

66th ANNUAL JAMES C. KIMBROUGH UROLOGICAL SEMINAR



2019 PROGRAM & ABSTRACT BOOK

January 16-20, 2019

Sheraton Kona Hotel & Conference Center at Keauhou Bay
Kona, Big Island, Hawaii



Society of Government Service Urologists

2019 PROGRAM BOOK



www.govurology.org

Scientific Program Directors:

LTC Joseph R. Sterbis, MC, USA

LTC John E. Musser, MC, USA

Disclosure: The views and opinions expressed in this program book are those of the authors and do not necessarily reflect the official policy or position of the US Navy, Army, Air Force, the Department of Defense, or the U.S. Government.



Welcome from the President, Gregory P. Thibault, MD

Dear SGSU Members,

Welcome “Aloha” to the Big Island of Hawaii and the 66th Annual Kimbrough Seminar. It is a distinct honor to serve as the President of the Society of Government Service Urologists. Dr. Joe Sterbis and Dr. John Musser have put together an outstanding academic and social program, and the DeSantis Management Group continues to provide exceptional administrative leadership and support. This should be a fabulous meeting. As the field of Urology, military medicine, and VA medicine evolve, the Kimbrough Seminar will likewise change with the times. The meeting remains a foundation for Urologists in the service of our government, an excellent forum for education and training, and a wonderful opportunity to socialize and network with one another. The leadership and dedication of our active duty, VA and retired membership ensures that the wonderful tradition of the Kimbrough meetings will continue to support the mission and camaraderie that is unique to military and VA urology. Enjoy the meeting and your time at this beautiful venue in Hawaii.

With Best Regards,

Greg Thibault, MD



Welcome from the Program Chairmen

**LTC Joseph R. Sterbis, MC, USA &
LTC John E. Musser, MC, USA**



Dear SGSU Members,

A warm Aloha welcoming all to the 66th Annual Society of Government Service Urologists, James C. Kimbrough Urological Seminar in spectacular Kona, Hawaii. We have an exciting and robust academic program planned while maintaining our important SGSU traditions. We will have three full meeting days and Sunday is dedicated to the Mock Oral Boards and a few talks for a total of **19.5** hours of CME.

Our Scientific Program provides every resident and staff the opportunity to present original research at podium and poster sessions. We are also honored to have a distinguished group of visiting faculty that will focus on state-of-the art discussions and highlight best practices and new research in urology. Special topic lectures and industry programs will round out our meeting. As usual, we will include ample time for audience questions and discussions.

In addition to a power-packed scientific program, we are planning a number of exciting social activities including our Wednesday evening Aloha reception may include the possible sighting of whales and manta rays! On Thursday evening, is the entertaining and traditional GU Bowl and Friday (4:30 to 6:30pm) join us for a relaxing sunset cocktail cruise (optional) aboard a beautiful catamaran adjacent to the hotel. Saturday evening the traditional Littrell Awards event will be done outdoors Hawaiian-style with Luau-like entertainment (dress is aloha casual).

We look forward, as always, to renewing old friendships and making new ones.

Best Regards,

LTC Joseph Sterbis, MC, USA
LTC John Musser, MC, USA
Tripler Army Medical Center

TABLE OF CONTENTS

	Page
Board of Directors.....	1
Awards.....	3
Previous Meetings.....	14
General Information.....	20
Continuing Medical Education Credits.....	21
Program-At-A-Glance.....	24
Invited Speakers.....	27
Index of Participants.....	28
Exhibitors, Schedule & Supporters.....	30
GU Bowl.....	33
Wednesday Scientific Program.....	35
Thursday Scientific Program.....	36
Friday Scientific Program.....	47
Saturday Scientific Program.....	52
Sunday Scientific Program.....	60
Abstracts.....	62

LEADERSHIP

President

Gregory P. Thibault, MD
Kaiser Permanente Moanalua Med. Ctr.& Tripler Army Med. Ctr., Honolulu, HI

Treasurer

Joseph Y. Clark, MD
Penn State Hershey Medical Center, Hershey, PA

Secretary

Harold (Hal) A. Frazier, MD
George Washington University, Washington, DC

Parliamentarian/Historian

Martin L. Dresner, MD, FACS
Surgery, VAMC, Tucson, AZ

Retired Representative

Brian K. Auge, MD
Boise, ID

VA Representative

Jeffrey Jones, MD
Baylor College of Medicine, Houston, TX

Member-at-Large

Stacey G. Koff, MD
VAMC, Washington, DC

-----Liaison Advisors-----

Kimbrough Seminar Course Directors, 2019

Joseph Sterbis, MD & John Musser, MD
Tripler Army Med. Ctr., Honolulu, HI

Past Kimbrough Seminar Course Director, 2018

Robert C. Dean, MD, MD
Walther Reed Nat'l Military Med. Ctr., Washington DC

Kimbrough Seminar Course Director-Elect, 2020

Christopher Allam, DO
Brooke Army Medical Center
George S. Kallungal, MD
San Antonio Mil. Med. Ctr.

Army Urology Liaison

Timothy Brand, MD
Madigan Army Medical Center, Tacoma, WA

LEADERSHIP

Army Member-At-Large

Thomas E. Novak, MD
Brooke Army Medical Center, Dept. of Urology, Fort Sam Houston, TX

Navy Urology Liaison

R. Chanc Walters, MD
Naval Medical Center, Portsmouth

Navy Member-At-Large, Active Duty

Sean P. Stroup, MD
Naval Medical Center San Diego

Air Force Urology Liaison

Christopher Allam, DO
Brooke Army Medical Center

Air Force Member-At-Large

Necia Pope, MD
Laughlin Air Force Base Hospital, Del Rio, TX

Military Resident Representative

Katherine "Katee" Carlile, MD
Tripler Army Medical Center

VA Member-At-Large

Debora Moore, MD
Charlotte VA Medical Center

Reserve Component Representative

Bradley F. Schwartz, DO, FACS
Southern Illinois University, Div. of Urology

SGSU Representative to the AUA Young Urologists

Steven J. Hudak, MD
San Antonio Military Medical Center

Audit Committee

Hal A. Frazier, MD
Timothy Brand, MD
Sean P. Stroup, MD

SGSU Executive Directors

Chris DeSantis, MBA / Jeannie DeSantis, MBA
DeSantis Management Group
1950 Old Tustin Avenue, Santa Ana, CA 92705
T: 714.550.9155 / E: info@sgsu.org
www.sgsu.org

JAMES CLAUDE KIMBROUGH, MD

Colonel, Medical Corps, United States Army -1887-1956



Colonel Kimbrough was the "Father of U.S. Army Urology". A native of Madisonville, Tennessee, he graduated from Vanderbilt University School of Medicine in 1916 and entered the U.S. Army Medical Corps in July 1917. He served a total of forty-one months in Europe during World Wars I and II. His career from 1921, was spent almost exclusively as Chief Urologist in many Army hospitals and included four tours, totaling eighteen years, at Walter Reed General Hospital where he initiated the urology residency program in 1946. His military awards include a MOS prefix of "A", Bronze

Star, Legion of Merit, Purple Heart, and a Meritorious Service Citation from General Pershing. He was immediately recalled to active duty after his statutory retirement in 1948. In 1953 an Act of Congress appointed him a Permanent Consultant in urology at Walter Reed. In addition, COL Kimbrough was a Diplomat of the American Board of Urology, a member of the American Urological Association (AUA), a Fellow of the American College of Surgeons, and a member of the American Medical Association. He served as President of the Mid-Atlantic Section of the AUA from 1955 to 1956. From 1949 to 1950 he was President of the Washington, D.C. Urologic Society. He held honorary memberships in the Western Section of the AUA, Royal Society of Medicine of London, Academic de Chirurgie of Paris and Alpha Omega Alpha. Colonel Kimbrough was a 32d degree Mason and Shriner. His intense interest and enthusiasm in Urology made him an authority in the field of urologic oncology; he contributed fifty-eight papers to the urological literature. In 1953 this seminar was established in his honor. In 1957, after his death, the official name became the James C. Kimbrough Urological Seminar. On 29 June 1961, Kimbrough Army Hospital, Fort George G. Meade, was dedicated to his memory.

JAMES C. KIMBROUGH MEMORIAL AWARDS - PREVIOUS WINNERS (cont.)

In 1957, Mrs. Pauline Kimbrough established the Kimbrough Memorial Award for the best presentation by a military resident. Starting in 1972, first place awards began to be presented to the two armed forces urology residents making the best presentations in clinical urology and basic science research. The competition was expanded to include all residents in government service affiliated urology residency programs in 2007. A plaque is given to each award winner.

PREVIOUS AWARD WINNERS

1957	MAJ Gerald Mahaffey, USAF	Letterman Gen Hospital
1958	MAJ A.A. Borski, USA	Fitzsimons Gen Hospital
1959	LT Carter E. Carlton, USN	Baylor U. College of Medicine
1959	CPT Frank E. Ceccarelli, USA	Brooke Gen Hospital
1960	CPT Herbert Levin, USA	Walter Reed Gen Hospital
1961	CPT Richard C. Macure, USA	Brooke Gen Hospital
1962	LCDR R.M. Busch, USN	San Diego Naval Hospital
1963	CPT Richard Finder, USA	Walter Reed Gen Hospital
1964	MAJ Mauro P. Gangai, USA	Walter Reed Gen Hospital
1965	MAJ Thomas Shown, USA	Letterman Gen Hospital
1966	LCDR Robert E. Julian, USN	US Naval Hospital, PA
1967	MAJ Robert Wright, USA	Brooke Gen Hospital
1968	MAJ John C. Wurster, USA	Tripler Gen Hospital
1969	MAJ Joseph A. Bruckman, USA	Tripler Gen Hospital
1970	MAJ Davis F. Gates, USA	Tripler Gen Hospital
1971	MAJ Charles T. Swallow, USA	Brooke Gen Hospital
1972	CPT Tarver B. Bailey, USA	Walter Reed AMC
1972	MAJ Peter A. Leninger, USA	Walter Reed AMC
1973	MAJ George E. Deshon, Jr., USA	Walter Reed AMC
1973	MAJ Gerald L. Levisay, USA	Fitzsimons AMC
1974	MAJ H. David Cox, USA	Walter Reed AMC
1974	LTC Jan Hull, USA	Brooke AMC
1975	MAJ Shannon McMillen, USA	Madigan AMC
1975	LCDR Clifford J. Nemeth, USN	National Naval Med Ctr
1976	MAJ Phillip H. Beck, USA	Letterman AMC
1976	MAJ Patrick W. Kronmiller, USA	Madigan AMC
1977	MAJ William D. Belville, USA	Walter Reed AMC
1977	MAJ David W. Bentley, USA	Fitzsimons AMC
1978	MAJ Victor J. Kiesling, USA	Letterman AMC
1978	Torrence M. Wilson, USA	Fitzsimons AMC
1979	MAJ Jack R. Pence II, USAF	Wilford Hall MC
1979	MAJ Rene Sepulveda, USA	Walter Reed AMC
1980	MAJ George G. Mygatt, USA	Tripler Army AMC
1980	MAJ Jack R. Pence II, USAF	Wilford Hall MC
1981	LCDR Kathryn S. Buchta, USN	Naval Med Ctr, San Diego
1981	MAJ Gary A. Wikert, USA	Brooke AMC
1982	MAJ Louis R. Cos, USA	Univ of Rochester MC
1982	CPT August Zabbo, USAF	Cleveland Clinic Foundation
1983	CPT Robert G. Ferrigni, USAF	Wilford Hall MC
1983	CPT Ian M. Thompson Jr., USA	Brooke AMC
1984	CPT Stephen M. Dresner, USAF	WA Univ, St. Louis, MO
1984	CPT Julius L. Teague, USA	Brooke AMC
1985	LCDR Thomas F. Huisman, USN	Naval Medical Ctr, San Diego
1985	CPT Thomas A. Rozanski, USA	Madigan AMC
1986	CPT Judd W. Moul, USA	Walter Reed AMC

JAMES C. KIMBROUGH MEMORIAL AWARDS - PREVIOUS WINNERS (cont.)

1986	CPT Thomas A. Rozanski, USA	Madigan AMC
1987	LCDR Thomas J. Stilwell, USNR	Mayo Clinic, Rochester, MN
1987	LT Harold A. Frazier II, USNR	Nat'l Naval Med. Ctr.
1988	CPT Anurag K. Das, USAFR	Duke Univ Med Ctr
1988	LT Jeffrey Twidwell, USNR	Naval Medical Ctr, San Diego
1989	MAJ Kurt L. Hansberry, USA	Brooke AMC
1989	CPT Leonard G. Renfer, USA	Madigan AMC
1990	<u>Cancelled</u> (Desert Shield/Storm)	
1991	CPT Wilfred S. Kears, Jr. USAF	Wilford Hall MC
1991	MAJ Timothy K. Dixon, USA	Brooke AMC
1992	CPT Richard W. Knight, USA	Madigan AMC
1992	MAJ Donald J. Lewis, USA	Walter Reed AMC
1993	MAJ M. David Bomalaski, USAF	Wilford Hall MC
1993	MAJ Thomas M. Seay, USAF	Wilford Hall MC
1994	CPT R. Duane Cespedes, USAF	Wilford Hall MC
1994	MAJ Joseph Y. Clark, USA	Brooke AMC
1995	CPT Jay T. Bishoff, USAF	Wilford Hall MC
1995	PT Ted O. Morgan, USA	Walter Reed AMC
1996	CPT Jay T. Bishoff, USAF	Wilford Hall MC
1996	CPT Raymond S. Lance, USA	Madigan AMC
1997	MAJ John G. Anema, USAF	Wilford Hall MC
1997	LTC Rhonda Cornum, USA	Brooke AMC
1998	MAJ John G. Anema, USAF	SAUSHEC*
1998	MAJ George B. Stackhouse, USA	Walter Reed AMC
1999	LT Melody A. Denson, USN	University of Iowa
1999	CPT Kyle J. Weld, USAF	University of Tennessee
2000	LCDR Prodromos G. Borboroglu, USN	Naval Medical Ctr, San Diego
2000	CPT Michael L. Gallentine, USAF	SAUSHEC*
2001	MAJ Kevin J. Gancarczyk, USA	Walter Reed AMC
2001	CPT Barak Perahia, USAF	SAUSHEC*
2002	CPT Ann S. Fenton, USAF	SAUSHEC*
2002	CPT Kenneth H. Ferguson, USAF	SAUSHEC*
2004	CPT Eric J. Hick, USAF	SAUSHEC*
2004	MAJ Stacey G. Koff, USA	Walter Reed AMC
2005	MAJ Mark Noller, USA	SAUSHEC*
2005	CPT Thomas Novak	Walter Reed AMC
2006	MAJ Inger Rosner, USA	Walter Reed AMC
2006	LT R. Chanc Walters, USN	Naval Medical Ctr, San Diego
2007	LT Alison M. Lake, USN	University of Michigan
2007	LT R. Chanc Walters, USN	Naval Medical Ctr, San Diego
2008	LT Alison M. Lake, USN	University of Michigan
2008	CPT L. Andrew Evans	SAUSHEC*
2009	CPT Chad DeRosa, MC, USA	Walter Reed AMC
2009	CPT Forrest C. Jellison, MC, USAF	Loma Linda Medical Center
2012	CPT Timothy Tausch, MC USA	Madigan AMC, WA
2012	MAJ Patrick McDonough, MC, USA	Madigan AMC, WA
2013	CPT Nicholas J. Kuntz, MC, USA	Duke University
2013	CPT Mark R. Anderson, MC, USA	Duke University
2014	CPT Ryan W. Speir, MC, USA	Madigan Army Medical Center
2014	CPT Nicholas J. Kuntz, MC, USA	Duke University

