Southeastern Section of the American Urological Association, Inc.

74th Annual Meeting
March 11 – 14, 2010
Loews Miami Beach Hotel
Miami Beach, Florida

In Memory of Victor Politano, MD (1919 – 2010)
SESAUA President 1979 – 1980
AUA President 1985 – 1986

In humble recognition of Dr. Politano’s many contributions to the art and practice of urology, the 74th annual meeting of the SESAUUA is formally dedicated to his memory.
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Southeastern Section of the American Urological Association, Inc.

Mission Statement:
To be the professional organization in the southeastern United States that fosters the highest standards of urologic care through education, research and socioeconomic awareness. SESUA goals:
• Support excellence in urologic care of patients
• Education of urologists
• Encourage research
• Forum for presentation of:
  ▪ Clinical interest
  ▪ Clinical and basic research
  ▪ Support the AUA in health care policy and share ideas with the AUA, Inc.

Scientific Program
SESAUA Secretary, Raymond J. Leveillee, MD has planned a dynamic program that is certain to provide practicing urologists cutting-edge information. Detailed information about the scientific program begins on page 25.

Needs Assessment
The Secretary of the SESUA, consulted with other members of the Committee on Science and Education; the Executive Committee members, including the current SESUA President, Dr. Thomas Stringer; and Dr. Elspeth McDougal, Director of the Office of Education of the AUA, regarding the needs we are attempting to fulfill through our annual scientific program. It was agreed by the above committee members, Section Officers and Director of the Office of Education of the AUA that there continues to be significant educational needs for our annual meeting and scientific program. Urologic abnormalities can present with a myriad of clinical symptoms and signs. Accurate differential diagnosis and disease management, which meets current standards of care, requires ongoing review of the presentations of various urologic abnormalities as well as the appropriate use of safe and cost-effective imaging modalities and various pharmacologic, minimally invasive, and operative management options. In addition, advancements in medical science and progress in management of various urologic diseases require basic and clinical research. Presentation and discussion of such peer-reviewed and Abstract Reviewer-selected summaries and results of investigations provide "cutting edge" updates for practicing clinicians and essential feedback to researchers on the practical applications and translation of their investigations to clinical practice.

Educational Objectives
At the conclusion of the meeting, participants should be able to:
• Recognize clinical presentation and treatment options of various urologic abnormalities
• Describe the various minimally invasive treatments for Urologic Diseases and their risk/benefits
• Apply Evidence Based Medicine (EBM) in urologic practice specifically incorporating AUA Guidelines into daily practice
• Understand the role of thermal therapies (e.g., Radiofrequency, Cryoablation, etc) in the treatment of urologic malignancies
• Describe the process involved in creating Guidelines and Best practice policies with review of recently released documents
• Identify basic laparoscopic applications and results in adult and pediatric patients
• Analyze data pertaining to various pharmacologic and surgical treatments for voiding dysfunction and urinary incontinence
• Recognize the latest diagnostic/treatment options for various renal anomalies
• Indicate current management options for urolithiasis (EBM)
• Understand new and modified treatments for erectile dysfunction, infertility, and penile malignancies
• Identify results of various laparoscopic and robotic approaches and techniques for benign and malignant urologic diseases
• Appraise research results and clinical series on management of prostate cancer and early diagnosis/screening in various patient populations
• Describe common pediatric urologic diseases and treatment updates
• Comprehend prognostic significance and treatments of various stages and grades of bladder cancer
• Identify techniques and results of various forms of urinary diversion
• Evaluate surgical techniques in video format to gain a greater understanding
• Identify socioeconomic factors affecting urologic training and clinical practice
• Design Wrap-up session to highlight current practice patterns. Understand the management issues pertaining to patients with Spinal cord injuries (SCI) and the unique urologic needs of such patients
Accreditation: The American Urological Association Education and Research, Inc. (AUAER) is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians. The AUAER takes responsibility for the content, quality, and scientific integrity of this CME activity.

Credit Designation: The American Urological Association Education and Research, Inc. designates this educational activity for a maximum of 23.75 AMA PRA Category 1 Credits™. Physicians should only claim credit commensurate with the extent of their participation in the activity.

AUAER Disclosure Policy: As a provider accredited by the Accreditation Council for Continuing Medical Education (ACCME), the AUAER must insure balance, independence, objectivity and scientific rigor in all its activities.

All faculty participating in an educational activity provided by the AUAER are required to disclose to the audience any relevant financial relationships with any commercial interest to the provider. The intent of this disclosure is not to prevent faculty with relevant financial relationships from serving as faculty, but rather to provide members of the audience with information on which they can make their own judgments. The AUAER must resolve any conflicts of interest prior to the commencement of the educational activity. It remains for the audience to determine if the faculty’s relationships may influence the educational content with regard to exposition or conclusion. When unlabeled or unapproved uses are discussed, these are also indicated.

Unlabeled or Unapproved Use of Drugs or Devices: It is the policy of the AUAER to require the disclosure of all references to unlabeled or unapproved uses or drugs or devices prior to the presentation of educational content. The audience is advised that this continuing medical education activity may contain reference(s) to unlabeled or unapproved uses of drugs or devices. Please consult the prescribing information for full disclosure of approved uses.

Disclaimer: The opinions and recommendations expressed by faculty, authors, and other experts whose input is included in this program are their own and do not necessarily represent the viewpoint of the AUAER.

Evidence Based Content: As a provider of continuing medical education accredited by the ACCME, it is the policy of the AUAER to review and certify that the content contained in this CME activity is valid, fair, balanced, scientifically rigorous, and free of commercial bias.

Special Assistance/Dietary Needs
The American Urological Association (AUA), an organization accredited for Continuing Medical Education (CME), complies with the Americans with Disabilities Act §12112(a). If any participant is in need of special assistance or has any dietary restrictions, a written request should be submitted at least one month in advance. For additional assistance with your request please call 800-908-9414.

General Disclaimer for the Southeastern Section of the AUA, Inc.
The opinions of the program participants are their own and do not necessarily represent those of the Southeastern Section of the AUA, Inc. Participation by the guest experts and by members of the Southeastern Section of the AUA, Inc. is not to imply endorsement of products and services by the Southeastern Section of the AUA, Inc. Exhibition by industry does not necessarily represent endorsement of these exhibited products or services by the Southeastern Section of the AUA, Inc.
SESAUA Contact Information

To expedite the business of the Southeastern Section of the American Urological Association, Inc., inquiries should be referred to the SESAUA Secretary or the SESAUA office as follows:

**SESAUA Secretary:**
Raymond J. Leveillee, MD, FRCS-G
University of Miami School of Medicine
Dept. of Urology/Div. of Endourology
1400 NW 10 Ave., Suite 509
Miami, FL 33135
Phone: (305) 243-4562
Fax: (305) 243-3381
Email: rleveill@med.miami.edu

- All inquiries and information regarding the scientific program of the annual meeting.

**SESAUA Office:**
Two Woodfield Lake
1100 East Woodfield Drive, Suite 520
Schaumburg, IL 60173-5116
Phone: (847) 969-0248
Fax: (847) 517-7229
Email: info@sesaua.org
Executive Director: Wendy J. Weiser

- Inquiries about or applications for membership in the SESAUA and the AUA.
- Membership roster information. *(changes/corrections to the present listing)*
- Any requests or information that one may wish to communicate.
- All inquiries and reports regarding the standing and special committees of the SESAUA.
- All matters needing the attention of or action by the Executive Committee.
Southeastern Section of the AUA, Inc.
Officers, Board of Directors,
Special & Standing Committees
2009 – 2010

OFFICERS

President
Thomas F. Stringer, MD; Daytona Beach, FL 2010

President Elect
Raju Thomas, MD, FACS, MHA; New Orleans, LA 2010

Secretary
Raymond J. Leveillee, MD, FRCS-G; Miami, FL 2012

Treasurer
W. Terry Stallings, MD; Mobile, AL 2011

Member at Large
Jon S. Demos, MD; Lexington, KY 2011

Chair, Committee on Education and Science
Dean G. Assimos, MD; Winston-Salem, NC 2012

Immediate Past President
Martin K. Dineen, MD; Daytona Beach, FL 2010

Historian
Hector H. Henry II, MD; Salisbury, NC 2010

Executive Director
Wendy J. Weiser; Schaumburg, IL

Associate Director
Sue O’Sullivan; Schaumburg, IL

REGIONAL REPRESENTATIVES

Alabama Representatives
Lee N. Hammontree, MD; Homewood, AL 2012
John F. Pirani, MD; Gadsden, AL 2012

Alabama Alternate Representatives
Kristie A. Blanchard Burch, MD; Mobile, AL 2012
Manish Shah MD; Gadsden, AL 2012

Florida Representatives
Michael S. Grable, MD; DeLand, FL 2011
G. Austin Hill, MD; Bradenton, FL 2012
Steven J. Hulecki, MD; Vero Beach, FL 2012
Michael A. Jenkins, MD; Panama City, FL 2011
Julio M. Pow-Sang, MD; Tampa, FL 2010

Florida Alternate Representatives
Michael A. Binder, MD; Gainesville, FL 2012
Vincent G. Bird, MD; Miami, FL 2012
Rafael E. Carrion, MD; Tampa, FL 2011
Michael J. Erhard, MD; Jacksonville, FL 2011
David H. Jablonski, MD; Orlando, FL 2010
Georgia Representatives
Jack M. Amie, MD; Brunswick, GA  2012
Mark L. Cain, MD; Augusta, GA  2010
Chad W.M. Ritenour, MD; Atlanta, GA  2012

Georgia Alternate Representatives
James A. Brown, MD; Iowa City, IA  2012
James D. Quarles Jr., MD; Augusta, GA  2012
Pablo J. Santamaria, MD; Dublin, GA  2010

Kentucky Representative
Jon S. Demos, MD; Lexington, KY  2010

Kentucky Alternate Representative
Christopher E. W. Smith, MD; Louisville, KY  2010

Louisiana Representatives
William S.I Kubricht, III, MD; Baton Rouge, LA  2010
Lester J. Prats, MD; New Orleans, LA  2012

Louisiana Alternate Representatives
Robert P. Bass Jr., DO, JD; Philadelphia, PA  2012
Stephen M. LaCour, MD; Metairie, LA  2010

Mississippi Representative
Woodie J. Wilson, Jr., MD; Hattiesburg, MS  2012

Mississippi Alternate Representative
To be determined

North Carolina Representatives
Luis M. Perez, MD; Charlotte, NC  2011
Thomas J. Polascik, MD; Durham, NC  2011
Thomas S. Stewart, MD; Lumberton, NC  2012

North Carolina Alternate Representatives
Raj S. Pruthi, MD; Chapel Hill, NC  2011
Ralph N. Vick, MD; Charlotte, NC  2011

Puerto Rico Representative
Felix Mendoza-Rosa, MD; Cidra, PR  2012

Puerto Rico Alternate Representative
Ricardo F. Sanchez-Ortiz, MD; Hato Rey, PR  2012

South Carolina Representatives
John J. Britton Jr., MD; Charleston, SC  2012
J Kevin O'Kelly, MD; Florence, SC  2011

South Carolina Alternate Representatives
Elizabeth W. Bozeman, MD; Spartanburg, SC  2012
David H. Lamb, MD; Lexington, SC  2011

Tennessee Representatives
Stephen V. Goryl, MD; Cookeville, TN  2010
S. Duke Herrell, MD; Nashville, TN  2011

Tennessee Alternate Representatives
Timothy K. Duffin, MD; Clarksville, TN  2010
Joel R. Locke, MD; Franklin, TN  2011

Representative to AUA Board of Directors
B. Thomas Brown, MD, MBA; Daytona Beach, FL  2011
AUA Leadership Program Representatives
Michael S. Cookson, MD; Nashville, TN  2009
Philipp Dahm, MD; Gainesville, FL  2011
Alexander Gomelsky, MD; Shreveport, LA  2011
Gerard D. Henry, MD; Shreveport, LA  2009

Resident Representatives
Sean J. Clark, MD; Birmingham, AL  2010
Tim J. LeRoy, MD; Jacksonville, FL  2010
Brent J. Morris, MD; Olive Branch, MS  2010
Benjamin M. Whittam, MD; Nashville, TN  2010

SESAUA STANDING COMMITTEES

BYLAWS COMMITTEE
Scott B. Sellinger, MD; Tallahassee, FL (Chair)  2009
John J. Britton, Jr., MD; Charleston, SC  2011
Gerard D. Henry, MD; Shreveport, LA  2010
Raymond J. Leveillee, MD, FRCS-G; Miami, FL (Secretary)  2012
Gregory F. Murphy, MD; Greenville, NC  2010
John F. Pirani, MD; Gadsden, AL  2012

COMMITTEE ON EDUCATION AND SCIENCE
David M. Albala, MD; Chapel Hill, NC (Committee Member - Videos)  2010
Michael S. Cookson, MD; Nashville, TN (Committee Member – Imaging)  2012
Ronald W. Lewis, MD; Augusta, GA
(Committee Member - Montague Boyd Essay)  2012
Stephen E. Strup, MD; Lexington, KY (Committee Member - Residents)  2011
Dean G. Assimos, MD; Winston-Salem, NC (Chair)  2012
Charles R. Pound, MD; Jackson, MS (Member At Large)  2012
Johannes W.G. Vieweg, MD; Gainesville, FL (Member At Large)  2012

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David M. Kraebber, MD; Shreveport, LA (Chair)  2011
Alexander Gomelsky, MD; Shreveport, LA  2011
Michael S. Grable, MD; DeLand, FL  2010
Scott D. Miller, MD; Atlanta, GA  2010
William R. Sanderson, MD; Mobile, AL  2012
W. Terry Stallings, MD; Mobile, AL (Treasurer)  2011

HEALTH POLICY COUNCIL
Martin K. Dineen, MD; Daytona Beach, FL (Chair)  2010
J. Christian Winters, MD; New Orleans, LA (Vice Chair)  2010
Lorie G. Fleck, MD; Mobile, AL (Alternate Chair)  2010
Jerry E. Jackson, MD; Sumter, SC (Alternate Vice Chair)  2010
Jack M. Amie, MD; Brunswick, GA (GA Representative)  2010
Ingrum W. Bankston, Jr., MD; Tuscaloosa, AL (AL Alternate Representative)  2010
Paul R. Breton, MD; Cape Coral, FL (FL Representative)  2010
John W. Brock, III, MD; Nashville, TN (TN Alternate Representative)  2010
Stephen V. Goryl, MD; Cookeville, TN (TN Representative)  2010
Ralph J. Henderson, MD; Shreveport, LA (LA Representative)  2010
Edward W. Killorin, Jr., MD; Columbus, GA (GA Alternate Representative)  2010
Felix Mendoza-Rosa, MD; Citra, PR (PR Representative)  2010
Oliver T. Newcomb, III, MD; Morehead, KY (Kentucky Representative)  2010
Thomas H. Phillips, MD; Matthews, NC (NC Alternate Representative)  2010
John F. Pirani, MD; Gadsden, AL (AL Alternate Representative)  2010
Thomas J. Polascik, MD; Durham, NC (NC Representative)  2010
Charles R. Pound, MD; Jackson, MS (MS Representative)  2010
Lester J. Prats, MD; New Orleans, LA (LA Alternate Representative)  2010
Terrence C. Regan, MD; Palm Coast, FL (FL Alternate Representative)  2010
Gilberto Ruiz-Deya, MD; Ponce, PR (Puerto Rico Alternate Representative)  2010
To Be Determined; (Kentucky Alternate Representative)  2010
Richard M. Vise, MD; Meridian, MS (Mississippi Alternate Representative)  2010
William C. Gates, Jr., MD; West Point, MS (Consultant)
William F. Gee, MD; Lexington, KY (Consultant)
Josiah F. Reed, Jr., MD; Montgomery, AL (Consultant)
LOCAL ARRANGEMENTS COMMITTEE
Raymond J. Leveille, MD, FRCS-G; Miami, FL (Chair)

MEMBERSHIP COMMITTEE
Stephen V. Goryl, MD; Cookeville, TN (Committee Chair) 2011
David M. Kraebber, MD; Shreveport, LA 2011
Arthur M. Matthews, Jr., MD; Gulfport, MS 2011
Charles G. Ray, MD; Lexington, KY 2011
Jeffrey R. Thill, MD; Orlando, FL 2010
J. Christian Winters, MD; New Orleans, LA 2011

NOMINATING COMMITTEE
Edward O. Janosko, MD; Wilmington, NC (Chair) 2010
Charles H. Coleman, Jr., MD; Augusta, GA (Member at Large) 2011
Michael J. Wehle, MD; Jacksonville, FL (Member at Large) 2010
Martin K. Dineen, MD; Daytona Beach, FL (Past President) 2012
Dennis D. Venable, MD; Shreveport, LA (Past President) 2011

SESAUA REPRESENTATIVES TO AUA COMMITTEES

AUA BOARD OF DIRECTORS
B. Thomas Brown, MD, MBA; Daytona Beach, FL (Representative) 2011
Dennis D. Venable, MD; Shreveport, LA (Alternate Representative) 2011

AUA BYLAWS COMMITTEE
Gerard D. Henry, MD; Shreveport, LA 2011
Scott B. Sellinger, MD; Tallahassee, FL 2011
W. Terry Stallings, MD; Mobile, AL 2011

AUA EDITORIAL BOARD COMMITTEE
Philiipp Dahm, MD, MHSc, FACS; Gainesville, FL 2010
Raj. S. Pruthi, MD; Chapel Hills, NC 2013
Raju Thomas, MD, FACS, MHA; New Orleans, LA 2012

AUA HEALTH POLICY COUNCIL
Martin K. Dineen, MD; Daytona Beach, FL 2010
Ralph J. Henderson, MD; Shreveport, LA 2010
J. Christian Winters, MD; New Orleans, LA 2010

AUA HISTORY COMMITTEE
Hector H. Henry II, MD; Salisbury, NC 2010

AUA INVESTMENT COMMITTEE
W. Terry Stallings, MD; Mobile, AL 2010

AUA JUDICIAL & ETHICS COUNCIL
Donald D. Kidd, MD; Mobile, AL 2011
Charles R. Pound, MD; Jackson, MS 2013
Harriette Miles Scarpero, MD; Nashville, TN 2013

AUA LEADERSHIP PROGRAM
Michael S. Cookson, MD; Nashville, TN 2009
Philiipp Dahm, MD; Gainesville, FL 2011
Alexander Gomelsky, MD; Shreveport, LA 2011
Gerard D. Henry, MD; Shreveport, LA 2009

AUA NOMINATING COMMITTEE
Charles R. Pound, MD; Jackson, MS (Alternate Representative) 2011
J. Christian Winters, MD; New Orleans, LA (Representative) 2010

AUA PRACTICE MANAGEMENT COMMITTEE
Alexander Gomelsky, MD; Shreveport, LA 2010
AUA RESIDENT’S COMMITTEE
Beau N. Dusseault, MD; Lexington, KY (Representative)  2011
Charles R. Vincent, MD; Gainesville, FL (Alternate Representative)  2011

AUA YOUNG UROLOGIST COMMITTEE
Kristie A. Blanchard Burch, MD; Mobile, AL (Representative)  2010

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Numerical Membership of the SESAUA

<table>
<thead>
<tr>
<th>Category</th>
<th>Members</th>
</tr>
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<tbody>
<tr>
<td>Active</td>
<td>1459</td>
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<tr>
<td>Affiliate</td>
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<tr>
<td>Associate</td>
<td>114</td>
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<tr>
<td>Corresponding</td>
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<tr>
<td>Honorary</td>
<td>67</td>
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<tr>
<td>Inactive</td>
<td>3</td>
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<tr>
<td>Senior</td>
<td>589</td>
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<tr>
<td>Grand Total Membership</td>
<td>2238</td>
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<tr>
<td>Time</td>
<td>Wednesday, March 10</td>
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<tr>
<td>7:00 a.m.</td>
<td>SESUA Executive Committee Meeting Location: Moon</td>
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<tr>
<td>9:00 a.m.</td>
<td>SESUA Board of Directors Meeting Location: Poinciana 23</td>
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<td>9:30 a.m.</td>
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<tr>
<td>11:00 a.m.</td>
<td>SESUA Board of Directors Meeting Location: Poinciana 23</td>
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<td>11:30 a.m.</td>
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<td>12:00 p.m.</td>
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<tr>
<td>12:30 p.m.</td>
<td>SESUA Past Presidents Dinner and Board Directors (invitation only)</td>
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<tr>
<td>1:00 p.m.</td>
<td>Welcome Reception Location: Americana 123</td>
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<tr>
<td>9:00 p.m.</td>
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<tr>
<td>Time</td>
<td>FRIDAY, MARCH 12</td>
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<tr>
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</tr>
</tbody>
</table>
| 6:30 a.m. – 5:30 p.m. | **Registration/Info Desk**  
  *Location: Rotunda East Ballroom* | 6:30 a.m. – 12:30 p.m.  
  **Spouse/Guest Hospitality Room**  
  *Location: Venus* |
| 6:00 a.m. – 5:00 p.m. | **Speaker Ready Room**  
  *Location: Sundial* | 6:00 a.m. – 12:30 p.m.  
  **Exhibit Hall**  
  *Location: Americana 123* |
| 7:00 a.m. | Session 8: Laparoscopy & Robotic Surgery Podium | Session 14:  
  Prostate – Non Cancer / Robotics / Miscellaneous Podium  
  *Location: Americana 4* |
| 7:30 a.m. |  | Session 15:  
  Prostate / Testis Cancer Poster  
  *Location: Poinciana 4* |
| 8:00 a.m. |  |  |
| 8:30 a.m. | Session 9: Endourology / Stone Disease Podium | T-Leon Howard Imaging Session |
| 9:00 a.m. |  |  |
| 9:30 a.m. |  |  |
| 10:00 a.m. | (10:00 a.m. – 10:10 a.m.)  
  Why Clinical Outcomes are Better Defined in Stone Patients: AUA Guidelines and Urolithiasis | (10:00 a.m. – 10:25 a.m.)  
  Break – Visit the Exhibits  
  *Location: Americana 123* |
| 10:00 a.m. | (10:10 a.m. – 10:40 a.m.)  
  Break – Visit the Exhibits  
  *Location: Americana 123* | (10:25 a.m. – 10:30 a.m.)  
  2011 SESAU Meeting Promotion |
| 10:30 a.m. | (10:40 a.m. – 11:10 a.m.)  
  Session 10: Montague Boyd Essay Contest | Ambrose-Reed Lecture:  
  Massachusetts Universal Healthcare – Lessons Learned |
| 11:00 a.m. | (11:10 a.m. – 11:30 a.m.)  
  Development of new Therapies for Treatment of Relapsed Androgen Independent Prostate Cancer | How a Changing Healthcare Regulatory Enforcement Environment Impacts Urologists |
| 11:30 a.m. | Ballenger Lecture (In Section):  
  Advances in the Design and Clinical Implementation of Cancer Vaccines | Presidential Lecture:  
  Understanding a Global Economy |
<table>
<thead>
<tr>
<th>Time</th>
<th>FRIDAY, MARCH 12</th>
<th>SATURDAY, MARCH 13</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:00 p.m.</td>
<td>(12:00 p.m. – 12:15 p.m.) Address of the AUA Secretary Elect</td>
<td>(12:00 p.m. – 12:20 p.m.) Health Policy Update</td>
</tr>
<tr>
<td></td>
<td>(12:15 p.m. – 12:35 p.m.) Address of the AUA President</td>
<td>(12:20 p.m. – 12:30 p.m.) History of the SES and Cuban Urology</td>
</tr>
<tr>
<td>12:30 p.m.</td>
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<td>(12:30 p.m. – 1:30 p.m.) Industry Sponsored Lunch</td>
</tr>
<tr>
<td>1:00 p.m.</td>
<td>(12:45 p.m. – 1:45 p.m.) Industry Sponsored Luncheon</td>
<td>Location: Poinciana 1 &amp; 2</td>
</tr>
<tr>
<td>1:30 p.m.</td>
<td>(12:45 p.m. – 1:45 p.m.) Industry Sponsored Luncheon</td>
<td>Location: Poinciana 1 &amp; 2</td>
</tr>
<tr>
<td>2:00 p.m.</td>
<td>(2:00 p.m. – 2:20 p.m.) Urologic Needs of Patients Suffering From Spinal Cord Injuries: Unique Opportunities for Collaborative Research</td>
<td>(1:30 p.m. – 3:00 p.m.) Young Urologists Forum and Luncheon Location: Americana 4</td>
</tr>
<tr>
<td>2:30 p.m.</td>
<td>(2:20 p.m. – 3:20 p.m.) Session 11: Neurourology / Urodynamics / Incontinence Podium</td>
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<tr>
<td>3:00 p.m.</td>
<td>(3:20 p.m. – 3:30 p.m.) Wrap Up and State of the Art: Strategy for the Systematic Approach to Urologic Issues of Primary Concern for Spinal Injured Patients</td>
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<tr>
<td>3:30 p.m.</td>
<td>Break – Visit the Exhibits</td>
<td>Location: Americana 123</td>
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<td>4:00 p.m.</td>
<td>Session 12: Urodynamics Poster</td>
<td>Session 13 Bladder Cancer Podium</td>
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<td>4:30 p.m.</td>
<td>Location: Poinciana 4</td>
<td>Location: Americana 4</td>
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<tr>
<td>5:00 p.m.</td>
<td>Medical Affairs Forum and Reception</td>
<td>2010 Annual Reception</td>
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<td>Location: Poinciana 1 &amp; 2</td>
<td>Location: Americana 3 Foyer</td>
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<td>5:30 p.m.</td>
<td>2010 SESAU A Annual Banquet</td>
<td>2010 SESAU A Annual Banquet</td>
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<td>7:00 p.m.</td>
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<tr>
<td>7:30 p.m.</td>
<td>(7:30 p.m. – 10:30 p.m.) Resident’s Night Out (Program Directors and Residents only)</td>
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<td>8:00 p.m.</td>
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<td>2010 SESAU A Annual Banquet</td>
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<td>8:30 p.m.</td>
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<td>7:00 a.m.</td>
<td><strong>Registration/Info Desk</strong>&lt;br&gt;Location: Rotunda East Ballroom 7:00 a.m. – 12:30 p.m.</td>
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<td>7:30 a.m.</td>
<td><strong>Spouse/Guest Hospitality Room</strong>&lt;br&gt;Location: Venus 7:30 a.m. – 12:00 p.m.</td>
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<td>8:00 a.m.</td>
<td><strong>Speaker Ready Room</strong>&lt;br&gt;Location: Sundial Exhibit Hall 7:00 a.m.</td>
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<td>8:30 a.m.</td>
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<td>9:00 a.m.</td>
<td>Session 16: Urethra / Ureter / Transplantation / Reconstruction / Potpourri Podium</td>
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<td>9:30 a.m.</td>
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<td>10:00 a.m.</td>
<td>(9:00 a.m. – 10:35 a.m.) Ballenger Lecture (Out of Section): Comparative Study of Greenlight Laser vs. TURP and the Impact on a Single Payer System</td>
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<tr>
<td>10:30 a.m.</td>
<td>(10:35 a.m. – 10:55 a.m.) The Economic Impact of Guideline Implementation</td>
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<tr>
<td>11:00 a.m.</td>
<td>(10:55 a.m. – 11:05 a.m.) AUA Foundation Update</td>
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<tr>
<td>11:30 a.m.</td>
<td>Annual Business Meeting</td>
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General Meeting Information

Registration /Information
The SESAUA Registration / Information Desk is located at the Loews Miami Beach Hotel, Rotunda East Ballroom. Tickets to attend the social events, sporting events and tours can be purchased at the registration / information desk.

SESAUA Registration Includes:
• Annual Banquet
• Continental Breakfasts
• Scientific Sessions
• Medical Affairs Forum
• Welcome Reception
• Annual Reception and Banquet

SESAUA Spouse/Guest Registration Includes:
• Annual Banquet
• SESAUA Spouse/Guest Hospitality Suite
• Medical Affairs Forum
• Welcome Reception
• Annual Reception and Banquet

Board of Directors and Executive Committee Meetings

Executive Committee Meeting: Wednesday, March 10th
8:00 a.m. – 12:00 p.m.
Location: Moon

Board of Directors Meetings:
Wednesday, March 10th
Board of Directors Lunch
12:00 p.m. – 1:00 p.m.
Location: Poinciana 1

Wednesday, March 10th
Board of Directors Meeting
1:00 p.m. – 5:00 p.m.
Location: Poinciana 23
Technical Exhibits
The SESAUA invites you to visit the exhibit area, which is located at the Loews Miami Beach Hotel, Americana 123. In addition to bringing educational benefits to the meeting, these exhibitors are also contributors to the scientific and social aspects of this convention.

Exhibit Hours
Thursday, March 11, 2010  12:00 p.m. – 4:00 p.m.
   Welcome Reception  6:30 p.m. – 8:30 p.m.
Friday, March 12, 2010   6:30 a.m. – 4:00 p.m.
   Medical Affairs Forum and Reception  5:30 p.m. – 7:00 p.m.
Saturday, March 13, 2010  6:30 a.m. – 12:00 p.m.

*Continental breakfasts, coffee breaks and box lunch will be available in the exhibit hall.

Speaker Ready Room
The Speaker Ready Room is in the Loews Miami Beach Hotel, Sundial Room. The room will be open for speakers to turn in and/or review their slides during the following hours:

Thursday, March 11, 2010  6:00 a.m. – 5:00 p.m.
Friday, March 12, 2010   6:00 a.m. – 5:00 p.m.
Saturday, March 13, 2010  6:00 a.m. – 12:30 p.m.

Spouse/Guest Hospitality Suite
The Spouse/Guest Hospitality Suite is located at the Loews Miami Beach Hotel, Venus Room.
*Registered spouse/guests only allowed into the room. Please have your badge with you at all times in the room.

Thursday, March 11, 2010  7:30 a.m. – 12:00 p.m.
Friday, March 12, 2010   7:30 a.m. – 12:00 p.m.
Saturday, March 13, 2010  7:30 a.m. – 12:00 p.m.
Sunday, March 14, 2010  7:30 a.m. – 12:00 p.m.

Annual Business Meeting
The SESAUA Annual Business Meeting will be held on Sunday, March 14, 2010 from 11:05 a.m. – 12:00 p.m at the Loews Miami Beach Hotel in Americana 4. All meeting attendees are welcome and encouraged to attend. Please note that only Active and Senior members may vote. Voting for the AUA President will occur during the Business Meeting. Members need not be registered for the scientific portion of the conference to attend the Business Meeting.

EVENING FUNCTIONS
One ticket to each function is included in your registration fee.
Individual tickets may be purchased on the registration form (prices listed below).

Thursday, March 11, 2010

WELCOME RECEPTION
Time: 6:30 p.m. – 8:30 p.m.
Location: Americana 123, Loews Miami Beach Hotel
Welcome to the gorgeous Loews Miami Beach Hotel. Come and catch up with colleagues and exhibitors as you are entertained by a strolling Latin trio of musicians performing Latin jazz. There will also be an authentic cigar roller demonstrating his native art. The cigar roller will have pre-made cigars to give away as well as cigars completed on site.
Dress: Business Casual
Cost: Included in registration. Extra tickets: $50.00 adult; $20.00 child.
**Friday, March 12, 2010**

**MEDICAL AFFAIRS FORUM AND RECEPTION**  
Time: 5:30 p.m. – 7:00 p.m.  
Location: Poinciana 1 & 2, Loews Miami Beach Hotel  
This year we are offering the first ever Medical Affairs Forum. In an exclusive event, you will have the opportunity for discussions with medical affairs teams from participating companies. This is your opportunity to ask questions about clinical trials, research grants and their latest scientific information.  
Dress: Business Casual  
Cost: Included in registration fee.

**RESIDENTS’ NIGHT OUT (Residents and Program Chairs only)**  
Time: 7:30 p.m. – 10:00 p.m.; depart from Loews Miami Beach Hotel lobby at 7:15 p.m.  
Dress: Casual

**Saturday, March 13, 2010**

**2010 ANNUAL RECEPTION AND BANQUET**  
Time: Reception 6:30 p.m. – 7:30 p.m.  
Dinner and Entertainment 7:30 p.m. – 10:00 p.m.  
Location: Loews Miami Beach Hotel  
The closing social event of the 74th annual meeting of the SESAUA is sure to please with an expertly crafted menu and Latin-themed musical entertainment and salsa dancing.  
Dress: Black tie invited  
Cost: Included in registration. Extra tickets: $225.00.

**OPTIONAL EVENTS (Availability of tours subject to change)**  
Optional and sporting events are not included in your registration fee. Optional and sporting events are filled on a first-come, first-served basis; therefore, it is recommended that you preregister to avoid disappointment. In addition, some tours may have minimum and maximum limitations. The SESAUA reserves the right to cancel tours and refund payment if registration does not meet the minimum number of persons required per tour, at least three (3) weeks prior to the meeting. Because guarantees will be based on advanced ticket sales, refunds or ticket exchanges will not be available two (2) weeks prior to or on-site at the meeting.

*All tours will depart from the Loews Miami Beach Hotel lobby. Please arrive 10 minutes prior to departure time.*

**Thursday, March 11th**

**EVERGLADES SAFARI TOUR**  
Time: 8:00 a.m. – 12:00 p.m.  
Get set for a thrill-a-minute ride on an airboat with professional tour guides who lead and narrate the way through winding trails, past the homes of gators and birds galore to an ancient Seminole Island. The Alligator and Wildlife Show after the ride provides guests an informative, interactive opportunity to become familiar with the features of the American alligators as well as a variety of other animals. To top this off, guests will have a chance to hold Snappy, a 2½-foot alligator!  
Cost: $83.00

**VILLA VIZCAYA TOUR**  
Time: 1:00 p.m. – 3:30 p.m.  
The magnificent Italian villa on Biscayne Bay has often been called the finest private home ever built in America. With its phenomenal human-made and natural resources, Vizcaya was built in the 1910s, a decade in which Gilded Age cultural standards were enlivened by the irreverent spirit of the dawning Jazz Age. Vizcaya was the winter residence of American industrialist James Deering from Christmas 1916 until his death in 1925. The splendid Renaissance, Baroque, Rococo and Neoclassical rooms, restored to their original splendor, are now open to guests.
Cost: $69.00
Friday, March 12th

FAIRCHILD TROPICAL BOTANIC GARDENS TOUR
Time: 9:30 a.m. – 12:00 p.m.
With extensive collections of rare tropical plants including palms, cycads, flowering trees and vines, Fairchild Tropical Botanic Garden is one of the world’s preeminent botanic gardens. Established in 1938, the 83-acre garden is among the region’s most popular visitor attractions and offers a variety of programs in environmental education, conservation and horticulture.
Cost: $72.00

TROPICAL DECO IN A FABLED PLAYGROUND TOUR
Time: 1:00 p.m. – 4:30 p.m.
Encounter the Art Deco tour that captures the glitz and glamour of the roaring twenties and thirties in our nation’s only Art Deco Historic District. This is your chance to experience the thrill of a city that defiantly danced ‘till dawn through the prohibition, the depression, major hurricanes, and two World Wars. You’ll walk the halls of the first hotel ever built on Miami Beach, and delight at the imaginative and playful art deco lifeguard stands lining the beach like pastel-colored toy soldiers.
Cost: $92.00

Saturday, March 13th

COOKING CLASS WITH CHEF BENACK AT EMERIL’S MIAMI BEACH
Time: 11:30 a.m. – 1:00 p.m.
Emeril’s Miami Beach cooking class is a fun and exciting way to enjoy a three-course lunch paired with wine at the world famous restaurant. During this time Chef Brandon Benack will conduct a live cooking demo in which he prepares and explains in detail all food preparation and execution. After each course is completed, guests will enjoy the food as prepared by our award-winning kitchen. Savory courses are also paired with wine that is specifically chosen to accompany the food. Guests will leave with full menu descriptions to take home with them.
Cost: $90.00

SPORTS DAY (Times and dates are subject to change)

TENNIS AT DAVID PARK
Time: 12:30 p.m. – 3:30 p.m.
Game – set – match! David Park tennis is an exciting park to play this classic game. Challenge a friend or take a lesson from a pro. There are a variety of courts to choose from – hard or clay.
Cost: $60.00

GOLF AT NORMANDY SHORES GOLF CLUB
Time: 12:45 p.m. – 5:00 p.m.
Normandy Shores Golf Club is located in the serene residential area of Normandy Shores. The view of Biscayne Bay, its soothing breezes and tropical wild life provide the backdrop for an enjoyable round of golf for novice or pro at this beautifully renovated hidden jewel.
Cost: $204.00

SESAUA VOLLEYBALL TOURNAMENT
Time: 3:00 p.m. - 5:00 p.m.
Join in on some fun in the sand at the first-ever volleyball tournament on Saturday afternoon of this year’s SESUA Annual Meeting! Nets will be set up on the beach outside of the Loews Miami Beach Hotel. Sign-up sheets will be available on-site at the Registration Desk.
CHILDCARE SERVICES

SoBe Kids Camp
Located in the lobby of the St. Moritz Spa Tower at the Loews Miami Beach Hotel, providing a high energy activity program for children 4-12 years old, SoBe Kids Camp offers full and half day programs daily from 9:00 a.m. – 5:00 p.m. and evening programs on Friday and Saturday nights from 5:30 p.m. – 9:00 p.m. Activities include arts and crafts, sand castle contests, scavenger hunts, movies, Nintendo Wii contests and water games. Nominal charge for the program. Pre-registration requested. For prices and more information please call (305) 604-3057.

PBteen Cabana
Calling all teenagers! Join us at our brand new PBteen Cabana, located on the north side of the Loews Miami Beach Hotel. Created and decorated specifically for Loews Miami Beach Hotel by Pottery Barn, the PBteen Cabana is the perfect place for tweens/teens to meet, listen to music, play Nintendo Wii, lounge and enjoy some sun and fun.
FUTURE SESAUUA MEETING

SESUAUA 75th Annual Meeting
March 17 – 20, 2011
Marriott New Orleans
New Orleans, Louisiana
## Company Name

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<th>Company Name</th>
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<td>Abbott Laboratories</td>
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<td>Allergan Medical Affairs</td>
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<td>American Medical Systems, Inc.</td>
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<td>American Urological Association</td>
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<td>Amgen, Inc.</td>
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<td>Generic Medical Devices, Inc. - GMD</td>
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<td>Hitachi Medical Systems America, Inc.</td>
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<td>Intuitive Medical Software</td>
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<td>Karl Storz Lithotripsy-America, Inc.</td>
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<td>Life-Tech, Inc.</td>
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<td>Matritech, Inc., A Division of Inverness Medical</td>
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<td>Onco Diagnostic Laboratory, Inc.</td>
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<td>Ortho Women's Health &amp; Urology/Bayer Healthcare</td>
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<td>Watson Pharma, Inc.</td>
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<td>Waveform Systems Inc.</td>
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The SESAUA Wishes to
Thank and Recognize Our 2010 Industry Partners.
Thank You For Your Support.

Diamond Level Industry Partners:

Emerald Level Industry Partner:

Ruby Level Industry Partners:

Thank you to our 2010 Educational Grant Provider
The Ballenger Memorial Lecture
Dr. Edgar Ballenger was the Southeastern Section president in 1935 and president of the AUA in 1939. The Annual Ballenger Memorial Lectureship was established after his death in 1946 and serves as our major scientific presentation.

The Montague Boyd Prize Essay Contest
Dr. Montague Boyd was the founder of the Southeastern Section, and he served as president in 1933 and 1934. The prize was established in 1967 and is given to a resident, fellow, or urologist in private practice less than ten years.

The Ambrose-Reed Lecture
Dr. Samuel Ambrose was the Southeastern Section president in 1975, and in 1981 became the first chairman of the AUA Public Relations Committee, later to be called the Socioeconomic Committee. Dr. Mason, who served as president, formed this committee, which later became the Health Policy Council. Dr. Josiah Reed was the Southeastern Section president in 1992, and chairman of the AUA Socioeconomic Committee in 1986. This award honors these two pioneers in the field of health policy.

The T. Leon Howard Imaging Conference
Dr. T. Leon Howard was president of the South Central Section in 1932. He was a founding trustee of the American Board of Urology in 1934 and AUA president in 1941. He became an honorary member of the Southeastern Section in 1947.
Scientific Program
2010 SESAUA Program Schedule
74th Annual Meeting
March 11 – 14, 2010
Loews Miami Beach Hotel
Miami, Florida

WEDNESDAY, MARCH 10, 2010
8:00 a.m. – 12:00 p.m. SESAUA EXECUTIVE COMMITTEE MEETING
Location: Moon

10:30 a.m. – 5:00 p.m. REGISTRATION/INFORMATION DESK OPEN
Location: Rotunda East Ballroom

12:00 p.m. – 1:00 p.m. SESAUA BOARD OF DIRECTORS LUNCH
Location: Poinciana 1

1:00 p.m. – 5:00 p.m. SESAUA BOARD OF DIRECTORS MEETING
Location: Poinciana 23

6:30 p.m. – 10:00 p.m. SESAUA PAST PRESIDENTS AND BOARD DIRECTORS DINNER (INVITATION ONLY)
Location: Depart from Loews Miami Beach Hotel lobby at 6:30 p.m.
THURSDAY, MARCH 11, 2010

6:00 a.m. – 5:00 p.m.  SPEAKER READY ROOM
Location: Sundial

7:00 a.m. – 6:00 p.m.  REGISTRATION/INFORMATION DESK OPEN
Location: Rotunda East Ballroom

7:30 a.m. – 12:00 p.m.  SPOUSE/GUEST HOSPITALITY SUITE
Location: Venus

8:00 a.m. – 12:00 p.m.  EVERGLADES SAFARI TOUR
Location: Depart from Loews Miami Beach Hotel lobby; please arrive 10 minutes prior

12:00 p.m. – 4:00 p.m.  EXHIBIT HALL OPEN
Location: Americana 123

1:00 p.m. – 3:30 p.m.  VILLA VIZCAYA TOUR
Location: Depart from Loews Miami Beach Hotel lobby; please arrive 10 minutes prior

6:30 p.m. – 8:30 p.m.  WELCOME RECEPTION IN EXHIBIT HALL
Location: Americana 123

7:30 a.m. – 10:30 a.m.  LIVE BROADCAST/DEBATES: TARGETED ABLATIVE TECHNOLOGIES – THE FUTURE OF SURGICAL TREATMENT?
Surgery 1: Live Surgery – Focal Cryoblation of the Prostate
Charles Rosser, MD
MD Anderson Cancer Center
Orlando, Florida

Surgery 2: Live Surgery – Laparoscopic Radiofrequency Ablation of Renal Mass
Robert Carey, MD, PhD
Sarasota Memorial Health Care System
Sarasota, Florida

10:00 a.m. – 10:30 a.m.  Discussion

10:30 a.m. – 10:45 a.m.  OPENING REMARKS
Invited Speaker: Pascal Goldschmidt, MD
Dean of the University of Miami, Miller School of Medicine
Miami, FL

SESAUA President: Thomas F. Stringer, MD
Central Florida Urology Specialists
Inverness, FL

10:45 a.m. – 12:10 p.m.  SESSION 1 – KIDNEY CANCER I PODIUM
Moderators: Michael L. Blute, MD
Rochester, MN

: Michael J. Wehle, MD
Jacksonville, FL

10:45 a.m.  #1  A NEOADJUVANT CLINICAL TRIAL WITH SORAFENIB FOR PATIENTS WITH STAGE II OR GREATER RENAL CELL CARCINOMA
Eugene Simopoulos, Stephen McKim, Kim Rathmell, William Kim, Paul Godley, Young Whang, Matthew Nielsen, Eric Wallen and Raj Pruthi
The University of North Carolina at Chapel Hill
(Presented By: Eugene Simopoulos)
10:50 a.m.  #2  LONG-TERM FOLLOW-UP OF PATIENTS INITIALLY MANAGED WITH ACTIVE SURVEILLANCE FOR SOLID RENAL MASSES
Eugene Simopoulos, Stephen McKim, Benjamin Waldorf, Angela Smith, Matthew Nielsen, Eric Wallen and Raj Pruthi
The University of North Carolina at Chapel Hill
(Presented By: Eugene Simopoulos)

10:55 a.m.  #3  NECROSIS AS A PREDICTOR OF SURVIVAL FOLLOWING NEPHRECTOMY FOR PATHOLOGIC T2 RENAL CELL CARCINOMA
Kelly Stratton, Ryan Hutchinson, Sam Chang, Andrew Stec, Benjamin Coons, Michael Cookson, S. Duke Herrell, Daniel Barocas, Joseph Smith, Jr. and Peter Clark
Department of Urologic Surgery, Vanderbilt University Medical Center, Nashville, TN
(Presented By: Kelly Stratton)

11:00 a.m.  #4  IMPACT OF BODY MASS INDEX AND TUMOR LOCATION ON THE INCIDENCE OF BENIGN HISTOLOGY AT THE TIME OF NEPHRON-SPARING SURGERY
Bruce Kava, Mohamed Aziz, Vincent Bird, Davendar Katkoori, Rajinikanth Ayyathurai, Rajan Ramanathan, Munugesan Manoharan, Gaetano Ciancio, Mark Soloway and Raymond Leveillee
University of Miami Miller School of Medicine, Miami, FL
(Presented By: Bruce Kava)

11:05 a.m.  #5  CHARACTERIZING THE USE OF PARTIAL NEPHRECTOMY FOR TREATMENT OF KIDNEY CANCER DIAGNOSED IN 2006
Jan Colli, Jared Cox, Sean Clark and Michael Knox
University of Alabama at Birmingham
(Presented By: Jared Cox)

11:10 a.m.  #6  PARTIAL NEPHRECTOMY IN PATIENTS WITH RENAL VEIN TUMOR THROMBUS
Cesar Ercole, Luke Wiegand, Jose Correa, Philippe Spiess, Julio Pow-Sang and Wade Sexton
Moffitt Cancer Center, Tampa, FL
(Presented By: Luke Wiegand)

11:15 a.m.  #7  CHARACTERIZING CHANGES IN KIDNEY AND RENAL PELVIS CANCER INCIDENCE FROM 1998 TO 2006 IN THE U.S.
Jan Colli, Michael Knox, Sean Clark and Jared Cox
University of Alabama at Birmingham
(Presented By: Michael Knox)

11:20 a.m.  #8  EFFECT OF PREOPERATIVE HYPERCALCEMIA ON SURVIVAL FOLLOWING NEPHRECTOMY FOR PATHOLOGIC T1 RENAL CELL CARCINOMA
Kelly Stratton, Michelle Lightfoot, Sam Chang, Andrew Stec, Benjamin Coons, Michael Cookson, S. Duke Herrell, Daniel Barocas, Joseph Smith, Jr. and Peter Clark
Department of Urologic Surgery, Vanderbilt University Medical Center, Nashville, TN
(Presented By: Kelly Stratton)

11:25 a.m.  #9  RATIONALE FOR A LESS AGGRESSIVE THERAPY FOR SMALL RENAL TUMORS
Matvey Tsivian, Vladimir Mouraviev, Masaki Kimura, Janice M. Mayes, Jorge R. Caso, David M. Albala, Cary N. Robertson, Philip J. Walther and Thomas J. Polascik
Duke University Medical Center, Durham, NC
(Presented By: Matvey Tsivian)
11:30 a.m. #10  RENAL CRYOABLATION: A COMPARATIVE ANALYSIS BETWEEN LAPAROSCOPIC AND PERCUTANEOUS APPROACHES  Wesley White¹, Sebastien Crouzet², Georges-Pascal Haber², Raj Goel² and Jihad Kaouk² ¹The University of Tennessee Medical Center, Knoxville; ²Cleveland Clinic, Cleveland, OH  (Presented By: Wesley White)

11:35 a.m. #11  IRREVERSIBLE ELECTROPORATION IN IN-VIVO PORCINE KIDNEYS  Raymond Leveillee¹, Nelson Salas²,³, Charles Moore⁴, Merce Jorda⁵, Maria-Eugenia Sierra⁴ and John Shields⁶ ¹Joint Bioengineering and Endourology Developmental Surgical (JBEDS) Laboratory, Department of Urology, University of Miami Miller School of Medicine, Miami, FL; ²Joint Bioengineering and Endourology Developmental Surgical Laboratory, Department of Urology, University of Miami Miller School of Medicine, Miami, FL; ³Department of Biomedical Engineering, University of Miami, Coral Gables, FL; ⁴Department of Radiology, University of Miami Miller School of Medicine, Miami, FL; ⁵Department of Urology, University of Miami Miller School of Medicine, Miami, FL  (Presented By: Raymond Leveillee)

11:40 a.m. #12  COMPARISON OF THE RENAL FUNCTIONS AFTER OPEN, LAPAROSCOPIC, AND ROBOTIC PARTIAL NEPHRECTOMY  Ugur Boylu, Michael Pinsky, Maggie Hopkins, Anthony Tracet and Benjamin Lee  Department of Urology, Tulane University School of Medicine, New Orleans, LA  (Presented By: Ugur Boylu)

11:45 a.m. #13  TUMOR SIZE AND ENDOPHYTIC GROWTH PATTERN AFFECT RECURRENCE RATES AFTER LAPAROSCOPIC RENAL CRYOABLATION  Matvey Tsivian¹, Christopher J. Lyne², Janice M. Mayes³, Vladimir Mouraviev¹, Masaki Kimura¹ and Thomas J. Polascik¹ ¹Duke University Medical Center, Durham, NC; ²Allegheny General Hospital, Pittsburgh, PA  (Presented By: Matvey Tsivian)

11:50 a.m. #14  SINGLE PORT LAPAROSCOPIC SURGERY: CUMULATIVE OUTCOMES WITH OVER 100 CASES  Wesley White¹, Raj Goel², Georges-Pascal Haber², Sebastien Crouzet² and Jihad Kaouk² ¹The University of Tennessee Medical Center, Knoxville; ²Cleveland Clinic, Cleveland, OH  (Presented By: Wesley White)

11:55 a.m. #15  PERIOPERATIVE COMPLICATIONS AND OUTCOMES FOLLOWING NEPHRECTOMY IN THE NINTH DECADE OF LIFE  Joe Mobley, Ryan Pickens, Brent Hardin, Wesley White, Bedford Waters and Fred Klein  University of Tennessee Medical Center, Knoxville, TN, Division of Urology, Department of Surgery  (Presented By: Joe Mobley)

PODIUM 1
A NEOADJUVANT CLINICAL TRIAL WITH SORAFENIB FOR PATIENTS WITH STAGE II OR GREATER RENAL CELL CARCINOMA  Eugene Simopoulos, Stephen McKim, Kim Rathmell, William Kim, Paul Godley, Young Whang, Matthew Nielsen, Eric Wallen and Raj Pruthi  The University of North Carolina at Chapel Hill  (Presented By: Eugene Simopoulos)
**Purpose:** The multi-targeted tyrosine kinase inhibitor sorafenib is used for the treatment of advanced stage renal cell carcinoma, but its safety and efficacy has not been evaluated in the preoperative setting – a setting offers several potential advantages such as tumor downstaging. This prospective trial evaluates the safety and feasibility of the tyrosine kinase inhibitor, sorafenib, in the preoperative setting.

**Methods:** Thirty patients with clinical Stage II or greater renal masses, selected based on their candidacy for nephrectomy, underwent preoperative treatment with sorafenib. Toxicities, surgical complications, and tumor responses were evaluated.

**Results:** Of the 30 patients enrolled, 17 patients had localized disease and 13 had metastatic disease (3% Stage I, 33% Stage II, 13% Stage III, 50% Stage IV). The majority proved to be clear cell cancers (70%), followed by papillary (13%), mixed (7%), chromophobe (3%), and other (7%). After a course of sorafenib therapy (median duration of therapy, 33 days), a decrease in primary tumor size (mean shrinkage 9%) and radiographic evidence of loss of intratumoral enhancement (mean decrease 14%) was seen in most patients. According to RECIST guidelines, of the 28 patients evaluable for response, 2 patients had a partial response and 26 had stable disease, with no patients progressing on therapy. Toxicities were similar to that expected with this class of medication. All patients were able to proceed with nephrectomy (mean time off therapy before nephrectomy = 3 days) and no surgical complications believed to be related to sorafenib administration were observed, including no delay in wound healing or dehiscence.

**Conclusions:** Preoperative sorafenib therapy can impact the primary tumor and appears safe and feasible to administer. Further studies are required to determine if preoperative systemic therapy improves survival outcomes in patients undergoing nephrectomy for high-risk renal cell carcinoma.

### PODIUM 2

**LONG-TERM FOLLOW-UP OF PATIENTS INITIALLY MANAGED WITH ACTIVE SURVEILLANCE FOR SOLID RENAL MASSES**

Eugene Simopoulos, Stephen McKim, Benjamin Waldorf, Angela Smith, Matthew Nielsen, Eric Wallen and Raj Pruthi

The University of North Carolina at Chapel Hill

(Presented By: Eugene Simopoulos)

**Objectives:** In recent years some institutions have reported on the relatively short-term follow-up of expectant management of small renal masses. This study sought to provide a long-term follow-up of our initial series of patients whose renal masses were managed expectantly (i.e. "watchful waiting") to provide some insight into the feasibility and safety of this approach in the long term.

**Methods:** 43 patients with 46 renal masses underwent an expectant management strategy for enhancing renal masses initiated between 12/99 – 1/05. Follow-up of this initial cohort are reported.
Results: Mean (median) follow-up of the entire cohort is 57.4 (64.9) months. The mean (median) initial tumor size was 2.9 cm (2.9 cm) and the mean (median) growth rate of the tumors was 0.6 cm/yr (0.2 cm/yr) with 12 (26%) of tumors having no growth. For the entire group, 6 patients were lost to follow-up (or refused follow-up) before intervention at a mean time 24.8 months. For the remaining 37 patients (40 tumors) the mean (median) follow up was 62.5 (65.5) months. Of these, 17 tumors in 15 patients have remained on surveillance and 23 tumors in 22 patients have undergone an intervention. Of the 15 patients (17 tumors) on surveillance, 8 patients (comprising 10 tumors) have died in their follow-up at a mean time from diagnosis of 45.7 months – all of other causes. No patient on surveillance has developed a metastasis or death secondary to renal carcinoma. 23 tumors (22 patients) have undergone an intervention with an overall mean (median) follow-up from diagnosis of 65.0 (68.0) months and with a mean (median) time from diagnosis to intervention of 25.1 (21.9) months. These patients have undergone surgery (19), cryotherapy (2), and RFA (2), with 2 patients requiring second intervention (repeat partial nephrectomy, repeat RFA). No patient in the intervention subgroup has developed a known metastasis nor has died of renal carcinoma at a mean follow-up of 65.0 (68.0) months with 2 patients dying of other causes. (5 patients in the intervention group were eventually lost to follow-up at a mean time of 23.9 months after treatment.)

Conclusions: Active surveillance for renal masses remains an appropriate option for the carefully selected patients – especially those with competing co-morbidities. The long-term follow-up of such patients demonstrates the safety of this approach, and delayed intervention does not appear to adversely impact clinical outcomes.

PODIUM 3
NECROSIS AS A PREDICTOR OF SURVIVAL FOLLOWING NEPHRECTOMY FOR PATHOLOGIC T2 RENAL CELL CARCINOMA
Kelly Stratton, Ryan Hutchinson, Sam Chang, Andrew Stec, Benjamin Coons, Michael Cookson, S. Duke Herrell, Daniel Barocas, Joseph Smith, Jr. and Peter Clark
Department of Urologic Surgery, Vanderbilt University Medical Center, Nashville, TN
(Presented By: Kelly Stratton)

Introduction: Variability exists in outcomes among patients with T2N0M0 disease after surgery for renal cell carcinoma (RCC). Previous studies to determine the significance of necrosis on pathology following nephrectomy have provided contradicting conclusions. We set out to determine if the presence of necrosis predicted outcome following nephrectomy for pathologic T2 (pT2) RCC.

Methods: Using a prospective database we identified 112 patients who underwent nephrectomy for pT2 RCC between 1990 and 2008. Patients with lymph node involvement (n=4), metastases (n=10), or both (n=2) were excluded leaving 96 patients in the cohort. Patient demographic, clinical and pathologic variables were collected. Primary outcome measures were overall survival (OS) and disease specific survival (DSS). Covariates for univariate analysis included patient age, tumor size, gender, histologic subtype, Fuhrman grade, presence of necrosis, preoperative hypercalcemia and American Society of Anesthesiology Classification (ASA), and were tested by log-rank statistic. Multivariate analysis was performed using a Cox proportional hazards model on covariates significant on univariate analysis. Necrosis was determined based on gross examination of sectioned specimens.

Results: There were 60 men and 36 women. Mean follow-up was 53.4 months (range 0.7 – 226 months). Mean age at nephrectomy was 57.7 years (range 26 – 87). On univariate analysis increasing age as a continuous variable (p=0.003) and presence of grossly apparent necrosis (p<0.001) were both associated with worse OS. Actuarial estimated five year OS with or without necrosis were 63% and 96% respectively (p=0.001). On multivariate analysis age (HR 1.06, 95% CI 1.01–1.11, p=0.011) and presence of necrosis (HR 3.47, 95% CI 1.38–8.76, p=0.008) remained independent predictors of OS. For DSS only the presence of necrosis was associated with worse outcome. The five-year estimated DSS among those with and without necrosis was 75% and 96% respectively (p=0.018). Tumor size, gender, histologic subtype, Fuhrman grade, hypercalcemia and ASA classification were not associated with outcome for either OS or DSS.

Conclusions: Our data demonstrate that in a cohort restricted to pT2N0M0 disease the presence of grossly evident necrosis is an independent predictor of worse OS and DSS. This is consistent with the hypothesis that biologic factors other than the classic TNM staging criteria are important in predicting outcome after surgery for RCC.

PODIUM 4
IMPACT OF BODY MASS INDEX AND TUMOR LOCATION ON THE INCIDENCE OF BENIGN HISTOLOGY AT THE TIME OF NEPHRON-SAVING SURGERY
Bruce Kava, Mohamed Aziz, Vincent Bird, Davendar Katkooi, Rajinikanth Ayyathurai, Rajan Ramanathan, Murugesan Manoharan, Gaetano Ciancio, Mark Soloway and Raymond Leveillee
University of Miami Miller School of Medicine. Miami, FL
(Presented By: Bruce Kava)
Introduction and Objectives: Historically, 15 – 25% of small renal masses prove to be benign at the time of nephron-sparing surgery (NSS). Female gender, smoking history, patient age and the size of the tumor have previously been found to impact the likelihood of benign histology. The relationship between body mass index (BMI) and the location of the tumor (central versus peripheral) on final histopathology has not been evaluated.

Methods: Data was collected prospectively for consecutive patients undergoing NSS. Central tumors were either: completely encircled by renal parenchyma, tumors that descended below the corticomedullary junction, or tumors that were in direct apposition to the collecting system, renal sinus, or the hilar structures. Categorical variables were evaluated with chi-square or Fischer’s exact test, and continuous variables were analyzed with ANOVA. Multivariate analysis was performed using regression analysis.

Results: NSS was performed in 325 patients by five surgeons. 107 (33%) were performed laparoscopically. Seventy-eight (24%) tumors were benign. Angiomyolipomas, oncocytomas and complex cysts accounted for 67 (86%) of benign tumors. The results of univariate analysis are depicted in table 1, and demonstrate that patients with benign tumors were more likely: to be female, have a lower BMI, and were less likely to have centrally located tumors. Age, smoking history and tumor size were not found to be associated with benign histology. On multivariate analysis, gender (p< 0.001), tumor location (p < 0.014) and BMI (p=0.015) were independently associated with benign histology.

Conclusions: Prospectively identifying which small renal masses are benign would have tremendous implications for the patient, who would be spared morbidity associated with NSS. Prior studies have implicated gender, size of the tumor, patient age and smoking history as variables associated with benign histology at the time of NSS. Ours is the first to identify the impact of tumor location and BMI on the risk of benign histology. Additional studies are needed to corroborate these findings and incorporate this data into nomograms.

Table 1: Comparison of patients with benign and malignant histology at the time of NSS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Benign (N=78)</th>
<th>Malignant (N=47)</th>
<th>P - value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean age (years)</td>
<td>57.5±18.9</td>
<td>59±12.4</td>
<td>0.229</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td>0.000</td>
</tr>
<tr>
<td>Female</td>
<td>50 (65.9%)</td>
<td>28 (59.5%)</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>28 (35.2%)</td>
<td>16 (27.3%)</td>
<td></td>
</tr>
<tr>
<td>BMI</td>
<td>26±4.4</td>
<td>28±5.6</td>
<td>0.012</td>
</tr>
<tr>
<td>Side</td>
<td></td>
<td></td>
<td>1.0</td>
</tr>
<tr>
<td>Left</td>
<td>43 (55.3%)</td>
<td>128 (27.5%)</td>
<td></td>
</tr>
<tr>
<td>Right</td>
<td>35 (45.6%)</td>
<td>115 (24.5%)</td>
<td></td>
</tr>
<tr>
<td>Mass size (cm)</td>
<td>3.7±2.5</td>
<td>3.4±1.5</td>
<td>0.36</td>
</tr>
<tr>
<td>Smoker</td>
<td>15 (19.7%)</td>
<td>51 (27.9%)</td>
<td>0.087</td>
</tr>
<tr>
<td>Location</td>
<td></td>
<td></td>
<td>0.009</td>
</tr>
<tr>
<td>Central</td>
<td>15 (23.4%)</td>
<td>93 (39.8%)</td>
<td></td>
</tr>
<tr>
<td>Periphera l</td>
<td>44 (56.6%)</td>
<td>14 (30.9%)</td>
<td></td>
</tr>
</tbody>
</table>

PODIUM 5
CHARACTERIZING THE USE OF PARTIAL NEPHRECTOMY FOR TREATMENT OF KIDNEY CANCER DIAGNOSED IN 2006
Jan Colli, Jared Cox, Sean Clark and Michael Knox
University of Alabama at Birmingham
(Presented By: Jared Cox)

Introduction: Partial nephrectomy for surgical treatment of kidney cancer can preserve renal function and benefit patients in many cases. The use of partial nephrectomy for treating kidney cancer has increased from about 6% in 1998 to 17% in 2006 in the United States. The surgical treatment is employed more frequently for stage I patients: 11.6% in 1998, and 26.9% in 2006. In this study we characterize the use of partial nephrectomy as a treatment for kidney cancer diagnosed in 2006. The objective is to compare geographical variations in the employment of partial nephrectomy and track these changes over time.

Methods: Data on 33,578 patients diagnosed with kidney and renal pelvis cancer diagnosed in 2006 from the National Cancer Data Base were used to determine the use of partial nephrectomy for kidney cancer treatment based on: stage; type of hospital; geographical location and patient characteristic (gender, race and age).
**Results:** Approximately 49% of the cases were stage I, 8% stage II, 12% stage III, 15% stage IV and 16% unknown. Partial nephrectomy was used more frequently in teaching hospitals (about 11.6% overall and 29.6% for stage I) than other hospitals (6.0% overall and 35.4% for community cancer centers). There were large geographical differences in partial nephrectomy rates. The highest rates were in NY and MN; 41% for stage I patients. Partial nephrectomy rates for stage I patients in NY teaching hospitals exceeded 45%. The lowest rates were in AL, FL and SC at 18% for stage I patients. Partial nephrectomy rates were about the same for Caucasians and African Americans. There were no differences in rates based on gender. Partial nephrectomy rates were highest for patients under 40 years of age (>40%) and declined for older patients: We project that approximately two thousand partial nephrectomies could have been performed in place of radical nephrectomy if partial nephrectomy rates of 40% were employed nationally in 2006.

**Conclusions:** Use of partial nephrectomy for the treatment of kidney cancer could be increased on a national basis, which would decrease solitary kidney rates by several thousand per year. This would result in an overall reduction in patients ending up with renal insufficiency and further decrease those progressing and requiring dialysis. With the use of minimal invasive techniques to perform partial nephrectomy, we are seeing a trend toward more partial nephrectomies being performed over the recent years in all areas of the country. We have no disclosures.

**PODIUM 6**

PARTIAL NEPHRECTOMY IN PATIENTS WITH RENAL VEIN TUMOR THROMBUS

Cesar Ercole, Luke Wiegand, Jose Correa, Philippe Spiess, Julio Pow-Sang and Wade Sexton

Moffitt Cancer Center, Tampa, FL

(Presented By: Luke Wiegand)

**Objectives:** Renal cell carcinoma (RCC) has a propensity to invade vascular structures. While pre-operative radiographic studies usually detect tumor thrombus if present, a small percentage of patients with suspected RCC will have thrombus found incidentally during partial nephrectomy (PN) or with radiographic imaging prior to PN. We determined the frequency of muscle containing renal vein or venous branch thrombus in patients undergoing PN, and the success of nephron preservation determined by renal function, margin status, complications, and local recurrence.

**Methods:** Since October 2004, 305 patients underwent PN at a single institution. A retrospective review of an IRB approved dataset identified 7 men (~2%) who underwent open PN for pT3b tumors (2002 TNM staging).

**Results:** All 7 patients had centrally located endophytic tumors (4 left-sided, 3 right-sided). Absolute indications for nephron preservation were present in 6 (solitary kidney [5], renal insufficiency [1]). The clinical stage was T1a (5) and T3b (2). In the 5 cT1a patients, thrombus was first identified with intraoperative ultrasound in 1 and by palpation of the renal vein or during the performance of the PN in the remaining 4. Three cT1a patient’s pre-op cross sectional imaging studies were beyond 60 days prior to surgery. Renal surface hypothermia was applied in 4 cases (avg. 76 min clamp) and warm ischemia only utilized in 3 (avg. 38 min clamp). Mean tumor size was 4.7 cm and 100% of the tumors were clear cell RCC. All surgical margins were negative (aside from the interface with the thrombus). Renal function as measured by serum Cr (pre-op and ≥ 30 days post-op) increased an average of 0.38 gm/dl (range 0.0 to 0.9 gm/dl). No patient required dialysis. Complications were limited to 1 delayed post-operative urine leak successfully managed with a JJ stent and percutaneous drainage. One patient developed a local recurrence associated with level III IVC tumor thrombus 9 months following PN. He was managed with radical excision and IVC thrombectomy followed by post-operative dialysis. Mean follow-up in the remaining 6 patients is 20 months (range 1 to 36 months) and none have experienced local or distant recurrences.

**Conclusions:** In candidate patients for PN, pre-operative radiographic studies should be scrutinized carefully to exclude tumor associated venous thrombus – especially for centrally located renal tumors. However, when thrombus is encountered incidentally during the course of PN, our findings suggest that most patients can be managed successfully with PN.

**Funding:** None

**PODIUM 7**

CHARACTERIZING CHANGES IN KIDNEY AND RENAL PELVIS CANCER INCIDENCE FROM 1998 TO 2006 IN THE U.S.

Jan Colli, Michael Knox, Sean Clark and Jared Cox

University of Alabama at Birmingham

(Presented By: Michael Knox)
Introduction: Kidney and renal pelvis cancer (KCa) incidence rates have increased significantly from 1998 to 2000 while mortality rates have declined. Smoking and hypertension are risk factors for the disease that has declined over the period. Obesity and antihypertension medications are variables that have increased modestly but probably not enough to account for the large increase in KCa incidence rates. Some studies suggest that rising KCa incidence rates are a consequence of higher detection rates from the increased use of diagnostic imaging for other causes. In this study, we examine changes in stage and treatments of patients diagnosed with KCa from 1998 to 2006. The goal is to characterize the changing nature of KCa cases.

Methods: Data on over 20,000 patients diagnosed with KCa diagnosed from 1998 to 2006 from the National Cancer Data Base were used to determine changes in stage (I, II, III, IV and unknown) and treatment (surgery, other and no treatment) rates based on race (White/Black), gender and age at diagnoses. KCa rates have increased by 61% in the U.S.; the largest increases were in DC and AL (> 87%) while the smallest were in NH and NM (< 3%). The percentages of KCa by stage for 2006 are: stage I (49%); stage II (8%); stage III (12%) stage IV (15%) and stage unknown (16%). The percentages of treatments for 2006 were: surgery (78%), other treatments (11%) and no treatment (11%).

Results: Stage I KCa rates increased from 33 to 62 cases/100000 for Whites (88%) and from 24 to 51 cases/100000 for Black (112%) from 1998 to 2006. Stage II disease decreased by about 11% for both races. Stage III increased by approximately 24% for Whites and 46% for Blacks. Stage IV increased by 5% Whites and 16% for Blacks. There were significant increases in rates for unknown stage for both races; 7.4 to 13.2 cases/100000 for Whites (179%) and 4.6 to 11.4 cases/100000 for Black (245%). There were no significant differences in trends in stage based on gender although overall rates for males were generally about 65% greater than females. The mean age at diagnoses remain constant for stage I (63 yrs), stage II (63 yrs), stage III (66 yrs) and stage IV (66 yrs) but declined from 69 to 67 yrs for stage unknown.

Conclusions: There was a significant increase in surgery for stage I; from 26 to 54 cases/100000 for Whites and from 19 to 46 cases/100000 for Blacks. There were no significant differences in rates for other treatments and no treatment over the time period. We have no disclosures.

PODIUM 8
EFFECT OF PREOPERATIVE HYPERCALCEMIA ON SURVIVAL FOLLOWING NEPHRECTOMY FOR PATHOLOGIC T1 RENAL CELL CARCINOMA

Kelly Stratton, Michelle Lightfoot, Sam Chang, Andrew Stec, Benjamin Coons, Michael Cookson, S. Duke Herrell, Daniel Barocas, Joseph Smith, Jr. and Peter Clark
Department of Urologic Surgery, Vanderbilt University Medical Center, Nashville, TN
(Presented By: Kelly Stratton)

Introduction: Hypercalcemia can be a paraneoplastic syndrome or seen with bone metastases in renal cell carcinoma (RCC); however its relevance in early stage tumors has not been well characterized. We set out to determine if hypercalcemia is associated with survival outcomes in pathologic T1 (pT1) RCC.

Methods: Using a prospective database we identified 495 patients who underwent nephrectomy for pathologic T1 RCC between 1990 and 2008. Patients with positive lymph nodes (n=2), metastases at time of nephrectomy (n=13), or both (n=1), or those missing preoperative serum calcium levels (n=94) were excluded leaving 385 patients for analysis. Patient, clinical, and pathologic variables were collected. Primary outcomes were overall survival (OS) and disease specific survival (DSS). Covariates evaluated included age, tumor size, gender, histologic subtype, Fuhrman grade, presence of gross necrosis on pathologic sectioning, preoperative hypercalcemia (serum calcium >10.5 mg/dL), and American Society of Anesthesiology classification (ASA). Univariate outcomes were tested by log-rank statistic while multivariate analysis was performed using Cox proportional hazards model.

Results: There were 234 men and 151 women. Mean follow-up was 36.3 months (range 0 – 153 months). Mean age at surgery was 60.0 years (range 18 – 86). Six patients (1.6%) had preoperative hypercalcemia. On univariate analysis, age (p=<0.001), ASA class (p=0.008), and preoperative hypercalcemia (p=0.012) were all associated with worse OS. Actuarial estimated three year OS for patients without or with preoperative hypercalcemia were 87% and 67% respectively (p=0.012).

On multivariate analysis increasing age (p=<0.001), higher ASA class (p=0.027), and preoperative hypercalcemia (HR 6.08, 95% CI 1.45–25.48, p=0.013) were all independent predictors of OS. For DSS, only hypercalcemia (p=<0.001) was associated with worse outcomes. Three year estimated DSS of patients without or with hypercalcemia was 98% and 83% respectively (p=<0.001). Tumor size, gender, histologic subtype, Fuhrman grade, and necrosis were not associated with worse OS or DSS.

Conclusions: Hypercalcemia is relatively rare in pT1 RCC without lymph node involvement or metastatic disease but is associated with significantly worse outcomes. It therefore adds substantially to the standard TNM staging criteria and may indicate those patients who warrant more aggressive or earlier intervention and closer follow-up post-operatively.
PODIUM 9
RATIONALE FOR A LESS AGGRESSIVE THERAPY FOR SMALL RENAL TUMORS
Matvey Tsivian, Vladimir Mouraviev, Masaki Kimura, Janice M. Mayes, Jorge R. Caso, David M. Albala, Cary N. Robertson, Philip J. Walther and Thomas J. Polascik
Duke University Medical Center, Durham, NC
(Presented By: Matvey Tsivian)

Introduction and Objectives: Currently, most renal masses are detected incidentally on imaging for unrelated problems. Small renal masses, amenable to nephron-sparing procedures are frequently encountered. We evaluated the influence of tumor size on pathological characteristics of the lesion to determine whether less aggressive treatment may be appropriate for smaller renal lesions.

Methods: We retrospectively reviewed medical records of patients who underwent a partial nephrectomy for a solitary enhancing lesion suspected to be renal cell carcinoma (RCC) between 2000 and 2008. Cases of known von Hippel Lindau syndrome were excluded from the analysis. Pathological features were analyzed and correlated to radiologically measured tumor size.

Results: We identified 243 records matching the criteria. Mean tumor size was 2.93 (±1.60) cm. Pathology reports showed RCC in 179 (73.7%) specimens, benign tumors in 45 (18.5%) and no tumor in 19 (7.8%). Benign tumors were found in 25.5% of lesions <2cm and 16.5% of larger lesions. No tumor was found in 14.5% of <2cm lesions and 5.9% of larger lesions (p=0.021). RCC was pathologically confirmed in only 60% of smaller kidney lesions. Moreover, pathologically confirmed RCC lesions <2cm by imaging had a significantly lower mean Fuhrman grade (1.09 vs 1.4, p=0.037). There were no grade 3 and 1 grade 4 RCC among tumors <2cm.

Conclusions: Among patients treated with partial nephrectomy, our experience reveals that solitary kidney lesions <2cm suspected to be RCC are malignant by final pathology in only 60% of cases. Additionally, small sized RCC lesions are mostly low (1 – 2) grade. These findings suggest possible overtreatment of small suspicious lesions that may be adequately treated with less invasive modalities or even carefully followed.

PODIUM 10
RENAL CRYOABLATION: A COMPARATIVE ANALYSIS BETWEEN LAPAROSCOPIC AND PERCUTANEOUS APPROACHES
Wesley White¹, Sebastien Crouzet², Georges-Pascal Haber², Raj Goel² and Jihad Kaouk²
¹The University of Tennessee Medical Center, Knoxville, TN; ²Cleveland Clinic, Cleveland, OH
(Presented By: Wesley White)

Introduction and Objectives: The widespread use and refinement of computed tomography has led to a dramatic increase in the number of incidentally discovered and localized renal lesions. This fortunate trend has allowed urologists to explore alternative and less invasive forms of therapy. Among patients with significant co-morbidities and/or compromised renal function, renal cryoablation is viewed as an efficacious and safe treatment option. However, the optimal approach for cryoablation is as yet unproven. We present our institution’s cumulative experience and comparative outcomes with laparoscopic (LRC) and percutaneous renal cryoablation (PRC).