**JAMES C. KIMBROUGH MEMORIAL AWARDS -
PREVIOUS WINNERS (cont.)**

2015	CPT Raffaella DeRosa, MC, USA	Tripler Army Medical Center
2015	CPT Nicholas J. Kuntz, MC, USA	Duke University
2016	MAJ Stephen Overholser, MC, USA	Univ. of TX Hlth. Sci. Ctr.
2016	LT Travis C. Allemang, MC, USN	Naval Medical Center Portsmouth
2017	CPT Tara K. Ortiz, MC, USA	Duke University Medical Center
2017	CPT Jonathan Wingate, MC, USA	Madigan Army Medical Center
2018	LT Chad Pusateri, MC, USN	Naval Medical Center San Diego
2018	Capt Theodore R. Saitz, MC, USAFR	Oregon Health & Sci. Univ. Urology

*San Antonio Uniformed Services Health Education Consortium

PRINCE D. BEACH, MD

Colonel, Medical Corps, United States Army -1918-1992



Colonel Beach was a native of New Bedford, Massachusetts, a graduate of Colby College and Jefferson Medical College, and was commissioned in the US AMEDD in 1945. Over the next several years he served as a battalion surgeon and medical officer with varied and multiple commands of dispensaries and station hospitals, primarily in Europe. During the Korean War he received the Bronze Star while commanding officer and division surgeon of the 24th Medical Battalion. After completion of his urology residency in 1955 at Brooke Army Medical Center, he was the Assistant Chief of Urology at Fort Carson and Brooke, and Chief of Urology, 2nd General

Hospital, Landstuhl, Germany. He returned to Brooke General Hospital in 1963 and was Chief of Urology from 1965 until his retirement in 1968, after 23 years of active service. Subsequently, he became an Associate Professor in the Department of Urology at Baylor College of Medicine, Chief of Urology at the VA Hospital in Houston, Texas, and Co-chairman of the VA Cooperative Urological Research Group. He was Executive Secretary of the Society of Government Service Urologists (SGSU) from its inception until his death in 1992. He was known for his great sense of humor, administrative expertise, wise counsel and sound clinical acumen.

PRINCE D. BEACH AWARD PREVIOUS WINNERS

Established in 1992 for the best paper presented by a Society Member Staff Physician, as judged by Chief Residents attending the Seminar.

PREVIOUS AWARD WINNERS

1993	MAJ Samuel Peretsman, USAF, MC	Wilford Hall Medical Center
1994	MAJ J. Brantley Thrasher, MC, USA	Madigan Army Medical Center
1995	MAJ J. Brantley Thrasher, MC, USA	Madigan Army Medical Center
1996	MAJ Allen F. Morey, MC, USA	UCSF San Francisco Gen.Hospital
1997	MAJ Ronald S. Sutherland, MC, USA	Tripler Army Medical Center
1998	LTC Burkhardt H. Zorn, MC, USA	Walter Reed Army Medical Ctr.
1999	COL Rhonda Cornum, MC, USA	Eisenhower Army Medical Center
2000	LCDR Stephen V. Jackman, MC, USN	Naval Medical Ctr. Portsmouth
2001	COL Thomas A. Rozanski, MC, USA	Brooke Army Medical Center
2002	MAJ(P) Douglas W. Soderdahl, MC, USA	Eisenhower Army Medical Center
2004	LCDR Brian Auge, MC, USN	Naval Medical Center San Diego
2005	COL Edward Mueller, MC, USA (Ret.)	San Antonio, TX
2006	LCDR Emily Cole, MC, USNR	Naval Medical Center San Diego
2007	MAJ R. Clay McDonough, III, USAF, MC	University of Iowa Hosp. & Clinics
2008	James A. Brown, M.D.	Medical College of Georgia
2009	LTC Andrew Peterson, MC, USA	Madigan Army Medical Center
2010	LCDR Douglas W. Storm, MC, USN	Naval Medical Center San Diego
2011	MAJ Steven Hudak, MC, USA	San Antonio Military Med. Ctr.
2012	LCDR Joe Miller, MC, USN	Univ. of California, San Francisco
2013	LTC Timothy Brand MC, USA	Madigan Army Medical Center
2014	LCDR Douglas W. Storm, MC, USN	University of Iowa Hosp. & Clinics
2015	Col (Ret) Drew Peterson, MC, USA	Duke University
2016	LCDR Eric T. Grossgold, MC, USN	Washington Univ. Medical Ctr.
2017	LCDR Eric T. Grossgold, MC, USN	Washington Univ. Medical Ctr.
2018	Thomas Rozanski, MD	UT Hlth. Sci. Ctr. San Antonio

H. GODWIN STEVENSON

SGSU Administrator - 1920-1992



H. Godwin Stevenson, a native of Philadelphia, graduated from Cornell University with a B.S. in zoology. He was a naval aviator and flight instructor during World War II. In 1946 he joined Eaton Laboratories as their first salesman and was in charge of government sales from 1952 until his retirement in 1982. He was a naturalist throughout his life, an expert in falconry, an avid birdwatcher, and published authority on moths. Known affectionately as "Tibbie," he was a trusted friend, confidant, and supporter of all Armed Forces and VA urologists. His numerous contributions to government service urology remain his legacy, and include: administrator of the SGSU from its inception in 1972 until his death in 1992, organization and

publication of the "Proceedings of the Kimbrough Seminar," solicitation of multiple corporate sponsors for the annual James C. Kimbrough Urological Seminar, resident grants to professional meetings, SGSU Membership Directory, and hotel conference agreements for the yearly Kimbrough meeting.

H.G. STEVENSON AWARD PREVIOUS WINNERS

In 1992 the Society established this award, which is presented annually for outstanding support and dedicated service to the Society. The recipient of this award can be a Corporate Member, physician, or other individual as determined by the Board of Directors.

PREVIOUS AWARD WINNERS

1992	COL Evan Lewis, MC, USA (Ret)
1994	Preston N. Littrell
1995	COL John N Wettlaufer, MC, USA (Ret)
1996	COL Leonard Maldonado, MC, USA (Ret)
1997	F. Kash Mostofi, M.D.
1998	Lester Persky, M.D.
1999	Charles A. Hulse, M.D.
2000	COL Donald E. Novicki, USAF, MC (Ret)
2001	Harry Tarr
2002	COL Martin L. Dresner, MC, USA (Ret)
2004	COL Robert M. Dobbs, MC, USA (Ret)
2005	COL Ian M. Thompson, MC, USA (Ret)
2006	Kathryn S. Littrell
2007	COL Howard E. Fauver, MC, USA (Ret)
2008	COL David G. McLeod, MC, USA (Ret)
2009	COL David McLeod, MC, USA (Ret)
2010	COL Thomas A. Rozanski, MC, USA (Ret)
2011	Isabel Sesterhenn, MD
2012	John Weigel, MD
2013	BGEN James T. Turlington, MC, USAF (Ret)
2014	John M. Barry, MD
2015	DeSantis Management Group
2016	MAJ GEN Thomas P. Ball, USAF, Ret.
2017	George W. Kaplan, MD
2018	Gerald Jordan, MD

CHRISTINE MANTHOS

Major, Medical Corps, United States Army - 1961-1999



Major Manthos, a native of Leesburg, Virginia, commissioned in the USAR in 1985, was a graduate with distinction of University of Virginia and the Uniformed Services University of the Health Sciences from which she received the Army Surgeon General Award. She did her surgical internship at Fitzsimons AMC followed by a one year assignment in Korea as Troop Medical Clinic Commander. She returned to Fitzsimons to complete her Urology residency in 1996 as the last graduating urology resident prior to the closure of Fitzsimons. Among her accomplishments throughout her life were fluency in Russian, participation in an early Hanta

virus study, experience as a country music disc jockey, selection by her peers in 1996 as Outstanding Teaching Resident and below zone promotion to Major. An outstanding physician, she was known for her genuine compassion, excellent teaching abilities and superb surgical skills. Chris was lovingly devoted to her children, family and many friends. Her ever-present infectious smile touched all who knew her. The annual luncheon will be held in memory of Christina Manthos, a member of the society who died of breast cancer. We hope her memory and love for residents will live on during the annual Manthos Resident and Young Urologist Luncheon.

CLARE SCANLON

1941-2005



Clare Scanlon was just as much a member of the Army as was her husband, retired judge advocate Wally. A native of Long Island, New York, Clare graduated from Marymount College in Arlington, Virginia. While raising a family and moving from post to post, Clare worked tirelessly to enrich the lives of those around her. She received the Military Wife of the Year award at Fort Dix, NJ in 1971, and in 1974 was a recipient of the Molly Pitcher award for distinguished service as an officer's wife in the community at Ft. Sill, OK. While at West Point, Clare instructed cadets on finer points of decorum and protocol, launching many young men and women into successful Army careers.

After Wally's career took him to Fort Sam Houston, she served as the medical editor for Brooke Army Medical Center, shepherded many manuscripts into prestigious journals and textbooks of international renown, and began a decade of service to the SGSU. Even into the last year of her life, Clare dedicated countless hours to planning the Kimbrough Urological Seminar, editing and assembling the program book.

CLARE SCANLON AWARD - PREVIOUS WINNERS

CLARE SCANLON AWARD

In 2006, to express our deep gratitude for her devoted service, the Society established the Clare Scanlon Award, to be "presented annually for outstanding administrative support and service to the Society, specifically in regards to the annual Kimbrough Seminar, as determined by the Course Director".

PREVIOUS AWARD WINNERS

2006	Teresa Clark & Sharon Mason	2017	LTC Joseph R. Sterbis, MC, USA
2007	Janie N. Garcia	2018	Inger Rosner, MD
2008	Patricia A. Harrison		
2009	Toni Dominci		
2011	Verna Munroe		
2016	Maria Salazar		

HONORARY LIFETIME MEMBERSHIP

Presented annually to an individual who has distinguished him or herself as a long-time supporter who is dedicated to the society.

HONORARY LIFETIME MEMBERSHIP AWARD PREVIOUS WINNERS

2015	Brendan Fox, MD
2016	Martin L. Dresner, MD
2017	Mitchell Edson, MD
2018	John M. Barry, MD

PREVIOUS JAMES C. KIMBROUGH SEMINARS

NUMBER	YEAR	
1	1953	Walter Reed General Hospital COL Jack W. Schwartz, MC, USA
2	1954	Walter Reed General Hospital COL Jack W. Schwartz, MC, USA
3	1955	Brooke General Hospital COL Claude C. Dodson, MC, USA
4	1956	Walter Reed General Hospital LTC Kryder E. Van Buskirk, MC, USA
5	1957	Walter Reed General Hospital COL John F. Patton, MC, USA
6	1958	Brooke General Hospital COL Louis K. Mantell, MC, USA
7	1959	Brooke General Hospital COL Louis K. Mantell, MC, USA
8	1960	Brooke General Hospital LTC Clarence B. Hewitt, MC, USA
9	1961	Brooke General Hospital COL Louis K. Mantell, MC, USA
10	1962	Letterman General Hospital COL Kryder E. Van Buskirk, MC, USA
11	1963	Walter Reed General Hospital COL Clarence B. Hewitt, MC, USA
12	1964	Brooke General Hospital COL Prince D. Beach, MC, USA
13	1965	Letterman General Hospital LTC Charles A. Moore, MC, USA
14	1966	Walter Reed General Hospital COL Kryder E. Van Buskirk, MC, USA
15	1967	Brooke General Hospital COL Prince D. Beach, MC, USA
16	1968	Walter Reed General Hospital COL Kryder E. Van Buskirk, MC, USA
17	1969	Letterman General Hospital COL Leonard Maldonado, MC, USA

PREVIOUS JAMES C. KIMBROUGH SEMINARS

NUMBER	YEAR	
18	1970	Brooke General Hospital LTC Robert M. Dobbs, MC, USA
19	1971	Letterman General Hospital LTC Ray E. Stutzman, MC, USA
20	1972	Fitzsimons General Hospital COL Evan L. Lewis, MC, USA
21	1973	Walter Reed Army Medical Center COL Anthony A. Borski, MC, USA CAPT Mitchell Edson, MC, USN
22	1974	Brooke Army Medical Center COL Mauro P. Gangai, MC, USA
23	1975	Madigan Army Medical Center COL John N. Wettlaufer, MC, USA
24	1976	Naval Hospital, NRMHC, San Diego, CA CAPT C.R. Sargent, MC, USN
25	1977	Fitzsimons Army Medical Center COL Robert M. Dobbs, MC, USA
26	1978	Wilford Hall USAF Medical Center COL Thomas P. Ball, MC, USAF COL Carl H. Weber, MC, USAF
27	1979	Walter Reed Army Medical Center COL Ray E. Stutzman, MC, USA
28	1980	Naval Regional Med Center, San Diego CAPT Michael R. McCarthy, MC, USN CDR John P. Sands, MC, USN
29	1981	Fitzsimons Army Medical Center COL Howard E. Fauver, MC, USA
30	1982	Wilford Hall USAF Medical Center COL Donald E. Novicki, USAF, MC LT COL Richard A. Airhart, USAF, MCP
31	1983	Letterman Army Medical Center COL Robert E. Agee, MC, USA
32	1984	Naval Hospital, Oakland, CA CDR George J. Gavrell, MC, USN