Methods: A retrospective cohort study was performed to assess perioperative outcomes and treatment efficacy among patients with radiographically enhancing renal masses treated with LRC or PRC. Demographic, radiographic and perioperative data were obtained for all patients. Patients were followed post-operatively for evidence of immediate and remote complications and treatment success. Renal function was assessed using absolute creatinine and estimated glomerular filtration rate (eGFR). Statistical analysis was performed.

Results: Between 1997 and 2008, a total of 307 patients underwent LRC (n = 244) or PRC (n = 63) for the management of a radiographically enhancing renal mass. Patient demographics, tumors characteristics and baseline renal function were similar between the 2 groups. Patients who underwent PRC were significantly more likely to have a solitary kidney (19 vs 30, p = 0.0012) or a prior history of kidney surgery (35 vs 54, p < 0.001). Mean pre- and post-operative creatinine for all patients was 1.5 and 1.4mg/dL, respectively (p = 0.97). Mean pre- and post-operative eGFR was 59.2 and 57.3mL/min, respectively (p = 0.94). Mean number of probes used for LRC and PRC was 1.4 and 2.2, respectively (p < .0001). Length of hospitalization was significantly shorter in the PRC cohort (22 hours) as compared to the LRC cohort (59.1 hours) (p < .0001). PRC demonstrated a significantly higher incomplete treatment rate (7.6%) compared to LRC (1.6%) (p = 0.0055). Two-year overall, disease-specific, and recurrence-free survival was similar between the 2 groups.

Conclusions: Based on our experience, LRC and PRC offer comparable and acceptable efficacy with excellent preservation of renal function. While PRC is associated with a higher incomplete treatment rate, long-term follow-up is needed to determine if this translates into inferior recurrence-free and disease-specific survival.
PODIUM 11

IRREVERSIBLE ELECTROPORATION IN IN-VIVO PORCINE KIDNEYS

Raymond Leveillee¹, Nelson Salas²,³, Charles Moore², Merce Jorda⁴, Maria-Eugenia Sierra⁴ and John Shields⁵

¹Joint Bioengineering and Endourology Developmental Surgical (JBEDS) Laboratory, Department of Urology, University of Miami Miller School of Medicine, Miami, FL; ²Department of Biomedical Engineering, University of Miami, Coral Gables, FL; ³Department of Radiology, University of Miami Miller School of Medicine, Miami, FL; ⁴Department of Urology, University of Miami Miller School of Medicine, Miami, FL

(Presented By: Raymond Leveillee)

Introduction and Objectives: Irreversible Electroporation (IRE) is a recently introduced, minimally-invasive treatment modality that uses an electric field, rather than heat or cold, to ablate tissue. The electric field, induced by high voltage direct current pulses, increases the permeability of the target tissue cell membranes, resulting in loss of homeostasis and eventual cell death. Since heat or cold is not used, blood vessels and nerves are spared. The objective of this investigation was to assess the feasibility of IRE for renal tissue treatment in in-vivo porcine kidneys.

Methods: The Nanoknife™ IRE system with either a single bipolar or two monopolar probes were used to treat both kidneys of eleven Yorkshire pigs ranging between 40 and 56 kg under general anesthesia with muscular blockade (pancuronium) through a midline incision. Pigs were survived between 0 to 18 days. Probes were inserted either perpendicular or parallel to the longitudinal axis of the kidney. The treatment parameters for the monopolar probes were the following: voltage = 1800−2500 V, electrode exposure = 1.5 – 2.0 cm, inter-probe distance = 1.5 – 2.5 cm, pulse count = 90, pulse duration = 100 microseconds. The treatment parameters for the bipolar probe are the following: voltage = 2000−2700 V, pulse count = 90, pulse duration = 70 microseconds. After euthanasia, the kidneys were harvested and evaluated grossly and histologically.

Results: Congestion, hemorrhage, and cell death were observed within and up to 5 mm outside of the grossly observed lesion. Dystrophic calcification was observed within 11 to 18 days. Lesion volumes were indistinct between cortex (0.06 – 2.28 cm³ @ 0 days; 1.10 – 1.65 cm³ @ 11 days) and medulla (0.37 – 1.66 cm³ @ 0 days; 1.65 – 3.14 cm³ @ 11 days). Lesion volumes decreased from one (6.3±2.0 cm³) to ten (2.0±1.2 cm³) days. Pulse disruptions occurred with bipolar probes resulting in inconsistent lesion volumes at voltages greater than 2000V.

Conclusions: IRE is a novel ablation modality that can create lesions of various sizes in renal tissue under a variety of parameters. Cell death is achieved within 18 days with preservation of gross architecture. Continued investigation is warranted to achieve optimal treatment parameters in the kidney.

PODIUM 12

COMPARISON OF THE RENAL FUNCTIONS AFTER OPEN, LAPAROSCOPIC, AND ROBOTIC PARTIAL NEPHRECTOMY

Ugur Boylu, Michael Pinsky, Maggie Hopkins, Anthony Tracet and Benjamin Lee

Department of Urology, Tulane University School of Medicine, New Orleans, LA

(Presented By: Ugur Boylu)

Introduction: The purpose of the study was to assess the intermediate term follow-up of surgical approach, such as open, laparoscopic, and robotic, on renal function in patients undergoing partial nephrectomy

Material and Methods: Between 1999 and 2009, a total 144 patients underwent robotic partial nephrectomy with open, laparoscopic, or robotic approach. Of these, 124 patients with solid renal masses (renal cell carcinoma, oncocytoma, angiomyolipoma) were included in the study. Estimated GFR was calculated using the standard MDRD formula. Differential functions were measured with MAG3 renal scan. Preoperative and 3 month postoperative eGFR and differential functions were compared between open, laparoscopic and robotic groups. Mean follow-up time was 34 months (range: 6 – 96 months).

Results: The average tumor size was 4.3±3.6 cm in open group (n=34), 2.8±1.4 cm in laparoscopy group (n=76), and 2.8±1.3 cm in robotic group (n=14) (p=0.003). Mean decrease in eGFR was 11.8 ml/min/1.73m² in open group, 12.9 ml/min/1.73m² in laparoscopy group, and 14.5 ml/min/1.73m² in robotic group. The difference between groups was insignificant (p=0.73). Mean decrease in differential function was 5.4% in open group, 5.5% in laparoscopy group, and 6.4% in robotic group. There was no significant difference among groups (p=0.64).

Conclusion: Decrease in renal function following partial nephrectomy is not affected by surgical approach. Open, laparoscopic and robotic partial nephrectomy results in similar renal functional outcomes.
PODIUM 13
TUMOR SIZE AND ENDOPHYTIC GROWTH PATTERN AFFECT RECURRENCE RATES AFTER LAPAROSCOPIC RENAL CRYOABLATION
Matvey Tsivian¹, Christopher J. Lyne², Janice M. Mayes¹, Vladimir Mouraviev¹, Masaki Kimura¹ and Thomas J. Polascik¹
¹Duke University Medical Center, Durham, NC; ²Allegheny General Hospital, Pittsburgh, PA
(Presented By: Matvey Tsivian)

Introduction and Objectives: Laparoscopic cryoablation (LCA) has gained popularity in the treatment of small renal tumors but local tumor control remains a concern. In this study, we analyze factors that may contribute to local relapse after LCA of renal tumors.

Methods: We analyzed 165 patients who underwent LCA between October 2001 and June 2008 at either Allegheny General Hospital or Duke University Medical Center with at least 6 months of post-surgical follow-up. Demographics, perioperative variables, tumor characteristics (size, pattern of growth, biopsy results) and follow-up were recorded. Growth pattern was categorized as exophytic, mesophytic or endophytic. Regression analyses were performed to evaluate risk factors for local relapse after LCA.

Results: Median patient age was 66 (range: 33 – 90) with males comprising 60.6% of the cohort. Median tumor size was 2.3 cm (range: 0.5−5.0). Pathology was distributed as follows: renal cell carcinoma in 118 (71.5%), oncocytoma in 13 (7.9%), angiomyolipoma in 8 (4.8%) and other in 26 (15.8%) patients. Patients were treated for a single lesion in 94.5% of cases and multiple tumors in 5.5%. Endophytic growth pattern was present in 22.4%. We observed 7 (4.2%) local recurrences over a median follow up of 60 (range: 6 – 79) months. Median time to recurrence was 15 (range: 6 – 48) months. On proportional hazards regression, tumor size and endophytic growth pattern were significantly associated with local recurrence (p=0.008 and p=0.001, OR=4.1 and OR=1.15, respectively).

Conclusions: LCA demonstrated good short-term tumor control with an acceptable recurrence rate. Larger tumors and those with endophytic growth pattern may be at increased risk of relapse after LCA.

PODIUM 14
SINGLE PORT LAPAROSCOPIC SURGERY: CUMULATIVE OUTCOMES WITH OVER 100 CASES
Wesley White¹, Raj Goel², Georges-Pascal Haber², Sebastien Crouzet² and Jihad Kaouk²
¹The University of Tennessee Medical Center, Knoxville, TN; ²Cleveland Clinic, Cleveland, OH
(Presented By: Wesley White)

Introduction and Objectives: To present perioperative outcomes in an observational cohort of patients who underwent LaparoEndoscopic Single Site (LESS) surgery at a single academic center.

Methods: A prospective study was performed to evaluate patient outcomes following LESS urologic surgery. Demographic data including age, BMI, operative time, estimated blood loss (EBL), operative indications, complications and post-operative Visual Analog Pain Scale (VAPS) scores were accrued. Patients were followed post-operatively for evidence of adverse events.

Results Obtained: Between September 2007 and June 2009, 105 patients underwent LESS urologic surgery. Specifically, 78 patients underwent LESS renal surgery (cryoablation – 9, partial nephrectomy – 15, metastectomy – 1, renal biopsy – 1, simple nephrectomy – 7, radical nephrectomy – 8, cyst decortication – 2, nephroureterectomy – 7, donor nephrectomy – 20, and dismembered pyeloplasty – 8) and 27 patients underwent LESS pelvic surgery (varicocelectomy – 3, radical prostatectomy – 7, radical cystectomy – 3, sacral colpopexy – 13 and ureteral reimplant – 1). Mean patient age was 55 years. Mean BMI was 26.1 kg/m2. Mean operative time was 198 minutes. Mean EBL was 132mL. No intraoperative complications occurred. Six patients required conversion to standard laparoscopy. One patient required open conversion. Mean length of hospitalization was 3 days. Mean VAPS score at discharge was 1.5/10. At a mean follow-up of 14 months, 10 Clavien Grade II (transfusion – 8, UTI – 1, DVT – 1) and 2 Clavien Grade IIIb (recto-urethral fistula – 1, angioembolization – 1) surgical complications occurred.

Conclusions: Based on our experience, LESS urologic surgery is feasible, offers improved cosmesis and may offer decreased pain. Its superiority compared to standard laparoscopy is currently speculative.
PODIUM 15
PERIOPERATIVE COMPLICATIONS AND OUTCOMES FOLLOWING NEPHRECTOMY IN THE NINTH DECADE OF LIFE
Joe Mobley, Ryan Pickens, Brent Hardin, Wesley White, Bedford Waters and Fred Klein
University of Tennessee Medical Center, Knoxville, TN, Division of Urology, Department of Surgery
(Presented By: Joe Mobley)

Introduction and Objectives: With an aging population, urologists frequently see significant pathology in our elderly patients. These patients often present saddled with multiple medical co-morbidities thus increasing their risk when surgical intervention is necessary. Despite trends toward observation and minimally invasive intervention, there are cases where radical extirpative therapy is indicated. In these circumstances, defining the risk of intervention to our elderly population is an important task to assist in decision-making and preoperative counseling. As such, we review our data concerning patients in their ninth decade of life who have undergone radical or total nephrectomy for enhancing renal masses or upper tract urothelial tumors.

Methods: A retrospective chart review was performed of all patients in our practice 80 years of age or older who have undergone an open or laparoscopic nephrectomy over a 6.5-year period. Data was collected in regards to age, size and pathology of tumor, operative technique, length of stay, intraoperative and postoperative complications, change in renal function and survival. Complications were categorized based on Clavien criteria.

Results: From 1/1/2003 to 7/31/2009, 23 octogenarians at our institution underwent open or laparoscopic nephrectomy. One patient was excluded from analysis due to concomitant cystectomy. The cohort’s average age at the time of surgery was 83.3 (80 – 89) and consisted of 10 females and 12 males. 15 patients underwent hand-assisted or pure laparoscopic surgery while 7 had an open procedure. Pathology revealed 10 renal cell carcinomas, 9 urothelial tumors, 1 metastatic lesion, 1 renal abscess and 2 benign lesions. There were no intraoperative complications. Mean hospital stay was 6.2 days. There were 9 postoperative complications including four Clavien 3 and two Clavien 4 complications. Both grade 4 complications were ICU admissions for postoperative respiratory issues in patients with chronic lung disease. Two patients developed DVTs and 2 patients required subsequent hemodialysis. 1 patient underwent subsequent placement of an IVC filter and 2 patients required reclosure of a fascial dehiscence. 6 months following surgery there was 100% survival among our 22 patients.

Conclusions: Open and laparoscopic radical nephrectomy is a feasible procedure in appropriately selected elderly patients and should remain an option when less invasive interventions are not appropriate. The postoperative care of this patient population does require a high level of diligence as a higher rate of perioperative complications can be expected. In high risk patients the use of retention sutures should decrease the risk of fascial failure.

12:10 p.m. – 12:20 p.m. STATE OF THE ART LECTURE: CURRENT VIEW OF MANAGEMENT OF SMALL RENAL MASSES – AUA GUIDELINES AND PERSONAL OPINIONS
Guest Speaker: Michael L. Blute, MD
Rochester, MN

12:25 p.m. – 1:25 p.m. Industry Sponsored Lunch
“What is Testosterone’s Role In Treatment Decisions and Outcomes in Prostate Cancer Patients? Four Provocative Case Studies”
Location: Poinciana 1
Supported by an Educational Grant from Watson
Coordinated by MedReviews, LLC
Speakers:
E. David Crawford, MD (Chair)
Professor of Surgery, Urology and Radiation Oncology
University of Colorado
Aurora, Colorado
Neal D. Shore, MD, FACS, CPI
Carolina Urologic Research Center / Atlantic Urology Clinics
Myrtle Beach, South Carolina
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| 12:25 p.m. – 1:25 p.m. | Industry Sponsored Lunch  
“Results From Two Head to Head Trials Comparing Two OAB Agents”  
Location: Poinciana 2  
Speaker: Pamela I. Ellsworth, MD  
University Urological Associates  
Providence, RI |

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| 1:30 p.m. – 2:45 p.m. | SESSION 2: ED / PENIS / INFERTILITY PODIUM  
Location: Americana 4  
Moderators: Rafael E. Carrion, MD  
Tampa, FL  
Moderators: Culley C. Carson, III, MD  
Chapel Hill, NC |

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| 1:30 p.m. #16 | PROGENITOR CELL-DERIVED ENDOTHELIAL CELL THERAPY RESTORES ERECTILE FUNCTION  
Sergio Rodriguez, Tamer Aboushwareb, Kuo-Liang Chen, Anthony Atala and James Yoo  
Department of Urology and Institute for Regenerative Medicine, Wake Forest University Health Sciences Winston Salem, NC  
(Presented By: Tamer Aboushwareb) |
| 1:35 p.m. #17 | ANALYSIS OF CLINICAL VARIABLES AFFECTING FUNCTIONAL OUTCOMES IN PATIENTS UNDERGOING SIS PATCH GRAFTING FOR PEYRONIE’S DISEASE  
Alejandro Rodriguez, Barrett McCormick, Jorge Caso and Rafael Carrion  
University of South Florida, Tampa, FL  
(Presented By: Alejandro Rodriguez) |
| 1:40 p.m. #18 | DISTAL PENOPLASTY FOR SKIN DEFECTS THAT RESULT WHILE CORRECTING PEYRONIE’S DISEASE  
Alejandro Rodriguez, Michael Keating and Rafael Carrion  
University of South Florida, Tampa, FL  
(Presented By: Alejandro Rodriguez) |
| 1:45 p.m. #19 | IMPROVED OUTCOMES FROM INTRALESIONAL INTERFERON INJECTIONS COMBINED WITH PENILE TRACTION THERAPY FOR PEYRONIE’S DISEASE  
Ashley Bowen¹, Arthi Chawla², Suresh Sikka² and Wayne Hellstrom²  
¹Tulane University New Orleans, LA  
(Presented By: Ashley Bowen) |
| 1:50 p.m. #20 | PREOPERATIVE AND POSTOPERATIVE ERECTILE FUNCTION IN PATIENTS UNDERGOING PEYRONIE’S PLAQUE INCISION AND GRAFTING  
Benjamin Whittam¹, Melissa Kaufman², Todd Doran² and Douglas Milam²  
¹Vanderbilt University Medical Center, Nashville, TN  
(Presented By: Benjamin Whittam) |
| 1:55 p.m. #21 | USE OF LENGTH EXPANSION INFLATABLE PENILE PROSTHESES IN MEN WITH ERECTILE DYSFUNCTION SECONDARY TO PEYRONIE’S DISEASE  
Benjamin Whittam¹, Melissa Kaufman², Todd Doran² and Douglas Milam²  
¹Vanderbilt University Medical Center, Nashville, TN  
(Presented By: Benjamin Whittam) |
2:00 p.m.  #22  A MULTI-INSTITUTIONAL OBSERVATIONAL STUDY ON TESTOSTERONE LEVELS AFTER TESTOSTERONE PELLET (TESTOPEL™) INSERTION.  
Ashley Bowen¹, Andrew McCullough², Mohit Khera³, Abraham Morgentaler⁴, Irwin Goldstein⁵ and Wayne Hellstrom⁶
¹Tulane University New Orleans, LA; ²New York University, New York, NY; ³Baylor University, Houston, TX; ⁴Harvard University, Boston, MA; ⁵University of California San Diego, San Diego, CA  
(Presented By: Ashley Bowen)

2:05 p.m.  #23  INTRA-OPERATIVE DOPPLER PHASE SHIFT TO LOCALIZE THE PRESENCE OF SPERM DURING TESTIS BIOPSY IN AZOOSPERMIC MEN  
Sijo Parekattil, Karen Priola, Johannes Vieweg and Marc Cohen  
University of Florida, Gainesville, FL  
(Presented By: Sijo Parekattil)

2:10 p.m.  #24  ROBOTIC ASSISTED MICRO SURGICAL SUBINGUINAL VARICOCELECTOMY  
Sijo Parekattil, Karen Priola, Hany Atalah and Marc Cohen  
University of Florida, Gainesville, FL  
(Presented By: Sijo Parekattil)

2:15 p.m.  #25  ROBOTIC ASSISTED MICROSURGERY: THE INITIAL 102 CASE EXPERIENCE  
Sijo Parekattil, Karen Priola, Hany Atalah, Johannes Vieweg and Marc Cohen  
University of Florida, Gainesville, FL  
(Presented By: Sijo Parekattil)

2:20 p.m.  #26  MORBIDITY ASSOCIATED WITH LYMPHADENECTOMY FOR SQUAMOUS CELL CARCINOMA OF THE PENIS  
Steven Koopman, Mark Runnels and Charles Pound  
University of Mississippi Medical Center, Jackson, MS  
(Presented By: Steven Koopman)

2:25 p.m.  #27  METASTASES TO THE PENILE CORPORA: AN END-STAGE EVENT  
Timothy Kim¹, Jose Correa², Luke Wiegand⁴, Mary Hall⁴ and Wadd Sexton²  
¹University of South Florida, Tampa, FL; ²Moffitt Cancer Center; ³James A. Haley VA Hospital  
(Presented By: Timothy Kim)

2:30 p.m.  #28  7-YEAR INFECTION-RELATED REVISION RATES FOR NAÏVE INFLATABLE PENILE PROSTHESIS IMPLANTS: ANTIBIOTIC-IMPREGNATED VS. NON-IMPREGNATED  
Culley C. Carson III¹, John J. Mulcahy² and Manya R. Harsch³  
¹University of North Carolina at Chapel Hill, Chapel Hill, NC; ²Department of Urology, University of Arizona, Paradise Valley, AZ; ³American Medical Systems, Minnetonka, MN  
(Presented By: Culley C. Carson III)
PODIUM 16
PROGENITOR CELL–DERIVED ENDOTHELIAL CELL THERAPY RESTORES ERECTILE FUNCTION
Sergio Rodriguez, Tamer Aboushwareb, Kuo-Liang Chen, Anthony Atala and James Yoo
Department of Urology and Institute for Regenerative Medicine, Wake Forest University Health Sciences
Winston-Salem, NC
(Presented By: Tamer Aboushwareb)

Introduction: Approximately 35 – 75 % of men with diabetes mellitus are afflicted with erectile dysfunction, which is believed to involve impairment in endothelial cell function. Dysfunctional endothelial cells are responsible for a decrease in nitric oxide release, which leads to a reduction of arterial inflow into corporal tissues. In the present study we examined whether endothelial cell therapy could restore normal erectile function in a diabetic rat model. We investigated the feasibility of using endothelial progenitor cells (EPC), obtained from peripheral blood, as a source of endothelial cells for therapy.

Materials and Methods: A model of Diabetes was created by intraperitoneal injection of Streptozotocin (50 mg/Kg). Those animals with a blood glucose level of greater than 300 mg/dl were considered as diabetics and used for the study. EPC were isolated from peripheral blood of donor rats. The cells were grown, expanded and induced into an endothelial cell lineage. The cells were characterized using cell-specific markers (CD31, CD34, VWv, CD133). The culture expanded endothelial cells were labeled with red fluorescent dye (PKH26) and injected directly into the dysfunctional corpora, and the animals were followed for up to 12 weeks. Erectile function was assessed by intracavernous pressure and the corporal tissues were retrieved for histo- and immunohistochemical analyses.

Results: EPC-derived endothelial cells were successfully isolated, grown and expanded. The progenitor and differentiated endothelial cell phenotypes were confirmed using immunohistochemistry with cell specific antibodies. The animals injected with cells showed a substantial improvement in intracavernous pressure and their erectile function was restored to normal levels. Histologically, the implanted cells that were labeled with the fluorescent dye tracer PKH26 survived and integrated into the corporal tissue within the injected region.

Conclusions: This study demonstrates that EPC obtained from peripheral blood can be used to achieve mature endothelial cells. The endothelial cells injected into diseased corpora are able to restore normal erectile function in a diabetic rat model. This cell-based technology may be a viable treatment modality for diabetic patients with erectile dysfunction.

PODIUM 17
ANALYSIS OF CLINICAL VARIABLES AFFECTING FUNCTIONAL OUTCOMES IN PATIENTS UNDERGOING SIS PATCH GRAFTING FOR PEYRONIE’S DISEASE.
Alejandro Rodriguez, Barrett McCormick, Jorge Caso and Rafael Carrion
University of South Florida, Tampa, FL
(Presented By: Alejandro Rodriguez)

Introduction and Objectives: We set out to assess long term functional outcomes, complications and patient satisfaction, as well as analyze the clinical variables affecting these, in patients with Peyronie’s disease (PD) surgically treated with plaque excision (PE) and small intestine submucosa (SIS) grafting.

Methods: From Jan 2005 to June 2009, 120 patients with PD were surgically treated with PE and SIS grafting (4-ply SIS, Cook, Bloomington, IN). Median age and follow-up, degree of curvature, curvature type, graft size, early complications (< 3 months) and late complications (>3 months) were analyzed. The pre- and post-operative functional outcome were assessed using the SHIM and EPIC questionnaires for sexual function. All patients received rehabilitation education/instructions, which entailed a post-operative protocol consisting of: daily use of vacuum device, oral pentoxyphylline, and low dose PDE-5 inhibitors. Patients were also asked the following: 1. Are you satisfied with the surgical results? (0–100%) 2. Would you be willing to undergo the surgery again? (Y/N) 3. How do you feel after surgery with respect to sexual intercourse capability, phallic length and cosmetic effect? (much better, better, the same, or worse).

Results: 93 patients with a median age of 60 years (33 – 72) and a follow-up of 19 months (6 – 53) completed the analysis. 27 patients were excluded due to incomplete functional outcomes. All had a > 60 degree of curvature. Dorsal, ventral and pure lateral curvatures were seen in 59, 20, 2 patients, respectively. Bottle neck deformity was seen in 12. Median SIS graft size was 4 cm (1.5 – 7) x 4 cm (1.25 – 6). Median pre- and post-operative SHIM score were 18 (4 – 25) and 17 (1 – 24), respectively. Median pre- and post-operative EPIC sexual function score were 38 (29 – 47) and 33 (27 – 42), respectively. Early complications were: penile edema (16%), penile pain (8.6%), hematoma (8.6%), numbness (7.5%) and skin infection (1%). Late complications were: feeling of shorter penis (16%), numbness (4.3%), re-curvature (2.1%), and penile pain (1%). Median patient satisfaction was 70% (20 – 100). 63 (68%) patients would be willing to go through the procedure if they would come for the first time. 70 (75%) patients referred feeling “better”, than before surgery. Of the 23 (25%) patients that did not feel better than before surgery, all failed to comply with penile rehabilitation.
Conclusions: Patients with PD treated surgically with PE and SIS graft can benefit from post-operative penile rehabilitation. Our series shows a relationship in penile rehabilitation with preservation of erectile function, preservation of phallic length and overall patient satisfaction.
Funding: None

PODIUM 18
DISTAL PENOPLASTY FOR SKIN DEFECTS THAT RESULT WHILE CORRECTING PEYRONIE'S DISEASE
Alejandro Rodriguez, Michael Keating and Rafael Carrion
University of South Florida, Tampa, FL
(Presented By: Alejandro Rodriguez)

Introduction and Objectives: The correction of Peyronie's disease occasionally results in difficulty with skin closure. This occurs specifically in patients with a paucity of excess shaft skin from prior circumcision. We report our experience with distal penoplasty in patients with this shaft skin dilemma.

Methods: Skin deficiencies occurred in 5 patients whose Peyronie's disease was corrected with plaque excision and patch grafting using smooth intestinal submucosa (SIS). These patients represented a subgroup of a larger series of 125 patients having similar surgery for Peyronie's disease. Distal penoplasty was required of 4 patients with dorsal curvature and 1 with ventral curvature. The surgical technique consisted of a midline incision in the distal penile shaft skin opposite the side of the skin deficiency that resulted with the correction of corporal curvature. This facilitates the contralateral transfer of distal penile shaft skin. Two skin flaps are created that are wrapped around the shaft and meet to cover the distal skin defect. Simple 3-0 Monocryl sutures were used in each case.

Results: The patient's mean age was 44.8 (range: 39 – 51). All patients had a greater than 70 degree penile curvature. The mean SIS patch graft size placed was 5.5 cm x 5 cm. At a mean follow-up of 4 months (1 – 7) all patients had correction of penile curvature. There were no wound openings or infections. All patients received penile rehabilitation with: vacuum device, pentoxyphylline, and PDE-5 inhibitors (standard protocol). None of the patients reported penile shortening, numbness or pain. Each was pleased with the cosmetic appearance of his penis.

Conclusions: Patients with Peyronie's disease who are surgically treated with a large plaque excision and patch grafting, experience lengthening of the corporal bodies and penile shaft. In occasional cases skin closure may be difficult to achieve without tension. Distal penoplasty is a novel technique that provides a simple and effective solution to the problem.
Funding: None
PODIUM 19
IMPROVED OUTCOMES FROM INTRALESIONAL INTERFERON INJECTIONS COMBINED WITH PENILE TRACTION THERAPY FOR PEYRONIE’S DISEASE
Ashley Bowen¹, Arthi Chawla², Suresh Sikka² and Wayne Hellstrom²
¹Tulane University New Orleans, LA
(Presented By: Ashley Bowen)

Introduction: Minimally invasive intralesional injection (ILI) therapies are commonly used for Peyronie’s Disease (PD). Penile traction devices are proposed for PD monotherapy. This study compares ILI vs. combined ILI and penile traction therapy.

Methods: A retrospective, cohort-case series over the past 2 years examines male patients who had completed color Doppler ultrasound (CDU) before and after a series of 12 ILI treatments. Control and treatment groups were divided between patients who claimed to have used a penile traction device for more than 2 hours per day. Demographics are compared with respect to age, pretreatment erectile function, duration of disease, history of trauma, presence of indentation, penile curvature and erect penile length and circumference. Outcome data values include hours of traction used per day, number of ILI treatments, change in resistive index, stretched and erect penile lengths, circumference, degree of curvature, percentage tumescence and rigidity and reduction of penile indentation. Variables for bimodal questions were analyzed using Fisher’s exact test. All other data was compared using the student’s t-test.

Results: Significant differences occurred in three outcomes variables. (a) The number of hours per day of traction: Control – 0.03 vs. Traction 5.77 (p=<0.01); (b) Change in stretched penile length: Control – 0.04cm vs. Traction 0.5 cm (p=0.05); (c) Change in degrees of curvature: Control – 3.62º vs. Traction – 19º (p=0.02). All other data points were not statistically different between the two groups.

Conclusions: PD therapy using a penile traction device (>2 hours/day) combined with ILI provides improved stretched penile length and decreased curvature after 10 – 12 treatments. A prospective trial is mandated in order to support combination therapy.

PODIUM 20
PREOPERATIVE AND POSTOPERATIVE ERECTILE FUNCTION IN PATIENTS UNDERGOING PEYRONIE’S PLAQUE INCISION AND GRAFTING
Benjamin Whittam¹, Melissa Kaufman², Todd Doran² and Douglas Milam²
¹Vanderbilt University Medical Center, Nashville, TN
(Presented By: Benjamin Whittam)

Introduction and Objectives: Surgical treatment of Peyronie’s disease is aimed at correction of penile deformity while preserving erectile function. Review of the current literature indicates this series is the first reported data to use the widely accepted Sexual Inventory in Men (SHIM) to evaluate preoperative and postoperative function in Peyronie’s patients undergoing plaque incision and SIS grafting.

Methods: A retrospective chart review was undertaken to identify patients who underwent incision and grafting for Peyronie’s disease from January 2004 to February 2009. These patients were stratified to include patients who had filled out pre-operative and post-operative SHIM and underwent grafting with SIS graft. Patient records were reviewed to obtain demographics, voiding symptoms, preoperative and postoperative SHIM score, American Urological Association Symptom Index, perioperative degree and direction of curvature, perioperative use of phosphodiesterase-5 inhibitors, operative time, length of stay and complications.

Results: 25 patients were identified that underwent incision and grafting with SIS graft who had completed both a preoperative and postoperative SHIM questionnaire. Mean patients age at time of surgery was 58.1 years (range 27 – 78 years). Average length of follow-up after surgery was 6.4 months (range 1 – 17 months). All patients presented with sign and symptoms of Peyronie’s disease, with an average duration of symptoms of 38 months (range 9 – 240 months). Symptoms were stable for an average of 16.5 months (range 6 – 48 months). Mean degree of curvature was reported at 84.2 degrees (range 70 – 130 degrees). Pre-operative average SHIM score was 11.96 and post-operatively the average SHIM score increased significantly to 16.04 (p = 0.001). 52% of the patients preoperatively utilized PDE-5 inhibitors, which increased to 76% post-operatively. Post-operative residual curvature was on average 19.80 degrees (range 0 – 90 degrees), 3 had no curve and another 13 were within physiologically normal limits. Pre-operatively, 24 % were able to have intercourse, while post-operatively 80% reported satisfactory intercourse. Complications included urinary retention (1), urinary tract infection (1), residual curve requiring dorsal corpoplasty (1).

Conclusion: This data suggests that in patients with adequate preoperative erectile function, SIS grafting is a feasible and effective method for treatment of Peyronie’s disease associated with improved SHIM scores, satisfactory capacity for intercourse, and minimal morbidity.
PODIUM 21
USE OF LENGTH EXPANSION INFLATABLE PENILE PROSTHESES IN MEN WITH ERECTILE DYSFUNCTION SECONDARY TO PEYRONIE’S DISEASE
Benjamin Whittam¹, Melissa Kaufman², Todd Doran² and Douglas Milam²
¹Vanderbilt University Medical Center, Nashville, TN
(Presented By: Benjamin Whittam)

Introduction and Objectives: Implantation of an inflatable penile prosthesis (IPP) with molding is an effective and durable treatment for erectile dysfunction (ED) and moderate penile curvature due to Peyronie’s disease. Current literature and dogma support use of the American Medical Systems (AMS) CX model or the Mentor Alpha 1 IPP because lengthening capacity of other models is thought to prohibit adequate rigidity for molding and straightening, however, these devices may result in the perception of decreased penile length. Herein we report our experience with placement of length expansion IPP models in the Peyronie’s population.

Methods: Retrospective review of medical records was performed for patients with ED and penile curvature that had undergone AMS Ulfrex or LGX IPP implantation from January 2004 to February 2009. Charts were evaluated for demographics, perioperative curvature, voiding symptoms, erectile function, outcomes and complications.

Results: Forty-nine patients underwent AMS Ulfrex or LGX implantation for ED associated with Peyronie’s disease. Mean patient age at time of surgery was 60 years (range 45 – 79 years). All patients presented with ED and penile curvature, with an average penile curve of 52.9 degrees and variable curve directions. Post-operatively, of the 40 patients with sufficient follow-up, 22 had no residual curve and the 18 had an average residual curve of 17.7 degrees. Sexual Health Inventory for Men scores increased from a pre-operative mean of 6.97 to 18.54 post-operatively (p=0.0001). The American Urological Association Symptom Index mean scores remained stable from 9.11 pre-operatively to 7.77 at last follow-up (p=0.80). Excluding 2 patients not sexually active, 87% reported satisfaction with their IPP. 31 patients underwent molding at time of operation, with no reported cases of aneurysmal dilatation. There were no device infections, one post-operative hematoma and one revision due to reduced glans support. No devices were explanted and replaced secondary to issues with penile length.

Conclusion: Even in patients with severe curvature and ED secondary to Peyronie’s disease, implantation of the AMS Ulfrex or LGX IPP results in substantial improvements in curvature, erectile function and sexual health. This data expands current clinical strategies for treatment of this complex patient population by demonstrating the AMS Ulfrex and LGX devices are viable therapeutic options for Peyronie’s disease, providing substantial resolution of penile deformities without perceived loss of length and accompanied by an acceptable morbidity profile.

PODIUM 22
A MULTI-INSTITUTIONAL OBSERVATIONAL STUDY ON TESTOSTERONE LEVELS AFTER TESTOSTERONE PELLET (TESTOPEL™) INSERTION
Ashley Bowen¹, Andrew McCullough², Mohit Khera³, Abraham Morgentaler⁴, Irwin Goldstein⁵ and Wayne Hellstrom⁶
¹Tulane University New Orleans, LA; ²New York University, New York, NY; ³Baylor University, Houston, TX; ⁴Harvard University, Boston, MA; ⁵University of California San Diego, San Diego, CA
(Presented By: Ashley Bowen)

Purpose: The use of implantable testosterone pellets has been FDA approved since 1972. Despite its proven efficacy in raising serum testosterone levels phamacokinetic data exists only for crystaline testosterone pellet preparations not available in the U.S. The purpose of this report is to present our early combined multi-institutional experience with Testopel. This represents the first published report on the pharmacokinetics of Testopel™.

Methods: Data retrospectively gathered from five academic institutions were pooled and analyzed. Data captured were patient age, pre and post implantation serum testosterone, PSA, number of pellets implanted and time from implantation to serum determination. Results were analyzed by ANOVA.

Results: Data were available on 166 patients with 183 pellet implantations, 25 with two or more implantations. 282 follow up levels were determined with an average of 72 days after implant. Mean age was 58. 47%, 33% and 20% of men had 8 or 9, 10 or 12 and 6 or 7 pellets implanted. Differences between levels were significant during the first and second months after implantation for the 10 and 12 pellet group (p<0.02) and the other two groups. Differences between the 8 and 9 and 6 and 7 groups were not significant at any time period. Low numbers precluded statistical comparison for the time periods longer than four months. Pre and post PSA levels revealed no change, (1.89 to 1.48). There were four extrusions and three hematomas occurring early in the experience. No patients required analgesics.

Conclusions: Testosterone pellets (Testopel™) provide sustained levels of testosterone well for four months and are well tolerated. Implantation of 10 or 12 pellets achieve the best results.
Introduction and Objectives: Testis biopsy with cryo preservation of sperm is a procedure performed in some men with possible non-obstructive azoospermia (NOA), and at times in men with a previous vasectomy (who do not want a reversal) and men with spinal cord injuries (who fail electro-ejaculation or vibratory ejaculation). Recent studies have illustrated that it is likely to find active spermatogenesis in areas with good blood supply within the testicle. These studies utilized detailed color Doppler ultrasonography and needle guidance techniques to localize possible areas of spermatogenesis within the testicle. Our goal was to assess the efficacy of percutaneous hand-held Doppler phase shift measurements of the testicle at the time of biopsy to localize areas of spermatogenesis.

Methods: Prospective blinded control trial of 6 patients who underwent testis biopsy from Sept’08 to Aug’09 for: NOA (2 men), previous vasectomy (2 men) and spinal cord injury (2 men). Percutaneous hand-held Doppler (Vascular Technology™, Nashua, NH) blood flow shift measurements were taken from 12 different marked regions of one testicle (one testicle scanned on each patient – the testicle that was larger was chosen). The surgeon then obtained 12 biopsies from the same testicle in these marked regions (blinded to the Doppler analysis). The findings from the biopsies were then compared to the pre-biopsy Doppler phase shift mapping to assess if the Doppler readings had any predictive value in detecting spermatogenesis.

Results: The Doppler phase shift readings were analyzed and an algorithm developed to identify areas of the testicle with specific flow patterns. These flow patterns were then analyzed to assess for any correlation with spermatogenesis. A predictive model optimized to identify areas of sperm production was then created. The model was 85% accurate (ROC 0.8, 95% CI 0.6–0.9) in identifying areas within the testicle that had sperm based of Doppler phase shift readings.

Conclusions: Our preliminary evaluation of hand-held Doppler phase shift flow mapping of the testicle at the time of biopsy appears to have promise in detecting areas of spermatogenesis. Further evaluation and testing will reveal its potential in this role.
Introduction and Objectives: A previous study by Wang et al. have shown possible benefits to robotic assisted microsurgical subinguinal varicocelectomy over the standard microsurgical approach. Our goal was to compare standard microsurgical subinguinal varicocelectomy (MVV) to robotic assisted subinguinal varicocelectomy (RAVx) in a canine model and present our initial human results.

Methods: A prospective randomized control trial of MVV to RAVx in a canine varicocele model by a fellowship-trained microsurgeon was performed. For the canine study, the microsurgeon performed cord dissection and ligation of 3 veins with 3 – 0 silk ties. 12 canine varicocelectomies were randomized into 2 arms of 6: MVV vs. RAVx. Procedure duration, vessel injury and knot failures recorded. We then reviewed the outcomes of our initial 32 human RAVx cases from Jun’08−Aug’09 (mean follow up 3 months: range 1 – 11).

Results: For the canine study, the RAVx mean duration (9.5 min) was significantly faster than MVV (12 min), p 0.04. There were no vessel injuries or knot failures in either group. In the human series, mean duration per side was 39 mins (25 – 80). Indications for the procedure were the presence of a grade two or three varicocele and the following conditions: 3 with azoospermia, 18 with oligospermia and 11 with testicular pain (failed all other conservative treatment options). Three-month follow up was available for 15 patients: 73% (11 patients) with oligospermia had a significant improvement in sperm count (three achieved a pregnancy), and 3 with azoospermia remain unchanged. For testicular pain: 91% (10/11 patients) had complete resolution of pain. The 4th robotic arm allowed the surgeon to control one additional instrument during the cases decreasing reliance on the microsurgical assistant. The fourth arm also enabled the surgeon to perform real-time intra-operative Doppler mapping of the testicular arteries while dissecting the veins with the other arms if needed. The figure below illustrates the vein ligation.

Conclusion: Robotic assisted microsurgical subinguinal varicocelectomy appears to be feasible. The preliminary human results appear promising. Further evaluation and follow up is needed.
PODIUM 25
ROBOTIC ASSISTED MICROSDURGY: THE INITIAL 102 CASE EXPERIENCE
Sijo Parekattil, Karen Priola, Hany Atalah, Johannes Vieweg and Marc Cohen
University of Florida, Gainesville, FL
(Presented By: Sijo Parekattil)

Introduction and Objective: Since the introduction of the operating microscope in 1975, there has been a steady increase in the use of technology to aid microsurgeons in their quest for better outcomes and improved operative ease. The use of the DaVinci S high definition Robotic System (Intuitive Surgical Inc., Sunnyvale, CA) for microsurgical applications may provide advantages in terms of offering magnification, motion scaling and additional surgical arms in a stable ergonomic platform for the microsurgeon. This study presents a review of our initial 102 case experience of robotic microsurgical procedures for male infertility and chronic orchialgia.

Methods: A review of 102 robotic assisted microsurgical cases performed by a fellowship-trained microsurgeon at our institution from July 2007 to August 2009. These cases include: 21 robotic vasovasostomy (RAVV) cases, 2 robotic vasoepididymostomy (RAVE) cases, 41 robotic denervation of the spermatic cord (RMDSC) cases for chronic orchialgia, 1 robotic testicular artery micro-anastomosis (injured during a RMDSC case), 32 robotic subinguinal varicocelectomies, 3 robotic micro-dissection testicular sperm extraction cases and 2 robotic microsurgical nerve grafting procedures during robotic prostatectomy. The 4-arm S-type robotic system was utilized with high definition magnification (10 – 15x), an additional 100x digital magnification camera routed through the TilePro software package to allow the surgeon the ability to toggle to this view when required, micro robotic instruments, and a new micro robotic Doppler probe that can be easily manipulated with the robotic graspers.

Results: All cases were completed successfully without the need to convert to pure microsurgery and without a trained microsurgical assistant. The fourth arm significantly improved surgeon efficiency in that an extra microsurgical instrument could be handled simultaneously in a number of critical instances: 1) to hold the micro Potts scissors during anastomosis suturing in the vasovasostomy (enabled the surgeon to cut sutures), 2) to hold the micro-ophthalmology 0.3mm blade for epididymal tubule incision during simultaneous placement of dual 10 – 0 nylon sutures in the tubule during vasoepididymostomy and 3) for real-time Doppler mapping of the testicular arteries while the other two arms are used for vessel dissection.

Conclusions: Robotic assisted microsurgery is in its infancy. However, with the aid of some technical advances and robotic micro-instruments, a number of microsurgical procedures can be successfully performed. Further studies and improvements in the technology will allow us to assess the robotic platform’s true cost-benefit ratio for microsurgery.
MORBIDITY ASSOCIATED WITH LYMPHADENECTOMY FOR SQUAMOUS CELL CARCINOMA OF THE PENIS

Steven Koopman, Mark Runnels and Charles Pound
University of Mississippi Medical Center, Jackson, MS
(Presented By: Steven Koopman)

Purpose: We retrospectively reviewed our recent experience with inguinal lymphadenectomy (IL) for squamous cell carcinoma (SCC) of the penis in order to evaluate the prevalence of complications and factors associated with major complications.

Material and Methods: We performed a retrospective review of 12 patients with SCC of the penis. A total of 22 ILs including 7 bilateral ILs, 8 unilateral ILs, and 5 pelvic lymphadenectomies were performed. Indications for ILs were therapeutic for palpable adenopathy in 17, prophylactic in 4, and palliative in one for a fungating mass. One patient had total penectomy, 8 had partial penectomy, and 3 had local excision as a primary surgery. The prevalence and severity of complication was determined for each lymph node dissection.

Results: Average age was 61 years old (range 43 – 74). Pathologic TNM stage was T1 – 3 and N 0 – 3. All patients had M0 disease. Of the 22 ILs, 10 dissections had lymph nodes with metastatic SCC on pathologic analysis. Mean follow-up was 12 months (range 3–50). The saphenous vein was spared in 14/22 (64%) ILs. Sartorious flap was required in 7/22 (32%). There were a total of 6 minor complications in the 22 cases (27%) (lymphedema in 5 and minor wound infection in 1). Major complications occurred in 6/22 (27%) cases (DVT in 1, flap necrosis requiring irrigation and debridement in 2, flap necrosis requiring fasciocutaneous graft in 1, wound hematoma requiring incision and drainage in 1, and seroma requiring percutaneous drainage in 1). Preservation of the saphenous vein and avoidance of sartorious flap was associated with a low risk of major complication (2/14 or 14%). Half (3/6) ILs with N3 disease had a major complication; whereas, only 1/12 (8%) with N0 disease had a major complication.

Conclusions: In this single institution experience, almost half (45%) of all inguinal lymph node dissections for SCC of the penis had positive lymph node(s). When a modified technique was used, the risk of a major complication was low. Patients with advanced disease had the highest rate of major complications.

METASTASES TO THE PENILE CORPORA: AN END-STAGE EVENT

Timothy Kim¹, Jose Correa², Luke Wiegand³, Mary Hall⁴ and Wadd Sexton²
¹University of South Florida, Tampa, FL; ²Moffitt Cancer Center; ³James A. Haley VA Hospital
(Presented By: Timothy Kim)

Purpose: To describe our experience with metastases to the penile corpora and to report the survival implications associated with this advanced stage malignant event.

Methods: We retrospectively identified men who either presented with penile corpora mets or who developed delayed metastatic disease to the penile corpora. Direct extension to the penile corpora from invasive prostate or bladder cancers were not considered to be metastatic events. Men with primary penile or urethral cancers were excluded from review.

Results: Eight men were identified with penile corpora metastases, confirmed pathologically in 6. Seven men had at least one primary genitourinary tumor (3 prostate adenocarcinoma [PCA], 5 bladder urothelial carcinoma [TCC] and 1 renal cell carcinoma [RCC]), while one man had a colorectal tumor. No patient reported significant penile pain or ischemia. Rather, each patient had firm, indurated, penile corpora with clinically apparent partial tumescence. Bladder outlet obstruction or transfusion-dependent hematuria was present in 3 of 4 patients with in-situ native bladders. 50% of the patients presented with penile mets at diagnosis whereas the remaining ½ developed delayed metastatic disease. Within 6 months of developing penile metastases, 3 patients have died of disease progression, 2 patients have entered into hospice care, and 1 patient has had repeated admissions for failure to thrive. The remaining 2 patients are receiving chemotherapy for metastatic TCC.

Conclusions: Metastatic disease to the penile corpora is an end stage event, and patients should be counseled accordingly. Furthermore, palliative measures should be considered in lieu of more aggressive management, with the possible exception of palliative urinary diversion when indicated.
PODIUM 28
7-YEAR INFECTION-RELATED REVISION RATES FOR NAIVE INFLATABLE PENILE PROSTHESIS IMPLANTS: ANTIBIOTIC-IMPREGNATED VS. NON-IMPREGNATED
Culley C. Carson, III¹, John J. Mulcahy² and Manya R. Harsch³
¹University of North Carolina at Chapel Hill, Chapel Hill, NC; ²Department of Urology, University of Arizona, Paradise Valley, AZ; ³American Medical Systems, Minnetonka, MN
(Presented By: Culley C. Carson III)

Introduction and Objective: Although some studies have suggested that most infections associated with the implantation of an inflatable penile prosthesis (IPP) occur within the first year after surgery, device-related infections have been reported more than 5 years after implantation, and the infection risk over time has not been well characterized. We previously reported statistically significantly lower infection rates for original (naïve) IPPs impregnated with an antibiotic treatment comprised of minocycline and rifampin (M/R) versus non-impregnated IPPs implants, with one year of follow-up. Long-term (6.5-year follow-up) data on infection revision rates for antibiotic-impregnated and non-impregnated prostheses were recently the basis for FDA approval of infection reduction claims for the M/R-coated IPP, and even longer-term, 7-year follow-up data are now available.

Methods: Patient information forms (PIFs) voluntarily filed with the manufacturer following initial implantation of IPPs between May 1, 2001 and December 31, 2008 were retrospectively reviewed to compare survival from infection-related revisions reported for antibiotic-impregnated versus non-impregnated implants throughout 84 months of follow-up.

Results: The M/R-impregnated group included 36,659 men with a mean age of 62.5 years and a mean of 40-months of follow-up. The non-impregnated group included 3,456 men with a mean age of 61.7 years and mean follow-up of 77 months after implantation of their first IPP. Infection revision rates were significantly lower for the M/R-impregnated group (1.77%) versus the non-impregnated group (3.09%) at 84 months of follow-up (log rank p<0.0001, see life table graph).

Conclusions: This 7-year outcomes analysis provides the first substantial clinical evidence of a reduction in costly infection-related revisions with the use of an antibiotic-impregnated IPP, and may represent the greatest surgical advance in IPPs in over a decade.

2:45 p.m. – 3:00 p.m. WRAP UP: DEFINING POTENCY – HONESTLY, HOW GOOD / BAD ARE OUR TREATMENTS?
Invited Speaker: Bruce R. Kava, MD
Miami, FL

1:30 p.m. – 3:00 p.m. SESSION 3: VIDEO SESSION 1
Location: Poinciana 3

Moderators: Benjamin R. Lee, MD
New Orleans, LA
Wesley White, MD
Knoxville, TN

Video #1 ROBOTIC REDO PYELOPLASTY IN THE PEDIATRIC POPULATION
Ngoc-Bich Le¹ and Michael Erhard²
¹Gainesville, FL; ²Nemours Children’s Hospital, Jacksonville, FL
(Presented By: Ngoc-Bich Le)
Video #2

ROBOTIC DIVERTICULECTOMY IN A PEDIATRIC PATIENT
Ngoc-Bich Le¹ and Michael Erhard²
¹Gainesville, FL; ²Nemours Children’s Hospital, Jacksonville, FL
(Presented By: Ngoc-Bich Le)

Video #3

VIDEO TECHNIQUE FOR ROBOTIC ASSISTED MICRO SURGICAL VASOVASOSTOMY
Sijo Parekattil, Hany Atalah and Marc Cohen
University of Florida, Gainesville, FL
(Presented By: Sijo Parekattil)

Video #4

ROBOTIC-ASSISTED LAPAROSCOPIC INTRACORPOREAL URINARY DIVERSION
Matthew Raynor, Matthew Nielsen, Eric Wallen and Raj Pruthi
The University of North Carolina at Chapel Hill
(Presented By: Matthew Raynor)

Video #5

ROBOTIC-ASSISTED APPROACHES TO PARTIAL CYSTECTOMY FOR BENIGN AND MALIGNANT DISEASE OF THE BLADDER
Matthew Raynor, Matthew Nielsen, Eric Wallen and Raj Pruthi
The University of North Carolina at Chapel Hill
(Presented By: Matthew Raynor)

Video #6

NOTES APPROACH TO MANAGEMENT OF INADVERTENT SPLENIC, ENTERAL AND BLADDER INJURIES
Sijo Parekattil, Hany Atalah, Li-Ming Su, Christopher Fyock, Christopher Forsmark and Mihir Wagh
University of Florida, Gainesville, FL
(Presented By: Sijo Parekattil)

Video #7

LAPAROSCOPIC MICROWAVE ABLATION OF A RENAL TUMOR
Vincent Bird¹, John Shields², Rosely De Los Santos¹, Raymond Leveillee¹ and Robert Carey³
¹University of Miami, Dept. of Urology; ²Colombia University Division of Urology at Mt. Sinai Medical Center, Miami, FL; ³Sarasota, FL
(Presented By: John Shields)

Video #8

ROBOTIC URETEROCALICOSTOMY AFTER FAILED PYELOPLASTY AND ENDO PYELO TOMETRY
David Spencer¹ and Patrick Daily²
¹University of Mississippi and G.V. (Sonny) Montgomery VA Medical Center, Jackson, MS; ²Mississippi Urology Clinic, Jackson, MS
(Presented By: David Spencer)

Video #9

SELECTIVE RENAL PARENCHYMAL CLAMPING IN ROBOTIC PARTIAL NEPHRECTOMY: INITIAL EXPERIENCE
Davis P. Viprasit, Hernan O. Altamar and S. Duke Herrell
Vanderbilt University Medical Center, Nashville, TN
(Presented By: Davis P. Viprasit)

Video #10

LAPAROSCOPIC ADRENALECTOMY OF A LARGE (>7CM), HYPERVASCULAR PHEOCHROMOCYTOMA
Nathaniel Hamilton¹ and Stephen Savage²
¹Medical University of South Carolina, Charleston, SC
(Presented By: Stephen Savage)

Video #11

ROBOTIC ASSISTED RADICAL CYSTECTOMY AND ORTHOTOPIC NEOBLADDER USING A MODIFIED PFANNENSTIEL INCISION
Devendar Katkoori¹, Jeffrey Gahan², Kishore Ta², Mohan Ariyanayagam² and Murugesan Manoharan²
¹University of Miami Miller School of Medicine, Miami, FL
(Presented By: Devendar Katkoori)
ROBOT-ASSISTED PELVIC LYMPHADENECTOMY: DUPLICATION OF OPEN SURGICAL TEMPLATE
Mark Yockey¹, Speeg Jeremy¹ and Richard Vanlangendonck²
¹Ochsner Health Systems, New Orleans, LA; ²New Orleans
(Presented By: Richard Vanlangendonck)

3:00 p.m. – 3:30 p.m.  BREAK – VISIT THE EXHIBITS

CONCURRENT SESSIONS
3:30 p.m. – 4:45 p.m.
SESSION 4: PEDIATRIC UROLOGY PODIUM
Location: Americana 4
Moderators: Richard W. Sutherland, MD
Chapel Hill, NC
Miguel Castellan, MD
Miami, FL

3:30 p.m.  #29  IN VITRO RECONSTITUTION OF HUMAN KIDNEY STRUCTURES FOR RENAL FAILURE
Nadia Guimaraes-Souza¹, Tamer Aboushwareb², Kathryn Stern¹, Anthony Atala¹ and James Yoo¹
¹Department of Urology and Wake Forest Institute for Regenerative Medicine, Winston Salem, NC
(Presented By: Tamer Aboushwareb)

3:35 p.m.  #30  THE USE OF PIC CYSTOGRAPHY IN THE EVALUATION AND MANAGEMENT OF FEBRILE URINARY TRACT INFECTIONS IN PATIENTS WITH APPARENT SPONTANEOUS RESOLUTION OF VESICOURETERAL REFLUX
Kathleen Kieran¹, Dana W. Giel¹, Wolfgang H. Cerwinka², Andrew Kirsch² and H. Norman Noe¹
¹University of Tennessee – Memphis/LeBonheur Children’s Medical Center, Memphis, TN; ²Children's Healthcare of Atlanta, Emory University School of Medicine, Atlanta, GA
(Presented By: Kathleen Kieran)

3:40 p.m.  #31  VENTRAL CORPORAL BODY GRAFTING FOR CORRECTING SEVERE PENILE CURVATURE ASSOCIATED WITH SINGLE OR TWO-STAGE HYPOSPADIAS REPAIR
Miguel Castellan, Rafael Gosalbez, Devendra Joshi, Yuval Bar-Yosef and Andrew Labbie
(Presented By: Miguel Castellan)

3:45 p.m.  #32  MAGNETIC RESONANCE UROGRAPHY EVALUATION OF CONTRALATERAL KIDNEY IN PATIENTS WITH UNILATERAL MULTICYSTIC DYSPLASTIC KIDNEY
Yasmin Bootwala¹, Jonathan Kalisvaart¹, J. Damien Grattan-Smith², James Elmore¹,², Andrew Kirsch¹,², Hal Scherz¹,² and Edwin Smith¹,²
¹Emory University Department of Urology, Atlanta, GA; ²Children’s Healthcare of Atlanta, Atlanta, GA
(Presented By: Yasmin Bootwala)

3:50 p.m.  #33  DYSFUNCTIONAL ELIMINATION SYNDROME FOLLOWING SURGICAL CORRECTION OF VESICOURETERAL REFLUX.
Douglass B. Clayton¹, Benjamin M. Whittam², John C. Thomas², John C. Pope IV², Mark C. Adams³, John W. Brock III³ and Stacy T. Tanaka³
¹Department of Urologic Surgery, Division of Pediatric Urology, Vanderbilt University, Nashville, TN
(Presented By: Douglass B. Clayton)

3:55 p.m.  #34  ROTATION OF THE AMPUTATED FISTULA TRACT (RAFT) FOR THE MANAGEMENT OF CONGENITAL URETHRAL-CUTANEOUS OR URETHRAL-ENTERIC FISTULA WITH SEVERE URETHRAL STENOSIS
Jonathan Kaye¹, Kate Kraft¹, Martin Koyle², Edwin Smith¹, Justin Watson¹ and Andrew Kirsch¹
¹Children’s Healthcare of Atlanta, Atlanta, GA; ²Seattle Children’s Hospital, Seattle, WA
(Presented By: Jonathan Kaye)
THE USE OF DIAGNOSTIC PNEUMOPERITONEUM TO DETECT OCCULT CONTRALATERAL INGUINAL HERNIA: LARGE SINGLE-SURGEON SERIES
Jonathan Kaye and Hal Scherz
Children's Healthcare of Atlanta, Atlanta, GA
(Presented By: Jonathan Kaye)

CLINICAL CHARACTERISTICS OF CHILDREN WITH SPINA BIFIDA REQUIRING VESICOSTOMY
Michelle Lightfoot, Lynn Woo, John Brock III, Mark Adams, John Pope IV, Stacy Tanaka and John Thomas
Division of Pediatric Urology, Vanderbilt University Medical Center, Nashville, TN
(Presented By: Michelle Lightfoot)

STAGED REPAIR FOR CORRECTION OF SEVERE HYPOSPADIAS WITH CHORDEE: LONG TERM FOLLOW-UP
Miguel Castellan, Devendra Joshi, Yuval Bar-Yosef, Andrew Labbie and Rafael Gosalbez
(Presented By: Miguel Castellan)

MINUTELY INVASIVE ROBOTIC PYELOPLASTY IN CHILDREN: INITIAL EXPERIENCE WITH 8MM CAMERA AND 5MM WORKING PORTS
Jonathan Kaye, Bruce Broecker, Charlotte Massad, Hal Scherz, Andrew Kirsch, Edwin Smith, Justin Watson and James Elmore
Children's Healthcare of Atlanta, Atlanta, GA
(Presented By: Jonathan Kaye)

SALVAGE DEFLUX INJECTION FOR PERSISTENT REFLUX AFTER SURGICAL REIMPLANTATION.
Yuval Bar-Yosef, Miguel Castellan, Devendra Joshi, Andrew Labbie and Rafael Gosalbez
(Presented By: Miguel Castellan)

STENTLESS TUBELESS PEDIATRIC ROBOTIC PYELOPLASTY: INITIAL EXPERIENCE
Timothy Weber¹, Alejandro Rodriguez², Mark Rich³, Michael Keating⁴ and Hubert Swana⁵
¹University of South Florida School of Medicine Tampa, FL; ²University of South Florida School of Medicine Department of Urology Tampa, FL; ³Nemours Children's Clinic Orlando University of South Florida School of Medicine Department of Urology Orlando, FL
(Presented By: Timothy Weber)

THE USE OF A DANGLER STRING TO FACILITATE STENT REMOVAL AFTER LAPAROSCOPIC ROBOTIC ASSISTED PYELOPLASTY IN CHILDREN
Michael Erhard, Erica Mercer and Mark Barraza
(Presented By: Michael Erhard)

PODIUM 29
IN VITRO RECONSTITUTION OF HUMAN KIDNEY STRUCTURES FOR RENAL FAILURE
Nadia Guimaraes-Souza¹, Tamer Aboushwareb², Kathryn Stem¹, Anthony Atala³ and James Yoo⁴
¹Department of Urology and Wake Forest Institute for Regenerative Medicine, Winston-Salem, NC
(Presented By: Tamer Aboushwareb)

Introduction and Objectives: End stage renal disease is currently being treated effectively by transplantation. However, increasing demand and donor shortage make this treatment challenging. Recent advances in cell-based therapies have provided potential opportunities to alleviate the current challenges of donor shortage. We previously have demonstrated that single renal cells expanded in culture are able to form renal structures when implanted in vivo. However, the levels of structure formation could not be adequately controlled. In this study, we investigated whether human kidney structures could be pre-formed in vitro for subsequent implantation in vivo to maximize tissue forming efficiency.
Methods: Primary human renal cells were isolated from unused donor kidneys using enzymatic digestion methods. Renal cells were grown, expanded and characterized using cell specific antibodies. To form kidney structures, single renal cells were placed in a three-dimensional culture system, consisting of neutralized type I collagen. The three-dimensional matrix with cells was solidified and cultivated over a period of 10 days. Histomorphological and ultrastructural analyses were performed using cell specific markers that identify proximal and distal tubules and collecting ducts.

Results: Human primary renal cells were effectively isolated and expanded in culture. The cells retained their phenotypic and functional characteristics at multiple culture stages. Single renal cells placed in a three-dimensional culture environment began to proliferate and form structures that resemble renal tubules. Histologically, these structures showed phenotypic resemblance to native kidney structures. The reconstituted tubules stained positively for proximal and distal tubular markers. E-cadherin and N-cadherin staining confirmed polarization of the cells present in the tubules.

Conclusions: These findings show that single human renal cells grown in a three-dimensional culture system are able to generate kidney structures. The cells constituting these structures maintained the expression of renal cell specific markers. This system may ultimately be developed into an efficient cell-based therapy for patients with end stage renal disease.

Funding: This study was supported by Tengion, Inc. through a sponsored research agreement. Anthony Atala and James Yoo serve as consultants to Tengion, Inc.

PODIUM 30
THE USE OF PIC CYSTOGRAPHY IN THE EVALUATION AND MANAGEMENT OF FEBRILE URINARY TRACT INFECTIONS IN PATIENTS WITH APPARENT SPONTANEOUS RESOLUTION OF VESICOURETERAL REFLUX
Kathleen Kieran¹, Dana W. Giel¹, Wolfgang H. Cerwinka², Andrew Kirsch² and H. Norman Noe¹
¹University of Tennessee – Memphis/LeBonheur Children’s Medical Center, Memphis, TN; ²Children’s Healthcare of Atlanta, Emory University School of Medicine, Atlanta, GA
(Presented By: Kathleen Kieran)

Introduction and Objectives: Spontaneous resolution of vesicoureteral reflux (VUR) is a well-documented phenomenon, though a small proportion of patients subsequently develop febrile urinary tract infections (FUTI). Such patients in whom voiding cystourethrograms (VCUG) are persistently negative, pose a challenge and at present there is no standard evaluation and treatment protocol for this population. Positional instillation of contrast (PIC) cystography has been successfully employed for the diagnosis of occult VUR, but the role of PIC for investigating FUTI in patients thought to have resolved VUR is not defined. We describe our experience in evaluating and managing patients with FUTI following VCUG demonstrating apparent resolution of VUR.

Methods: This was a collaborative, two-institution study. Patients with a history of VUR with subsequent VCUG-documented resolution, followed by FUTI, were included in this analysis. Data were collected on patient demographics, grade of VUR, antibiotic prophylaxis, and methods of radiographic evaluation for recurrent FUTI.

Results: A total of 14 patients met study criteria. All patients were female, and none had untreated dysfunctional voiding at time of PIC. No patient was taking prophylactic antibiotics at the time of FUTI. Group 1 consisted of 5 patients (median age: 7.1 years) who underwent VCUG following FUTI; all VCUGs were negative in this group. These patients subsequently underwent PIC cystogram. Group 2 consisted of 9 patients (median age: 9 years) who underwent PIC cystogram without VCUG following FUTI. PIC cystogram demonstrated VUR in all 14 patients, and all patients underwent endoscopic injection of dextranomer/hyaluronic acid at the time of PIC. All patients have remained free of FUTI since treatment, with a median follow up of 2.8 years (range: 1.3 – 4.5).

Conclusions: Recurrent FUTI in patients with a history of VUR but apparent radiographic resolution of VUR is a challenging problem. In our series, no patient had VUR by standard radiographic methods, though VUR was diagnosed by PIC cystogram in 100% of patients. It remains unclear whether this occult VUR is persistent or recurrent. In patients with a history of resolved VUR and subsequent FUTI, PIC cystogram may be the most efficient means of accurately diagnosing VUR, thereby eliminating unnecessary studies and facilitating simultaneous treatment. Further investigation with a larger patient cohort is needed to determine the optimal management algorithm for these patients.
Purpose: The literature on small intestinal Submucosa (SIS) for chordee correction in children is scarce. We reviewed our experience with 1 ply SIS for ventral corporal body grafting in cases of severe ventral penile curvature associated with proximal hypospadias in children.

Materials and Methods: Between April 2001 to December 2007, 58 boys with proximal hypospadias and severe congenital ventral curvature underwent single layered SIS graft corpororpastiy. In 43 patients the surgery was done in the first stage of a planned 2-staged procedure. Fifteen patients underwent a 1-stage chordee correction with SIS and transverse preputial island flap urethroplasty. Straight erections were documented by parent reports, patient self-assessment or an artificial erection test intraoperatively.

Results: Mean follow-up was 42 months. A straight phallus without fibrosis was achieved in 57/58 patients. In 51/58 patients an artificial erection was performed in OR. In one patient chordee was overcorrected and need a second SIS graft and a Nesbitt plication for correction of residual dorsal chordee. In patients who underwent a 1-stage genital reconstruction, the neourethral meatus was left in normal position (4), lower part of the glans (4) and at the coronal sulcus (7).

Conclusions: Corporal body grafting with single layer SIS is a viable option for correction of severe chordee associated with corporal body disproportion. SIS is a material with reliable results, easy availability and no donor site associated morbidity. In our opinion the 2-stage procedure is a reliable and reproducible technique with better cosmetic outcomes in this difficult cohort of hypospadias patients.

Introduction: The imaging features of a multicystic dysplastic kidney (MCDK) are readily delineated by modern radiographic techniques allowing for the diagnosis of MCDK to be made with confidence. Associated abnormalities are known to exist in the contralateral kidney in a significant proportion of patients including vesicoureteral reflux, ureteropelvic junction obstruction and megaureter. Most often the parenchymal integrity of the contralateral kidney has been judged to be normal by renal ultrasound or dimercaptosuccinic acid renal scan. However, the imaging resolution offered by magnetic resonance urography (MRU) is revealing a greater incidence of parenchymal, structural, and functional abnormalities involving the contralateral kidney than appreciated by other imaging modalities.

Objectives: Using MRU we aimed to evaluate the incidence of functional and anatomic abnormalities especially more subtle parenchymal features in the contralateral kidney of patients with unilateral MCDK disease and correlate these findings with the presence or absence of compensatory hypertrophy.

Methods: We reviewed the MRU imaging of patients with MCDK disease at Scottish Rite Children’s Hospital to evaluate the contralateral kidney for anatomic abnormalities, functional abnormalities, and compensatory hypertrophy. The findings of MRU were compared to the findings of other imaging modalities.

Results: 36 patients had a MCDK. 17 (44%) of the patients had an anatomic abnormality. 5 patients had hydronephrosis and 12 (33%) patients had dysplasia in the contralateral kidney. Of the 36 patients with MCDK, 28 patients had a body surface area corrected Patlak functional evaluation based on MRU imaging of the contralateral kidney to estimate the glomerular filtration rate (GFR). The 5 patients with hydronephrosis in the contralateral kidney had an average GFR of 99ml/min. The 7 patients with dysplasia in the contralateral kidney had an average GFR of 55ml/min. The 16 patients with normal contralateral kidneys had a GFR of 103.5ml/min.

Conclusions: MRU for patients with MCDK reveals a high incidence of anatomic abnormalities in the contralateral kidney including more subtle parenchymal changes associated with a lack of compensatory hypertrophy and lower lower GFR. These findings have implications regarding long-term follow-up of patients with MCDK disease.
PODIUM 33
DYSFUNCTIONAL ELIMINATION SYNDROME FOLLOWING SURGICAL CORRECTION OF VESICOURETERAL REFUX.
Douglas B. Clayton¹, Benjamin M. Whittam², John C. Thomas², John C. Pope IV², Mark C. Adams², John W. Brock, III¹ and Stacy T. Tanaka²
¹Department of Urologic Surgery, Division of Pediatric Urology, Vanderbilt University, Nashville, TN
(Presented By: Douglas B. Clayton)

Introduction: The presence of dysfunctional elimination syndrome (DES) is known to decrease success following surgical treatment for vesicoureteral reflux (VUR). It has been suggested that postoperative DES (post-DES) may be more common following open ureteral reimplantation as compared to endoscopic correction with dextranomer/hyaluronic acid injection. We sought to compare the incidence of postoperative DES following endoscopic vs. open surgery for VUR.

Methods: We performed a review of patients undergoing surgical treatment of VUR with either endoscopic injection or ureteral reimplantation between 2002 and 2007. Study inclusion criteria consisted of primary VUR, postop followup > 1 month, and age between 48 and 120 months. Patients with previous ureteral reimplantation, ectopic ureter, ureterocele, neurogenic bladder and/or posterior urethral valves were excluded. Data collected included demographic variables, clinical presentation at VUR diagnosis, VUR grade and the presence of preoperative DES (pre-DES) and postoperative DES. DES was defined as the presence of voiding symptoms (urinary urgency, urinary urge incontinence, or infrequent voiding) with or without constipation. Individual clinic notes were reviewed to determine the presence of DES at each visit. Proportional data was analyzed using Fisher’s exact test. P values were two-tailed with significance defined as <0.05.

Results: Between 2002 and 2007, 162 patients underwent endoscopic correction of VUR at our institution, and 49 met inclusion criteria while 395 underwent open reimplantation with 209 meeting inclusion criteria. While the incidence of post-DES was significantly different between the two groups (p = 0.002), among patients with pre-DES, resolution rates in the postoperative period were not significantly different between the open and endoscopic groups (p = 0.48). The de novo development of post-DES was not statistically different between the two groups (p = 0.43).

Conclusion: DES is common both before and after surgery for VUR. In our population, DES resolution and de novo development was not influenced by surgical approach. All VUR patients should be diligently followed in the postoperative period to assess and correct poor voiding habits.

PODIUM 34
ROTATION OF THE AMPUTATED FISTULA TRACT (RAFT) FOR THE MANAGEMENT OF CONGENITAL URETHRAL−CUTANEOUS OR URETHRAL−ENTERIC FISTULA WITH SEVERE URETHRAL STENOSIS
Jonathan Kaye¹, Kate Kraft¹, Martin Koyle², Edwin Smith¹, Justin Watson¹ and Andrew Kirsch¹
¹Children’s Healthcare of Atlanta, Atlanta, Georgia; ²Seattle Children’s Hospital, Seattle, Washington
(Presented By: Jonathan Kaye)

Introduction: Urethral stenosis is a rare but important entity. Although often amenable to management via sequential dilation (i.e. P.A.D.U.A. technique), this malformation occasionally requires complex reconstruction. Small subsets of these patients have concomitant congenital urethral-enteric or urethral-cutaneous fistulae, with an atretic or severely stenotic urethra distal to the fistula. The extremely narrow caliber of the urethra distal to the fistula tract can render the urethral segments unusable for reconstruction. We present a novel surgical approach that rotates the amputated fistula tract (R.A.F.T.) into urethral reconstruction.

Methods: The charts of 6 patients undergoing this technique were reviewed. Demographic data, surgical indications, operative details, post-operative complications, subsequent surgeries and sexual function were recorded. Surgical principles were similar in all cases: the fistula tract was amputated as close to the bowel or skin as possible. A tubularized urethra was then fashioned from preputial skin (i.e. Duckett technique) and anastomosed to the distal end of the fistula. The distal end of the neo-urethra was then brought to the tip of the penis, or anastomosed to the patent distal urethra.

Results: Between January 1991 and July 2008, six patients underwent urethral reconstruction with fistula tract with mean follow-up of 8 years (range 3 months – 17 years). Mean patient age at surgery was 15 months (range 6–22 months). Three patients had a recto-urethral fistula as a component of VACTERL, while 1 had a urethra-cutaneous fistula draining just anterior to the anus. In 3 patients, P.A.D.U.A. dilation was unsuccessfully attempted prior to surgery; in the fourth, the urethra could not accommodate a pediatric guide wire. Length of urethral deficit ranged from 7 cm to 11 cm. Three patients experienced post-operative epididymo-orchitis. Four patients have functional urethras and have required no subsequent urologic reconstruction. Two patients have undergone augmentation cystoplasty and Mitrofanoff, one of whom ejaculates normally per urethra. Sexual function could not yet be evaluated in 3 pre-pubescent patients.

Conclusions: The RAFT technique represents a viable option for major urethral reconstruction in the presence of a congenital fistula and distal urethral stenosis. The anastomosis to an epithelial tube shortens the length of this tube required to bridge a gap. This technique may be of particular utility in cases of failed PADUA, or in which a staged buccal onlay graft is not feasible.
PODIUM 35
THE USE OF DIAGNOSTIC PNEUMOPERITONEUM TO DETECT OCCULT CONTRALATERAL INGUINAL HERNIA: LARGE SINGLE-SURGEON SERIES
Jonathan Kaye and Hal Scherz
Children’s Healthcare of Atlanta, Atlanta, Georgia
(Presented By: Jonathan Kaye)

Introduction: Inguinal herniorrhaphy (IH) is the most common pediatric surgical procedure, with approximately 75% of cases presenting unilaterally. Prior studies have demonstrated no predilection for either side, but have established that approximately 40% of “unilateral” pediatric hernia patients have a patent processus vaginalis contralaterally. Roughly half of these patients will develop an inguinal hernia. However, the questions of whether and how to identify at the time of IH those children at risk for developing a clinically significant contralateral hernia remain matters of debate. Diagnostic pneumoperitoneum, or the so-called Goldstein test, is commonly used to identify an occult contralateral hernia. In this largest series to date, we report our single-surgeon experience with this technique and compare our findings to those published previously.

Materials and Methods: Chart review was performed for all patients ages 3 months – 12 years undergoing unilateral IH by a single surgeon over a 15-year period. Patients without patent processus vaginalis, with thin and friable hernia sac, with prior contralateral repair or with ventriculoperitoneal shunt did not undergo diagnostic pneumoperitoneum, and were therefore excluded from analysis. In all other cases, the peritoneal cavity was insufflated to 20 mm/Hg through an 8 Fr feeding tube placed through that processus vaginalis. All patients with a positive Goldstein test underwent same-setting contralateral repair. Demographic information, laterality, findings at pneumoperitoneum, and recurrence were recorded for all patients.

Results: Between January 2, 1994 and October 1, 2008, 535 patients (520 boys and 15 girls, mean age 3.0 years) underwent diagnostic pneumoperitoneum at the time of unilateral IH. 343/535 (64%) were right-sided and 192/535 (36%) were left-sided (p<0.05). Overall, 68/535 (13%) patients had a positive Goldstein test. Among those presenting with right-sided hernias, 33/343 (10%) were positive, while 35/192 (18%) of those presenting with left-sided hernias were positive (p<0.05). With mean follow-up of 7 years (range 2 months – 13.5 years), there were 4 false negatives, all of which presented with hydroceles within 2 years of their initial surgery.

Conclusions: Diagnostic pneumoperitoneum is a safe, efficient and reliable method of diagnosing a contralateral hernia at IH. Because its risk, time and expense are negligible, we believe that its use should be routine, as it obviates an additional surgery in a handful of children. Contrary to prior studies, right-sided hernias (both apparent and occult) predominate over left-sided hernias.

PODIUM 36
CLINICAL CHARACTERISTICS OF CHILDREN WITH SPINA BIFIDA REQUIRING VESICOSTOMY
Michelle Lightfoot, Lynn Woo, John Brock III, Mark Adams, John Pope IV, Stacy Tanaka and John Thomas
Division of Pediatric Urology, Vanderbilt University Medical Center, Nashville TN
(Presented By: Michelle Lightfoot)

Introduction and Objectives: In a subset of children with spina bifida, temporary urinary diversion with vesicostomy may be indicated to avoid upper tract deterioration from high storage pressures and/or infection. We sought to characterize the clinical findings and outcomes of children with spina bifida who underwent vesicostomy at our institution.

Methods: We reviewed the records of all children with spina bifida who were born at, or immediately transferred to our medical center between 1997 and 2007. A minimum of 2 years follow-up was required for inclusion in our review.

Results: 85 patients were included in our analysis. Mean follow-up was 78 months (24−145). A total of 8 (9.4%) patients required vesicostomy at a mean age of 19.3 months (1.9 – 32.1). All 8 had pre-existing hydronephrosis, which worsened in 6. Preoperatively, 6/8 were found to have vesicoureteral reflux (VUR); 3/8 had detrusor leak point pressure (dLPP)>40 cm H2O, and 2/8 demonstrated both VUR and dLPP The remaining patient developed recurrent urinary tract infections while on intermittent catheterization (CIC). Vesicostomy was performed after failure of conservative management with anticholinergics and/or CIC. Following surgery, 7 patients had normal renal ultrasounds at a mean follow-up of 10.4 months (2 – 21), and 1 patient had intermittent grade 1 hydronephrosis. Stomal stenosis requiring operative dilation was required in 1 patient. Vesicostomy closure has since been performed in 2 patients in combination with augmentation cystoplasty, both at 5 years of age.

Conclusion: In our series of children with spina bifida, 9% required vesicostomy. Hydronephrosis with the appearance of VUR was the most frequent indication for surgery. Vesicostomy continues to be a safe and effective method of urinary diversion in young children with spina bifida. The young age at time of vesicostomy underscores the importance of close follow-up in these children, particularly during the first 3 years of life.
PODIUM 37
STAGED REPAIR FOR CORRECTION OF SEVERE HYPOSPADIAS WITH CHORDEE: LONG TERM FOLLOW-UP
Miguel Castellan, Devendra Joshi, Yuval Bar-Yosef, Andrew Labbie and Rafael Gosalbez
(Presented By: Miguel Castellan)

Introduction: Proximal hypospadias with severe chordee represents a difficult subset of patients. We report our results of retrospective analysis of staged repair for severe hypospadias with chordee with a long term follow up.

Materials and Methods: We retrospectively analyzed our data between Jan’1998 – July’2007. Staged hypospadias repair was performed in 48 patients with proximal hypospadias and chordee repair during this period. Meatal location was perineal in 26 (54%) and penoscrotal in 22 (46%). Mean age at first surgery was 15.2 months (12months – 60 months). Mean duration between first stage and second stage was 8.5 months. Orthoplasty was done with SIS corporoplasty (66.7%), Nesbit tuck penoplasty (16.7%), penile degloving (10%), dermal graft corporoplasty (4%) and tunica vaginalis graft corporoplasty (2%). Second stage urethroplasty was done as Thiersch-Duplay in 25 patients (52%), proximal Thiersch-Duplay with distal Snodgrass in 11 patients (23%), buccal mucosal graft (Snodgraft) in 11 patients (23%), while proximal Thiersch-Duplay with distal onlay was done in 1 patient (2%). Follow up ranged from 2 years – 17 years (mean – 5.2 years).

Results: All patients had satisfactory cosmesis after the procedure. Complications requiring further surgical procedures were seen in 18 patients (37.5%). Urethrocutaneous fistula was the most common complication seen in 16.7% of the patients. Other complications included urethral diverticulum in 5 (10.4%), meatal stenosis in 4 (8.3%) and inclusion cyst in 1 patient (2%). Fistula rates and urethral diverticulum observed in our analysis did not vary much between the different types of urethroplasties. All cases of meatal stenosis were observed in patients undergoing Thiersch-Duplay urethroplasty. Fourth surgery was done in 5 patients (10.4%), of which 4 patients had meatal revision while 1 had excision of inclusion cyst.

Conclusion: Staged hypospadias repair provides good cosmetic and functional outcome for this difficult subset of patients. With the use of grafts for corporoplasty, satisfactory results can be achieved without sacrificing penile length. Although complications were seen in one-third of our patients, they were not severe and they were all correctly managed surgically.

PODIUM 38
MINUTELY INVASIVE ROBOTIC PYELOPLASTY IN CHILDREN: INITIAL EXPERIENCE WITH 8MM CAMERA AND 5MM WORKING PORTS
Jonathan Kaye, Bruce Broecker, Charlotte Massad, Hal Scherz, Andrew Kirsch, Edwin Smith, Justin Watson and James Elmore
Children’s Healthcare of Atlanta, Atlanta, Georgia
(Presented By: Jonathan Kaye)

Background: Robotic-assisted laparoscopic pyeloplasty (RALP) has recently become a minimally invasive option for the treatment of ureteropelvic junction obstruction in children. The primary advantages include less post-operative pain and a shorter convalescence. The typical procedure utilizes a 12 mm camera and two 8 mm working ports. The relatively large aggregate length of these incisions partly offsets the cosmetic advantage of a minimally invasive approach. However, we now perform this procedure with the smaller camera and working instruments recently introduced by Intuitive Surgical (DaVinci) and herein describe our initial experience.

Materials and Methods: The charts of all patients undergoing transperitoneal RALP utilizing the new 8 mm camera and 5 mm working instruments were reviewed. Data including operative time, estimated blood loss (EBL), complications, length of hospital stay, success rates and final cosmesis were collected.

Results: Between May 2007 and August 2008, 7 girls and 9 boys with a mean age of 10.3 years (range 5 – 17) underwent transperitoneal RALP using an 8 mm camera and two 5 mm working instruments by a single surgeon (JME). In 6 of these patients, an additional 5 mm accessory port was placed for retraction while no additional ports were used in the remaining 10 patients. Average operative time, including robot set-up, was 190 minutes (range 162 – 241). EBL averaged 30cc (range 15 – 60). Ureteral stents were placed in all patients and left indwelling for 6 – 8 weeks postoperatively. All patients where discharged on the first post-operative day with a urethral catheter which was removed 3 – 5 days post-operatively in the office. Peritoneal drains were not utilized. There were no intraoperative complications. One patient developed a urine leak, which resolved 1 week after placement of a percutaneous drain. At a mean follow up of 15.8 months (range 5 – 17) all patients have had radiographic success (MRU in 9 and serial ultrasounds in 7). One patient has infrequent right upper quadrant pain despite acceptable drainage and a significant reduction in hydronephrosis on MRU. Cosmesis has been excellent in all cases with nearly invisible scarring in most.
Conclusions: RALP in the pediatric population utilizing the smaller camera and working instruments can be performed with similar initial success rates to those published with the standard larger instruments. The smaller ports further minimize scarring, thereby providing another advantage to this minimally invasive technique.

PODIUM 39
SALVAGE DEFLUX INJECTION FOR PERSISTENT REFLUX AFTER SURGICAL REIMPLANTATION
Yuval Bar-Yosef, Miguel Castellan, Devendra Joshi, Andrew Labbie and Rafael Gosalbez
(Presented By: Miguel Castellan)

Aim: To study the efficacy of Deflux injection as a salvage procedure in patients with persistent VUR after reimplantation.

Materials and Methods: A retrospective analysis of data for the period 8/2002~11/2008 was performed. A total of 21 patients (26 ureteral units) with persistent reflux after reimplantation were identified. Of these, 6 patients were referred after failed reimplantation by other surgeons. Mean age of the patients was 7yrs (2~13yrs). Reimplantation was done for primary VUR in single system in 13 patients. The procedure was performed extravesically in 6 patients and intravesically, including Cohen and Glenn–Anderson (1 patient), in 7 patients. Reimplantation with excisional ureteral tapering for megaureter was performed in 4 patients. Three patients had duplex systems, of which 2 patients underwent double barrel reimplant while another patient had upper to lower uretero–ureterostomy with reimplant. One patient had lower tract reconstruction performed for ureterocele. The grade of reflux, out of a total of 26 ureteral units were as follows: grade 1 − 3(11%), grade 2 – 17(65%), grade 3 – 3(11%), grade 4 – 3(11%). Average volume of Deflux used in each sitting was 1.2 ml.

Results: Reflux successfully resolved in 15 patients and 20 ureteral units (77%), while the reflux was downgrade in 25 ureteral units (96%). The success rate improved to 84% (22 ureteral units) after up to 3 injections. Of the 6 patients in whom reflux persisted after the first injection, 4 patients had primary VUR, 1 patient had tapered reimplant for megaureter and 1 patient had ureterocele repair. The reflux resolved after multiple injections in 2 patients with primary VUR. Of the 4 patients with persistent reflux, 3 are on regular follow-up, while 1 patient underwent surgical correction.

Conclusion: Deflux injection is an excellent salvage procedure for persistent reflux after reimplantation with a high success rate after single injection and very low morbidity.

PODIUM 40
STENTLESS TUBELESS PEDIATRIC ROBOTIC PYELOPLASTY: INITIAL EXPERIENCE
Timothy Weber¹, Alejandro Rodriguez², Mark Rich³, Michael Keating⁴ and Hubert Swana⁵
¹University of South Florida School of Medicine Tampa, FL; ²University of South Florida School of Medicine Department of Urology Tampa, FL; ³Nemours Children’s Clinic Orlando University of South Florida School of Medicine Department of Urology Orlando, FL
(Presented By: Timothy Weber)

Purpose: Open dismembered pyeloplasty remains the standard of care for pediatric patients with ureteropelvic junction obstruction. Whether or not to stent the repair remains a point of contention with open pyeloplasty for children, since stent removal often requires a second anesthesia. Laparoscopic techniques are increasing in frequency with comparable success rates. Robotic technology facilitates the fine suturing necessary for Anderson-Hynes type reconstruction, yet concerns about the need for secondary anesthesia for stent removal persist. We report our initial experience with non-stented pediatric robotic pyeloplasty.

Materials and Methods: Seven consecutive pediatric patients underwent robotic dismembered pyeloplasty. A transperitoneal approach was used in all cases. The anastamosis was created using interrupted 6–0 vicryl sutures. Stenting of the anastomosis was not performed. No nephrostomy tubes were used. A Jackson-Pratt drain was left in place externalized through the lower quadrant port site to see if urinary leakage occurred. Operative time, console time, hospital stay, days length of Jackson-Pratt drainage, complications and need for secondary procedures related to the primary repair were analyzed.

Results: Of the 7 non-stented repairs, there were no complications. No patients required a secondary procedure. The mean patient age was 9.1 years. The mean hospital stay was 3.4 days. Mean operative time and mean console time was 193 and 137 minutes, respectively. No patient experienced urine leak or wound infections. All patients had symptomatic relief and ultrasonographic improvement in the degree of hydronephrosis.

Conclusions: Robot-assisted laparoscopic pyeloplasty can be reliably performed without stent drainage, thus eliminating the need for additional surgery. Early results suggest that it may be reasonable in select patients.
THE USE OF A DANGLER STRING TO FACILITATE STENT REMOVAL AFTER LAPAROSCOPIC ROBOTIC ASSISTED PYELOPLASTY IN CHILDREN
Michael Erhard, Erica Mercer and Mark Barraza

Introduction and Objectives: Laparoscopic pyeloplasty is being performed more frequently in children. At our institution, we utilize robotic assistance due to enhanced 3-D visualization, magnification, and greater instrument degrees of freedom. We report our safe and effective experience in using a dangler string to facilitate office stent removal two weeks postoperatively after pyeloplasty for ureteropelvic junction obstruction.

Methods: We retrospectively reviewed all children who had undergone laparoscopic robotic assisted pyeloplasty at our institution from 6/2005 to 6/2009. Included in this study are those children who had a dangler string in place attached to the stent to facilitate postoperative removal without anesthesia. Specifically we recorded outcome of surgery (success defined as improved symptoms, ultrasound, or lasix renal scan), and whether there were any adverse events from the use of the dangler string.

Results: A total of 82 robotic assisted pyeloplasties were performed, 43 had a dangler string (first patient 4/2007) and are included in this study. There were 28 males and 15 females ages 4 months to 17 years. One child (8 months of age) had an inadvertant accidental early removal three days postoperatively. There were no significant urinary tract infections, and morbidity included dysuria, hematuria, and minor stent discomfort. All children were noted to have success as defined above.

Conclusions: The use of a dangler string to facilitate the early removal of stents, without anesthesia, in children after laparoscopic robotic assisted pyeloplasty is safe, well tolerated, and does not appear to affect the success of the procedure.

3:30 p.m. – 4:45 p.m.  SESSION 5: VIDEO SESSION II
Location: Poinciana 3
Moderators: Robert I. Carey, MD, PhD
Sarasota, FL
S. Duke Herrell, MD
Nashville, TN

Video #13
TECHNIQUE OF ROBOTIC-ASSISTED DISTAL URETERECTOMY AND PSOAS HITCH FOR BENIGN AND MALIGNANT URETERAL DISEASES
Charles Vincent, Hany Atalah and Li-Ming Su
University of Florida, Gainesville, FL
(Presented By: Charles Vincent)

Video #14
BRICKER ILEAL CONDUIT: TIPS TO FACILITATE EASE OF CONSTRUCTION
Marina Cheng and James A. Brown
Medical College of Georgia, Augusta, GA
(Presented By: Marina Cheng)

Video #15
MANAGEMENT OF CROSSING VESSELS (AND OTHER FINDINGS) DURING ROBOTIC PYELOPLASTY
Ugur Boylu, Benjamin R. Lee and Raju Thomas
Department of Urology, Tulane University School of Medicine, New Orleans, LA
(Presented By: Ugur Boylu)

Video #16
ROBOTIC PARTIAL NEPHRECTOMY: EARLY UNCLAMPING
Benjamin R. Lee, Mathew Oommen, Mathew Raynor and Ugur Boylu
Department of Urology, Tulane University School of Medicine, New Orleans, LA
(Presented By: Ugur Boylu)

Video #17
NOTES TRANSVAGINAL NEPHRECTOMY: INITIAL CLINICAL EXPERIENCE
Wesley White¹, Georges-Pascal Haber², Raj Goel³, Sebastien Crouzet² and Jihad Kaouk²
¹The University of Tennessee Medical Center, Knoxville, TN; ²Cleveland Clinic, Cleveland, OH
(Presented By: Wesley White)
Video #18  LAPAROSCOPIC PARTIAL CYSTECTOMY
Joshua Griffin and William Duncan
University of Mississippi, Jackson, MS
(Presented By: Joshua Griffin)

Video #19  STEREOTACTIC PERCUTANEOUS RENAL CRYOABLATION: INITIAL CLINICAL EXPERIENCE
Wesley White¹, Georges-Pascal Haber², Sebastien Crouzet³ and Jihad Kaouk⁴
¹The University of Tennessee Medical Center, Knoxville, TN; ²Cleveland Clinic, Cleveland, OH
(Presented By: Wesley White)

Video #20  TECHNIQUE OF ROBOTIC VESICOVAGINAL FISTULA REPAIR
Charles Vincent, Hany Atalah, Linda Morgan and Li-Ming Su
University of Florida, Gainesville, FL
(Presented By: Charles Vincent)

Video #21  TECHNIQUE OF ROBOTIC-ASSISTED LAPAROSCOPIC SIMPLE PROSTATECTOMY
Rafael Coelho¹, Sanket Chauhan², Marcelo Orvieto², Kenneth Palmer², Bobby Ardila² and Vipul Patel²
¹Global Robotics Institute, Florida Hospital Celebration Health, University of Central Florida School of Medicine, Celebration, FL; ²Global Robotics Institute, Florida Hospital Celebration Health, Celebration, FL
(Presented By: Rafael Coelho)

Video #22  ROBOT-ASSISTED RADICAL PROSTATECTOMY IN RENAL TRANSPLANT RECIPIENTS
Damien Smith¹, Joseph Graversen² and Richard Vanlangendonck³
¹Ocshner Health Systems, New Orleans, LA; ²New Orleans
(Presented By: Richard Vanlangendonck)

Video #23  ROBOTIC ADRENALECTOMY: SURGICAL TECHNIQUE AND OUTCOMES
Lawrence Yeung, Hany Atalah, Sijo Parekattil and Li-Ming Su
University of Florida, Gainesville, FL
(Presented By: Lawrence Yeung)

4:45 p.m. – 5:45 p.m.
SESSION 6: PROSTATE CANCER I PODIUM
Location: Americana 4
Moderators: Joseph E. Busby, MD
Birmingham, AL
Viraj A. Master, MD
Atlanta, GA

4:45 p.m.  #42  EVALUATING THE EVIDENCE: QUALITY OF REPORTING OF STUDIES ON ROBOTIC-ASSISTED LAPAROSCOPIC PROSTATECTOMY
Diana Kang¹, Miranda Hardee², Susan Fesperman¹, Johannes Vieweg¹, Sijo Parekattil¹ and Philipp Dahm¹
¹Department of Urology, University of Florida, Gainesville, FL; ²Department of Surgery, Division of Urology, University of Utah, Salt Lake City, UT
(Presented By: Diana Kang)

4:50 p.m.  #43  CAREFUL SELECTION AND CLOSE MONITORING OF LOW-RISK PROSTATE CANCER PATIENTS ON AN ACTIVE SURVEILLANCE PROTOCOL MINIMIZES THE NEED FOR TREATMENT
Mark Soloway¹, Cynthia Soloway², Kristell Acosta¹, Ahmed Eldefrawy¹, Devendar Katkoori¹, Bruce Kava¹ and Murugesan Manoharan¹
¹University of Miami Miller School of Medicine, Miami, FL
(Presented By: Cynthia Soloway)
4:55 p.m.  #44 PROSTATE CANCER DISEASE STAGE COMPARED TO PROSTATE CANCER SCREENING RATES AMONG STATES IN THE UNITED STATES
Jan Colli, Jared Cox, Sean Clark and Michael Knox
University of Alabama at Birmingham
(Presented By: Jared Cox)

5:00 p.m.  #45 RADICAL PROSTATECTOMY FOR HIGH-RISK PROSTATE CANCER: A SINGLE-CENTER EXPERIENCE
David Spencer, Joshua Griffin, Jason Bridges, James Seidmon and Charles Pound
University of Mississippi and G.V. (Sonny) Montgomery VA Medical Center, Jackson, MS
(Presented By: David Spencer)

5:05 p.m.  #46 USE OF AGE AND BMD TO PREDICT FRACTURE RISK IN MEN ON ADT
Marc C. Gittelman¹, Amy Gittelman¹, Lawrence Winton¹, Mark Christ¹, Harvey Samowitz¹, Stephen Tannenbaum¹, Juan Primoli¹, Ronald Morton² and Shontelle Dodson²
¹South Florida Medical Research, Aventura, FL; ²GTx, Inc. Memphis, TN
(Presented By: Marc C. Gittelman)

5:10 p.m.  #47 ONCOLOGICAL AND FUNCTIONAL OUTCOME FOLLOWING TOTAL PROSTATECTOMY: HOW MANY MEN ACHIEVE THE “TRIFECTA”??
Mark Soloway¹, Elie Antabie², Ahmed Eldedefawy¹, Devendar Katkooi³, Rajnikanth Ayyadurai¹ and Murugesan Manoharan¹
¹University of Miami Miller School of Medicine, Miami, FL
(Presented By: Elie Antabie)

5:15 p.m.  #48 PHASE III TRIAL OF TOREMIFENE 80 MG IN MEN ON ADT DEMONSTRATES SIGNIFICANT FRACTURE RISK IN UNTREATED PLACEBO GROUP
Marc C. Gittelman¹, Amy Gittelman¹, Lawrence Winton¹, Mark Christ¹, Harvey Samowitz¹, Stephen Tannenbaum¹, Juan Primoli¹, Ronald Morton² and Shontelle Dodson²
¹South Florida Medical Research, Aventura, FL; ²GTx, Inc. Memphis, TN
(Presented By: Marc C. Gittelman)

5:20 p.m.  #49 10-YEAR OUTCOMES FOR CLINICALLY LOCALIZED HIGH RISK PROSTATE CANCER TREATED WITH COMBINATION PALLADIUM BRACHYTHERAPY, LOW DOSE EXTERNAL RADIATION THERAPY, AND SHORT COURSE HORMONAL ABLATION THERAPY
Rizwan Nurani¹, Mitchell Terk¹, Jamie Cesaretti¹, Rosetta Hixson¹, Apoorva Vashi¹ and Douglas Swartz³
¹Riverside Cancer Center, Jacksonville, FL; ²Jacksonville Prostate Center, Jacksonville, FL; ³McIver Urological Clinic, Jacksonville, FL
(Presented By: Douglas Swartz)

5:25 p.m.  #50 HOW DOES THE UROLOGIST’S ACCEPTANCE OF ACTIVE SURVEILLANCE IMPACT THE PATIENT’S CHOICE OF TREATMENT FOR LOW-RISK PROSTATE CANCER?
Ahmed Eldedefawy, Devender Katkooi, Cynthia Soloway, Kristell Acosta, Murugesan Manoharan and Mark Soloway
University of Miami Miller School of Medicine, Miami, FL
(Presented By: Ahmed Eldedefawy)

5:30 p.m.  #51 TOREMIFENE 80 MG PHASE III TRIAL IN MEN ON ADT DEMONSTRATES POSITIVE IMPACT ON LIPID PROFILE RELATIVE TO PLACEBO
Michael Cookson¹, Dean Knoll², Ronald A. Morton³, Shontelle Dodson³ and Domingo Rodriguez³
¹Vanderbilt University School of Medicine, Nashville, TN; ²Center for Urological Treatment, Nashville, TN; ³GTx, Inc. Memphis, TN
(Presented By: Michael Cookson)
PODIUM 42
EVALUATING THE EVIDENCE: QUALITY OF REPORTING OF STUDIES ON ROBOTIC-ASSISTED LAPAROSCOPIC PROSTATECTOMY
Diana Kang¹, Miranda Hardee², Susan Fesperman¹, Johannes Vieweg¹, Sijo Parekattil¹ and Philipp Dahm¹
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(Presented By: Diana Kang)

Purpose: Robotic-assisted laparoscopic prostatectomy (RALP) has de facto displaced radical retropubic prostatectomy as the "gold standard" surgical approach to clinically localized prostate cancer. We performed this study to critically assess the available published evidence to support this major shift in practice.

Materials and Methods: We performed a systematic MEDLINE and EMBASE literature search from 1/2000 to 12/2008 to identify all original research publications on RALP. Editorials, letters to the editors and review articles were excluded. Two reviewers independently performed the data abstraction using a standardized form derived from the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) criteria, that was pilot-tested for inter-observer agreement in a separate sample. Discrepancies were settled by discussion and arbitration by a third investigator.

Results: 61 original research publication met eligibility criteria. No randomized controlled trial was identified; 69% of studies were case series, 21% retrospective and 10% prospective cohort studies. Eleven investigators authored 69% of studies (42/61). The median study sample size was 150 (IQR 55–307). Nearly one third of studies (29.5%) did not identify the number of surgeons involved, and 38% did not provide information on the surgeons' learning curve. The patients' perioperative care was not described in 64%, and information on the mean/median length of follow-up was missing in 50% of studies. Only 43% of studies applied a standardized questionnaire to assess patient outcomes, and only 40% specified Institutional Review Board study approval.

Conclusions: The published RALP literature is limited to uncontrolled, observational studies, many of which appear of poor methodological quality. Most studies originate from few, select centers. These findings draw into question to what extent valid conclusions about the relative superiority or equivalence of RALP to other surgical approaches can be drawn and whether outcome can be generalized to the broader community. There appears an urgent need to raise the methodological standards for clinical research for newly introduced urological procedures and devices.

PODIUM 43
CAREFUL SELECTION AND CLOSE MONITORING OF LOW-RISK PROSTATE CANCER PATIENTS ON AN ACTIVE SURVEILLANCE PROTOCOL MINIMIZES THE NEED FOR TREATMENT
Mark Soloway¹, Cynthia Soloway², Kristell Acosta¹, Ahmed Eldefrawy¹, Devendar Katkoori¹, Bruce Kava¹ and Murugesan Manoharan¹
¹University of Miami Miller School of Medicine, Miami, FL
(Presented By: Cynthia Soloway)

Introduction: Due to an increase over the last 20 years in PSA screening and the number of biopsy cores obtained, there has been a dramatic rise (15% to 62%) in the incidence of low-risk prostate cancer (LRPC). Some suggest 50% of cases detected through PSA screening are over-treated. Consequently, active surveillance (AS) may be the optimal strategy for low-risk prostate cancer (LRPC). There appears an urgent need to raise the methodological standards for clinical research for newly introduced urological procedures and devices.

Results: 212/252 PC patients met our AS criteria for analysis: 1) ≥ 12 month follow-up; 2) PSA ≤ 15; 3) Gleason score ≤ 6; 4) ≤ 80 years; and 5) a life expectancy ≥ than 10 years. Although the accepted criteria is ≤ 50% tumor in two cores, our cohort was offered AS if the initial biopsy had ≤ 10–15% tumor in no more than 2 biopsy cores. The patients were asked to adhere to strict guidelines for follow-up: DRE and PSA 3 – 4 months by discussion and arbitration by a third investigator. Discrepancies were settled by discussion and arbitration by a third investigator.

Conclusions: The published RALP literature is limited to uncontrolled, observational studies, many of which appear of poor methodological quality. Most studies originate from few, select centers. These findings draw into question to what extent valid conclusions about the relative superiority or equivalence of RALP to other surgical approaches can be drawn and whether outcome can be generalized to the broader community. There appears an urgent need to raise the methodological standards for clinical research for newly introduced urological procedures and devices.
PODIUM 44
PROSTATE CANCER DISEASE STAGE COMPARED TO PROSTATE CANCER SCREENING RATES AMONG STATES IN THE UNITED STATES
Jan Colli, Jared Cox, Sean Clark and Michael Knox
University of Alabama at Birmingham
(Presented By: Jared Cox)

Introduction: Some recent large-scale studies have suggested that widespread prostate cancer screening and treatment provides little or no benefit in disease related mortality. However, differences in prostate cancer mortality rates are difficult to detect because men often die of other causes since the disease strikes older men and there is a long latency period for disease-related mortality. The objective of this study is to explore the effect of prostate cancer screening on the occurrence of stage IV disease on initial diagnoses among states as a measure of the effectiveness screening. We hypothesize that delaying the onset of stage IV disease is a good barometer of the benefits of prostate cancer screening since mortality rates for distant disease are significantly high than for localized disease

Methods: The percent of stage I, II, III IV and unclassified prostate cancers diagnosed in white males in 2005 were compared to prostate cancer screening rates on a state-by-state basis. To consider access to medical care and socioeconomic status; median family income, degree of urbanization and health insurance status was included in the analysis. Data on the progression of prostate cancer disease in new cases among states were obtained from the National Cancer Data Base (NCBD), which contains data on 117,981 cases of males diagnosed with prostate cancer in 2005. The NCBD is a joint program of the Commission on Cancer and the American Cancer Society covering more than 14,000 approved hospitals. Data on prostate cancer screening rates and health insurance status among states were obtained from the Behavioral Risk Factor Surveillance System, sponsored by the Center for Disease Control and Prevention. Data on the median family income and the degree of urbanization was obtained from the U.S. Census Bureau. Statistical analysis was performed using SPSS version 12.0 software.

Results: Stage IV prostate cancer as a percentage of incidences in 2005 varied from 8% in New Jersey to 18% in Kansas. Prostate cancer stage IV disease correlated inversely with prostate cancer screening rates ($R = -0.37$, $P = .02$) where $R$ is the correlation coefficient and $P$ is the probability.

Conclusions: The results of this study suggest that prostate cancer screening may be associated with reduced rates of stage IV disease. These findings are consistent with the hypothesis that prostate cancer screening and treatment will reduce the occurrence of late stage disease in initial diagnoses. We have no disclosures.

PODIUM 45
RADICAL PROSTATECTOMY FOR HIGH-RISK PROSTATE CANCER: A SINGLE-CENTER EXPERIENCE
David Spencer, Joshua Griffin, Jason Bridges, James Seidmon and Charles Pound
University of Mississippi and G.V. (Sonny) Montgomery VA Medical Center, Jackson, MS
(Presented By: David Spencer)

Introduction: Radical prostatectomy (RP) remains an important primary therapy in the management of high-risk prostate cancer (HRCAP). We assessed the oncologic control provided by RP in VA patients with a preoperative Gleason score of $>7$ on biopsy or prostatic specific antigen (PSA) $\geq 10$ ng/mL.

Methods: A retrospective review of HRCAP patients with a biopsy Gleason score of $>7$ or PSA $\geq 10$ ng/mL was performed on patients who underwent RP between 2000 and 2008. Treatment failure was defined as a PSA of $\geq 0.4$ ng/mL or initiation of adjuvant therapy.

Results: A total of 436 RPs were performed at our institution over this time period with 77 RPs performed on patients with HRCAP. Overall, 66 patients without preoperative hormone therapy and at least 1 year of follow-up were included in our analysis. Median follow-up was 40.5 months and mean age was 60 ± 6 years (46 – 72). The mean preoperative PSA was 13.2 ± 5.6 ng/mL (4.2 – 38.8). Of the 66 total patients, 56 (85%) had preoperative PSAs of $\geq 10$ ng/mL, 14 (21%) had a biopsy Gleason score of $>7$, and 4 (6%) had both. After pathologic analysis, there were 44 (67%) stage pT2, 9 (14%) stage pT3a, and 13 (19%) stage pT3b patients. Four of 56 patients (7%) with biopsy Gleason scores of $\leq 7$ and PSAs of $\geq 10$ ng/mL were upgraded to $>7$ on final pathology. Nine of 14 patients (64%) with biopsy Gleason scores of $>7$ were downgraded to $\leq 7$ on final pathology. Lymph nodes were positive for metastatic disease in 10 of 66 (15%) patients and surgical margins were positive in 21 of 66 (32%). Excluding the patients with positive lymph nodes, there were 11 of 56 (20%) biochemical recurrences at a median time of 6 months (0 – 31). Adjuvant treatment was given to 20 of 66 patients (30%) consisting of external radiation therapy in 9, hormone therapy in 7 and both in 4. There were 6 (9%) total deaths with 1 (1.5%) death due to prostate cancer.

Conclusions: RP is a reasonable therapeutic option for men with HRCAP. In this single institution cohort, over half of the men with Gleason scores of $>7$ on biopsy were downgraded on final pathology. Less than 10% of men with biopsy Gleason scores of $\leq 7$ and PSAs of $\geq 10$ ng/mL were upgraded to $>7$ on final pathology. Men in this high-risk group should be counseled that they may require adjuvant therapy.
PODIUM 46
USE OF AGE AND BMD TO PREDICT FRACTURE RISK IN MEN ON ADT
Marc C. Gittelman¹, Amy Gittelman¹, Lawrence Winton¹, Mark Christ¹, Harvey Samowitz¹, Stephen Tannenbaum¹, Juan Primoli², Ronald Morton² and Shontelle Dodson²
¹South Florida Medical Research, Aventura, FL; ²GTx, Inc. Memphis, TN
(Presented By: Marc C. Gittelman)

Background: Androgen deprivation therapy (ADT) decreases bone mineral density by reducing estrogens to castrate levels. As a result of this estrogen deficiency, patients are at increased risk for fracture. We recently completed a two-year trial in 1,389 men in which we examined the ability of toremifene to reduce fracture risk in men on ADT. We report analyses of the placebo group to assess the baseline characteristics associated with new fractures in this patient population.

Methods: We conducted a randomized, double-blind, placebo controlled trial in 1,389 men with histologically confirmed prostate cancer on ADT. All subjects were on ADT for ≥ 6 months, had a serum PSA ≤ 4 ng/mL, were >70 years of age or were at or below WHO thresholds for spine or hip (BMD). Subjects on intermittent ADT at enrollment had to remain on continuous ADT for their duration on study. Subjects were randomized to receive 80mg toremifene citrate daily or matching placebo. The primary end point was the incidence of new morphometric vertebral fractures. Secondary endpoints included BMD, fragility fractures, bone turnover markers, lipids, hot flashes, and gynecomastia. The modified intent to treat (MITT) population included subjects who took study medication and had an on-study radiograph.

Results: There were 493 subjects in the placebo MITT population. To identify factors associated with fracture risk in men on ADT we compared placebo subjects who suffered a fracture, or during the first year on study, suffered ≥7% bone loss with those placebo subjects who did not. Baseline characteristics included: BMD (spine, hip, femoral neck), age, history of fracture, ADT duration, bone turnover markers, and race. Logistic regression models of the probability of fracture/bone loss as a function of country showed that each of BMD at all sites, age, race, CTX, and history of previous fracture independently predicted fracture or 7% bone loss. When all characteristics were analyzed in a multivariable model, lower spine BMD (p=0.006) and older age (p=0.018) were significantly associated with incident fractures.

Conclusions: In prostate cancer patients on ADT, older age and lower baseline spine BMD were associated with a greater risk of fracture in untreated patients.

Funding: GTx, Inc.

PODIUM 47
ONCOLOGICAL AND FUNCTIONAL OUTCOME FOLLOWING TOTAL PROSTATECTOMY: HOW MANY MEN ACHIEVE THE “TRIFECTA”?
Mark Soloway¹, Elie Antabie², Ahmed Eldefrawy³, Devendar Katkoori¹, Rajinikanth Ayyadurai¹ and Murugesan Manoharan¹
¹University of Miami Miller School of Medicine, Miami, FL
(Presented By: Elie Antabie)

Introduction and Objectives: The desirable outcome after total prostatectomy (TP) for clinically localized prostate cancer (PC) is to remain recurrence free, continent and potent, together called the “trifecta.” To the best of our knowledge there are only two published reports analyzing the trifecta. Our aim is to assess the likelihood of achieving trifecta in our patients and to analyze the factors influencing the trifecta.

Materials and Methods: 1,998 men with localized PC underwent TP from 1992 – 2008 by a single surgeon. The exclusion criteria for this study were: preoperative hormonal or radiation therapy, preoperative incontinence or impotence, follow-up less than 12 months or insufficient data. All relevant factors affecting continence, potency or biochemical recurrence (BR) were analyzed. BR was defined as PSA ≥ 0.2 ng/mL, continence as wearing no pads and potency as having erections sufficient for intercourse upon most attempts with or without a phosphodiesterase-5 inhibitor.

Results: 1,005 patients met the inclusion criteria. The mean age of the entire cohort was 59 years. The median follow-up was 54 months (mean 62, range 12 – 202). The BR, potency and continence rates were 20%, 71.5% and 94% respectively. Trifecta was achieved in 63.5% at 2-year follow-up and 60.5% at 5-year follow-up. Age at surgery, PSA, biopsy Gleason sum (GS), nerve sparing (NS), prostate specimen weight, pathological GS and pathological stage were significant factors influencing the trifecta (P<0.001), while clinical stage and body mass index (BMI) had no significance when using univariate analysis. On multivariate analysis age, pathologic GS, pathologic stage, specimen wt and NS were independent factors.

Conclusions: Age, pathologic GS, pathologic stage, specimen wt and NS were independent predictors for achieving trifecta following TP. This information will help in counseling patients undergoing TP for localized prostate cancer.
PODIUM 48
PHASE III TRIAL OF TOREMIFENE 80 MG IN MEN ON ADT DEMONSTRATES SIGNIFICANT FRACTURE RISK IN UNTREATED PLACEBO GROUP
Marc C. Gittelman¹, Amy Gittelman¹, Lawrence Winton¹, Mark Christ¹, Harvey Samowitz¹, Stephen Tannenbaum¹, Juan Primoli¹, Ronald Morton² and Shontelle Dodson²
¹South Florida Medical Research, Aventura, FL; ²GTx, Inc. Memphis, TN
(Presented By: Marc C. Gittelman)

Introduction and Objectives: ADT results in castrate levels of testosterone and estrogen that lead to estrogen deficiency side effects. In recent years its use has expanded and ADT is administered earlier in the natural history of the disease. As a result, many men are on ADT for 10 or more years subjecting them to serious estrogen deficiency side effects such as bone loss and fracture. The consequence of fractures in these men is an increase in morbidity and mortality. We conducted a double blind, placebo controlled trial to determine if toremifene 80 mg daily would prevent fractures in men on ADT. We report the fracture incidence in the placebo group, which represents an estimate of the fracture risk for men with prostate cancer on ADT.

Methods: 1,389 men with prostate cancer were randomized to receive 80 mg toremifene or placebo orally for up to 24 months. All subjects were on ADT for ≥ 6 months, had a serum PSA ≤4 ng/mL, were >70 years of age or were at or below WHO thresholds for spine or hip (BMD). The primary clinical endpoint was new morphometric vertebral fractures (MVF). Secondary endpoints included BMD, worsening vertebral fractures, lipid changes, breast pain, hot flashes and fragility fractures. The modified intent to treat (MITT) population was defined as all randomized subjects who received at least 1 dose of study medication, and had at least 1 on treatment radiograph.

Results: The primary endpoint was reached with a 53% reduction in new morphometric vertebral fractures in the toremifene treated group (p<0.033). Subjects with > 7% bone loss on DEXA are considered to be at high risk for fracture and were removed from the study for safety reasons. At 24 months the new morphometric vertebral fracture rate in the placebo group was 4.9%. The rate for new morphometric vertebral fractures combined with worsening vertebral fractures and fragility fractures was 9.9%. The rate of treatment failures defined as new or worsening morphometric vertebral fractures or fragility fractures or > 7% bone loss was 23.8%.

Conclusions: In this well-controlled, prospective randomized trial toremifene reduced the incidence of new vertebral fractures. The results also demonstrate a significant fracture rate in the placebo group representing the predicted fracture rate for men on ADT without prevention or treatment for bone loss. The fracture rate observed demonstrates the clinical significance of fracture risk in this patient population and the need for fracture preventive treatment in men on ADT.

Funding: GTx, Inc.
10-YEAR OUTCOMES FOR CLINICALLY LOCALIZED HIGH RISK PROSTATE CANCER TREATED WITH COMBINATION PALLADIUM BRACHYTHERAPY, LOW-DOSE EXTERNAL RADIATION THERAPY, AND SHORT-COURSE HORMONAL ABLATION THERAPY

Rizwan Nurani¹, Mitchell Terk¹, Jamie Cesaretti¹, Rosetta Hixson¹, Apoorva Vashi² and Douglas Swartz³

¹Riverside Cancer Center, Jacksonville, FL; ²Jacksonville Prostate Center, Jacksonville, FL; ³McIver Urological Clinic, Jacksonville, FL

(Presented By: Douglas Swartz)

Introduction and Objectives: To demonstrate that the combination of prostate brachytherapy (BT), low-dose external beam radiation therapy (EBRT) and short-course hormonal ablation therapy (HAB) results in higher long-term biochemical control rates (bNED) than traditional single-modality therapies.

Methods: 2,850 patients have undergone prostate seed implantation at our institution since 1997. This review evaluates 237 consecutive patients with high-risk disease per established NCCN guidelines (Gleason 8 – 10, or PSA >20, or stage T2c – T3a). All received a combination of prostate BT using a Pd-103 implant of 100 Gy combined with 45 Gy EBRT. 96 % of patients received HAB for a median of 9 months. All patients were followed prospectively and assessed for clinical and biochemical recurrence based on the Phoenix definition including serial PSA levels and physical examination. Treatment related toxicities were recorded according to the RTOG late toxicity scale. Actuarial outcomes were determined by the method of Kaplan and Meier and statistical significance was calculated with the log-rank test.

Results: The median follow-up from the time of implant was 72 months (range 24 – 140 months). Overall, 80% and 76% of men were bNED at 5 and 10 years, respectively. Median PSA at last follow-up was 0.1 ng/ml for all patients. A total of 46 patients experienced biochemical failure, with a median time to failure of 24 months, however the freedom from local failure was 96% at 10 years, suggesting failure from distant disease. 18 patients died from prostate cancer, for 5 yr and 10 yr prostate specific survival rates of 95% and 88% respectively. On regression analysis of age, stage, Gleason score, PSA and percentage of biopsy cores positive, only the percentage of cores positive correlated with bNED (p=0.04). 2% of patients developed grade 3 urinary toxicities and 2% of patients developed grade 3 rectal toxicities. No grade 4 toxicities occurred, and no rectal fistulae or ulceration occurred.

Conclusion: Combined modality therapy with BT, EBRT and short course HAB results in excellent long-term outcomes with minimal morbidity in high-risk patients. These results compare favorably to other published outcomes of single-modality therapy.

Funding: None

HOW DOES THE UROLOGIST’S ACCEPTANCE OF ACTIVE SURVEILLANCE IMPACT THE PATIENT’S CHOICE OF TREATMENT FOR LOW−RISK PROSTATE CANCER?

Ahmed Eldefrawy, Devender Katkoori, Cynthia Soloway, Kristell Acosta, Murugesan Manoharan and Mark Soloway

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(Presented By: Ahmed Eldefrawy)

Introduction: As a result of PSA screening, there has been a shift in the incidence (63%) of Gleason 6, T1c low-risk prostate cancer (LRPC). Since only 3% of these patients will die of PC, it is important that patients consider whether early curative treatment, with potential negative health-related quality of life sequelae, is their only option at diagnosis. Active surveillance (AS) is a strategy for LRPC patients that delays treatment until evidence of clinical progression. Although currently hundreds of LRPC patients have been successfully followed long-term on AS without treatment, there is no uniformity among urologists as to the acceptance of AS. The objective of this study was to learn from AS patients their rationale for electing AS.

Methods: 185 of the most recent patients to elect AS received a questionnaire by mail consisting of 12 statements each of which they were asked to rank from 1 to 10, with 1 being most important in their decision to choose AS. The patient was also asked if the physician who initially diagnosed his PC had offered AS as an alternative to treatment.

Results: 105/185 (57%) patients returned the questionnaire. The mean age of the respondents was 66 years. 36% (38/105) were offered AS by the physician who made the initial diagnosis; 37% diagnosed within the last two years were offered AS. Among the statements receiving the largest number of “1”s were: “My doctor thought it was a reasonable alternative”[76% (77/102)]; “I felt sure I could still be cured with treatment if my cancer progressed”[66% (63/96)]; and “I have researched the alternatives and this one seems the best for the type of PC I have”[59% (58/98)]. 49% were most concerned about their erections.
Conclusions: Even with increasing evidence of overtreatment in the last two years, the number of LRPC offered AS has not changed. Despite data suggesting the low risk of progression to treatment and death due to PC in the AS cohort, patients reported that at diagnosis 64% of clinicians did not offer AS. Nevertheless, after consulting with another urologist who thought AS was reasonable, patients elected the alternative maintenance strategy.

PODIUM 51
TOREMIFENE 80 MG PHASE III TRIAL IN MEN ON ADT DEMONSTRATES POSITIVE IMPACT ON LIPID PROFILE RELATIVE TO PLACEBO
Michael Cookson¹, Dean Knoll², Ronald A. Morton³, Shontelle Dodson³ and Domingo Rodriguez³
¹Vanderbilt University School of Medicine, Nashville, TN; ²Center for Urological Treatment, Nashville, TN; ³GTx, Inc. Memphis, TN
(Presented By: Michael Cookson)

Introduction and Objective: ADT is the treatment of choice for men with advanced prostate cancer. In recent years its use has expanded and ADT is administered earlier in the natural history of the disease. As a result, many men are on ADT for 10 or more years subjecting them to serious estrogen deficiency side effects such as adverse changes in serum lipoproteins. We conducted a double blind, randomized, placebo-controlled trial to determine if toremifene 80 mg would prevent fractures in men on ADT. Because of the incidence of other estrogen deficiency side effects in these men on ADT we also assessed the effect of toremifene on total cholesterol, LDL, triglycerides and HDL.

Methods: 1,389 men with prostate cancer were randomized to receive either 80 mg toremifene or placebo orally for up to 24 months. All subjects were on ADT for ≥ 6 months, had a serum PSA ≤ 4 ng/mL, were > 70 years of age or were at or below WHO thresholds for spine and hip (BMD). The primary clinical endpoint was new morphometric vertebral fractures (MVF). Secondary endpoints included change in serum lipids, BMD, worsening vertebral fractures, breast pain, and hot flashes.

Results: Changes in serum lipoproteins differed significantly between the toremifene and placebo groups. By 24 months, total cholesterol, LDL, and triglycerides decreased by 5.0% (95% CI, 2.4% to 7.7%), 7.6% (95% CI, 3.7% to 11.5%), and 19.3% (95% CI, 9.7% to 28.8%), respectively, in the toremifene group relative to the placebo group (p<0.001 for all comparisons). In contrast, HDL increased by 6.9% (95% CI, 4.0% to 9.8%) in the toremifene group relative to the placebo group (p<0.001).

Conclusion: Adverse lipid changes are a common asymptomatic side effect of ADT. In this randomized, placebo-controlled trial, toremifene 80 mg demonstrated a reduction in total cholesterol, LDL, and triglycerides; and an increase in HDL. These results suggest that men on toremifene for the prevention of fractures due to ADT may benefit from a statistically significant improvement in their lipid profile.

Funding: GTx, Inc.
4:45 p.m. – 5:45 p.m.  SESSION 7: IMAGING / OUTCOMES / TRAINING POSTER
Location: Poinciana 4
Moderators: Vincent G. Bird, MD
Miami, FL
Philipp Dahm, MD, MHSc, FACS
Gainesville, FL

Poster #1
COMPARING UROLOGY RESIDENT AND FACULTY PERCEPTIONS OF SURGICAL SKILLS AND GENERAL SURGERY ROTATIONS FOLLOWING INTERNSHIP
Robert Mitchell¹, Peter Clark² and Harriette Scarpero²
¹Vanderbilt University, Nashville TN; ²Vanderbilt University Medical Center, Nashville TN
(Presented By: Robert Mitchell)

Poster #2
COMPARING COIL-REINFORCED VERSUS NON COIL-REINFORCED STENTS FOR LAPAROSCOPIC RECONSTRUCTIVE SURGERY USING A LAPAROSCOPIC SIMULATOR
Justin Kropf, Jeremy Norwood and Michael Aleman
University of Tennessee, Memphis, TN
(Presented By: Justin Kropf)

Poster #3
ASSESSING THE SURGICAL SKILLS EDUCATIONAL NEEDS OF UROLOGY RESIDENTS FOLLOWING PRE-urology GENERAL SURGERY TRAINING
Robert Mitchell¹, Peter Clark² and Harriette Scarpero²
¹Vanderbilt University, Nashville TN; ²Vanderbilt University Medical Center, Nashville TN
(Presented By: Robert Mitchell)

Poster #4
DOES PREOPERATIVE 3.0 TESLA MRI CONTRIBUTE IN TREATMENT OF HIGH-RISK PROSTATE CANCER?
Ugur Boylu, Oliver Sartor, Benjamin R. Lee and Raju Thomas
Department of Urology, Tulane University School of Medicine, New Orleans, LA
(Presented By: Ugur Boylu)

Poster #5
A REVIEW OF THE INITIAL EXPERIENCE FOLLOWING INSTALLATION OF AN OFFICE-BASED CT SCANNER
Joe Mobley, Adam Stewart, Bedford Waters and Fred Klein
University of Tennessee Medical Center, Knoxville, TN, Division of Urology, Department of Surgery
(Presented By: Joe Mobley)

Poster #6
UTILIZATION OF IMAGING PROCEDURES FOR URINARY LITHIASIS IN THE UNITED STATES
Charles Scales¹, Lesley Curtis², Michael Ferrandino¹, Kevin Schulman² and Glenn Preminger¹
¹Duke University Medical Center, Durham, NC; ²Duke Clinical Research Institute, Durham, NC
(Presented By: Charles Scales)

Poster #7
CATHETERLESS MRI CYSTOGRAM USING ULTRASOUND ACTIVATED GADOLINIUM-CONTAINING LIPOSOMES – A PILOT STUDY
Steve Hodges, Bhavin Patel, Justin Saul, Robert Kraft and Anthony Atala
Wake Forest University Baptist Medical Center
(Presented By: Bhavin Patel)
Poster #8

**VARIATION IN SECOND PROCEDURES FOR STONE FRAGMENTATION IN THE UNITED STATES**

Charles Scales¹, Tracey Krupski², Alex Smith³, Lesley Curtis⁴, Margeret Pearle⁵, Brian Matlaga⁶, Yair Lotan⁷, Christopher Saigal⁸, Mark Litwin⁹ and Glenn Preminger⁴

¹Duke University Medical Center, Durham, NC; ²University of Virginia, Charlottesville, VA; ³RAND, Los Angeles, CA; ⁴Duke Clinical Research Institute, Durham, NC; ⁵UT Southwestern Medical Center, Dallas, TX; ⁶Johns Hopkins University, Baltimore, MD; ⁷UCLA, Los Angeles, CA

(Presented By: Charles Scales)

Poster #9

**SURVEY BASED ANALYSIS OF DEEP VENOUS THROMBOSIS PREVENTION IN UROLOGIC PATIENTS**

Jamin Brahmbhatt, Reza Mehrazin and Robert Wake

University of Tennessee Health Sciences Center, Memphis, TN

(Presented By: Jamin Brahmbhatt)

Poster #10

**THE INFLUENCE OF OBESITY ON PERIOPERATIVE PARAMETERS IN ROBOTIC VERSUS OPEN PROSTATECTOMY CASES AT A SINGLE CENTER THAT SPECIALIZES IN BOTH TECHNIQUES.**

Suzanne B. Stewart¹, Matvey Tsivian¹, Lionel Bañez¹,², Tong Gan¹, Cary Robertson¹, Philip Walther¹,², Thomas Polascik¹, Vladimir Mouraviw¹, David Alaba¹ and Judd Moul¹

¹Division of Urologic Surgery and Duke Prostate Center, Department of Surgery, Duke University Medical Center, Durham, NC; ²Urology Section, Department of Surgery, Veterans Affairs Medical Centers, Durham, NC; ³Department of Anesthesiology, Duke University Medical Center, Durham, NC

(Presented By: Suzanne B. Stewart)

Poster #11

**FUNCTIONAL AND PATHOLOGIC OUTCOMES BETWEEN CONVENTIONAL AND ROBOT-ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY: A SINGLE SURGEON COMPARISON BASED UPON VALIDATED QUALITY OF LIFE OUTCOMES**

Daniel Willis¹, Mark Gonzalgo², Michelle Brotzman², Zhaoyong Feng², Bruce Trock² and Li-Ming Su³

¹University of Florida, Gainesville, FL; ²Johns Hopkins, Baltimore, MD

(Presented By: Daniel Willis)

Poster #12

**A REVIEW OF THE FLORIDA CANCER DATA SYSTEM FOR RENAL CELL CARCINOMA: LOW SOCIOECONOMIC STATUS, BUT NOT RACE, CARRIES A WORSE PROGNOSIS FOR RENAL CELL CARCINOMA**

Christopher Gomez¹, Michael Cheung³, Kathleen Brookfield², Relin Yang³, Gaetano Ciancio² and Leonidas Koniaris²

¹University of Miami Department of Urology, Miami, FL; ²University of Miami, Miami, FL

(Presented By: Christopher Gomez)

Poster #13

**FACTORS ASSOCIATED WITH CITATION RATES IN THE UROLOGICAL LITERATURE**

Daniel Willis¹, Clint Bahler², Susan Fesperman¹ and Philipp Dahm¹

¹Department of Urology, University of Florida, Gainesville, FL; ²Department of Urology, Indiana University, Bloomington, IN

(Presented By: Daniel Willis)

Poster #14

**DECISIONS REGARDING FELLOWSHIP TRAINING: RESULTS FROM A NATIONWIDE SURVEY OF UROLOGY RESIDENTS**

Benjamin Martin¹, Janet Colli¹, Peter Kolettis¹ and Christopher Amling²

¹University of Alabama at Birmingham, Birmingham, AL; ²Oregon Health & Science University, Portland OR

(Presented By: Benjamin Martin)
Introduction and Objective: Resident work hour restrictions and reductions in pre-urology surgical training have impacted the preparedness of residents in urology. We compared resident and faculty perceptions of new residents’ surgical skills, and views of general surgery rotations during pre-urology training.

Methods: A survey was distributed electronically to all resident members of the AUA, and to faculty directors of each residency program. Residents were asked to consider 11 surgical skills: their importance to subsequent urology training and their self-assessed proficiency with those skills were assayed. Faculty members were asked to evaluate the same surgical skills with regard to their importance and their residents’ proficiency with those skills. All were asked to evaluate 11 general surgery rotations’ importance to later urology training. Faculty responses were compared to resident responses using the Fisher Exact test and the chi square test.

Results: There were 305 resident and 58 faculty responses. There was no difference between the resident and faculty assessment of global surgical skills (p=0.76) or of general surgery rotation effectiveness (p=0.87). Resident and faculty responses differed only with regard to the importance of choice of suture material, closing fascia, and choosing instruments (p = 0.023, 0.018, and 0.036). Faculty rated residents less proficient than residents rated themselves in closing skin (p = 0.037) but more proficient in choice of instruments (p = 0.005). Faculty regarded the basic general surgery rotation (p = 0.009) and the cardiothoracic surgery rotation (p = 0.006) as more important than the residents did, while residents regarded the urology rotation as more important (p = 0.043).

Conclusions: A general concordance was demonstrated between urology resident and faculty perceptions of residents’ surgical skills and their importance, and of general surgery rotations prior to starting formal urology residency. Attention to the areas of discrepancy would likely improve surgical skills and facilitate learning.
Poster #2
COMPARING COIL-REINFORCED VERSUS NON COIL-REINFORCED STENTS FOR LAPAROSCOPIC RECONSTRUCTIVE SURGERY USING A LAPAROSCOPIC SIMULATOR
Justin Kropf, Jeremy Norwood and Michael Aleman
University of Tennessee, Memphis, TN
(Presented By: Justin Kropf)

Background and Objectives: Laparoscopic reconstructive urologic surgery (pyeloplasty, ureteroneocystostomy) often requires cutting tissue and placing sutures over a stent. Inadvertent division of the stent is an uncommon complication that requires difficult and time-consuming maneuvers to correct. We sought to determine if newly-available coil-reinforced stents offered superior performance over conventional stents in two areas: resistance to accidental transection during dissection and ease of reinsertion into the ureter should the stent become accidentally dislodged.

Materials and Methods: 6 French coil-reinforced Applied Medical Silhouette XtraFlo© and conventional ACMI Lubrifflex® stents were utilized in a two-phased exercise with a laparoscopic simulator. 10 urology residents and attending faculty participated in the study. The length of time required to make 6 complete cuts through each stent was measured, as an objective measure of stent resistance to laparoscopic injury. The time required to pass each stent into a plastic tube was then measured, simulating laparoscopic reinsertion into the ureter. The coil-reinforced stent had a 540-degree distal curl compared to a 360 degree curl on the ACMI stent. The group then answered a subjective questionnaire regarding the relative ease of each exercise. The results were compared using the Student’s t-test.

Results: Participants took an average of 27.7 versus 33.3 seconds (p=0.329) to make 6 cuts through coil-reinforced stents versus conventional stents. Subjectively, neither stent appeared to be more resistant to accidental cutting, with 50 percent of participants reporting that the two stents were equally difficult to cut. When asked to pass the stent through a simulated ureter, the coil-reinforced stent took significantly longer to pass (135 seconds versus 71.9 seconds, p=0.008), and 80 percent of participants reported that the coil-reinforced stent was more difficult to pass into the simulated ureter.

Conclusions: The coil-reinforced stent does not appear to be more resistant to accidental transection but does appear to be more difficult to reinsert into a simulated ureter, possibly as a result of its 540-degree distal curl.

Poster #3
ASSESSING THE SURGICAL SKILLS EDUCATIONAL NEEDS OF UROLOGY RESIDENTS FOLLOWING PRE- UROLOGY GENERAL SURGERY TRAINING
Robert Mitchell¹, Peter Clark² and Harriette Scarpero²
¹Vanderbilt University, Nashville TN; ²Vanderbilt University Medical Center, Nashville TN
(Presented By: Robert Mitchell)

Introduction and Objectives: Resident work hour restrictions and a reduction in pre-urology surgical training have impacted the way in which urology residents acquire surgical skills. We sought to assess the perceived educational needs of urology residents after completion of pre-urology training in general surgery and to determine which aspects of pre-urology training have an impact on those needs.

Methods: A survey was distributed electronically to all urology resident members of the AUA. Demographic and training program information was requested. Participants were asked to consider 11 surgical skills with regard to their importance and self-assessed proficiency with those skills. 11 general surgery rotations were then assessed with regard to importance and efficacy in imparting surgical skills. Proficiency and importance were compared for each surgical skill, while importance and efficacy were compared for each general surgery rotation. Gender and time spent in general surgery were compared with overall skills proficiency and general surgery satisfaction.

Results: There were 305 complete responses (21.8% of 1396 residents queried). For every surgical skill, self-assessed proficiency was lower than the perceived importance for that skill (p=0.001). 7 of 10 general surgery rotations were perceived as important to urology, but their efficacy in imparting skills to residents was lacking (p<0.05). 68.1% of residents rated their overall surgical skills proficiency as satisfactory and 70.5% reported that their general surgery preparation was effective. Greater than one year spent in general surgery training was associated with higher self-assessed surgical skill proficiency, but not satisfaction with general surgery training.

Conclusions: There is a discrepancy between urology residents’ self-assessments and levels of proficiency with regard to surgical skills, and general surgery rotations prior to beginning urology residency are not sufficiently efficacious in skills education. Despite these findings, there is a positive correlation between more time spent in pre-urology general surgery training and self-assessed surgical skills proficiency among urology residents.
Introduction: Patients with high tumor volume, high PSA levels, high Gleason scores, and significant palpable disease are considered to be in a high-risk category. Healthy patients with no other co-morbidities can be candidates for appropriate surgical excision in the setting of clinically organ-confined disease. Our purpose was to determine whether 3.0 Tesla MRI (3T-MRI) might allow better assessment of local extraprostatic extension (EPE) or seminal vesicle involvement (SVI).

Material and Methods: Twenty-nine patients with high-risk prostate cancer underwent 3T-MRI of the prostate and pelvis. Seven patients were excluded due to EPE and/or SVI on MRI. Twenty-two patients with no sign of EPE and/or SVI on 3T-MRI underwent robotic assisted radical prostatectomy (RARP). Surgical and oncologic outcomes were compared to the high-risk prostate cancer patients (n=35) who underwent RARP without prior 3T-MRI.

Results: One RARP case in 3T-MRI group was aborted due to locally advanced disease. SVI was present in 38% of 3T-MRI group and 31.4% of control group (p=0.61). (Table 1) EPE was present in 67% in 3T-MRI group and 68% in control group (p=0.88). Lymph node involvement was found in 4 patients in 3T-MRI group and 2 patients in control group (p=0.18). Surgical margins were positive in 33% of the 3T-MRI group and 37% of the control group (p=0.77).

Conclusions: In treatment of high-risk prostate cancer patients, 3T-MRI does not improve assessment of EPE, SVI, and lymph node involvement.

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Poster #5
A REVIEW OF THE INITIAL EXPERIENCE FOLLOWING INSTALLATION OF AN OFFICE-BASED CT SCANNER
Joe Mobley, Adam Stewart, Bedford Waters and Fred Klein
University of Tennessee Medical Center, Knoxville, TN, Division of Urology, Department of Surgery
(Presented By: Joe Mobley)

Introduction and Objectives: The ownership of ancillary services such as office based CT scanners by physician groups, and particularly urologists, is increasingly common. These ancillary services are utilized in an effort to provide more streamlined, convenient, point-of-service care to patients while tangentially providing an alternate source of revenue to a practice. Such arrangements often meet resistance from radiology groups expressing concern over quality control. Given this, we investigate the impact of an office-based CT scanner in our practice and provide recommendations for quality control based on our experience.

Methods: A point of service database search was performed utilizing CPT codes for all CT scans ordered over a 28-month period since installation of our office scanner. Patient volume as well as overall and average reimbursement was calculated and cost analysis was performed to define the fiscal benefit to the practice. Internal policies were reviewed and a literature search was performed regarding best practice policies for office-based CT scanners. Recommendations are made for avoiding common pitfalls based on the overall review.

Results: Between 4/1/2007 and 7/30/2009, 69,017 office visits were recorded at our office of 4 full time urologists. 1,680 total CT scans were performed with a mean reimbursement of $449.06 for combined CT abdomen and pelvis. Average monthly reimbursement to the office is $31,330.80 before overhead and $16,437.36 following the payment of associated expenses. A review of policies revealed a strict adherence to AUA best practice guidelines, an internal compliance officer and accreditation by the American College of Radiologists as important facets of our organizational model.

Conclusions: Office CT scanners appear to add value to a practice both fiscally and in regards to patient convenience and access to care. CT scan accreditation as well as a cordial working relationship with local radiologists is paramount to ensuring scan quality. Adherence to AUA guidelines and an internal compliance officer ensure proper and ethical use of the scanner as scrutiny of these matters should and will be increasingly important in the current medical environment.

Poster #6
UTILIZATION OF IMAGING PROCEDURES FOR URINARY LITHIASIS IN THE UNITED STATES
Charles Scales¹, Lesley Curtis², Michael Ferrandino³, Kevin Schulman² and Glenn Preminger⁴
¹Duke University Medical Center, Durham, NC; ²Duke Clinical Research Institute, Durham, NC
(Presented By: Charles Scales)

Introduction and Objective: Diagnostic imaging is central to the management of urolithiasis, although little is known about real world patterns of imaging practice. Our objective was to use a nationally representative cohort to document variation in imaging procedures for urolithiasis in the United States.

Methods: We identified a cohort of subjects with an index encounter for urolithiasis from 2003 – 2005 using a 5% sample of Medicare beneficiaries. Imaging procedures were identified using Common Procedural Terminology (CPT) codes, and included computerized tomography (CT), plain abdominal radiograph (KUB), intravenous pyelogram (IVP) and ultrasound (US). Only imaging procedures with an associated diagnostic code for urinary lithiasis or symptoms (i.e. renal colic) were included. Acute imaging procedures were defined as those with a claim from 0 – 7 days of the index encounter. A multivariable logistic regression model was used to identify characteristics associated with the use of CT scan versus other procedures among those who underwent some form of imaging.

Results: The cohort comprised 49,022 beneficiaries with an index encounter for urinary lithiasis, including 28,154 (57.4%) males. Among these subjects, 27,911 (56.9%) had a claim for an imaging procedure within 0 – 7 days of the index encounter. Of those imaged, CT was the most common acute imaging procedure (57.7 % of patients imaged). Use of KUB and IVP decreased, whereas US utilization remained relatively constant. Ultrasound was the most common office-based imaging procedure. CT scan utilization increased across all care settings, with the greatest increase in the physician office, from 42 per 1,000 incident beneficiaries in 2003 to 58 per 1,000 incident beneficiaries in 2005 (38% increase). On multivariable modeling, the odds of CT scan in 2005 were 1.47 (95% CI 1.39 – 1.55, p<0.001) times that in 2003. As compared to the West census region, CT scan use was higher in the Northeast (OR 1.11, 95% CI 1.03 –1.20, p=0.007), but lower in the Midwest and Southeast.

Conclusions: Ultrasound remains an important imaging modality in the office setting. Efforts to train and support physicians in use of office based ultrasound appear warranted. Utilization of CT is rising across all care settings. While CT remains the gold standard for the acute evaluation of suspected urinary lithiasis, further investigation is required to identify strategies to guide optimal use of diagnostic imaging outside of the acute setting.
**Poster #7**

**CATHETERLESS MRI CYSTOGRAPH USING ULTRASOUND ACTIVATED GADOLINIUM-CONTAINING LIPOSOMES – A PILOT STUDY**

Steve Hodges, Bhavin Patel, Justin Saul, Robert Kraft and Anthony Atala
Wake Forest University Baptist Medical Center
(Presented By: Bhavin Patel)

**Purpose:** We hypothesize that non-enhancing gadolinium-containing liposomes can be delivered to the bladder and ruptured with ultrasonic energy to locally release gadolinium, allowing for the performance of a cystourethrogram without catheterization or exposure to ionizing radiation. We performed a pilot study using an in vitro and in vivo model to test the feasibility of this concept.

**Methods:** Omniscan liposomes were prepared and placed into 15ml falcon tubes and a T1 MRI scan of the tubes was obtained. Ultrasonic energy (1 MHz) was then delivered to the tube for 5 minutes to rupture the micelles and the scans were repeated. We then catheterized female Sprague-Dawley rats and filled their bladders with gadolinium-containing liposomes and performed T1 MRI scans of the rat bladders. Ultrasonic energy (1 MHz) was also administered to the bladders for 5 minutes and the scans were repeated.

**Results:** The T1 MRI images of the falcon tubes with gadolinium-containing micelles demonstrated no enhancement, while repeat scan following activation with ultrasonic energy demonstrated obvious enhancement. The T1 MRI images of the rat bladders following filling with gadolinium-containing liposomes also demonstrated no enhancement, but repeat scans following activation showed clear cystogram images, the bladders filled with gadolinium.

**Conclusions:** The ultrasonic activation of gadolinium-containing liposomes allows for the localization of gadolinium enhancement specifically to the bladder, excluding of the upper urinary tract, for use in MRI cystography. This technology may be combined with orally consumed or intravenously delivered gadolinium-containing liposomes to perform voiding cystourethrograms in children without catheterization or ionizing radiation.

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**Poster #8**

**VARIATION IN SECOND PROCEDURES FOR STONE FRAGMENTATION IN THE UNITED STATES**

Charles Scales¹, Tracey Krupski², Alex Smith³, Lesley Curtis⁴, Margeret Pearle⁵, Yair Lotan⁶, Christopher Saigal⁷, Mark Litwin⁷ and Glenn Preminger⁸
¹Duke University Medical Center, Durham, NC; ²University of Virginia, Charlottesville, VA; ³RAND, Los Angeles, CA; ⁴Duke Clinical Research Institute, Durham, NC; ⁵UT Southwestern Medical Center, Dallas, TX; ⁶Johns Hopkins University, Baltimore, MD; ⁷UCLA, Los Angeles, CA
(Presented By: Charles Scales)

**Introduction and Objectives:** Healthcare expenditures for the management of urinary lithiasis are second only to those for urinary tract infection among urologic disorders. While both URS and SWL are first-line therapies for appropriately selected calculi, little is known about real-world practice patterns for these technologies. Our objective was to document practice patterns and variation in second procedures for stone fragmentation.

**Methods:** We used the Medicare 5% sample to identify a cohort of beneficiaries undergoing SWL or URS (with or without stone fragmentation) of renal or ureteral calculi. Beneficiaries had an incident stone encounter from 1997 – 2007. Patient and provider characteristics were identified from Medicare files. Practice setting characteristics were linked to claims using data from the American Hospital Association and the Area Resource File from the United States Census Bureau. A multivariable regression model identified factors associated with a second procedure (URS or SWL) within 120 days of the initial procedure.

**Results:** The cohort comprised 9,358 beneficiaries who underwent an initial procedure, of whom 61% were male and 92% were white. Fifty-nine percent of beneficiaries were aged between 66 – 74 years. SWL was used in 5,208 (56%) beneficiaries, while URS (with or without fragmentation) was used in 4,150 (44%). Controlling for patient demographics, year, provider volume, practice setting and ownership, the odds of a second procedure following initial shock wave lithotripsy were 1.54 times that of ureteroscopy with laser fragmentation (p<0.001). Beneficiaries treated by a high volume SWL provider were more likely to undergo an additional procedure (OR 1.18, p = 0.0124), as were those beneficiaries treated at a teaching facility (OR 1.23, p = 0.026). Stratification by ureteral and renal calculi yielded similar results. For URS and SWL, the second procedure was most commonly the same as the first.

**Conclusions:** In a nationally representative cohort, patients undergoing URS are significantly less likely to undergo additional procedures to treat stones. A significantly higher second procedure rate following SWL may contribute to the high cost of management for stone disease. Further investigation is required to understand factors driving these practice patterns and their contribution to healthcare costs.

**Funding:** National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health
**Poster #9**  
**SURVEY BASED ANALYSIS OF DEEP VENOUS THROMBOSIS PREVENTION IN UROLOGIC PATIENTS**  
Jamin Brahmbhatt, Reza Mehrzin and Robert Wake  
University of Tennessee Health Sciences Center, Memphis, TN  
(Presented By: Jamin Brahmbhatt)

**Introduction and Objectives:** Pulmonary thromboembolism (PTE) caused by deep venous thrombosis (DVT) is one of the most common nonsurgical causes of death in urologic patients. The advent of mechanical and pharmacologic preventive measures has significantly reduced the risk of DVT and PTE in surgical patients. This study assesses the general practice patterns pertaining to use of DVT prophylaxis in urologic patients.

**Methods:** We performed a computer-based 15-item survey study of urology physicians throughout the United States. Survey analysis was then performed to identify current practice patterns pertaining to DVT prophylaxis in urologic surgery patients.

**Results:** A total of 200 urology physicians responded to the survey. When combining open and robotic prostatectomy nephrectomy, and cystectomy, intermittent pneumatic compression (IPC) stockings and early ambulation (EA) are the most common preventive measure employed by 62%, followed by combination of IPC and pharmacologic methods (PM) 21%, PM only 9%, TEDs and EA 7%. 78% of respondents do not feel an increased BMI puts patients at increased risk for DVT. 52.7% of physicians use a combination of pharmacologic and mechanical prevention in patients undergoing open or radical cystectomy, compared to only 22% for prostate and 24% for renal surgery. 89% of respondents feel patients treated with cystectomy are at risk for DVT induced PE whereas only 59% of respondents feel prostate or renal surgery patients are at increased risk. 12% of respondents have had a fatal embolic event in the past year. In terms of starting post procedure pharmacologic prophylaxis 49% will start it on post op day one if there are not bleeding issues, followed by 28% use none, 14% pre operatively and 9% in recovery room. 81% do not continue pharmacologic intervention once patient is discharged home. When asked if they are aware of the 2009 AUA best practice guidelines on DVT prophylaxis 46% use them routinely, 36% adapt the guidelines to their personal clinical experiences, and 18% deny knowledge of these guidelines.

**Conclusions:** Some form of DVT prevention is used by most urologists, with IPC and EA being the most common. Cystectomy is thought to put patients at most risk for DVT and PE. Physicians who believe in pharmacologic prophylaxis tend to start it on post op day one after prostatectomy if there are no bleeding issues. Few patients go home on long-term pharmacologic prophylaxis. An alarming 18% of respondents were unaware of the AUA best practice guidelines on DVT prophylaxis.

**Poster #10**  
**THE INFLUENCE OF OBESITY ON PERIOPERATIVE PARAMETERS IN ROBOTIC VERSUS OPEN PROSTATECTOMY CASES AT A SINGLE CENTER THAT SPECIALIZES IN BOTH TECHNIQUES**  
Suzanne B. Stewart¹, Matvey Tsivian¹, Lionel Bañez², Tong Gan³, Cary Robertson¹, Philip Walther¹,², Thomas Polascik¹, Vladimir Mouraviev³, David Albala¹ and Judd Moul¹  
¹Division of Urologic Surgery and Duke Prostate Center, Department of Surgery, Duke University Medical Center, Durham, NC; ²Urology Section, Department of Surgery, Veterans Affairs Medical Centers, Durham, NC; ³Department of Anesthesiology, Duke University Medical Center, Durham, NC  
(Presented By: Suzanne Biehn Stewart)

**Introduction:** Public competition between robotic and open prostatectomy remains prominent in the current era. Prior comparisons between the two modalities have been criticized for their lack of analyses in centers that specialize in both techniques and that apply similar clinical pathways. Additionally, obesity in the United States continues to grow as a national health dilemma. Investigation of an optimal prostatectomy approach for specific body mass index (BMI) subgroups has yet to be explored.

**Objectives:** We sought to compare differences in perioperative parameters between robotic and open prostatectomy approaches using a center that specializes in both modalities, at a time point that minimizes the learning curve, and to investigate the influence of BMI on these outcomes.

**Methods:** We retrospectively analyzed 576 robotic assisted laparoscopic (RALP) and 513 radical retropubic prostatectomy (RRP) cases from 2005 to 2009 at Duke University. Patients were stratified into BMI subgroups of normal: <25kg/m², overweight: 25−29kg/m², obese ≥ 30kg/m². Associations between surgical modality and peri-operative variables were assessed using the Student’s T-test, Mann-Whitney and Chi-squared tests. Comparisons of variables across BMI subgroups, for each surgical modality, were evaluated using the Kruskal-Wallis and Chi-squared tests.
Results: We found operative and anesthesia times were shorter with RRP and post-anesthesia care (PACU) stays were shorter with RALP ($p < 0.001$). Maximum and minimum PACU pain scores were significantly lower for RALP compared with RRP ($p < 0.001$). Stratification by BMI did not influence surgical times, PACU stay or pain scores. RRP patients were 4.7 times more likely to receive blood products compared with RALP (95% CI 2.95−7.53, $p < 0.001$). Obese men were less likely to receive blood products compared to all other BMI subgroups in both RRP ($p = 0.025$) and RALP ($p = 0.017$) groups.

Conclusions: RALP patients had shorter PACU stays, lower pain scores and risk of blood product transfusions compared with RRP cases, which may be an indicator of overall decreased procedure morbidity for RALP. Obesity was not found to influence these peri-operative parameters between RRP and RALP. Further investigation is required to examine the influence of obesity on local disease control between RRP and RALP and explore more completely whether an optimal prostatectomy approach exists for certain BMI subgroups.

Poster #11
FUNCTIONAL AND PATHOLOGIC OUTCOMES BETWEEN CONVENTIONAL AND ROBOT-ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY: A SINGLE SURGEON COMPARISON BASED UPON VALIDATED QUALITY OF LIFE OUTCOMES
Daniel Willis¹, Mark Gonzalgo², Michelle Brotzman², Zhaoyong Feng², Bruce Trock² and Li-Ming Su³
¹University of Florida, Gainesville, FL; ²Johns Hopkins, Baltimore, MD
(Presented By: Daniel Willis)

Purpose: Patient consideration of functional outcomes plays a significant role in selecting therapy for localized prostate cancer. Few prospective studies exist that compare functional outcomes between treatment modalities using validated instruments assessing health related quality of life. We compared the functional outcomes of laparoscopic radical prostatectomy (LRP) and robot-assisted laparoscopic prostatectomy (RALP) in a single-surgeon series using validated quality of life indices.