PREVIOUS JAMES C. KIMBROUGH SEMINARS

NUMBER	YEAR	
33	1985	Madigan Army Medical Center COL William D. Belville, MC, USA
34	1986	Wilford Hall USAF Medical Center COL Alvin L. Sago, USAF, MC LTC John D. Maldazys, MC, USAF
35	1987	Walter Reed Army Medical Center/USUHS COL David G. McLeod, MC, USA LTC Steven J. Skoog, MC, USA
36	1988	Naval Hospital Portsmouth CAPT Gordon MacDonald, MC, USA
37	1989	Brooke Army Medical Center COL Francisco R. Rodriguez, MC, USA
38	1990	Fitzsimons Army Medical Center COL Michael J. Raife, MC, USA
39	1991	National Naval Medical Center-Bethesda s CAPT Kevin J. O'Connell, MC, USN LCDR Harold A. Frazier, II, MC, USN
40	1992	Madigan Army Medical Center Four Seasons Olympic Hotel, Seattle, WA COL John N. Wettlaufer, MC, USA
41	1993	Naval Medical Center San Diego Bahia Hotel, San Diego, CA CAPT John P. Sands, MC, USN
42	1994	Naval Medical Center Portsmouth Omni at Charleston Place, Charleston, SC CAPT James R. Auman, MC, USN
43	1995	Walter Reed Army Medical Center/USUHS L'Enfant Plaza, Washington, DC COL David G. McLeod, MC, USA LTC Pierce B. Irby, MC, USA
44	1996	Wilford Hall USAF Medical Center Scottsdale Plaza Hotel, Scottsdale, AZ MAJ Steven C. Lynch, MC, USAF MAJ Edmund S. Sabanegh, MC, USAF

PREVIOUS JAMES C. KIMBROUGH SEMINARS

NUMBER	YEAR	
45	1997	Tripler Army Medical Center The Fairmont Hotel, San Francisco, CA COL George E. Deshon, MC, USA
46	1998	National Naval Medical Center-Bethesda Ft. Magruder Inn, Williamsburg, VA CAPT Paul J. Christenson, MC, USN CDR Harold A. Frazier, II, MC, USN
47	1999	Brooke Army Medical Center Hilton Palacio Del Rio, San Antonio, TX LTC Thomas A. Rozanski, MC, USA LTC John P. Foley, MC, USA
48	2000	Naval Medical Center San Diego Wyndam Emerald Plaza, San Diego, CA CAPT James L. Roberts, MC, USN LCDR Christopher J. Kane, MC, USN
49	2001	Madigan Army Medical Center Four Seasons Olympic Hotel, Seattle, WA LTC(P) Raymond A. Costabile, MC, USA
50	2002	Walter Reed Army Medical Center Crystal City Marriott Hotel, Arlington, VA COL Dennis S. Peppas, MC, USA
51	2004	Wilford Hall USAF Medical Center Hilton Palacio Del Rio, San Antonio, TX MAJ Edith Canby-Hagino, MC, USAF LT COL Steven C. Lynch, MC, USAF
52	2005	Tripler Army Medical Center Sheraton Waikiki Hotel, Honolulu, HI COL Ronald S. Sutherland, MC, USA
53	2006	Naval Medical Center Portsmouth & Eastern Virginia Medical School Savannah Marriott Riverfront, Savannah, GA CAPT Leo Kusuda, MC, USN Gerald H. Jordan, MD
54	2007	Brooke Army Medical Center Westin Galleria, Houston, TX LTC Douglas W. Soderdahl, MC, USA COL Allen F. Morey, MC, USA

PREVIOUS JAMES C. KIMBROUGH SEMINARS

NUMBER	YEAR	
55	2008	Naval Medical Center San Diego Wyndam Emerald Plaza, San Diego, CA CDR Brian K. Auge, MC, USN LCDR Donald S. Crain, MC, USN
56	2009	Walter Reed Army Medical Center & National Naval Medical Center-Bethesda Hyatt Regency Capitol Hill, Washington DC COL James R. Jezior, MC, USA COL Robert C. Dean, MC, USA
57	2010	Wilford Hall Medical Center Westin Hotel, San Antonio, TX LT COL Kyle J. Weld, MC, USAF
58	2011	Madigan Army Medical Center Seattle Sheraton, Seattle, WA MAJ Timothy C. Brand, MC, USA
59	2012	Naval Medical Center Portsmouth Charleston Marriott, Charleston, SC CAPT Paul D. McAdams, MD, FACS
60	2013	Tripler Medical Center, Honolulu Marriott Waikiki Beach Hotel, Honolulu, HI COL (Ret) USA, Richard S. Stack, MD MAJ Joseph Sterbis, MC, USA CDR Tammy L. Bloom, MC, USN
61	2014	Naval Medical Center San Diego Sheraton Harbor Island Hotel, San Diego, CA CDR Sean P. Stroup, MC, USN CDR Jamey Sarvis, MC, USN
62	2015	Madigan Army Medical Center Sheraton Harbor Island Hotel, San Diego, CA LTC Timothy C. Brand, MC, USA LTC Jack R. Walter, MC, USA
63	2016	San Antonio Military Medical Center Westin Hotel, San Antonio, TX MAJ Steven J. Hudak, MC, USA LT COL Timothy M. Phillips, MC, USAF

PREVIOUS JAMES C. KIMBROUGH SEMINARS

NUMBER	YEAR	
64	2017	Naval Medical Center, Portsmouth, VA Sheraton Harbor Island Hotel, San Diego, CA CDR R. Chanc Walters, MC, USN LCDR Paul R. Womble, MC, USN
65	2018	Walter Reed National Military Medical Center The Scottsdale Resort at McCormick Ranch, Scottsdale, Arizona COL Robert C. Dean, MC, USA
66	2019	Tripler Army Medical Center Sheraton Kona Hotel, Kona, Hawaii LTC Joseph Sterbis, MC, USA & LTC John Musser, MC, USA

GENERAL INFORMATION

Registration:

Registration is required in order to obtain Continuing Medical Education credits. Attendees will be given badges at registration. It is required that you wear your badges to gain entry into the scientific sessions, exhibits, social events, breakfasts, and breaks. Should you wish to bring your spouse to any of these events, you must register them for a badge.

The evening optional social events include the:

- Wednesday Evening President's Welcoming Reception - \$45
- Friday Evening Sunset Cocktail Cruise - \$65
- Saturday Evening Preston & Kathy Littrell Awards Dinner - \$75

If you have not purchased these tickets, you may do so at the registration desk.

(Note some events may be sold-out)

(Tickets will be collected at the entrance).

Overview/Highlights:

Topics featured at the Kimbrough Annual Seminar will feature state of the art lectures in various urologic topics - including: Neurourology, Renal Malignancy Reconstruction and Andrology, Oncology, Pediatric Urology, Prostate, Female Urology, Sexual Health, VA & Surgical Updates, and a Course Summary. In addition, the program will include the traditional Resident Research Competition, Research Papers, Podium/Poster Session and Mock Oral Boards - for those preparing for the ABU certifying examination. This year, the Manthos Resident/Young Urologist Luncheon Program will feature a panel on Options for Government Service in Urology.

Special Assistance/Dietary Needs: The SGSU complies with the Americans with Disabilities Act §12112(a). If any participant is in need of special assistance or has any dietary restrictions, please see the registration desk.

Attention Presenters:

Go to slide preview area to make changes/update slides. Updates must be made at least one hour in advance of your presentation.

Slide Preview Hours:

WED: 2:00 PM - 6:00 PM

THURS - SAT: 7:00 AM - 5:00 PM

CONTINUING MEDICAL EDUCATION

Acknowledgement of Commercial Support

Medtronic

Physicians



JOINTLY ACCREDITED PROVIDER™
INTERPROFESSIONAL CONTINUING EDUCATION

In support of improving patient care, this activity has been planned and implemented by Amedco LLC and Society of Government Service Urologists. Amedco LLC is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

Credit Designation Statement

Amedco designates this live activity for a maximum of 19.50 *AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity. *(See page 23 to claim your CME certificate)*

Objectives - After attending this program you should be able to:

1. Discuss new evidence for growth hormone and rejuvenation therapies for erectile dysfunction.
2. Assess complications and use flaps in vaginal surgery.
3. Examine and discuss challenges associated with urologic cancer surgery.

CONTINUING MEDICAL EDUCATION

Disclosure of Conflict of Interest

The following table of disclosure information is provided to learners and contains the relevant financial relationships that each individual in a position to control the content disclosed to Amedco. All of these relationships were treated as a conflict of interest, and have been resolved. (C7 SCS 6.1--6.2, 6.5)

All individuals in a position to control the content of CE are listed in the program book. If their name is not listed below, they disclosed that they had no relevant financial relationships.

First Name	Last Name	Relationship	Commercial Interest
Andrew	Peterson	Boston Scientific	Research Grant Site Principal Investigator
		Boston Scientific	Scientific/Medical Advisory Board Member
		Boston Scientific	Speakers Bureau
Stephen	Boorjian	Ferring	Consultant
Jaspreet	Sandhu	Boston Scientific	Consultant
Sean	Stroup	Neotract, Inc	Consultant
		Intuitive Surgical	Consultant

CONTINUING MEDICAL EDUCATION

Print Your CME Certificate After The Meeting

Instructions:

Go to **SGSU.CmeCertificateOnline.com**

Click on the
“2019 Annual Meeting”
link and follow instructions

Please print all pages of your certificate for your record.
Questions? Email Certificate@AmedcoEmail.com

Thank you!

PROGRAM-AT-A-GLANCE

Special Note: Meal service for all daytime functions is in the first hour.

WEDNESDAY, JANUARY 16

TIME	EVENT	ROOM
2:00 PM - 6:00 PM	Registration	Keauhou Blrm. Foyer
2:00 PM - 6:00 PM	Slide Preview	Keauhou 1 Ballroom
2:00 PM - 4:00 PM	Board of Director's Mtg.	Hualalai Room
6:30 PM - 8:30 PM	Aloha Reception	Paokai Point

THURSDAY, JANUARY 17

TIME	EVENT	ROOM
7:00 AM - 2:00 PM	Exhibits Open	Keauhou 1 Ballroom
7:00 AM - 8:15 AM	Networking Breakfast	Exhibits Area
7:00 AM - 4:00 PM	Registration	Keauhou Ballrm. Foyer
7:00 AM - 5:00 PM	Slide Preview Station	Keauhou 1 Ballroom
8:15 AM - 8:30 AM	Opening Ceremonies	Keauhou 2 Ballroom
8:30 AM - 8:40 AM	AUA Keynote Address	Keauhou 2 Ballroom
8:40 AM - 9:00 AM	Group Picture	Keauhou 2 Foyer
9:00 AM - 10:00 AM	Session I-II, Res. Comp	Keauhou 2 Ballroom
10:00 AM - 10:45 AM	Refreshment Break	Exhibits Area
10:45 AM - 11:45 AM	Special Symposium	Keauhou 2 Ballroom
11:45 AM - 12:11 PM	Session III, Res. Comp	Keauhou 2 Ballroom
12:11 PM - 1:45 PM	Manthos Lunch Program	Bayview 2 Room
12:11 PM - 1:45 PM	Lunch in Exhibits Area	Exhibits Area
1:45 PM - 4:15 PM	Session IV-VI Res. Comp	Keauhou 2 Ballroom
6:00 PM - 6:45 PM	GU Bowl Tailgate Party	Keauhou Ballrm. Foyer
6:45 PM - 8:00 PM	GU Bowl	Keauhou 2 Ballroom

PROGRAM-AT-A-GLANCE

Special Note: Meal service for all daytime functions is in the first hour.

FRIDAY, JANUARY 18

TIME	EVENT	ROOM
7:00 AM - 2:00 PM	Exhibits Open	Keauhou 1 Ballroom
7:00 AM - 8:15 AM	Networking Breakfast	Exhibits Area
7:00 AM - 3:00 PM	Registration	Keauhou Ballrm. Foyer
7:00 AM - 5:00 PM	Slide Preview Station	Keauhou 1 Ballroom
8:15 AM - 9:00 AM	Sexual Medicine	Keauhou 2 Ballroom
9:00 AM - 10:00 AM	Special Symposium	Keauhou 2 Ballroom
10:00 AM - 11:00 AM	Refreshment Break	Exhibits Area
11:00 AM - 12:00 PM	Female Urology	Keauhou 2 Ballroom
12:00 PM - 1:15 PM	CME Lunch Program	Keauhou 2 Ballroom
1:15 PM - 3:15 PM	Poster Session/Reception	Bayview 2 Room
4:30 PM - 6:30 PM	Cocktail Cruise (optional)	Keauhou Pier

SATURDAY, JANUARY 19

TIME	EVENT	ROOM
7:00 AM - 2:00 PM	Exhibits Open	Keauhou 1 Ballroom
7:00 AM - 8:15 AM	Networking Breakfast	Exhibits Area
7:00 AM - 5:00 PM	Registration	Keauhou Ballrm. Foyer
7:00 AM - 5:00 PM	Slide Preview Station	Keauhou 1 Ballroom
8:15 AM - 10:15 AM	Oncology 1 & 2	Keauhou 2 Ballroom
10:15 AM - 11:30 AM	Refreshment Break	Exhibits Area
11:30 AM - 12:00 PM	Reconstruction	Keauhou 2 Ballroom
12:00 PM - 1:20 PM	CME Lunch Program	Keauhou 2 Ballroom

PROGRAM-AT-A-GLANCE

Special Note: Meal service for all daytime functions is in the first hour.

SATURDAY, JANUARY 19 (cont.)