Materials and Methods: Expanded Prostate Cancer Index Composite (EPIC) data was collected prospectively at 0, 3, 6, and 12 months after 175 consecutive LRP and 174 RALP procedures. Urinary and sexual function outcomes were compared using two methods: traditional, single question analysis and the more comprehensive EPIC summary/subscale analyses. EPIC scores were normalized to patient preoperative baseline responses. Mixed model analysis was used to compare and assess the significance of EPIC data between cohorts over time.

Results: The two groups were statistically similar with respect to preoperative baseline demographics and urinary and sexual function scores. Comparison of postoperative urinary function using both single question and EPIC data analyses showed no statistical differences between RALP and LRP at all time points. At 12 months, 93% of patients used zero to one security pad in both cohorts. EPIC urinary summary scores showed improvement over time with 93% (RALP) and 97% (LRP) return of baseline function at 12 months. In contrast, differences in sexual function were noted between RALP and LRP, particularly among men who underwent bilateral nerve sparing surgery. By single question analysis, a trend was noted at all time points with a greater percentage of RALP patients reporting sexual intercourse in the past 4 weeks (87.5% vs. 66.7% at 12 months). Using EPIC analyses at 3 (59.8% vs. 42.2%, $p=0.0008$) and 6 months (71.2% vs. 51.3%, $p=0.001$), the percent return of baseline sexual summary score was superior with RALP. In addition, mixed model analysis showed a significant difference for each EPIC variable over time (Sexual Summary Score, $p=0.005$; Sexual Function and Bother Subscales, $p=0.007$), favoring RALP.

Conclusions: In the hands of a single, fellowship trained surgeon, patients receiving RALP demonstrated similar urinary outcomes and an improved and earlier return of sexual function than LRP patients. The improved potency after RALP was most pronounced after bilateral nerve sparing procedures. These findings may be a result of enhanced nerve sparing approach with RALP as a result of improved visualization, dexterity, and wristed robotic instrumentation.

Poster #12
A REVIEW OF THE FLORIDA CANCER DATA SYSTEM FOR RENAL CELL CARCINOMA: LOW SOCIOECONOMIC STATUS, BUT NOT RACE, CARRIES A WORSE PROGNOSIS FOR RENAL CELL CARCINOMA
Christopher Gomez¹, Michael Cheung², Kathleen Brookfield², Relin Yang², Gaetano Ciancio³ and Leonidas Koniaris²
¹University of Miami, Department of Urology, Miami, FL; ²University of Miami, Miami, FL
(Presented By: Christopher Gomez)

Introduction and Objective: Racial disparities have been shown for multiple medical conditions and cancers. We sought to analyze the survival outcomes for renal cancer between whites and blacks while controlling for multiple variables that may explain previously reported disparities.
Methods: The Florida Cancer Data System and the Agency for Health Care Administration data sets (1998 – 2003) were merged and queried. Correlations between categorical variables were made using the Chi-square test. Median survival rates were calculated by the Kaplan-Meier method. The univariate effects of demographic, clinical, and treatment variables on survival were tested by the Log-rank test for categorical values. To estimate the impact of race, ethnicity, and socioeconomic status (SES) on survival outcomes, we used a Cox proportional hazards model, adding demographic, clinical and treatment variables in a stepwise fashion that included 27 medical co-morbidities.

Results: Over the five-year study period, 12,931 cases of renal cancer were identified. Overall median survival time (MST) was 50 months. There was no difference in MST between races (whites = 50.6 months, blacks = 47 months, p=0.058) or ethnicities (Hispanic = 49.7 months versus non-Hispanics = 54.2 months, p=0.08). A survival advantage was seen for women (54.5 months versus 48.4 months for men, p<0.001) and for the highest SES (HSES) (55.9 months versus 40.2 months for lowest SES (LSES)). Exirpative surgery was performed equally between races but patients in the LSES were less likely to receive surgical treatment (68.4% of LSES received surgery versus 74.7% received surgery for HSES, p<0.001). Patients receiving their treatment at a high volume center or teaching facility had a 10 and 12.6 months survival advantage compared to their counterparts. On multivariate analysis independent predictors of decreased survival included lower SES, increased age, tobacco use, positive lymph nodes, increased tumor grade, increased tumor stage, and not receiving surgery.

Conclusion: After controlling for socio-demographic factors, medical co-morbidities, clinical characteristics, and treatment modality, we have demonstrated for the first time equal survival outcomes between races for RCC. Significant disparities still exist between socioeconomic classes that have proven effects on cancer outcomes. As demonstrated by this report, diminishing the gap in these disparities can lead to equal outcomes across races.

Poster #13
FACTORS ASSOCIATED WITH CITATION RATES IN THE UROLOGICAL LITERATURE
Daniel Willis¹, Clint Bahler², Susan Fesperman¹ and Philipp Dahm¹
¹Department of Urology, University of Florida, Gainesville, FL; ²Department of Urology, Indiana University, Bloomington, IN
(Presented By: Daniel Willis)

Introduction and Objective: Investigators aim to publish their work in top journals in an effort to achieve the greatest possible impact. One measure of impact is the number of times a paper is cited after its publication in a journal. We conducted a review of the four major urological journals to determine factors associated with subsequent citation rates.

Materials and Methods: A random sample of 200 original published research articles stratified by journal (European Urology, J Urology, Urology and BJU International) was analyzed. Study information was abstracted by two independent reviewers using a standardized form that was pilot-tested in a separate sample. Citation counts within four years of publication were performed using the Web of Science™. Statistical analysis was performed using non-parametric ANOVA and logistic regression analysis. Medians were reported with interquartile ranges (IQR). All testing was performed 2-sided with an alpha of 0.05.

Results: We identified a total of 2,108 citations within 48 months of publication. The percentage of citations by the end of 12, 24, 36 and 48 months were 12.6%, 41.1%, 70.2% and 100.0%, respectively. The rate of subsequent citations in non-urological journals was 37%. Among these, 14 studies (14/200; 7.0%) were cited a total of 19 times (19/2108; 0.9%) in high impact journals. Overall, the median number of citations per published article was 6.0 (3.0; 12.0). Median citation rates for Journal of Urology, European Urology, Urology and BJU International were 8.0 (5.0; 16.25), 8.0 (3.0; 12.0), 6.0 (3, 12.25) and 5.0 (2.0; 9.0), respectively (p=0.044). In a multivariate logistic analysis, study design and an oncological topic were the only variables associated with subsequent citation rates. Randomized controlled trials received significantly (p=0.001) more citations (median: 13.5; IQR 8.25−36.75) than prospective (median: 6.0 IQR 5.0−12.0), retrospective observational studies (median: 7.0; 3.5−12.0), and case reports (median: 1.0; 0.0−2.0).

Conclusions: These results suggest that randomized controlled trials are cited more frequently than other clinical studies. Authors involved in urological research may improve the impact of their work by designing clinical studies with greater methodological safeguards against bias.
Introduction: Many urology residents pursue subspecialty fellowships after completion of residency training. However, factors considered in making the decision to undertake additional training are unknown. We conducted a nationwide survey of urology residents to ascertain attitudes toward fellowship training and to determine what factors might contribute to decisions whether or not to pursue this additional training.

Methods: A 36 question web-based survey was distributed to all urology residents in the United States during April 2008. The survey included questions pertaining to their desire to pursue fellowship training. A sub-analysis of attitudes of graduating chief residents was also performed.

Results: Of 1030 surveys solicited, 364 were completed (35% response rate), with 79% male and 20% female. Of respondents; 46% were interested in entering a fellowship, 34% were not interested and 20% were undecided. Reasons to pursue fellowship training included a desire to enter academics (46%), to gain skills not mastered in residency (26%) and to gain sub-specialty experience prior to entering private practice (25%). Considering educational debt as a factor; 55% of residents without debt were interested in fellowship training compared to only 32% of residents with debt greater than 200K. Males were most interested in oncology (36%) and laparoscopic/robotic fellowships (29%) while females were interested in female urology (30%), pediatrics (16%) and oncology (16%). Of chief residents interested in fellowship training at the start of residency; 75% did enter a fellowship while 40% of those not initially interested ultimately made the decision to pursue fellowship training. Of chief residents entering a fellowship; 63% are entering academic practices and 37% are pursuing a private practice career.

Conclusion: While most urology residents use a fellowship as a path to an academic career, many want to gain skills not mastered in residency or in preparation for private practice. Although most residents interested in fellowship training at the start of residency ultimately pursue this training, some lose interest and many residents not initially interested make the decision for this additional training during residency. There are significant gender differences in the subspecialty type of training desired and educational debt may impact decisions to pursue fellowship training.
SESSION 8: LAPAROSCOPY & ROBOTIC SURGERY PODIUM

Moderators:
Robert G. Moore, MD
Shreveport, LA
Vipul R. Patel, MD
Celebration, FL

7:00 a.m.  #52  ROBOT-ASSISTED RADICAL PROSTATECTOMY IN RENAL TRANSPLANT RECIPIENTS
Damien Smith, Jeremy Speeg¹ and Richard Vanlangendonck²
¹Ochsner/LSU Urology Residency Program, PGY-3, New Orleans, LA;
²Ochsner Clinic Foundation, Program Director, New Orleans, LA
(Presented By: Damien Smith)

7:05 a.m.  #53  PROSPECTIVE, RANDOMIZED TRIAL OF ROBOTIC VERSUS OPEN RADICAL CYSTECTOMY FOR BLADDER CANCER: PERI-OPERATIVE AND PATHOLOGICAL RESULTS
Stephen McKim, Eugene Simopoulos, Angela Smith, Jeff Nix, Matthew Raynor, Matthew Nielsen, Eric Wallen and Raj Pruthi
The University of North Carolina at Chapel Hill
(Presented By: Stephen McKim)

7:10 a.m.  #54  PREDICTORS FOR POSITIVE SURGICAL MARGINS AND ITS LOCATION AFTER ROBOTIC-ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY
Rafael Coelho, Marcelo Orvieto, Sanket Chauhan, Kenneth Palmer, Bernardo Rocco and Vipul Patel
Global Robotics Institute, Florida Hospital Celebration Health, University of Central Florida School of Medicine, Celebration, FL
(Presented By: Rafael Coelho)

7:15 a.m.  #55  PERIOPERATIVE OUTCOMES, POSITIVE SURGICAL MARGIN RATES, AND SHORT-TERM CONTINENCE OUTCOMES AFTER ROBOTIC-ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY IN OVERWEIGHT AND OBESE PATIENTS
Rafael Coelho, Sanket Chauhan, Kenneth Palmer, Marcelo Orvieto, Bobby Ardila and Vipul Patel
Global Robotics Institute, Florida Hospital Celebration Health, University of Central Florida School of Medicine, Celebration, FL
(Presented By: Rafael Coelho)

7:20 a.m.  #56  PREDICTORS FOR LYMPHOCELE FORMATION AFTER PELVIC LYMPHADENECTOMY DURING ROBOT-ASSISTED RADICAL PROSTATECTOMY
Marcelo Orvieto, Rafael Coelho, Sanket Chauhan, Kenneth Palmer and Vipul Patel
Global Robotics Institute – Florida Hospital Celebration Health, Celebration, FL
(Presented By: Marcelo Orvieto)

7:25 a.m.  #57  DOES THE PRESENCE OF PROSTATE MEDIAN LOBE AFFECT PERIOPERATIVE, ONCOLOGIC AND EARLY CONTINENCE OUTCOMES AFTER ROBOTIC-ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY?
Rafael Coelho, Sanket Chauhan, Marcelo Orvieto, Kenneth Palmer and Vipul Patel
Global Robotics Institute, Florida Hospital Celebration Health, University of Central Florida School of Medicine, Celebration, FL
(Presented By: Rafael Coelho)
7:30 a.m.  #58  INFLUENCE OF MODIFIED POSTERIOR RECONSTRUCTION OF THE RHABDOSPINCER ON EARLY RECOVERY OF CONTINENCE AND ANASTOMOTIC LEAK RATES AFTER ROBOTIC-ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY
Rafael Coelho, Marcelo Orvieto, Sanket Chauhan, Kenneth Palmer, Bobby Ardila and Vipul Patel
Global Robotics Institute, Florida Hospital Celebration Health, University of Central Florida School of Medicine, Celebration, FL
(Presented By: Rafael Coelho)

7:35 a.m.  #59  COMPLICATIONS ASSOCIATED WITH ROBOTIC RADICAL CYSTECTOMY FOR BLADDER CANCER: A MULTI-INSTITUTIONAL ANALYSIS
Matthew Raynor¹, Angela Smith¹, Christopher Amling², J. Erik Busby³, Erik Castle⁴, Rodney Davis⁵, Raju Thomas⁶, Matthew Nielsen¹ and Raj Pruthi⁴
¹The University of North Carolina at Chapel Hill; ²Oregon Health Sciences University; ³University of Alabama at Birmingham; ⁴Mayo Clinic Scottsdale; ⁵Vanderbilt University; ⁶Tulane University
(Presented By: Matthew Raynor)

7:40 a.m.  #60  ONCOLOGIC OUTCOMES OF ROBOTIC ASSISTED RADICAL CYSTECTOMY
Ugur Boylu, Mathew Oommen, Benjamin R. Lee and Raju Thomas
Department of Urology, Tulane University School of Medicine, New Orleans, LA
(Presented By: Ugur Boylu)

7:45 a.m.  #61  SALVAGE ROBOTIC-ASSISTED LAPAROSCOPIC PROSTATECTOMY FOR RADIORECURRENT PROSTATE CANCER: MULTI-INSTITUTIONAL OUTCOMES
Manoj Patel¹, Rafael Coelho¹, Marcelo Orvieto¹, Sanket Chauhan¹, Kenneth Palmer¹, Michael Liss², Robert Ferrigni², Jean Joseph², Erik Castle³, Thomas Ahlering³ and Vipul Patel⁴
¹Global Robotics Institute, Florida Hospital Celebration Health, University of Central Florida School of Medicine, Celebration, FL; ²University of California – Irvine, CA; ³Center Mayo Clinic Phoenix, Phoenix, AZ; ⁴University of Rochester Medical Center; ⁵Global Robotics Institute, Florida Hospital Celebration Health, Celebration, FL
(Presented By: Rafael Coelho)

7:50 a.m.  #62  HIGH VOLUME, FELLOWSHIP-TRAINED SINGLE SURGEON ROBOTIC-ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY OUTCOMES ARE SUPERIOR TO THOSE REPORTED IN POPULATION BASED STUDIES FOR ALL MEDICARE BENEFICIARIES
Robert Carey, Daniel Kaplon and Tariq Hakky
Urology Treatment Center, Florida State College of Medicine, Sarasota, FL
(Presented By: Robert Carey)

7:55 a.m.  #63  ROBOTIC-ASSISTED LAPAROSCOPIC INTRACORPOREAL URINARY DIVERSION
Stephen McKim, Eugene Simopoulos, Angela Smith, Matthew Raynor, Matthew Nielsen, Eric Wallen and Raj Pruthi
The University of North Carolina at Chapel Hill
(Presented By: Stephen McKim)

8:00 a.m.  #64  ROBOTIC VERSUS LAPAROSCOPIC PARTIAL NEPHRECTOMY: SINGLE SURGEON MATCHED COHORT STUDY OF 150 PATIENTS
Wesley White¹, Georges-Pascal Haber², Sebastien Crouzet², Raj Goel² and Jihad Kaouk²
¹The University of Tennessee Medical Center, Knoxville, TN; ²Cleveland Clinic, Cleveland, OH
(Presented By: Wesley White)
8:05 a.m.  #65 ROBOT ASSISTED LAPAROSCOPIC PELVIC LYMPHADENECTOMY AT THE TIME OF RADICAL CYSTECTOMY RIVALS THAT OF OPEN SURGERY: SINGLE INSTITUTION REPORT
Kyle Richards, Ashok Hemal, Karim Kader and Joseph Pettus
Wake Forest University Baptist Medical Center Department of Urology
Winston-Salem, NC
(Presented By: Kyle Richards)

8:10 a.m.  #66 FEASIBILITY AND OUTCOMES OF ROBOTIC-ASSISTED LAPAROSCOPIC RADICAL CYSTECTOMY FOR BLADDER CANCER IN THE ELDERLY
Stephen McKim, Eugene Simopoulos, Angela Smith, Matthew Raynor, Matthew Nielsen, Eric Wallen and Raj Pruthi
The University of North Carolina at Chapel Hill
(Presented By: Stephen McKim)

PODIUM 52
ROBOT-ASSISTED RADICAL PROSTATECTOMY IN RENAL TRANSPLANT RECIPIENTS
Damien Smith, Jeremy Speeg¹ and Richard Vanlangendonck²
¹Ochsner/LSU Urology Residency Program, PGY-3, New Orleans, LA; ²Ochsner Clinic Foundation, Program Director, New Orleans, LA
(Presented By: Damien Smith)

Purpose: To determine feasibility and evaluate outcomes in patients undergoing robot-assisted laparoscopic prostatectomy (RARP) after previous renal transplantation.

Materials and Methods: Patients were selected from the Ochsner Clinic Foundation database for a retrospective case-series report. All patients who received a renal transplant allograft and underwent RARP from 2006 to 2009 were included. Chart reviews were performed to evaluate patient demographics, perioperative characteristics and outcomes. The technique of the procedure is described in detail.

Results: Three patients were included in the study, all of which received a cadaveric renal transplant. All patients were subsequently diagnosed with prostate cancer by transrectal biopsy. All patients underwent a successful RARP without any major or minor complications. The average operative time was 128 minutes (range, 120 minutes to 135 minutes) with all patients having an estimated blood loss of 300 ml. No changes in renal graft function, measured by serum creatinine, were noted. Negative surgical margins were appreciated in all patients; extracapsular extension was identified in one patient. All three patients were discharged on postoperative day one. Foley catheters were removed two weeks postoperatively. PSA values one month postoperatively were undetectable in all three patients.

Conclusion: RARP in renal transplant recipients is feasible and can be accomplished safely. No modifications to trocar placement or anatomic dissection of the prostate are required. Margin status and short-term biochemical success are not compromised with the robotic approach.

PODIUM 53
PROSPECTIVE, RANDOMIZED TRIAL OF ROBOTIC VERSUS OPEN RADICAL CYSTECTOMY FOR BLADDER CANCER: PERI-OPERATIVE AND PATHOLOGICAL RESULTS
Stephen McKim, Eugene Simopoulos, Angela Smith, Jeff Nix, Matthew Raynor, Matthew Nielsen, Eric Wallen and Raj Pruthi
The University of North Carolina at Chapel Hill
(Presented By: Stephen McKim)

Background: In recent years, surgeons have begun to report case series of minimally invasive approaches to radical cystectomy including robotic-assisted techniques—demonstrating the surgical feasibility of this procedure. Notwithstanding these experiences and observations, it must be clearly recognized that at this point, high levels of clinical evidence with regard to benefits of robotic cystectomy are absent, and the current experiences represent case series with limited comparisons to historical controls at best. We report our results on a prospective, randomized trial of open versus robotic radical cystectomy.

Methods: We performed an IRB-approved, prospective, randomized, single-center non-inferiority study comparing open versus robotic approaches to cystectomy in patients who are candidates for radical cystectomy for urothelial carcinoma of the bladder. Of the 41 patients who were enrolled and randomized, 20 were randomized to the robotic approach and 21 to the open technique. All patients underwent radical cystectomy, bilateral pelvic lymphadenectomy, and urinary diversion by either technique. The primary end-point was lymph node yield with a non-inferiority margin of 4 LNs. Secondary endpoints include demographic characteristics, peri-operative outcomes, pathological results and short-term narcotic usage.
Results: On univariate analysis, no significant differences were found between the two groups with regard to age, sex, BMI, ASA, clinical stage or diversion type. In the robotic group 14 patients had <=pT2 disease, 3 pT3/T4 disease, and 4 N+ disease. In the open group, 8 had <=pT2, 5 pT3/T4, and 7 N+ disease. There was no difference in LN yield robotic versus open groups (19 vs. 18; p = 0.515). Such findings appear to demonstrate non-inferiority of the robotic approach, given the pre-existing statistical conditions of this study, with regard to these important measures of surgical quality.

Conclusions: We present the results of a prospective randomized non-inferiority study with a primary endpoint of lymph node yield, demonstrating the robotic approach to be non-inferior to the open approach. The robotic approach also compares favorably to the open approach in several peri-operative parameters.

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PODIUM 54
PREDICTORS FOR POSITIVE SURGICAL MARGINS AND ITS LOCATION AFTER ROBOTIC-ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY
Rafael Coelho, Marcelo Orvieto, Sanket Chauhan, Kenneth Palmer, Bernardo Rocco and Vipul Patel
Global Robotics Institute, Florida Hospital Celebration Health, University of Central Florida School of Medicine, Celebration, FL
(Presented By: Rafael Coelho)

Introduction: Positive surgical margin (PSM) after radical prostatectomy (RP) has been shown to be an independent predictive factor for cancer recurrence. Refinements in surgical technique and a downward stage migration during the PSA era have collectively contributed to declining of PSM rates in contemporary RP series. Several investigations have correlated preoperative variables, surgical experience and technical modifications with the margin status after open RP. However, few studies have addressed the predictive factors for PSM after RARP. Herein, we sought to identify predictive factors for PSMs and its location after RARP.

Methods: We analyzed prospectively 876 consecutive patients who underwent RARP performed by a single surgeon. Stepwise logistic regression was used to identify potential predictive factors for PSM. Three logistic regression models were built: (1) one model using preoperative variables only (age, BMI, PSA, clinical stage, number of positive cores, percentage of positive cores and AUA-SS); (2) another model using pre-operative, intra-operative and post-operative variables combined (type of nerve-sparing, presence of median lobe, percentage of tumor in the surgical specimen, gland size, pathological stage and pathological Gleason grade); and, finally, (3) one model was created to identify potential predictive factors for PSM location. Preoperative variables entered in the models included.

Results: In the multivariate analysis including pre-operative variables (model 1), clinical stage was the only independent predictive factor for PSM, with a higher HSR rate for T3 vs T1c (OR 10.7, 2.6–43.8) and for T2 vs T1c (OR 2.9, 1.9–4.6). Considering pre-, intra- and post-operative variables combined (model 2), percentage of tumor, presence of EPE, pathological stage and pathological Gleason score were associated with increased risk of PSM in the univariable analysis (P<0.001 for all variables). However, in the multivariate analysis, pathological stage (p<0.0001) and percentage of tumor in
the surgical specimen (p=0.0022) were the only independent predictive factors for PSM. Finally, in the multivariate analysis of predictive factors for PSM locations (model 3), BMI was shown to be an independent predictive factor (p=0.0119) for apical PSMs, with increasing BMI predicting higher incidence of apex location.

**Conclusions:** Clinical stage was the only pre-operative variable independently associated with PSM after RARP. Pathological stage and percentage of tumor in the surgical specimen were identified as independent predictive factors for PSMs when analyzing pre, intra and post-operative variables combined. Regarding PSM location, BMI was shown to be an independent predictive factor for apical PSMs.

**PODIUM 55**

**PERIOPERATIVE OUTCOMES, POSITIVE SURGICAL MARGIN RATES, AND SHORT-TERM CONTINENCE OUTCOMES AFTER ROBOTIC-ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY IN OVERWEIGHT AND OBESE PATIENTS**

Rafael Coelho, Sanket Chauhan, Kenneth Palmer, Marcelo Orvieto, Bobby Ardila and Vipul Patel
Global Robotics Institute, Florida Hospital Celebration Health, University of Central Florida School of Medicine, Celebration, FL
(Presented By: Rafael Coelho)

**Purpose:** To determine the impact of BMI on perioperative outcomes, positive surgical margin rates (PSM), and short-term continence outcomes in patients undergoing Robotic-Assisted Laparoscopic Radical Prostatectomy (RARP).

**Methods:** We analyzed 992 consecutive patients who underwent RARP. All the procedures were performed by a single surgeon (VRP) with previous experience greater than 1000 procedures. Patients were stratified in three groups according to BMI: normal weight (group 1 – BMI< 25 kg/m2), overweight (group 2 – BMI =25 to 29.9 kg/m2) and obese (Group 3 – BMI ≥ 30 kg/m2) for outcomes analysis. Continence was defined as the use of “no pads” based on the patient responses to the EPIC (Expanded Prostate Cancer Index Composite) questions at 4 weeks, 6 weeks, 3 months and 6 months after RALP.

**Results:** Groups 1, 2 and 3 had 143, 518 and 331 patients, respectively. When compared to group 1, groups 2 and 3 had equivalent length of hospital stay, mean number of days with catheter, overall complication rates, pathological stage, pathological Gleason score, number of nerve sparing procedures, number of anastomotic leakages, mean tumor volume and PSM rates. However, the overall operative time (76.3±11.9 and 79.5±12.3 min vs. 72.8±10.8 min, respectively; p<0.001) and mean EBL (113±35.7 and 123.7±39 cc vs. 106.8±26.5 cc, respectively; p<0.001) were slightly greater in groups 2 and 3 compared to group 1. Continence rates were also significantly higher in group 1 when compared to group 3 at 4 weeks after RARP (51.7% vs.40%; p=0.045), although the rates were similar at 6 weeks (63.5% vs.60.5%; p=0.67), 3 months (86.2% vs.83.9%; p=0.708) and 6 months (94% vs.91%; p=0.579), after surgery. The continence rates were equivalent between group 1 and 2 at 4 weeks (51.7% vs 41.8%; p=0.084), 6 weeks (63.5% vs.60%; p=0.574), 3 months (86.2% vs.83.5%; p=0.614) and 6 months (94% vs.92.8%; p=0.878) after surgery.

**Conclusion:** RARP is a safe and effective procedure in overweight and obese patients when performed by an experienced surgeon. There was a slight increase in the operative time and mean EBL in these two groups when compared to patients with normal weight. The continence rates were lower in obese patients compared to patients with normal weight at 4 weeks after the procedure, although the continence rates at 6 weeks, 3 months and 6 months were similar between the groups.

**PODIUM 56**

**PREDICTORS FOR LYMPHOCELE FORMATION AFTER PELVIC LYMPHADENECTOMY DURING ROBOT-ASSISTED RADICAL PROSTATECTOMY**

Marcelo Orvieto, Rafael Coelho, Sanket Chauhan, Kenneth Palmer and Vipul Patel
Global Robotics Institute – Florida Hospital Celebration Health, Celebration, FL
(Presented By: Marcelo Orvieto)

**Introduction and Objectives:** The frequency of lymphocele formation after pelvic lymphadenectomy (PLND) during robot-assisted radical prostatectomy (RARP) is unclear and likely underestimated. We sought to determine the incidence and predictive factors of lymphocele formation in patients undergoing PLND during RARP.

**Methods:** Between April and December 2008, 76 patients underwent PLND during RARP for ≥cT2c, PSA ≥10, Gl<7 prostate cancer. All patients were prospectively followed with pelvic CT at 6 – 12 weeks after the procedure. All pts received subcutaneous heparin preoperatively and postoperatively. PLND was limited to zones 1 & 2 as defined by Studer. Plasma-kinetic (PK) bipolar forceps were used for hemostasis during PLND.

**Results:** Median lymph node yield was 6 nodes per side (range 2 – 12). At a mean follow up of 10.8 weeks, 51% (39/76) of pts had developed a lymphocele on CT. Of these, 32/39 (82%) were unilateral,
while 7 pts (18%) developed bilateral lymphoceles. Mean size was 4.3 x 3.2cm (range 1.5 – 12.3cm) with 41% lymphoceles <4cm, 53.9% 4 – 10cm, and 5.1% >10cm in diameter. Of the patients with radiologically apparent lymphoceles, 15.4% (6/39) were clinically symptomatic (pelvic pressure (5/6), abdominal distension with ileus (3/6), leg pain/weakness (1/6), and costovertebral tenderness (1/6). 2/39 (5.1%) required drainage for persistence of symptoms. On the logistic regression model the presence of nodal metastases, tumor volume in the prostate, seminal vesicles involvement and extracapsular extension were independent risk factors for the development of a lymphocele. There was no correlation between EBL, BMI, pathologic Gleason score and number nodes retrieved with the development of lymphocele.

**Conclusions:** The lymphocele rate was higher than anticipated given the believed protective effect of the transperitoneal approach against lymphocele formation. Furthermore, PK bipolar forceps do not seem to adequately seal lymphatic channel and prevent lymphocele formation. The risk of lymphocele increased linearly with the presence of more extensive disease, particularly ECE and nodal involvement. The benefit of PLND during RARP should be weighed against the elevated risk of lymphocele formation and its potential complications. Due to the high lymphocele rate observed, we have switched to the use of Hemo-lock clips while performing PLND. Further studies are needed to evaluate the exact incidence of lymphocele formation with this technique.

**PODIUM 57**

**DOES THE PRESENCE OF PROSTATE MEDIAN LOBE AFFECT PERIOPERATIVE, ONCOLOGIC AND EARLY CONTINENCE OUTCOMES AFTER ROBOTIC-ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY?**

Rafael Coelho, Sanket Chauhan, Marcelo Orvieto, Kenneth Palmer and Vipul Patel
Global Robotics Institute, Florida Hospital Celebration Health, University of Central Florida School of Medicine, Celebration, FL
(Presented By: Rafael Coelho)

**Purpose:** To determine whether the presence of median lobe affects perioperative outcomes, positive surgical margin (PSM) rates and short-term urinary continence outcomes after Robot-Assisted Radical Prostatectomy (RALP).

**Methods:** We analyzed prospectively 992 consecutive patients who underwent RALP. All the procedures were performed by a single surgeon (VRP) with previous experience greater than 1000 procedures. Patients were categorized in two groups based on the presence or absence of a median lobe identified during RALP. Outcomes analyzed included operative time, Estimated Blood Loss (EBL), nerve-sparing procedure, hospital stay, days with catheter, presence of anastomotic leakage on cystogram, number of bladder neck reconstruction procedures, prostate weight, tumor volume, pathological stage, PSM rates, pathological Gleason score and continence rates. Continence was defined as the use of “no pads” based on the patient responses to the EPIC (Expanded Prostate Cancer Index Composite) questions at 4 weeks, 6 weeks, 3 months and 6 months after RALP.

**Results:** Of the 992 patients who underwent RALP, 175 (17.6%) had median lobes. Patients with median lobes were slightly older (63.5 vs 59.7 <0.001), had higher PSA levels (6.5 vs. 5.6; p<0.001) and higher AUA-SS before RALP (11.4 vs.8.1; p<0.001). Both groups had equivalent EBL, length of hospital stay, mean number of days with catheter, pathological stage, pathological Gleason score, number of nerve sparing procedures, number of anastomotic leakages, mean tumor volume and PSM rates. The overall operative time for RALP was slightly greater in patients with median lobes (81.3vs. 76; p=0.001). The number of bladder neck reconstruction procedures and the mean prostate weight were also higher in the median lobe group. Continence rates were equivalent between patients with and without median lobe at 4 weeks (39.1% vs. 48%, p=0.131), 6 weeks (68.1 vs. 66.3%, p=0.831), 3 months (88.8 vs.90%, p=0.989) and 6 months (92.8 vs.94.5%, p=0.761) after surgery.

**Conclusion:** The presence of a median lobe does not affect perioperative, PSM rates and continence outcomes in patients undergoing RALP performed by an experienced surgeon. There was a slight increase in the operative time probably related to larger prostate size and to higher incidence of bladder neck reconstruction procedures in the median lobe group.
PODIUM 58
INFLUENCE OF MODIFIED POSTERIOR RECONSTRUCTION OF THE Rhabdosphincter ON EARLY RECOVERY OF CONTINENCE AND ANASTOMOTIC LEAK RATES AFTER ROBOTIC-ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY
Rafael Coelho, Marcelo Orvieto, Sanket Chauhan, Kenneth Palmer, Bobby Ardila and Vipul Patel
Global Robotics Institute, Florida Hospital Celebration Health, University of Central Florida School of Medicine, Celebration, FL
(Presented By: Rafael Coelho)

Purpose: Posterior reconstruction of the rhabdosphincter has been previously described during open Radical Prostatectomy (RP) and shorter times to return of continence were reported using this technical modification. Contradictory results have been reported, however, using this technique during Robotic-Assisted Radical Prostatectomy (RARP). We hereby describe a modified technique of posterior reconstruction of the rhabdosphincter during RARP and report its impact on early recovery of urinary continence.

Methods: We analyzed prospectively 803 patients who underwent RARP; 330 without performing posterior reconstruction (group 1) and 473 with posterior reconstruction (group 2), as described below. Continence was defined as the use of "no pads" based on the patient responses to the EPIC (Expanded Prostate Cancer Index Composite) questions at 4, 12 and 24 weeks after RARP. The principles are consistent with the two layer reconstruction described by Rocco et al. with minor technical modifications. The reconstruction was performed using two 3 – 0 poliglecaprone sutures tied together. The free edge of the remaining Denovilliers' fascia was identified after prostatectomy and approximated to the posterior aspect of the rhabdosphincter and the posterior median raphe using one arm of the suture. The second layer of the reconstruction was then performed with the other arm of the suture approximating the posterior bladder neck to the initial reconstructed layer of posterior rhabdosphincter and posterior urethra.

Results: There was no significant difference between the groups with respect to patient age, BMI, PSA levels before RARP, prostate weight, AUASS, and biopsy Gleason score. There was also no significant difference with respect to EBL, operative time, number of nerve sparing procedures and catheterization time between the groups. In group 1, the continence rates at 4, 12 and 24 weeks postoperatively were 42.7%, 91.8% and 96.3%, respectively; in group 2, the continence rates were 51.6%, 91.7% and 97%, respectively. The modified posterior reconstruction technique resulted in significantly greater continence rates at 4 weeks after RARP (p = 0.016), although the rates at 12 and 24 weeks were not significantly affected. The incidence of cystographic leaks was also lower in the posterior reconstruction group compared to the group without reconstruction (0.4% vs. 2.1%; p=0.036).

Conclusion: The modified posterior reconstruction of the rhabdosphincter during RALP resulted in statistically significant higher continence rates at 4 weeks after the procedure and lower anastomotic leak rates compared to RARP performed without posterior reconstruction.

PODIUM 59
COMPLICATIONS ASSOCIATED WITH ROBOTIC RADICAL CYSTECTOMY FOR BLADDER CANCER: A MULTI-INSTITUTIONAL ANALYSIS
Matthew Raynor¹, Angela Smith¹, Christopher Amling², J. Erik Busby³, Erik Castle⁴, Rodney Davis⁵, Raju Thomas⁶, Matthew Nielsen¹, Eric Wallen¹ and Raj Pruthi¹
¹The University of North Carolina at Chapel Hill; ²Oregon Health Sciences University; ³University of Alabama at Birmingham; ⁴Mayo Clinic Scottsdale; ⁵Vanderbilt University; ⁶Tulane University
(Presented By: Matthew Raynor)

Purpose: Radical cystectomy remains one of the most effective treatments for patients with localized, invasive bladder cancer. Recently, some surgeons have begun to describe single institution case series with less-invasive surgical approaches to this disease such as laparoscopic or robotic-assisted techniques. As with any novel procedure, careful scrutiny and analysis of complications are essential to evaluate and validate the appropriateness of the intervention. We report on a multi-institutional experience with robotic-assisted laparoscopic radical cystectomy with regard to surgical complications and associated clinical factors.

Methods: 227 patients (178 males and 49 females) underwent a robotic radical cystectomy and urinary diversion at one of four institutions. In all cases, peri-operative complications were recorded and classified using the Clavien system. We analyzed clinical and operative factors that may be associated or predictive of surgical complications. Statistical analysis was performed using SAS version 9.2.

Results: The overall complication rate for all 227 patients was 30% with 7% of pts experiencing a Clavien grade 3 or higher complications. Multivariate analysis was carried out via logistic regression, controlling for covariates age, sex, ASA, BMI and stage. Multiple models were fitted, including several other covariates, which proved nonsignificant and subsequently dropped from the model. These included EBL, margin status, operative time, and type of diversion. In the final model, sex, stage, and BMI were
nonsignificant covariates. Age was found to be a significant predictor (p=0.0204) of worse complications with those >60 years old being over twice as likely (OR 2.2) to experience a higher Clavien complication rate with robotic surgery when controlling for other variables. Interestingly, ASA was also likely to predict complications with higher ASA scores associated (OR 2.4) with a higher Clavien complication rate. BMI also was nearly statistically significant with those with a higher BMI (> 25) 1.8 times more likely than those < 25 to experience a higher Clavien complication rate.

Conclusions: The present analysis helps to define the overall rate and predictive factors of peri-operative complications in patients undergoing robotic radical cystectomy for bladder cancer by utilizing a large, multi-institutional cohort. Age, BMI, and ASA class appear to be independent predictors of peri-operative complications.

PODIUM 60
ONCOLOGIC OUTCOMES OF ROBOTIC ASSISTED RADICAL CYSTECTOMY
Ugur Boylu, Mathew Oommen, Benjamin R. Lee and Raju Thomas
Department of Urology, Tulane University School of Medicine, New Orleans, LA
(Presented By: Ugur Boylu)

Objective: To report the intermediate-term oncologic outcomes of robotic assisted radical cystectomy (RARC).

Material & Methods: A total of 36 patients who underwent RARC with extracorporeal urinary diversion for bladder cancer between 2005 and 2008 and have a follow-up of at least 6 months were reviewed. Pathologic outcomes, surgical margin status, overall survival and disease-specific survival were evaluated.

Results: RARC was performed in 29 men and 7 women. Mean age was 66.1 years. Studer pouch (6), ileal pouch (24), Hautmann orthotopic bladder (5), and Indiana pouch (1) was performed. There were 4 pTis, 4 pT1, 10 pT2, 14 pT3, and 4 pT4 patients. The mean number of lymph nodes removed was 16.8 (range 7 – 62) and 11 (31%) patients have Stage N+ disease. One patient (2.8%) had surgical margin positive. Mean follow-up was 28.8 months (range: 6 – 48 months). Mean estimated overall survival was 33.1 months (95% CI 26.9 to 39.3) and disease-specific survival was 40.5 months (95% CI 35.2 to 45.8) (Figure 1). The difference in mean survival between LN+ (n=11) and LN− (n=25) patients was statistically significant (22.1 vs. 27.9 months, p=0.006) (Figure 2).

Conclusion: The oncologic outcomes and survival of patients undergoing RARC due to bladder cancer appears to be favorable in intermediate term.

PODIUM 61
SALVAGE ROBOTIC-ASSISTED LAPAROSCOPIC PROSTATECTOMY FOR RADIORECURRENT PROSTATE CANCER: MULTI-INSTITUTIONAL OUTCOMES
Manoj Patel¹, Rafael Coelho¹, Marcelo Orvieto¹, Sanket Chauhan¹, Kenneth Palmer¹, Michael Liss², Robert Ferrigni³, Jean Joseph⁴, Erik Castle³, Thomas Ahlering² and Vipul Patel⁵
¹Global Robotics Institute, Florida Hospital Celebration Health, University of Central Florida School of Medicine, Celebration, FL; ²University of California – Irvine, CA; ³Center Mayo Clinic Phoenix, Phoenix, AZ; ⁴University of Rochester Medical Center; ⁵Global Robotics Institute, Florida Hospital Celebration Health, Celebration, FL
(Presented By: Rafael Coelho)

Introduction: An estimated 10 – 60% of men who undergo definitive radiation therapy (RT) for prostate cancer (PCa) may experience biochemical recurrence. Salvage treatment options for local recurrences have historically been limited to cryotherapy, HT or salvage radical prostatectomy (RP), with the latter being associated with significant morbidity. The recent introduction of advanced robotic devices to the field of minimally invasive urologic surgery has added new hopes of reducing complications and improving outcomes following salvage RP. We report here a multi-institutional experience with performing Salvage Robotic-Assisted Laparoscopic Prostatectomy (sRALP) in patients with recurrent PCa after definitive radiotherapy.
Methods: Between March 2007 and December 2008, 15 men underwent sRALP, in 4 different institutions, for treatment of locally recurrent PCA. Radiation treatment consisted of external beam radiation in 4 cases, brachytherapy in 6 cases, proton beam therapy in 2 cases, and external beam radiation followed by brachytherapy in 3 cases. Perioperative, oncologic and functional outcomes were evaluated. Continence was defined as the use of no pads; Potency was defined as erections sufficient for sexual intercourse with or without the assistance of oral medications; Biochemical recurrence after sRALP was defined as PSA>0.2.

Results: The mean estimated blood loss was of 76.67 ml, operative time of 125.25 min and hospital length of stay of 1.3 days. At a mean follow-up period of 7.1 months, 3 patients (20%) presented with biochemical progression, defined as PSA>0.2; all 3 had negative surgical margins and underwent bilateral PLND, which revealed no evidence of malignancy. When stratified by age, all (8/8) patients younger than 64 years were continent, defined as 0 pads; 40% of men aged 64 – 70 (2/5) were continent; and no men older than 70 years were continent after surgery. None of the patients in our series were potent after salvage RALP; however, all the patients did report mild – moderate erectile dysfunction (defined as SHIM<17) after RT and before salvage surgery. There were no rectal injuries, blood transfusions, or conversion to open surgery.

Conclusion: Salvage RALP is a technically challenging, but feasible procedure. Perioperative and early functional outcomes appear to be at least equivalent with historical salvage radical prostatectomy series. Further studies with longer follow-up are warranted to evaluate the oncologic outcomes after sRALP.

PODIUM 62
HIGH VOLUME, FELLOWSHIP-TRAINED SINGLE SURGEON ROBOTIC-ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY OUTCOMES ARE SUPERIOR TO THOSE REPORTED IN POPULATION BASED STUDIES FOR ALL MEDICARE BENEFICIARIES
Robert Carey, Daniel Kaplon and Tariq Hakky
Urology Treatment Center, Florida State College of Medicine, Sarasota, FL
(Presented By: Robert Carey)

Introduction: Robotic-assisted laparoscopic radical prostatectomy (RALRP) is a technically demanding operation in which surgical outcomes depend upon the training and experience of the surgeon. We report the experience of a high volume fellowship-trained surgeon compared to published sampling of Medicare recipients undergoing minimally invasive radical prostatectomy (MIRP) and open radical prostatectomy (ORP).

Methods: A total of 364 patients underwent RALRP over a period of 36 months. Prospective data collection included Expanded Prostate Cancer Index Composite (EPIC), PSA, Gleason grade, and clinical stage. Operative parameters were estimated blood loss, length of surgery, and complications. Post-operative parameters included length of hospital stay, pathology, return to continence, PSA, perioperative complications and salvage therapy.

Results: The mean patient age was 63.6 years (46 – 79), mean BMI 28.3 (20.9 – 43.8), mean prostate size 53.8 (22.0−131), mean preoperative PSA 6.0. The mean follow-up is 14.6 months. Pathology stages were T2a-T2b (21%), T2c (64.3%), T3a (9.5%), T3b (3.2%), and T4 (6, 1.9%). Gleason scores were 5 (0.9%), 6 (49.8%), 7 (42.6%), 8 (3.6%), 9 (3.0%). Bilateral pelvic lymph node dissections were performed in 68.1% of patients with positivity identified in 6 (2.0%) patients. The length of surgery improved from 213 min for cases 1 – 50 to 119 min for cases 150 – 364. The estimated blood loss for cases 1 – 50 was 170 mL, and for cases 150 – 364 was < 100 mL. The overall positive margin rates for this study were 12.4%, although this fell to 5.7% for cases 150 – 364. No positive margins were obtained for T2b or lower disease. Early continence was achieved in 63% of patients at one month and 95% at 3 months. There were no intra-operative transfusions and only 7 (1.9%) post-operative transfusions. Adjuvant radiation therapy for biochemical recurrence has been undertaken in 3.3% (n = 12) patients. Adjuvant androgen deprivation has been started in 4/6 patients with lymph node positive or metastatic disease. There has been 1 (0.27%) anastomotic stricture. In comparison, published samplings of Medicare recipients undergoing MIRP or ORP have rates of anastomotic stricture (15.2% and 12%), salvage therapy (27% and 9%) respectively.

Conclusions: Perioperative complication rates and oncologic outcomes obtained by a fellowship trained single surgeon dedicated to robotic surgery are markedly superior to that reported for a sampling of Medicare beneficiaries for either MIRP or ORP. Our data suggest that adequate training, supervision, and experience in RALRP are key factors in producing consistently excellent outcomes.
PODIUM 63
ROBOTIC-ASSISTED LAPAROSCOPIC INTRACORPOREAL URINARY DIVERSION
Stephen McKim, Eugene Simopoulos, Angela Smith, Matthew Raynor, Matthew Nielsen, Eric Wallen and Raj Pruthi
The University of North Carolina at Chapel Hill
(Presented By: Stephen McKim)

Introduction: Recent small case series have now been reported for robotic-assisted laparoscopic radical cystectomy. In most of these series, the urinary diversion has been performed in an extracorporeal fashion. This has been few case reports of an intracorporeal diversion, and little description of the technique of such a procedure. Herein, we report our initial experience with robotic-assisted laparoscopic intracorporeal urinary diversion describing stepwise the surgical procedure itself, and evaluating perioperative and pathologic outcomes of this novel procedure.

Methods: Twelve patients underwent robotic-assisted laparoscopic radical cystectomy and intracorporeal urinary diversion. Outcome measures evaluated in this series included operative variables, hospital recovery, and complication rate. Comparisons were made to the most recent 20 consecutive patients who underwent a robotic cystectomy with extracorporeal diversion from an experience of over 100 robotic cystectomy patients since 2005.

Results: Mean age was 60.9 years (range 45 – 70 years). Nine patients underwent intracorporeal ileal conduit diversion and 3 underwent an orthotopic neobladder. Mean OR time of all patients was 5.3 hours (4.3 – 7.3 hrs) with a mean time of intracorporeal diversion of 3.0 hours. There were 6 complications in 5 patients (1 patient Clavien 3 or higher) – only one apparently related to the urinary diversion (misplaced ureteral stent). Outcomes and comparisons to the extracorporeal diversion cohort are shown in the table.

Conclusions: Our initial experience with robotic-assisted laparoscopic intracorporeal diversion appears to be favorable with acceptable operative, and short-term clinical outcomes. As our experience increases, we should expect to continue to refine our surgical technique and reduce operating room times. Certainly, larger experiences are required to adequately evaluate and validate this procedure as an appropriate surgical option for the bladder cancer patient or other patient requiring urinary diversion.

PODIUM 64
ROBOTIC VERSUS LAPAROSCOPIC PARTIAL NEPHRECTOMY: SINGLE SURGEON MATCHED COHORT STUDY OF 150 PATIENTS
Wesley White¹, Georges-Pascal Haber², Sebastien Crouzet², Raj Goel² and Jihad Kaouk²
¹The University of Tennessee Medical Center, Knoxville; ²Cleveland Clinic, Cleveland, OH
(Presented By: Wesley White)

Introduction and Objectives: We present comparative outcomes among matched patients who underwent robotic partial nephrectomy (RPN) or laparoscopic partial nephrectomy (LPN) by a single surgeon.

Methods: A retrospective cohort study was performed to evaluate perioperative outcomes among patients who underwent RPN or LPN. Patients were matched for age, gender, body mass index (BMI), ASA score, and tumor size, side, and location. Salient operative data including operative time, estimated blood loss, and warm ischemia time was obtained. Postoperative outcome measures included duration of hospitalization, pre− and post-operative renal function, surgical margin status, and the rate of adverse events. Statistical analysis was performed.

Results: Between June 2006 and August 2009 a total of 75 patients underwent RPN. This cohort of patients was retrospectively compared to a matched, contemporary cohort of 75 patients that underwent LPN. There was no significant difference between the 2 cohorts with respect to patient age (p = 0.17), BMI (p = 0.68), ASA score (p = 0.96), preoperative eGFR (p = 0.54), or tumor size (p = 0.17). Mean operative time for RPN was 200 minutes versus 197 minutes for LPN (p = 0.75). Mean EBL was higher in the RPN cohort (323mL) versus the LPN cohort (222mL) (p = 0.01). There was no significant difference between the RPN and LPN cohorts with respect to warm ischemia time (18.2 minutes vs. 20.3 minutes, respectively; p = 0.27), length of hospitalization (p = 0.84), % change in eGFR (p = 0.80), or adverse events (p = 0.52). All surgical margins were negative.
Conclusions: Based on our initial experience, RPN offers equivalent perioperative and renal functional outcomes as compared to LPN. With increased surgeon experience, a significant difference in outcomes including warm ischemia time may ultimately favor RPN. Although a prospective, randomized controlled trial is needed to confirm these findings, the translational capacity of the robotic operating platform coupled with its superior optics and flexibility of use may very well establish RPN as the new standard of care for minimally invasive nephron-sparing surgery.

PODIUM 65
ROBOT ASSISTED LAPAROSCOPIC PELVIC LYMPHADENECTOMY AT THE TIME OF RADICAL CYSTECTOMY RIVALS THAT OF OPEN SURGERY: SINGLE INSTITUTION REPORT
Kyle Richards, Ashok Hemal, Karim Kader and Joseph Pettus
Wake Forest University Baptist Medical Center Department of Urology Winston-Salem, NC
(Presented By: Kyle Richards)

Objective: Currently there is controversy whether robot-assisted laparoscopic PLND (RALPLND) at radical cystectomy is technically feasible and oncologically equivalent to PLND at the time of open radical cystectomy (ORC). Until robust long-term survival data are available, oncologic efficacy may be estimated with surrogate markers such as margin status and lymph node yield. The purpose of this study is to analyze the PLND and margin status using a standard technique in the first 35 patients undergoing robot-assisted radical cystectomy (RARC) at our institution while establishing a robotics program and compare the results to the past 35 ORC performed at our institution.

Materials and Methods: After obtaining Institutional Review Board approval, we reviewed the clinical and pathologic data from 70 consecutive patients with clinically localized bladder cancer that underwent radical cystectomy with PLND from April 2007 – June 2009. Thirty-five operations were performed open and 35 utilized the da Vinci robotic system™. The PLND was performed in all patients using either a modified standard or extended PLND template.

Results: There was no significant difference between the ORC and RARC group in regards to patient demographics, American Society of Anesthesiologists class, prior abdominal surgery history, tumor stage (43% ORC and 40% RARC having pT3/pT4 disease), and node status (29% N+ in each group). The median total lymph node yield was similar with 15 (IQR 11, 22) in the ORC group and 16 (IQR 11, 24) in the RARC group (p-value 0.5). One patient that underwent RARC had a positive margin compared to three patients in the ORC group.

Conclusions: The initial 35 RARC with PLND performed at our institution compared to the last 35 ORC resulted in equivalent lymph node yield and similar rates of positive margins. RARC with PLND is feasible, safe, and effective when performed at a high volume center by an experienced team.

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PODIUM 66
FEASIBILITY AND OUTCOMES OF ROBOTIC-ASSISTED LAPAROSCOPIC RADICAL CYSTECTOMY FOR BLADDER CANCER IN THE ELDERLY
Stephen McKim, Eugene Simopoulos, Angela Smith, Matthew Raynor, Matthew Nielsen, Eric Wallen and Raj Pruthi
The University of North Carolina at Chapel Hill
(Presented By: Stephen McKim)

**Purpose:** Recently, some surgeons have begun to describe outcomes associated robotic approaches to cystectomy for bladder cancer. Application to an older patient population, which is often the case in bladder cancer and cystectomy, has not yet been assessed. We report our maturing experience with robotic-assisted laparoscopic radical cystectomy as applied to an older patient population with regard to peri-operative measures, surgical complications, and pathologic outcomes.

**Methods:** 106 patients underwent robotic radical cystectomy at our institution from 1/06 – 5/09 for clinically-localized bladder cancer. Due to patient selection early in this series (often younger patients initially), and to exclude any significant effects of the learning curve, the first 20 cases were excluded. Operative outcomes, pathological results, and complications of the remaining 86 cases categorized by age (younger [< age 70] versus older [>= age 70]) are reported.

**Results:** Mean age of this cohort was 66.1 years (range 33 – 86 years). 53 were “younger” and 33 patients “older” (including 6 patients over age 80). Table shows the results based on age category with significant differences only observed in BMI and OR time (trend). In the younger subgroup, there were 21 complications in 17 patients including 3 (6%) Clavien 3 or higher and 11% readmissions. In the older group there were 12 complications in 10 patients including 3 (9%) Clavien 3 or higher and 12% readmissions. Of younger patients, 36% underwent ileal conduit, 62% underwent a neobladder, and 1% did not have a diversion (ESRD). Of older patients, 97% underwent ileal conduit and 3% underwent a neobladder. There were no differences on surgical pathology between the 2 groups. The mean number of lymph nodes removed was not significantly different in younger (19.6 [range 9 to 40]) vs. older (17.5 [range 10–37]) groups. There was no case of a positive surgical margin in either group.

**Conclusions:** Our evolving experience with robotic-assisted radical cystectomy, older patients do not appear to have any significant differences or compromises with regard to peri-operative and pathologic outcomes. As such, robotic cystectomy appears to be an appropriate surgical option for older patients.
8:30 a.m. #67  LOW DOSE CT FOR FOLLOW-UP OF UROLITHIASIS – ITS EFFECTIVENESS IN THE SETTINGS OF THE UROLOGY CLINIC
Dorit Zilberman, Michael Lipkin¹, Michael Ferrandino¹, Erik Paulson², Donald Frush² and Glenn Preminger¹
¹Urology Division, Duke University Medical Center, Durham, NC; ²Department of Radiology, Duke University Medical Center, Durham, NC
(Presented By: Dorit Zilberman)

8:35 a.m. #68  RESOLUTION OF RENAL PAPILLARY INJURY AND RANDALL’S PLAQUE IN A RODENT MODEL
Benjamin Canales and Saeed Khan
University of Florida, Gainesville, FL
(Presented By: Benjamin Canales)

8:40 a.m. #69  THE IMPACT OF LITHOTRIPTER BEAM SIZE ON STONE FRAGMENTATION
John Mancini¹, Walter Simmons², Michael Ferrandino¹, Dorit Zilberman¹, Michael Lipkin¹, Eliza Raymundo¹, Pei Zhong² and Glenn Preminger¹
¹DUMC, Durham, NC; ²Duke University, Durham, NC
(Presented By: John Mancini)

8:45 a.m. #70  IMPROVED IN VIVO DETERMINATION OF URINARY STONE COMPOSITION USING DUAL ENERGY COMPUTED TOMOGRAPHY WITH ADVANCED POST-IMAGE ACQUISITION DATA PROCESSING
Dorit Zilberman, Michael Lipkin¹, Michael Ferrandino¹, Daniel Bolli², David Albala¹ and Glenn Preminger¹
¹Urology Division, Duke University Medical Center, Durham, NC; ²Department of Radiology, Duke University Medical Center, Durham, NC
(Presented By: Dorit Zilberman)

8:50 a.m. #71  A NEW ACOUSTIC LENS DESIGN FOR ELECTROMAGNETIC SHOCK WAVE LITHOTRIPTERS
John Mancini¹, Michael Ferrandino¹, Walter Simmons², Eliza Raymundo¹, Michael Lipkin¹, Dorit Zilberman¹, Pei Zhong² and Glenn Preminger¹
¹DUMC, Durham, NC; ²Duke University, Durham, NC
(Presented By: John Mancini)

8:55 a.m. #72  COMPARISON OF THE INCIDENCE AND COMPOSITION OF UPPER TRACT AND LOWER TRACT CALCULI IN PATIENTS WHO HAVE UNDERGONE URINARY DIVERSION
Hernan O. Altamar, Erica H. Lambert, Michael S. Cookson, Joseph A. Smith, S. Duke Herrell and Nicole L. Miller
Vanderbilt University Medical Center, Nashville, TN
(Presented By: Hernan O. Altamar)

9:00 a.m. #73  EFFICACY OF TUBELESS AND STENTLESS PERCUTANEOUS NEPHROSTOLITHOTOMY FOR COMPLEX RENAL CALCULI
Reza Mehrzarin, Michael Aleman, Jamin Brahmbhatt, Anothony Patterson and Robert Wake
University of Tennessee Health Science Center at Memphis
(Presented By: Reza Mehrzarin)

9:05 a.m. #74  SAME-SESSION BILATERAL URETEROSCOPY IS SAFE AND EFFICACIOUS
Kenneth Ogan¹, Charles Chang² and John Pattaras¹
¹Emory University, Atlanta, GA; ²The University of Chicago, Chicago, IL
(Presented By: Kenneth Ogan)

9:10 a.m. #75  AN INNOVATIVE USE OF THE JACKSON SPINAL TABLE FOR COMPLEX PERCUTANEOUS NEPHROLITHOTOMY PROCEDURES
Brian Richardson, Gordon Fifer, Matthew Raynor, Gabriella Pridjian and Raju Thomas
Tulane University Health Sciences Center
(Presented By: Raju Thomas)
9:15 a.m.  #76  ACCESS FOR PERCUTANEOUS NEPHROLITHOTOMY BY UROLOGISTS: SAFE AND EFFECTIVE
Jason Poteet, Dustin Hyatt, Leah Chiles, Rowena DeSouza and Dennis Venable
LSU-HSC Shreveport, LA
(Presented By: Jason Poteet)

9:20 a.m.  #77  A COMPARISON OF THE USE OF INTRA-OPERATIVE FUROSEMIDE ON STONE CLEARANCE RATES WITH SHOCK WAVE LITHOTRIPSY
John Pattaras, Thomas Middour, Brad Figler and Kenneth Ogan
Emory University, Atlanta, GA
(Presented By: John Pattaras)

9:25 a.m.  #78  CLINICAL CHARACTERISTICS OF ELDERLY PATIENTS UNDERGOING SURGERY FOR UROLITHIASIS
Kelvin Moses¹, Daniel Saint-Elie², Brian Kapp², John Petros², Muta Issa³ and Chad Ritenour³
¹Emory University, Atlanta, GA; ²Atlanta VA Medical Center and Emory University, Atlanta, GA
(Presented By: Kelvin Moses)

9:30 a.m.  #79  VARIATION IN SURGICAL MANAGEMENT OF URINARY LITHIASIS IN THE UNITED STATES
Charles Scales¹, Tracey Krupski², Alex Smith³, Lesley Curtis⁴, Margaret Pearle⁵, Brian Matlaga⁶, Yair Lotan⁵, Christopher Saigal⁷, Mark Litwin⁷ and Glenn Preminger⁸
¹Duke University Medical Center, Durham, NC; ²University of Virginia, Charlottesville, VA; ³RAND, Los Angeles, CA; ⁴Duke Clinical Research Institute, Durham, NC; ⁵UT Southwestern Medical Center, Dallas, TX; ⁶Johns Hopkins University, Baltimore, MD; ⁷UCLA Medical Center, Los Angeles, CA
(Presented By: Charles Scales)

9:35 a.m.  #80  FACTORS AFFECTING PATIENT RADIATION EXPOSURE DURING PERCUTANEOUS NEPHROLITHOTOMY
John Mancini, Michael Ferrandino, Eliza Raymundo, Dorit Zilberman, Michael Lipkin, Lionel Banez, Michael Miller, Jr. and Glenn Preminger
DUMC, Durham, NC
(Presented By: John Mancini)

9:40 a.m.  #81  IN VITRO ASSESSMENT OF FRAGMENTATION AND RETROPULSION IN A NEW PNEUMATIC LITHOTRIPSY DEVICE
Eliza Raymundo¹, John Mancini¹, W. Neal Simmons⁴, Michael Ferrandino¹, Michael Lipkin¹, Dorit Zilberman¹, Pei Zhong⁴ and Glenn Preminger⁴
¹Duke University Medical Center, Durham, NC; ⁴Mechanical Engineering and Materials Science, Duke University, Durham, NC
(Presented By: Eliza Raymundo)

9:45 a.m.  #82  WHAT FACTORS CAN BETTER PREDICT THE INCIDENCE OF UROSEPSIS FOLLOWING AN ACUTE STONE EPISODE?
John Mancini, Eliza Raymundo, Charles Scales, Jr., Michael Ferrandino, Michael Lipkin, Dorit Zilberman, Charles Gerardo and Glenn Preminger
DUMC, Durham, NC
(Presented By: John Mancini)
Introduction: Non-contrast helical CT is the gold standard for detection of urolithiasis. However due to the risk of increased radiation exposure, its routine use in the follow-up of patients with recurrent nephrolithiasis may not be optimal. The goal of this study was to evaluate whether a low dose protocol CT scan can provide the same information as standard CT for the follow up of recurrent stone forming patients.

Methods: Sixty-two consecutive patients with suspected urolithiasis were investigated with unenhanced renal stone 16-MDCT with a tube current of 160 mA. Electronic “noise” was then introduced into the images to simulate levels of 130, 100, and 70 mA, corresponding to a 19%, 38% and 56% reduction in radiation dose. Three endourology fellowship trained urologists interpreted the original and simulated scans in a blinded manner. Films were reviewed for the number and location of stones. A score of 1 – 10 was used to rate the ease of image reading in the abdomen, bony pelvis and the level of confidence in diagnosis.

Results: Overall, 248 images were reviewed. Increasing difficulty was observed with the lowest dose CT when reviewing the bony pelvis area. The level of confidence in diagnosis did not significantly change and remained high at 9.6 – 10. All stones >2mm were detected in the urinary tract, including those within the bony pelvis.

Conclusions: A significant reduction in radiation dose may provide adequate diagnostic imaging for the follow-up of urolithiasis patients. Confirmation of these findings and the minimal required radiation dose needs to be determined.

Funding: Supported by a grant from GE Healthcare.

Introduction: Human renal studies suggest that certain calcium oxalate (CaOx) kidney stones develop attached to renal papillary sub-epithelial deposits of calcium phosphate, termed Randall’s plaques. Due to lack of inflammatory cells seen in these samples, some authors have proposed that these plaques are not associated with renal injury or inflammation. We hypothesize that the absence of injury and inflammation in association with these renal deposits indicates that they have merely become inactive and that the associated tissue injury has resolved. We developed and tested our hypothesis in a rat model of renal crystal deposition.

Methods: Male Sprague-Dawley rats were given hydroxyl-L-proline (HLP) mixed with chow. Rats in group 1 (Fed) continued on hydroxyl-L-proline for 63 days while rats in group 2 (Early) stopped taking HLP after 42 days. Urine was collected and analyzed once weekly for creatinine, calcium, oxalate, lactate dehydrogenase (LDH), 8-isoprostane (8-IP) and H2O2. Urinary pH and crystalluria were monitored. Rats were sacrificed on days 28, 42 and 63. Renal tissue was examined for crystal deposition and markers of inflammation osteopontin (OPN) and ED-1 (macrophage stain).

Results: All rats receiving HLP developed CaOx nephrolithiasis by day 42. Urinary excretion of LDH, 8-IP and H2O2, markers of stress and injury, increased significantly in all rats compared to baseline. Additionally, immunohistochemical staining for OPN (renal epithelial cells) and ED-1 (renal interstitium) was stronger in all rats compared to baseline (p<0.001). In the early HLP discontinuation group, significant decreases in urinary oxalate, 8-IP, H2O2, and urinary crystals were noted compared to urine of the fed group (p<0.01). Histologically, a statistically significant reduction (p<0.001) in crystal deposition, OPN, and ED-1 staining was noted in Early vs. Fed groups.

Conclusions: Administration of hyperoxaluria lead to CaOx crystal deposition in the kidneys with the development of inflammation and associated degradation in renal biology. Discontinuation of HLP caused a decrease in urinary excretion of oxalate and a reduction in CaOx crystal renal deposition. As a result, renal structure and function returned to normal with resolution of injury and inflammation. These results indicate that, over time, crystal deposition can be reversed, inflammation can be resolved, and renal structural changes can be restored. This suggests that the absence of inflammation and injury at any specific time does not indicate its prior non-existence.

Funding: RO1 DK065658-03S1 (BKC) and R01 DK065658-04 (SRK).
PODIUM 69
THE IMPACT OF LITHOTRIPTER BEAM SIZE ON STONE FRAGMENTATION
John Mancini¹, Walter Simmons², Michael Ferrandino¹, Dorit Zilberman¹, Michael Lipkin¹, Eliza Raymundo¹, Pei Zhong² and Glenn Preminger¹
¹DUMC, Durham, NC; ²Duke University, Durham, NC
(Presented By: John Mancini)

Introduction: There exists long-standing debate regarding the effect of lithotripter beam size (focal zone) on stone fragmentation during shock wave lithotripsy (SWL). We performed a beam size comparison to assess inherent variations when comparing different lithotripters.

Methods: A reflector insert was developed to modify the pressure and energy distribution in a Dornier HM-3 lithotripter at the same output settings without effecting the means for coupling and stone localization. The acoustic fields of the original and modified HM-3 lithotripter were characterized using a light spot hydrophone. Stone fragmentation tests were performed using BegoStone phantoms in vitro in a membrane holder and in vivo in a swine model.

Results: At 20 kV, the modified HM-3 produces a significantly higher peak positive pressure (87 MPa) with concomitantly reduced beam size (4 mm) compared to the original HM-3 (51 MPa and 8 mm, p<0.05). The total acoustic pulse energy of the two reflector configurations, however, is comparable (116 mJ vs. 122 mJ: modified vs. original). In vitro stone fragmentation results after 500 and 2,000 shocks are 40% and 75% for the modified and 58% and 85% for the original reflector. The corresponding values in vivo are 43% and 81%, and 70% and 91%, respectively. The differences in stone fragmentation efficiencies are all statistically significant (p < 0.05).

Conclusions: Under the same effective acoustic pulse energy, a lithotripter with a large beam size (or focal zone) produces better stone fragmentation in vitro and in vivo. These results suggest that efforts to increase the focal zone of second and third generation lithotripters should improve clinical results.

PODIUM 70
IMPROVED IN VIVO DETERMINATION OF URINARY STONE COMPOSITION USING DUAL ENERGY COMPUTED TOMOGRAPHY WITH ADVANCED POST-IMAGE ACQUISITION DATA PROCESSING
Dorit Zilberman, Michael Lipkin¹, Michael Ferrandino¹, Daniel Boll², David Albala¹ and Glenn Preminger¹
¹Urology Division, Duke University Medical Center, Durham, NC; ²Department of Radiology, Duke University Medical Center, Durham, NC
(Presented By: Dorit Zilberman)

Introduction: The characterization of urinary calculi using non-invasive methods has the potential to affect clinical management. CT remains the gold standard for diagnosis of urinary calculi, but has not reliably differentiated varying stone compositions. Dual Energy Multi-detector Tomography (DECT) has emerged as a technology to improve CT characterization of anatomic structures. This study aims to assess the ability of DECT with a novel post-image acquisition data processing technique to accurately discriminate between different types of urinary calculi in vivo and validate previous in vitro findings.

Methods: A total of seventeen patients who were to undergo ureteroscopy or percutaneous nephrolithotomy and who had clinical indication for pre-operative CT were identified. All patients underwent DECT evaluation with post-image acquisition data processing technique. Urinary calculi were harvested at the time of surgical intervention and subjected to infrared spectroscopy. The radiologist used post-image acquisition data processing to predict stone composition.

Results: Post-image acquisition processing allowed for identification of the main different chemical compositions of urinary calculi: brushite, calcium oxalate-calcium phosphate, struvite and uric acid. Statistical analysis demonstrated that this processing identified all stone compositions without obvious graphical overlap.

Conclusion: Dual-Energy multi-detector CT with post-processing techniques allows for accurate discrimination among the main different subtypes of urinary calculi in an in vitro model. The ability to better detect stone composition may have implications in determining the optimum clinical treatment modality for urinary calculi from non-invasive, pre-procedure radiological assessment.
PODIUM 71
A NEW ACOUSTIC LENS DESIGN FOR ELECTROMAGNETIC SHOCK WAVE LITHOTRIPTERS
John Mancini¹, Michael Ferrandino¹, Walter Simmons², Eliza Raymundo¹, Michael Lipkin¹, Dorit Zilberman¹, Pei Zhong² and Glenn Preminger¹
¹DUMC, Durham, NC; ²Duke University, Durham, NC
(Presented By: John Mancini)

Introduction: Recent studies suggest that third-generation electromagnetic (EM) shock wave lithotripters result in reduced stone fragmentation and may be less clinically effective than earlier generation electohydraulic (EH) lithotripters. A new acoustic lens for the Siemens Modularis (EM) has been developed to produce an idealized pressure waveform with low peak pressure and broad focal zone, that more closely mimics the profile of earlier generation EH lithotripters.

Methods: A new acoustic lens for the Modularis lithotripter was developed that produces an idealized pressure waveform while simultaneously enlarging the beam size produced by the original acoustic lens. Stone fragmentation studies were performed using BegoStone phantoms both in vitro in a ureteral model and in vivo in a swine model.

Results: At acoustic pulse energy of 42 mJ, the Modularis with the new lens produced a peak positive pressure of 41 MPa, compared to 47 MPa by the original lens. In addition, the -6 dB focal zone is enlarged by 43%. After 2000 shocks, in vitro stone fragmentation produced by the original and new lenses are 100% and 99% at the lithotripter focus, and 49.7±15.0% and 75.3±8.7% (p < 0.001) at 10 mm off axis. The corresponding values in vivo (with stone initially placed at focus) are 63.4±17.4% for the original lens and 83.3±8.5% for the new lens (p < 0.01).

Conclusion: Using the new acoustic lens design, the Modularis lithotripter can produce an enlarged acoustic field with lower peak pressure and broader focal zone, leading to significantly improved stone fragmentation. This new technology could potentially be retrofitted to existing EM lithotripters, to improve the clinical effectiveness of our current devices.

PODIUM 72
COMPARISON OF THE INCIDENCE AND COMPOSITION OF UPPER TRACT AND LOWER TRACT CALCULI IN PATIENTS WHO HAVE UNDERGONE URINARY DIVERSION
Hernan O. Altamar, Erica H. Lambert, Michael S. Cookson, Joseph A. Smith, S. Duke Herrell and Nicole L. Miller
Vanderbilt University Medical Center, Nashville, TN
(Presented By: Hernan O. Altamar)

Introduction and Objectives: Patients who have undergone urinary diversion including ileal conduit, continent diversions and augmentation cystoplasty can develop calculi. However, the prevalence and stone composition is underreported in the urologic literature. We evaluated the incidence of procedures performed for stones in patients who have undergone urinary diversions, as well as the differences in stone composition between the upper and lower urinary tract.

Methods: Between January 1998 and March 2009, we performed a retrospective analysis of all patients who have undergone urinary diversion, including continent cutaneous diversion, neobladder, augmentation cystoplasty, and ileal conduit, which then had subsequent procedures for stone disease. Stone composition and location for each patient was recorded and compared between the groups.

Results: 1,285 patients underwent neobladder, continent cutaneous and ileal conduit diversion at our institution. A total of 35 patients underwent 43 stone procedures following urinary diversion. 9 additional patients who underwent augmentation cystoplasty underwent 12 stone procedures. There was a significant increase in patients requiring procedures for stone formation in those who underwent a continent diversion (7.3%) as opposed to an ileal conduit (1.5%) [p<0.001]. 41 of the stone procedures (74.5%) were performed on patients with continent diversions, in which the majority were found in the reservoir. In the entire cohort, 52% of the stones were metabolic, 38% were infectious and 10% were mixed. Of the 25 procedures performed for upper tract stones, 14 (56%) were metabolic. In patients with continent urinary diversions with lower tract stones, 45% were metabolic stones.

Conclusions: Patients with continent urinary diversions are more likely to require a treatment for stones when compared to other types of urinary diversion. Stones formed in the setting of urinary diversion have traditionally been thought to be infectious in nature. However, our data demonstrate that, as a group, patients with urinary diversion are more likely to form metabolic stones. Upper tract stones in all types of urinary diversion are more often metabolic. It is only in the patients with continent reservoir diversions that we observed slight predominance of infectious over metabolic stones, at 55% and 45%, respectively. These findings suggest the importance of performing an appropriate metabolic evaluation and regular imaging in patients who form stones following urinary diversion.
PODIUM 73
EFFECTIVENESS OF TUBELESS AND STENTLESS PERCUTANEOUS NEPHROSTOLITHOTOMY FOR COMPLEX RENAL CALCULI
Reza Mehrazin, Michael Alemán, Jamin Brahmbhatt, Anthony Patterson and Robert Wake
University of Tennessee Health Science Center at Memphis
(Presented By: Reza Mehrazin)

Introduction: Percutaneous nephrolithotomy (PCNL) is a well-accepted technique for removal of large or complex renal calculi. We had previously presented and published our experience with PCNL without nephrostomy tube drainage for large renal calculi. We began performing PCNL with neither a nephrostomy tube nor a ureteral stent (“tubeless, stentless”) at our institution in January, 2008. We reviewed our experience with tubeless, stentless PCNL to determine its safety and efficacy for complex renal calculi.

Methods: A retrospective review of all PCNLs performed for complex renal calculi (partial/complete staghorn, and infundibular stenosis/calyceal diverticulum) between January 2008 and July 2009 was performed. Only those patients who underwent both tubeless and stentless PCNL were included in the study. None of the patients in the cohort had a stent or nephrostomy tube prior or after the surgery. Imaging was obtained at the first outpatient follow-up visit. Outcomes including length of hospitalization, complications, transfusion requirements, and stone-free rates were analyzed. “Stone-free” was defined as negative imaging (KUB/RUS, CT, or IVP).

Results: 11 tubeless, stentless PCNLs were performed for complex renal calculi (8 total/partial staghorn, and 3 infundibular stenosis/calyceal diverticulum). Mean age was 56.1 ± 7.3 years. Median length of hospital stay was 18 hours. Mean preoperative and postoperative hematocrit was 41.7 ± 4.5 and 38.2 ± 4.2. Single procedure stone-free rate was 72.7 % and the two procedure stone-free rate was 90.9%.

Conclusion: Tubeless, stentless PCNL is a safe and effective procedure and can be performed in patients with complex renal calculi. Stone-free rate, length of hospital stay, and complication rates are similar to those reported in the literature for conventional PCNL.

PODIUM 74
SAME-SESSION BILATERAL URETEROSCOPY IS SAFE AND EFFICACIOUS
Kenneth Ogan¹, Charles Chang² and John Pattaras¹
¹Emory University, Atlanta, GA; ²The University of Chicago, Chicago, IL
(Presented By: Kenneth Ogan)

Introduction and Objectives: Bilateral ureteroscopy may be performed in one sitting, thus obviating the need for multiple procedures and thereby potentially reducing the risks of undergoing additional surgeries and healthcare costs. Our objective was to analyze our experience with same-session bilateral ureteroscopy (SSBU) to determine its safety and efficacy.

Methods: In this retrospective study over a 9-year period (from May 2000 through August 2009) at Emory University Hospital, a series of 1,477 consecutive ureteroscopic procedures were performed. Of these cases, 77 (5.2%) were performed as SSBU, which constituted our study cohort. Bilateral procedures were performed for urolithiasis (55), urothelial carcinoma (10), ureteral stricture (2), and other (10). Patients were followed up at least 1 month postoperatively to evaluate for procedural success and assess for any perioperative complications.

Results: The mean age of our patients was 50.2 years, with 37 males and 32 females. Multiple procedures were performed in 6 patients. SSBU could be accomplished in 76/77 (98.7%) of patients. At the conclusion of the case, ureteral stents were placed bilaterally (45), unilaterally (12) or not at all (20). Intraoperative and postoperative (>1 mo) bilateral stone-free rates were 86% and 67%, respectively. The mean change in serum creatinine postoperatively was 0.03 mg/dL (range -0.9 to +0.8), with no patients developing acute postoperative azotemia. Postoperative complications (10.4%) included: pain necessitating readmission to the hospital (2) or an ER visit (2), pyelonephritis / urinary tract infection (2), urinary retention (1), and urosepsis / death (1).

Conclusions: Same-session bilateral ureteroscopy is efficacious and safe for the evaluation and treatment of upper tract pathologies. The avoidance of multiple staged procedures may reduce overall morbidity and healthcare costs.
PODIUM 75
AN INNOVATIVE USE OF THE JACKSON SPINAL TABLE FOR COMPLEX PERCUTANEOUS NEPHROLITHOTOMY PROCEDURES
Brian Richardson, Gordon Fifer, Matthew Raynor, Gabriella Pridjian and Raju Thomas
Tulane University Health Sciences Center
(Presented By: Raju Thomas)
Purpose: Performing a percutaneous nephrolithotomy (PCNL) often requires positioning the patient in the prone position for prolonged periods of time. Select patients are unable to tolerate this positioning secondary to cardiopulmonary compromise, abdominal compression, and pregnancy.
Materials and Methods: The Jackson Spinal table (Mizuho OSI; Tokyo, Japan) has been used in complex patients including morbid obesity, and including a 32 week gravid uterus who had been unable to tolerate conservative and less invasive therapy for two large (1 cm) obstructing renal pelvic calculi. This table greatly enhances C-Arm capabilities for superior imaging in complex and challenging cases.
Results: A PCNL was performed without complication and rendered the patient stone free. Fetal heart monitoring in this pregnant patient was performed during the course of the procedure by the Obstetrician team. Radiation exposure was limited to 25 seconds total. Total anesthesia time was 67 minutes. Total operative time was 50 minutes. Similar adjustments were made in other patients with complex renal calculi presentations.
Conclusions: The Jackson Spinal table offers an alternative and many advantages including limited radiation exposure, decreased operative and anesthesia time, and minimal abdominal compression when performing a percutaneous nephrolithotomy in selected patients unable to tolerate traditional prone positioning. Further indications, besides pregnancy, would include patients with existing cardiopulmonary compromise and morbid obesity.

PODIUM 76
ACCESS FOR PERCUTANEOUS NEPHROLITHOTOMY BY UROLOGISTS: SAFE AND EFFECTIVE
Jason Poteet, Dustin Hyatt, Leah Chiles, Rowena DeSouza and Dennis Venable
LSU-HSC Shreveport, LA
(Presented By: Jason Poteet)
Introduction and Objectives: Access for PCNL surgery is critical to successful removal of stone burden and is often performed by a specialist other than an urologist. However, in many regions there is limited availability of such personnel. We reviewed the complication rates related to PCNL access when performed at a teaching hospital to establish that access for PCNL may be safely taught to and performed by urology residents. Chief urology residents across the nation were also anonymously surveyed to better understand the current trends and dynamics regarding PCNL access in teaching institutions.
Materials and Methods: A retrospective chart review was performed of all PCNL surgeries performed at our institution from 1995 to 2009 for any complications related to surgery. Patients with access gained at outside institutions or not attempted at the time of surgery by residents were excluded. The complication rate was compared to those of the Society of Interventional Radiologists. An eight-question survey was also sent by email to all current urology chief residents regarding their experience with PCNL access during residency.
Results: A total of 290 patients underwent PCNL surgery with 338 separate access sites gained at the time of surgery under the supervision of nine teaching staff. Access was successfully gained in all cases at the time of surgery. Major complications included: transfusion in 20 patients (5.9%), sepsis in 2 patients (6%), pseudoaneurysm necessitating intervention in 2 patients (6%), hydrothorax in 2 patients (6%), pneumothorax in 1 patient (3%), UPJ disruption in 1 patient (3%) and 1 death after surgery (3%). Minor complications included: UTI in 5 patients (1.5%) and collecting system injuries in 6 patients (1.8%) necessitating placement of ureteral stent. Our survey of residents demonstrated that over 65% did not routinely gain access for PCNL surgery at their institution. However, 91% who did not get instruction on PCNL access felt it would be a valuable addition to their training.

Conclusion: Our results show that access for PCNL surgery can be safely and successfully obtained by GU residents under the supervision of trained staff at the time of surgery. We feel that access for PCNL surgery is a valuable tool that should be in the armamentarium of all urologic surgeons upon leaving an accredited urology training program.

PODIUM 77
A COMPARISON OF THE USE OF INTRA-OPERATIVE FUROSEMIDE ON STONE CLEARANCE RATES WITH SHOCK WAVE LITHOTRIPSY
John Pattaras, Thomas Middour, Brad Figler and Kenneth Ogan
Emory University, Atlanta, GA
(Presented By: John Pattaras)

Objective: To evaluate the effect of intravenous injection of the diuretic furosemide during shockwave lithotripsy of renal and ureteral calculi.

Patients and Methods: Patients with renal and ureteral calculi treated with shockwave lithotripsy (SWL) at our institution from 2005 to present were evaluated for stone passage. By surgeon preference, patients received at least one liter of fluids followed by furosemide 10mg IV at the immediate completion of SWL. Patients were scheduled for follow up at 2 weeks and 2 months for exam, imaging (KUB, CT or US), and urine analysis. A total of 115 patients were deemed evaluable if they were stone-free at first visit or compliant with at least two follow up visits within the 3 month post-operative period. Success was defined as stone-free imaging, symptom-free, and clear urine analysis. Failure was defined as requiring further surgical intervention or persistence of calculi. A total of 57 evaluable patients were given furosemide and while 58 were not given diuretics. A retrospective analysis as well as statistical review was performed.

Results: Mean maximum and minimum stone diameter, age, and BMI were 8.8 and 9.2, 5.7 and 6.9, 47.5 and 48.3, and 28.8 and 28.2 for furosemide (F) and non-furosemide (NF) cases, respectively. The stone-clearance rate was 41/57 (71.9 %) for F patients and 23/58 (39.7%) for NF patients(p=0.007). For renal stones, the success rate was 19/30 (63.3%) for the F group and 21/48 (43.8%) for NF group. For ureteral stones, the success rate was 22/27 (81.5%) for the F group while only 2/10 (20.0%) for NF patients. For cases with greater than 30 BMI, clearance of stones was higher for F patients (81.3% and 38.9%). No major immediate postoperative complications occurred with either group. Minor complications included only pain and hematuria and occurred at a similar rate between groups. Secondary interventions were necessary in 12/57 (21.1%) and 26/58 (44.8%) patients within the first year (p=0.0096).

Conclusions: Vigorous hydration and the addition of IV furosemide given at the time of SWL improved stone-free outcomes and decreased need for secondary interventions significantly for both renal and ureteral stones. Trends towards success were even evident in patients with greater BMI.

PODIUM 78
CLINICAL CHARACTERISTICS OF ELDERLY PATIENTS UNDERGOING SURGERY FOR UROLITHIASIS
Kelvin Moses¹, Daniel Saint-Elie², Brian Kapp², John Petros², Muta Issa² and Chad Ritenour²
¹Emory University, Atlanta, GA; ²Atlanta VA Medical Center and Emory University, Atlanta, GA
(Presented By: Kelvin Moses)

Introduction and Objectives: Urolithiasis is a significant source of morbidity, particularly in the Southeast. The etiology and treatment of stone disease has been thoroughly investigated, though not particularly in the elderly population. We retrospectively analyzed our elderly patients who have undergone surgical treatment for urolithiasis to determine the profile of this unique population.

Methods: We identified all patients who had a procedure for urolithiasis at the Atlanta VA Medical Center from January 2004 to August 2009. Patients who were ≥70 years old at the time of diagnosis and treatment were included for analysis. Data collected included patient age, race, type and number of procedures performed, stone composition, renal function as determined by creatinine level as well as by Cockcroft-Gault and modified diet in renal disease (MDRD) equations, BMI, and ASA score.
**Results:** 51 patients were included for analysis. All were male with a median follow-up of 21.7 mo. Median age at treatment was 77.6 y, and a total of 1.31 procedures were performed per patient. Surgical interventions included 21 ESWLs, 19 ureteroscopies, 15 percutaneous nephrostolithotomies, and 12 ureteral stent placements. Two perioperative complications were observed, 1 in the ESWL group (perinephric hematoma), and 1 in the PCNL group (retroperitoneal hematoma). Median ASA score was 3. There were no significant differences between African-American and non-AA patients, including age, ASA score, BMI, stone size, and pre- and post-operative renal function. First time stone formers had significantly smaller median stone size (8.5 mm vs 10.0 mm, p = 0.03), lower baseline creatinine (0.95 mg/dl vs 1.10 mg/dl, p < 0.001), and better preoperative renal function (87.2 ml/min vs 66.0 ml/min, p = 0.002 by MDRD, and 74.2 ml/min vs 58.2 ml/min, p = 0.02 by Cockroft–Gault). Of the 25 patients with stone analysis, 72% were primarily calcium oxalate monohydrate, 8% primarily calcium oxalate dihydrate, 8% pure uric acid, 8% primarily calcium phosphate, and 4% struvite.

**Conclusions:** Despite a peak incidence in the 4th to 6th decade, a small number of patients will present with urolithiasis beyond the 7th decade of life. Our results suggest that minimally invasive treatment of these patients is safe, though overall health status must be taken into consideration. Most patients in our study presented with calcium oxalate stones suggesting a perturbation in calcium or oxalate metabolism. However, changes in total body water and hydration cannot be ignored as a possible etiology. Further research of renal physiology in elderly patients may help identify risk factors for initial urolithiasis in this population.

**PODIUM 79**

**VARIATION IN SURGICAL MANAGEMENT OF URINARY LITHIASIS IN THE UNITED STATES**

Charles Scales¹, Tracey Krupski², Alex Smith³, Lesley Curtis⁴, Margaret Pearle⁵, Brian Matlaga⁶, Yair Lotan⁷, Christopher Saigal⁷, Mark Litwin⁷ and Glenn Preminger⁸

¹Duke University Medical Center, Durham, NC; ²University of Virginia, Charlottesville, VA; ³RAND, Los Angeles, CA; ⁴Duke Clinical Research Institute, Durham, NC; ⁵UT Southwestern Medical Center, Dallas, TX; ⁶Johns Hopkins University, Baltimore, MD; ⁷UCLA Medical Center, Los Angeles, CA

(Presented By: Charles Scales)

**Introduction and Objectives:** Shock wave lithotripsy (SWL) and ureterorenoscopy (URS) are both highly effective treatments for urinary lithiasis, and are recommended as first line therapy for appropriately selected calculi. While stone size and location are likely primary determinants of therapy, little is known about other factors which may be associated with treatment selection. Our objective was to identify patient, provider and practice setting characteristics associated with selection of ureterorenoscopy or SWL.

**Methods:** We used the Medicare 5% sample to identify a cohort of beneficiaries undergoing SWL or URS (with or without stone fragmentation) of renal or ureteral calculi. Beneficiaries had an incident stone encounter from 1997 – 2007, with no claim for stone management 365 days prior to the index encounter. Patient and provider characteristics were identified from Medicare files. Practice setting characteristics were linked to claims using data from the American Hospital Association and the Area Resource File from the United States Census Bureau. A multivariable regression model identified factors associated with selection of ureterorenoscopy or SWL.

**Results:** The cohort comprised 9358 beneficiaries who underwent an initial procedure, of whom 61% were male and 92% were white. Fifty-nine percent of beneficiaries were aged between 66 – 74 years. SWL was used in 5208 (56%) beneficiaries, while URS (with or without fragmentation) was used in 4150 (44%). Females were less likely than males to undergo URS (OR 0.844, p = 0.006). Providers who more recently completed residency training employed URS more often (p = 0.023). Beneficiaries undergoing treatment by high volume URS providers were more likely to undergo URS (OR 4.71, p < 0.001). Likewise, beneficiaries undergoing treatment at high volume URS facilities were more likely to undergo URS (OR 1.44, p < 0.001). Similar trends were noted for high volume SWL providers and facilities. Age, race, income, and facility ownership were not associated with URS or SWL use.

**Conclusions:** Non-clinical factors are associated with selection of URS or SWL for stone management, which may reflect provider preferences or experience rather than optimal application of each technology. Further investigation is required to understand outcomes of these practice patterns, and identify the impact on quality of care.

**Funding:** National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health.
PODIUM 80
FACTORS AFFECTING PATIENT RADIATION EXPOSURE DURING PERCUTANEOUS NEPHROLITHOTOMY
John Mancini, Michael Ferrandino, Eliza Raymundo, Dorit Zilberman, Michael Lipkin, Lionel Banez, Michael Miller, Jr. and Glenn Preminger
DUMC, Durham, NC
(Presented By: John Mancini)

Introduction: Recent studies suggest that many patients receive excessive radiation during the diagnosis and management of nephrolithiasis. Yet, there has been little research focused on techniques to minimize radiation exposure during stone removal. Herein we investigate the patient and stone characteristics that may contribute to increased radiation exposure during percutaneous nephrolithotomy.

Material and Methods: A retrospective review of 61 patients who underwent PNL over the past two years was performed. The effective radiation dose was calculated using accepted conversion tables and analyzed with respect to specific patient, stone, and procedural characteristics. Multivariable linear regression was used to assess the association between effective radiation dose and the following covariates: age, body mass index (BMI), stone size, stone location and configuration, estimated blood loss (EBL), and number of percutaneous access tracts.

Results: A majority of patients were female (59%) with a mean age of 51.8 years. Median BMI was 30.5 kg/m² (16.3 – 59.6). Median stone burden was 4.13 cm², with 41% and 50% of patients having branched stones and stones that crossed an infundibulum, respectively. Increased BMI (p=0.005) and greater number of percutaneous access tracts (p=0.045) were significantly associated with increased effective radiation dose. Specifically, obese patients (BMI≥30 kg/m²) had a two-fold increase in mean-adjusted effective radiation dose, when compared to non-obese patients (9.91 vs. 5.08 mSv, p=0.012). Stone specific parameters (burden, location, configuration, and composition), location of percutaneous access, and EBL were not associated with effective radiation dose.

Conclusion: Patients with higher BMI and multiple nephrostomy access tracts are at risk for increased radiation exposure during PNL. Since radiographic imaging is inseparable from long-term stone management, urologists must seek alternative imaging strategies to minimize radiation exposure, especially during stone removal procedures.

PODIUM 81
IN VITRO ASSESSMENT OF FRAGMENTATION AND RETROPULSION IN A NEW PNEUMATIC LITHOTRIPSY DEVICE
Eliza Raymundo¹, John Mancini¹, W. Neal Simmons², Michael Ferrandino¹, Michael Lipkin¹, Dorit Zilberman¹, Pei Zhong² and Glenn Preminger¹
¹Duke University Medical Center, Durham, NC; ²Mechanical Engineering and Materials Science, Duke University, Durham, NC
(Presented By: Eliza Raymundo)

Objectives: The LMA Stonebreaker, a new pneumatic lithotripter, reports advantages of portability, decreased cost, rapid fragmentation, and decreased retropulsion compared to currently utilized devices. An in vitro model was designed to compare the fragmentation and retropulsion characteristics of the LMA Stonebreaker (Cook Urological) to the established Lithoclast (Boston Scientific).

Materials and Methods: The working channel of an offset ureteroscope was used to support the 1mm probes for both the Stonebreaker and the Lithoclast. A hands-free underwater set-up was employed, allowing introduction of the ureteroscope into a tank filled with water. The probe was projected 3 mm from the end of the scope against a non-frangible steel mass (21.01 g) that was buttressed against polyurethane tissue-mimicking material. Imaging was recorded using high-speed photography (Phantom v7.3 camera) at speeds of 10,000 frames/second to capture impact dynamics of the probe and mass. Retropulsion was determined by measuring the distance the mass was displaced. Fragmentation efficiency was assessed by measuring the elapsed time and number of shots required to break Bego Stone phantoms (0.5x1cm) into < 4mm fragments. The Lithoclast was evaluated in both single fire and continuous fire modes. Mean and standard deviations were computed for all groups and statistical analysis was performed (student’s t-test, Kruskall-Wallis).

Results: Retropulsion produced by the Stonebreaker was significantly less with a distance of 1.3± 0.1 mm compared to 4.6 ± 0.95mm for the Lithoclast (p=0.001). Time to fragmentation was not significantly different between groups, with the Stonebreaker, Lithoclast single fire and continuous fire requiring a mean of 178 ± 6, 130 ± 23 and 124 ± 29 seconds, respectively (p=0.09). The number of shots was higher for the Lithoclast on continuous fire mode with mean of 573.5 ± 154.8 shots compared to 87.7 ± 19.4 and 64.7 ± 8.4 shots respectively for the single fire mode and the Stonebreaker (p-value 0.0046).

Conclusions: The Stonebreaker produces significantly less retropulsion compared to the Lithoclast. Though time to fragmentation was higher for the Stonebreaker, this was not statistically significant and overall, the fragmentation efficiency of the Stonebreaker was comparable. Based on these results, the new LMA Stonebreaker is a viable option for minimally-invasive treatment of urinary stones.
WHAT FACTORS CAN BETTER PREDICT THE INCIDENCE OF UROSEPSIS FOLLOWING AN ACUTE STONE EPISODE?

John Mancini, Eliza Raymundo, Charles Scales, Jr., Michael Ferrandino, Michael Lipkin, Dorit Zilberman, Charles Gerardo and Glenn Preminger
DUMC, Durham, NC
(Presented By: John Mancini)

Introduction: Sepsis from an obstructing stone is a relatively rare, but potentially lethal consequence of ureteral stones. Little is known about specific factors which are associated with development of urosepsis in patients who are initially deemed candidates for conservative management of acute urolithiasis. Our objective was to identify clinical factors associated with the development of urosepsis after an initial trial of conservative therapy.

Materials and Methods: A chart review of the past 3 years identified 1,402 patients seen in the Emergency Department (ED) with urolithiasis, of which 76 were admitted to the hospital with acute symptoms. Of the patients placed on conservative therapy, 9 returned to the ED with urosepsis within a two week period. Upon review of inpatient records over the past 6 years, an additional 8 patients were identified, who had been admitted with urosepsis after being treated in the ED. For these 17 patients, a matched case-control design was used to compare the septic patients with two age, sex and race matched control subjects. Univariate analysis with logistic regression was used to determine the association of specific factors with urosepsis: recent history of fever, temperature, white blood (WBC) count, and urinalysis variables (leukocyte esterase, and nitrite positivity). A Bonferroni correction (adjusted alpha=0.01) was used to account for multiple comparisons.

Results: 0.68% of patients initially treated with conservative therapy, returned to the ED in urosepsis. The median age was 48 years and the majority of patients were female (77%). The median time for return to the ED was 2 days (range 1 – 14). When compared to the matched control group, the median WBC count was 12.2 vs. 9.0 x 10^9 cells per liter (OR=1.18, CI=0.943–1.475, p=0.148). The presence of subjective fever was not significantly associated (OR=3.18, CI=0.718−14.091, p=0.127), however temperature was significantly higher in the urosepsis patients, median 37.0° vs. 36.2°C (OR=3.81, CI=1.484−9.825, p=0.005). A temperature > 37.5°C was associated with an 18-fold increase in the risk of developing urosepsis (OR=18, CI=1.95−166.44, p=0.01). Neither the presence of leukocyte esterase or nitrites was associated with urosepsis.

Conclusion: The development of urosepsis from ureteral calculi is rare. Our study suggests that several reported predictors of infection were not associated with urosepsis. However, elevated temperature, particularly greater than 37.5°C is associated with a greater risk of urosepsis: even when patients are afebrile. Further evaluation in a larger cohort, possibly through a multi-centered approach, is required to confirm these findings.
11:30 a.m. – 12:00 p.m. **BALLenger Lecture (In Section): Advances in the Design and Clinical Implementation of Cancer Vaccines**
Invited Speaker: Johannes W.G. Vieweg, MD
Gainesville, FL

12:00 p.m. – 12:15 p.m. **Address of the AUA Secretary-Elect**
AUA Secretary-Elect: Glenn M. Preminger, MD
Durham, NC

12:15 p.m. – 12:35 p.m. **Address of the AUA President**
AUA President: Anton J. Bueschen, MD
Atlanta, GA

12:45 p.m. – 1:45 p.m. **Industry Sponsored Luncheon**
"Advances in Pharmacologic Treatment of Benign Prostatic Hyperplasia (BPH)"
Location: Poinciana 1
Supported by an Educational Grant from Watson
Coordinated by MedReviews, LLC
Speakers:
Steven A. Kaplan, MD
Professor of Urology
Chief, Institute of Bladder and Prostate Health
Weill Cornell Medical College
New York, New York
Claus G. Roehrborn, MD, FACS
E.E. Fogelson and Greef Garson Fogelson Distinguished Chair in Urology
University of Texas
Southwestern Medical School
Dallas, Texas

12:45 p.m. – 1:45 p.m. **Industry Sponsored Luncheon**
"Recent Discoveries in Metastatic Prostate Cancer – The Essential Role of the RANK Ligand Pathway"
Location: Poinciana 2
Speaker: Neal Shore, MD, FACS
Grand Strand Urology
Myrtle Beach, SC

2:00 p.m. – 2:20 p.m. **Urologic Needs of Patients Suffering from Spinal Cord Injuries: Unique Opportunities for Collaborative Research**
Invited Speaker: Marc Buoniconti
President, Buoniconti Fund to Cure Paralysis
Miami, FL

2:20 p.m. – 3:20 p.m. **Session 11: Neurourology / Urodynamics / Incontinence Podium**
Moderators:
Bobbilynn H. Lee, MD, MHA, FACS, FAAP
Augusta, GA
Charles M. Lynne, MD
Miami, FL

2:20 p.m. #83 **Sacral Neuromodulation in Patients with Voiding Dysfunction and Concomitant Gastrointestinal Dysfunction**
Allen Haraway, Mark Runnels, Thomas Abell and William Duncan
Jackson, MS
(Presented By: Allen Haraway)
2:25 p.m.  #84  THE IMPACT OF AN IN SITU UTERUS ON APICAL OUTCOMES FOLLOWING VAGINAL PROLAPSE REPAIR EMPLOYING TRANSVAGINAL MESH SYSTEMS
Joe Mobley¹, Ryan Pickens¹, Adam Stewart¹, Pleas Copas² and Fred Klein¹
¹University of Tennessee Medical Center, Knoxville, TN, Division of Urology, Department of Surgery; ²University of Tennessee Medical Center, Knoxville, TN, Division of Urogynecology, Department of Surgery
(Presented By: Joe Mobley)

2:30 p.m.  #85  MODIFIED LATZKO PROCEDURE (PARTIAL COLPOCESIS) FOR VESICOVAGINAL FISTULA: TECHNIQUE AND OUTCOMES
Denise Chow¹, Ahmet Bedestani², Ralph Chesson² and Jack Winters²
¹Louisiana State University/Ochsner Clinic Foundation, New Orleans, LA; ²Louisiana State University, New Orleans, LA
(Presented By: Denise Chow)

2:35 p.m.  #86  INDICATIONS, OUTCOMES, AND COMPLICATIONS OF SACRAL NERVE STIMULATION FOR THE TREATMENT OF MALE VOIDING DYSFUNCTION
Joe Mobley, John Beddies, Hardin Brent, Wes White, Regula Doggweiler and Frederick Klein
University of Tennessee Medical Center, Knoxville, TN, Division of Urology, Department of Surgery
(Presented By: Joe Mobley)

2:40 p.m.  #87  WHAT IS THE PREDICTIVE VALUE OF URODYNAMICS WHEN COMPARED TO CLINICAL HISTORY AND VALIDATED INSTRUMENTS?
Daniel Caruso¹, Prashanth Kanagarajah², Ross Krashow¹, Brian Cohen¹ and Angelo Gousse¹
¹University of Miami-Miller School of Medicine, Miami, FL
(Presented By: Prashanth Kanagarajah)

2:45 p.m.  #88  PHYSICAL SIGNS OF ASYMMETRY AS A GUIDE TO SUCCESSFUL INTERSTIM THERAPY
Brad Figler, Nedra Hood, Joy Butterworth and Niall Galloway
Emory University, Atlanta, GA
(Presented By: Brad Figler)

2:50 p.m.  #89  CORRELATION OF BLADDER NECK LOCATION ON CYSTOGRAM PREDICTS EARLY RETURN OF CONTINENCE FOLLOWING ROBOTIC RADICAL PROSTATECTOMY
Ugur Boylu, Michael Pinsky, Brian Richardson, Raju Thomas and Benjamin Lee
Department of Urology, Tulane University School of Medicine, New Orleans, LA
(Presented By: Ugur Boylu)

2:55 p.m.  #90  CAN REPEAT INJECTIONS OF BOTULINUM TOXIN TYPE-A PRODUCE SUSTAINED, REPRODUCIBLE RELIEF IN SYMPTOMS FOR REFRACTORY IDIOAPHTIC OVERACTIVE BLADDER PATIENTS?
Angelo Gousse¹, Prashanth Kanagarajah², Rajinikanth Ayyathurai¹ and Daniel Caruso¹
¹University of Miami-Miller School of Medicine, Miami, FL
(Presented By: Prashanth Kanagarajah)

3:00 p.m.  #91  6 MONTHS PROSPECTIVE EVALUATION ON MINIARC™ SINGLE-INCISION MINIMALLY INVASIVE SLING FOR THE TREATMENT OF STRESS URINARY INCONTINENCE
Michael Kennelly¹, Stewart Pringle², Douglas V. Drie³, Cristopher Klingele⁴, James Presthus⁵ and Dirk De Ridder⁶
¹McKay Department of Urology, Charlotte, NC; ²Southern General Hospital, Glasgow; ³Michigan Affiliated Physicians, Grand Rapids, MI; ⁴Mayo Clinic & Medical College, Rochester, MN; ⁵Minnesota Gynecology & Surgery, Edina, MN; ⁶University Hospital K.U. Leuven, Leuven, Belgium
(Presented By: Michael Kennelly)
PODIUM 83
SACRAL NEUROMODULATION IN PATIENTS WITH VOIDING DYSFUNCTION AND CONCOMITANT GASTROINTESTINAL DYSFUNCTION
Allen Haraway, Mark Runnels, Thomas Abell and William Duncan
Jackson, MS
(Presented By: Allen Haraway)

Introduction: Neuromodulation of the sacral nerves has shown excellent results in treating patients with voiding dysfunction refractory to conservative therapy. It is known that patients with gastric motor disorders often have co-existing abnormalities of the genitourinary system. Through a validated questionnaire, we report the symptom scores before and after the placement of a sacral nerve stimulator (SNS) for voiding dysfunction, quality of life, and constipation in a unique group of patients with gastric motility disorders.

Materials and Methods: A validated questionnaire was designed to assess voiding dysfunction, quality of life, and constipation in patients that had both a gastroesophageal stimulator and SNS. Patients answered questions relating to voiding dysfunction (i.e. difficulty voiding, trouble starting urinary stream, urgency, incontinence, urinary retention, frequency, and number of pads) on a scale of 0 (none) to 4 (all of the time). Quality of life was characterized on a scale from −3 (very unhappy) to +3 (very happy).

Results: The questionnaire was completed and returned by a total of 36 patients. One patient did not complete the questionnaire and was not included in the study. There were a total of 34 females and 1 male. Ages ranged from 19 – 76. The scores were analyzed as continuous variables and a two-tailed, paired t-test was used for calculating significance. Mean voiding dysfunction scores improved from 8.1+/− 3.6 before treatment to 2.6 +/− 3.1 after treatment (p<0.0001). Mean quality of life scores improved from −2.29 +/− 1.53 before treatment to 1.58+/− 1.59 after treatment (p<0.0001). Mean constipation scores improved from 4.0+/−1.8 before treatment to 2.2 +/−1.4 after treatment (p<0.0001). Three patients showed no change in voiding dysfunction and one patient reported worsening of symptoms. All patients except one had improvement in quality of life after the placement of the SNS.

Conclusion: We report the results of voiding dysfunction and quality of life in patients with gastric motor disorders after the placement of a sacral nerve stimulator. Both voiding dysfunction and quality of life were significantly improved after the placement of a SNS. Constipation was also improved in these patients. Sacral nerve stimulation appears to improve voiding dysfunction as well as concomitant gastrointestinal motility dysfunction.

PODIUM 84
THE IMPACT OF AN IN SITU UTERUS ON APICAL OUTCOMES FOLLOWING VAGINAL PROLAPSE REPAIR EMPLOYING TRANSVAGINAL MESH SYSTEMS
Joe Mobley¹, Ryan Pickens¹, Adam Stewart¹, Pleas Copas² and Fred Klein¹
¹University of Tennessee Medical Center, Knoxville, TN, Division of Urology, Department of Surgery; ²University of Tennessee Medical Center, Knoxville, TN, Division of Urogynecology, Department of Surgery
(Presented By: Joe Mobley)

Introduction and Objectives: Urologists increasingly treat symptomatic vaginal prolapse with the assistance of mesh repair systems. Despite wider acceptance as a surgical tool, important questions persist regarding long-term outcomes, complications and appropriate patient selection. One such question involves the adequacy of these systems in addressing apical prolapse. Given this, we present our data regarding outcomes of the vaginal apex in a large series of patients treated in this manner.

Methods: A retrospective study of female patients who underwent vaginal prolapse repair utilizing the Gynecare PROLIFT™ system was performed. Patients underwent physical examination and demographic data including age, parity, BMI, and prior surgical procedures were recorded. The grade of anterior, apical, and posterior prolapse was noted pre and postoperatively employing the Baden-Walker classification. Outcomes of the vaginal apex were noted and the database was investigated for predictors of recurrence. Chi-squared and multivariate logistic regression analysis was performed.

Results: From June 2005 to July 2006, 142 female patients with a mean age of 60.5 years (range 34 – 85 years) underwent vaginal prolapse repair utilizing the PROLIFT™ system. 122 patients
exhibited some degree of apical prolapse in association with concomitant anterior and/or posterior prolapse. Grades 1, 2, 3 and 4 apical prolapse were noted preoperatively in 23, 31, 58 and 10 patients respectively. 72 patients had prior hysterectomy and 4 patients underwent concomitant hysterectomy. At a mean follow-up of 24.9 months (range 6 – 33 months), 13 (11%) and 3 (2%) patients exhibited grade 1 and grade 2 recurrences, respectively. 15 of 16 (94%) recurrences occurred in patients with an in situ uterus. All 3 patients with grade 2 recurrence exhibited anterior and posterior high grade prolapse preoperatively and all had an in situ uterus. 33% of patients with an in situ uterus postoperatively exhibited some degree of recurrence at follow up. Of patients status post hysterectomy there was only a single grade 1 recurrence (1.3%). Statistical analysis revealed the presence of a uterus as a significant predictor of recurrence at 2 years (p<.001).

**Conclusions:** In our series 33% of patients with an in situ uterus exhibited some degree of apical recurrence at 2 year follow up. Though this is often of low grade, longer follow up is needed to determine if this will progress. Meanwhile, this should guide physicians in their patient selection and preoperative counseling.

**PODIUM 85**

**MODIFIED LATZKO PROCEDURE (PARTIAL COLPOCLESIS) FOR VESICOVAGINAL FISTULA: TECHNIQUE AND OUTCOMES**

Denise Chow¹, Ahmet Bedestani², Ralph Chesson² and Jack Winters²

¹Louisiana State University/Ochsner Clinic Foundation, New Orleans, LA; ²Louisiana State University, New Orleans, LA

(Presented By: Denise Chow)

**Introduction and Objectives:** The Modified Latzko procedure historically has been a successful approach to transvaginal treatment for VVF. This procedure is reproducible, and can be performed for most fistulas. Our objective is to highlight the principles of the repair and summarize our experience.

**Methods:** 17 patients who presented with fistulas were repaired via the Latzko technique. The key components of the procedure include: 1) Adequate exposure of the apex of vagina 2) A circumferential, full thickness dissection of the vaginal wall to expose fistula 3) Isolation and closure of the fistula, 4) Imbricating sutures to complete the partial colpocleisis (serves as interposition) 5) Re-closure of the vaginal cuff. A retrospective chart review was completed to assess outcomes and operative experience.

**Results:** 17 patients underwent repair with this technique. Age ranged from 28–80, and 1 patient had failed abdominal repair. 88% were discharged the following day and catheter drainage was maintained for 3 – 4 weeks. 16 (94%) had successful resolution after the primary repair. 1 had a recurrence 2 years following the primary procedure due to an inclusion cyst. No intraoperative complications occurred, including bowel, ureteral or bladder injury. A blood loss of 600 cc was encountered in 1 patient. No complaints of sexual dysfunction were recorded.

**Conclusions:** The Latzko procedure is a reproducible, efficacious alternative approach to the transvaginal correction of VVF. Results are excellent and complications are minimal. This procedure should be considered as the primary repair of VVF.

**PODIUM 86**

**INDICATIONS, OUTCOMES, AND COMPLICATIONS OF SACRAL NERVE STIMULATION FOR THE TREATMENT OF MALE VOIDING DYSFUNCTION**

Joe Mobley, John Beddies, Hardin Brent, Wes White, Regula Doggweiler and Frederick Klein

University of Tennessee Medical Center, Knoxville, TN, Division of Urology, Department of Surgery

(Presented By: Joe Mobley)

**Introduction and Objectives:** Men with refractory or complex voiding dysfunction can pose unique diagnostic and therapeutic challenges. Sacral nerve stimulation (SNS) is well documented to provide objective benefit to patients with urge incontinence, urgency/frequency, and non-obstructive urinary retention. However, exclusive reports of its efficacy and durability in men are lacking. Given this gap in knowledge, we present long-term follow-up of men treated with SNS.

**Methods:** A prospective, longitudinal study was performed to characterize the indications and operative outcomes among men treated with SNS. Men with refractory urgency/frequency, non-obstructive urinary retention, and urge incontinence were offered treatment of their symptoms with the InterStim® device. Accrued patients underwent history/physical examination, one week voiding log, cystoscopy, and urodynamics. Suitable candidates were treated with staged lead placement under general anesthesia. Patients with >50% improvement in symptoms based on a one-week follow-up voiding log underwent implantable pulse generator placement. Patients were followed post-operatively at 1 week, 1 month, and every 3 months for evidence of sustained efficacy, durability, and adverse events.

**Results:** Between July 2001 and July 2009, 52 men with a mean age of 56 years (range 28 – 79 years) underwent first stage lead placement with a non-tined (11) or tined (41) lead. Indications for intervention included refractory urgency/frequency (30) or non-obstructive urinary retention (22). Forty-one patients
(79%) reported >50% improvement in symptoms on a one-week follow-up voiding log and underwent IPG placement. Of note, 26 of 30 (86.7%) patients with urgency/frequency converted compared to 15 of 22 (68.2%) patients with non-obstructive urinary retention. Adverse events occurred in 7 patients (Lead migration – 4, Trauma – 1, Painful stimulation – 1, Infection −1), 2 of which underwent successful revision. An additional 5 patients underwent device revision owing to a lack of efficacy (3), battery expiration (1), and chronic diarrhea (1). At a mean follow-up of 41.7 months, 36 patients (88%) have functional IPGs with >50% objective improvement over baseline.

**Conclusions:** SNS is an effective, well-tolerated treatment for men with refractory urinary urgency/frequency or non-obstructive urinary retention. Men with non-obstructive urinary retention demonstrate inferior conversion rates and future study is needed to clarify the nature and source of this finding.

**PODIUM 87**

**WHAT IS THE PREDICTIVE VALUE OF URODYNAMICS WHEN COMPARED TO CLINICAL HISTORY AND VALIDATED INSTRUMENTS?**

Daniel Caruso¹, Prashanth Kanagarajah², Ross Krasnow¹, Brian Cohen¹ and Angelo Gousse¹  
¹University of Miami-Miller School of Medicine, Miami, FL  
(Presented By: Prashanth Kanagarajah)

**Introduction and Objectives:** Multichannel urodynamic testing (UD) has been used to calculate the sensitivity and specificity of the Urinary Distress Inventory (UDI−6), other questionnaires, and findings on clinical exam. However, results have been variable. The aim of our study was to discover the sensitivity and specificity of urodynamic testing after a voiding dysfunction specialist established a diagnosis of voiding dysfunction or urinary incontinence based on a clinical evaluation.

**Methods:** We retrospectively reviewed a database of 1003 patients who presented with voiding dysfunction or urinary incontinence. A diagnosis of urinary frequency (UF), urge urinary incontinence (UUI) or stress urinary incontinence (SUI) was made by the same voiding dysfunction specialist based on clinical findings on history, pelvic exam, and answers on the UDI-6 questionnaire. UD was performed according to International Continence Society (ICS) criteria. The following urodynamic parameters were measured and correlated with clinical findings: maximum cystometric capacity (MCC), detrusor overactivity (DO) and evidence of SUI (UD-SUI). The sensitivity and specificity of UD parameters were calculated and supported using Pearson’s Chi-Square analysis.

**Results:** A total of 537 patients (366 females and 171 males) met study criteria. Patients had the following diagnoses based on clinical evaluation: UF, 75%; UUI, 51%; SUI, 57%. Urodynamic parameters were paired with clinical findings to determine predictive values. MCC had poor sensitivity (0.196) and moderate specificity (0.835) in predicting UF. The correlation of MCC and UF did not reach statistical significance. The UD parameters DO and UD-SUI had higher specificity in the evaluation of UUI (0.884) and SUI (0.991) respectively and the correlation reached statistical significance (p<0.001).

**Conclusion:** UD testing is not always a reliable test in diagnosing voiding dysfunction, UI and UF. However, demonstration of DO and UD-SUI are specific tests for the diagnosis of UUI and SUI. Therefore, a multi-systematic approach combining clinical findings with UD evidence is needed to diagnose voiding dysfunction and UI.

**Funding:** There was no financial funding for this study.

**PODIUM 88**

**PHYSICAL SIGNS OF ASYMMETRY AS A GUIDE TO SUCCESSFUL INTERSTIM THERAPY**

Brad Figler, Nedra Hood, Joy Butterworth and Niall Galloway  
Emory University, Atlanta, GA  
(Presented By: Brad Figler)

**Introduction:** Patients with symptoms of urinary frequency and urgency refractory to medical treatment may be candidates for InterStim therapy. Unilateral placement in the S3 foramen is typical and placement is guided by motor reflex, sensory territory and stimulation threshold. Little attention has been paid to whether the device should be placed on the left or right side.

**Methods:** From January 1, 2003, to December 31, 2008, 73 patients with medically refractory frequency, urgency and urine incontinence underwent first stage placement of an Interstim neuromodulation device in either the right or left S3 foramen. All patients were examined for evidence of asymmetry in pelvic floor muscle strength, anal grip, 2-point discrimination, leg length, foot size, gluteal muscle mass and abduction of the toes. In those patients with gross asymmetry, the device was located on the less well formed side in 6 and the more fully formed side in 5. Records were reviewed to determine whether signs of asymmetry in the pelvic floor are useful in determining the optimal of device placement.

**Results:** 11 patients were identified with signs of gross asymmetry in the pelvic floor. Of these, 5 underwent Interstim placement in the more well formed side, and 6 underwent placement in the less well formed side. Indications for neuromodulation were: urgency without urge incontinence (5), detrusor areflexia (2), and voiding dysfunction (4). There was no significant difference in the indication for
neuromodulation when comparing groups. Median follow-up was 28 months in the first group (device placed in well formed side) and 57 months in the second group (device placed in less well formed side). 3/5 (60%) of those in the first group reported greater than 50% improvement in symptoms at the time of last follow-up, and 3/6 (50%) of those in the second group report greater than 50% improvement in symptoms at the time of last follow-up.

**Conclusions:** In our small sample, there was no demonstratable advantage to choosing a side for InterStim based on asymmetry elicited during the physical exam. Bilateral EMG measurements are a promising tool for the detection of asymmetry in the pelvic floor, and we discuss our initial experience with this (see Figure).

PODIUM 89
CORRELATION OF BLADDER NECK LOCATION ON CYSTOGRAM PREDICTS EARLY RETURN OF CONTINENCE FOLLOWING ROBOTIC RADICAL PROSTATECTOMY
Ugur Boylu, Michael Pinsky, Brian Richardson, Raju Thomas and Benjamin Lee
Department of Urology, Tulane University School of Medicine, New Orleans, LA
(Presented By: Ugur Boylu)

**Introduction:** Elucidation of return of urinary control following radical prostatectomy is multifactorial. Various contributing factors such as surgical technique, reconstruction of anatomic supporting structures such as the rectourethralis muscle have been reported. Such reconstruction leads to prevention of bladder neck descent on post-operative cystogram. We evaluated the association between location of the bladder neck on cystogram after robotic prostatectomy to determine if there was a correlation with time to continence.

**Material and Methods:** Following Institutional Review Board approval, we retrospectively evaluated cystograms of 56 patients who underwent robotic assisted radical prostatectomy. Measurements were taken from the top of the symphysis, and then the length of the bladder neck covered by symphysis was measured and divided by total symphysis length to generate a ratio to control for patient positioning. Patients were contacted and questioned for continence and time to continence. Patients with 0 – 1 pad were considered as continent. Pearson correlation test was used to analyze the association.

**Results:** There was a positive correlation between the time to continence and the bladder neck location (R=0.28, p=0.04). The lower the bladder neck location was, the longer the return of continence. At three months, there were 35 (63%) continent and 21 (37%) incontinent patients. The ratio was significantly lower in continent group (0.37) compared to incontinent group (0.53) (p=0.002).

**Conclusion:** The bladder neck location predicts early return of continence following robotic assisted radical prostatectomy. In patients with a higher bladder neck location, urinary control is regained earlier.
PODIUM 90
CAN REPEAT INJECTIONS OF BOTULINUM TOXIN TYPE-A PRODUCE SUSTAINED, REPRODUCIBLE RELIEF IN SYMPTOMS FOR REFRACTORY IDIOAPTHIC OVERACTIVE BLADDER PATIENTS?
Angelo Gousse¹, Prashanth Kanagarajah², Rajinikanth Ayyathurai¹ and Daniel Caruso¹
¹University of Miami-Miller School of Medicine, Miami, FL
(Presented By: Prashanth Kanagarajah)

Introduction and Objectives: We report our experience of treating 60 patients with idiopathic overactive bladder refractory to anti-muscarinic therapy with repeat injections of Botulinum toxin-A (BTX-A) once every 6 months over a period of 3 years. This is the first randomized trial conducted to study the efficacy of 2 dose levels of BTX-A (100U and 150U) after repeat intra-detrusor injections in idiopathic OAB population.

Methods: During a 7 year period we recruited 60 patients to take part in this institutional review board approved, investigator initiated, prospective, single center randomized trial. Each patient was randomly allocated to receive either 100U or 150U. Subjects were asked to complete a three-day voiding diary (3VD), urogenital distress inventory-6 questionnaire (UDI-6) and to rate their current quality of life on a 10cm visual analogue scale (VAS) prior to study enrollment and at 6 weeks post injection. The UDI-6 scores and VAS at baseline was compared with the score at week 6 post injection to determine the efficacy of the injection. The results of the injections were analyzed using paired sample T-test, one-way ANOVA and Fisher’s exact test.

Results: The UDI-6 and VAS scores dropped significantly (p=0.0001) post injection when compared to pre injection levels. The UDI-6 and VAS scores dropped from 8.25 to 3.32 and 9.38 to 3.63 in 60 patients after injection 1 (each p=0.0001), from 8.33 to 3.53 and 9.25 to 3.75 in 36 patients after injection 2 (each p=0.0001), from 8.35 to 3.13 and 9.43 to 3.17 in 23 patients after injection 3 (each p=0.0001), from 7.75 to 2.38 and 9.63 to 2.56 in 16 patients after injection 4 (each p=0.0001), from 8.42 to 2.33 and 9.67 to 1.92 in 12 patients after injection 5 (each p=0.0001), from 8.89 to 3.22 and 9.56 to 2.67 in 9 patients after injection 6 (each p=0.0001) respectively (Graph−1). The UDI-6 scores after repeat injections of BTX-A did not differ significantly in patients belonging to the 100U and 150U treatment arms.

Conclusions: Repeat injections of BTX-A is capable of significantly reducing the UDI-6 scores and improving the quality of life in patients with idiopathic overactive bladder symptoms refractory to anti-muscarinic therapy. Intra-detrusor BTX-A injections can be used as a long term treatment alternative for this selected patient population.

Funding: Allergan Inc. USA, provided Botulinum toxin-A for injection in the study.

PODIUM 91
6 MONTHS PROSPECTIVE EVALUATION ON MINIARC™ SINGLE-INCISION MINIMALLY INVASIVE SLING FOR THE TREATMENT OF STRESS URINARY INCONTINENCE
Michael Kennelly¹, Stewart Pringle², Douglas Van Drie³, Cristopher Klingele⁴, James Presthus⁵ and Dirk De Ridder⁶
¹McKay Department of Urology, Charlotte, NC; ²Southern General Hospital, Glasgow; ³Michigan Affiliated Physicians, Grand Rapids, MI; ⁴Mayo Clinic & Medical College, Rochester, MN; ⁵Minnesota Gynecology & Surgery, Edina, MN; ⁶University Hospital K.U. Leuven, Leuven, Belgium
(Presented By: Michael Kennelly)

Objectives: Report the subjective and objective outcomes at 6 months on the MiniArc minimally invasive single-incision sling for the treatment of stress urinary incontinence (SUI) in women.

Methods and Materials: IRB and ethics committee approval was obtained for a multi-center, prospective study conducted at 16 centers in the US, Canada, Belgium, and United Kingdom. 151 women ≥18 years old with confirmed SUI were enrolled. Data was collected at baseline, 7 days and at 6 months. Peri-operative parameters collected included estimated blood loss (EBL), length of stay (LOS) and pain scores at discharge. Follow-up data at 7 days (151 subjects) and 6 months (132 subjects) is reported. At 7 days, voiding function and pain score level were evaluated. Data on 6 months included subjective (UDI-6 and IIQ-7) and objective outcomes (cough stress test (CST) and 1-hour pad weight test). In addition, post-operative complications were reported. At 6 months, UDI-6, IIQ-7, and 1 hour pad weight were compared to baseline using the Paired t-test or Wilcoxon Signed Rank tests.

Results: The mean age was 51 years (32 – 79 range) and mean body mass index was 27.6 kg/m2 (17.9 – 40.1 range). The median LOS was 2.8 hours. The median EBL was 25 mL. At discharge, subjects reported a mean pain score of 0.78 ± 1.23 (0, 5 range)). At 7 days evaluation, 99% of subjects reported normal voiding with the mean pain level at 0.6 ± 1.2 (0, 7 range). Post-procedure data was collected at 6 months. The UDI-6 mean score decreased from 49.2 ± 18.0 at baseline to 13.7 ± 15.0 at 6 months (p <.001). The IIQ-7 mean score decreased from 41.6 ± 23.5 at baseline to 5.4 ± 13.9 at 6 months (p <.001). Based on the UDI-6 question #2, improvement of urgency was reported in 81% of subjects. Four subjects developed de novo urge. The CST was negative in 91% (105/115) of subjects who had a
positive CST at baseline. The mean pad weight decreased from 25.5 ± 35.6 at baseline to 5.7 ± 28.9 at 6 months (p < .001). 78% percent (98/125) of subjects had a pad weight of ≤ 1 gram on the 1-hour pad weight test. The adverse events greater than 1% reported are: UTIs (2), dyspareunia (3), extrusion (2) and pelvic pain (2). There was 1 intra-operative complication (vaginal wall perforation).

**Conclusion:** MiniArc 6 month prospective data showed significant improvement in both subjective and objective measures of continence for the treatment of SUI in women. The results demonstrated short facility stay, minimal EBL and low pain levels, as well as minimal comorbidities. The MiniArc single-incision sling is a minimally invasive approach in treating SUI in women. Subjects in the study will be followed for 24 months.

**Funding:** AMS

**PODIUM 92**

**TWELVE-MONTH OUTCOME OF SPIRAL SLING TECHNIQUES FOR DEVASTATING RECURRENT STRESS URINARY INCONTINENCE IN FEMALES**

Alejandro Rodriguez, Tariq Hakki, Jorge Caso, Raul Ordorica and Jorge Lockhart

University of South Florida, Tampa, FL

(Presented By: Alejandro Rodriguez)

**Introduction and Objectives:** We previously presented our initial experience with spiral sling techniques (SST) for the management of devastating recurrent stress urinary incontinence (SUI) following multiple standard sling procedures. We report our twelve-month clinical outcome using these techniques.

**Methods:** Between Jan 2007 and Jul 2008, 29 female patients with persistent SUI following multiple failed anti-incontinence procedures were treated with a spiral sling. 21 had a synthetic spiral sling (SSS), 5 had an autologous spiral sling (AUSS), and 3 underwent a lateral spiral sling (LSS). Patients were followed with number of pads, Stamey score and quality of life questionnaires.

**Results:** 28 patients, with a mean age of 60 years (36 – 84), were followed for a minimum of 12 months (12 – 18). At presentation, the mean number of prior vaginal procedures and pads used was 3.5 (1 – 6) and 7 (3 – 12), respectively. Complications included 3 unilateral vesical perforations, in which the contralateral LSS was used. Mean daily pad use decreased to 1 (0 – 2) (p<0.05). Postoperative mean Stamey score decreased from 2.6 to 0.3 (p<0.05). 22 (78%) patients referred using 0 – 1 pad and 12 (43%) referred no pad use. Patients reported a mean improvement of symptoms of 80% after surgery (range 0% – 100%). A total of 19 (68%) patients reported 90% or greater improvement in symptoms, and all except 2 (7%) reported 50% or greater improvement. These two patients (7%) developed de novo urge incontinence, and received anticholinergic therapy with improvement in symptoms. The patients reported a mean postoperative QOL score related to urinary symptoms of 1.7 (between pleased and mostly satisfied). Of the 29 patients, five SSS and one LSS failed. Of these, three (all SSS) required urethral calibration, dilatation, and are on clean intermittent catheterization, improving the overflow incontinence and bladder outlet obstruction. We did not perform urethrolysis on these patients to prevent recurrent devastating incontinence. Two (one LSS and one SSS) required bulky substance injection with improvement in the ISD type of incontinence, and one (SSS) was lost to follow-up with mild incontinence. None of the AUSS failed nor had complications requiring further therapy. Considering the patient lost on follow-up, as a failure, as well as the 2 patients that developed de novo urge incontinence and reported a less than 50% improvement in symptoms, the overall success was 72% (21/29 patients).

**Conclusions:** Longer term follow-up confirms that SST represent a satisfactory alternative for the treatment of devastating refractory SUI in female patients that have failed prior standard sling procedures.

**Funding:** None.

3:20 p.m. – 3:30 p.m. **WRAP UP AND STATE-OF-THE-ART: STRATEGY FOR THE SYSTEMATIC APPROACH TO UROLOGIC ISSUES OF PRIMARY CONCERN FOR SPINAL INJURED PATIENTS**

Invited Speaker: Gopal H. Badlani, MD
Winston-Salem, NC

3:30 p.m. – 4:00 p.m. **BREAK – VISIT THE EXHIBITS**

Location: Americana 123

4:00 p.m. – 5:30 p.m. **SESSION 12: URODYNAMICS POSTER**

Location: Poinciana 4

Moderators: Angelo E. Gousse, MD
Miami, FL
Yvonne K. Koch, MD
Miami, FL
FUNCTIONAL RECOVERY OF COMPLETELY DENERVATED MUSCLE BY DIRECT NERVE TRANSPLANTATION
Sung B. Kang, Tamer Aboushwareb, Anthony Atala and James Yoo
Department of Urology and Institute for Regenerative Medicine, Wake Forest University Health Sciences Winston Salem, NC
(Presented By: Tamer Aboushwareb)

ONE YEAR FOLLOW-UP DATA ON THE MINIARC™ SINGLE INCISION SLING SYSTEM FOR THE TREATMENT OF STRESS URINARY INCONTINENCE
Ryan Pickens, Frederick Klein, Joe Mobley III, William Waters and Wesley White
UTMCK
(Presented By: Ryan Pickens)

A MULTICENTER STUDY AND NATIONWIDE PATIENT INFORMATION FORM DATA ON THE NEW INHIBIZONE ANTIBIOTIC COATING FOR THE ARTIFICIAL URINARY SPHINCTER WITH MORE THAN ONE YEAR FOLLOW UP
Gerard Henry¹, Leroy Jones², Jaspreet Sandhu³, Jeffery Brady⁴ and Brian Flynn⁵
¹Shreveport, LA; ²San Antonio, TX; ³Newark, NJ; ⁴Orlando, FL; ⁵Denver, CO
(Presented By: Gerard Henry)

LONG-TERM OUTCOMES AND COMPlications OF THE TRANSOBTURATOR MIDURETHRAL SLING
Paul W. Walker, Joshua Holstead, B. Jill Williams and Alex Gomelsky
LSUHSC – Shreveport, LA
(Presented By: Paul W. Walker)

EVALUATING OUTCOMES OF ANTI-INCONTINENCE PROCEDURES: DEVELOPMENT OF A MAIL BASED PAD KIT
Ryan Krlin¹, Maria Latsis² and Jack Winters³
¹Department of Urology, Louisiana State University/Ochsner Clinic Foundation, New Orleans, Louisiana; ²Ochsner Clinic Foundation, New Orleans, Louisiana; ³Department of Urology, Louisiana State University, New Orleans, Louisiana
(Presented By: Ryan Krlin)

24-MONTH RESULTS OF A 3-YEAR TRIAL OF NONSURGICAL TRANSURETHRAL COLLAGEN DENATURATION FOR STRESS URINARY INCONTINENCE
Denise M. Elser¹, Gretchen K. Mitchell² and Harvey Winkler³
¹Illinois Urogynecology, LTD, Oak Lawn, IL; ²Atlanta Urogynecology Associates, Alpharetta, GA; ³North Shore Women’s Health, Great Neck, NY
(Presented By: Denise M. Elser)

TREATMENT OF RECURRENT INCONTINENCE AFTER AN ARTIFICIAL URINARY SPHINCTER WITH THE ADVANCE MALE SLING
Brian Christine¹, Dean Knoll² and Anthony Bella³
¹Urology Centers of Alabama, Birmingham, AL; ²The Center for Urological Treatment, Nashville, TN; ³The Ottawa Hospital, Ontario, Canada
(Presented By: Brian Christine)

PATIENT SELECTION CRITERIA AND OUTCOMES FOR SURGICAL MANAGEMENT OF POST-PROSTATECTOMY INCONTINENCE
Benjamin Whittam¹, Melissa Kaufman², Todd Doran² and Douglas Milam²
¹Vanderbilt University Medical Center; Nashville, TN
(Presented By: Benjamin Whittam)
**Poster #23**

**SELECTIVE MANAGEMENT OF THE URETHRA AT TIME OF PROLAPSE REPAIR: AN ASSESSMENT OF POSTOPERATIVE INCONTINENCE AND PATIENT SATISFACTION**

Ryan Krlin¹, Robyn Crowell² and Jack Winter³

¹Department of Urology, Louisiana State University/Ochsner Clinic Foundation, New Orleans, LA; ²Louisiana State University Health Science Center School of Medicine, New Orleans, LA; ³Department of Urology, Louisiana State University, New Orleans, LA

(Presented By: Ryan Krlin)

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**Poster #24**

**OPTIMIZING MIDURETHRAL SLING OUTCOMES AND MINIMIZING COMPLICATIONS: CHOOSING APPROACH BASED ON RISK FACTOR ANALYSIS**

Mirian Boci, B. Jill Williams and Alex Gomelsky

LSUHSC – Shreveport, LA

(Presented By: Mirian Boci)

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**Poster #15**

**FUNCTIONAL RECOVERY OF COMPLETELY DENERVATED MUSCLE BY DIRECT NERVE TRANSPLANTATION**

Sung B. Kang, Tamer Aboushwareb, Anthony Atala and James Yoo

Department of Urology and Institute for Regenerative Medicine, Wake Forest University Health Sciences Winston Salem, NC

(Presented By: Tamer Aboushwareb)

**Purpose:** To engineer functional muscle tissue for reconstruction, integration of nerve is necessary. It is uncertain whether implantation of engineered muscle constructs, which is analogous to denervated muscle, could be innervated when native nervous tissue was provided. We investigated whether transplantation of native nerve into complete denervated muscle (neurotization) would lead to functional recovery and form neuromuscular junction.

**Methods:** Eighty Lewis rats were divided into three groups: a normal control group (n=16); a denervated group (n=32); and a transplantation group (n=32). Denervation was achieved by removing a 10mm segment of the sciatic nerve branches. Direct nerve transplantation was achieved by embedding the common peroneal nerve into the gastrocnemius muscle after excision of tibial nerve and sensory nerve branch. Neurofunctional behavior including extensor postural thrust (EPT) and withdrawal reflex latency (WRL), compound muscle action potential (CMAP), and histological evaluations were performed.

**Results:** EPT and WRL were improved in the transplantation group compared to the denervated group, but the levels were significantly lower than the normal control group, even at 12 weeks. CMAP latency and amplitude significantly improved in the transplantation group with time (P < 0.001), and at 12 weeks was not statistically different from the normal control group (latency, P = 0.164; amplitude, P = 0.184). Recovery of the neuromuscular junction was demonstrated histologically in the transplantation group.

**Conclusion:** These studies indicate that, while nerve transplantation allows regeneration of the neuromuscular junction, the function of the denervated muscle remains in the subnormal range even at 12 weeks. These results suggest that nerve transplantation should be combined with other supportive treatment to allow for a more complete recovery of muscle function.

**Funding:** OTRP–Department of Defense

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**Poster #16**

**ONE YEAR FOLLOW-UP DATA ON THE MINIARC™ SINGLE INCISION SLING SYSTEM FOR THE TREATMENT OF STRESS URINARY INCONTINENCE**

Ryan Pickens, Frederick Klein, Joe Mobley III, William Waters and Wesley White

UTMCK

(Presented By: Ryan Pickens)

**Introduction and Objectives:** We present longitudinal surgical and quality of life outcomes in an observational cohort of patients that underwent treatment of stress urinary incontinence (SUI) with the MiniArc™ Single Incision Sling System. After having initial success with the MiniArc™ Single Incision Sling System at one month, we investigated whether the procedure was still successful at one year in regards to symptoms related to SUI, urge incontinence (UI), overall quality of life, and sexual function.

**Methods:** A prospective analysis of patients with stress urinary incontinence who underwent surgical intervention with the MiniArc™ Single Incision Sling System was performed. Patients were sent an envelope and asked to fill out and return: a quality of life questionnaire, a female sexual function index (FSFI), an IIQ-7 form, and an UDI-6 form. We compared our first month follow-up IIQ-7 and UDI-6 scores to those who returned them after being one year out from having the procedure performed. We used our quality of life questionnaire to determine how many patients would now be considered treatment failures at one year. We used our FSFI to determine how the procedure affected their sexual activity. Statistical analysis was performed.
**Results:** From September 2007 to June 2008, a total of 80 patients underwent placement of the MiniArc™ Single Incision Sling System at our institution for stress urinary incontinence. Seventy patients (88%) completed follow-up. Mean patient age was 57.5 years (range 26 – 87). Twenty-seven patients (33%) had concomitant urge incontinence pre-operatively. Mean Body Mass Index (BMI) of our patients was 27.2. Preoperative pad usage was 2.40 per day per patient. Mean IIQ-7 and UDI-6 scores pre-op were 2.6 and 2.5 respectively. At a mean follow-up of 17.5 months, 62 of the 70 responders (89%) denied having any symptoms of SUI, 7% reported occasional leakage and 4% reported full return of symptoms of SUI. Average pads per day were 0.2 (p<0.005). Average IIQ-7 and UDI-6 scores were 0.4 (p<0.005) and 0.5 (p<0.005) respectively at one year. Twenty-five (36%) of patients reported urge incontinence on a daily basis. Average quality of life scores went from 4.2 pre-operatively to 8.8 at one year follow-up. Based on FSFI results, 49% of our patients never have discomfort with intercourse, 9% sometimes have discomfort, and 2% always have discomfort. Forty percent of our patients are currently sexually inactive.

**Conclusions:** Based on our experience, treatment outcomes with the MiniArc™ Single Incision Sling System are durable at one year. Quality of life is significantly improved with minimal impact on sexual function.

**Poster #17**

**A MULTICENTER STUDY AND NATIONWIDE PATIENT INFORMATION FORM DATA ON THE NEW INHIBIZONE ANTIBIOTIC COATING FOR THE ARTIFICIAL URINARY SPHINCTER WITH MORE THAN ONE YEAR FOLLOW UP**

Gerard Henry¹, Leroy Jones², Jaspreet Sandhu³, Jeffery Brady⁴ and Brian Flynn Brian Flynn⁵

¹Shreveport, LA; ²San Antonio, TX; ³Newark, NJ; ⁴Orlando, FL; ⁵Denver, CO

(Presented By: Gerard Henry)

**Introduction and Objectives:** The antibiotic coating, InhibiZone (IZ), has been shown to reduce infection rate by about fifty percent in patients receiving an IZ inflatable penile prosthesis (IPP) compared to an uncoated IPP. IZ is a combination of Minocycline and Rifampin that is impregnated on the outside of the device. We evaluated the success and complications for the artificial urinary sphincter (AUS) with the IZ antibiotic coating for patients with stress urinary incontinence.

**Methods:** We reviewed the charts of 71 patients who we are prospectively following who underwent the implantation of an IZ AUS from 2/2007 to 11/2007 at five different centers. Patient age range was from 35 to 84 (average 67.4) years old. Race breakdown was 10 African American, 1 Asian, 1 Indian, 4 Hispanic, and 55 Caucasian. 70 had urethral cuff placement with the one spina bifida patient having his cuff placed at the bladder neck. American Medical Systems (AMS) have operating personnel / physicians fill out Patient Information Form (PIF) when an AUS is being done or revised. AMS PIF data was analyzed comparing uncoated versus IZ coated AUS for infection rates.

**Results:** Of the 70 urethral IZ AUSs, 22 were placed through a transverse scrotal incision and 48 from a perineal surgical approach. 10 patients underwent initial double cuff placement. Ten patients were undergoing revision / replacement surgery with 55 being primary (virgin) IZ AUS placements. In addition to an IZ AUS implantation for the treatment of urinary incontinence, 10 IPPs were placed simultaneously for the treatment of erectile dysfunction, 1 had a bladder biopsy, 3 required bladder neck dilatation and one had a laparoscopic partial nephrectomy. Follow up reveals three patients who had removal of their IZ AUS for cuff erosion / infection, one patient requiring upsizing of the cuff for urinary retention, one patient with scrotal burning and one pump that simply eroded through the scrotal skin at 15 months. Therefore, an erosion / infection rate of 5.6% (4 / 71). PIF data on original implants reveals 6144 patients received non-IZ AUSs with 39 (.6%) reporting infections and 2321 patients received IZ coated AUSs with 27 (.6%) reporting infections. Revisions for mechanical failure numbered 68 (1.1%) in the non-IZ group and 27 (1.2%) in the IZ coated group.

**Conclusions:** The new antibiotic coat, IZ, on the AUS appears to be well tolerated in this multicenter study and nationwide PIF data with short term follow up.

**Poster #18**

**LONG-TERM OUTCOMES AND COMPLICATIONS OF THE TRANSOBTURATOR MIDURETHRAL SLING**

Paul W. Walker, Joshua Holstead, B. Jill Williams and Alex Gomelsky

LSUHSC – Shreveport, LA

(Presented By: Paul W. Walker)

**Introduction and Objectives:** While several authors have recently reported long-term outcomes of the retropubic midurethral sling, to date, long-term outcomes (>48 months) of women undergoing the transobturator (TO) sling have yet to emerge. Our objectives are to report the first long-term outcomes and complications of the outside-in TO sling and to evaluate the durability of this procedure by comparing outcomes with women completing medium-term follow-up (F/U; 12~48 months).
**Methods:** After IRB approval, we retrospectively identified 389 women who underwent TO sling since 2004 at our institution, and were eligible for a minimum F/U of 12 months. Pre- and post-operative assessment included pelvic exam, cough-stress test (CST), SEAPI assessment (stress incontinence, emptying, anatomy, protection and inhibition), quality of life (QOL) questionnaires, and Visual Analog Score (VAS; 1 − 10) measuring overall satisfaction. “Global Cure” was defined as subjective-SEAPI composite=0 and VAS≥8. “SUI Cure” was defined as no subjective SUI (SEAPI(S)=0) and a negative CST. Demographics, peri-operative details, and complications were abstracted from the clinic and hospital charts. Statistical evaluation comparing the two groups was conducted.

**Results:** Sixty-three women (16%) were eligible but did not complete F/U≥12 months, leaving 326 women for reporting. Mean follow-up for the entire cohort was 32.5 months. Group 1 (medium-term F/U) and Group 2 (long-term F/U) consisted of 285 and 41 women, respectively. There were no significant differences (NS) in demographic and preoperative variables, and incidence of previous pelvic surgery between the two groups. The “SUI cure” rate was 88.4% and 78% in Groups 1 and 2, respectively (NS). The “Global Cure” rate was 72.3% and 56.1% in Groups 1 and 2, respectively (p<0.05). A statistically significant improvement in SEAPI scores, QOL indices, and daily pad usage was observed in both groups. There were no statistically significant differences in short-term (<30 days) and long-term (>30 days) complications between the two groups. Reoperation rates were likewise similar.

**Conclusions:** At long-term follow-up, the TO sling provides durable results in resolving SUI in women; however, the “Global Cure” is significantly lower than in women with medium-term follow-up. This indicates that factors other than SUI may play a greater role in the long-term surgical outcomes in these women. The complication rates are low and, regardless of follow-up length, women experience a significant improvement in their QOL.

**Poster #19**
**EVALUATING OUTCOMES OF ANTI-INCONTINENCE PROCEDURES: DEVELOPMENT OF A MAIL BASED PAD KIT**
Ryan Krlin¹, Maria Latsis² and Jack Winters³¹Department of Urology, Louisiana State University/Ochsner Clinic Foundation, New Orleans, LA; ²Ochsner Clinic Foundation, New Orleans, LA; ³Department of Urology, Louisiana State University, New Orleans, LA
(Presented By: Ryan Krlin)

**Introduction:** Outcomes evaluation for the various treatments of stress urinary incontinence is often subjective, and a standard definition is lacking. Validated questionnaires exist, but an objective measure is usually difficult to obtain as it involves patient time and ancillary procedures.

**Objective:** To assess the feasibility of a mail-based kit combining a 24-hour pad test and validated questionnaires in an attempt to evaluate the objective and subjective endpoints as part of an overall incontinence outcomes assessment.

**Methods:** The mail-out pad kit was designed through collaboration with the institutional Biosafety Committee and the United States Postal Service (USPS). The common mandate was to develop a leak-proof system that met federal and institutional requirements in four specific areas: Specimen Category, Hazard Class, Risk Group and Shipping Class. 1. Specimen Category: The pad kit is categorized as a diagnostic specimen. 2. Hazard Class: The pad kit is designated as Class 6: Toxic Substance, Infectious Substance or Diagnostic Specimen. 3. Risk Group: The risk in sending this kit via the mail was evaluated by the above parties and placed in Group 1, microorganisms unlikely to cause human or animal disease. This kit is not regulated as a hazardous material, but is subject to the packing requirements of USPS code 601.10.17.10. 4. Shipping Class: The USPS requires a biohazard symbol along with a three-step packing procedure to ship Class 6 specimens as either First-Class, Priority or Express Mail.

**Results:** Multi-step packaging is required: First, the incontinence pad must be placed in a leak-proof primary receptacle (zip-top bag). Then that receptacle is placed in a leak-proof secondary vessel (biohazard bag). It must be able to withstand an internal pressure differential of no less than 95 kPa without leaking, as well as contain an absorbent sheet able take in all contained liquid in the event of a spill. Third, the sealed secondary vessel is placed into a strong container (corrugated 11 1/8" x 8 3/4" x 2" box), which is then placed into an orange, moisture-proof, biohazard shipping envelope. The cost of the kit was under $2, and the cost for mailing the kit with return postage was $9.60. The above measures gained approval from the USPS and the institutional Biosafety Committee.

**Conclusion:** A mail-based pad test kit is feasible and can be administered with local IRB approval using the above guidelines. This protocol can be utilized by any practice desiring a balanced measure of outcomes.
**Poster #20**

**24-MONTH RESULTS OF A 3-YEAR TRIAL OF NONSURGICAL TRANSURETHRAL COLLAGEN DENATURATION FOR STRESS URINARY INCONTINENCE**

Denise M. Elser¹, Gretchen K. Mitchell² and Harvey Winkler³

¹Illinois Urogynecology, LTD, Oak Lawn, IL; ²Atlanta Urogynecology Associates, Alpharetta, GA; ³North Shore Women’s Health, Great Neck, NY

(Presented By: Denise M. Elser)

**Objective:** Transurethral radiofrequency collagen denaturation is FDA-approved for the treatment of women with stress urinary incontinence (SUI) due to bladder outlet hypermobility. This nonsurgical procedure is performed in an office setting in about 30 minutes using local anesthesia, with most patients completing the procedure and leaving the physician’s office within 1 hour. This clinical trial aimed to demonstrate long-term effectiveness.

**Methods:** A 3-year prospective, single-arm, multicenter, open-label study has thus far conducted patient evaluations from baseline through 24 months. Women with SUI due to bladder outlet hypermobility for at least 12 months who had failed prior conservative treatment were included. The study excluded women with urge or mixed urinary incontinence or who had prior definitive treatment (eg, incontinence surgery or bulking agents). Patients received an oral antibiotic and local periurethral lidocaine injection. The procedure was then performed as described in Wells WG and Lenihan Jr JP. CMRO 2007;23:1279-84. Patients completed Incontinence Quality of Life (I-QOL), Patient Global Impression of Improvement (PGI-I) and Urogenital Distress Inventory (UDI-6) measures and recorded SUI episodes in a bladder diary. Adverse events and responses to patient satisfaction questions were noted. We report 24-month results based on the intent-to-treat (ITT) population, except where otherwise noted.

**Results:** In all, 136 women (mean age, 47 years; range, 26 – 87 years) received treatment. At baseline, mean number of leaks due to activity was 2.1/day (15.0/week); median I-QOL score was 53.0; mean UDI-6 score was 52.3. At 24 months, data were available for 42 of 44 patients who remain in the study. A ≥50% leak reduction from baseline in leaks due to activity was reported in 56 (41.2%) patients in the ITT population and in 23 (55%) patients evaluated at 24 months (P=.0001). Median reduction from baseline was 9.5 leaks/week. Upon stress pad weight testing, 41% of the women evaluated were dry. Median I-QOL score improved 7.5 points, with 46% having ≥10-point improvement. On PGI-I, 44.1% reported that symptoms improved. Mean UDI-6 score improvement was 13.1 points. Overall, 60.3% of patients were satisfied, and 52% would recommend the procedure to a friend. No serious adverse events occurred at any time post-treatment.

**Conclusions:** Nonsurgical collagen denaturation demonstrated significant durable reductions in stress-related leaks and measurable improvement in QOL at 24 months. This minimally invasive, safe procedure has a negligible recovery time and may allow women with SUI who cannot undergo or do not desire surgery to avoid the compliance requirements of other nonsurgical therapies.

**Poster #21**

**TREATMENT OF RECURRENT INCONTINENCE AFTER AN ARTIFICIAL URINARY SPHINCTER WITH THE ADVANCE MALE SLING**

Brian Christine¹, Dean Knoll² and Anthony Bella³

¹Urology Centers of Alabama, Birmingham, AL; ²The Center for Urological Treatment, Nashville, TN; ³The Ottawa Hospital, Ontario, Canada

(Presented By: Brian Christine)

**Introduction:** Persistent urinary incontinence may be a complication after radical prostatectomy. The use of an artificial urinary sphincter (AUS) is a well-established treatment option in these men, but recurrent incontinence despite the prior placement of an AUS can occur. Adding a second cuff or downsizing the existing cuff has been used to treat these patients. The use of the AdVance transobturator male sling (American Medical Systems) to treat post-prostatectomy incontinence has been shown to be efficacious.

**Objectives:** We report on a series of men who developed recurrent post-prostatectomy incontinence despite a prior AUS, and who were treated by the placement of an AdVance sling rather than revising their AUS.

**Methods:** Nineteen men who had undergone placement of an AUS to treat post-prostatectomy incontinence, but who had developed recurrent incontinence, underwent placement of an Advance sling. Interval between placement of the AUS and placement of the sling was 2 – 5 years. The slings were placed in a standard fashion; the AUS was deactivated at the time of surgery. At 1 week post-op if the patient was not continent, the AUS was reactivated. Follow up occurred at 1 week, 6 weeks, then every 6 months thereafter.

**Results:** Pre-sling pad use was 2 – 5 pads/day. All 19 men reported decreased pad use. 15/19 (79%) reported complete continence with no further pad usage. 4/19 (21%) reported the need for 1 pad/day. Of the 15 men who attained continence, 8 had no leakage despite the deactivation of the AUS (8/15, 53%);
the remainder maintained continence with a combination of the sling and an activated AUS. In no patient were we unable to place the sling. There were no postoperative complications.

Conclusions: Recurrent post-prostatectomy incontinence in men who have previously had an AUS placed can be safely and effectively treated with the AdVance transobturator sling. In addition, half of the patients who attain continence may be able to deactivate the artificial sphincter.

Poster #22
PATIENT SELECTION CRITERIA AND OUTCOMES FOR SURGICAL MANAGEMENT OF POST-PROSTATECTOMY INCONTINENCE
Benjamin Whittam¹, Melissa Kaufman², Todd Doran² and Douglas Milam²
¹Vanderbilt University Medical Center; ²Vanderbilt University Medical Center Nashville, TN
(Presented By: Benjamin Whittam)

Introduction and Objectives: Influx of novel technologies has evolved the treatment algorithms for evaluation and management of post-prostatectomy incontinence. This effort was to define urodynamic and clinical parameters to determine optimal surgical management of post-prostatectomy intrinsic sphincter dysfunction with either artificial urinary sphincter or male urethral sling.