TIME	EVENT	ROOM
1:20 PM - 2:30 PM	SGSU Business Meeting	Keauhou 2 Ballroom
2:30 PM - 3:20 PM	General Urology	Keauhou 2 Ballroom
3:20 PM - 3:50 PM	Andrology	Keauhou 2 Ballroom
3:50 PM - 4:00 PM	Short Break	
4:00 PM - 5:00 PM	Current Urology	Keauhou 2 Ballroom
6:30 PM - 9:30 PM	Littrell Awards Luau	Hawaiian Lawn

SUNDAY, JANUARY 20

TIME	EVENT	ROOM
7:00 AM - 9:00 AM	Registration	Keauhou Ballrm. Foyer
7:00 AM - 8:15 AM	Mahalo Breakfast	Keauhou 2 Ballroom
8:30 AM - 8:45 AM	Meeting Highlights	Keauhou 2 Ballroom
8:50 AM - 12:00 PM	Mock Oral Boards	Keauhou 1 Ballroom

INVITED SPEAKERS

Stephen A. Boorjian, MD, FACS

Carl Rosen Professor in Urology
Vice Chair of Research, Department of
Urology, Director, Urologic Oncology
Fellowship, Mayo Clinic, Rochester, MN

E. David Crawford, MD

Professor of Surgery and Radiation
Oncology, Head of the Section of
Urologic Oncology, University of
Colorado Denver School of Medicine

Brett S. Carver, MD

Memorial Sloan Kettering Cancer
Center

Tanya B. Dorff, MD

USC Norris Comprehensive Cancer
Center and City of Hope National
Medical Center Surgery

Leonard Gomella, MD

Bernard W. Godwin, Jr. Professor of
Prostate Cancer, Chairman of the Dept.
of Urology, Jefferson Medical College

Muta M. Issa, MD, FACS, MBA

Professor of Urology, Emory University
School of Medicine & Chief of Urology,
Atlanta Veterans Affairs Medical Center

COL (RET) Stacey Koff, MD

VAMC, Washington DC

Shlomo Raz MD

Professor of Urology
UCLA School of Medicine

Paul Russo, MD

Memorial Sloan Kettering Cancer Center

Hossein Sadeghi-Nejad, MD, FACS

President of the Sexual Medicine
Society of North America (SMSNA)
Professor of Surgery / Urology at
Rutgers New Jersey Medical School, and
Chief of Urology at the New Jersey
Veterans Affairs Hospitals

Jaspreet S. Sandhu, MD

Memorial Sloan Kettering Cancer Center

Brad Schwartz, DO, FACS

Professor & Chairman, Div. of Urology
Southern Illinois University School of
Medicine, Springfield, IL

J. Brantley Thrasher, MD

AUA Immediate Past President,
William L. Valk Distinguished Professor,
Department of Urology,
Co-Director of Operative Services,
University of Kansas Medical Center

Edward M. Uchio, MD, FACS

Associate Professor of Clinical Urology,
UC Irvine Medical Center, Orange, CA

INDEX OF PARTICIPANTS

Allam, Chris.....	58	Hughes, Michael.....	41
Balzano, Felicia.....	44,51	Issa, Muta.....	42,57
Barham, David.....	43	Janssen, Karmon.....	43
Barry, John M.....	38,39,41,42,44,45	Kallingal, George.....	39
Bartmuss, Edward.....	58	Kasprenski, Matthew.....	44
Biewenga, Eric.....	48	Koff, Stacey.....	42,43,57
Boorjian, Stephen.....	53	Krzastek, Sarah.....	49
Brand, Timothy.....	54	Leidig, Patrick.....	38
Brown, James.....	51,54	Leventhal, Edward.....	58
Caras, Rj.....	57	McCauley, John.....	45
Carlisle, Katherine.....	50	McFadden, Jacob.....	50
Carver, Brett.....	53	Medendorp, Andrew.....	38,49
Choe, Jay.....	38	Moore, Robert.....	58
Christman, Matthew.....	44	Musser, John.....	37,45,53,61
Craig, Kiersten.....	44,51	Mygatt, Justin.....	45
Crawford, E. David.....	48	Nandan, Naveen.....	45,50
Dean, Robert.....	48,57	Park, Grace.....	45
Donahue, Timothy.....	45,50	Peterson, Drew.....	58
Dorff, Tanya.....	49	Potts, Bradley.....	43,50
Doudt, Alexander.....	43	Raz, Shlomo.....	49
Dresner, Martin.....	38,39,41,43,44,45	Reed, Amy.....	43
Ensley, Daniel.....	41	Reed-Maldonado, Amanda.....	41,58
Gerald, Thomas.....	45,50	Rocco, Nicholas.....	45,51
Gomella, Leonard.....	56	Roger, Elizabeth.....	49
Greenstein, Miriam.....	39	Russo, Paul.....	53
Grossgold, Erik.....	50	Sadeghi-Nejad, Hossein.....	48
Henry, Ashley.....	38	Salter, Carolyn.....	51
Hertz, Alexandria.....	38,51,58	Sandhu, Jaspreet.....	56

INDEX OF PARTICIPANTS

Santomauro, Mike.....	57	Thibault, Gregory.....	37
Schisler, John.....	51	Thrasher, J. Brantley.....	37,38,39,41
Schwartz, Bradley.....	42,50	43,44,45
Sexton, Stephanie.....	38,51	Tullos, Elizabeth.....	44
Shaw, Travis.....	54	Tuong, Nicole.....	39
Shenkman, Noah.....	43	Turlington, James.....	57
Shepard, Caitlin.....	45	Uberoi, Pansy.....	43
Speir, Ryan.....	54	Walthers, R. Chanc.....	58
Stackhouse, Danielle.....	41,56	Wingate, Jonathan.....	49
Steckler, Robert E.....	50	Zillioux, Jacqueline.....	41
Sterbis, Joseph R.....	37,53,61	Zipper, Ryan.....	39
Stroup, Sean P.....	39,54		

OPTIONAL EVENT



Optional Sunset Cocktail Cruise - Friday, 4:30pm - 6:30pm - Meet at the Keauhou Pier - (Tickets will be collected)

Don't miss the opportunity to join the group for a private 2 hour cruise on board the Fairwind II Catamaran and see the Kona Coast in style. This is a 60 foot beautiful 2 story vessel with shade and sun areas, nice restrooms, very comfortable seating and lots of room to relax, have fun and enjoy the scenery. Departing from historic Keauhou Bay located a short 5 minute walk from the Sheraton Kona. Cost includes hosted bar and pupu's during the cruise. Seating is limited for this special sunset cruise and subject to sell-out at any time.

EXHIBITOR ACTIVITIES

Visit the Exhibit Area For The Education!

- See first hand the latest in urology technology & services
- Enjoy hearty networking breakfasts
- Re-Energize with lively refreshment breaks
- Visit the exhibitors to win prizes!

The Exhibits are located in the Keauhou 1 Ballroom

Schedule of Activities in the Exhibit area

Thursday, Jan. 17 Schedule:

7:00 AM - 2:00 PM: Hours Open
7:00 AM - 8:15 AM: Networking Breakfast
10:00 AM - 10:45 AM: Refreshment Break
12:11 PM - 1:45 PM: Lunch Break in Exhibit Area

Friday, Jan. 18 Schedule:

7:00 AM - 2:00 PM: Hours Open
7:00 AM - 8:15 AM: Networking Breakfast
10:00 AM - 11:00 AM: Refreshment Break

Saturday, Jan. 19 Schedule:

7:00 AM - 2:00 PM: Hours Open
7:00 AM - 8:15 AM: Networking Breakfast
10:15 AM - 11:30 AM: Refreshment Break

**Visit with the Exhibitors during the
Breakfasts, Refreshment Breaks
Use your “**Aloha Card**” to win prizes!**

EXHIBITORS

We thank our commercial exhibitors for their support of the Kimbrough Annual Meeting. Please be sure to visit them during the meeting.

Thank You!

Allergan

Astellas Pharma /Pfizer

Oncology

Bayer HealthCare / Sanofi

Genzyme

Blue Earth Diagnostics

Boston Scientific Corp.

Coloplast

Comp Health

Dendreon

Dornier Medtech America, Inc.

Endo

Genomic Health

i3health

Janssen Biotech

Karl Storz Endoscopy-America

Liebel-Flarsheim

MDx Health

Pacific Edge Diagnostics

Procept BioRobotics

Richard Wolf Med. Instr. Corp.

Siemens Medical Solutions USA

Tolmar

**Please visit our Exhibitors
and see what's new and exciting.
Win prizes! Have fun!**

THANK YOU SUPPORTERS

The SGSU thanks the following companies for their outstanding support!

Commercial Supporter

Medtronic

Non-CME Promotional Partners

Platinum

Astellas Pharma US, Inc. / Pfizer Oncology

i3health

Bayer HealthCare / Sanofi Genzyme

Tolmar Pharmaceuticals

Bronze

Boston Scientific Corp.

Karl Storz

Emerald

Sexual Medicine Society of North America

Society of Genitourinary Reconstructive Surgeons

American Urological Association

GU BOWL

Experience a Great Tradition!
The SGSU Annual GU Bowl



Attend Thursday Evening's

GU Bowl Official Tailgate Party
6:00 pm, Keauhou Ballroom Foyer

GU Bowl
6:45 pm, Keauhou Ballroom



**THE SGSU
WELCOMES
THE PARTICIPATION
OF THE VA UROLOGISTS
AND
Urological Society for
American Veterans
(USAV)**



WEDNESDAY, JANUARY 16

Outline of Scientific Program

66th Kimbrough

Annual Seminar * Sheraton Kona Hotel * Big Island, HI

TIME	EVENT	ROOM
2:00 PM - 6:00 PM	Registration	Keauhou Ballroom Foyer
2:00 PM - 6:00 PM	Slide Preview	Keauhou 1 Ballroom
2:00 PM - 4:00 PM	Board of Director's Mtg.	Hualalai Room
6:30 PM - 8:30 PM	Aloha Reception	Paokai Point

Welcome
Reception



6:30pm - 8:30 pm - Paokai Point

ALOHA!!

**Wear your favorite Aloha shirt (or skirt)
and join your colleagues beautiful Hawaiian
surroundings.**

Enjoy hosted bar and pupu's.

Spouses, guests, kids & exhibitors are welcome.

Be sure to bring your event & drink tickets.

THURSDAY, JANUARY 17

Outline of Scientific Program

66th Kimbrough

Annual Seminar * Sheraton Kona Hotel * Big Island, HI

TIME	EVENT	ROOM
7:00 AM - 2:00 PM	Exhibits Open	Keauhou 1 Ballroom
7:00 AM - 8:15 AM	Networking Breakfast	Exhibits Area
7:00 AM - 4:00 PM	Registration	Keauhou Ballrm. Foyer
7:00 AM - 5:00 PM	Slide Preview Station	Keauhou 1 Ballroom
8:15 AM - 8:30 AM	Opening Ceremonies	Keauhou 2 Ballroom
8:30 AM - 8:40 AM	AUA Keynote Address	Keauhou 2 Ballroom
8:40 AM - 9:00 AM	Group Picture	Keauhou 2 Ballroom
9:00 AM - 10:00 AM	Session I-II, Res. Comp	Keauhou 2 Ballroom
10:00 AM - 10:45 AM	Refreshment Break	Exhibits Area
10:45 AM - 11:45 AM	Special Symposium	Keauhou 2 Ballroom
11:45 AM - 12:11 PM	Session III, Res. Comp	Keauhou 2 Ballroom
12:11 PM - 1:45 PM	Manthos Lunch Program	Bayview 2 Room
12:11 PM - 1:45 PM	Lunch in Exhibits Area	Keauhou 1 Ballroom
1:45 PM - 4:15 PM	Session IV-VI Res. Comp	Keauhou 2 Ballroom
6:00 PM - 6:45 PM	GU Bowl Tailgate Party	Keauhou Ballrm. Foyer
6:45 PM - 8:00 PM	GU Bowl	Keauhou 2 Ballroom

7:00 AM

Coffee & Breakfast in the Exhibits Area!

*Enjoy a hearty breakfast, hot coffee and mingle
with colleagues and industry reps!*



Complete your "Aloha Card" to win prizes!

THURSDAY, JANUARY 17, 2019

OPENING CEREMONIES

8:15 AM - 9:00 AM - Keauhou 2 Ballroom

8:15AM - 8:25AM

Welcome & Announcements

Program Chairman: LTC Joseph R. Sterbis, MC,
USA & LTC John E. Musser, MC, USA &
President, COL (RET) Greg Thibault, MD

8:25AM - 8:30AM

National Anthem

AUA Keynote Address

8:30 AM - 8:40 AM

J. Brantley Thrasher, MD

**Immediate Past President,
American Urological Association**

8:40AM - 9:00AM

Group Picture



THURSDAY, JANUARY 17, 2019

SESSION I - RESIDENTS COMPETITION

Neurourology

9:00 AM - 9:35 AM - Keauhou 2 Ballroom
(Papers are seven minutes)

Moderators:

CDR Chong "Jay" Choe, MC & LTC Andrew Medendorp, MC, USA

Judges: John M. Barry, MD, J. Brantley Thrasher, MD &

COL (Ret.) Martin L. Dresner, MD, FACS

- 1 9:00AM Capt Ashely Henry, MC, USAF**
Single-Stage Sacral Neuromodulation: A Prospective Study.
 - 2 9:07AM CPT Patrick D. Leidig, MC, USA**
Inflammasome Activation Early in the Development of Diabetic Bladder Dysfunction.
 - 3 9:14AM CPT Stephanie J. Sexton, MC, USA**
Bladder Decompensation and Reduction In Nerve Density In A Rat Model Of Chronic Bladder Outlet Obstruction Is Attenuated With The NLRP3 Inhibitor Glyburide.
 - 4 9:21AM CPT Alexandria Hertz, MC, USA**
Novel Therapeutics for Sexual Health Recovery in a Pelvic Neurovascular Trauma Model.
- 9:28AM Discussion (7 minutes)**
- 9:35AM End of Session**



Courtesy Reminder
SET PHONES TO VIBRATE
Please take your calls outside the
meeting room.

Thank You

THURSDAY, JANUARY 17, 2019

SESSION II - RESIDENTS COMPETITION
Renal Malignancy

9:35 AM - 10:00 AM - Keauhou 2 Ballroom
(Papers are seven minutes)

Moderators:

CDR Sean P. Stroup, MC, USN & LTC George Kallingal, MC, USA

Judges: John M. Barry, MD, J. Brantley Thrasher, MD &

COL (Ret.) Martin L. Dresner, MD, FACS

- 5 9:35AM Nicole E. Tuong, MD**
Quantitative Analysis Of Renal Thermal Therapy on Devascularized Renal Parenchyma.
- 6 9:42AM Capt Ryan W. Zipper, MC, USAF**
Preoperative Planning For Open Partial Nephrectomy Using Three-dimensional Printing And Virtual Reality Models For Complex Vascular Anatomy In A Horseshoe Kidney.
- 7 9:49AM Capt Miriam Greenstein, MC, USAF**
ASA Score and the Charlson Comorbidity Index Fail to Discriminate Patients that Have Post-Operative Complications after Robotic Partial Nephrectomy.

9:56AM Discussion (4 minutes)

10:00AM End of Session



10:00 AM - 10:45 AM

"Vendor Blender"

Refreshment Break in Exhibits Area

**Complete your
Aloha Card
for great prizes!!!**

SPECIAL SYMPOSIUM

10:45AM - 11:45 AM - Keauhou 2 Ballroom

**A Treatment Option for Castration-Resistant
Prostate Cancer (CRPC).**

Edward M. Uchio, MD, FACS

*Associate Professor of Clinical Urology,
UC Irvine Medical Center, Orange, CA*

Supported by Astellas & Pfizer Oncology - Non CME Program

THURSDAY, JANUARY 17, 2019

**SESSION III - RESIDENTS COMPETITION
Reconstruction & Andrology**

**11:45 AM - 12:11 PM - Keauhou 2 Ballroom
(Papers are seven minutes)**

Moderators:

LTC Amanda Reed-Maldonado, MC, USA & LTC Danielle Stackhouse, MC, USA

**Judges: John M. Barry, MD, J. Brantley Thrasher, MD &
COL (Ret.) Martin L. Dresner, MD, FACS**

- 8 11:45AM Capt Daniel C. Ensley, MC, USAF**
Parameters Predicting Fertility Outcomes After Vasectomy Reversal.
- 9 11:52AM Jacqueline M. Zillioux, MD**
Assessment of Complications Following Urinary Diversion for Benign Indications.
- 10 11:59AM LT Michael Hughes, MC, USN**
International Multi-institutional Experience with Transurethral Ventral Buccal Mucosa Graft (BMG) Inlay for Treatment of Distal Urethral Strictures.