Materials and Methods: Retrospective review was undertaken after IRB approval of all medical records for radical prostatectomy patients who had undergone AUS or male urethral sling implantation from January 2004 to June 2008 was performed. Charts were evaluated for demographics, voiding symptoms, urodynamics, post-operative outcomes including standardized instruments and incontinence pad counts, and surgical complications.

Results: Fifty-two prostatectomy patients underwent AUS placement (American Medical Systems, Inc., Minnetonka, MN) from 1/2004 to 2/2008 and twenty-eight patients underwent placement of the bone-anchored InVance™ male urethral sling (American Medical Systems, Inc., Minnetonka, MN) from 3/2005 to 6/2008. Mean age at time of surgery was 66.9 years (range 53 – 85 years) for AUS patients and 67.6 years (range 51 – 85 years) for sling patients. Average follow up for AUS patients was 9.9 months (range 1 – 40 months) and 7.6 months (1 – 26 months) for sling patients. Average time from prostatectomy to first AUS and sling placement was 55.2 months (range 8 – 295 months) and 39.4 months (range 13 – 161 months) respectively. Average Valsalva leak point pressure (VLPP) was 54.6 cm H20 in AUS patients and 76.6 cm H20 in sling patients. Both groups showed a significant reduction in mean number of pads per day (PPD) from 7.1 to 0.86 (p < .0001) in AUS patients and from 2.1 to 0.3 (p < .0001). Eight complications (15%) were noted including four cuff erosions resulting in three explants with subsequent re-implant, one device infection resulting in explant and suprapubic catheter placement, one mechanical revision, two episodes of transient retention, and one superficial wound infection.

Conclusion: For men with VLPP <60 and ≥3 PPD our data supports AUS placement, while men with VLPP >70 and ≤2 PPD are appropriate sling candidates. In this population of men with post-prostatectomy incontinence we have identified urodynamic and incontinence pad parameters to provide a simple algorithm to identify appropriate surgical treatment. These data provide insight into important considerations for clinicians developing algorithms for the treatment of post-prostatectomy incontinence and provide specific parameters to compare surgical managements and guide treatment strategy.

Poster #23
SELECTIVE MANAGEMENT OF THE URETHRA AT TIME OF PROLAPSE REPAIR: AN ASSESSMENT OF POSTOPERATIVE INCONTINENCE AND PATIENT SATISFACTION
Ryan Krilin¹, Robyn Crowell² and Jack Winters³
¹Department of Urology, Louisiana State University/Ochsner Clinic Foundation, New Orleans, LA; ²Louisiana State University Health Science Center School of Medicine, New Orleans, LA; ³Department of Urology, Louisiana State University, New Orleans, LA
(Presented By: Ryan Krilin)

Introduction: In women presenting with symptomatic pelvic organ prolapse (POP) in the absence of signs or symptoms of stress urinary incontinence (SUI), the literature supports the selective use of an anti-incontinence procedure. It has been our experience that the vast majority of women without symptomatic or occult SUI will not leak with prolapse surgery alone and no concomitant anti-incontinence procedure.

Objectives: We report our outcomes with patients who underwent selective management of the urethra at the time of POP repair. Our primary endpoints are patient satisfaction and self reported continence.
Methods: Patients who underwent surgery for advanced POP were selected from our database. All charts were reviewed to determine if a concomitant anti-incontinence procedure was performed. Patients were excluded if post-operative follow-up was less than one year. Patients were contacted via telephone to obtain responses to 3 validated questionnaires: Urogenital Distress Inventory (UDI-6), Patient Global Impression of Improvement scale (PGI-I), and Medical, Epidemiological, and Social Aspects of Aging (MESA).

Results: 18 patients met inclusion criteria and completed responses to all questionnaires. Patients were separated into two groups—those who underwent prolapse repair alone (n=9) and those who underwent both prolapse repair and suburethral sling (n=9). The mean UDI-6 scores were 2.6 in the prolapse only group and 2.1 in the concomitant sling group (p=0.678). The MESA urge component was 0.667 in the prolapse only group and 2.55 in the concomitant sling group (p=0.143), and the MESA stress component was 2.66 in the prolapse only group and 2.11 in the concomitant sling group (p=0.704). The PGI-I revealed 67% to be either “much better” or “very much better” in both groups. One patient with a prolapse only repair returned with incontinence and underwent a secondary sling procedure. Patients that underwent a concomitant sling had a higher urge component and a lower stress component compared to the patients that underwent prolapse only repair; however, these differences weren’t statistically significant.

Conclusions: Patients with advanced POP that don’t have a concomitant suburethral sling at the time of their prolapse repair have continence and satisfaction outcomes that are equivalent to those who do undergo concomitant suburethral sling and prolapse repair. The decision to perform a concomitant prophylactic anti-incontinence procedure at the time of advanced prolapse repair should be tailored to individual symptoms and lower urinary tract evaluation.

Poster #24
OPTIMIZING MIDURETHRAL SLING OUTCOMES AND MINIMIZING COMPLICATIONS: CHOOSING APPROACH BASED ON RISK FACTOR ANALYSIS
Mirian Boci, B. Jill Williams and Alex Gomelsky
LSUHSC – Shreveport, LA
(Presented By: Mirian Boci)

Introduction and Objectives: Several randomized studies have shown similar success rates for women after the retropubic (RP) and transobturator (TO) midurethral sling (MUS). However, the TO sling is often considered to provide inferior support, although fewer complications. In a previous analysis, we identified risk factors for postoperative stress incontinence (SUI) following TO sling (failure of previous anti-incontinence surgery, concomitant prolapse repair for prolapse Grade ≥2). The objective of this study was to prospectively allocate women to a MUS approach based on risk factors, in an effort to improve outcomes and minimize complication rates.

Methods: After IRB approval, all women undergoing MUS were evaluated. Since 2007, all women at “high risk” for postoperative SUI underwent RP sling, while women at “low risk” underwent TO sling. Pre- and post-operative assessment included pelvic exam, cough-stress test (CST), SEAPI assessment (stress incontinence, emptying, anatomy, protection and inhibition), quality of life (QOL) questionnaires and Visual Analog Score (VAS; 1 – 10) measuring overall satisfaction. “Global Cure” was defined as subjective-SEAPI composite=0 and VAS≥8. “SUI Cure” was defined as no subjective SUI (SEAPI(S)=0) and a negative CST. Demographics and peri-operative complications were abstracted from clinic and hospital charts. Statistical evaluation was conducted.

Results: Minimum follow-up for all women was 12 months. In our initial, retrospective study, the SUI-cure in “high-risk” women after TO sling was 67.6% (vs. 91% in “low-risk” women). After prospectively allocating “high-risk” women to undergo SP sling, the SUI-cure improved to 83.5% (N=115; p=0.0196). “Low-risk” women prospectively allocated to undergo TO sling achieved a SUI-cure rate of 85.7% (N=126; Not statistically different). Global-cure rate and complication rates were significantly higher in the prospective TO group than the SP group. A statistically significant improvement in SEAPI scores, QOL indices and daily pad usage was observed in both prospective groups.

Conclusions: Results of this pilot study suggest that allocating women to a MUS approach based on risk factors is an effective way to improve the SUI-cure and decrease complications for the entire cohort. Not surprisingly, women with higher grades of concomitant prolapse and previously-failed SUI surgery had higher complication rates and lower rates of global-cure. Regardless of approach, QOL indices improved significantly.
SESSION 13: BLADDER CANCER PODIUM
Location: Americana 4
Moderators: Anthony L. Patterson, MD
Memphis, TN
Randall G. Rowland, MD, PhD
Lexington, KY

4:00 p.m. #93
EFFECTS OF PRE-OPERATIVE NUTRITIONAL DEFICIENCY ON 90-DAY MORTALITY AND OVERALL SURVIVAL IN PATIENTS UNDERGOING RADICAL CYSTECTOMY FOR BLADDER CANCER
Justin Gregg, Shady Salem, Sam Chang, Peter Clark, Michael Cookson, Rodney Davis, C.J. Stimson, Monty Aghazadeh, Joseph Smith and Daniel Barocas
Vanderbilt University Medical Center, Department of Urologic Surgery, Nashville, TN
(Presented By: Justin Gregg)

4:05 p.m. #94
PERIOPERATIVE BLOOD TRANSFUSION INCREASES THE RISK OF OVERALL MORTALITY IN PATIENTS UNDERGOING RADICAL CYSTECTOMY FOR BLADDER CANCER
Todd Morgan, Daniel Barocas, Sam Chang, Peter Clark, Shady Salem, Joseph Smith and Michael Cookson
Vanderbilt University Department of Urologic Surgery, Nashville, TN
(Presented By: Todd Morgan)

4:10 p.m. #95
FAST TRACK PROGRAM IN PATIENTS UNDERGOING RADICAL CYSTECTOMY: EXPERIENCE IN 362 CONSECUTIVE CASES
Stephen McKim, Eugene Simopoulos, Matthew Nielsen, Eric Wallen and Raj Pruthi
The University of North Carolina at Chapel Hill
(Presented By: Stephen McKim)

4:15 p.m. #96
SEALED BLADDER CUFF TECHNIQUE DURING LAPAROSCOPIC NEPHROURETERECTOMY UTILIZING THE LIGASURE™ ELECTROSURGICAL DEVICE: LABORATORY AND CLINICAL EXPERIENCE
Vanderbilt University Medical Center, Nashville, TN
(Presented By: Hernan O. Altamar)

4:20 p.m. #97
MULTI-INSTITUTIONAL ANALYSIS OF ROBOTIC RADICAL CYSTECTOMY FOR BLADDER CANCER: PERI-OPERATIVE OUTCOMES IN 227 PATIENTS
Matthew Raynor¹, Angela Smith¹, Christopher Amling², J. Erik Busby³, Erik Castle⁴, Rodney Davis⁵, Raju Thomas⁶, Matthew Nielsen¹, Eric Wallen¹ and Raj Pruthi¹
¹The University of North Carolina at Chapel Hill; ²Oregon Health Sciences University; ³University of Alabama at Birmingham; ⁴Mayo Clinic Scottsdale; ⁵Vanderbilt University; ⁶Tulane University
(Presented By: Matthew Raynor)

4:25 p.m. #98
THE INACCURACY OF COMPUTED TOMOGRAPHY IN PREOPERATIVE STAGING OF RADICAL CYSTECTOMY PATIENTS
C.J. Stimson¹, John E. Humphrey², Michael S. Cookson³, Peter E. Clark³, Daniel A. Barocas³, Joseph A. Smith, Jr.³ and Sam S. Chang³
¹Vanderbilt University School of Medicine; ²Lahey Clinic, Boston, MA; ³Vanderbilt Medical Center, Nashville, TN
(Presented By: C.J. Stimson)
4:30 p.m.  #99  ASSESSMENT OF THE 2002 AJCC NODAL STAGING OF BLADDER UROTHELIAL CARCINOMA
Sanjay Patel, Daniel Barocas, Michael Cookson, Peter Clark, David Penson, Joseph Smith and Sam Chang
Vanderbilt University Medical Center, Nashville, TN
(Presented By: Sanjay Patel)

4:35 p.m.  #100  USING HYPERBARIC OXYGEN TO TREAT RADIATION INDUCED HEMORRHAGIC CYSTITIS
Reza Mehrazin, Christopher Diblasio, Jamin Brahmbhatt, Ithaar Derweesh, Robert Wake, Michael Aleman, Anthony Patterson and Christopher Ledbetter
University of Tennessee Health Science Center at Memphis
(Presented By: Reza Mehrazin)

4:40 p.m.  #101  ARE COMPLETION RATES BETTER FOR NEOADJUVANT COMPARED TO ADJUVANT CHEMOTHERAPY IN PATIENTS UNDERGOING RADICAL CYSTECTOMY
Murugesan Manoharan, Devendar Katkoori, Elie Antabie, Rakesh Singal, Bruce Kava and Mark Soloway
University of Miami Miller School of Medicine, Miami, FL
(Presented By: Elie Antabie)

4:45 p.m.  #102  CHEMOKINE RECEPTOR CXCR7 IS A MOLECULAR DETERMINANT OF BLADDER CANCER
Samir Shirodkar¹, Miguel Gosalbez², Christopher Gomez², Soum Lokeshwar², Mark Soloway² and Vinata Lokeshwar²
¹University of Miami Urology; ²University of Miami
(Presented By: Samir Shirodkar)

4:50 p.m.  #103  DOES AGE AFFECT PRESENTATION AND OUTCOMES IN PATIENTS UNDERGOING RADICAL CYSTECTOMY FOR BLADDER CANCER?
Eugene Simopoulos, Stephen McKim, Elizabeth Dray, Angela Smith, Matthew Nielsen, Eric Wallen and Raj Pruthi
The University of North Carolina at Chapel Hill
(Presented By: Eugene Simopoulos)

4:55 p.m.  #104  BLOOD LOSS AND TRANSFUSION WITH ROBOTIC ASSISTED RADICAL CYSTECTOMY (RARC) VERSUS OPEN RADICAL CYSTECTOMY (ORC) FOR BLADDER CANCER
Shady Salem, Sam Chang, Michael Cookson, Rodney Davis, Roxy Baumgartner, Peter Clark, Joseph Smith, Jr. and Daniel Barocas
Department of Urologic Surgery Vanderbilt University Medical Center
(Presented By: Shady Salem)

5:00 p.m.  #105  DISCHARGE STATUS AFTER RADICAL CYSTECTOMY: WHAT DETERMINES WHERE OUR PATIENTS GO?
Monty Aghazadeh, Daniel Barocas, Shady Salem, Peter Clark, Michael Cookson, Rodney Davis, Justin Gregg, C.J. Stimson, Joseph Smith and Sam Chang
Vanderbilt University Department of Urologic Surgery, Nashville, TN
(Presented By: Monty Aghazadeh)

5:05 p.m.  #106  WHAT DO MOST PATIENTS WITH BLADDER CANCER ULTIMATELY SUCCUMB TO: A SINGLE INSTITUTION BLADDER CANCER REGISTRY WITH 25-YEAR FOLLOW-UP (1980 – 2004)
Alan Nieder¹ and Ana Ruiz²
¹Columbia University Division of Urology; ²Mount Sinai Medical Center, Miami Beach, FL
(Presented By: Alan Nieder)
RADICAL CYSTECTOMY AFTER BCG: HAS THE TIMING OF SURGERY IMPROVED IN RECENT YEARS?
Devendar Katkoori¹, Kristell Acosta¹, Mohan Ariyanayagam², Murugesan Manoharan¹ and Mark Soloway¹
¹University of Miami Miller School of Medicine, Miami, FL
(Presented By: Mohan Ariyanayagam)

PODIUM 93
EFFECTS OF PRE-OPERATIVE NUTRITIONAL DEFICIENCY ON 90-DAY MORTALITY AND OVERALL SURVIVAL IN PATIENTS UNDERGOING RADICAL CYSTECTOMY FOR BLADDER CANCER
Justin Gregg, Shady Salem, Sam Chang, Peter Clark, Michael Cookson, Rodney Davis, C.J. Stimson, Monty Aghazadeh, Joseph Smith and Daniel Barocas
Vanderbilt University Medical Center, Department of Urologic Surgery, Nashville, TN
(Presented By: Justin Gregg)

Introduction and Objectives: Poor preoperative nutritional status may be a risk factor for peri-operative mortality and poor overall survival after radical cystectomy (RC) and urinary diversion for bladder cancer. Our study aims to evaluate the effect of preoperative nutritional deficiency (ND), as measured by pre-operative BMI, weight loss and serum albumin, on peri-operative mortality and overall survival.

Methods: 789 consecutive patients underwent RC for urothelial carcinoma (UC) between January 2000 and December 2007. Patients with preoperative albumin < 3.5, BMI < 18.5 or pre-surgical weight loss > 5% of body weight were considered ND. 525/789 (66.5%) had all data points documented. Primary outcomes were 90-day mortality and overall survival. Survival rates were estimated using Kaplan-Meier analysis and compared using the log-rank test. Cox proportion hazards models were used for multivariate survival analysis.

Results: Mean age was 68.4 (SD 10.5), 79.4% were male and 4.3% were non-white. 105 of 525 patients (20%) met criteria for ND (71 [13.5%] weight loss; 17 [3.3%] low BMI; 32 [6.3%] low albumin). 90-day mortality was 7.1% overall (37 deaths); 15.4% in patients with ND and 5% in the others, p<0.01. Kaplan-Meier estimated 90-day survival was 83.3% (95% CI [74.1, 89.4]) for ND patients vs. 94.8% (92.1, 96.6) for others, p<0.01. ND was a strong predictor of death within 90 days on Cox proportional hazard model (HR 3.30, 95% CI [1.56, 6.95], p<0.01), controlling for age-adjusted Charlson comorbidity index (CCI), lymph node density, organ-confined vs. extravesical disease, peri-operative complications and number of units of blood transfused peri-operatively. Median follow-up of patients alive at last visit was 16.3 months and 181 (34.6%) patients had died. Overall survival at 3 years was 35.6% (24.2, 47.2) for patients with ND and 57.7% (51.2, 63.7) for other patients, p<0.01. On multivariate analysis, patients with ND had significantly higher risk of death (HR 1.64, 95% CI [1.13, 2.38], p<0.01), after controlling for age, CCI, race, sex, smoking history, preoperative hematocrit, estimated blood loss, pathological grade, tumor stage, histology (pure UC vs. mixed), lymph node density and number of units of blood transfused peri-operatively.

Conclusions: Nutritional deficiency, as measured by preoperative weight loss, BMI and serum albumin, is a strong predictor of 90-day mortality and poor overall survival in patients who have undergone RC for bladder cancer. Prospective studies are needed to demonstrate the most appropriate markers and indices of preoperative nutritional status and whether nutritional intervention can alter the poor prognosis for patients with nutritional deficiencies.

PODIUM 94
PERIOPERATIVE BLOOD TRANSFUSION INCREASES THE RISK OF OVERALL MORTALITY IN PATIENTS UNDERGOING RADICAL CYSTECTOMY FOR BLADDER CANCER
Todd Morgan, Daniel Barocas, Sam Chang, Peter Clark, Shady Salem, Joseph Smith and Michael Cookson
Vanderbilt University Department of Urologic Surgery, Nashville, TN
(Presented By: Todd Morgan)

Introduction and Objectives: Transfusion of blood products is known to have an immunosuppressive effect, and the use of peri-operative blood transfusions (PBT) may impair the immune surveillance of cancer cells. In fact, PBT in patients undergoing surgery for colon cancer is known to carry a significant recurrence and mortality risk. We therefore sought to evaluate whether PBT has any effect on overall survival following radical cystectomy (RC) among patients with bladder cancer.
Methods: The medical records of 789 consecutive patients undergoing RC from 2000 – 2007 for urothelial carcinoma of the bladder with or without other histologic elements were reviewed. PBT was defined as transfusion of packed red blood cells during cystectomy or within the hospital stay following surgery, and the primary outcome measure was overall survival. Clinical and pathologic variables were compared using chi-squared tests, and Cox multivariate survival analysis was performed. Mortality rates were estimated using the Kaplan-Meier product limit method.

Results: A total of 321 patients (40.2%) underwent PBT of an average of 3.1 units of packed red blood cells. Median follow-up was 16.1 months (1 – 91.5 months), and there have been 310 deaths (39.3%). In the Kaplan-Meier analysis (Figure), PBT was associated with a significantly increased mortality rate (p<0.0001). Controlling for age-adjusted Charleson comorbidity index, node density, stage, grade, margin status, pre-operative hematocrit, and blood loss, transfusion was associated with a significant mortality risk (HR 1.46, CI 1.06–2.00, p=0.02). The increased mortality risk associated with each transfused unit was 15% (HR 1.15, 1.06–1.24, p=0.04).

Conclusions: These data suggest that PBT carries significant mortality risk, independent of clinicopathologic factors. This effect occurred regardless of blood loss and in a dose-dependent fashion. The increased mortality risk shown here suggests that stringent requirements should be utilized for PBT in patients undergoing RC. Strategies to further reduce the need for transfusions should be actively pursued.

POD 95
FAST TRACK PROGRAM IN PATIENTS UNDERGOING RADICAL CYSTECTOMY: EXPERIENCE IN 362 CONSECUTIVE CASES
Stephen McKim, Eugene Simopoulos, Matthew Nielsen, Eric Wallen and Raj Pruthi
The University of North Carolina at Chapel Hill
(Presented By: Stephen McKim)

Purpose: This paper analyzes our current peri-operative management of patients undergoing cystectomy and urinary diversion utilizing advancements in peri-operative care to allow for early institution of an oral diet, early hospital discharge.

Methods: 362 consecutive patients underwent a radical cystectomy and urinary diversion with curative intent. Each underwent a peri-operative care plan (“fast track” program). Throughout our experience evidence-based modifications to this program were instituted. We analyzed the impact of these modifications and report the outcomes with the most recent 100 cases in which no further modification has been used.

Results: Mean age is 66.3 years with 44% of the patients being over the age of 70 and 12% over age 80. We have found no detrimental effects to immediate removal of the OG tube at the end of the procedure, but found a beneficial effect of empiric metoclopramide use with lower rates of nausea and vomiting (3% vs. 12%; p = 0.011). Peri-operative antibiotic coverage has been reduced to 24 hours as per AUA guidelines. Gum chewing has also been shown to be of benefit with regard to a more rapid recovery of bowel function (time to BM: 3.2 vs. 3.9 days; p < 0.001). The use of non-narcotic analgesics (e.g. ketrolac) have also been central in the pathway. Finally, the early institution of an oral diet has been an original and central component to our fast track program. The results in our most recent 100 patients are shown in the table.
Conclusions: A successful application of a fast track program has been applied to our patients undergoing radical cystectomy and urinary diversion with the potential to utilize evidence-based modifications to reduce morbidity and improve recovery.

<table>
<thead>
<tr>
<th>Mean Age (range)</th>
<th>66.9 years (33 – 86 years)</th>
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<tbody>
<tr>
<td>Mean ASA score (range)</td>
<td>2.7 (2 – 0)</td>
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<tr>
<td>Mean time to flatus</td>
<td>2.2 days</td>
</tr>
<tr>
<td>Mean time to RM</td>
<td>2.9 days</td>
</tr>
<tr>
<td>Mean time to Discharge</td>
<td>5.0 days</td>
</tr>
<tr>
<td>% DC on POD 4/5</td>
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<tr>
<td>Overall complication rate</td>
<td>39%</td>
</tr>
<tr>
<td>GI complication rate</td>
<td>15%</td>
</tr>
<tr>
<td>Readmission rate</td>
<td>12%</td>
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</tbody>
</table>

PODIUM 96
SEATED BLADDER CUFF TECHNIQUE DURING LAPAROSCOPIC NEPHROURETERECTOMY UTILIZING THE LIGASURE™ ELECTROSURGICAL DEVICE: LABORATORY AND CLINICAL EXPERIENCE
Vanderbilt University Medical Center, Nashville, TN
(Presented By: Hernan O. Altamar)

Introduction and Objectives: Laparoscopic nephroureterectomy (LNU) is a safe, minimally invasive approach for management of upper tract urothelial tumors. Controversy exists over the optimal technique for the distal ureter and bladder cuff excision. We examined the novel technique of using the LigaSure™ bipolar electrosurgical device in laboratory investigations and during clinical LNU to manage the distal ureter and bladder cuff.

Methods: Initial investigations were undertaken in the porcine model. Areas of both normal porcine ureters and bladders and ex vivo human ureters from radical nephrectomy specimens were sealed with the LigaSure™ and stained with NADH and hematoxylin and eosin to examine the length of treatment effect and the viability of the ablated tissue. Clinically, we performed 22 LNU for proximal urothelial tumors using the LigaSure™ for the management of the distal ureter and bladder cuff. Intraoperative cystoscopy assessed cuff resection and bladder leakage. On postoperative day 10, a cystogram was performed.

Results: In the porcine model, the technique sealed the bladder effectively with a mean burst pressure of 14mmHg. Cellular staining revealed no viable urothelial tissue in the seal area and an additional margin of 2mm outside this area. Eighteen patients had a successful seal/ablation intraoperatively. Cystoscopy revealed cautery artifact and blanching over the former position of the ureteral orifice.

Conclusions: The LigaSure™ device ablates and seals urothelial tissue with no viable cells in the clamped as well as the adjacent blanched tissue. Our technique is technically feasible, removes an adequate bladder cuff, typically maintains a closed urinary system, and adheres to sound oncological principles. This procedure could be performed in both laparoscopic and open NU for proximal upper tract transitional cell tumors.

PODIUM 97
MULTI-INSTITUTIONAL ANALYSIS OF ROBOTIC RADICAL CYSTECTOMY FOR BLADDER CANCER: PERI-OPERATIVE OUTCOMES IN 227 PATIENTS
Matthew Raynor¹, Angela Smith¹, Christopher Amling², J. Erik Busby³, Erik Castle⁴, Rodney Davis⁵, Raju Thomas⁶, Matthew Nielsen¹, Eric Wallen¹ and Raj Pruthi⁷
¹The University of North Carolina at Chapel Hill; ²Oregon Health Sciences University; ³University of Alabama at Birmingham; ⁴Mayo Clinic Scottsdale; ⁵Vanderbilt University; ⁶Tulane University
(Presented By: Matthew Raynor)

Purpose: Radical cystectomy remains one of the most effective treatments for patients with localized, invasive bladder cancer. Recently, some surgeons have begun to describe single institution case series with less-invasive surgical approaches to this disease such as laparoscopic or robotic-assisted techniques. We report on a multi-institutional, multi-surgeon experience with robotic-assisted laparoscopic radical cystectomy with regard to operative and pathologic outcomes and complications to evaluate the feasibility and reproducibility of this technique in a large cohort of patients with bladder cancer.

Methods: 227 patients (178 males and 49 females) underwent a robotic cystectomy and urinary diversion at one of four institutions. Operative outcomes, pathological results, and complications of this combined case series are herein reported.
Results: Mean age of this cohort was 67.1 years (range 33 – 86 years) with a mean ASA score of 2.7 (range 2 – 4). 168 patients (74%) underwent ileal conduit diversion, 58 (26%) underwent an orthotopic ileal neobladder, and 1 patient (<1%) required no diversion (ESRD). The urinary diversion was performed extracorporeally in 97% cases with 7 patients (3%) undergoing an intracorporeal diversion. Mean OR time of all patients was 5.4 hours and mean surgical blood loss was 256 ml. On surgical pathology, 128 (56%) patients had <=pT2 disease, 46 (20%) pT3/T4 disease, and 53 (23%) N+ disease. The mean number of lymph nodes removed was 18 (range 3 to 52). There was a positive surgical margin in 4 cases (1.7%) – all with pT3-4 disease. Mean (median) time to discharge was 5.5 days (5.0 days) with 157 patients (69%) discharged on POD#5 or sooner. Sixty-eight patients (30%) experienced complications with 7% having Clavien grade 3 or higher.

Conclusions: A combined multi-institutional experience with robotic radical cystectomy, bilateral pelvic lymphadenectomy, and urinary diversion appears to demonstrate acceptable operative and pathologic outcomes thus helping to validate the previously reported single institution case series. Ultimately, oncologic follow-up these patients will remain as the most important measure of therapeutic success.

PODIUM 98
THE INACCURACY OF COMPUTED TOMOGRAPHY IN PREOPERATIVE STAGING OF RADICAL CYSTECTOMY PATIENTS
C.J. Stimson¹, John E. Humphrey², Michael S. Cookson³, Peter E. Clark³, Daniel A. Barocas³, Joseph A. Smith, Jr.³ and Sam S. Chang³
¹Vanderbilt University School of Medicine; ²Lahey Clinic, Boston, MA; ³Vanderbilt Medical Center, Nashville, TN
(Presented By: C.J. Stimson)

Introduction and Objectives: For bladder cancer patients, computed tomography (CT) has become a mainstay in preoperative staging prior to radical cystectomy (RC). We sought to analyze the accuracy of preoperative CT imaging in staging nodal disease.

Methods: We reviewed prospectively collected data on 753 patients undergoing RC for bladder cancer from January 2001 to December 2007. Preoperative CT scans within three months of the operation were correlated to the patients’ pathologic staging at the time of RC and bilateral lymphadenectomy.

Results: Of the 753 patients in this series, 135 did not have adequate preoperative imaging reports or CT scans, leaving 618 patients with adequate data. CT demonstrated significant lymphadenopathy in 39 cases (6%). 156 patients (25%) were found to have pathologically positive lymph nodes following RC. CT imaging predicted pathologic lymphadenopathy in 17 of these patients, yielding a sensitivity of 11% (17/156), whereas the specificity was 95% (440/462). Positive predictive value was 44% (17/39) and negative predictive value was 76% (440/579).

Conclusions: In our population, preoperative CT imaging was only accurate in identifying 11% of patients with positive nodal disease. Although there is high specificity (95%), positive predictive value was only 44%. Therefore, the majority of patients who have suspected pathologic lymphadenopathy preoperatively are found to be without node positive disease following RC. With advancements in neoadjuvant chemotherapies, it will be important to accurately stage bladder cancer preoperatively. Our results point to an area of needed improvement in imaging interpretation and technique for preoperative nodal staging in bladder cancer patients.
Introduction and Objectives: Nodal staging of bladder urothelial carcinoma (UC) per American Joint Committee on Cancer (AJCC) staging criteria utilizes both quantity and size of positive nodes. We sought to compare the overall survival of patients using the AJCC nodal staging system particularly between N1 and N2 disease as well as the impact of the total number of nodes collected during cystectomy.

Methods: We reviewed our database of 718 consecutive patients from 2001 – 2007 who underwent radical cystectomy for bladder cancer with pure or mixed histology UC. Patients with NX nodal staging were excluded from analysis. Survival rates were estimated using Kaplan-Meier analysis and compared with the log rank test. The Cox proportion hazards model was used for multivariate survival analysis.

Results: A total of 638 patients met inclusion criteria. Mean age at cystectomy was 67.3 years (17.5–94.3) with mean follow-up time of 22 months (1–91 months). Four hundred eighty-nine 489/638 (76.5%) patients were classified as N0, 64/638 (10.0%) were classified as N1, and 85/638 (13.3%) were classified as N2. The 5-year overall survival was 54.4%, 18.3%, and 15.4% (p<0.001) in order of increasing N stage (N0, N1, N2). There was no significant difference in univariate overall survival between N2 and N1 disease (p=0.17), while there was a difference between N1 vs. N0 and N2 vs. N0. On multivariate analysis age, increasing bladder tumor stage, Charlson Comorbidity Index (CCI) >4, and positive surgical margins were predictors of an adverse outcome, while number of nodes collected predicted favorable outcome (HR=0.97 [0.95–0.99], p=0.01). There was no increased risk of adverse outcome between N1 and N2 disease (N2 vs. N1 – HR: 1.13 [0.72–1.78], p=0.585; N0 vs. N1 – HR: 0.60 [0.46–1.00], p=0.05). The concordance for the analysis was 0.74.

Conclusion: There was no difference in survival between the nodal staging of N1 vs. N2 disease which suggests that the 2002 AJCC nodal staging criteria should undergo revision. Furthermore, survival improves with increasing numbers of lymph nodes removed during cystectomy which presumably allows for identification of high risk patients who may benefit from additional therapy.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Haz. Ratio</th>
<th>[95% Conf. Interval]</th>
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<tbody>
<tr>
<td>Age</td>
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<td>1.01 - 1.04</td>
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<tr>
<td>CCI 0-4</td>
<td>1.00</td>
<td></td>
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<tr>
<td>CCI &gt;4</td>
<td>2.38</td>
<td>1.14 - 4.97</td>
</tr>
<tr>
<td>pT1</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>pT2</td>
<td>2.17</td>
<td>1.44 - 3.28</td>
</tr>
<tr>
<td>pT3</td>
<td>3.10</td>
<td>2.09 - 4.59</td>
</tr>
<tr>
<td>pT4</td>
<td>4.84</td>
<td>3.00 - 7.80</td>
</tr>
<tr>
<td>N1</td>
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</tr>
<tr>
<td>N0</td>
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<td>0.46 - 1.00</td>
</tr>
<tr>
<td>N2</td>
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<tr>
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<td></td>
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<tr>
<td>Pos Margin</td>
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<tr>
<td>Total Nodes</td>
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</tr>
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</table>
PODIUM 100
USING HYPERBARIC OXYGEN TO TREAT RADIATION INDUCED HEMORRHAGIC CYSTITIS
Reza Mehrazin, Christopher Diblasio, Jamin Brahmbhatt, Ithaar Derweesh, Robert Wake, Michael Aleman, Anthony Patterson and Christopher Ledbetter
University of Tennessee Health Science Center at Memphis
(Presented By: Reza Mehrazin)

Purpose: Hemorrhagic cystitis is a potential complication of pelvic radiotherapy for treatment of pelvic malignancies, occurring between 6 months to 10 years following therapy. In cases refractory to non-surgical and/or intravesical instillation therapies, hyperbaric oxygen therapy (HBO) has emerged as a potential treatment option. Herein, we present our single-center experience with HBO for refractory hemorrhagic cystitis.

Material and Methods: After IRB approval, we studied all men receiving HBO at a single center (Regional Medical Center, Memphis) between 2/2002 – 11/2007. Overall, 18 patients with radiation-induced hemorrhagic cystitis were treated with HBO. The HBO treatment protocol employed involved 30 dives of 90 minutes duration at 2.4 atmospheres absolute. Follow-up ranged from 9 months to 72 months post-HBO.

Results: The primary pathological diagnoses were prostate cancer (55.6%), cervical cancer (33.3%) and bladder cancer (11.1%). Mean patient age was 63 years (range: 53 – 82). Of the 18 patients, 8 (44.4%) experienced complete resolution, 6 (33.3%) experienced <5 episodes of mild recurrent hematuria post-HBO, while only 2 (11.1%) experienced >5 episodes of mild recurrent hematuria. One patient required cystectomy post-HBO for severe hematuria requiring repeat transfusion. 1 patient died of malignancy. Of the 8 patients with recurrent hematuria, 5 had received less than the optimal 30 dives protocol. Anxiety was the most common reason for premature termination of therapy (4 out of 8), followed by earache (2 out of 6), pain (1 out of 8), and fluctuation in blood pressure (1 out of 8).

Conclusion: HBO for radiation-induced hemorrhagic cystitis may provide an efficacious alternative therapy for patients failing other interventions. Patients must be counseled on the possible complications of this therapy, and the potential for recurrent hematuria if HBO treatment is not completed to the recommended number of dives.

PODIUM 101
ARE COMPLETION RATES BETTER FOR NEOADJUVANT COMPARED TO ADJUVANT CHEMOTHERAPY IN PATIENTS UNDERGOING RADICAL CYSTECTOMY?
Murugesan Manoharan, Devendar Katkoori, Elie Antabie, Rakesh Singal, Bruce Kava and Mark Soloway
University of Miami Miller School of Medicine, Miami, FL
(Presented By: Elie Antabie)

Introduction and Objective: Chemotherapy has been shown to improve survival in patients undergoing radical cystectomy (RC) for muscle invasive bladder cancer (MIBC). Once the decision is made to administer chemotherapy, planned number of cycles should be completed at the optimal dosage to achieve maximum benefit. In this study we evaluated the completion rates of neoadjuvant (NAC) compared to adjuvant chemotherapy (AC) in the setting of RC for MIBC.

Patients and Methods: We performed a retrospective analysis of patients who underwent RC by a single surgical team between 1992 and 2008. Patients who received NAC and those with high-risk BC receiving AC were identified and relevant data analyzed. NAC was advised for patients with clinical stage >T2, hydronephrosis, or in the presence of extensive lymphovascular invasion (LVI) / prostatic stromal invasion. Typically, patients with pathological stage > T2, and/or positive lymph nodes were considered for adjuvant chemotherapy.

Results: 550 patients underwent RC. Among the 95 patients who were offered NAC, 83(87.5%) initiated NAC. 202 patients were eligible for AC based on pathology and 68 (33.5%) initiated (p<0.001) AC. In the NAC group 55 received at least 3 cycles of chemotherapy, 21 completed 2 cycles as planned and 7 (8.5%) did not complete planned chemotherapy. In the AC group 48 completed at least 4 cycles. 20 (29.5%) could not complete the planned cycles (p=0.003). (Table 1)The reasons for not initiating/ not completing chemotherapy and complications are given in the table.

Conclusions: When chemotherapy is indicated in patients with high-risk bladder cancer, those offered NAC are more likely to initiate and complete the planned number of cycles compared to those offered adjuvant chemotherapy.
Introduction and Objectives: Inflammatory chemokines and cytokines promote cancer growth and metastasis. CXCR7 and CXCR4 are G-protein coupled receptors of stromal-derived factor-1 (SDF-1). Very few studies have examined CXCR7 expression and function in cancer and none have been conducted in bladder cancer (BCa). We examined CXCR4 and CXCR7 expression in bladder tissues and in urine specimens and evaluated CXCR4 and CXCR7 function in BCa cell lines.

Methods: BCa tissues (n=43) were collected from patients undergoing surgery. Normal bladder (NBL) tissues were collected from organ donors or at the time of cystectomy. Urine specimens were collected from 149 study individuals (BCa = 53; normal = 17; benign urologic conditions = 48; history of BCa: 31). RNA was isolated from tissues and exfoliated cells and subjected to real time RT−PCR for CXCR4 and CXCR7; mRNA expression was normalized to 18S RNA. CXCR4 and CXCR7 protein expression in tissues was evaluated by immunohistochemistry. CXCR4 and CXCR7 functions in BCa cell lines were examined by siRNA transfection.

Results: CXCR7 but not CXCR4 mRNA levels were 5-fold elevated in BCa tissues (1.56 +/- 0.46) when compared to NBL tissues (0.26 +/- 0.1; P < 0.001). CXCR7 staining increased in BCa tissues (189 +/- 97.7) when compared to NBL tissues (28 +/- 37.7; P < 0.001). The staining correlated with mRNA levels (Pearson's r = 0.81; P < 0.001). Urinary CXCR7 mRNA levels had high sensitivity (84.3%; high-grade BCa: 91.7%) and specificity (79.4%) to detect BCa when compared to CXCR4 levels (43.3% and 76.5%). Transfection of BCa cells by CXCR7 siRNA (but not CXCR4) induced apoptosis (2.5-fold) with a concomitant ~ 3-fold increase in caspase-3 activation and PARP cleavage.

Conclusions: This is the first report that shows CXCR7 expression is up-regulated in BCa. It may be a marker for BCa detection and promote BCa growth and progression.

Funding: NIH 2R01CA72821-10, Florida Bankhead Coley Cancer Research Program.
PODIUM 103
DOES AGE AFFECT PRESENTATION AND OUTCOMES IN PATIENTS UNDERGOING RADICAL CYSTECTOMY FOR BLADDER CANCER?
Eugene Simopoulos, Stephen McKim, Elizabeth Dray, Angela Smith, Matthew Nielsen, Eric Wallen and Raj Pruthi
The University of North Carolina at Chapel Hill
(Presented By: Eugene Simopoulos)

Purpose: Bladder cancer is predominately a disease of the elderly, with the median age at diagnosis of 73 years. As our population continues to age and longevity increases, we can expect to face an increasing number of elderly patients with varying degrees of pathology. This study sought to analyze the influence of age on demographics, clinical presentation, and operative and pathologic outcomes of patients under radical cystectomy for bladder cancer.

Methods: From a cystectomy cohort of 460 patients (2001 – 2008), 363 patients underwent radical cystectomy and urinary diversion with curative intent and had complete demographic and clinical records and at least 1 year of follow-up. From this cohort, the impact and differences based on age was evaluated with regard to clinical parameters and surgical pathology. For analysis, patients were categorized as follows: < 60; 60−69; 70−79; and >=80.

Results: Of patients undergoing cystectomy, 26% were age < 60, 31% were 60−69, 32% were 70−79, and 11% >=80. Interestingly, there was a decreasing trend of current smokers (65% vs. 38% vs. 20% vs. 11%) and increasing trend of never smokers (8% vs. 19% vs. 17% vs. 25%) based on age. No such trends were observed with regard to alcohol use. Also, there were no age-related trends for gender, but an increasing % of Caucasians (71% vs. 81% vs. 88% vs. 95%). There were no significant differences in pre-op renal function based on age, but older patients had a higher 6 month post-op creatinine and greater deterioration in renal function. No differences were observed with EBL or length of stay, except for an increasing trend in use of ileal conduits (30% vs. 68% vs. 91% vs. 100%).

Conclusions: The present analysis demonstrates differences in clinical, operative, and pathologic characteristics based on age in patients undergoing radical cystectomy for bladder cancer.

PODIUM 104
BLOOD LOSS AND TRANSFUSION WITH ROBOTIC ASSISTED RADICAL CYSTECTOMY (RARC) VERSUS OPEN RADICAL CYSTECTOMY (ORC) FOR BLADDER CANCER
Shady Salem, Sam Chang, Michael Cookson, Rodney Davis, Roxy Baumgartner, Peter Clark, Joseph Smith, Jr. and Daniel Barocas
Department of Urologic Surgery Vanderbilt University Medical Center
(Presented By: Shady Salem)

Introduction and Objectives: Blood loss and transfusion are important outcomes of radical cystectomy for bladder cancer. We undertook this comparison of ORC and RARC to determine whether surgical approach affects blood loss and likelihood of transfusion.

Methods: We studied 147 consecutive patients who underwent RARC (34) or ORC (113) for bladder cancer between December 2007 and July 2009. RARC cases were done using da Vinci S robot and urinary diversion was done through mini laparotomy. Data was collected prospectively. Characteristics of the RARC and ORC groups were compared using Wilcoxon and Fisher’s exact tests. Multivariate models were developed to for blood loss (linear regression) and transfusion (logistic regression), controlling for age, sex, preoperative hematocrit, presence of extravesical disease, lymph nodes status and operative time.
Results: In the entire cohort, 35 (24.1%) patients were females and mean age was 65±11.7. Fewer patients in the RARC group were female (5.9% vs. 29.7%, p=.002), had muscle-invasive disease on biopsy (35.3% vs. 61.9%, p=.026) and extravesical disease on final pathology (24.2% vs. 47.8%, p=.012). Operative time was longer in the RARC group (median 368 vs. 276 minutes, p<.001) and length of hospital stay was shorter (mean 6.2 vs. 6.9 days, p=.001). There were no statistically significant differences in lymph node yield (median 12 [IQR 9–15] vs. 14 [IQR 9–20], p=.105), minor complications (21.2% vs. 23.0%, p=.517) or major complications (6.1% vs. 8.0%, p=.529).

RARC patients had significantly lower blood loss than ORC patients (349 ± 212cc vs. 767 ±612cc p<.001). Only 5 (15.1%) patients in the RARC group required transfusion (each had 2 units) vs. 58 (52.7%) in ORC group (2 – 20 units). On multivariate analysis RARC was strongly associated with less blood loss (coefficient – 583. 95% CI [−884, −283], p<.001) and lower likelihood of transfusion (OR .07, 95% CI [0.01, 0.3], p<.001). Other factors influencing the likelihood of transfusion were low preoperative hematocrit (OR 0.90, 95% CI [0.81, 0.99], p=.036), older age (OR 1.09, 95% CI [1.03, 1.16], p=.002) and female sex (OR 5.82, 95% CI [1.62, 20.9] p=.007), while presence of extravesical disease, lymph node positive disease, total nodes resected and operative time were not significant.

Conclusion: RARC is associated with lower blood loss and lower likelihood of transfusion than ORC, even when controlling for preoperative hematocrit, demographic, operative and disease characteristics.

PODIUM 105
DISCHARGE STATUS AFTER RADICAL CYSTECTOMY: WHAT DETERMINES WHERE OUR PATIENTS GO?
Monty Aghazadeh, Daniel Barocas, Shady Salem, Peter Clark, Michael Cookson, Rodney Davis, Justin Gregg, C.J. Stimson, Joseph Smith and Sam Chang
Vanderbilt University Department of Urologic Surgery, Nashville, TN
(Presented By: Monty Aghazadeh)

Objective: To describe the discharge status of patients after radical cystectomy for bladder cancer and to determine factors affecting discharge status.

Methods: The cohort consisted of 445 patients who underwent radical cystectomy for urothelial carcinoma with or without other histologic elements from January 2004 to December 2007. Five patients with incomplete data were excluded. Patients were grouped by discharge status into 1 of 4 groups: Home under self-care [Home alone]; Home with home health services [Home with services]; Subacute care facility/ nursing home/rehabilitation facility/skilled nursing facility [Facility]; or Hospice/in-hospital mortality [Mortality]. The home alone, home with services and facility groups were compared with respect to clinical, peri-operative and pathologic variables using Kruskal-Wallis tests and Fisher exact tests where appropriate. A multinomial logistic regression model (controlling for age, pre-op albumin, marital status, living alone preoperatively, insurance status, pre-op exercise tolerance, Charlson Comorbidity Index (CCI), blood transfusion, surgical margin status, length of stay and complications) was fit to identify variables associated with discharge status. We also tested the association between discharge status and readmission rate and 90 day mortality.

Results: 250 of 440 patients (56.8%) were discharged to home alone; 145 (32.9%) were discharged home with services; 39 (8.9%) were discharged to a facility; 6 (1.4%) were mortalities. On univariate analysis, patients discharged to Home with services or to a Facility were older, more likely to live alone, to be unmarried (single, divorced or widowed), to have poor preoperative exercise tolerance (< 3 METs), to have undergone a peri-operative transfusion, have a positive surgical margin, a longer hospital stay and a higher rate of complications. Older age, lower preoperative albumin, being unmarried, and higher CCI were predictors of home with services on multivariate analysis. Older age, poor preoperative exercise tolerance, positive surgical margins and longer hospital stay predicted discharge to a Facility. Patients who were discharged to a Facility were more likely to suffer mortality within 90 days of surgery than patients who went home independently or with services (20.5% vs. 4.0%, 4.8%, p<0.001). There was no difference in the likelihood of readmission.

Conclusion: Sociodemographic factors, preoperative performance status and comorbidities, and perioperative factors contribute to the discharge decision after radical cystectomy. Some subgroups can be predicted to have increased post-operative care needs and may be appropriate targets for disposition planning preoperatively.
PODIUM 106
WHAT DO MOST PATIENTS WITH BLADDER CANCER ULTIMATELY SUCCUMB TO: A SINGLE INSTITUTION BLADDER CANCER REGISTRY WITH 25-YEAR FOLLOW-UP (1980 – 2004)

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(Presented By: Alan Nieder)

Introduction: Over 60,000 cases of bladder cancer (BC) are diagnosed each year in Americans, a large percentage of which are likely related to tobacco use, which is also a significant risk factor for cardiopulmonary disease. We have previously demonstrated that there have been no significant improvements in patients presenting with advanced disease over the last 25 years. We now sought to evaluate if there have been any significant trends in cause of death and or tobacco usage over this time period in our patient population which includes a high percentage of Hispanics and foreign-born subjects.

Methods: A single institution’s (Mount Sinai Medical Center) tumor registry was retrospectively evaluated for all cases of BC since the registry’s inception (1980). All cases were evaluated and analyzed by stage, age, sex and ethnicity at diagnosis. 5- and 10-year survival data was analyzed. We specifically analyzed cause of death (including secondary malignancies) and tobacco history.

Results: Between 1980 and 2004, we identified 1,436 cases of BC at our single institution. 74% of patients were male and 26% were female. White, black and Hispanic patients comprised 81%, 2%, and 14%, respectively. Most patients were diagnosed with non-invasive vs. muscle-invasive disease: 81% and 19%, respectively. Non-contemporary patients had worse survival. 5-year overall survival in patients diagnosed in the 1980s, 1990s and 2000s were: 46%, 54% and 55%, respectively. Of the 1,055 of patients who expired during the study period (73%), the cause of death was BC, cardiopulmonary disease and secondary malignancy in 22%, 36% and 8%, respectively. Of our cohort, over 50% were identified as tobacco users (including 21% who were current smokers at the time of their diagnosis).

Conclusions: Over a 25-year period, we identified 1,436 patients with BC. While BC is the most expensive cancer to treat, for those patients with low-grade non-invasive lesions, a far greater percentage of patients expired from a secondary malignancy or from cardiopulmonary disease (as opposed to BC). Tobacco usage likely plays a large etiologic role in the development of BC and other malignancies, as well as cardiopulmonary disease. Future investigations should be initiated to evaluate the specific benefits of tobacco cessation as it relates to BC and cardiopulmonary disease in this specific patient population. Furthermore, patients need to be made aware of the likely natural history of BC in relationship with, and taking into effect, their co-morbidities, which for most patients will have a far greater impact on their future morbidity and mortality.

PODIUM 107
RADICAL CYSTECTOMY AFTER BCG: HAS THE TIMING OF SURGERY IMPROVED IN RECENT YEARS?
Devendar Katkoori¹, Kristell Acosta¹, Mohan Ariyanayagam², Murugesan Manoharan¹ and Mark Soloway¹
¹University of Miami Miller School of Medicine, Miami, FL; ²University of Miami School of Medicine, Miami, FL
(Presented By: Mohan Ariyanayagam)

Introduction and Objectives: Intravesical BCG is commonly used to treat patients with high-grade Ta, T1 and CIS bladder cancer (BC). Since BCG is not uniformly effective, it is of utmost importance that patients receiving BCG are evaluated carefully and immunotherapy should be abandoned in favor of a radical cystectomy (RC) at the earliest evidence of high-grade recurrence. The timing of RC is crucial given that the survival following RC is directly related to the pathologic stage. If RC is performed before progression to muscle invasion (<pT2), as is the case when BCG is first initiated, the cancer specific survival is over 90%. However, the 5-yr survival declines to less than 70% for muscle invasive BC. With increasing data and awareness on BCG failure in the past few years, it is anticipated that the timing of RC will improve and more patients will undergo RC before adverse pathologic progression. In this study we analyzed if there was a trend in recent years towards performing RC at an earlier stage.

Methods: A retrospective analysis of our RC database was performed to identify patients who underwent RC after BCG treatment. The majority of the patients were referred by community urologists for evaluation and treatment following one or more courses of BCG for non-muscle invasive BC. Relevant clinical and pathological data were analyzed. The final pathologic stage for patients who underwent RC from 2003 to 2007 (group 1) was compared to those operated between 1992 and 2002 (group 2).
**Results:** 152 patients were included, 75 in group 1 and 77 in group 2. The groups were similar in tumor stage prior to initiation of BCG, number of BCG cycles and time interval from first BCG to RC. Patients receiving neoadjuvant chemotherapy were excluded. The proportion of patients with <pT2 BC has remained the same (p=0.5). 52% of group 1 and 43% of group 2 had ≥pT2 BC with 32% and 26% having extravesical BC (pT3/ pT4). 16% of group 1 and 11% in group 2 were N+.

**Conclusions:** The timing of RC has not improved in recent years. A high proportion of patients undergoing RC after receiving BCG have pT2 or higher BC. A bladder preservation approach should be discontinued at the first indication of persistent or recurrent high grade BC.

![Figure 1: Comparison of pathologic stage at the time of radical cystectomy over time. (p=0.5)]
7:00 a.m. – 8:30 a.m.  
**CONCURRENT SESSIONS**  
**SESSION 14: PROSTATE – NON CANCER / ROBOTICS / MISCELLANEOUS PODIUM**  
Location: Americana 4  
Moderators: E. James Seidmon, MD  
Jackson, MS  
Li-Ming Su, MD  
Gainesville, FL  

7:00 a.m. #108 RESTORATION OF FUNCTIONAL MUSCLE BY NEUROTIZATION WITH A NERVE CONDUIT  
Sung B. Kang, Tamer Aboushwareb, Anthony Atala and James Yoo  
Department of Urology and Institute for Regenerative Medicine, Wake Forest University Health Sciences, Winston Salem, NC  
(Presented By: Tamer Aboushwareb)

7:05 a.m. #109 COST EFFECTIVENESS OF TRANSURETHRAL RESECTION OF THE PROSTATE: MONOPOLAR VS BIPOLAR IN PANAMA  
Marcos Young¹, Juan M. Vasquez² and Viannette Montagne²  
¹CSS, Panama, Panama  
(Presented By: Marcos Young)

7:10 a.m. #110 EFFICIENT RECOVERY OF BLOOD-DERIVED PROGENITOR CELLS FOR CLINICAL TRANSLATION  
Bryan Tillman¹, Tamer Aboushwareb², Saami K. Yazdani³, Randolph L. Geary⁴, Matthew A. Corriere⁵, Anthony Atala² and James Yoo²  
¹Department of Urology and Institute for Regenerative Medicine, ²Department of Vascular and Endovascular Surgery, Wake Forest University Health Sciences, Winston-Salem, NC; ³Department of Urology and Institute for Regenerative Medicine, Wake Forest University Health Sciences Winston Salem, NC; ⁴Department of Biomedical Engineering, Wake Forest University Health Sciences Winston Salem, NC  
(Presented By: Tamer Aboushwareb)

7:15 a.m. #111 WITHDRAWN

7:20 a.m. #112 LAPAROSCOPIC PYELOPLASTY: ARE THERE PREDICTORS FOR FAILURE?  
Vinh Trang, J. Nathaniel Hamilton, Robert Jansen and Stephen Savage  
Medical University of South Carolina (MUSC), Charleston, SC  
(Presented By: Vinh Trang)

7:25 a.m. #113 MICROLAPAROSCOPIC 2-MM HYBRID LAPAROSCOPIC PYELOPLASTY: AN EVOLVING APPROACH IN MINIMALLY INVASIVE COMPLEX RENAL RECONSTRUCTIVE SURGERY  
Hernan O. Altamar, Davis P. Viprakasit, S. Duke Herrell and Benjamin Whittam  
Vanderbilt University Medical Center, Nashville, TN  
(Presented By: Hernan O. Altamar)
LONG-TERM INFECTION RATES IN DIABETIC PATIENTS IMPLANTED WITH ANTIBIOTIC-IMPREGNATED VERSUS NON-IMPREGNATED INFLATABLE PENILE PROSTHESES: 7-YEAR OUTCOMES
John J. Mulcahy¹, Culley C. Carson III² and Manya R. Harsch³
¹Department of Urology, University of Arizona, Paradise Valley, AZ; ²University of North Carolina at Chapel Hill, Chapel Hill, NC; ³American Medical Systems, Minnetonka, MN
(Presented By: John J. Mulcahy)

INTEGRATED, DUAL SCAFFOLDING SYSTEM FOR THE ENGINEERING OF COMPOSITE TISSUES
Mitchell Ladd, Tamer Aboushwareb, Sang J. Lee, Anthony Atala and James Yoo
Department of Urology and Institute for Regenerative Medicine, Wake Forest University Health Sciences, Winston-Salem, NC
(Presented By: Tamer Aboushwareb)

URETEROARTERIAL FISTULAS: A RARE ENTITY MANAGED WITH COVERED ENDOVASCULAR STENT-GRAFTS
Stephen Johnson¹, Dennis Venable², Elmajian Donald³ and Gomelsky Alexander²
¹LSUHSC Department of Urology, Shreveport, LA; ²LSUHSC-S Department of Urology, Shreveport, LA; ³LSUHSC-S Department of Vascular Surgery, Shreveport, LA
(Presented By: Stephen Johnson)

HOLMIUM LASER ENUCLEATION OF ABLATED PROSTATE (HOLEAP): AN INNOVATIVE SURGICAL TECHNIQUE FOR BENIGN PROSTATIC HYPERPLASIA
Tony John, Ashish Sabharwal and Sanjay Razdan
International Robotic Prostatectomy Institute, Miami, FL
(Presented By: Sanjay Razdan)

IS RETROGRADE EJACULATION IN SILODOSIN-TREATED MEN ASSOCIATED WITH GREATER IMPROVEMENT IN SYMPTOMS OF BENIGN PROSTATIC HYPERPLASIA (BPH)?
Claus G. Roehrborn¹, Herbert Lepor², Steven A. Kaplan³, Lawrence A. Hill⁴, Weining Volinn⁴ and Gary Hoel⁴
¹UTSW Medical Center, Dallas, TX; ²NYU School of Medicine, New York, NY; ³Weill Medical College, Cornell Univ., New York, NY; ⁴Watson Laboratories, Salt Lake City, UT
(Presented By: Steven A. Kaplan)

RAPID EFFECTS OF SILODOSIN ON IRRITATIVE AND OBSTRUCTIVE SYMPTOMS OF BENIGN PROSTATIC HYPERPLASIA (BPH) IN 2 PHASE 3 STUDIES
Marc C. Gittelman¹, Lawrence A. Hill², Weining Volinn² and Gary Hoel²
¹South Florida Medical Research, Aventura, FL; ²Watson Laboratories, Salt Lake City, UT
(Presented By: Marc C. Gittelman)

EFFICACY AND SAFETY OF SILODOSIN IN DIFFERENT AGE GROUPS OF MEN WITH SYMPTOMS OF BENIGN PROSTATIC HYPERPLASIA (BPH)
Marc C. Gittelman¹, Lawrence A. Hill², Weining Volinn² and Gary Hoel²
¹South Florida Medical Research, Aventura, FL; ²Watson Laboratories, Salt Lake City, UT
(Presented By: Marc C. Gittelman)
PODIUM 108

RESTORATION OF FUNCTIONAL MUSCLE BY NEUROTIZATION WITH A NERVE CONDUIT

Sung Bum Kang, Tamer Aboushwareb, Anthony Atala and James Yoo
Department of Urology and Institute for Regenerative Medicine, Wake Forest University Health Sciences Winston Salem, NC
(Presented By: Tamer Aboushwareb)

Introduction and Objectives: Direct nerve transfer into denervated muscle (neurotization) is indicated in patients who lack a distal nerve segment for anastomosis. Until recently, there have been no studies investigating neurotization using a nerve conduit to allow innervation over a long nerve gap in denervated muscle. We investigated whether a nerve conduit could induce regeneration of axon and the neuromuscular junction and restore denervated muscle function.

Methods: Seventy-two Lewis rats were evaluated in three groups: a normal control group (n=8); a denervated group (n=32); and a neurotization group (n=32). Denervation was created by removing a 10mm segment of the sciatic nerve branches. Neurotization was achieved by connecting a 10 mm nerve conduit from the truncated common peroneal nerve and implanted directly into the native gastrocnemius muscle after excision of tibial nerve and sensory nerve branch. Neurofunctional behavior and histological evaluations were performed at 4, 8, 12 and 20 weeks.

Results: Extensor postural thrust (EPT) and compound muscle action potential amplitude (CMAP) were significantly improved in the neurotization group (P < 0.05), although at 20 weeks they were still significantly different than the normal control group (EPT, P < 0.001; CMAP amplitude, P < 0.001). Regeneration of axons and the neuromuscular junction were demonstrated in the neurotization group.

Conclusion: Neurotization using a nerve conduit can regenerate axons and restore neuromuscular junctions in the completely denervated muscle. This study is the first report showing that nerve conduits can be used in neurotization procedures to repair a long nerve gap, which lacks a distal nerve segment for anastomosis.

Funding: OTRP-Department of Defense.

PODIUM 109

COST EFFECTIVENESS OF TRANSURETHRAL RESECTION OF THE PROSTATE: MONOPOLAR VS BIPOLAR IN PANAMA

Marcos Young¹, Juan Materno Vasquez² and Viannette Montagne²
¹CSS, Panama, Panama
(Presented By: Marcos Young)

Introduction and Objectives: Transurethral prostate resection is the most popular operation for symptomatic BPH in Panama. The success ratio of this surgery is around 88%. The morbidity rate associated with this surgery is around 7 to 43%. The principal complications include peri-operative bleeding and TUR syndrome (1%). TUR syndrome is associated with prolonged hospitalization and higher cost. These patients can develop severe renal insufficiency and dialysis. The clinical outcomes of the procedures have already been described and are similar. The ability of the bipolar system to work in a saline environment has the potential of minimizing the TUR syndrome. We present our experience when changing from monopolar to bipolar TURP, showing the financial benefits with the prevention of the TUR syndrome.
Materials and Methods: In 2006, our institution performed 237 consecutive cases using monopolar traditional TURP. In 2007 we performed 237 surgeries using bipolar resection, with Gyrus-ACMI PK equipment. No changes were made in the evaluation protocol or peri-operative management of theses pts. We analyzed the cost of the materials used, the excess of hospitalization days when TUR syndrome is present and the variation in cost.

Results: For monopolar TURP, 3 pts. develop acute renal insufficiency requiring hemodialysis. The mean hospitalization time for these cases was 28 days. All of these pts. needed 6 dialysis sessions. For bipolar TURP, no cases of acute renal failure were registered. For this analysis, the dialysis cost is $180 and the average hospitalization day is $250. No differences in age, IPSS score symptoms and other co-morbidities. Other complications had similar rates. Average hospitalization was 3 days for both groups. For monopolar resection the cost of disposables was $32,795.92. Additional cost for dialysis was $3,240 and this group had 28 additional hospitalization days, for a cost of $21,000. The total expense for monopolar resection was $57,035.92. For bipolar resection the cost of disposables was $54,310. The cost for TUR syndrome prevention was B/2,725.

Conclusions: In our experience, the introduction of bipolar resection for TURP was more expensive than monopolar resection. The principal difference was the cases of acute renal failure prevented with the bipolar system. The additional cost of the treatment of the complications exceeded the cost of the disposables. In terms of public health, bipolar resection of the prostate is a cost effective intervention in our country. Currently, we only performed TURP in our hospital with the bipolar system.

PODIUM 110
EFFICIENT RECOVERY OF BLOOD-DERIVED PROGENITOR CELLS FOR CLINICAL TRANSLATION
Bryan Tillman¹, Tamer Aboushwareb², Saami K. Yazdani³, Randolph L. Geary⁴, Matthew A. Corriere⁵, Anthony Atala² and James Yoo²
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(Presented By: Tamer Aboushwareb)

Introduction: Circulating progenitor cells have increasingly become a centerpiece of research for regenerative medicine applications. Despite their extensive utility, the efficient recovery of autologous progenitor cells, in particular, remains a significant obstacle in translating cell-based therapies. Cells expressing CD133 constitute a population of multi-potential progenitor cells found in the circulation. We developed an extracorporeal cellular affinity (ECA) system that would allow selective recovery of these circulating progenitor cells from the entire blood volume of the donor while returning unbound cell types and plasma back to the donor. In this study ECA columns directed towards CD133 or an isotype control were compared to buffy leukocytes purified from an isolated blood specimen using traditional gradient methods.

Materials and Methods: A CD133 affinity column was constructed of sepharose beads conjugated to an antibody for CD133. In a sheep model the column was connected in arteriovenous fashion after operative physiologic and hematologic parameters were recorded and compared to controls using Wilcoxon rank sum statistics. Cells were compared to a conventional buffy leukocyte approach with regards to expression CD133, differentiation into endothelial colonies and the duration of culture achieve a target number of cells.

Results: Our results show that this process has a minimal effect on the hematologic and physiologic parameters of the animal. With regards to generation of endothelial cells, this recovery approach generated over 600-fold more endothelial colony forming units than conventional buffy leukocytes isolated from a peripheral blood specimen (Figure 2). Ultimately, the increased cell recovery of the ECA column enabled the generation of a cell biomass for therapeutic purposes in nearly a third of the time.

Conclusions: This approach may facilitate the generation of large numbers of progenitor derived cells for clinical therapies and reduce the time required to attain clinically relevant cell numbers while minimizing loss of other important cell types to the donor. Given reports of decreased absolute numbers of endothelial progenitor cells in certain patient populations, this technology may prove particularly useful in these patients who stand to benefit most from progenitor based therapies and could also be used to isolate other cell types that express alternate cell surface markers.
PODIUM 112
LAPAROSCOPIC PYELOPLASTY: ARE THERE PREDICTORS FOR FAILURE?
Vinh Trang, J. Nathaniel Hamilton, Robert Jansen and Stephen Savage
Medical University of South Carolina (MUSC), Charleston, SC
(Presented By: Vinh Trang)

Introduction: Laparoscopic pyeloplasty is a minimally invasive treatment option for ureteropelvic junction (UPJ) obstruction. Many factors in technique and presentation have been considered in relation to success of treatment. We analyzed our experience to determine if there were specific factors predictive for failure.

Methods: We retrospectively reviewed all patients who underwent laparoscopic pyeloplasty by a single surgeon (SJS) at our institution from February 2005 to February 2009. We evaluated preoperative factors such as patient age, body mass index (BMI), and previous interventions. Perioperative factors of approach, presence of crossing vessels, operative time, and estimated blood loss (EBL) were assessed as well as duration of Jackson-Pratt (JP) drainage and hospital stay. Patients were characterized as successes, equivocals (persistent symptoms with no evidence of obstruction on further investigation), and failures (requiring secondary interventions).

Results: Thirty-six patients were reviewed. Average age and BMI were 38.5 and 26.5, respectively. Seven patients had a total of 9 previous interventions (5 endopyelotomies and 4 open surgeries). 22 patients required decompression of their collecting system with either a stent or nephrostomy at some point prior to pyeloplasty. Twenty-five patients underwent the transperitoneal approach while 11 had retroperitoneoscopy. There were 25 successes, 9 equivocals and 2 failures. Crossing vessels were noted in 25 patients, eleven of which were transposed at the time of surgery. Neither presence of crossing vessels (p ≤0.251) nor transposition (p ≤0.31) was predictive for failure. Failures trended toward increased operative times versus successes (252.5 min vs. 229, p ≤0.139). There was significantly more intraoperative blood loss in the failure group (150 vs. 48.7ml, p ≤0.0007). Twenty-nine patients had drains removed prior to discharge (1 – 2 days) and 7 patients were discharged with JP drains for an average of 8.2 days. Prolonged urinary leakage was not predictive for failure (p ≤0.29). Both pyeloplasty failures subsequently underwent successful endoscopic management.

Conclusions: Laparoscopic pyeloplasty when performed by an experienced surgeon has a low failure rate (5.5%) with a high salvage rate (100%). Surgical approach and transposition of vessels were not prognostic variables. EBL was a significant predictor for failure. Increasing operative time was also associated with failure; however, this did not reach statistical significance with our modest sample size. These findings may indicate areas of compromised vascularity at the point of anastomosis resulting in postoperative stricture formation.

PODIUM 113
MICROLAPAROSCOPIC 2-MM HYBRID LAPAROSCOPIC PYELOPLASTY: AN EVOLVING APPROACH IN MINIMALLY INVASIVE COMPLEX RENAL RECONSTRUCTIVE SURGERY
Hernan O. Altamar, Davis P. Viprakasit, S. Duke Herrell and Benjamin Whittam
Vanderbilt University Medical Center, Nashville, TN
(Presented By: Hernan O. Altamar)

Introduction and Objectives: Laparoscopic pyeloplasty is a well-established standard for the treatment of ureteropelvic junction obstruction. Recently described minimally invasive surgery techniques are aimed at improving cosmesis and potentially reducing the morbidity of the operation including single-port laparoscopy, robotic surgery and NOTES. We describe the initial clinical application of 2-mm microlaparoscopic working instruments through 2.5-mm ports for the performance of laparoscopic dismembered pyeloplasty.
Methods: Two patients, both female, underwent Hybrid microlaparoscopic pyeloplasty. Initially, a 5-mm optical trocar was inserted through a hidden umbilicus incision and 2 accessory 2.5-mm trocars were inserted through skin punctures with no skin incision for standard trans-peritoneal dismembered pyeloplasty with retrograde stent placement. Freehand intracorporeal suturing was performed using 4-0 Vicryl running anastomotic sutures with intracorporeal tying. A standard postoperative care pathway with discharge on postop day one was followed.

Results: The procedures were technically successful with no extra-umbilical skin incisions. Patient #1 had significant crossing vessels which were preserved despite marked scarring as the patient had previously undergone failed Acucise endopyelotomy and percutaneous nephrostomy tube placement. Patient #2 had a primary UPJ without crossing vasculature. The total operative time was 4 and 3 hours, respectively. Estimated blood loss was less than 20cc and hospital stay was one day. There were no complications and no post-operative leaks on cystogram. Pain scores were similar to standard laparoscopic pyeloplasty. Cosmetic results were rated “outstanding” by the patients.

Conclusions: Microlaparoscopic instrumentation, including needle holders, has improved such that complex upper tract reconstruction such as pyeloplasty is both technically feasible and safe in selected patients. The only external incisional scar is concealed within the umbilicus. The 2-mm instruments through 2.5-mm trocar sites are virtually invisible after healing and most importantly allow for instrument triangulation facilitating proper tissue retraction, intracorporeal suturing and preventing crossing instruments, commonly encountered in single-port laparoscopy. This extremely minimally invasive procedure may be a new competitor for single port laparoscopy.

PODIUM 114
LONG-TERM INFECTION RATES IN DIABETIC PATIENTS IMPLANTED WITH ANTIBIOTIC-IMPREGNATED VERSUS NON-IMPREGNATED INFLATABLE PENILE PROSTHESES: 7-YEAR OUTCOMES
John J. Mulcahy¹, Culley C. Carson, III² and Manya R. Harsch³
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(Presented By: John J. Mulcahy)

Introduction and Objectives: Diabetic patients may be more prone to implant infections than other men with organic erectile dysfunction, and so better quantifying and reducing the risk of implant infections in this population is important. This is a large, long-term infection prevention outcomes analysis of diabetic men after initial implantation of their first inflatable penile prostheses (IPPs) to determine whether outcomes for those receiving an IPP impregnated with a combination of minocycline and rifampin (M/R) were improved versus those receiving a non-impregnated prosthesis. Long-term (6.5-year follow-up) data on infection revision rates for antibiotic-impregnated and non-impregnated prostheses in diabetic men were recently the basis for FDA approval of infection reduction claims for the M/R-impregnated IPP, and even longer-term, 7-year follow-up data are now available for this population at risk.

Methods: Reported rates of infection-related revisions for M/R-impregnated and non-impregnated implants were compared using data from patient information forms (PIFs) voluntarily filed with the manufacturer for first-time penile prostheses implanted between May 1, 2001, and December 31, 2008, in diabetics with erectile dysfunction. Survival from infection-related revisions was compared for these patients throughout 84 months of follow-up.

Results: Mean age was 59.1 years for the 6,174 diabetic men in the M/R-impregnated group, with mean follow-up of 43 months. The non-impregnated group included 642 diabetic men with a mean age of 57.7 years and a mean of 78 months of follow-up. Infection revisions were significantly lower for M/R-impregnated implants (2.16%) than for non-impregnated prosthesis implants (5.30%) at 84 months of follow-up (log rank p<0.0001, see life table graph).

Conclusions: This long-term evidence from the largest known database of diabetic penile prosthesis recipients establishes that the use of an antibiotic-impregnated IPP instead of a non-impregnated IPP can decrease the risk of infection. Reducing the incidence of this disastrous complication represents a significant medical advance in erectile restoration for diabetic patients.
PODIUM 115
INTEGRATED, DUAL SCAFFOLDING SYSTEM FOR THE ENGINEERING OF COMPOSITE TISSUES
Mitchell Ladd, Tamer Aboushwareb, Sang Jin Lee, Anthony Atala and James Yoo
Department of Urology and Institute for Regenerative Medicine, Wake Forest University
Health Sciences Winston Salem, NC
(Presented By: Tamer Aboushwareb)

Introduction: While tissue engineering has had initial successes with building simple homogeneous tissues, there is an increasing demand for developing composite tissue systems that require coordinated function. One challenge in developing such tissues is designing a single scaffold that can accommodate the unique mechanical properties of the different tissue types. In this study, we developed a continuous, integrated, dual scaffolding system using a co-electrospinning fabrication technique that had regional variations in mechanical properties.

Methods: Two different polymer solutions, 10% (w/v) poly (ε-caprolactone)/collagen and 5% (w/v) poly (L-lactide)/collagen blends with the ratio of 1:1 in weight, were simultaneously electrospun (using high voltage power at 20 kV potential) onto opposite ends of a cylindrical mandrel to create a scaffold with 3 distinct regions: a PCL/collagen side (PCL side), PLLA/collagen side (PLLA side), and a center overlap region (Fig. 1). Both solutions were delivered through a blunt tip at a constant flow rate of 1 mL/hr using a syringe pump. The distance between the syringe tip and the mandrel was 10 cm and the rate of rotation was 1000 rpm. Subsequently, the scaffolds were cross-linked with 2.5% glutaraldehyde vapor for 2 hours. Characterization of the scaffolds included ultrastructural morphology (n=3), uniaxial tensile testing (n=6), cyclic tensile testing (n=6), and stress relaxation testing (n=6). The quasi-linear viscoelastic model was used to describe the scaffold’s viscoelastic behavior. The scaffold was tested for biocompatibility and seeded with muscle cells.

Results: The results demonstrate that an integrated, dual scaffolding system can be created using co-electrospinning that is biocompatible, displays a nanofiber architecture with fiber diameters ranging from 505 – 606 nm, exhibits vast regional variations in mechanical properties with moduli ranging from 3,406 – 24,354 kPa, and withstands cyclic mechanical and stress-relaxation testing.

Conclusion: We have demonstrated the development of a novel, integrated, dual scaffolding system that has distinct mechanical properties within different regions of the system. The scaffold is biocompatible, accommodates muscle cells. Characterization with cyclic and stress-relaxation testing showed that the dual-scaffolding system has good mechanical properties and viscoelastic properties. This system may serve as an excellent scaffold for the formation of composite tissues.
PODIUM 116
URETEROARTERIAL FISTULAS: A RARE ENTITY MANAGED WITH COVERED ENDOVASCULAR STENT-GRAFTS
Stephen Johnson¹, Dennis Venable², Elmajian Donald³, West Charles³ and Gomelsky Alexander²
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(Presented By: Stephen Johnson)

Introduction: Ureteroarterial fistula (UAF) is an uncommon, life-threatening clinical entity with a high rate of morbidity and mortality. Vascular reconstruction with urinary diversion or nephrectomy has been the only treatment options available. We report our experience with endovascular treatment of UAF.

Materials and Methods: Between May 2006 and September 2007, three patients were diagnosed with UAF at our institution. Demographic and perioperative data were abstracted from the clinic and hospital records.

Results: All three patients were managed primarily using covered endovascular stent-grafts with successful resolution of the UAF. None required open vascular or urinary tract reconstruction. At a minimum follow-up of 6 months, no UAF recurrence has been detected. Risk factors for fistula formation in our subset of patients included; history of external beam radiation in two patients and systemic lupus erythematosus in the last. All three patients had a history of chronic indwelling ureteral stents. A MEDLINE review of the literature was performed to place our outcomes and management into historical context. Twenty-five UAF managed primarily with endovascular repair were identified with successful fistula closure in 21 cases. Four adverse events were reported, which included thrombosis with stent occlusion and urosepsis.

Conclusions: Endovascular management of UAF is an effective minimally invasive treatment option for this vexing clinical problem. Although few data exists to support its long-term durability; it should be considered as a primary treatment modality in unstable patients and those who are poor surgical candidates.