12:06PM Discussion (5 minutes)

12:11PM End of Session

LUNCH PROGRAMS

12:11pm - 1:45pm - Bayview II/ MuanaLoa/MuanaKea

Manthos Resident & Young Urologist Lunch Program

"Options for Government Service in Urology"

Muta M. Issa, MD, FACS, MBA

COL (RET) Stacey Koff, MD

Bradley Schwartz, DO, FACS



Meet & Greet with Industry ~ 12:45pm - 2:45pm

Lunch provided by SGSU in the Exhibit Area

(Food service until 1:45pm)

Complete your Aloha Card for prizes!

THURSDAY, JANUARY 17, 2019

SESSION IV - RESIDENTS COMPETITION

General Urology

1:45 PM - 2:45 PM - Keauhou 2 Ballroom
(Papers are seven minutes)

Moderators:

COL (RET) Stacey Koff, MD & COL (Ret) Noah Shenkman, MD

Judges: John M. Barry, MD, J. Brantley Thrasher, MD &

COL (Ret.) Martin L. Dresner, MD, FACS

- 11 1:45PM Capt Amy Reed, MC, USAF**
Ureteral Stenting After Endoscopic Injury In A Porcine Model: A Pilot Study.
- 12 1:52PM LT (O-3) Alexander D. Doudt, MC, USN**
Penile Calciphylaxis - A Case Series and Literature Review.
- 13 1:59PM LT Paul Campbell, MC, USN**
The Rule of "W" in Urology: Testing Surgical Dictum.
- 2:06PM Discussion (5 minutes)**
- 14 2:11PM CPT Bradley Potts, MC, USA**
Bladder Outlet Procedures Are Effective In The Treatment Of Patients With Urodynamically-confirmed Detrusor Underactivity Without Bladder Outlet Obstruction.
- 15 2:18PM Major Pansy Uberoi, MC, USAF**
Patient and Urologist Interactions: A Survey Study.
- 16 2:25PM CPT Karmon Janssen, MC, USA**
Opioid Prescribing Practices in Patients Undergoing Robotic Minimally Invasive Urologic Surgery.
- 17 2:32PM CPT David W. Barham, MC, USA**
Pain Control After Vasectomy: Are Opioids Required?
- 2:39PM Discussion (10 minutes)**
- 2:45PM End of Session**

THURSDAY, JANUARY 17, 2019

**SESSION V - RESIDENTS COMPETITION
Pediatrics**

**2:45 PM - 3:10 PM - Keauhou 2 Ballroom
(Papers are seven minutes)**

Moderators:

CDR Matthew Christman, MC, USN & MAJ Matthew Kasprenski, MC, USA

**Judges: John M. Barry, MD, J. Brantley Thrasher, MD &
COL (Ret.) Martin L. Dresner, MD, FACS**

- 18 2:45PM CPT Felicia L. Balzano, MC, USA**
Eliminating Ultrasound Utilization For The Diagnosis Of
Cryptorchidism: A Quality Improvement Initiative.
- 19 2:52PM Capt Kiersten M. Craig, MC, USAF**
Characterization And Management Of Vaginal Stenosis Following
Vaginoplasty In The Congenital Adrenal Hyperplasia Cohort.
- 20 2:59PM Capt E. Brooke Tullos, MC, USAF**
Societies For Pediatric Urology Meetings – How Are Women
Represented?
- 3:06PM Discussion (4 minutes)**
- 3:10PM End of Session**



THURSDAY, JANUARY 17, 2019

SESSION VI - RESIDENTS COMPETITION

Prostate

3:10 PM - 4:15 PM - Keauhou 2 Ballroom
(Papers are seven minutes)

Moderators:

Capt (RET) Timothy Donahue, MD & LTC John E. Musser, MC, USA

**Judges: John M. Barry, MD, J. Brantley Thrasher, MD &
COL (Ret.) Martin L. Dresner, MD, FACS**

- 21 3:10PM MAJ Grace E. Park, MC, USA**
Prevalence And Risk Factors Of Post-operative Urinary Tract Infection Following Robot Assisted Prostatectomy.
- 22 3:17PM CPT Justin G. Mygatt, MC, USN**
Race, Tumor Location, And Disease Progression Among Low Risk Prostate Cancer Patients Who Are Eligible For Active Surveillance.
- 23 3:24PM Naveen Nandanan, MD**
Surgical Delay For Radical Prostatectomy May Be Associated With Higher Positive Surgical Margin Rates And Increased Biochemical Recurrence.
- 3:31PM Discussion (6 minutes)**
- 24 3:37PM CPT John F. McCauley, MC, USA**
Incidence Of Metastatic Disease In A Racially Diverse, Longitudinal Cohort Of Prostate Cancer Patients: 1990-2017.
- 25 3:44PM CPT (P) Thomas Gerald, MC, USA**
The Impact Of Delay To Radical Prostatectomy For Prostate Cancer Patients Who Are Eligible For Active Surveillance.
- 26 3:51PM LT/03 Nicholas Rocco, MC, USN**
27-year Patterns In High Risk Prostate Cancer Treatment In A Racially Diverse, Equal Access Health Care Setting.
- 27 3:58PM Caitlin Shepherd, MD**
Salvage Cryoablation Of Prostate With Transperineal Denonvilliers' Space Expansion With Spaceoar: Postoperative Outcomes.
- 4:05PM Discussion (10 minutes)**
- 4:15PM End of Session**

Attend tonight's

Session: VII



**GU BOWL OFFICIAL TAILGATE PARTY - 6:00 PM
KEAHUOU BALLROOM FOYER**

**GU BOWL - 6:45 PM
KEAHUOU 2 BALLROOM**



FRIDAY, JANUARY 18

Outline of Scientific Program

66th Kimbrough

Annual Seminar * Sheraton Kona Hotel * Big Island, HI

TIME	EVENT	ROOM
7:00 AM - 2:00 PM	Exhibits Open	Keauhou 1 Ballroom
7:00 AM - 8:15 AM	Networking Breakfast	Exhibits Area
7:00 AM - 3:00 PM	Registration	Keauhou Ballrm. Foyer
7:00 AM - 5:00 PM	Slide Preview Station	Keauhou 1 Ballroom
8:15 AM - 9:00 AM	Sexual Medicine	Keauhou 2 Ballroom
9:00 AM - 10:00 AM	Special Symposium	Keauhou 2 Ballroom
10:00 AM - 11:00 AM	Refreshment Break	Exhibits Area
11:00 AM - 12:00 PM	Female Urology	Keauhou 2 Ballroom
12:00 PM - 1:15 PM	CME Lunch Program	Keauhou 2 Ballroom
1:15 PM - 3:15 PM	Poster Session/Reception	Bayview 2 Room
4:30 PM - 6:30 PM	Cocktail Cruise (optional)	Keauhou Pier

7:00 AM

Network Breakfast in Exhibit Area



BRING your Aloha Card
to win prizes!

FRIDAY, JANUARY 18, 2019

SESSION VIII - SEXUAL MEDICINE

8:15 AM - 9:00 AM - Keauhou 2 Ballroom

Moderators:

LCDR Eric Biewenga, MC, USN & COL Robert C. Dean, MC, USA

SEXUAL MEDICINE SOCIETY OF NORTH AMERICA (SMSNA) SUPPORTED STATE OF THE ART LECTURE

- 28 8:15AM Hossein Sadeghi-Nejad, MD**
Growth Hormone and Rejuvenation Therapies for Erectile Dysfunction: Do They Really Work?

9:00AM End of Session

SPECIAL SYMPOSIUM

9:00 AM - 10:00 AM - Keauhou 2 Ballroom

Androgen Targeted Therapy Across the Continuum of Prostate Cancer - A Review of Evolving Best Practices.

E. David Crawford, MD,

Professor of Surgery and Radiation Oncology, Head of the Section of Urologic Oncology, University of Colorado Denver School of Medicine

Supported by Tolmar - Non CME Program

10:00AM - 11:00AM



Refreshment Break in Exhibits Area

**Complete your Aloha Card
for great prizes!!!**

FRIDAY, JANUARY 18, 2019

SESSION IX - FEMALE UROLOGY

11:00 AM - 12:00 PM - Keauhou 2 Ballroom

Moderator:
LTC Andrew Medendorp, MC, USA

- 29 11:00AM Shlomo Raz, MD**
The Use of Flaps in Vaginal Reconstruction.
- 30 11:20AM Shlomo Raz, MD**
Complications of Vaginal Surgery in the Era of Mesh.
- 31 11:40AM LT Elizabeth I. Roger, MC, USN**
Robotic Assisted Transabdominal Posterior Urethroplasty For Traumatic Urethral Transection.
- 32 11:45AM Sarah C. Krzastek, MD**
Increased Risk Of Acute Kidney Injury Following Weight-based Gentamicin Administration For Urologic Prosthetic Surgery In A Veteran Population.
- 33 11:50AM MAJ Jonathan Wingate, MC, USA**
A Multicenter Assessment of Stricture Location and Type of Urethroplasty on Erectile Function.
- 11:55AM Discussion (5 minutes)**
- 12:00PM End of Session**

CME LUNCH PROGRAM

12:00 PM - 1:15 PM - Keauhou 2 Ballroom

**Castrate-Resistant Prostate Cancer: Implementing
New Data and Evolving Standards.**

Tanya B. Dorff, MD

*Associate Clinical Professor, Dept. Medical Oncology & Therapeutics
Research, Head Genitourinary Cancers Program, City of Hope*

This activity has been supported by an educational grant from i3health.

FRIDAY, JANUARY 18, 2019

**SESSION X - PODIUM/POSTER
PRESENTATIONS & RECEPTION**

1:15 PM - 3:15 PM - Bayview 2 Room
(10 minutes of viewing posters, followed by
2 minute podium presentations)

Moderators/Judges:

**LTC Robert Steckler, USAR, Capt (RET) Timothy Donahue, MD &
Bradley Schwartz, MD**

- 34 CPT Jacob McFadden, MC, USA**
Risk Factors For Anesthesia-related Complications During Urologic Surgery: A Quality Improvement Study.
- 35 CPT Bradley A. Potts, MC, USA**
Striking Differences In The Effects Of B3-adrenoceptor Agonists And Antimuscarinics On Bladder Filling/voiding Function In Chronic Spinal Cord Injured Rats.
- 36 Naveen Nandanan, MD**
Repair Of Iatrogenic Hypospadias In Spinal Cord Injured Patients.
- 37 CDR Erik Grossgold, MC, USN**
Recurrent Urethral Leiomyoma.
- 38 CPT Jacob McFadden, MC, USA**
Unusual Suspect: A Case Report Of Tubulocystic Renal Cell Carcinoma With Features Of Cystic Renal Oncocytoma.
- 39 Capt Kiersten Craig, MC, USAF**
Microwave Ablation of T1a Renal Cell Carcinoma: Immediate Short Term Outcomes.
- 40 CPT Katherine A. Carlisle, MC, USA**
Durable Disease Control: A Case Report Of Pembrolizumab In Metastatic Poorly Differentiated Bladder Cancer.
- 41 CPT Thomas Gerald, MC, USA**
Placement Of A Ventricu-ureteral Shunt In The Management Of Refractory Hydrocephalus.

- 42 SCPT John Schisler, MC, USA**
The Effect of a Multidisciplinary Prostate Cancer Clinic on Management at Tripler Army Medical Center.
- 43 CPT Alexandria Hertz, MC, USA**
“Head To Head” Comparison Of Three State Of The Art Virtual Reality Robotic Surgery Simulators.
- 44 LT/O3 Nicholas Rocco, MC, USN**
Our Initial Experience With Testosterone Undecanoate In The Setting Of A Shared Medical Appointment For Testosterone Deficiency.
- 45 MAJ Carolyn Salter, MC, USA**
Arousal Incontinence In Men Following Radical Prostatectomy: Prevalence, Impact, And Predictors.
- 46 CPT Felicia Balzano, MC, USA**
Sonographic Evaluation Of The High Submuscular Technique For Inflatable Penile Prosthesis Reservoir Placement.
- 47 MAJ Carolyn Salter, MC, USA**
Bother Associated With Climacturia After Radical Prostatectomy: Prevalence And Predictors.
- 48 CPT Stephanie J. Sexton, MC, USA**
Immune Expression in Children with Wilms Tumor.
- 49 Capt Kiersten Craig, MC, USAF**
Prolonged Length of Stay with Heminephrectomy Compared to Ureteroureterostomy for Management of Upper Pole Obstruction.
- 50 James A. Brown, MC, USA**
Non-genitourinary Complications Associated With Robot-assisted Laparoscopic And Radical Retropubic Prostatectomy: A Single Institution Assessment of 1100 Patients Over 11 Years.
- 51 MAJ Carolyn A. Salter, MC, USA**
Self-esteem And Relationship (SEAR) Questionnaire And Arousal Incontinence.

End of Session

SATURDAY, JANUARY 19

Outline of Scientific Program
66th Kimbrough

Annual Seminar * Sheraton Kona Hotel * Big Island, HI

TIME	EVENT	ROOM
7:00 AM - 2:00 PM	Exhibits Open	Keauhou 1 Ballroom
7:00 AM - 8:15 AM	Networking Breakfast	Exhibits Area
7:00 AM - 5:00 PM	Registration	Keauhou Ballrm. Foyer
7:00 AM - 5:00 PM	Slide Preview Station	Keauhou 1 Ballroom
8:15 AM - 10:15 AM	Oncology 1 & 2	Keauhou 2 Ballroom
10:15 AM - 11:30 AM	Refreshment Break	Exhibits Area
11:30 AM - 12:00 PM	Reconstruction	Keauhou 2 Ballroom
12:00 PM - 1:15 PM	CME Lunch Program	Keauhou 2 Ballroom
1:20 PM - 2:30 PM	SGSU Business Meeting	Keauhou 2 Ballroom
2:30 PM - 3:20 PM	General Urology	Keauhou 2 Ballroom
3:20 PM - 3:50 PM	Andrology	Keauhou 2 Ballroom
3:50 PM - 4:00 PM	Short Break	
4:00 PM - 5:00 PM	Current Urology	Keauhou 2 Ballroom
6:30 PM - 9:30 PM	Littrell Awards Luau	Hawaiian Lawn

7:00 AM

Start your day off in the
Exhibit Hall with Breakfast!
Mix, Mingle & Learn!



SATURDAY, JANUARY 19, 2019
SESSION XI - ONCOLOGY 1

8:15 AM - 9:40 AM - Keauhou 2 Ballroom

Moderators:

LTC Joseph R. Sterbis, MC, USA & LTC John E. Musser, MC, USA

- 52 8:15AM Paul Russo, MD**
Lymphadenectomy in RCC.
- 53 8:35AM Brett S. Carver, MD**
Late Recurrence in Testis Cancer.
- 54 8:55AM Stephen A. Boorjian, MD**
Perioperative Risk Assessment and Complications of Radical Cystectomy.
- 9:15AM Discussion (5 minutes)**
- 55 9:20AM Case Presentations:**
Paul Russo, MD, Brett S. Carver, MD, Stephen A. Boorjian, MD
- 9:40AM End of Session**



**Please complete your daily
Evaluation Forms
and drop in the provided
Evaluation Boxes. *Thank you!***

SATURDAY, JANUARY 19, 2019

SESSION XII - ONCOLOGY 2

9:40 AM - 10:15 AM - Keauhou 2 Ballroom
(Papers are 5 minutes)

Moderators:

COL Timothy C. Brand, MC, USA & CDR Sean P. Stroup, MC, USN

- 56 9:40AM James A. Brown, MC, USA**
Cell Cycle Progression Score Has Potential Prognostic Value For Stage T1 Clear Cell Renal Cell Carcinoma.
- 57 9:45AM MAJ Ryan W. Speir, MC, USA**
Pathological Response At Radical Cystectomy With Cisplatin-based Chemotherapy: Does Variant Histology Matter?
- 58 9:50AM MAJ Ryan W. Speir, MC, USA**
A Histologic Comparison Of Patients Presenting With Pure Choriocarcinoma VS Mixed NSGCT With Serum HCG Levels >20,000 In Patients Undergoing PC-RPLND.
- 59 9:55AM James A. Brown, MC, USA**
Association Of A-dystroglycan Immunoreactivity With Mortality In Patients Undergoing Radical Prostatectomy For Node Positive Prostate Cancer.
- 60 10:00AM James A. Brown, MC, USA**
Functional Proteomic Analysis Reveals That ABL Kinases Suppress The Malignant Phenotype Of Metastatic Castrate-resistant Prostate Cancer Via Inhibition Of AKT Signaling Pathways.
- 61 10:05AM Travis Shaw, MC, USAF**
Comparing Perioperative Outcomes in Radical Perineal Prostatectomy, Radical Retropubic Prostatectomy, and Robot assisted Laparoscopic Prostatectomy.

10:10AM Discussion (5 minutes)

10:15AM End of Session



*Refreshment & Network Break
in the exhibits area
10:15am - 11:30am*



**Bring your
Aloha Card for the
Prize Drawings!**

SATURDAY, JANUARY 19, 2019

SESSION XIII - RECONSTRUCTION

11:30 AM - 12:00 PM - Keauhou 2 Ballroom

Moderator:
LTC Danielle Stackhouse, MC, USA

62 GENITOURINARY RECONSTRUCTIVE SURGEONS (GURS)
SUPPORTED STATE OF THE ART LECTURE

11:30AM Jaspreet S. Sandhu, MD
Post-Radiation Voiding Dysfunction.

12:00PM End of Session

CME LUNCH PROGRAM

12:00 PM - 1:15 PM - Keauhou 2 Ballroom

**Applying the Latest Clinical Data and Emerging
Therapeutic Approaches in the Management of Prostate
Cancer Throughout the Disease Spectrum**

Leonard Gomella, MD

*Bernard W. Godwin, Jr. Professor of Prostate Cancer, Chairman of the
Dept. of Urology, Jefferson Medical College.*

*This activity has been supported by an educational grant from Bayer
HealthCare Pharmaceuticals, Inc. and Sanofi Genzyme.*

1:20pm - 2:30pm - Keauhou 2 Ballroom

SGSU MEMBERS
BUSINESS MEETING



Hear updates on the state of the branches of the Services

SATURDAY, JANUARY 19, 2019

SESSION XIV - GENERAL UROLOGY

2:30 PM - 3:20 PM - Keauhou 2 Ballroom

Moderators:

LCDR Mike Santomauro, MC, USN & MAJ RJ Caras, MC, USA

- 63 2:30PM Muta M. Issa, MD, FACS**
Generational Gaps in the Workplace – Understanding and Reconciling the Differences to Optimize the Work Environment and Productivity.
- 64 2:50PM COL (RET) Stacey G. Koff, MD**
Preventing Provider Burnout.
- 65 3:10PM Brig Gen (Ret) James T. Turlington, MD**
Dr. John Barry, USAF MC FS, and Dr. Mitch Edson Capt USN (ret)..Careers and Contributions.
- 3:20PM End of Session**

SATURDAY, JANUARY 19, 2019

SESSION XV - ANDROLOGY

3:20 PM - 3:50 PM - Keauhou 2 Ballroom

- 66 2:30PM COL Robert C. Dean, MC, USA**
Combat Sperm Salvage
- 3:50PM End of Session**

3:50 PM - 4:00 PM
SHORT BREAK

SATURDAY, JANUARY 19, 2019

SESSION XVI - CURRENT UROLOGY

4:00 PM - 5:00 PM - Keauhou 2 Ballroom

(Papers are 5 minutes)

Moderators:

LTC Chris Allam, MC, USAF & LTC Amanda Reed-Maldonado, MC, USA

- 67 4:00PM COL(RET) Andrew C. Peterson, MC, USA**
The Distribution Of Post-void Residual Volumes (PVR) In People Seeking Care: Analysis Of 880 Participants Of The Symptoms Of Lower Urinary Tract Dysfunction Network (LURN) Observational Cohort Study.
- 68 4:05PM LTC Roland Bartmuss, MC**
Breaking Stones In The Hot Sun – Calculi In A Deployed Environment, Why We Need To Treat It.
- 69 4:10PM Edward K. Leventhal, MD**
Urolift Prostatic Anchor Implantation - Experience In a Rural Community Hospital.
- 4:15PM Discussion (5 minutes)**
- 70 4:20PM CDR R. Chanc Walters, MC, USN**
Overview Of Military Urology Nsqip Data. Maximizing Tri-service Cooperation To Be At The Forefront Of Quality And Safety.
- 71 4:25PM CDR R. Chanc Walters, MC, USN**
Opioid Pain Medication Use After Vasectomy. A Prospective Study To Determine The Appropriate Amount.
- 72 4:30PM CPT Alexandria Hertz, MC, USA**
Vasectomy Reversal in an Open Access System: a 14-year Experience.
- 73 4:35PM Robert G. Moore, MD**
Upper Urinary Tract Urothelial Tumors (UUTUT) in the Veteran Population.
- 4:40PM Discussion (10 minutes)**
- 5:00PM End of Session**

6:30pm-9:30pm
Hawaiian Lawn

Preston & Kathy Littrell Awards
Hawaiian- Style
Reception/Dinner

Be sure to bring your Event & Drink Tickets!
Wear your Aloha attire!



SUNDAY, JANUARY 20

Outline of Scientific Program

66th Kimbrough

Annual Seminar * Sheraton Kona Hotel * Big Island, HI

TIME	EVENT	ROOM
7:00 AM - 9:00 AM	Registration	Keauhou Ballrm. Foyer
7:00 AM - 8:15 AM	Mahalo Breakfast	Keauhou 2 Ballroom
8:30 AM - 8:45 AM	Meeting Highlights	Keauhou 2 Ballroom
8:50 AM - 12:00 PM	Mock Oral Boards	Keauhou 1 Ballroom

REMINDER TO COMPLETE
&
TURN IN YOUR
EVALUATION FORMS.
THANK YOU!

SUNDAY, JANUARY 20, 2019

SESSION XVII - MEETING HIGHLIGHTS

8:30 AM - 8:45 AM - Keauhou 2 Ballroom

74 8:30AM LTC John E. Musser, MC, USA
Meeting Summary Highlights - Take Home Messages.

8:45AM End of Session

SUNDAY, JANUARY 20, 2019

SESSION XVIII - MOCK ORAL BOARDS

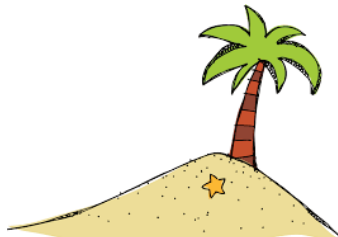
8:50 AM - 12:00 PM - Keauhou 1 Ballroom

Director: LTC Joseph R. Sterbis, MC, USA

GET PREPPED FOR THE BOARDS!

**Be sure to sign up for this session at the
Registration Desk.**

**Attendees will circulate through examiner
stations and be asked board questions.**



**Be sure to submit your daily evaluation forms in
the provided boxes before you leave the
meeting.**

ABSTRACTS

PAPER #1

SINGLE-STAGE SACRAL NEUROMODULATION: A PROSPECTIVE STUDY

Ashley M. Henry, M.D., Forrest Jellison, M.D.: San Antonio, TX.
(Presentation to be made by Dr. Henry)

Objectives: Sacral Neuromodulation (SNM) is performed as a two-stage procedure. Implantation in a single-stage rather than two procedures may reduce the number of operations. This study prospectively investigated the safety and efficacy of a single-stage procedure.

Methods: This is a prospective, single institution study with outcomes reported at 6 weeks and 3 months. The primary outcome is reduction in urinary symptoms defined as >50% reduction in episodes of urinary incontinence, nocturia, number of daily voids, or return to < 8 daily voids at 3 months. Inclusion criteria included refractory overactive bladder with or without urge incontinence. Patients were excluded for interstitial cystitis, urinary retention, or neurogenic bladder. Outcomes were measured with 2-day voiding diary and with validated questionnaires (UDI-6, IIQ-7, OABq-SF, PGI-I).

Results: All patients implanted with single-stage SNM had a response in urinary symptoms as defined as >50 reduction in episodes of urinary symptoms as defined by the primary outcome. One SNM device was removed in due to pain. All patients reported some degree of improvement as measured on the PGI-I, ranging from mild (20%), moderate (40%), or marked (40%).

Conclusions: The single-stage SNM procedure is feasible for patients with refractory overactive bladder. In select patients, the procedure was efficacious and safe at short-term outcomes.

Source of Funding: None

PAPER #2

INFLAMMASOME ACTIVATION EARLY IN THE DEVELOPMENT OF DIABETIC BLADDER DYSFUNCTION

Brian M. Inouye M.D.*, Francis M. Hughes, Jr. Ph.D.*, Patrick Leidig, M.D., Robin Lütolf, M.S.*, Clay Rouse, D.V.M.*, Wen-Chi Foo, M.D.*, J. Todd Purves, M.D., Ph.D.*:

Durham, NC

(Presentation to be made by Dr. Patrick Leidig)

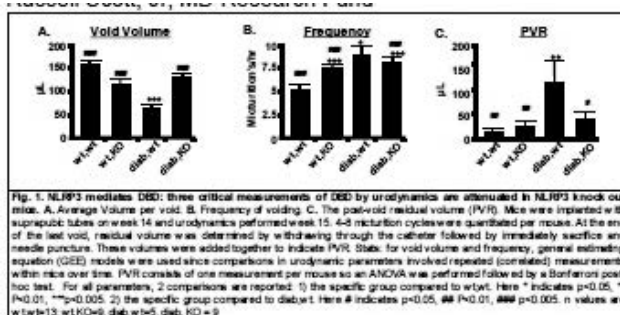
Objectives: Diabetic uropathy affects 87% of all diabetics. Outside the lower urinary tract (e.g. kidney and retina) there is data suggesting that diabetic organ damage is mediated in large part by the NLRP3 inflammasome which triggers inflammation through the maturation of pro-inflammatory cytokines, particularly IL-1 β . In the bladder, this complex has been shown to precipitate inflammation and irritative voiding symptoms in models of sterile and infectious cystopathy. Acute diabetic bladder dysfunction (DBD), a component of diabetic uropathy, is also characterized by irritative voiding symptoms such as urgency, frequency, and urge incontinence. Thus, we hypothesize that the NLRP3 inflammasome is activated and the bladder is inflamed during diabetes, and that NLRP3 activation is responsible for the irritative voiding symptoms of acute DBD.

Methods: Ins2 (Akita) diabetic mice and age-matched controls, with either an NLRP3^{+/+} or NLRP3^{-/-} genotype, were used at 15 weeks of age. Active caspase-1, a functional moiety of the activated NLRP3 inflammasome, was evaluated with a fluorescent marker measured through flow cytometry. Bladder inflammation was assessed through the Evans blue dye extravasation assay. Urodynamics was used to assess voiding patterns. Significance was defined as $p < 0.05$.

Results: Active caspase-1 was significantly more abundant in diabetic urothelium than control, and diabetic mice had significantly elevated Evans blue extravasation, indicating increased inflammation levels. Diabetic mice with functional NLRP3 demonstrated significantly increased frequency of voiding and decreased volume per void compared to wild type mice. Importantly, these urodynamic changes were all prevented or severely attenuated in the NLRP3^{-/-} mice.

Conclusion: The NLRP3 inflammasome is activated in the bladder during diabetes where it triggers inflammation and acute diabetic bladder dysfunction.

Source of Funding: 2017 Urology Care Foundation Residency Research Award sponsored by the Russell Scott, Jr, MD Research Fund



PAPER #3

BLADDER DECOMPENSATION AND REDUCTION IN NERVE DENSITY IN A RAT MODEL OF CHRONIC BLADDER OUTLET OBSTRUCTION IS ATTENUATED WITH THE NLRP3 INHIBITOR GLYBURIDE

Stephanie J. Sexton MD, Francis M. Hughes PhD*, Patrick D. Leidig MD, J T. Purves MD PhD*: Durham, NC

(Presentation to be made by Dr. Stephanie Sexton)

Objective: Bladder outlet obstruction (BOO) leads to progressive voiding dysfunction. Acutely, obstruction triggers inflammation that drives bladder dysfunction. Over time, inflammation leads to decreased bladder nerve density and increased fibrosis that is responsible for eventual decompensation and irreversibility. We have previously shown that BOO triggers inflammation, reduced bladder nerve density and increased fibrosis via activation of the NLRP3 inflammasome in an acutely obstructed (12 day) rat model. However, as BOO progresses the bladder may become decompensated with an increase in post-void residual volume (PVR) and decreased voiding efficiency. The objective is to examine rat bladder function and nerve densities after chronic BOO to determine if NLRP3 plays a role in the decompensation at this stage.

Methods: 4 rat groups were examined: control, sham-operated, BOO or BOO+gly (glyburide; an NLRP3 inhibitor). After 42 days, bladder weight, inflammation (Evan's blue), urodynamics and nerve density were measured.

Results: BOO greatly enhanced bladder weights and inflammation while inflammation was prevented by glyburide. Voiding pressures were increased and flow rates decreased in BOO and BOO+gly groups, demonstrating physical obstruction. No difference in frequency or voided volume (VV) were detected. However, PVRs were greatly increased in BOO rats while BOO+gly rats were not different than controls. Moreover, there was a dramatic decrease in voiding efficiency in the chronic BOO rats which was prevented with glyburide treatment. Finally, a reduction in nerve density was apparent with BOO and attenuated with glyburide.

Conclusion: Together the results suggest a critical role for NLRP3 in mediating bladder decompensation and nerve density during chronic BOO.