PODIUM 117
HOLMIUM LASER ENUCLEATION OF ABLATED PROSTATE (HOLEAP): AN INNOVATIVE SURGICAL TECHNIQUE FOR BENIGN PROSTATIC HYPERPLASIA
Tony John, Ashish Sabharwal and Sanjay Razdan
International Robotic Prostatectomy Institute, Miami, FL
(Presented By: Sanjay Razdan)

Introduction and Objective: Holmium Laser Resection of the Prostate (HoLRP) was introduced as an alternative to TURP, with shorter hospital stay and reduction in perioperative blood loss. There is a prolonged phase of irritative voiding symptoms in the postoperative period, due to sloughing of the ablated prostate. In Holmium Laser Enucleation of the Prostate (HOLEP), whole lobes of the prostate are enucleated and removed using a transurethral morcellator. We introduced HoLEAP (Holmium Laser Enucleation of Ablated Prostate), which is an amalgam of HoLRP and HOLEP. This technique circumvents the steep learning curve and additional instrumentation required for HoLEP.

Methods: In HoLEAP, a continuous flow resectoscope is introduced into the bladder. A side firing holmium laser fiber is used, with normal saline as the irrigant. The depth of the prostate adenoma is ascertained and the prostate gland is ablated, up to the capsule, by ‘paint brush’ movements of the laser fiber, as in HoLRP. The ablated prostatic tissue is then enucleated, by “gentle saw like” movements of the laser fiber, similar to HOLEP. Large chunks of prostate tissue, is then scooped out like ice cream scoops to achieve a large “clean” cavity in an expeditious and almost bloodless field.

Results: 52 patients underwent HOLEAP for surgical correction of infravesical obstruction secondary to BPH, over a 15-month period. The prostate size varied from 20 to 80 grams. The mean operating time was 55 minutes. There were no intraoperative complications. The average postoperative hospital stay was 2 hours. All patients had satisfactory improvement in uroflow parameters. One patient had recurrent urinary retention. 3 patients had irritative voiding symptoms post op, which resolved spontaneously over 3 – 4 weeks. The overall patient satisfaction rate was 98 %.

Conclusions: Holmium Laser Enucleation of Ablated Prostate (HOLEAP) is a safe and efficacious method for the surgical treatment of BPH. The advantages of HoLRP (reduced blood loss) and HOLEP (avoidance of postoperative irritative voiding symptoms) are combined in this technique. The need for an additional instrument, the morcellator, is avoided as well as possible injury to the urinary bladder. HoLEAP is expeditious and circumvents the steep learning curve and additional instrumentation required for HoLEP. The results are comparable to HoLEP. HoLEAP is easier to adopt for larger sized glands. This is an outpatient procedure and hospital stay is avoided.
PODIUM 118
IS RETROGRADE EJACULATION IN SILODOSIN-TREATED MEN ASSOCIATED WITH GREATER IMPROVEMENT IN SYMPTOMS OF BENIGN PROSTATIC HYPERPLASIA (BPH)?
Claus G. Roehrborn¹, Herbert Lepor², Steven A. Kaplan³, Lawrence A. Hill⁴, Weining Volinn⁴ and Gary Hoel⁴
¹UTSW Medical Center, Dallas, TX; ²NYU School of Medicine, New York, NY; ³Weill Medical College, Cornell Univ., New York, NY; ⁴Watson Laboratories, Salt Lake City, UT

Introduction and Objectives: Improvement of BPH symptoms and urinary flow resulting from treatment with alpha-blockers is thought to be related to smooth muscle relaxation in the prostate and bladder neck. We examined whether the presence of retrograde ejaculation in BPH patients treated with the uroselective alpha-blocker silodosin is an indicator of greater treatment efficacy.

Methods: In two 12-week, randomized, placebo-controlled studies, patients aged 50 years or older with lower urinary tract symptoms secondary to BPH (International Prostate Symptom Score [IPSS] greater than or equal to 13; peak urinary flow rate [Qmax] of 4 – 15 ml/sec; voided volume greater than 125 ml; postvoid residual less than 250 ml) received silodosin 8 mg (N = 466) or placebo once daily (N = 457). Patients were stratified in this post hoc analysis by whether or not they reported retrograde ejaculation (RE) as an adverse event (AE).

Results: Baseline IPSS and Qmax were similar in both groups. Of the silodosin-treated patients, 131 reported RE (SIL−RE+) and 335 did not (SIL−RE–). The percentage of patients who achieved 12-week improvement of at least 3 points in IPSS AND 3 ml in Qmax was significantly greater for both silodosin groups (SIL−RE+ and SIL−RE–) than for the placebo group (Table). In addition, the percentage of patients who achieved this level of improvement was significantly greater for SIL−RE+ than for SIL−RE–.

Conclusions: The odds of a silodosin-treated patient achieving an improvement of at least 3 units in IPSS and in Qmax were significantly greater if the patient experienced RE. This finding is consistent with the idea that silodosin relaxes the smooth musculature of both the lower urinary and genital tracts, and that RE is an indicator of greater pharmacologic activity and thus greater efficacy in BPH symptom relief.

Funding: Watson Pharmaceuticals, Inc.

PODIUM 119
RAPID EFFECTS OF SILODOSIN ON IRRITATIVE AND OBSTRUCTIVE SYMPTOMS OF BENIGN PROSTATIC HYPERPLASIA (BPH) IN 2 PHASE 3 STUDIES
Marc C. Gittelman¹, Lawrence A. Hill², Weining Volinn² and Gary Hoel²
¹South Florida Medical Research, Aventura, FL; ²Watson Laboratories, Salt Lake City, UT
(Presented By: Marc C. Gittelman)

Introduction and Objectives: Silodosin is a uroselective alpha-blocker shown in 2 US phase 3 studies to significantly improve urinary symptoms of BPH (Marks et al. J Urol. 2009;181:2634 – 2640). This post hoc analysis of combined data examined changes in International Prostate Symptom Score (IPSS) by individual IPSS question.

Methods: Men 50 years of age or older with IPSS greater than or equal to 13 were randomly assigned to receive 8 mg silodosin (n = 466) or placebo (n = 457) once daily for 12 weeks. Symptom improvement was assessed with the 7-item IPSS questionnaire, addressing irritative (IPSS questions [Q] 2, 4, and 7) and obstructive (IPSS Q1, 3, 5, and 6) symptoms. IPSS scores (on a 6-point scale) for all 7 questions were determined at baseline and at weeks 0.5 (day 3 or 4), 1, 2, 4 and 12. Treatments (silodosin vs placebo) were compared by analysis of covariance.
Results: Mean baseline values in all IPSS subcategories were virtually identical in both treatment
groups (Q1, 3.1; Q2, 3.5; Q3, 3.1; Q4, 3.0; Q5, 3.6; Q6, 2.2; Q7, 2.8). At study end, mean changes
(stdandard deviation) from baseline in all IPSS subscores were significantly greater with silodosin vs
placebo. Symptom improvement with silodosin vs placebo was statistically significant at the earliest post-
baseline assessment (3 to 4 days) for all individual IPSS questions except Q7 (nocturia); by 1 week of
treatment, nocturia was significantly improved with silodosin vs placebo (Table).

Conclusions: Silodosin significantly improved irritative and obstructive symptoms of BPH within 3 to 7
days of treatment. Improvement was sustained over the duration of the study.

Funding: Watson Pharmaceuticals, Inc.

Introduction and Objectives: Two randomized, placebo-controlled, double-blind studies in men with
clinical BPH showed that treatment with silodosin rapidly improved symptoms and was well tolerated

Methods: Men aged 50 years or older with International Prostate Symptom Scores (IPSS) greater
than or equal to 13 and peak urinary flow rates (Qmax) of 4 to 15 mL/sec received silodosin 8 mg or
placebo once daily for 12 weeks. Changes in IPSS and Qmax from baseline to the last observation were
analyzed separately in patients younger than 65 years (younger group) and those 65 years or older
(older group). Treatment groups were compared by analysis of covariance.

Results: Of 923 study participants, 508 (55%) were younger than 65 years. Among 466 patients who
received silodosin, 8.1% of younger and 4.3% of older patients discontinued treatment due to adverse
events. Regardless of age, patients experienced significantly greater improvement in IPSS (including
irritative and obstructive subscores) and Qmax with silodosin than placebo (Table). Fewer men in
the older than in the younger age group reported the most common silodosin-related adverse event,
retrograde ejaculation. Drug-related orthostatic hypotension, although more common in older patients,
overall occurred at similar frequency with silodosin vs placebo (younger than 65 years, 1.5% vs 1.2%; 65
years or older, 2.4% vs 1.9%). No cardiac events occurred.

Conclusions: Silodosin provided significant relief of BPH symptoms and was well tolerated in older and
younger patients. In both age groups, silodosin had a placebo-like cardiovascular safety profile.

Funding: Watson Pharmaceuticals, Inc.
PODIUM 121
INITIAL RESULTS OF ROBOTIC SIMPLE PROSTATECTOMY
Thomas Holley
Urology Centers of Alabama, Birmingham, AL
(Presented By: Thomas Holley)

Introduction and Objectives: Open prostatectomy is the surgical treatment of choice for bladder outlet obstruction caused by severe benign prostatic enlargement. This operation is now being performed laparoscopically with the aid of the da Vinci® Surgical System. The objective of this study is to report patient demographics, surgical and pathological findings, as well as AUA symptom score (AUASS) and quality of life (QOL) improvements at three months in patients undergoing robotic simple prostatectomy.

Methods: All cases were performed transperitoneally and the prostatic adenoma was enucleated through an anterior cystotomy. Following enucleation, a 20 Fr 3 way foley catheter was placed. A JP drain was used in all cases. Patients were started on continuous bladder irrigation in the operating room. Demographic, perioperative, and outcome data were analyzed on all patients undergoing robotic simple prostatectomy.

Results: 16 patients, with a minimum of three months follow-up, underwent robotic simple prostatectomy. Average age was 71.6 years (range 57 – 82). The average pre-operative prostate size by ultrasound was 127.9 grams (range 84 – 205). Seven patients were in retention pre-operatively. Mean operative time was 206 (range 158 – 266) minutes and average blood loss was 158 (range 100 – 250) ccs. Average length of hospital stay was 2.6 nights (range 2 – 4). Continuous bladder irrigation was stopped on all patients on POD #1. No patients were transfused. All JP drains were removed prior to discharge. A cystogram was performed at POD #7 and all catheters were removed at that time. The average pathological weight of the adenoma removed was 67.2 (range 23 – 113) grams. Two patients were found to have low volume prostate cancer (<5%). The average pre-operative AUASS was 25.1 (range 23 – 27) and QOL was 4.77 (range 3 – 6). The average AUASS score at 3 months was 5.18 (range 1 – 12) and QOL was 1.25 (range 0 – 4), representing an average decrease of 18.9 points and 3.2 points respectively.

Conclusions: Robotic simple prostatectomy is a safe and feasible alternative to open prostatectomy. Short term data demonstrates symptom score reduction and QOL improvements are similar to open prostatectomy but longer term follow-up is needed.

PODIUM 122
HOLMIUM LASER ENUCLEATION OF THE PROSTATE (HOLEP): IMPACT OF THE LEARNING CURVE FOLLOWING FELLOWSHIP TRAINING
Davis P. Viprakasit, Hernan O. Altamar and Nicole L. Miller
Vanderbilt University Medical Center, Nashville, TN
(Presented By: Davis P. Viprakasit)

Objectives: Holmium laser enucleation of the prostate (HoLEP) has been advocated as the size-independent gold standard surgical management for patients with symptomatic enlarged prostates. However, the steep learning curve (>50 cases) associated with the procedure is a primary drawback in the wide utilization of this technique. We evaluate the outcomes of HoLEP by a single surgeon following fellowship training in the technique.

Methods: We retrospectively analyzed all patients who underwent HoLEP between June 2008 and April 2009 at our institution by a single surgeon following fellowship training.

Results: Eighteen patients were identified: their mean (range) age was 69 (53 – 84) years and prostate volume 68.7 (20 – 186) ml. Preoperative urinary retention was noted in 8/18 (40%) patients. Additionally, two patients were on perioperative anticoagulation. Comparative preoperative and 3-month follow-up parameters are listed in Table 1. Mean % change in PSA was 67.5%. All patients were discharged on postoperative day 1 with mean duration of 1.2 days for catheterization. No patients required perioperative blood transfusions. One patient required transient re-catheterization, and all patients are currently catheter-free. There was one post-operative mortality secondary to a cardiac event.

Conclusions: HoLEP is a safe and effective surgical treatment for lower urinary tract symptoms due to prostatic enlargement. The complete removal of the transition zone accounts for the dramatic reduction in PSA. Comparable short-term results to those published in the literature can be achieved in the early experience of a fellowship-trained surgeon.
Table 1:

<table>
<thead>
<tr>
<th></th>
<th>Preoperative</th>
<th>3-month Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean AUA-SS (Range)</td>
<td>17.7 (10-30)</td>
<td>6.1 (2-14)</td>
</tr>
<tr>
<td>Mean Qmax (Range) ml/s</td>
<td>10.2 (3-15.2)</td>
<td>19.8 (7.3-37.5)</td>
</tr>
<tr>
<td>Mean PVR (Range) ml</td>
<td>210 (0-575)</td>
<td>61 (0-177)</td>
</tr>
<tr>
<td>Mean PSA (Range) ng/ml</td>
<td>4.5 (0.5-12.4)</td>
<td>0.9 (0.33-2.03)</td>
</tr>
</tbody>
</table>

7:00 a.m. – 8:30 a.m.  SESSION 15: PROSTATE / TESTIS CANCER POSTER
Location: Poinciana 4
Moderators: Raj S. Pruthi, MD
Chapel Hill, NC
Mark S. Soloway, MD
Miami, FL

Poster #25  CONTROLLED REGULATION OF ERYTHROPOIETIN PRODUCING CELLS FOR RENAL FAILURE INDUCED ANEMIA
Tamer Aboushwareb¹, Kenneth Gyabaah², Nadia Guimaraes-Souza², Anthony Atala² and James Yoo²
¹Department of Urology and Institute for Regenerative Medicine, Wake Forest University Health Sciences Winston Salem, NC
(Presented By: Tamer Aboushwareb)

Poster #26  ASSESSMENT OF TWO EXPERIMENTAL MODELS OF RENAL FAILURE IN THE RAT: APPLICABILITY TO THE STUDY OF ACUTE AND CHRONIC DISEASE
Hung J. Wang¹, Adam Varner¹, Tamer Aboushwareb¹, Rusty Kelly², Andrew Bruce², Manuel Jayo², Eric Werdin², Sharon Presnell² and James Yoo¹
¹Department of Urology and Institute for Regenerative Medicine, Wake Forest University Health Sciences Winston Salem, NC; ²Tengion, Inc., Winston-Salem, NC
(Presented By: Tamer Aboushwareb)

Poster #27  FOLLOW-UP OF PATIENTS TREATED WITH PERCUTANEOUS EMBOLIZATION FOR GRADE 5 BLUNT RENAL TRAUMA
Adam Stewart¹, Eric Brewer Jr.², Joe Mobley III², Ryan Pickens², Frederick Klein² and Edward Kim²
¹Division of Urology, University of Tennessee Graduate; ²Division of Urology, University of Tennessee Graduate School of Medicine, Knoxville, TN
(Presented By: Adam Stewart)

Poster #28  RETROSPECTIVE LONG-TERM ANALYSIS OF TITAN® HYDROPHILIC COATING: POSITIVE REDUCTION OF INFECTION COMPARED TO NON-COATED DEVICE
Wayne Hellstrom, Brian Richardson and Arthur Caire
Tulane University Health Sciences Center
(Presented By: Wayne Hellstrom)

Poster #29  ANTIBIOTIC SENSITIVITY OF OXALOBACTER FORMIGENES
Hayes Wong¹, Mark Hinsdale², John Knight², Ross Holmes² and Dean Assimos²
¹Wake Forest University School of Medicine, Winston-Salem, NC
(Presented By: Hayes Wong)

Poster #30  MICROBIAL COLONIZATION OF BLADDER SUBMUCOSA IS A MAJOR DETERMINANT IN COMPLICATED UTI
Leticia Reyes and Benjamin Canales
University of Florida, Gainesville, FL
(Presented By: Benjamin Canales)
Poster #31  
DOES SATURATION PROSTATE BIOPSY AFFECT SURGICAL OUTCOMES AND COMPLICATIONS OF RADICAL PROSTATECTOMY?
Joshua Griffin¹, William Duncan², Jason Bridges³, Jennifer Samples³ and Warren May⁴
¹University of Mississippi, Jackson, MS; ²University of Mississippi Medical Center and Veterans Administration Hospital Jackson, MS; ³University of Mississippi Medical Center, Jackson, MS
(Presented By: Joshua Griffin)

Poster #32  
DOES AGE INFLUENCE THE DEVELOPMENT OF URINARY INCONTINENCE IN PATIENTS WHO ARE CONTINENT FOLLOWING TOTAL PROSTATECTOMY?
Mark Soloway, Devendar Katkooi, Cynthia Soloway and Murugesan Manoharan
University of Miami, Miller School of Medicine, Miami, FL
(Presented By: Mark Soloway)

Poster #33  
SALVAGE PROSTATE BRACHYTHERAPY FOR PRIMARY EXTERNAL BEAM RADIATION THERAPY FAILURES
Jamie Cesaretti¹, Rizwan Nurani¹, Rosetta Hixson¹, Mitchell Terk¹, Apoorva Vashi² and Douglas Swartz²
¹Riverside Cancer Center, Jacksonville, FL; ²Jacksonville Prostate Center, Jacksonville, FL
(Presented By: Mitchell Terk)

Poster #34  
THE IMPACT OF OBESITY AS A COMPETING RISK FACTOR IN PROSTATE CANCER
Stephen McKim, Eugene Simopoulos, Greg Larsen, Matthew Nielsen, Eric Wallen and Raj Pruthi
The University of North Carolina at Chapel Hill
(Presented By: Stephen McKim)

Poster #35  
BIOPSY ACCURACY IN IDENTIFYING UNILATERAL PROSTATE CANCER DEPENDS ON PROSTATE WEIGHT
Matvey Tsivian, Daniel M. Moreira, Leon Sun, Vladimir Mouraviev, Jorge R. Caso, Masaki Kimura, Judd W. Moul and Thomas J. Polascik
Duke University Medical Center, Durham, NC
(Presented By: Vladimir Mouraviev)

Poster #36  
THE INCIDENCE OF PROXIMAL EJACULATORY DUCT IN TRANSRECTAL ULTRASOUND GUIDED BIOPSY SPECIMENS
Matthew McIntyre¹, Benjamin Coulter², Laura Spruill³, Harry Fisch⁴ and Micheal Smith⁵
¹MUSC Urology, Charleston, SC; ²MUSC Pathology, Charleston, SC; ³Cornell Urology, New York, NY
(Presented By: Matthew McIntyre)

Poster #37  
ELIMINATION OF BOWEL PREPARATION IN PATIENTS UNDERGOING CYSTECTOMY AND URINARY DIVERSION
Garjae Lavien, Eugene Simopoulos, Stephen McKim, Matthew Nielsen, Eric Wallen and Raj Pruthi
The University of North Carolina at Chapel Hill
(Presented By: Eugene Simopoulos)

Poster #38  
ANATOMIC BASIS OF DENERVATION OF THE SPERMATIC CORD FOR CHRONIC ORCHIALGIA
Sijo Parekattil, Karen Priola, Hany Atalah, Johannes Vieweg and Marc Cohen
University of Florida, Gainesville, FL
(Presented By: Sijo Parekattil)
Poster #39

IS THE MORBIDITY OF POST-CHEMOTHERAPY RETROPERITONEAL LYMPH NODE DISSECTION FOR TESTICULAR CANCER RELATED TO THE SIZE OF THE RESIDUAL MASS OR TO THE INTERNATIONAL GERM CELL CONSENSUS CLASSIFICATION?

Moffitt Cancer Center, Tampa, FL
(Presented By: Luke Wiegand)

Poster #25

CONTROLLED REGULATION OF ERYTHROPOIETIN PRODUCING CELLS FOR RENAL FAILURE INDUCED ANEMIA

Tamer Aboushwareb¹, Kenneth Gyabaah², Nadia Guimaraes-Souza², Anthony Atala² and James Yoo²
¹Department of Urology and Institute for Regenerative Medicine, Wake Forest University Health Sciences Winston Salem, NC; ²Department of Urology and Wake Forest Institute of Regenerative Medicine, Wake Forest University Health Sciences, Winston-Salem, NC
(Presented By: Tamer Aboushwareb)

Introduction and Objectives: Anemia is an inevitable outcome of chronic renal failure due to the kidney’s decreased ability to produce erythropoietin (EPO). We previously have shown that cultured renal cells are able to produce EPO and that these cells may be used as a potential treatment option for renal failure induced anemia. However, it is uncertain whether these cells could regulate EPO production when they are used for cell therapy. In this study we investigated whether production of EPO could be controlled by exposing EPO producing cells to different environmental conditions.

Methods: Renal cells from 2 – 3 week old rats were isolated, expanded and characterized for EPO expression using immunocytochemistry, FACS and Western Blot analyses. To assess the levels of EPO expression, cells were incubated under normoxic and hypoxic (1%) conditions for varying time periods up to 24 hours. Another group of cells was subjected to alternating cycles of hypoxia and normoxia. To determine whether the presence of EPO in culture media influence EPO production, renal cells were grown in conditions either with or without media changes. All cells were collected at the end of each experiment for assessment using Western blot analysis and RT-PCR.

Results: Immunocytochemical analysis of the cultured renal cells showed the expression of EPO at each subculture stage (P1 – P3). Western Blot analysis of the detergent-solubilized cell extracts detected EPO (34 kDa) protein in the kidney cells of all passages tested. RT-PCR analysis of renal cells exposed to hypoxia showed up-regulation of EPO gene expression over a period of 24 hours followed by a gradual decrease in the next 48 hours. However, this decrease was reversed completely when culture media was changed every 24 hours, which indicates their ability to regulate EPO production through a negative feedback mechanism. Decrease in EPO expression was also observed when cells under hypoxia were transferred to normoxic conditions. When these cells were placed back to hypoxic environment, the levels of EPO expression began to increase.

Conclusions: These results demonstrate that EPO producing renal cells possess the ability to regulate EPO expression in response to varying levels of oxygen. The cells readily respond to the amounts of surrounding EPO by either inhibiting or promoting EPO production. These findings indicate that EPO producing renal cells may be used as a treatment option for renal failure induced anemia.

Funding: This study was supported by Tengion, Inc. through a sponsored research agreement. Anthony Atala and James Yoo serve as consultants to Tengion, Inc.

Poster #26

ASSESSMENT OF TWO EXPERIMENTAL MODELS OF RENAL FAILURE IN THE RAT: APPLICABILITY TO THE STUDY OF ACUTE AND CHRONIC DISEASE

Hung J. Wang¹, Adam Varner¹, Tamer Aboushwareb², Rusty Kelly³, Andrew Bruce³, Manuel Jayo³, Eric Werdin³, Sharon Presnell² and James Yoo¹
¹Department of Urology and Institute for Regenerative Medicine, Wake Forest University Health Sciences Winston Salem, NC; ²Tengion, Inc., Winston-Salem, NC
(Presented By: Tamer Aboushwareb)

Introduction and Objectives: Rodent models of renal failure frequently fail to recapitulate human disease states at the histologic and systemic levels. We examined the histological and clinical features of two previously described models of renal injury: the two-step 5/6 surgical nephrectomy (model 1) and the bilateral ischemia/reperfusion (model 2). Methods: Model 1 was created by removing both distal poles of the right kidney followed by left nephrectomy 1 week later. Renal failure was induced in Model 2 rats by ligating both renal pedicles for 75 minutes followed by reperfusion. Age matched healthy rats served as controls. Blood was collected weekly for hematology and serum chemistry, and kidneys, livers, spleens, and femoral bone marrows were collected for histological assessment.
**Results:** Model 1 rats had a mean survival of 139 + 29 days after the first surgery. Serum creatinine (CR) and blood urea nitrogen (BUN) levels rose to >200% of the controls within 5 weeks of nephrectomy and continued to rise until sacrifice. Hematocrit (HCT) and red blood cell number (RBC) decreased to <90% of the controls, confirming of anemia secondary to renal impairment. Histologically, the kidney and bone marrow tissues showed progressive tubular and glomerular degeneration and an overall reduction in bone marrow erythroid lineages. Model 2 rats had a 35 – 40% mortality rate within the first week after injury. Serum CR and BUN levels rose significantly and subsequently declined, reaching normal levels within 4 weeks after injury. Histologically, the kidney tissues showed progressive glomerular and tubular degeneration with varying degrees of fibrosis. No reduction in HCT or RBC was noted in Model 2 rats throughout the duration of study.

**Conclusion:** Both injury models result in significant elevations of CR and BUN, indicating of renal impairment. The two-step 5/6 nephrectomy model yields progressive systemic and histologic kidney disease and mild anemia in nearly 100% of the rats. Thus, Model 1 may provide an appropriate vehicle for evaluation of therapeutic interventions aimed at slowing or reversing progression of kidney disease. The ischemia/reperfusion model yields robust and significant short-term renal impairment, complete with a high death rate during the acute phase of damage. Thus, Model 2 may be optimal for the evaluation of therapeutic modalities targeted to improve survival and lessen damage associated with the acute stage of renal failure.

**Funding:** This study was supported by Tengion, Inc. through a sponsored research agreement. James Yoo serves as a consultant to Tengion, Inc.

**Poster #27**  
**FOLLOW-UP OF PATIENTS TREATED WITH PERCUTANEOUS EMBOLIZATION FOR GRADE 5 BLUNT RENAL TRAUMA**  
Adam Stewart¹, Eric Brewer, Jr.², Joe Mobley III², Ryan Pickens², Frederick Klein² and Edward Kim²  
¹Division of Urology, University of Tennessee Graduate; ²Division of Urology, University of Tennessee Graduate School of Medicine, Knoxville, TN  
(Presented By: Adam Stewart)

**Introduction:** The short-term efficacy and safety of percutaneous embolization for treatment of grade 5 renal injuries secondary to blunt trauma in patients who are hemodynamically unstable has been previously established; however, there has been no significant long-term follow up in the literature. The purpose of this study is to report long-term follow up and complications for this treatment modality in the same cohort of patients.

**Methods:** A retrospective study was performed to determine the intermediate term outcomes in an observational cohort of patients that underwent percutaneous embolization for the management of Grade 5 blunt renal trauma. Demographic and perioperative data was obtained. Follow-up was performed via mail and/or phone questionnaire.

**Results:** Between October 2004 and December 2007, 9 patients demonstrated radiographic evidence of Grade 5 blunt renal trauma. All patients were hemodynamically unstable at presentation. Mean age of the cohort was 27 years (range 5 – 40). All patients underwent successful treatment of renal trauma with embolization. Mean follow-up was 3.3 years (1.7 – 4.9). All patients were successfully contacted by mail and/or phone questionnaire. There were no reported complications of hypertension, altered renal function, urolithiasis, chronic pain, urine leak, arterio-venous fistula or pseudoaneurysm. No other procedures were required after the initial embolization for their renal trauma.

**Conclusions:** Based on our single center experience, management of grade 5 renal injuries by percutaneous renal embolization is safe and is not associated with long-term adverse events.

**Poster #28**  
**RETROSPECTIVE LONG-TERM ANALYSIS OF TITAN® HYDROPHILIC COATING: POSITIVE REDUCTION OF INFECTION COMPARED TO NON-COATED DEVICE**  
Wayne Hellstrom, Brian Richardson and Arthur Caire  
Tulane University Health Sciences Center  
(Presented By: Wayne Hellstrom)

**Introduction and Objective:** Penile implant surgery continues to be a positive alternative for patients with severe ED. Historically, adverse events related to infection were 3 – 4% for original implants. Advancements in technology have contributed to improved efficacy and decreased adverse events, such as infection. This review of over 26,000 implants compares the pre/post infection rates after the inclusion of a technological (hydrophilic) coating enhancement between two implantable, three-piece, penile prostheses (IPP), the Mentor Alpha 1® and the Titan® (Coloplast Corp., Minneapolis, MN).
**Methods:** A substantial number of Alpha 1 and Titan implants reported into a volunteer, post-market registry, from January 1, 2000 to June 30, 2009 were reviewed and reported infections extracted from total population. The advanced Titan includes hydrophilic coating across all components allowing for the absorption of an aqueous solution, while no components of the Alpha 1 employed a hydrophilic coating. Data was analyzed using a Pearson’s chi-square test to determine significance of reduction in reported infection between the Alpha IPP and the hydrophilic-coated Titan IPP.

**Results:** A total of 8,825 implants and 358 infections (4%) were reported on Alpha, and 17,900 implants with 279 infections (1.6%) reported on Titan, showing a statistically significant (p-value 0.0001) decrease in reported infections between the Alpha IPP and hydrophilic-coated Titan IPP.

**Conclusions:** New advances in technology continue to improve efficacy and decrease adverse events for patients with severe ED treated with penile implants. Significant decreases in reported infection rates between the non-coated Alpha IPP and the hydrophilic-coated Titan IPP suggest that the technology may contribute to decreased infections.

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**Poster #29
ANTIBIOTIC SENSITIVITY OF OXALOBACTER FORMIGENES**

Hayes Wong¹, Mark Hinsdale², John Knight², Ross Holmes² and Dean Assimos²

¹Wake Forest University School of Medicine; ²Wake Forest University School of Medicine, Winston-Salem, NC

(Presented By: Hayes Wong)

**Introduction and Objectives:** Colonization with Oxalobacter formigenes (OxF) has been shown to lower the risk of developing calcium oxalate kidney stones. A gram-negative facultative anaerobe and part of natural GI flora, OxF colonization can be lost through the use of antibiotics, putting an individual at greater risk for stone formation.

**Methods:** The in vitro minimal inhibitory concentration (MIC) of OxF for fourteen commonly prescribed antibiotics was measured using a two-fold serial broth dilution method and confirmed with an IC spectrophotometer. An overnight OxF stock culture was prepared by adding 100 µL of OxF (HC-1 strain) to 10mL of 80mM oxalate media and subsequent 24 hour incubation. In an anaerobic chamber, 10mL bottles of fresh 80mM media were inoculated with 100 µL of OxF stock, and a two-fold serial dilution was prepared from the antibiotic stock solution (according to NCCLS standards). Using a Hamilton syringe, 100 µL of each drug concentration were injected into the inoculated bottles in a final 1:100 dilution step. The cultures were incubated for 24 hours at 37°C. MIC was determined by visual inspection of the broth by the absence of turbidity and confirmed with an IC spectrophotometer.

**Results:** The table below lists the MIC for the drugs tested and the range of concentrations assessed.

<table>
<thead>
<tr>
<th>Antibiotic Name</th>
<th>OxF MIC (µg/mL)</th>
<th>Total Range Tested</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amoxicillin</td>
<td>Resistant</td>
<td>21–500 µg/mL</td>
</tr>
<tr>
<td>Amox./Clavulanate</td>
<td>128/64</td>
<td>4/2–500/250 µg/mL</td>
</tr>
<tr>
<td>Azithromycin</td>
<td>0.4</td>
<td>0.05–16 µg/mL</td>
</tr>
<tr>
<td>Ceftriaxone</td>
<td>0.5–128 µg/mL</td>
<td></td>
</tr>
<tr>
<td>Cephalexin</td>
<td>16</td>
<td>0.5–64 µg/mL</td>
</tr>
<tr>
<td>Ciprofloxacin</td>
<td>8</td>
<td>0.015–48 µg/mL</td>
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<td>Clindamycin</td>
<td>4</td>
<td>0.05–128 µg/mL</td>
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<tr>
<td>Doxycycline</td>
<td>0.4</td>
<td>0.1–32 µg/mL</td>
</tr>
<tr>
<td>Gentamycin</td>
<td>128</td>
<td>8–500 µg/mL</td>
</tr>
<tr>
<td>Levofloxacin</td>
<td>3.2</td>
<td>0.1–16 µg/mL</td>
</tr>
<tr>
<td>Metronidazole</td>
<td>32</td>
<td>4–100 µg/mL</td>
</tr>
<tr>
<td>Nitrofurantoin</td>
<td>16</td>
<td>0.5–256 µg/mL</td>
</tr>
<tr>
<td>Tetracycline</td>
<td>0.4</td>
<td>0.05–64 µg/mL</td>
</tr>
<tr>
<td>Vancomycin</td>
<td>Resistant</td>
<td>1–300 µg/mL</td>
</tr>
</tbody>
</table>

**Conclusion:** These results can better inform clinicians on the types of antibiotics that may pose a higher risk of decolonizing natural GI OxF flora and subsequently putting patients at a higher risk for developing calcium oxalate kidney stones.
INTRODUCTION: Ureaplasmas, commensals of the human urinary tract, have been implicated as causative agents of prostatitis, chronic urinary tract infections (UTI), pyelonephritis, and nephrolithiasis. The factors that confer uncomplicated infection or disease are largely unknown.

OBJECTIVES: Use a rodent model of U. parvum induced UTI to characterize the temporal host immune response in asymptomatic and complicated infection.

METHODS: F344 rats were inoculated with sterile culture media (controls) or U. parvum. Rats were sacrificed at 1, 4, 24, 48 and 72 hours and 2 weeks post-inoculation (PI). U. parvum infection was characterized by culture and in situ location in bladder tissue. Rats were then classified into asymptomatic or complicated UTI groups based on bladder-specific immune responses including cytokine profiling, ELISA, histology, confocal microscopy and expression of the inflammatory biomarker Calgranulin A.

RESULTS: Bladder inflammation in control animals completely resolved within 72 hours PI. Animals that remained infected showed a divergent pattern of inflammation that correlated to location of U. parvum within the bladder tissue. Rats in the asymptomatic UTI group had U. parvum colonization localized to the bladder mucosa with inflammatory resolution by 72 hours PI and undetectable tissue Calgranulin A levels. At 2 weeks PI, this group had significantly lower concentrations of urinary pro-inflammatory cytokines in their urine (P < 0.001) compared to the complicated group. Rats in the complicated UTI group with ongoing inflammation had U. parvum present in both the mucosal and submucosal layers, evidenced by edema and leukocytic infiltration. Calgranulin A was detected within submucosal neutrophils at 48, 72 and 2 weeks PI. Additionally, complicated UTI animals exhibited a Calgranulin A pattern of uroepithelial expression at 2 weeks PI that positively correlated with urinary IL-1α and chemokine factor GRO/KC (IL−8) (P< 0.03).

CONCLUSIONS: Animals in which U. parvum colonization was localized to the bladder mucosa showed a similar immune response as sham inoculated controls. Rats with evidence of U. parvum submucosal colonization exhibited chronic and active inflammation that preceded uroepithelial expression of Calgranulin A and increased urinary cytokine levels. This suggests that submucosal involvement in the innate immune response contributes to complicated UTI, a finding that may yield both diagnostic and pathophysiologic insights into chronic inflammatory disease states of the urinary tract.

Funding: NIH K08 DK075651.
**Results:** A total of 437 subjects met criteria for review. The retropubic approach was used in 395 subjects (90.4%) and 42 patients underwent laparoscopic RP (9.6%). 43 patients underwent SBx, (9.8% of cohort) and 394 EBx (10−12 cores, n=394). Mean age was 59.25 ± 5.86 for SBx and 61.35 ± 6.16 for EBx (p 0.0272) while there were no statistically significant differences in race or BMI (46.2% vs 55.8% and 28.27 ± 5.39 vs 27.16 ± 5.21 respectively). Median PSA was similar in both groups (SBx –6.4 vs EBx 6.0, p=0.2074). The difference in mean Gleason Sums was slightly lower in the SBx for both clinical (6.0 +/- 0.9 vs 6.3 +/- 0.9) and pathologic (6.3 ± 0.8 vs 6.6 ± 0.8) recordings but only reached borderline statistical significance (p=0.0539 and 0.0514, respectively). Operative time, blood loss, transfusion requirements, margin status and hospital stay were not significantly different between the two groups. A subset analysis of patients admitted for greater than 4 days was performed. This demonstrated a higher incidence of a longer hospitalization in the EBx group (46.5% vs 25.6% p=0.0089). Incidence of BNC, anastomotic leak, and rectal injury was not different between the groups.

**Conclusion:** SBx does not appear to have an adverse effect on surgical outcomes of radical prostatectomy and is not associated with an increased incidence of complications.

**Poster #32**

**DOES AGE INFLUENCE THE DEVELOPMENT OF URINARY INCONTINENCE IN PATIENTS WHO ARE CONTINENT FOLLOWING TOTAL PROSTATECTOMY?**

Mark Soloway, Devendar Katkoori, Cynthia Soloway and Murugesan Manoharan
University of Miami, Miller School of Medicine, Miami, FL
(Presented By: Mark Soloway)

**Introduction and Objectives:** Among the complications following a total prostatectomy (TP), urinary incontinence is perhaps the most annoying for the patient. In population-based studies, age is a risk factor for developing urinary incontinence (UI) with nearly 10% of men over the age of 75 years being incontinent. In this study, we analyzed whether patients who are continent following TP develop UI over time and assess if age plays a role. To the best of our knowledge there are no published reports addressing this issue.

**Methods:** 1,998 TPs were performed by a single surgeon between 1992 and 2008. We performed a retrospective analysis of all the patients who were continent following TP and had follow-up more than five years. To assess the influence of age, two groups were defined according to age at surgery (<70 and ≥70yr). The groups were compared for the proportion of incontinent patients and long-term continence rates (using Kaplan Meier method). The patient was considered continent if he was not wearing a pad. Those who use one or more pads were considered incontinent. Patients were followed at 6 weeks, 3 months and every 6 months thereafter. Continence was evaluated at each follow-up by the surgeon or by an annual questionnaire if the patient did not return for follow-up.

**Results:** 538 patients met the inclusion criteria. In the entire cohort, 18 patients developed UI. 17 of them have a single pad usage and one patient had three pads usage. 482 patients were <70 yr at TP and 3.3% (16/482) developed incontinence. 56 patients were <70 at TP and 3.6% (2/56) developed incontinence (p=1.0). No significant difference was noted between the groups (Log rank P=0.95) (Figure1).

**Conclusion:** Once continence is attained following TP, very few patients develop incontinence. Patients over 70 yr old who undergo a TP are as likely to remain continent, as are younger men (<70 yrs).

**Continence function by age at surgery**

![Continence function by age at surgery](image_url)
Poster #33
SALVAGE PROSTATE BRACHYTHERAPY FOR PRIMARY EXTERNAL BEAM RADIATION THERAPY FAILURES
Jamie Cesaretti¹, Rizwan Nurani¹, Rosetta Hixson¹, Mitchell Terk¹, Apoorva Vashi² and Douglas Swartz²
¹Riverside Cancer Center, Jacksonville, FL; ²Jacksonville Prostate Center, Jacksonville, FL
(Presented By: Mitchell Terk)

Introduction and Objectives: Local failure rates following external radiation therapy as a single modality treatment for prostate cancer range between 25 – 35%. In this study, we evaluate the long-term safety and efficacy of salvage prostate brachytherapy (BT).

Methods: Of the 2,850 patients that have undergone prostate BT at our institution since 1997, 64 received salvage Pd-103 seed implantation. All 64 patients presented with a rising PSA after prior definitive external radiation therapy (EBRT) as the only treatment. The median dose of EBRT was 7020cGy. All patients had biopsy proven disease in the prostate with negative staging CT and bone scans. All patients had Palladium (Pd103) implantation. 98% of men received hormonal therapy with an LHRH agonist (LHRHa) for a median duration of 6 months. 58 consecutive patients had a minimum follow-up of 2 years and were included in this analysis. All patients were prospectively tracked in an IRB approved centralized database with serial PSA levels and physical examination. Treatment related toxicities were recorded according to the NCI late toxicity scale. Biochemical failure was defined according to the Phoenix definition. The Kaplan-Meier method and Log-rank test were used in evaluating data.

Results: The median follow-up from the time of implant was 64 months (range 24 – 130 months). Overall, 51% of men were free from biochemical relapse (bNED) at both 5 and 10 years. The median PSA at last follow-up was 0.1. For men with a Gleason < 7 at re-biopsy, and a pre-salvage PSA < 7, 71% were bNED at 7 years vs 35% with a Gleason 8 – 10 or PSA > 7 (p=0.04). There were no grade 4 complications and no rectal fistulae or ulcerations. TURP was required in 5% of patients for bladder outlet obstruction symptoms or prolonged urinary retention.

Conclusions: Prostate seed implant is a safe and effective salvage option for patients with recurrent disease following external beam radiation therapy. At the time of salvage, patients with a Gleason < 7 and PSA < 7 had excellent long-term outcomes with minimal long-term toxicity.

Funding: None.

Poster #34
THE IMPACT OF OBESITY AS A COMPETING RISK FACTOR IN PROSTATE CANCER
Stephen McKim, Eugene Simopulos, Greg Larsen, Matthew Nielsen, Eric Wallen and Raj Pruthi
The University of North Carolina at Chapel Hill
(Presented By: Stephen McKim)

Introduction and Objectives: For many patients, obesity may be a competing risk factor to death from prostate cancer, yet it remains unclear as to how obesity should influence such treatment decisions. This study analyzed existing data on the impact of obesity on life expectancy and compared such estimates to the expected mortality from prostate cancer in untreated patients.

Methods: Using data from Fontaine et al JAMA (2003) and US Life Tables (2003), we calculated the probability of death in 15 years for men in each BMI category at integer-defined age intervals over 5-yr age intervals. Estimates of 15-year disease-specific mortality by Gleason grade for men with localized prostate cancer and who received only conservative management were then derived from data published by Albertsen et al JAMA (1998; 2005). A comparison of the two data sets was then completed to estimate whether BMI or untreated prostate cancer offered the greatest 15-year mortality risk.

Results: The graph demonstrates the 15-year mortality rates based on BMI (25, 30, 35, 40, and 45+), with increasing mortality observed at higher BMI values. The graph also demonstrates the super-imposed 15-year disease-specific mortality rates based on prostate cancer Gleason grade (<6, 7, 8 – 10) with increasing mortality rates observed with increasing grade. All Gleason 6 patients had lower prostate cancer mortality rates than other causes at each BMI level. Conversely, patients with Gleason 8 – 10 cancers had higher prostate cancer mortality at most ages and BMI levels except for the oldest and most obese patients.

Conclusion: For men with Gleason 6 or 8 – 10 prostate cancer, BMI should have little if any impact on treatment decision, except for the oldest and most obese men. For men with Gleason 7 disease, the 15-year mortality associated with significant obesity can exceed the disease-specific mortality with prostate cancer. Accordingly, one should consider the possible impact of obesity when considering treatment options in men with prostate cancer.
**Poster #35**  
**BIOPSY ACCURACY IN IDENTIFYING UNILATERAL PROSTATE CANCER DEPENDS ON PROSTATE WEIGHT**  
Matvey Tsivian, Daniel M. Moreira, Leon Sun, Vladimir Mouraviev, Jorge R. Caso, Masaki Kimura, Judd W. Moul and Thomas J. Polascik  
Duke University Medical Center, Durham, NC  
(Presented By: Vladimir Mouraviev)

**Introduction and Objectives:** To evaluate the relationship between prostate weight and the diagnostic performance of routine biopsy schemes in detecting unilateral prostate cancer (PCa).

**Methods:** Retrospective analysis of patients undergoing radical prostatectomy at Duke University Medical Center from 1990 – 2007. The cohort was dichotomized according to prostate weight (≤40 and >40g) and further divided by biopsy scheme: 6 – 9 (sextant) and 10 – 20 cores (extended). Diagnostic accuracy, sensitivity, specificity, positive and negative predictive values were calculated within each prostate weight group and compared between biopsy schemes.

**Results:** A total of 859 patients were included in the study. Patients with prostates >40g were generally older and had higher PSA levels (p<0.0001 and p=0.036, respectively). Unilateral disease was more common in prostates >40g both on biopsy (69% vs 60%, p=0.009) and on final pathology (21% vs. 14%, p=0.017) despite larger total tumor volume (6.1 vs. 4.8cc, p<0.001). Low grade PCa was also more common in larger glands (p=0.003). Overall, extended biopsy schemes performed better than sextant but the benefit was statistically significant only in prostates >40g.

**Conclusions:** Despite having higher tumor volumes, men with prostate weight >40g were more likely to have unilateral PCa than those with smaller prostates. In prostates >40g, increasing the number of cores harvested at biopsy increased the diagnostic performance for detecting cancer laterality. Therefore, our results suggest that the benefit of more extensive tissue sampling may be higher in larger prostates compared to smaller ones.
Poster #36
THE INCIDENCE OF PROXIMAL EJACULATORY DUCT IN TRANSRECTAL ULTRASOUND GUIDED BIOPSY SPECIMENS
Matthew McIntyre¹, Benjamin Coulter², Laura Spruill², Harry Fisch³ and Michael Smith²
¹MUSC Urology Charleston, SC; ²MUSC Pathology, Charleston, SC; ³Cornell Urology, New York, NY
(Presented By: Matthew McIntyre)

Introduction: The ejaculatory duct (ED) courses through the prostate and delivers seminal fluid into the urethra. ED pathology can lead to infertility as well as male sexual dysfunction and has been linked to pelvic pain syndromes. The proximal ejaculatory duct has a continuous epithelial layer and similar histology to the seminal vesicles (SV). No defined criteria exist to distinguish these two structures. The clinical implications of this relate to staging of prostate cancers. Identification of SV invasion indicates a stage T3 cancer and carries a worse prognosis. The incidence of ED in biopsy specimens has never been reported. We sought to determine the incidence of proximal ejaculatory duct in transrectal ultrasound guided (TRUS) biopsy specimens and define what characterizes ED from SV.

Methods: We reexamined the last 100 TRUS biopsy specimens looking for ED as well as SV. Positive findings were then reviewed and consensus reached by all researchers including a dedicated GU pathologist (MS).

Results: The average prostate volume was 44.1 gm. The incidence of proximal ED on TRUS biopsy was found to be 4%. The incidence of SV when it was not the intended target of biopsy was 11.5%. Only one patient was identified as having both ED and SV on biopsy specimen. The most common biopsy location for ED was the right base 50%. The most common biopsy site of SV was left base 56%. The average prostate size for specimens with ED was 38.9gm. The rate of prostate cancer diagnosis was 39%; none of these patients had ED in the specimen. A distinguishing characteristic of ED is the presence of prostatic glandular elements on both sides of ED epithelium in a biopsy core. The smaller size of seminal epithelial elements and lack of circular muscle fibers helps to delineate ED from SV.

Conclusions: This is the first recorded rate of ED in TRUS biopsy specimens. With an aging population and increasing numbers of biopsies being performed this is a clinical scenario that will continue to be encountered by pathologist. ED can be distinguished from SV to accurately distinguish T2 from T3 tumors. The rate of proximal ED in TRUS guided biopsy specimens is 4%.

Poster #37
ELIMINATION OF BOWEL PREPARATION IN PATIENTS UNDERGOING CYSTECTOMY AND URINARY DIVERSION
Garjae Lavien, Eugene Simopoulos, Stephen McKim, Matthew Nielsen, Eric Wallen and Raj Pruthi
The University of North Carolina at Chapel Hill
(Presented By: Eugene Simopoulos)

Introduction: Current studies in the colorectal surgery literature have suggested there are no differences in outcomes with or without pre-operative mechanical bowel prep (MBP) prior to surgery. However, literature examining the role of MBP in urologic surgery is minimal. The objective of this study is to compare peri-operative outcomes in patients who underwent cystectomy and ileal urinary diversion with or without MBP.

Methods: The study represents a consecutive case series of 70 patients who underwent elective cystectomy and ileal urinary diversion either with MBP or no bowel preparation (NO PREP). Patients excluded from both groups included those with history of pelvic XRT or with history of complex bowel surgery (e.g. prior colostomy). 37 patients (6/08 – 12/08) underwent a MBP that included 1 bottle of Magnesium citrate, Fleets enema, clear-liquid diet day before surgery, and peri-operative antibiotics. The 33 patients in the NO PREP group (1/09 – 7/09) had a regular diet until midnight before surgery, a Fleets enema the morning of surgery, and peri-operative antibiotics. Post-operative complications were graded using the Clavien classification of surgical complications.

Results: There were no differences in recovery of bowel function, time to discharge, or complication rates between the 2 groups. With regard to GI complications, MDC group had 6 cases (16.2%) of partial ileus/emesis (all resolved with conservative management), 1 case of fascial dehiscence, and 1 case of new onset incarcerated inguinal hernia. In the NO PREP group, GI complications included 5 cases (15.2%) of partial ileus/emesis (all resolved with conservative management) and 1 case of fascial (port site) dehiscence. There were no cases of anastomotic leak, fistula, peritonitis, or abscess in either group.

Conclusions: MBP does not demonstrate any significant advantage in peri-operative outcomes in patients who undergo cystectomy and ileal urinary diversion. These results suggest that MBP can be omitted in many patients undergoing urologic procedures involving use of small bowel. Non-prepped regimen may provide potential benefits of improved patient tolerability and hydration status.
Introduction and Objectives: Recent publications by Levine et al. and other groups have suggested that microsurgical de-nervation of the spermatic cord can be a successful treatment option for men with chronic orchialgia. However, there is a paucity of literature on the anatomical basis for the success of this procedure. This study was aimed at developing an anatomical mapping of nerve fibers within the spermatic cord to better our understanding of how the de-nervation technique may provide pain relief.

Methods: A review of pathology specimens of the tissues being transected in the spermatic cord during 11 microsurgical de-nervation procedures performed from May to Aug 2009 by a fellowship-trained microsurgeon. The specimens were taken in a standardized mapped fashion from a cross-section of the spermatic cord. All specimens were reviewed by the same pathologist and assessed for number of nerves, size and any evidence of pathological changes within these nerves on hematoxylin-eosin staining. All cases were performed in men with chronic orchialgia (pain for greater than 3 months) that had failed conservative treatment options and had a negative urologic and neurologic workup.

Results: There were a large number of small diameter (<0.5 mm) nerve fibers within the spermatic cord (on average 20 nerve fibers in each patient). A number of these nerve fibers were found to have Wallerian degeneration. There was a characteristic reproducible distribution of these nerves within the spermatic cord across the different patients. There were three primary locations for these nerves, listed in decreasing order of nerve density: 1) the highest density in the cremasteric muscle fibers (9.2 nerves/patient), 2) the peri-vasal tissues and vasal sheath (7.6 nerves/patient), 3) the peri-arterial tissues (3.1 nerves/patient). There were a few small nerve fibers along some of the veins and none in the actual vas deferens (they were all located within the vasal sheath). These findings support the key components of the denervation procedure which are: ligation of all cremasteric fibers, stripping of the vas deferens and ligation of the peri-vasal sheath, and careful dissection and ligation of the peri-arterial tissues. The trans-section of these small diameter nerve fibers (possible pain fibers) may explain the effect of the de-nervation procedure.

Conclusion: There may be an anatomical basis to the success of microsurgical de-nervation of the spermatic cord for men with chronic orchialgia. There appear to be specific distribution patterns of small diameter nerve fibers within the spermatic cord. Further studies will enhance our understanding of the de-nervation procedure.
Poster #39
IS THE MORBIDITY OF POST-CHEMOTHERAPY RETROPERITONEAL LYMPH NODE DISECTION FOR TESTICULAR CANCER RELATED TO THE SIZE OF THE RESIDUAL MASS OR TO THE INTERNATIONAL GERM CELL CONSENSUS CLASSIFICATION?
Moffitt Cancer Center, Tampa, FL
(Presented By: Luke Wiegand)

Introduction and Objectives: To evaluate whether surgical morbidity or peri-operative complications following post-chemotherapy retroperitoneal lymph node dissection (PCRPLND) are related to tumor bulk or to the International Germ Cell Consensus Classification (IGCCC).

Methods: A retrospective review was performed to identify patients who underwent PCRPLND from December 1992 through July 2009. Patients were divided into groups based on the size of the residual mass (group 1 ≤ 5cms; group 2 > 5cms). The IGCCC status was determined to assign risk categories. Clavien’s system was utilized to classify the severity of peri-operative complications.

Results: 86 patients underwent PCRPLND. Groups 1 and 2 included 38 and 48 patients, respectively. The IGCCC status was determined for 71 of the 86 patients (83%); good risk=28, intermediate risk=19 and poor risk=24. The mean EBL, the mean operative time and the mean LOS was higher in group 2 compared to group 1; 2,103 ml vs. 922 ml, 511 min vs. 429 min, and 9.5 days vs. 7.1 days. Intra-operative and post-operative complications occurred in 12 (13.9%) and 37 (43%) patients, respectively. However, complications deemed significant and requiring intervention according to the Clavien classification (i.e. Clavien’s III or higher) occurred in only 10 (11.6%) patients. A univariate analysis revealed that a residual mass > 5 cm (group 2) was significantly associated with EBL (p=0.0048) and vascular/adjacent organ resection (i.e. nephrectomy, adrenalectomy, major vessel resection, bowel resection) (p=0.012). Poor-risk IGCCC status was significantly associated with EBL (p=0.010), longer OR time (p=0.049), and transfusion requirements (p=0.03). However, neither the size of the residual mass nor the IGCCC status predicted the occurrence of peri-operative complications on multivariate analysis.

Conclusions: Although PCRPLND is often associated with extensive surgery, significant complications (Clavien III–V) are limited to a minority of patients. The EBL, operative time, LOS and number of organ and vascular resections are increased in patients with bulky retroperitoneal disease. The IGCCC status or the largest residual mass size did not predict post-operative morbidity.

Funding: None

8:30 a.m. – 10:00 a.m.  T-LEON HOWARD IMAGING SESSION
Moderator: Michael S. Cookson, MD
Nashville, TN

Case #1
Presented By: Ngoc-Bich Le, MD
Case #2
Presented By: Ian Thompson, III, MD
Case #3
Presented By: Kelvin Moses, MD, PhD
Case #4
Presented By: Justin Watson, MD
Case #5
Presented By: John Lee MD
Case #6
Presented By: Richard Vanlangendonck, MD
Case #7
Presented By: David Spencer, MD
Case #8
Presented By: Joe Mobley, MD, MPH

10:00 a.m. – 10:25 a.m.  BREAK – VISIT THE EXHIBITS
Location: Americana 123

10:25 a.m. – 10:30 a.m.  2011 SESAUA MEETING PROMOTION
Presenter: Raju Thomas, MD, FACS, MHA
New Orleans, LA

10:30 a.m. – 12:30 p.m.  SOCIOECONOMIC FORUM

10:30 a.m. – 11:00 a.m.  AMBROSE-REED LECTURE: MASSACHUSETTS UNIVERSAL HEALTH CARE – LESSONS LEARNED
Guest Speaker: Kevin R. Loughlin, MD, MBA
Boston, MA
11:00 a.m. – 11:30 a.m.  HOW A CHANGING HEALTHCARE REGULATORY ENFORCEMENT ENVIRONMENT IMPACTS UROLOGISTS

Guest Speaker: Robert Kusserow
CEO, Strategic Management Services
Alexandria, VA

11:30 a.m. – 12:00 p.m.  PRESIDENTIAL LECTURE: UNDERSTANDING A GLOBAL ECONOMY

Introducer: Jim Kimbrough
Vice-Chairman, Tampa Region SunTrust
Brooksville, FL

Guest Speaker: Gregory Miller
Chief Economist, SunTrust
Atlanta, GA

12:00 p.m. – 12:20 p.m.  HEALTH POLICY UPDATE

Invited Speaker: David F. Penson, MD, MPH
Vice-Chair AUA Health Policy Council
Nashville, TN

12:20 p.m. – 12:30 p.m.  HISTORY OF THE SES AND CUBAN UROLOGY

Invited Speakers: Manuel J. Coto, MD
Orlando, FL
Hector H. Henry, II, MD
Salisbury, NC

12:30 p.m. – 1:30 p.m.  INDUSTRY SPONSORED LUNCH
Promoting Wellness 2: How to Save Time Discussing What Works and What is Worthless
Location: Poinciana 1 & 2
Speaker: Mark Moyad, MD, MPH
University of Michigan

1:30 p.m. – 2:50 p.m.  YOUNG UROLOGISTS FORUM

Chairs: Philipp Dahm, MD
Alex Gomelsky, MD

Welcome & Introduction
Thomas F. Stringer, MD

Update on ACGME requirements and Residency Training
Martha K. Terris, MD

Maintenance of Certification for the Young Urologist
W. Bedford Waters, MD

Trends in Private Practice Employment Opportunities
Kenneth L. Perego II, MD

Update on Upcoming Changes in Health Policy
Steven M. Schlossberg, MD

Volunteerism and Haiti Experience
Martin K. Dineen, MD

2:50 p.m. – 3:00 p.m.  Q&A
SUNDAY, MARCH 14, 2010

7:00 a.m. – 12:30 p.m.  REGISTRATION AND INFORMATION DESK OPEN
Location: Rotunda East Ballroom

7:30 a.m. – 12:00 p.m.  SPOUSE/GUEST HOSPITALITY SUITE OPEN
Location: Venus

7:30 a.m. – 9:00 a.m.  SESSION 16: URETHRA / URETER / TRANSPLANTATION /
RECONSTRUCTION / POTPOURRI PODIUM

Moderators: Nicolas A. Muruve, MD
Weston, FL
David Thiel, MD
Jacksonville, FL

7:30 a.m.  #123  PROSTATE CANCER IN RENAL TRANSPLANT RECIPIENTS: BIOPSY
COMPLICATIONS AND ONCOLOGIC CHARACTERISTICS
Sergey Ananyev, Rizk El-Galley and J. Erik Busby
Division of Urology, Department of Surgery, University of Alabama at
Birmingham, Birmingham, AL
(Presented By: Sergey Ananyev)

7:35 a.m.  #124  OUTCOMES OF SIMULTANEOUS BILATERAL NEPHRECTOMY IN
KIDNEY TRANSPLANT RECIPIENTS
Rizk El-Galley and Jan Colli
University of Alabama at Birmingham
(Presented By: Jan Colli)

7:40 a.m.  #125  RECENT TRENDS IN IATROGENIC URETERAL INJURIES
Victoriano Romero¹, Haluk Akpinar², John Smith² and Dean Assimos²
¹Wake Forest University School of Medicine; ²Wake Forest University School
of Medicine, Winston-Salem, NC
(Presented By: Victoriano Romero)

7:45 a.m.  #126  THE USE OF FULL LENGTH METALLIC URETERAL STENTS FOR
MALIGNANT URETERAL OBSTRUCTION
Hadley Wyre and Ken Ogan
Emory University, Atlanta, GA
(Presented By: Hadley Wyre)

7:50 a.m.  #127  LONG-TERM FOLLOW-UP OF ROBOTIC PYELOPLASTY
Ugur Boylu, Mathew Oommen, Benjamin R. Lee and Raju Thomas
Department of Urology, Tulane University School of Medicine, New Orleans,
LA
(Presented By: Ugur Boylu)

7:55 a.m.  #128  ROBOTIC URETERAL REIMPLANTATION FOR IATROGENIC INJURIES
AND BENIGN DISEASE
Denise Chow¹, Sean Collins², Jesse Gill² and Richard Vanlangendonck³
¹Louisiana State University/Ochsner Clinic Foundation, New Orleans, LA;
²Louisiana State University, New Orleans, LA; ³Ochsner Clinic Foundation,
New Orleans, LA
(Presented By: Denise Chow)

8:00 a.m.  #129  URETERAL DYNAMICS IN THE PRESENCE OF A URETERAL STONE IN
A SOLITARY KIDNEY: AN IN VIVO PROCINE STUDY
Ramakrishna Venkatesh¹, Jay Page², Steven La Barbera³ and Nitin Das³
¹University of Kentucky, Urology Division, Lexington, KY; ²University of
Kentucky, Lexington, KY; ³Washington University School of Medicine, St.
Louis, MO
(Presented By: Ramakrishna Venkatesh)
8:05 a.m.  #130  A NEW MICRO DOPPLER PROBE FOR ROBOTIC MICROGSURGICAL PROCEDURES
Sijo Parekattil, Karen Priola, Hany Atalah and Marc Cohen
University of Florida, Gainesville, FL
(Presented By: Sijo Parekattil)

8:10 a.m.  #131  CRITICAL ANALYSIS OF ROBOTIC-ASSISTED LAPAROSCOPIC DISMEMBERED PYELOPLASTY FOR PRIMARY AND SECONDARY URETEROPELVIC JUNCTION OBSTRUCTION: A MULTI-INSTITUTIONAL EXPERIENCE
Manoj Patel¹, Rafael Coelho², Sanket Chauhan³, Marcelo Orvieto⁴, Kenneth Palmer⁵, Bobby Ardila⁶ and Vipul Patel⁷
¹Global Robotics Institute, Florida Hospital Celebration Health, University of Central Florida School of Medicine, Celebration, FL
(Presented By: Rafael Coelho)

8:15 a.m.  #132  IN VITRO EXPANDED LIVING SKIN FOR RECONSTRUCTION
Mitchell Ladd¹, Tamer Aboushwareb², Victoriano Romero², Sang J. Lee²,
Anthony Atala² and James Yoo³
¹Department of Urology and Institute for Regenerative Medicine, and VT/WFU School of Biomedical Engineering and Science, Wake Forest University Health Sciences Winston Salem, NC; ²Department of Urology and Institute for Regenerative Medicine, Wake Forest University Health Sciences Winston Salem, NC
(Presented By: Tamer Aboushwareb)

8:20 a.m.  #133  OUTCOMES OF TRAUMATIC LOWER URINARY TRACT INJURY
Jared Cox, Mark Lockhart, Alan Cantor and Janet Colli
University of Alabama at Birmingham, Birmingham, AL
(Presented By: Jared Cox)

8:25 a.m.  #134  URETHRAL RECONSTRUCTION FOLLOWING PELVIC FRACTURE AND BLUNT PERINEAL TRAUMA: A SINGLE SURGEON EXPERIENCE
Christopher Bean¹ and Charles Secrest²
¹Division of Urology, University of Mississippi, Jackson, MS; ²Division of Urology, University of Mississippi, Jackson, MS and The Center for Reconstruction, Jackson, MS
(Presented By: Christopher Bean)

8:30 a.m.  #135  LAPAROSCOPIC AND PERCUTANEOUS CRYOABLATION FOR RENAL TUMORS: A TWO-INSTITUTION EXPERIENCE
Thomas J. Polascik¹, Matvey Tsivian¹, Janice M. Mayes¹, Vladimir Mouraviev¹,
Blake Wynia² and Bruce Shingleton²
¹Duke University Medical Center, Durham, NC; ²University of Chapel Hill, Chapel Hill, NC
(Presented By: Matvey Tsivian)

8:35 a.m.  #136  ELECTROLYTE PANEL ANALYSIS AFTER IRREVERSIBLE ELECTROPORATION IN IN-VIVO PORCINE KIDNEYS
Nelson Salas¹,², Charles Moore¹ and Raymond Leveillee¹
¹Joint Bioengineering and Endourology Developmental Surgical (JBEADS) Laboratory, Department of Urology, University of Miami Miller School of Medicine, Miami, FL; ²Department of Biomedical Engineering, University of Miami, Coral Gables, FL
(Presented By: Nelson Salas)
OUTCOMES OF ROBOTIC-ASSISTED LAPAROSCOPIC PELVIC LYMPHADENECTOMY FOR PROSTATE AND BLADDER CANCER
Eugene Simopoulos, Stephen McKim, Matthew Raynor, Matthew Nielsen, Eric Wallen and Raj Pruthi
The University of North Carolina at Chapel Hill
(Presented By: Eugene Simopoulos)

PODIUM 123
PROSTATE CANCER IN RENAL TRANSPLANT RECIPIENTS: BIOPSY COMPLICATIONS AND ONCOLOGIC CHARACTERISTICS
Sergey Ananyev, Rizk El-Galley and J. Erik Busby
Division of Urology, Department of Surgery, University of Alabama at Birmingham, Birmingham, AL
(Presented By: Sergey Ananyev)

Introduction: There are presently no established guidelines for prostate cancer (CaP) screening, detection, and treatment in male renal transplantation recipients (RTR). Outcomes for RTR with CaP are varied when compared to non-RTR. Only one previous study has examined the morbidity of biopsy in RTR undergoing evaluation for CaP. We compared a large population of RTR to a non-RTR cohort at a single institution to determine the rate of periprocedural infections from prostate biopsy and subsequent CaP characteristics and outcomes.

Methods: Of 2,478 RTR from 1993 to 2007, 29 underwent prostate biopsy. Infectious complication was defined as 3 of 4 criteria (T>101F, WBC > 12,000, positive urine culture, positive blood culture), or any criteria coupled with hospitalization. The RTR cohort was compared to 2053 non-RTR men who underwent biopsy in the same period (random sampling of 145 men out of 2053 performed for accurate statistical analysis). Cancer characteristics, treatment, and oncologic outcomes were also compared between the subset of each cohort diagnosed with CaP.

Results: Of RTR and non-RTR respectively, infectious complication occurred in 10% and 0.7% (p=0.016), and of patients biopsied, CaP was detected in 64% and 46% (p=0.079). Comparing RTR and non-RTR cohorts respectively, mean total Gleason grades were 6.11 and 6.48 (p=0.09), mean primary Gleason grades were 3.06 and 3.18 (p=0.343) and secondary Gleason grades were 3.0 and 3.31 (p=0.042). Treatment for RTR vs non-RTR respectively included active surveillance in 21% and 10%, radiation in 42% and 48%, prostatectomy 32% and 38%, and hormonal ablation 5% and 5%. No difference was seen in the treatment between cohorts (p=0.584). D’Amico risk criteria were low (in 47% versus 48%), intermediate (in 42% versus 36%), and high (in 11% versus 16%) with overall comparable risk distribution (p=0.812) in RTR vs non-RTR. Within African American RTR, there was increased intermediate risk CaP (p=0.003), but otherwise there was no difference among groups. Immunosuppressants did not impact cancer characteristics.

Conclusions: Although there is a trend towards increased detection in RTR, the groups have similar CaP risk categories. RTR present with higher secondary Gleason scores and African American RTR have increased intermediate risk CaP. RTR have a significantly increased risk for infectious complications after prostate biopsy, warranting improved measures and patient education.

PODIUM 124
OUTCOMES OF SIMULTANEOUS BILATERAL NEPHRECTOMY IN KIDNEY TRANSPLANT RECIPIENTS
Rizk El-Galley and Jan Colli
University of Alabama at Birmingham
(Presented By: Jan Colli)

Introduction: Bilateral nephrectomy of potential kidney graft recipients is indicated for patients with bilateral solid renal masses or for patients with massively enlarged polycystic kidneys resulting in complications such as early satiety or those leading to recurrent urinary tract infections. The aim of this study is to present our surgical technique and analyze outcomes of simultaneous bilateral nephrectomies.

Methods: Eighteen patients (age range 33 to 63 years) were referred for simultaneous bilateral nephrectomy between 2005 and 2008 at the University of Alabama at Birmingham. Among the thirteen patients with autosomal-dominant polycystic kidney disease, one experienced recurrent cysts or urinary tract infections, one had recurrent severe hematuria, one had early satiety due to mass effect, one had solid renal mass and nine patients had extremely enlarged kidneys, which required removal prior to renal transplantation. One patient with end-stage renal disease (ESRD) presented with chronic infections secondary to bilateral stone disease, and another required bilateral nephrectomies to control complications resulting from severe hypoalbuminemia. Three patients with ESRD presented with renal cancer in their native kidneys, many years after they had undergone successful renal transplantation. In all cases the kidneys were removed transperitoneally via hand-assisted laparoscopic technique.
Results: Average length of hospital stay was 2 days (range 1 – 13 days). Average estimated blood loss was 175cc (50 – 200cc). No patients required blood transfusion. Range of pathological kidney size was 28 – 36cm. There were no intra-operative complications and no conversions to open surgery. Post operative complications developed in five patients: ileus (n=1), adrenal insufficiency (n=1), pulmonary embolism (n=1), myocardial infarction (n=1) and superficial wound infection (n=1). After bilateral nephrectomies, four patients underwent successful renal transplantation within a few months, and another six patients were placed on renal transplant waiting lists. Eight patients had received a kidney transplant prior to undergoing bilateral nephrectomies. All of these patients remained with excellent postoperative graft function. No patients suffered delayed wound healing or infectious complications from chronic immunosuppressive therapy.

Conclusion: Simultaneous hand assisted bilateral nephrectomy was safe and allowed early access to renal transplantation in our population. Our results found reasonably low complication rates and short postoperative hospital stays. We also demonstrated excellent outcomes in patients who received prior renal transplantation and subsequently required removal of native kidneys due to cancer.

PODIUM 125
RECENT TRENDS IN IATROGENIC URETERAL INJURIES
Victoriano Romero¹, Haluk Akpinar², John Smith² and Dean Assimos²
¹Wake Forest University School of Medicine; ²Wake Forest University School of Medicine, Winston-Salem, NC
(Presented By: Victoriano Romero)

Introduction: There have been recent advances in endoscopic, laparoscopic and robotic surgical techniques. In addition, aggressive open surgical tumor de-bulking operations as a part of multi-modal therapy for abdominal and pelvic malignancies are being more commonly undertaken. We previously reported that there was an increase in the incidence of ureteral injuries from 1985 – 1989 coinciding with the introduction of ureteroscopic procedures. We performed a study to determine if the incidence of ureteral injuries has been influenced by the introduction of the aforementioned surgical techniques.

Methods: We identified the number of patients treated for iatrogenic ureteral injuries at our medical center from 1996 to 2008 through billing codes. These included those occurring within the institution and those referred from other centers. Data were analyzed by time periods; period 1 (1996 – 2001) and period 2 (2002 – 2008), and specialty including urology, obstetrics/gynecology and general/vascular surgery using Fisher's exact test.

Results: There were 29 injuries in period 1 and 48 in period 2. Fifty-six of the injuries occurred at other centers. The treatment of ureteral injuries indexed to 10,000 hospital admissions was similar for both periods. During the 1996 – 2002 and 2002 – 2008 time periods, urologic injuries managed increased from 26.31 in period 1 to 57.24 per 10,000 in period 2 (p=0.03). However, there were no increases in urologic injuries occurring at our institution. Thirty-seven urologic injuries were managed with only 3 occurring at our institution. Eighty-six percent occurred during ureteroscopy, 8% during percutaneous nephrostolithotomy, and 3% during robotic prostatectomy and 3% during TURBT. There were no changes in the incidence of gynecologic injuries as a whole or institutionally. An increase in overall general surgical injuries occurred from period 1 (0.41 per 10,000) to period 2 (4.08 per 10,000); p=0.055. However, this reached statistical significance for injuries occurring at our institution; p=0.006.

Conclusions: We found an increase in the number of urologic ureteral injuries managed but not occurring at our institution. These injuries mainly occurred during endourologic procedures. This trend could be due to and increasing volume of more aggressive endourologic procedures performed in the community setting. An increase in the number of general surgical induced ureteral injuries was demonstrated which may be due to more aggressive oncologic procedures.

PODIUM 126
THE USE OF FULL LENGTH METALLIC URETERAL STENTS FOR MALIGNANT URETERAL OBSTRUCTION
Hadley Wyre and Ken Ogan
Emory University, Atlanta, GA
(Presented By: Hadley Wyre)

Objectives: Malignant ureteral obstruction (MUCO) has traditionally been a difficult problem to manage. Indwelling ureteral stents have a failure rate up to 50%, necessitating the placement of percutaneous nephrostomy (PCN) drainage, which has associated complications and impacts on quality of life. Recently, metallic ureteral stents have emerged as a treatment for extrinsic ureteral obstruction. We present our initial experience using Resonance (Cook Urologic, Spencer, IN) full-length metallic stents for MUCO.
Methods: 20 patients (27 renal units) with advanced cancers and MUO were treated with either unilateral or bilateral metallic stents. Patients were followed prospectively to evaluate for recurrent obstruction. Perioperative morbidity and overall mortality were recorded.

Results: The mean patient age was 49.9 yrs (range 23 – 81). The primary malignancies causing MUO were gastrointestinal (8), gynecologic (6), genitourinary (2), or other (4). All but three renal units had been previously treated with traditional stents. There were no perioperative complications related to stent placement. Eight out of 20 (40%) patients required further intervention for their MUO with a mean time to failure of 6.3 months (range 0 – 19 months). Three patients required conversion to percutaneous drainage for persistent azotemia. Five patients required change to traditional stents (3) or removal of metallic stents (2) secondary to symptoms (1), hematuria (1), azotemia (1), migration (1) or recurrent infections (1). At last follow-up, ten patients died at a mean of 4.6 months (range 1 – 11 months) from stent placement. Eight of the ten patients died with functioning stents in place. Of the remaining ten living patients, four have functioning metallic stents at a mean follow-up of 12.2 months (range 3 – 24 months).

Conclusion: MUO remains a difficult clinical problem in a group of patients with a high mortality. While metallic stents ultimately have a failure rate similar to that of traditional stents, the mean time to failure is longer. Therefore, metallic stents may benefit patients with MUO because the longer dwell time may eliminate the need for more frequent stent changes or further interventions.
Results: Five patients underwent robotic ureteral reimplantation from July 2006 to December 2008. Four patients experienced iatrogenic ureterovaginal fistula and one patient had an endometrioma-associated ureteral stricture. Mean age of the study group was 37.2 (31 – 44) years. Minimal blood loss was reported. Mean hospital stay was 1.6 (1 – 3) days. Mean operative time was 246.6 (175 – 374) minutes. Types of reimplants were three non-refluxing and two refluxing. No surgical complications were reported. Mean post-operative serum creatinine was 0.82 (0.7 – 1.1). Two patients refused post-operative imaging. The remaining three patients enjoyed resolution of either their hydronephrosis or urinary extravasation on post-operative imaging. Urinary leakage resolved in all four patients with ureterovaginal fistulas.

Conclusion: Robotic ureteral re-implantation is safe and effective for the treatment of gynecologic-associated ureteral pathology. Long-term follow-up is needed.

PODIUM 129
URETERAL DYNAMICS IN THE PRESENCE OF A URETERAL STONE IN A SOLITARY KIDNEY: AN IN VIVO PROCINE STUDY
Ramakrishna Venkatesh¹, Jay Page², Steven La Barbera³ and Nitin Das³
¹University of Kentucky, Urology Division, Lexington, KY; ²University of Kentucky, Lexington, KY; ³Washington University School of Medicine, St. Louis, MO
(Presented By: Ramakrishna Venkatesh)

Introduction and Objectives: Stone obstruction can be considered “dynamic” as the kidney may be obstructed intermittently as the stone moves down the ureter. The effects of stone obstruction on ureteral activity in a solitary kidney may be different compared to a situation with a normal contralateral kidney. We studied the acute effects of a ureteral stone in a solitary kidney in a porcine model.