Funding Source: NIDDK: R01DK103534

PAPER #4

NOVEL THERAPEUTICS FOR SEXUAL HEALTH RECOVERY IN A PELVIC NEUROVASCULAR TRAUMA MODEL

Alexandria M. Hertz MD, Evalyn I. George BS*, Amanda B. Reed-Maldonado MD, Timothy C. Brand MD, and Shashikumar K. Salgar PhD*

Tacoma, WA Presentation to be made by: Alexandria M. Hertz MD

Introduction: Treatment of erectile dysfunction (ED) following trauma is challenging as traditional therapies are often ineffective. Low-energy shockwave therapy (LESWT) has shown promise in recovery of erectile function. This study aimed to determine whether combination therapy with phosphodiesterase-5 inhibitors (PDE5i), LESWT, and mesenchymal stem cells (MSC) would result in improved erectile function after pelvic neurovascular injury and whether thermal imaging is a potential diagnostic tool.

Methods: 54 Lewis rats, aged 10-12 weeks, were divided into nine groups: sham operation, bilateral cavernous nerve crush injury and bilateral internal pudendal bundle ligation without treatment (injury/control), injury with PDE5i, injury with LESWT, injury with MSC, injury with LESWT and PDE5i, injury with MSC and LESWT, injury with MSC and PDE5i, and injury with all three therapies (n=6 rats/group). Bone marrow-derived MSC (2 million in 100 μ l of normal saline) were delivered at the time of injury via injection into the corpora cavernosum. Forty-eight hours after injury groups were started on three times weekly LESWT (1000 pulses at 0.06 mJ/mm² and 3Hz) or sildenafil was given by mouth mixed into daily drinking water at 5-20 mg/kg/day (water intake ad libitum) with a 1% sucrose additive, for four weeks. Following a one week washout period (week 5), final outcome measures were determined by intracavernous pressure (ICP) at week 6 along with thermal imaging to evaluate penile blood flow.

Results: Pelvic neurovascular injury resulted in a significant decrease in erectile function as measured by maximum ICP, average ICP and change in ICP (p=0.003, 0.001, 0.007, respectively). Erectile function was recovered completely with combination PDE5i and LESWT as measured by maximum ICP, average ICP, and change in ICP (when compared to the sham group p=0.636, 0.184, 0.5; control group p=0.0006, 0.0001, 0.0002). LESWT alone was seen to have partial recovery as measured by maximum ICP (compared to sham p=0.066) and change in ICP (versus control p=0.05, versus sham p=0.2). MSC therapy alone resulted in partial recovery (average ICP, change in ICP compared to control group, p=0.05, 0.037). When compared to the sham group, combination LESWT and MSC resulted in partial recovery (p=0.08). The other combination therapies and PDE5i alone did not show significant (p>0.05) erectile recovery.

On subjective visual assessment, the sham and LESWT/PDE5i groups had visibly evident erections on plain photography (12 out of 12 rats). This correlated with visibly evident change on thermal imaging. The injury group did not show evidence of erectile function (0/6 rats) and minimal temperature change from baseline was noted on thermal imaging. When comparing temperature during stimulation, the sham group had a significantly higher temperature compared to the control (31C vs 28.65C, p=0.05) and no difference when compared to the LESWT/PDE5i group (31C vs 30.9C, p=0.92). There was a trend towards the LESWT/PDE5i group having significantly higher temperatures compared to the control group (30.9C vs 28.65, p=0.066). When comparing the thermal temperatures to the ICP there was poor correlation.

Conclusion: Combination therapy with sildenafil and LESWT resulted in complete recovery of erectile function in a rat model of pelvic nerve injury. MSC alone and in combination with LESWT produced partial improvement of erectile function in a rat model of pelvic nerve injury. Combination therapy was superior to individual therapy alone. Thermal imaging may be a promising, non-invasive, simple method for evaluating changes in penile blood flow and erectile function. However, further evaluation in a larger population with larger target anatomy will help to better assess this modality for clinical application in the future

PAPER #5

QUANTITATIVE ANALYSIS OF RENAL THERMAL THERAPY ON DEVASCULARIZED RENAL PARENCHYMA

Nicole E. Tuong M.D*., Katy L. Reines*, Jacques J. Farhi M.D. M.B.A.*, Ben N.
Contrella M.D.*, Noah S. Schenkman M.D.

Charlottesville, VA

Presentation to be made by Dr. Tuong

Introduction and Objective: Renal mass thermal therapy is an alternative nephron-sparing treatment for small renal masses (SRM). Using patients collected in a single institution SRM database, we sought to determine if devascularized renal parenchyma (DRP) following renal ablation significantly affects postoperative glomerular filtration rate (GFR).

Methods: A retrospective review was performed of 96 patients with renal masses who underwent thermal therapy from 2012 to 2017. Patients who did not have postoperative imaging with intravenous contrast were excluded. Using imaging software, DRP was calculated by comparing imaging studies taken preoperatively and approximately 6-month postoperative. Wilcoxon rank sum was used to compare thermal therapy procedures. We performed multilinear regression models on number of probes, renal mass size, probe angle, energy modality, R.E.N.A.L nephrometry score (RN), DRP, and preoperative GFR.

Results: 83 (86.4%) and 13 (13.6%) patients were treated with microwave (MWA) and cryoablation (CA) energy respectively with a mean age of 64.7 years old. There were 33 females (34.4%) and 63 males (65.6%). Mean renal mass size was 3.0 cm (range 1.2-6.8 cm). 87.5% and 12.5% were clinical tumor stage T1a and T1b respectively. 81 patients (84.4%) had a preoperative image guided renal biopsy with 72 patients (88.9%) of patients diagnosed with renal carcinoma. Computed tomography (CT) guidance was used in 36.4% of procedures, ultrasound guidance (US) in 58.3%, and both CT and US in 5.2%. Mean number of probes used was 2.6 with a mean angle of 44.4 degrees upon entry into the renal tumor. Mean RN was 7.1. Mean preoperative GFR and 6-month postoperative GFR were 76.6 and 73 ml/min/1.73m² respectively (p=0.005). There was no effect on ablation type on 6-month postoperative GFR and DRP. There was no correlation between RN, number of probes, and tumor size to amount of DRP. BMI had a statistically significant positive correlation to amount of DRP. There was also no significant relationship between percentage of DRP to total kidney parenchyma on change in GFR at 6 months post procedure. At 6 months, there was 1 oncologic recurrence.

Conclusions: In our study, only BMI impacted the size of DRP. However, percentage of DRP to total kidney parenchyma had no impact on change in 6 month GFR postoperatively. There is minimal DRP after thermal therapy making it an effective nephron sparing approach to treating renal masses.

Source of Funding: None

PAPER #6

PREOPERATIVE PLANNING FOR OPEN, PARTIAL NEPHRECTOMY USING THREE-DIMENSIONAL PRINTING AND VIRTUAL REALITY MODELS FOR COMPLEX VASCULAR ANATOMY IN A HORSESHOE KIDNEY

Bryce Wyatt, M.D.*, Ryan Zipper, M.D.*, Pallavi Murty, MBBS*, Michael Yost, Ph.D.*, John Yost*, Robert Grubb, M.D.*, Satish Nadig, M.D. Ph.D.*: Charleston, SC
(Presentation to be made by Dr. Ryan Zipper)

Objectives: Horseshoe kidneys are the most common congenital renal fusion anomaly and represent a surgical challenge whenever malignancy is identified. Advancements in three-dimensional (3D) virtual reality modeling and printing provide a possible avenue to aid with preoperative planning to improve surgical outcomes in complex cases. The purpose of this study is to present the application of these new scientific advancements to assist in surgical planning for a partial nephrectomy in a horseshoe kidney with multiple masses and complex vasculature.

Materials and Methods: The patient underwent multi-phasic, contrasted CT imaging demonstrating possibly three renal neoplasms in the isthmic portion of his horseshoe kidney. A 3D, virtual reality representation of the horseshoe kidney and its vasculature as well as a 3D printed model were used to better visualize and determine the best approach prior to open, partial nephrectomy. MasterPieceVR was used for 3D virtual reality representation. The 3D printing was done with a Makerbot Replicator Generation V using the Makerbot Print Program with makerbot yellow PLA filament.

Results: The patient underwent open, partial nephrectomy with use of intraoperative ultrasound in July 2018. The vascular bundles were identified and isolated with the aid of preoperative virtual reality model and a 3D printed model. The case took 5 hours and 58 minutes. A total of 4050mL of blood was lost during the procedure and the patient received 5 units of packed red blood cells. A total of three masses were sent to pathology with tumor pathology significant for low grade oncocytic neoplasm in two of the specimens measuring 2 and 2.2 cm in the greatest dimension. Preoperative creatinine was 0.9. Creatinine two weeks postoperatively was 1.3.

Conclusions: Cases with complex anatomy and difficult surgical approaches are aided by the application of new scientific advances including virtual reality models and three-dimensional printing. These applications allowed for a successful partial nephrectomy of three masses in a horseshoe kidney with complex vasculature.

Source of Funding: None

PAPER #7

ASA SCORE AND THE CHARLSON COMORBIDITY INDEX FAIL TO DISCRIMINATE PATIENTS THAT HAVE POST-OPERATIVE COMPLICATIONS AFTER ROBOTIC PARTIAL NEPHRECTOMY

CAPT Miriam Greenstein, MC USAF; Ketan Badani, MD

Purpose: To evaluate and compare the ability of the American Society of Anesthesiologists score (ASA), Charlson Comorbidity Index (CCI) and age adjusted CCI (CACI) to identify post-operative complication (POC) after robotic assisted partial nephrectomy (RAPN).

Materials and Methods: 1,229 patients underwent RAPN between 2006-2016 from 5 institutions. Total POC were defined as any Clavien-Dindo complication occurring within 30 days of surgery. The area under receiver operating characteristic (AUROC) curve for any POC and major (Clavien 3) POC between the ASA score, CCI and CACI was compared using pairwise DeLong's tests. The association of additional factors was evaluated using univariable and multivariable binary logistic regression models.

Results: 173 POC's were identified in 142 patients (11.4%). Of these 27.2% were Grade ≥ 3 . The AUROC for total POC was 0.552 for ASA score, 0.513 for CCI and 0.540 for CACI (lowest pairwise $p=0.139$). The AUROC for major POC was 0.543 for ASA score, 0.528 for CCI and 0.523 for CACI (lowest pairwise $p=0.646$). Tumor size (OR=1.16, $p=0.013$), lower eGFR (OR=1.01, $p=0.003$), hypertension (OR=1.62, $p=0.043$), coronary artery disease (CAD; OR=2.28, $p=0.005$) and upper vs mid pole tumors (OR=1.75, $p=0.020$) were associated with an increased likelihood of POC. No factors were significantly associated with major POC.

Conclusions: The ASA score, CCI and CACI failed to accurately discriminate patients with total and major POC following RAPN. Hypertension, CAD, lower eGFR, tumor size and upper pole tumors were associated with POC and should be incorporated into risk models to improve identification and patient counseling.

PAPER #8
PARAMETERS PREDICTING FERTILITY OUTCOMES AFTER VASECTOMY REVERSAL

Daniel C. Ensley M.D., Kuwong B. Mwamukonda M.D.: San Antonio, TX
(Presentation to be made by Dr. Daniel C. Ensley)

Objective: Microscopic vasectomy reversal was first described in 1977 and since then has become an increasingly popular option for patients desiring fertility after vasectomy. Reports of reversal outcomes frequently utilize vas deferens patency as the sole measure of success, or include pregnancies obtained through assisted reproductive techniques. Our objective was to evaluate and report our reversal outcomes with particular emphasis on what factors may predict post-operative success as defined by spontaneous live birth.

Materials and Methods: All the patients who had undergone vasectomy reversal by a single surgeon from September 2010 to December 2015 were identified. Demographic data was recorded, to include age of the patient and spouse, and prior fertility history. The obstructive interval was rounded off to the nearest year from the patient's stated time of vasectomy. Intra-operative data recorded was the gross appearance and sperm content of fluid expressed from the testicular end of the vas deferens, and the type of reversal performed. Postoperative semen analyses and patients' report of pregnancy with or without assisted reproductive techniques was included.

Results: 109 patients underwent vasectomy reversal at Brooke Army Medical Center from 2010 to 2015. Mean age of patients at time of reversal was 35 ± 5 years old. Mean age of spouse at time of reversal was 30 ± 4 years old. 15 patients reported live birth resulting from conception with intercourse alone. Spontaneous, live birth rates were significantly higher for patients with lower mean age (36.0 ± 5 vs 33.7 ± 3 , $p=0.04$) years old. Higher live birth rates approached significance for patients with the same partner (26% vs 10%, $p=0.07$), sperm seen at time of reversal (17% vs 3%, $p=0.05$), and time to first post-operative semen analysis (7.7 ± 10 vs 4.4 ± 3 month, $p=0.06$). Spouse age, post-operative sperm concentration, or presence of sperm at first post-operative semen analysis did not significantly affect spontaneous, live birth outcomes.

Conclusion(s): Younger male age may be an important predictive factor of unassisted pregnancy after vasectomy reversal. Spouse age, post-operative sperm concentration and presence of sperm at first post-operative semen analysis do not significantly affect spontaneous, live birth outcomes.

Source of Funding: None

PAPER #9

ASSESSMENT OF COMPLICATIONS FOLLOWING URINARY DIVERSION FOR BENIGN ETIOLOGY

Jacqueline Zillioux, MD; David E. Rapp, MD*; Riel Smith-Harrison, MD*;
Raymond A. Costabile, MD

Charlottesville, VA (Presentation to be made by Dr. Jacqueline Zillioux)

Objective: There are limited studies evaluating outcomes following urinary diversion for benign indications. We sought to analyze early and delayed complications following urinary diversion for non-malignant conditions over long-term follow-up.

Methods: We performed a retrospective review of patients undergoing urinary diversion for benign indications between January 2000 and December 2017. Data were collected including patient demographic and clinical characteristics, with focus on surgical characteristics and post-operative complications. Complications were graded according to the Clavien-Dindo classification and were classified as early (≤ 90 day post-operatively) or delayed (>90 days post-operatively). Logistic regression was used to assess for predictors of developing complications.

Results: A total of 73 patients were identified for study analysis with median follow-up of 24 (6-71) months. Seventy and 23% of patients underwent diversion for neurogenic bladder and complications related to pelvic radiation, respectively. A majority (93%) underwent ileal conduit with the remainder undergoing continent diversion. A total of 133 complications were identified, comprising 56 early and 77 delayed. Overall, 77% of patients had at least one complication during the follow-up period. Fifty-one percent of patients experienced early complication, while 75% experienced delayed. Complications of Clavien-Dindo Score \geq IIB were seen in 48% of patients. The most common early complications included wound infection (15%), prolonged ileus (8%), and urinary tract infection (UTI) (7%). Urinary tract infection (39%), nephrolithiasis (31%) and uretero-enteric anastomotic stricture (17%) were the most frequent delayed complications. Univariate followed by multivariate logistic regression modeling found BMI and operative length (hr) to be independent positive predictors of complication (OR 1.16 and 2.49, $p=0.01$).