Methods: We evaluated ureteral peristalsis, intrapelvic pressure, and renal resistive index (RI) in 24 female domestic pigs. The animals were divided into 4 groups. Group 1: controls with bilateral normal kidneys and no ureteral stone, Group 2: animals with a stone in the ureter with a normal contralateral kidney, Group 3: animals with solitary kidney with no ureteral stone and Group 4: animals with a solitary kidney and a ureteral stone. Peristalsis was studied using a magneto-resistive sensor and EMG electrodes deployed on the extraluminal surface. Intrapelvic pressure was measured by a pressure transducer in the renal pelvis and the RI by a duplex ultrasound probe. The above parameters including urine output was measured for 6 hours in each group of animals.

Results: The average urine output for the group with a solitary kidney and ureteral stone was 95mls/hr. compared to an average of 153mls/hr. in the other 3 groups. There was increase in median peristaltic rate in the groups with ureteral stone (15/10min.) compared to groups without ureteral stone (11/10min). There was no significant difference in peristaltic rate between solitary kidney with stone versus animals with ureteral stone with normal contralateral kidney. There was increase in the median intra pelvic pressure in animals with ureteral stone (9 – 11cmH20) compared to animals without ureteral stone (4cmH20). There was no significant difference between the solitary kidney with stone (11cmH20) compared to ureteral stone with normal contra lateral kidney (9cmH20) (p=0.4). The renal RI was between 0.5 – 0.6 with no significant difference among different groups of animals.

Conclusions: In the above acute in vivo porcine study, presence of ureteral stone produced increase in peristalsis and intra pelvic pressure. There was a trend towards higher median intrapelvic pressure in animals with ureteral stone with solitary kidney compared to that with normal contralateral kidney. There was no difference in peristaltic rate in animals with ureteral stone in a solitary kidney compared to those with two kidneys.

PODIUM 130
A NEW MICRO DOPPLER PROBE FOR ROBOTIC MICROSURGICAL PROCEDURES
Sijo Parekattil, Karen Priola, Hany Atalah and Marc Cohen
University of Florida, Gainesville, FL
(Presented By: Sijo Parekattil)

Introduction and Objectives: Real time Doppler scanning for arterial localization during microsurgical procedures such as varicocelectomy and denervation of the spermatic cord for chronic orchialgia is beneficial in preventing inadvertent arterial injuries. The use of the Da Vinci S HD® robotic platform (Intuitive Surgical, CA) to perform microsurgical procedures is being explored. One of the caveats of this platform is the difficulty in manipulating the standard microscopic Doppler probes with the robotic graspers during such procedures since these probes are designed to be held in the human hand. This study presents the initial evaluation of a novel micro Doppler probe (MDP) designed specifically for robotic microsurgical procedures.

Methods: The MDP (Vascular Technology Inc., NH) was evaluated in a human bilateral robotic assisted varicocelectomy case for efficacy in testicular artery localization and ease of robotic grasper maneuverability.
Results: The MDP was effective in identifying three testicular arteries within the spermatic cord on either side. Due to the compact size of the MDP and the presence of a small grasping handle for the robotic grasper, maneuverability using the robotic grasper was significantly improved over the standard handheld Doppler probe. MDP allowed for full range of motion of the robotic arms allowing the surgeon to easily scan vessels from a wide range of angles. The operative duration for the case was 70 minutes, 8 veins where ligated on the left, 6 on the right. No complications occurred. The figure below illustrates the device in use.

Conclusion: The new micro Doppler probe for robotic microsurgical procedures appears to have performed effectively in this initial case. Further prospective testing and evaluation is necessary to confirm these findings.

Introduction and Objectives: Historically, the standard treatment for ureteropelvic junction obstruction (UPJO) has been open pyeloplasty. However, over the past 15 years, the laparoscopic approach has shown substantial efficacy, challenging this standard. The introduction of robotic assistance into laparoscopy surgery has not only enabled more surgeons to attempt the laparoscopic approach to pyeloplasty, but also to perform more difficult cases, including previously failed surgical repairs. Herein, we report a multi-institutional experience with Robotic-Assisted Laparoscopic Dismembered Pyeloplasty (RALDP) for primary and secondary repair of UPJO.

Material and Methods: Between June 2002 and October 2008, a total of 168 patients from 3 institutions underwent RALDP for primary or secondary repair of UPJO. All patients underwent a diuretic renal scan and glomerular filtration rate (GFR (ml/min)) calculation pre- and post-surgery. A retrospective chart review was performed to collect demographic, intraoperative and postoperative outcomes both for primary and secondary UPJ repair.

Results: Overall 96.9% of patients showed improvement of T½ in the diuretic renal scan after surgery, with a mean decrease of 32.5min; 72.7% showed improved renal function with a mean increase of 4.5% in the affected renal unit. When examining changes in glomerular filtration rate, 86.2% showed either improvement or no change in GFR after surgery, with 51.7% showing an increase in GFR by a mean of 15.1 ml/min. Of the 4 cases with renal insufficiency (defined as GFR<60 ml/min) preoperatively, 3 patients demonstrated an increase in the GFR above 65 ml/min after surgery. There were 11 (6.6%) complications, with the most common being ileus and bleeding requiring blood transfusion. With regards to the 4 patients demonstrating continued obstruction postoperatively, 3 underwent successful retrograde endopyelotomy; 1 underwent balloon dilation for anastomotic stricture. Of the 168 patients, 21
underwent RALDP for secondary repair of UPJO. The secondary repair group consisted of 12 endopyelotomy failures (57% had a crossing vessel etiology), 8 open repair failures and 1 laparoscopic failure. There were no statistically significant differences in any parameters between the patients undergoing a primary or secondary repair at a mean follow-up of 20.1 months.

**Conclusions:** To our knowledge, this review represents the largest multi-institutional experience of RALDP with long-term follow-up. RALDP is a safe, efficacious and viable option for either primary or secondary repair of UPJO with excellent outcomes and a low incidence of complications.

**PODIUM 132**
**IN VITRO EXPANDED LIVING SKIN FOR RECONSTRUCTION**
Mitchell Ladd¹, Tamer Aboushwareb², Victoriano Romero³, Sang J. Lee³, Anthony Atala² and James Yoo²
¹Department of Urology and Institute for Regenerative Medicine, and VT/WFU School of Biomedical Engineering and Science, Wake Forest University Health Sciences Winston Salem, NC; ²Department of Urology and Institute for Regenerative Medicine, Wake Forest University Health Sciences Winston Salem, NC
(Presented By: Tamer Aboushwareb)

**Introduction:** Reconstructive procedures in urology often require the use of skin. In vivo tissue expanders have been used clinically to generate larger autologous skin. However, this method requires an additional surgical procedure for expander implantation and a long waiting time to obtain sufficient tissue for reconstruction. Moreover, discomfort associated with the increasing expander volume and frequent tissue fibrosis remains among the limitations of this approach. In this study we investigated whether these limitations could be addressed by increasing the surface area of skin tissue in a bioreactor system in vitro while maintaining tissue viability.

**Methods:** Human foreskin was incrementally expanded over 6 days to increase its surface dimensions in a computer-controlled bioreactor system under tissue culture conditions. Morphological, structural and mechanical properties of the foreskin were evaluated before and after expansion using histo- and immunohistochemistry, scanning electron microscopy (SEM), and tensile testing.

**Results:** The surface area of the expanded skin matrices was increased by 110.7%. Histological evaluation showed the maintenance of cell viability and proliferative potential. Histomorphological and ultrastructural analyses showed that dermal structural integrity was preserved. Young's modulus and ultimate tensile strength were increased in expanded skin matrices due to collagen fiber alignment. Despite these changes, the mechanical properties of the skin tissue after expansion were not adversely affected.

**Conclusion:** These findings show that in vitro expansion of living skin matrices can be achieved using a bioreactor system. This technique provides an opportunity to generate large amounts of skin for reconstructive procedures and may overcome the current limitations of the in vivo tissue expander system.

**PODIUM 133**
**OUTCOMES OF TRAUMATIC LOWER URINARY TRACT INJURY**
Jared Cox, Mark Lockhart, Alan Cantor and Janet Colli
University of Alabama at Birmingham, Birmingham, AL
(Presented By: Jared Cox)

**Introduction:** Lower urinary tract injury is a common occurrence with abdominal and pelvic trauma. We evaluated the number and types of lower urinary tract injury at our institution and analyzed short-term urinary and sexual outcomes in these patients using validated questionnaires.

**Methods:** We performed a retrospective review of our radiology database between January 2000 and December 2008. Patient demographics, mechanism of injury, type of bladder or urethral injury and management, type of pelvic fracture, and associated injuries were reviewed. Each patient was mailed a questionnaire detailing his or her current health and preexisting voiding or sexual dysfunction. In addition, men were sent the American Urological Association Symptom Score (AUASS) and the Sexual Health Inventory for Men (SHIM) questionnaires. Women were sent the Urogenital Distress Inventory-6 (UDI-6), the Incontinence Impact Questionnaire-7 (IIQ-7), and the Female Sexual Function Index (FSFI) questionnaires.
**Results:** 114 out of 1225 patients over the eight year period were found to have a true traumatic lower urinary tract injury. Mean age was 33 (range 15 – 80). 85 (75%) were male, and 29 (25%) were female. 89 patients had bladder ruptures (72% extraperitoneal, 28% intraperitoneal). 46 patients experienced a urethral injury, and 15 of these patients had a complete disruption. 86% of patients had an associated pelvic fracture. Intraperitoneal rupture was associated with other solid abdominal organ injuries (p=0.0034), and posterior urethral injuries were associated with pubic rami (p=0.05) and sacral/iliac fractures (p=0.006). Overall, 31 (27%) patients responded to the questionnaires, including 22 men (age range 19 – 59) and 9 women (age range 16 – 50). No patients reported urinary or sexual dysfunction prior to injury. In men, there were 11 bladder ruptures and 11 urethral injuries. Mean AUASS was 13 and mean SHIM was 17. Bladder rupture was not associated with alterations in AUASS (p=0.15) or SHIM (p=0.26) scores. Neither fracture type nor orthopedic surgical intervention was significantly associated with alteration in AUASS or SHIM scores. There was a trend toward improved AUASS and SHIM scores in patients with incomplete urethral injuries versus complete urethral injuries (p=0.09). In women, mean UDI-6 was 5/24, mean IIQ-7 was 2/21, and mean FSFI was 24.

**Conclusions:** Despite low numbers of responders, neither bladder rupture nor type of pelvic fracture seems to portray worse urinary or sexual outcomes. Incomplete urethral injuries may have improved outcomes over complete injuries. This may be important in the decision for immediate urethral realignment in the acute trauma setting. We have no disclosures.

**PODIUM 134**

**URETHRAL RECONSTRUCTION FOLLOWING PELVIC FRACTURE AND BLUNT PERINEAL TRAUMA: A SINGLE SURGEON EXPERIENCE**

Christopher Bean¹ and Charles Secrest²

¹Division of Urology, University of Mississippi, Jackson, MS; ²Division of Urology, University of Mississippi, Jackson, MS and The Center for Reconstruction, Jackson, MS

(Presented By: Christopher Bean)

**Introduction:** From October 1999 to January 2009, we retrospectively identified 54 out of 139 patients who underwent posterior urethral reconstruction following pelvic fracture or blunt perineal trauma.

**Materials and Methods:** We analyzed this population for the mechanism of injury, location and length of urethral damage, age at reconstruction, time from injury to reconstruction, type of urethral reconstruction, previous surgical procedures, and recurrence. The reconstruction was considered a success with the ability to pass a 16Fr flexible cystoscope through the repair on followup exam.

**Results:** A total of 28 out of 54 patients who underwent urethral reconstruction following pelvic fracture (20) or blunt perineal trauma (8) were available for followup. The location of urethral injury (LOI) in pelvic fracture was membranous in 70%, bulbomembranous in 20%, and proximal bulb in 10%. LOI in blunt perineal trauma was bulbomembranous in 62.5% and proximal bulb in 37.5%. The mean length of injury was 1.85cm and 2.38 cm following pelvic fracture and blunt perineal trauma respectively. Age at reconstruction ranged from 5 to 70 years (mean 31) following pelvic fracture and 18 to 70 years (mean 40) following blunt perineal trauma. Time from injury to reconstruction ranged from 6 to 72 months (mean 14.6) and 4 to 300 months (mean 55.5) following pelvic fracture and blunt perineal trauma respectively. 19 of 20 (95%) urethral injuries following pelvic fracture were reconstructed with excision and primary anastomosis of which 26.3% required development of the intracrural space and 5.3% required infrapubectomy and 1 of 20 (5%) was repaired with a scrotal flap. 6 of 8 (75%) urethral injuries following blunt perineal trauma were repaired with excision and primary anastomosis of which 50% required development of the intracrural space and 2 of 8 (25%) were repaired with a buccal graft. 13 of 20 (65%) pelvic fractures and 5 of 8 (62.5%) of blunt perineal trauma had endourethral or surgical interventions by other physicians prior to definitive urethral reconstruction at our facility. Success rates were 96.4% and 100% following urethral reconstruction for pelvic fracture and blunt perineal trauma respectively.

**Conclusions:** Open reconstruction remains the standard of care for urethral injury following pelvic fracture or blunt perineal trauma. The mechanism of injury is an important predictor of the location and length of urethral injury and the surgical approach to reconstruction.
PODIUM 135
LAPAROSCOPIC AND PERCUTANEOUS CRYOABLATION FOR RENAL TUMORS: A TWO-INSTITUTION EXPERIENCE

Thomas J. Polascik¹, Matvey Tsivian¹, Janice M. Mayes¹, Vladimir Mouraviev¹, Blake Wynia² and Bruce Shingleton²
¹Duke University Medical Center, Durham, NC; ²University of Chapel Hill, Chapel Hill, NC
(Presented By: Matvey Tsivian)

Introduction and Objectives: Recent developments in renal imaging and third generation cryotechnology have allowed these minimally invasive cryosurgical procedures to become a feasible option for the treatment of small renal masses. Hereby we present our two-institution experience with both the laparoscopic cryoablation (LCA) and percutaneous cryoablation (PCA) approaches.

Methods: Between January 2001 and August 2008, a total of 123 patients underwent 131 cryosurgical procedures: LCA-54 and PCA-77 for an organ-confined renal tumor(s). All patients had been carefully selected based on the following criteria: tumor size ≤ 3.5 cm for LCA, <5 cm for PCA approach, respectively, and the absence of local and systemic spread on MRI or CT. Cryoablation was employed using third generation cryotechnology (Galil Medical, Plymouth Meeting, PA). Patients were followed by serial CT or MRI scan, creatinine level and physical examination at least every 3 months after PCA and 6 months after LCA.

Results: Results are reported in Table 1. Complications were minor (flank pain, fever, related to general anesthesia, vomiting, respiratory distress) with non-significant differences between groups.

Conclusions: Both LCA and PCA of the small renal tumor are safe procedures with minimal complications and an acceptable level of cancer control. Although the recurrence rate remains higher in the PCA group, tumor size was significantly larger in this cohort than in the LCA group. PCA is truly minimally invasive and can be easily repeated for local failure. Further study is needed to verify long-term efficacy.

Table 1. Summary of results

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<th>PCA</th>
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<tr>
<td>No. procedures</td>
<td>77</td>
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<td>Mean Age (±SD)</td>
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<td>Median tumor size (range) cm</td>
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<td>Mean length of stay in hospital (±SD) days</td>
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<td>2.09±1.84</td>
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<td>Complications: minor</td>
<td>8 (10.4%)</td>
<td>5 (9.1%)</td>
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<td>Recurrence rate</td>
<td>7 (9.1%)</td>
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PODIUM 136
ELECTROLYTE PANEL ANALYSIS AFTER IRREVERSIBLE ELECTROPORATION IN IN-VIVO PORCINE KIDNEYS

Nelson Salas¹,², Charles Moore³ and Raymond Leveillee³
¹Joint Bioengineering and Endourology Developmental Surgical (JBEDS) Laboratory, Department of Urology, University of Miami Miller School of Medicine, Miami, FL; ²Department of Biomedical Engineering, University of Miami, Coral Gables, FL
(Presented By: Nelson Salas)

Introduction and Objective: Irreversible Electroporation (IRE) is a minimally invasive treatment modality that utilizes an electrical field to increase the permeability of the target tissue cell membranes, resulting in their loss of homeostasis and eventual cell death. The objective of this investigation is to measure the intracellular chemical panel in the blood after IRE in in-vivo porcine kidneys.
**Methods:** Both kidneys of fourteen Yorkshire pigs were treated through a midline incision with the NanoknifeTM (Angiodynamics®, Queensbury, NY) IRE ablation system under a variety of treatment parameters. Up to four ablations were performed per kidney. Survival time ranged between 1 and 15 days after ablation. Serum was extracted from fresh blood samples taken before ablation and at the following time intervals after ablation: 30 minutes, 1 day, 2 day, 3 day, every other third day and day of euthanasia. A large chemical panel analysis was performed on the serum.

**Results:** Panel analysis showed a rise in the chemical levels but a decrease to within normal levels within 1 to 3 three days after treatment. Levels remained normal up to 15 days after treatment.

**Conclusions:** Irreversible electroporation is a treatment modality that ablates tissue by increasing the cell membrane permeability, thus permitting a release of intracellular chemicals. Electrolyte levels initially rise but are restored to normal levels within 1 to 3 days after IRE treatment.

**PODIUM 137**

**OUTCOMES OF ROBOTIC-ASSISTED LAPAROSCOPIC PELVIC LYMPHADENECTOMY FOR PROSTATE AND BLADDER CANCER**

Eugene Simopoulos, Stephen McKim, Matthew Raynor, Matthew Nielsen, Eric Wallen and Raj Pruthi

The University of North Carolina at Chapel Hill

(Presented By: Eugene Simopoulos)

**Purpose:** Recently, robotic approaches to prostatectomy and cystectomy have been reported. However, for both prostate cancer and bladder cancer, the associated lymphadenectomy has remained an important diagnostic and even therapeutic part of the procedure. We describe our approach and outcomes with a robotic–assisted laparoscopic pelvic lymphadenectomy for bladder cancer.

**Methods:** 120 patients underwent a robotic PLND as part of robotic prostatectomy (n=35) and robotic cystectomy (n=85) procedures. Of all patients undergoing robotic prostatectomy procedures (n=350), 35 men (10%) underwent a PLND and in all cases this was a limited PLND. Of the cystectomy patients, all 85 patients (100%) underwent either a standard dissection (52%) or an extended/common iliac dissection (48%). The limited dissection included an obturator dissection. The standard dissection included obturator, hypogastric and iliac nodes up to the bifurcation of the common iliac vessels. An extended dissection additionally included nodes along the common iliac vessels up to the aorta. The limited dissection was uniquely used in prostatectomy patients. The standard approach was typically employed for cystectomy patients with non-invasive disease or low volume invasive disease (without angiolympatic invasion)—especially early in our experience. An extended dissection has been employed for cystectomy patients with high–risk invasive disease and more recently for all T2 patients.

**Results:** Thirty-five patients underwent a limited PLND with a mean (range) number of lymph nodes removed of 9 (3–28). Forty-four patients have undergone a standard dissection with a mean (range) number of lymph nodes removed of 17 (8–37). Forty-one patients have undergone an extended dissection with a mean (range) number of lymph nodes removed of 22 (9 – 40). There have been no surgical complications that were attributable to the lymph node dissection. Technical aspects and tricks of the robotic PLND—including obturator, iliac, and para-aortic dissection—will also be discussed.

**Conclusions:** Robotic-assisted laparoscopic pelvic lymphadenectomy for prostate and bladder cancer is a feasible approach with adequate access, exposure and excision of pelvic lymph nodes in both a standard and extended fashion.
9:00 a.m. – 9:10 a.m. INTERNATIONAL VOLUNTEERS IN UROLOGY REPORT
Invited Speaker: Josh Wood
Salt Lake City, UT

9:10 a.m. – 9:30 a.m. LIFE AFTER HEALTH CARE REFORM 2010
Invited Speaker: William F. Gee, MD
Lexington, KY

9:30 a.m. – 9:50 a.m. THE ECONOMICS OF A ROBOTIC SURGERY PROGRAM
Invited Speaker: Michael S. Cookson, MD
Nashville, TN

9:50 a.m. – 10:05 a.m. BREAK

10:05 a.m. – 10:35 a.m. BALLenger LECTURE (OUT OF SECTION): COMPARATIVE STUDY OF GREENLIGHT LASER VS. TURP AND THE IMPACT ON A SINGLE PAYER SYSTEM
Guest Speaker: J. Paul Whelan, MD
Hamilton, ON

10:35 a.m. – 10:55 a.m. THE ECONOMIC IMPACT OF GUIDELINE IMPLEMENTATION
Guest Speaker: John B. Forrest, MD
Tulsa, OK

10:55 a.m. – 11:05 a.m. AUA FOUNDATION UPDATE
Invited Speaker: Sandra Vassos
Linthicum, MD

11:05 a.m. – 12:00 p.m. ANNUAL BUSINESS MEETING
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of
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See Abstracts section for complete text.

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AB# - 3/11/10 1:30 p.m. Video# 5
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AB# 97 3/12/10 4:20 p.m.

Razdan, Sanjay
AB# 117 3/13/10 7:45 a.m.

Richards, Kyle
AB# 65 3/12/10 8:05 a.m.

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AB# 18 3/11/10 1:40 p.m.
AB# 92 3/12/10 3:05 p.m.

Romero, Victoriano
AB# 125 3/14/10 7:40 a.m.

Salas, Nelson
AB# 136 3/14/10 8:35 a.m.

Salem, Shady
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Scales, Jr., Charles D.
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AB# - 3/11/10 4:45 p.m. Poster# 8
AB# 79 3/12/10 9:30 a.m.

Shields, John M.
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Shirodkar, Samir P.
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Simopoulos, Eugene
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AB# 137 3/14/10 8:40 a.m.

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Soloway, Cynthia
AB# 43 3/11/10 4:50 p.m.

Soloway, Mark S.
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Stewart, Suzanne
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Stimson, C.J.
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Stratton, Kelly L.
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AB# 8 3/11/10 11:20 a.m.

Swartz, Douglas A.
AB# 49 3/11/10 5:20 p.m.

Terk, Mitchell
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Thomas, Raju
AB# 75 3/12/10 9:10 a.m.

Thompson, III, Ian M.
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Trang, Vinh
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Minutes
73rd Annual Business Meeting
Southeastern Section of the American Urological Association, Inc.
Mobile, AL
Saturday, March 29, 2009

Unless otherwise noted, actions were by unanimous vote and all committee reports were unanimously approved.

I. WELCOME AND CALL TO ORDER: MARTIN K. DINEEN, MD
Dr. Dineen welcomed the membership and called the 73rd Annual Business Meeting to order at 11:10 a.m.

II. APPROVAL OF MINUTES OF THE PREVIOUS MEETING
Dr. Dineen presented the minutes of the 72nd Annual Business Meeting held Saturday, March 8, 2008.

Action
The minutes were approved as circulated.

III. SECRETARY’S REPORT: RAJU THOMAS
Dr. Thomas reported on recent actions of the SESAUA Board of Directors as follows:

A. The SESAUA Board of Directors appointed the following individuals to serve on SESAUA Committees:

SESAUA Committees:
Bylaws
Member: John Pironi, MD

Committee on Education and Science
Chair – Dean Assimos, MD
Montague Boyd – Ron Lewis, MD
Video – Dave Albala, MD
Imaging – Mike Cookson, MD – until 2011
Resident Affairs – Steve Strup, MD
Member-at-Large – Charles Pound, MD – until 2012
Member at Large – Johannes Viewig, MD – until 2010

Finance
Member-at-Large – William Sanderson, MD

Local Arrangements Chair – Miami Meeting
Ray Leveillee, MD

Future Sites Committee
Chair – Ed Janosko, MD
Member – Martin Dineen, MD

All other SESAUA Committee positions remain current.
The SESAUA Board of Directors appointed the following individuals to serve as SESAUA representatives on AUA Committees:

AUA Committees:

Bylaws:
Gerard Henry, MD, Terry Stallings, MD, Scott Sellinger, MD

AUA Editorial Board
Phil Dahm, MD, replaces Christopher Amling, MD

Health Policy Council:
Martin Dineen, MD, Jonathan Henderson, MD and Chris Winters, MD

History Committee
Hector Henry, MD

AUA Judicial and Ethics Committee
Harriette Scarpero, MD

AUA Research Committee
Harriette Scarpero, MD

All Other SESAUA Representatives positions remain current.

The SESAUA Board of Directors made the following nominations for AUA Awards

AUA Distinguished Contribution Award: Cully Carson, MD
AUA Distinguished Service Award: Wendy Weiser
AUA Gold Cane Award: Fletcher Derek, MD
AUA Certificate of Achievement Award: Ronald Lewis, MD
AUA Ramon Guiteras Award: Jay Smith, MD
AUA Hugh Hampton Young Award: George Webster, MD
AUA Gold Cystoscope Award: Sam Chang, MD
AUA Eugene Fuller Prostate Award: Jay Smith, MD
AUA Victor Politano Award: Roger Dmochowski, MD
AUA Health Science Award: GTx, Corp.
AUA William Didusch Art and History Award: Raju Thomas, MD

The SESAUA Board of Directors voted to continue to support an IVU Scholar at $4,000 in 2009.

The SESAUA Board of Directors voted to establish an Ad Hoc Committee to determine the feasibility of regional and state socio-economic programs. Thomas Stringer, MD, will appoint the Ad Hoc Committee members.

The Board voted to continue to have the SESAUA Committees meet by teleconference prior to the SESAUA meeting to eliminate the need for a Saturday morning Board meeting. Committee reports should be handed in 30 days prior to the annual meeting for review and inclusion in the SESAUA Board Books. The Nominating Committee, however will meet in person during the SESAUA Annual meeting prior to the Annual Business Meeting.

The Board voted to renew its management contract with W. J. Weiser & Associates. They have been the SESAUA management company for nine years and the new contract provides a three-year extension.
H. Spring Annual Meeting Schedule
The Board of Directors voted to continue with a spring schedule for the SESAUA Annual Meeting for the next two years, but will continue discussions for a possible change in the future to a Fall Meeting schedule.

I. AUA Secretary-Elect
Glenn Preminger was nominated and named the 2009 Secretary Elect of the AUA.

IV. SESAUA TREASURER’S REPORT AND FINANCE COMMITTEE REPORT: TERRY STALLINGS, MD

Dr. Stallings reviewed the Treasurer’s Report and gave a slide presentation of the current state of the SESAUA finances.

At year-end December 31, 2008, the SESAUA Fund Balance totaled $2,560,783 and reflects a 2008 excess of expenses related to revenue of ($817,218) for the period. This includes a loss on investments, net dividends and interest totaling ($821,983) for the period. Total income for the fiscal year ending 12/31/08 was $4,014 and is primarily related to Membership Dues of $283,955 and annual meeting income of $541,447 and a loss in investments totaling $821,983. The investment account balance as of 12/31/08 totaled $1,920,462, which reflects a YTD loss of 30%.

Operating expenses for the Section totaled $232,441, Meeting expenses totaled $408,209 and Investment Expenses totaled $180,582. The Investment Expenses include $16,781 for Management Fees to Mediquis, $34,800 for Residents Stipends and $125,000 paid for the AUAF Endowment. This reflects total expenses for the Section of $821,232.

Operating Income was $66,773, meeting income was 133,238 and investment incomes showed a total loss of ($1,017,229) resulting in a total net income loss of ($817,219).

The portfolio as of 12/31/08 (This was prior to the January Committee Meeting done by teleconference) consists of 1% Cash/Money Funds, 40% Bond funds and 59% equity and Real Estate Funds. Dr. Stallings included a slide comparing the total portfolio returns since inception both time weighted and annualized pointing out the fund has been down for the past five years. Comparing our losses to S&P the SES is down 30% whereas the S&P is down 39%. However, when comparing our portfolio to indices since inception, our portfolio was down in all but two indices.

Dr. Stallings reported that our total assets as of 12/31/08 reflect $638,321 in a checking/money market sweep account, $1,920,462 remaining in the Investment Account and $2,000 in an account used for SES Postage fees. (Total assets of $2,560,783). It has been determined that funds in a money market sweep account are not FDIC insured. A checking account is insured, a savings account is insured and a CD is insured. Chase **does** have additional insurance for funds up to $1,000,000 in a flexible savings account, but not checking/sweep accounts so the Finance Committee will move all but $100,000 out of the checking/sweep account into an insured savings account until 12/31/09 in order to have the ability to move it immediately in the event things change in CD rates or the market. Because CD rates are so poor and are literally the same as a savings account at this time, it was decided not to invest in CD’s but simply in this flexible saving account so we can access the money if needed.

The Executive Committee has taken the following action at their meeting on Wednesday:
1) to move funds out of the uninsured sweep account into the flexible savings account. 2) to rebalance the portfolio 3) They have appointed an Ad Hoc Committee to interview other investment managers in order to determined if a change in management is necessary. This Committee will consist of Dr. Stallings as the SES Treasurer, Dr. Kraebber as the Finance Committee Chair, Dr. Jon Demos as the Board Member at Large and past Finance Committee Chair and Dr. Tom Stringer as Incoming President of SESAUA and past SES Treasurer who will act as the Chair of this Ad Hoc Committee. If this Committee feels a recommendation is necessary in regards to our Investment Management Company it will be presented at the August Executive Committee meeting.

Another task of this Ad Hoc Committee will be to also sit down and do a complete line-by-line review of the SESAUA budget in an effort to cut unnecessary costs, especially in printing and travel/meals/site visits. A report will be provided to the Executive Committee and Board of Directors upon completion.
Action
The Treasurer’s report was accepted as presented.

V. SESAUAA HISTORIANS: CECIL MORGAN, MD

It has been his pleasure to serve as the SESAUAA Historian for these many years. He reported that in order to preserve all the history documents for the Section dating back to its inception, he has shipped 10 boxes of SESAUAA information to the AUA Headquarters to their AUA History room for safekeeping. This will enable anyone to review these documents if so needed. Dr. Morgan has enjoyed his work on the AUA History Committee under the direction of Dr. Engel who is the curator of Didisch Museum at the AUA Headquarters. He encouraged all the members to visit the museum. Dr. Morgan provided the following Necrology Report for 2009: Thomas W. Ayres, MD, of Daytona Beach, FL, John P. Donohue, MD, of Melbourne Beach, FL, Lloyd H. Harrison, MD, of Tabaccoville, NC, John C. Matthews, MD, of Pompano Beach, FL, Zachary Voeltz, MD, of Marietta, GA, DeGraft Hayford Yankah, MD, of Selma, AL., and Jack Heiman, MD, of Mobile, AL. Dr. Morgan requests a moment of silence in their memory. Dr. Dineen and the Board thank Dr. Morgan for his many, many years of service to the Section.

Action:
The Historian’s Report was accepted as presented.

VI. REPORT OF THE AUA BOARD OF DIRECTORS: B. THOMAS BROWN, MD

Dr. Dineen explained to membership that the Executive Committee, in an attempt to improve communications between the Executive Committee/Board and the SES representative to the AUA Board and the Health Policy Council, have decided to invite the SESAUAA representative and the Health Policy Council representative to attend and participate in the Executive Committee meetings for the next few years as a non-voting guest. The Executive Committee hopes this will give our AUA representatives a better feeling and understanding of the wishes of our entire membership and that that message will be better relayed and carried back to the AUA Board and Health Policy Council. Brown provided a full report of activities of the AUA Board of Directors.

Dr. Brown confirmed that SESAUAA did provide $125,000 to a scholar from our section, however, because of a prior commitment to the VA, this recipient was unable to accept the endowment. The Executive Committee chose to hold these funds until next year and at that time present them to a qualified one or two-year recipient.

Action
The SESAUAA Representatives Report is accepted as presented.

VII. REPORT OF THE AUA TREASURER: WILLIAM F. GEE, MD

Dr. Gee provided the membership with a brief overview of the AUA Financial Report that will be presented at the AUA Business Meeting next month in Chicago, IL. The report indicates that the AUA continues to report revenues over expenses in their operating fund and currently has over 15,000 members. The AUA total budget in 2004 was 23.6 million and in 2008 was 31 million. After a recent audit, the projected AUA revenue for 2008 is 34.5 million, which reflects a 3.7 million revenue over expenses. Investment losses as of December, 2008 were $23 million. The asset allocation of the AUA consists of 65% equities and 35% bonds. Dr. Gee stated that the AUA primarily uses funds that result from industry support of the annual meeting as well as revenues from the Journal of Urology, Member Services, etc. to fund programs throughout the year.

VIII. STANDING COMMITTEES REPORTS

A. SESAUAA Membership Committee – Raju Thomas, MD

In Dr. Goryl’s absence, Dr. Thomas presented the Membership Report which shows that the Southeastern Section has 2,283 total members, 1,477 are active members and 609 are Senior Members. Dr. Thomas outlined the candidates for membership along with the names of those individuals that have transferred into the Section over the past year.
**Action:** A motion is made to accept the Membership Committee Report and approve all candidates for membership as presented.

B. **Program Committee Report - Raju Thomas, MD**
Dr. Thomas gave an overview of the 2009 Program reporting that we currently have 305 registered to attend in Mobile. This is typical of past years and indicated that in 2005 we had 352 attendees, in 2006 we had 306, in 2007 we had 453, and in 2008 we had 309. Taking into account the results of last years program survey, the scientific session will start out with two live surgical transmissions, include wrap up sessions after some of the key sessions, include simultaneous presentations, an expanded poster session as well as dedicated video. The 2009 scientific session will include 112 podium presentations, 41 posters and 15 video presentations. The Section received 312 abstract submission and 56% of those were selected for the program. This was up from last year. The top eight categories for submission were Prostate Cancer, Kidney Cancer, Robotic Surgery, Bladder Cancer, Kidney, Outcomes, Urinary Diversion/Reconstruction and Miscellaneous. He has maintained the core programs for 2009 including the Young Urologists Forum, Techniques and Technology presentation, Socio-Economic Forum, three Presidential Lectures and a state-of-the-art academic program.

**Action:** A motion is made to accept the Program Committee Report as presented.

C. **SESAUA Committee on Education and Science: Randy Rowland, M.D.**
Dr. Rowland congratulated Dr. Thomas for his outstanding work reviewing and compiling the many abstract submissions included in the 2009 annual program. This will be Dr. Rowland’s last year as Chairman of the Education and Science Committee after serving nine years, three years on Videos, three years on Pylograms and three years as Chairman. He thanked his Committee this year for their hard work which consists of Dr. Albala on Video Conference, Dr. Leveillee on T-Leon Howard Conference, Dr. Ron Lewis on the Montague Boyd Essay Conference and Dr. Steve Strup who is in charge of Resident Affairs. The job of the Committee is to improve the scientific quality of the meeting and urge research efforts while supporting the Secretary and Executive Committee with the meeting.

**Action:** A motion is made to accept the Report from the Committee on Education and Science as presented.

D. **SESAUA Bylaws Committee: Gerard Henry, MD**
Dr. Henry referred membership to Pages 178 in their Program Books for details of the Bylaws changes. The bulk of the changes pertain to the Annual Business Meeting. The Executive Committee has the right to choose the standing committee members and the SESUA Secretary can set the order of business at the Annual Business Meeting. A quorum at the Annual Business Meeting will include those present voting members rather than 50 members as was previously stated.

**Action**
The proposed changes were approved by the SESUA membership.

E. **SESAUA Health Policy Report (HPC) – Jonathan Henderson, MD**
Dr. Henderson reported that the Health Policy Council has been very active this year and the teleconferences have allowed them to streamline their activities. He also reported a very successful Joint Advocacy Conference in Washington, DC, and for those members who have not attended in the past, he encouraged everyone to attend. Their Committee meeting was held via teleconference and that method worked out great for all involved. In the past since, it is hard to get many to attend during the meeting, however, the teleconference offered an easier way to be a part of the Committee meeting.
Topics that were discussed at length throughout the year include:
Manpower issues
Pay for Emergency Room Calls
How the Economy affects Individual Practices
How Relevant is the Section in your Practice
Malpractice issues
Legislative update
Physician Rankings and that tie into specific insurance reimbursements
Advocacy Agenda Items
Proportional Representation

The following actions items were made and approved unanimously by the SES Board in relation to the Health Policy Committee report.

**Action Item #1:** The Health Policy Council recommends that the AUA Board of Directors be encouraged to continue to monitor manpower issues and address deficiencies in the urologic workforce regionally and look for ways to encourage younger urologists to consider private practice.

**Action Item #2:** The Health Policy Council recommends that the AUA Board be petitioned to adopt a policy statement that is appropriate and ethical equally for everyone in urology to receive compensation from hospitals for emergency room calls and to receive fair compensation for these duties.

**Action Item #3:** The Health Policy Council recommends that the SES BOD continue to address the needs of young practicing urologists by continuing and expanding programs specifically designed for these physicians at the annual meeting.

**Action Item #4:** This Action item as written on Page 199 has been tabled and a new motion to appoint an Ad Hoc Committee to search the best and most cost effective way to present socioeconomic issues throughout the SES region will be examined. The Ad Hoc Committee will be chaired by Dr. Stringer, who will also appoint its members.

**Action Item #5:** The Health Policy Council has been made aware that differential insurance reimbursements have been made because of a physician ranking methodology determined by insurance companies without the input of practicing physicians and recommends that the SES Board of Directors petition the AUA to convene a task force to discuss this issue and recommendations to combat this practice, either alone or in alliance with other specialty associations.

**Action #6:** The Health Policy Council recommends that the SES Board review the process for how the AUA staff determines its advocacy agenda items and ensure that the input of sections is included in those discussions.

**Action #7:** The Health Policy Council recommends that the BOD of the AUA cannot continue to ignore the issue of proportional representation from each of the sections.

**Action:** A motion is made to accept the Health Policy Committee Report as presented.

**ACTION:**
All Standing Committee reports are approved collectively by membership.

IX. SPECIAL COMMITTEES REPORTS

A. **General Arrangements Committee: Martin Dineen, MD**
Dr. Dineen congratulated Dr. Bill Sanderson and his wife, Amy, for all their excellent efforts in organizing and promoting the Mobile, Alabama 2009 Annual Meeting.
B. Hotel Sites Committee - Martin Dineen, MD
Dr. Dineen reported on the upcoming SESAUA meeting locations as follows:

2010- Miami Beach, FL
March 11-14, 2010
Loews Miami Beach Hotel

2011- New Orleans, LA
March 17-20, 2011
Marriott New Orleans

Action: All Special Committee reports are approved collectively by membership.

X. NEW BUSINESS

A. Honorary Members – Martin Dineen, MD
Dr. Dineen asked that the Board of Directors approve the following individuals for honorary membership:
Anton Bueschen, MD – Past President and AUA Lecture
Catherine deVries, MD – Presidential Lecture
Jeffrey E. Kaufman, MD – Ambrose Reed Lecture
Steve Wilson, MD – Ballenger Lecture

B. Report of the SESAUA Nominating Committee: Cully Carson, MD
Dr. Dineen explained that the Nominating Committee is comprised of the three past presidents, along with two members-at-large elected at the SES Annual Business Meeting. The two members-at-large can serve two 2-year terms as long as there are not more than two members from any one state at any one time. Dr. Coleman has completed his first 2-year term as the member-at-large and is eligible for re-election for a second 2-year term as the member-at-large on the Nominating Committee. Dr. Dineen would like to nominate Dr. Coleman to serve a second term on the Nominating Committee but asks if there are any other nominations from the floor. Since no new nominations are presented a motion is made to re-elect Dr. Coleman to serve a second 2-year term on the SES Nominating Committee.

Action: The motion is approved by membership.

Dr. Carson then presented the Nominating Committee report and presented the following slate of candidates:

SESAUA President-Elect: Raju Thomas, MD
SESAUA Secretary: Raymond Leveillee, MD
SESAUA Historian: Hector Henry, MD
AUA JU Editorial Board: Raj Pruthi, MD, to replace Dennis Venable, MD and Philipp Dahm, MD, to replace Chris Amling, MD

AUA Board of Representatives: Thomas Brown, MD
AUA Board Alternate: Dennis Venable, MD
AUA Nominating Committee: Chris Winters, MD, for Martha Terris, MD – As an alternate representative – Charles Pound, MD

Alabama Representatives
Lee Hammontree ascends from alternate to Alabama Representative
John Pirani, MD replaces William Sanderson, MD
Alabama Alternate Representative – Kristy Blanchard, MD
Alabama Alternate Representative – Manish Shah, MD

Florida Representatives
Austin Hill, MD - Representative
Steve Hulecki, MD - Representative
Vincent Bird, MD – Alternate Representative
Michael Binder, MD – Alternate Representative
Georgia
Jack Amie, MD – Representative
Chad Ritenour, MD – Representative
James Brown, MD – Alternate
James Quarles, MD – Alternate

Kentucky
All terms are current

Louisiana
Lester Prats, MD – Representative
Alternate to be named at the LA State Meeting in April, 2009

Mississippi
Woodie Jeffrey Wilson, Jr., MD – Representative
Alternate to be named at the MS State Meeting in 2009

North Carolina
Tom Stuart, MD – Representative
Alternate to be named at the NC State Meeting in 2009

Puerto Rico Representatives
Felix Mendoza-Rosa, MD - Representative
Alternate to be named at the Puerto Rico Urological Meeting in 2009

South Carolina Representative
John Britton, MD – Representative
Elizabeth Bozeman, MD - Alternate Representative

**Action**
The nominating committee slate was accepted as presented. There were no nominations from the floor. All nominees were elected to their respective offices.

**XI. INCOMING SESAUVA PRESIDENT’S ADDRESS: THOMAS STRINGER, MD**
Dr. Stringer announces that his first order of business is to recognize some of the outgoing Committee Chairs for their years of services:

Raju Thomas, MD, as SESAUVA Secretary
Randy Rowland, MD, as Chair of the Science and Education Committee
Cecil Morgan, MD, SESAUVA Historian for many, many years.

Dr. Stringer is honored to serve as the 2009-2010 SESAUVA President and he promises to work very hard for the benefit of all members of the section.

**XII. ADJOURN**
Dr. Stringer adjourned the 2009 Annual Business Meeting at 12:10 p.m.

Respectfully Submitted,
Wendy J. Weiser
Executive Director
Southeastern Section of the AUA, Inc.
Membership Candidates and Transfers 2010

* Application Not Complete

**Candidates for Membership**

**Active**

Bass, Robert A., Alexandria, LA  
* Beckford, Cleveland, Doral, FL  
* Benitez, Omar, Fort Myers, FL  
Brightbill, Keith Eric, Columbia, SC  
* Carney, Kenneth Jeff, Atlanta, GA  
* Chakrabarty, Amit, Huntsville, AL  
* Cohen, Brian, Asheville, NC  
* Cohen, Daniel D., Winter Park, FL  
Cohn, Ross A, Hixson, TN  
* Edwards, Troy Keithley, Ocoee, FL  
* Enrique, Beliver G., Puerto Rico, PA  
* Greenberger, Mark David, Memphis, TN  
* Inman, Brant, Durham, NC 27710  
* Katz, Erin E., Clearwater, FL  
* Lawrence, Peter G., Jackson, TN  
* Makhuli, Mark Joseph, Charlotte, NC  
* Malkin, Richard B., Sarasota, FL  
Meibach, David Steven, Delray Beach, FL  
Miller, Nicole Lara, Nashville, TN  
* Mobley, Jonathan M., Bowling Green, KY  
* Novakovic, Kristian R., Louisville, KY  
Phillips, Joseph Jason, Dothan, AL  
* Sanchez, Marta Cecilia, Miami, FL  
* Santa-Cruz, Robert W., Statesville, NC  
* Singh, Amar, Chattanooga, NC  
* Steinberg, Jordan R., Winter Park, FL  
Wilkinson, David R., Bonita Springs, FL  
* Wong, Jaime Alan, Atlanta, GA 30318  
Total Active:  32

**Associate**

Alvarez, Alonso, Tampa, FL  
* Ballert, Katie Nicole, Lexington, KY  
* Borawski, Kristy McKiernan, Durham, NC  
Brewer, Jr., Michael Eric, Homewood, AL  
Cottrell, Brandon Scott, Oak Ridge, TN  
Creighton, Matthew Aaron, Hickory, NC  
* Crisp, Paul L., Lexington, KY  
* Daugherty, Michael, Albany, GA  
* Delacroix, Jr., Scott E., Houston, TX  
* Dusing, Michael, Edgewood, KY  
Fitzsimons, Nicholas John, Durham, NC  
* Fountain, Michael W., Eglin AFB, FL  
Hamoui, Omar, Tampa, FL  
* Hernandez, David, Tampa, FL  
* Hines, Robert Lee, Fayetteville, NC  
Hudson, Jon Edward, Winston Salem, NC  
Jadick, Richard Harris, Orange Park, FL  
* Kaufman, Melissa Rae, Nashville, TN  
Laungani, Rajesh Gobind, Atlanta, GA  
* Luongo, Tony, Belmont, MA  
McCowan, B. Scott, Atlanta, GA  
* Moore, Debora K., Shreveport, LA  
Morris, David Scott, Hendersonville, TN  
Natale, II, Richard, Concord, NC  
* Perez Soto, Benjamin, North Mayaguez, PR  
Pugliese, Jennifer Michelle, Evans, GA  
* Robbins, David Alan, Bali Harbour, FL  
* Shah, Shailendu Kantilal, Jacksonville, FL  
Shappley, III, William Vance, Germantown, TN  
* Shrivastava, Alok, Weston, FL  
Stiles, William, Winchester, TN  
* Vasquez, Juan M., Panama  
Williams, Bryant Fleming, Dothan, AL  
* Zmaj, Paul Michael, Chattanooga, TN  
Total Associate:  34

Grand Total Candidates for Membership:  66

**MEMBERSHIP STATUS TRANSFERS**

(INTERNAL)

**Active**

Prendergast Jr., Neal Joseph, Louisville, KY  
Total Active:  1

**Associate**

Total Associate:  0

**Senior**

Adams, Jr., George W., Homewood, AL  
Chulik, John D., High Springs, FL  
Creevy, Jr., Joseph Aloysius, Covington, KY  
Crosse, James E. W., Midland, GA  
Davis, James W., Cullman, AL  
Freeman, Coy, Powell, TN 37849-Hanna, John Edward, Sarasota, FL  
Heiser, Don R., Powell, TN  
Homisy, Yves L., Tampa, FL  
Jacob, E. Jake, Winter Park, FL  
Karp, Robert L., Tampa, FL  
Kossow, Alan Simon, Winter Park, FL  
Lee, Robert E., Sumter, SC  
Mannes, Harvey A, Austell, GA  
Rice, William C., Charlotte, NC  
Sanfelippo, Carl John, Birmingham, AL  
Soloway, Mark S., Miami, FL  
Spalding, Michael J., Nashville, TN  
Stafford, Steven James, Raleigh, NC  
Vyas, Subhash A., Williamson, WV  
Wanuck, Stuart Louis, West Palm Beach, FL  
Wexler, Harold D., Baton Rouge, LA  
Total Senior:  22

Grand Total Membership Status Transfers - (Internal):  23
MEMBERSHIP TRANSFERS FROM OTHER AUA SECTIONS

Active
Bell, Bradley B., Jeffersonville, IN
Bohl, Robert Daniel, Edenton, NC
Hasford, Matthew K., Miami Shores, FL
Kumar, Udaya, Inverness, FL
Lipson, Stephen Duncan, Biloxi, MS
Moore, Robert G., Shrevport, LA
Ornstein, David K., Naples, FL
Penson, David F., Nashville, TN
Scaglia, Bennett Peter, Daytona Beach, FL
Sebesta, Michael J., Jackson, TN
Smolowitz, Edwin L., Sylva, NC
Soergel, Trevor Matthew, Jeffersonville, IN
Total Active: 12

Senior
Mulcahy, John J., Madison, AL
Total Senior: 1

Grand Total Membership Transfers from Other AUA Sections: 13
Necrology Report
2010
In Loving Memory of:

Sidney Lane Bicknell, MD
Germantown, TN

Thomas S. Boozer, MD
Montgomery, AL

Aubra D. Branson, MD
Knoxville, TN

*James F. Glenn, MD
Versailles, KY

Jacob B. Millard Goff, MD
Winston-Salem, NC

Earl Haltiwanger, MD
Atlanta, GA

John F. Hensleigh, MD
Anniston, AL

Homer R. Justis, MD
Shelby, NC

H. Gordon King, MD
Tuscaloosa, AL

Robert Joseph Macaulay Jr., MD
Rocky Mount, NC

Franklin Joseph Mascia, MD
Dodge City, KS

William S. Muse, Sr., MD
Knoxville, TN

*Victor A. Politano, MD
Miami, FL

Seymour Walter Rubin, MD
Miami, FL

Maurice P. Segal, MD
Robert E. Shiflet, MD  
Athens, GA

Richard C. Slocum, MD  
Columbia, SC

William R. Story, MD  
North Wilkesboro, NC

Lucian L. Tatum Jr., MD  
Griffin, GA

Edwin M. Tomlin, MD  
Harrisburg, NC

Wilbur S. Turner, MD  
Stuart, FL

Clark A. Whitehorn, MD  
Panama City, FL

Warren S. Witus, MD  
Miami, FL

Hugh Murphy Yearwood, MD  
Shreveport, LA

John G. Young, MD  
Fort Myers, FL

*Indicates Past President
Southeastern Section of the AUA
Proposed Bylaws Changes
2009-2010

ARTICLE I - MEMBERSHIP

Section D. ELECTION/APPROVAL OF MEMBERSHIP
All members shall be elected at the Annual Business Meeting, except for Candidate Members who shall be approved by the Executive Committee periodically throughout the Association year, and Associate and Active Candidates referred by the AUA as otherwise fulfilling Active Membership requirements for those certified within the last 24 months (as per Article I, Section E., Item 4 of the AUA Bylaws) or Associate candidates moving through the AUA Fast Track Associate Status (as per Article I, Section E., Item 1 of the AUA Bylaws) who shall be approved by the Executive Committee periodically throughout the Association year.

ARTICLE IV - REPRESENTATIVES TO THE AUA

Section B. REPRESENTATIONS ACCORDING TO AUA BYLAWS
In accordance with Article V, Section 1 of the Bylaws of the AUA, the Section will have Representatives as follows:

1. Editorial Committee: the number of representatives and terms shall be in accordance with the Bylaws of the American Urological Association. Two (2) Members elected to serve for five (5) years or until successors are elected. The Members are limited to one (1) term of service. If there is more than one member on the Committee, One Member shall be appointed to serve as Chairperson of the Editorial Committee of the Section. (See Article V, Section B., 4.) and the other as Co-Chairperson.

2. Board of Directors Representative: one (1) Member and one (1) Alternate Member elected in odd years to serve for two (2) years or until his/her successors are elected. The Member shall be limited to two (2) terms of service not counting any term(s) as Alternate.

3. Nominating Committee: one (1) Member and one (1) Alternate to serve for one year or until his/her successors are elected. The Member shall be limited to two (2) terms of service not counting any term(s) as Alternate. The terms of service shall be in accordance with the Bylaws of the American Urological Association.

4. Research Committee: the number of representatives and terms shall be in accordance with the Bylaws of the American Urological Association. Every two (2) years the Board of Directors shall nominate two (2) Members who are interested in research to serve on the AUA Research Committee for four (4) years. The Members will serve the first two (2) years term as Alternates and the latter two (2) years as Representatives.

5. Health Policy Council: the number of representatives and terms shall be in accordance with the Bylaws of the American Urological Association. One member will be appointed to Chairperson, another Vice Chairperson, and if more than two members on the Committee, they shall be named members at large. Two (2) Members who are the current Chairperson and the Vice Chairperson of the Section’s Health Policy Council. There shall be one Alternate to the Chairperson and Vice Chairperson.

6. Membership Committee: one (1) Member who is the current Secretary of the Section.

7. Bylaws Committee: two (2) Members who are the current Chairperson and Vice Chairperson of the Section’s Committee on Bylaws shall serve. The number of representatives and terms shall be in accordance with the Bylaws of the American Urological Association. One member will be appointed to Chairperson, another Vice Chairperson, and if more than two Members on the Committee, they shall be named members at large.

8. Audio-Visual Committee: the number of representatives and terms shall be in accordance with the Bylaws of the American Urological Association. At least one (1) Active or Senior Member appointed by the AUA President annually, in consultation with the Section. The Chairperson of the Section Audio-Visual Committee, if one comes into being, ideally would serve.

9. Judicial and Ethics Council: the number of representatives and terms shall be in accordance with the Bylaws of the American Urological Association. The Board of Directors shall nominate an Active Member every two (2) years for a four (4) year term. The initially appointed second member shall serve a term of two (2) years.
ARTICLE V - COMMITTEES
Section B. SPECIAL COMMITTEES

3. COMMITTEE ON NOMINATIONS

   c. The Committee shall present to the Section Membership at its Annual Business Meeting a slate of nominees of Active Members in good standing in the Section and AUA. There shall be one (1) candidate for each position as follows:

3. Nominees for positions in AUA: shall be in accordance with the Bylaws of the American Urological Association.

   (a) Every five (5) years for a five (5) year term: one (1) Member of the Editorial Committee of the AUA who will be limited to one (1) term of office.

   (b) Every two (2) years (odd years) for two (2) year terms: one (1) Representative Member and one (1) Alternate Member of the Board of Directors of the AUA who will be limited to three (3) terms of service not counting any term(s) as Alternate.

   (c) Each year for one (1) year terms: one (1) Representative Member and one (1) Alternate of the Nominating Committee of the AUA who will be limited to five (5) terms not counting any term(s) as Alternate.

Report of the SESAUA Representative to the AUA Board of Directors

1. The AUA President is our own Anton J. Bueschen, MD. The President-Elect is Datta G. Wagle, MD, of the Northeastern Section.

2. The annual meeting is from May 29 to June 3, 2010, in beautiful San Francisco, California. We should all plan to attend so we can support AUA President Bueschen.

3. The total AUA membership by category is 16,624 and by section is 12,444. The Southeastern Section continues to be the largest section with 2,572 members.

4. President Thomas Stringer, MD, gave an excellent presentation to the AUA BOD on proportional representation but the motion to change representation was defeated 12-1.

5. The Joint Advocacy meeting will be held in Washington, D.C. from March 20th to the 23rd. The AUA will introduce two bills to the US House and Senate hoping for sponsors and passage on Urotrauma and Prostate Cancer. All SESAUA members are encouraged to attend and support these important projects.

6. The AUA continues to be in good financial health and is recovering from the setbacks of the market and the economy in general. The AUA and the AUA Foundation were audited by our auditors this year and the audit found no abnormal actions. We were commended by our auditors on our internal controls and financial well being.

7. The Office of Education is now headed by Elspeth McDougal, MD, after the election of our own Glen Preminger, MD, to the office of Secretary-Elect of the AUA.

8. The new Director of Research for the AUA Foundation is our own Johannes Vieweg, MD, of the University of Florida.

9. The AUA Board of Directors and the staff of the AUA are here to serve the membership of the AUA. Major programs continue to be the Annual Meeting, the Journal of Urology, AUA Guidelines and Update, the Health Policy Council, the Legislative Workgroup, Government Relations and Advocacy, and Practice Management Network. The entire AUA Family is resolved to serve the educational and socio-economic needs of the membership.

10. It has been my honor and pleasure to serve the SESAUA on the AUA BOD as its representative for the last three years. I welcome any input or suggestions from the membership on how I may better serve you. I thank you for the privilege of serving you as your representative to the AUA BOD.

Respectfully submitted,
B. Thomas Brown, MD, MBA
Preliminary Treasurer’s Report of the Southeastern Section of the American Urological Association

The Fund Balance as of December 31, 2009 totals $3,225,536. This reflects an operating surplus of $664,753 for the period. The unrealized gain on investments, net dividends and interest for the period was $563,325. Total income for the fiscal year ending December 31, 2009 was $1,296,456 and consists of Membership Dues of $286,717, Annual Meeting income of $446,264, interest and gain on investments totaling $563,325, and other income of $150.00. This contrasts to a total income of $4,014 for the year 2008 and an unrealized loss in investment value totaling ($821,983). For the year 2009, expenses totaled $631,703.

The SESAUA has one active checking account held at Chase Bank. This account is used for general operating and meeting related transactions. As of December 31, 2009, the checking account balance was $157,606. A high balance savings account was opened to replace the sweep account because the sweep account was not FDIC insured. The balance as of December 31, 2009 was $244,043. A $2,000 postage reserve is held at WJ Weiser & Associates and is reconciled monthly with actual usage. A deposit of $4,052 has been paid for the 2010 Past President’s dinner.

The SESAUA investments are held at Charles Schwab and as of December 31, 2009, totaled $2,817,834. At the annual meeting in Mobile, an ad-hoc committee was created to perform a comprehensive review of our 10yr investment performance. The agenda included a review and revision of our Investment Policy, an asset allocation review that resulted in removal of Real Estate as an asset class and rebalancing our portfolio, an item by item review of our proposed 2010 budget that resulted in a savings of $30,175, and participating in an Investment Summit hosted by WJ Weiser and Associates in Chicago. The purpose of the summit was to bring together organizations of similar size to hear presentations by leading investment management firms with national reputations to determine if a change in management was necessary. The ad-hoc committee asked for a formal Request for Performance from 3 firms that included our then current manager. After a diligent review of the RFP’s, the committee concluded that a change in management was necessary and recommended CNL Bank WealthManagement in Orlando. The Executive Committee which voted to accept the recommendation and the investment funds were transferred to Clarke Lemons, President of CNL in December, 2009.

The Finance Committee held a teleconference on February 10, 2010. The report to the Board of Directors will include recommending for approval a new Investment Policy that emphasizes controlling internal management costs and utilizing where appropriate index funds instead of actively managed funds, creating a new asset class called Alternative Investments to our portfolio, and revision of our portfolio composition based on reallocation and rebalancing.

Respectfully submitted,
W. Terry Stallings, M.D., Treasurer
Roster of the State Societies and Officers
2009 – 2010

Please help us keep our information about State Urological Societies accurate and current. Contact the SESAUA office at (847) 969-0248 if you have information about the following societies:

**Alabama Urology Society**
President: Joe Schultz, MD  
Sandestin Resort, FL  
2010 Meeting: July 1 – 4

**Florida Urological Society**
President: Mike Wehle, MD  
Orlando, FL  
2010 Meeting: September 2 – 5

**Georgia Urologic Association**
President: Chad Ritenour, MD  
Sea Island, GA  
2010 Meeting: September 10 – 12

**Kentucky Urological Association**
Information not available at time of printing

**Louisiana State Urological Society**
President: Dr. James Morris  
Baton Rouge, LA  
Date: Not available at time of printing

**Mississippi Urologic Society**
Information not available at time of printing

**North Carolina Urological Association**
President: Dr. Ed Janosko, MD  
Raleigh, NC  
2010 Meeting: January 22 – 23

**Puerto Rico Urological Association**
Information not available at time of printing

**South Carolina Urologic Association**
President: Information not available at time of printing  
Columbia, SC  
2010 Meeting: February 2010

**Tennessee Urological Association**
President Stephen V. Goryl, MD  
Knoxville, TN  
2010 Meeting: February 19 – 20
Previous Officers and Annual Meeting Sites
of the
Southeastern Section of the AUA, Inc.

* Indicates Deceased Member

1932 Birmingham, AL - Meeting to Organize
• Edgar G. Ballenger, MD, Atlanta, GA

1933 Richmond, VA
• Montague L. Boyd, MD, Atlanta, GA
• Edgar G. Ballenger, MD, Atlanta, GA
• Earl Floyd, MD, Atlanta, GA

1934 Atlanta, GA
• Montague L. Boyd, MD, Atlanta, GA
• Edgar G. Ballenger, MD, Atlanta, GA
• Earl Floyd, MD, Atlanta, GA

1935 Nashville, TN
• Edgar G. Ballenger, MD, Atlanta, GA
• H. W.E. Walther, MD, New Orleans, LA
• Earl Floyd, MD, Atlanta, GA

1936 Charlotte, NC
• H. W.E. Walther, MD, New Orleans, LA
• Hamilton McKay, MD, Charlotte, NC
• Earl Floyd, MD, Atlanta, GA

1937 Birmingham, AL
• Hamilton McKay, MD, Charlotte, NC
• George Livermore, MD, Memphis, TN
• Earl Floyd, MD, Atlanta, GA

1938 Louisville, KY
• George Livermore, MD, Memphis, TN
• Earl Floyd, MD, Atlanta, GA
• Raymond Thompson, MD, Charlotte, NC

1939 Biloxi, MS
• Earl Floyd, MD, Atlanta, GA
• J. Ullman Reaves, MD, Mobile, AL
• Louis M. Orr, MD, Gainesville, FL

1941 Jacksonville, FL
• J. Ullman Reaves, MD, Mobile, AL
• Jefferson C. Pennington, MD, Nashville, TN
• Louis M. Orr, MD, Gainesville, FL

1942 Chattanooga, TN
• Jefferson C. Pennington, MD, Nashville, TN
• Louis M. Orr, MD, Gainesville, FL
• Harold P. McDonald Sr., MD, Atlanta, GA

1943 New Orleans, LA
• Louis M. Orr, MD, Gainesville, FL
• William E. Coppridge, MD, Durham, NC
• Harold P. McDonald Sr., MD, Atlanta, GA

1946 Augusta, GA
• William E. Coppridge, MD, Durham, NC
• Hubert K. Turley Sr., MD, Memphis, TN

No Officers
Temporary Chair
Chair
Vice Chair
Secretary/Treasurer
President
President-Elect
Secretary/Treasurer
President
President-Elect
Secretary/Treasurer
President
President-Elect
Secretary/Treasurer
President
President-Elect
Secretary/Treasurer
President
President-Elect
Secretary/Treasurer
President
President-Elect
<table>
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<tr>
<th>Year</th>
<th>Location</th>
<th>President</th>
<th>President-Elect</th>
<th>Secretary/Treasurer</th>
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<tr>
<td>1947</td>
<td>Palm Beach, FL</td>
<td>Hubert K. Turley</td>
<td>Robert P. McIver</td>
<td>Harold P. McDonald</td>
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<tr>
<td></td>
<td></td>
<td>Sr., MD, Memphis,</td>
<td>MD, Jacksonville,</td>
<td>Sr., MD, Atlanta,</td>
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<td></td>
<td></td>
<td>TN</td>
<td>FL</td>
<td>GA</td>
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<td>1948</td>
<td>Hollywood Beach, FL</td>
<td>Robert P. McIver, MD, Jacksonville, FL</td>
<td>Harold P. McDonald Sr., MD, Atlanta, GA</td>
<td>Russell B. Carson, MD, Vero Beach, FL</td>
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<td>1949</td>
<td>Boca Raton, FL</td>
<td>Harold P. McDonald Sr., MD, Atlanta, GA</td>
<td>James J. Ravenel, MD, Charleston, SC</td>
<td>Russell B. Carson, MD, Vero Beach, FL</td>
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<td>1950</td>
<td>Edgewater Park, MS</td>
<td>James J. Ravenel, MD, Charleston, SC</td>
<td>Edgar Burns, MD, New Orleans, LA</td>
<td>Russell B. Carson, MD, Vero Beach, FL</td>
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<td>1951</td>
<td>Memphis, TN</td>
<td>Edgar Burns, MD, New Orleans, LA</td>
<td>Temple Ainsworth, MD, Jackson, MS</td>
<td>Russell B. Carson, MD, Vero Beach, FL</td>
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<td>1952</td>
<td>Boca Raton, FL</td>
<td>Temple Ainsworth, MD, Jackson, MS</td>
<td>W.R. Miner, MD, Covington, KY</td>
<td>Russell B. Carson, MD, Vero Beach, FL</td>
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<td>1953</td>
<td>Havanna- Cuba</td>
<td>W.R. Miner, MD, Covington, KY</td>
<td>Russell B. Carson, MD, Vero Beach, FL</td>
<td>Sidney Smith, MD, Raleigh, NC</td>
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<td>1954</td>
<td>Palm Beach, FL</td>
<td>Russell B. Carson, MD, Vero Beach, FL</td>
<td>Samuel L. Raines, MD, Memphis, TN</td>
<td>Sidney Smith, MD, Raleigh, NC</td>
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<td>New Orleans, LA</td>
<td>Samuel L. Raines, MD, Memphis, TN</td>
<td>Sidney Smith, MD, Raleigh, NC</td>
<td>Robet F. Sharp Sr., MD, New Orleans, LA</td>
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<td>Sidney Smith, MD, Raleigh, NC</td>
<td>Robet F. Sharp Sr., MD, New Orleans, LA</td>
<td>Charles Reiser, MD, Atlanta,</td>
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<td>1956</td>
<td>Hollywood, FL</td>
<td>Sidney Smith, MD, Raleigh, NC</td>
<td>Jarratt P. Robertson, MD, Atlanta, GA</td>
<td>Charles Reiser, MD, Atlanta,</td>
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<td>1957</td>
<td>Atlanta, GA</td>
<td>Jarratt P. Robertson, MD, Atlanta, GA</td>
<td>Lawrence P. Thackston Sr., MD, Orangeburg, SC</td>
<td>Robet F. Sharp Sr., MD, New Orleans, LA</td>
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<td>Lawrence P. Thackston Sr., MD, Orangeburg, SC</td>
<td>Robet F. Sharp Sr., MD, New Orleans, LA</td>
<td>Frank M. Woods, MD, LaBelle, FL</td>
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<td>1958</td>
<td>Hollywood, FL</td>
<td>Lawrence P. Thackston Sr., MD, Orangeburg, SC</td>
<td>Robet F. Sharp Sr., MD, New Orleans, LA</td>
<td>President-Elect</td>
</tr>
<tr>
<td>Year</td>
<td>Location</td>
<td>President</td>
<td>President-Elect</td>
<td>Secretary</td>
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<td>1959</td>
<td>Louisville, KY</td>
<td>Robet F. Sharp Sr., MD, New Orleans, LA</td>
<td>Rudolph Bell, MD, Thomasville, GA</td>
<td>James L. Campbell Jr., MD, Orlando, FL</td>
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<td>1960</td>
<td>Jacksonville, FL</td>
<td>Rudolph Bell, MD, Thomasville, GA</td>
<td>N Lewis Bosworth, MD, Lexington, KY</td>
<td>James L. Campbell Jr., MD, Orlando, FL</td>
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<td>1962</td>
<td>Belleair, FL</td>
<td>Alfred D. Mason Jr., MD, Memphis, TN</td>
<td>James L. Campbell Jr., MD, Orlando, FL</td>
<td>Louis C. Roberts, MD, Greensboro, NC</td>
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<td>1963</td>
<td>Nassau- Bahamas</td>
<td>James L. Campbell Jr., MD, Orlando, FL</td>
<td>Powell G. Fox Sr., MD, Raleigh, NC</td>
<td>Louis C. Roberts, MD, Greensboro, NC</td>
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<td>1964</td>
<td>Belleair, FL</td>
<td>Powell G. Fox Sr., MD, Raleigh, NC</td>
<td>W. E. Kittredge, MD, New Orleans, LA</td>
<td>Louis C. Roberts, MD, Greensboro, NC</td>
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<td>1965</td>
<td>Miami Beach, FL</td>
<td>W. E. Kittredge, MD, New Orleans, LA</td>
<td>Douglas E. Scott, MD, Lexington, KY</td>
<td>David W. Goddard, MD, Daytona Beach, FL</td>
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<td>1966</td>
<td>Memphis, TN</td>
<td>Douglas E. Scott, MD, Lexington, KY</td>
<td>Louis C. Roberts, MD, Greensboro, NC</td>
<td>David W. Goddard, MD, Daytona Beach, FL</td>
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<td>1967</td>
<td>Hollywood, FL</td>
<td>Louis C. Roberts, MD, Greensboro, NC</td>
<td>Charles Reiser, MD, Atlanta,</td>
<td>David W. Goddard, MD, Daytona Beach, FL</td>
</tr>
<tr>
<td>1968</td>
<td>Atlanta, GA</td>
<td>Charles Reiser, MD, Atlanta,</td>
<td>David W. Goddard, MD, Daytona Beach, FL</td>
<td>R. Prosser Morrow Jr., MD, New Orleans, LA</td>
</tr>
<tr>
<td>1969</td>
<td>Hollywood Beach, FL</td>
<td>David W. Goddard, MD, Daytona Beach, FL</td>
<td>Henry Comfort Hudson, MD, Birmingham, AL</td>
<td>John T. Karaphillis, MD, Belleair, FL</td>
</tr>
</tbody>
</table>
1970 TS Hanseatic
- R. Prosser Morrow Jr., MD, New Orleans, LA: Secretary
- Charlton P. Armstrong III, MD, Greenville, SC: Treasurer

- Henry Comfort Hudson, MD, Birmingham, AL: President
- Milton M. Coplan, MD, Miami, FL: President-Elect
- R. Prosser Morrow Jr., MD, New Orleans, LA: Secretary
- Charlton P. Armstrong III, MD, Greenville, SC: Treasurer

1971 Miami Beach, FL
- Milton M. Coplan, MD, Miami, FL: President
- R. Prosser Morrow Jr., MD, New Orleans, LA: President-Elect
- Samuel S. Ambrose, MD, Atlanta, GA: Secretary
- George W. Vickery, MD, Gulfport, MS: Treasurer

1972 New Orleans, LA
- R. Prosser Morrow Jr., MD, New Orleans, LA: President
- Charlton P. Armstrong III, MD, Greenville, SC: President-Elect
- Samuel S. Ambrose, MD, Atlanta, GA: Secretary
- George W. Vickery, MD, Gulfport, MS: Treasurer

1973 Palm Beach, FL
- Charlton P. Armstrong, MD: President
- Hubert K. Turley, MD, Memphis, TN: President-Elect
- Samuel S. Ambrose, MD, Atlanta, GA: Secretary
- Victor A. Politano, MD, N. Miami, FL: Treasurer

1974 Marco Island, FL
- Hubert K. Turley, MD, Memphis, TN: President
- Samuel S. Ambrose, MD, Atlanta, GA: President-Elect
- William Brannan, MD, The Woodlands, TX: Secretary
- Victor A. Politano, MD, N. Miami, FL: Treasurer

1975 Atlanta, GA
- Samuel S. Ambrose, MD, Atlanta, GA: President
- Rafe Banks Jr., MD, Gainesville, GA: President-Elect
- William Brannan, MD, The Woodlands, TX: Secretary
- Victor A. Politano, MD, N. Miami, FL: Treasurer

1976 Hollywood, FL
- Rafe Banks Jr., MD, Gainesville, GA: President
- James F. Glenn, MD, Versailles, KY: President-Elect
- William Brannan, MD, The Woodlands, TX: Secretary
- John I. Williams, MD, Fort Lauderdale, FL: Treasurer

1977 New Orleans, LA
- James F. Glenn, MD, Versailles, KY: President
- William Brannan, MD, The Woodlands, TX: President-Elect
- Miles W. Thomley, MD, Winter Park, FL: Secretary
- John I. Williams, MD, Fort Lauderdale, FL: Treasurer

1978 Louisville, KY
- William Brannan, MD, The Woodlands, TX: President
- Victor A. Politano, MD, N. Miami, FL: President-Elect
- Miles W. Thomley, MD, Winter Park, FL: Secretary
- John I. Williams, MD, Fort Lauderdale, FL: Treasurer

1979 Memphis, TN
- Victor A. Politano, MD, N. Miami, FL: President
- Joseph Ward Hooper Jr., MD, Wilmington, NC: President-Elect
- Miles W. Thomley, MD, Winter Park, FL: Secretary
- Fontaine Bruce Moore Jr., MD, Memphis, TN: Treasurer

1980 San Juan, Puerto Rico
- Joseph Ward Hooper Jr., MD, Wilmington, NC: President
• Miles W. Thomley, MD, Winter Park, FL
  W. Lamar Weems, MD, Jackson, MS
  Fontaine Bruce Moore Jr., MD, Memphis, TN
  President-Elect
  Secretary
  Treasurer

1981 Lake Buena Vista, FL
• Miles W. Thomley, MD, Winter Park, FL
  • John I. Williams, MD, Fort Lauderdale, FL
  W. Lamar Weems, MD, Jackson, MS
  • Fontaine Bruce Moore Jr., MD, Memphis, TN
  President
  President-Elect
  Secretary
  Treasurer

1982 New Orleans, LA
• John I. Williams, MD, Fort Lauderdale, FL
  Eugene C. St. Martin, MD, Shreveport, LA
  W. Lamar Weems, MD, Jackson, MS
  Edward H. Ray Jr., MD, Lexington, KY
  President
  President-Elect
  Secretary
  Treasurer

1983 Haines City, FL
Eugene C. St. Martin, MD, Shreveport, LA
W. Lamar Weems, MD, Jackson, MS
William Redd Turner Jr., MD, Folly Beach, SC
Edward H. Ray Jr., MD, Lexington, KY
President
President-Elect
Secretary
Treasurer

1984 Nashville, TN
W. Lamar Weems, MD, Jackson, MS
• Fontaine Bruce Moore Jr., MD, Memphis, TN
  Jack Hughes, MD, Durham, NC
  William Redd Turner Jr., MD, Folly Beach, SC
  Edward H. Ray Jr., MD, Lexington, KY
  President
  President-Elect
  Secretary
  Treasurer

1985 Marco Island, FL
• Fontaine Bruce Moore Jr., MD, Memphis, TN
  Jack Hughes, MD, Durham, NC
  William Redd Turner Jr., MD, Folly Beach, SC
  Robert N. Webster, MD, Tallahassee, FL
  President
  President-Elect
  Secretary
  Treasurer

1986 Dorado Beach, Puerto Rico
Jack Hughes, MD, Durham, NC
William Redd Turner Jr., MD, Folly Beach, SC
• David M. Drylie, MD, Gainesville, FL
  • Robert N. Webster, MD, Tallahassee, FL
  President
  President-Elect
  Secretary
  Treasurer

1987 New Orleans, LA
William Redd Turner Jr., MD, Folly Beach, SC
Roy Witherington, MD, Augusta, GA
• David M. Drylie, MD, Gainesville, FL
  • Robert N. Webster, MD, Tallahassee, FL
  President
  President-Elect
  Secretary
  Treasurer

1988 Boca Raton, FL
Roy Witherington, MD, Augusta, GA
Edward H. Ray Jr., MD, Lexington, KY
• David M. Drylie, MD, Gainesville, FL
  • Robert B. Quattlebaum Jr., MD, Savannah, GA
  President
  President-Elect
  Secretary
  Treasurer

1989 Hilton Head, SC
Edward H. Ray Jr., MD, Lexington, KY
• David M. Drylie, MD, Gainesville, FL
  • Lloyd H. Harrison, MD, Tobaccoville, NC
  • Robert B. Quattlebaum Jr., MD, Savannah, GA
  President
  President-Elect
  Secretary
  Treasurer

1990 Palm Beach, FL
• David M. Drylie, MD, Gainesville, FL
  • Robert N. Webster, MD, Tallahassee, FL
  • Lloyd H. Harrison, MD, Tobaccoville, NC
  • Robert B. Quattlebaum Jr., MD, Savannah, GA
  President
  President-Elect
  Secretary
  Treasurer