Conclusion: Our study demonstrates that urinary diversion for benign etiologies is associated with a significant rate of complication. A large percentage of these are delayed and classified as serious. BMI is an independent predictor of complication in this population.

Source of Funding: None.

PAPER #10

INTERNATIONAL MULTI-INSTITUTIONAL EXPERIENCE WITH TRANSURETHRAL VENTRAL BUCCAL MUCOSA GRAFT (BMG) INLAY FOR TREATMENT OF URETHRAL STRICTURES

Michael Hughes, M.D.¹, Michael Daneshvar M.D.^{1*}, Stephen Blakely M.D.^{1*}, Javier Angulo^{2*}, Jay Simhan M.D.^{3*}, Jacob Lucas M.D.^{3*}, Craig Hunter M.D.^{4*}, Justin Chee M.D.^{5*}, Damian Lopez Alvarado M.D.^{6*}, Erick Alejandro Ramirez Perez M.D.^{7*}, Alos Madala M.D.^{8*}, Juan José de Benito M.D.^{9*}, Brian Flynn M.D.^{10*}, Dmitriy Nikolavsky M.D.^{1*} :¹ Syracuse, NY, ² Madrid, Spain, ³ Philadelphia PA, ⁴ Reno, NV, ⁵ Melbourne Australia, ⁶ Mexico City, Mexico, ⁷ Mexico City, Mexico, ⁸ Wichita, KS, ⁹ Córdoba, Argentina, ¹⁰ Denver, CO

(Presentation to be made by Dr Michael Hughes)

Introduction and Objectives: To present an international multi-institutional study of a patient cohort with distal urethral strictures treated with a previously described transurethral buccal mucosa graft inlay urethroplasty technique.

Materials and Methods: A retrospective multi-institutional study of consecutive patients with fossa navicularis strictures treated with a transurethral ventral BMG inlay urethroplasty technique was conducted. Patients who underwent concurrent urethroplasty of other urethral segments were excluded. Patient demographics, stricture characteristics, peri-operative (surgical time, EBL, hospital stay) and post-operative clinical and patient-reported outcomes were analyzed. The primary post-operative outcomes were stricture recurrence and complications. Secondary outcomes were change in maximum urinary flow rate (Qmax), PVR, IPSS, SHIM, and global response assessment (GRA) questionnaire responses.

Results: Fifty-eight men underwent the described repair at 10 institutions between 3/2014 and 3/2018. Fifty-three met the inclusion criteria (table 1). Mean operative time and EBL were 90 min (25-160) and 30 ml (5-110), respectively. Forty-three men completed ≥12 months follow-up. At a mean follow up of 18 months (12-36), 40 patients (92.5%) remained stricture-free. Mean Qmax improved from 6 to 20 ml/sec ($p<0.005$), PVR 117 to 33 ml ($p<0.005$), and IPSS 18 to 6 ($p<0.005$); QOL score: 5 to 1 ($p<0.005$). SHIM score did not significantly change (17 to 18). GRA scores at the latest follow-up were +3 (markedly improved) for 29 men, and +2 (somewhat improved) for 4 men. No patients developed fistula, glans dehiscence or penile chordee.

Conclusion: Transurethral ventral BMG inlay urethroplasty is a feasible option for treatment of FNS. This novel surgical technique is an effective treatment alternative for men with distal urethral strictures. In this initial multi-institutional experience, 92.5% of patients were recurrence-free at intermediate-term follow-up. This single-stage technique allows for avoiding skin incision or urethral mobilization. It helps to prevent glans dehiscence, fistula formation and avoids the use of genital skin flaps especially in patients affected with lichen sclerosus.

Source of Funding: None

PAPER #11

URETERAL STENTING AFTER ENDOSCOPIC INJURY IN A PORCINE MODEL: A PILOT STUDY

Amy M. Reed, M.D., Christopher L. Allam, D.O.: San Antonio, TX
(Presentation to be made by Dr. Amy Reed)

Objectives: Ureteral injuries during ureteroscopy have been reported in up to 46% of cases, including 13% involving the muscularis layer and 4% being ureteral perforations. Endoscopic injuries are commonly managed with prolonged ureteral stenting for up to 6 weeks based on historical data. We sought to evaluate the time to urothelial healing after endoscopic ureteral perforation in a porcine model.

Materials and Methods: Endoscopic bilateral ureteral perforation using a semirigid ureteroscope was performed in 18 pigs (35 ureters). The ureters were stented using 4.7Fr by 22cm ureteral stents. The stents were maintained for 3, 7, 10 or 14 days and retrograde pyelograms performed after stent removal. After the animals were sacrificed, the ureters were collected for microscopic evaluation of the ureteral perforation site.

Results: At 3 days, there was urinary extravasation on retrograde pyelograms and there was a gross ureteral defect in all 10 ureters. Starting at 7 days, there was no evidence of urinary extravasation on retrograde pyelograms. Microscopic evaluation revealed intact urothelium by 7 days with ongoing healing of various degrees within the lamina propria and muscularis layers. Granulation tissue predominated in the early phase of healing within all ureters.

Conclusions: Following endoscopic ureteral perforation in the porcine model, the urothelium is microscopically functionally intact and no extravasation on retrograde pyelogram after 7 days. While it is known that there is ongoing lamina propria and muscular regeneration that continues for several weeks, the degree of urothelial healing after 7 days may be a clinically sufficient duration of ureteral stenting following ureteral perforation during ureteroscopy. Further studies are warranted, but these results challenge the current practice of maintaining a ureteral stent for up to 6 weeks.

Source of Funding: None

PAPER #12

PENILE CALCIPHYLAXIS – A CASE SERIES AND LITERATURE REVIEW

Alexander D. Doudt DO, Eric D. Biewenga MD, Eugene Y. Rhee MD*

San Diego, CA

Presentation to be made by Dr. Alexander Doudt

Calciophylaxis is a rare sequela of end-stage renal disease (ESRD) that results in abnormal systemic calcification of dermal arteries, arterioles, and capillaries. This obstructive vasculopathy leads to tissue ischemia and eventual necrosis. Reported incidence is 1-4% within the dialysis population. There are only a handful reported cases of penile involvement within the literature. Clinically, penile calciophylaxis can mimic penile cancer. Controversy exists in the appropriate diagnostic work-up and management. Surgical intervention, including biopsy, can result in significant morbidity. Overall mortality has been reported as high as 64% with a mean time to death of 3 months.

Herein, we report two cases of penile calciophylaxis with different management strategies. (1) A 54 year old male with ESRD on HD was hospitalized for congestive heart failure and iron overload. On exam, he had a tender necrotic lesion involving the dorsal aspect of the glans penis. Biopsy confirmed dermal necrosis and vascular calcification, consistent with calciophylaxis. Local wound care and debridement were performed for ongoing gangrenous infection. He died within 3 months. (2) A 60 year old uncircumcised male was evaluated for penile pain. He recently started peritoneal dialysis for ESRD. Dorsal slit revealed an auto-amputated glans penis with visible, but non-viable distal corpora cavernosa, corpora spongiosum, and urethra. Biopsies confirmed the absence of malignancy. Due to refractory pain, partial penectomy was performed. Final pathology confirmed calciophylaxis with gangrenous necrosis. At one month follow-up, pelvic pain was moderately improved.

Penile calciophylaxis is a rare, severe dermal vasculopathy that is present in ESRD patients. A high degree of clinical suspicion needs to be present, as patients have a very poor prognosis. The mainstay of treatment is supportive with local wound care, pain control, and endocrine management. Endovascular and surgical modalities are reserved for intractable pain, but have not been shown to alter overall mortality.

Source of Funding: None

Conflict of Interest Declaration: The authors have no conflicts of interest relevant to this article to disclose.

PAPER #13

THE RULE OF "W" IN UROLOGY: TESTING SURGICAL DICTUM

CDR Matthew Christman, MC, USN; LT Christine Herforth, MC, USN; LT Nicholas Rocco, MC, USN

PURPOSE: The Rule of W is a mnemonic that has been historically used to teach causes of postoperative fever. Updated literature to support its relevance is lacking. We sought to evaluate the timing and frequency of postoperative occurrences as described in this mnemonic for modern urologic and general surgical cases.

METHODS: Using data from the American College of Surgeons National Surgical Quality Improvement Program(NSQIP), patients who underwent a urologic or general surgery procedure and developed a postoperative pneumonia, urinary tract infection(UTI), surgical site infection(SSI), venous thromboembolic event(VTE), or myocardial infarction(MI) were included. Frequency and median days to complication were compared.

RESULTS: 445,639 general surgery and 57,963 urology patients were included. Median time to occurrence differed between the cohorts for pneumonia, UTI, superficial infection, organ space infection, and MI. MI occurred earliest on POD3 for both groups ($p=0.0438$). Pneumonia occurred second on POD4 and POD5 for general surgery and urology, respectively ($p=0.0034$). VTE's occurred third with PE occurring on POD8 for both cohorts ($p=0.1225$) and DVT occurring on POD10 and POD11 ($p=0.6879$) for general surgery and urology, respectively. Wound related complications occurred at days 9-12 for general surgery and 11-13 for urology. The final sequence yielded Waves, Wind, Walking, Water/Wound for general surgery and Waves, Wind, Walking, Wound, Water for urology. General surgery patients had increased rates of pneumonia (1.43%, $p<0.0001$) and wound related complications (5.11%), whereas the urology group had an increase in UTI's (3.15%, $p<0.001$) and PE (0.41%, $p<0.001$). No differences were found for rates of DVT and MI. The daily incidence for urologic complications showed MI was the most common complication on POD1, pneumonia incidence peaked on POD1-3, and UTI had the highest daily incidence from POD4-30. Wound related complications remained relatively stable occurring second in incidence after UTI on POD4-30. The daily risk of VTE remained low, but stable.

CONCLUSIONS: The mnemonic historically used does not accurately reflect the chronology of postoperative complications for urology cases. However, value in such an educational pearl exists therefore a revised mnemonic based on sound evidence is proposed: waves – wind – walking – wound – water. Additionally, UTI's represent the most frequent and predictable complication on a daily basis outside of the initial few days after urologic surgery. As medicine evolves, the "Rule of W", and other teaching tools, need to be critically reviewed.

PAPER #14

BLADDER OUTLET PROCEDURES ARE EFFECTIVE IN THE TREATMENT OF PATIENTS WITH URODYNAMICALLY-CONFIRMED DETRUSOR UNDERACTIVITY WITHOUT BLADDER OUTLET OBSTRUCTION

Bradley A. Potts M.D., Andrew C. Peterson M.D., Michael J. Belsante* M.D.,
Ngoc-Bich P. Le* M.D.: Durham, NC

(Presentation to be made by Dr. Bradley A. Potts)

Objectives: Detrusor underactivity (DU), including detrusor hyperactivity with impaired contractility (DHIC) and detrusor acontractility (DA), may be a significant cause of bladder emptying dysfunction and is only distinguishable from bladder outlet obstruction (BOO) with pressure-flow urodynamic studies (UDS). Because management of DU patients without associated BOO has been infrequently studied, we sought to investigate surgical procedures and their associated outcomes for such patients at our institution.

Materials and Methods: We performed an IRB-approved review of all patients who underwent pressure-flow UDS at our institution from 1996 to 2014. We included adult males with emptying symptoms, bladder contractility index <100, and bladder outlet obstruction index <40. We excluded concomitant BOO on UDS, diabetes, pelvic radiation/surgery, and known neuropathology. Success was defined as no future retention or symptoms requiring urinary catheterization or subsequent operations.

Results: We identified 139 patients with median follow-up of 10 months (IQR = 1 - 36) after UDS diagnosis. Most patients were managed with either medication alone (37%) or urinary catheterization +/- medication (30%). Twenty-one patients (15%) received bladder outlet surgery (14 TURPs, 6 KTPLAPs, and 1 bladder-neck incision). Types of DU in this group included DHIC (10, 48%), isolated DU (6, 29%), and DA (5, 24%). Successful emptying was achieved in 18 (86%) patients undergoing bladder outlet procedures with postoperative FU of 6 months (IQR = 1 - 18).

Conclusions: Bladder outlet procedures are an effective treatment option for patients with UDS-diagnosed DU without BOO. We recommend considering the procedure in all patients with symptomatic DU.

Source of Funding: None

PAPER #15

PATIENT AND UROLOGIST INTERACTIONS: A SURVEY STUDY

Pansy Uberoi MD, MPH, Forrest Jellison MD, Kuwong Mwamukonda MD,
Thomas Novak MD (Presentation to be made by Dr. Pansy Uberoi)

Objectives: Prevention of sexual harassment in the workplace is emphasized both in the military and civilian sector. Required trainings often address interactions between colleagues and between personnel of varying rank. However, there is little known if or to what degree urologists experience harassment. This survey investigates the prevalence and nature of such interactions as well as the impact they may have on urologists.

Methods: A 15 question survey was sent to all accredited Urology residency programs in the US as well as various urology societies.

Results: 110 physicians responded to the study. Two-thirds of respondents endorse having been sexually harassed by a patient in a medical setting. Approximately half considered these experiences moderate or severe. 23% reported feeling violated and 20% were unsure of themselves as a result of these experiences.

Conclusions: A majority of urologists that responded to this survey have experienced some degree of sexual harassment from patients. The prevalence of harassment may over represented among urologist due to response bias. Incorporating techniques on how to handle such situations during training may be beneficial to decrease the impact such experiences may have on physicians. Employers and practice groups should consider establishing policies for managing patients whose behavior is considered harassing in nature.

Source of Funding: None

PAPER #16

OPIOID PRESCRIBING PRACTICES IN PATIENTS UNDERGOING ROBOTIC MINIMALLY INVASIVE UROLOGIC SURGERY

Karmon M Janssen, DO, Matthew M Banti, MD, Jack R. Walter, MD, Timothy C. Brand, MD, Tacoma, WA

(Presentation to be made by Dr. Karmon Janssen)

Introduction: Opioid excessive prescribing patterns have been recognized in the general surgery and orthopedic literature however very few reports for urologic surgeries, specifically robotic minimally invasive surgery have been described. The objectives of this retrospective review are to describe postoperative opioid prescriptions after robotic minimally invasive surgery and compare prescribed dosage to the guideline recommendations.

Methods: A single institution retrospective review was performed for 130 adults who underwent urologic robotic minimally invasive surgery. Opioid prescription upon discharge were reported in daily oral morphine equivalents (OME). Discharge prescriptions that were >90mg daily and >200mg total were defined as high opioids based on U.S. Center for Disease Control and Prevention and Washington State guidelines. Descriptive statistics were used to analyze our data.

Results: There were a total of n= 116 robotic assisted laparoscopic prostatectomy, n= 4 laparoscopic nephrectomy, n= 4 robotic partial nephrectomy, n= 1 robotic adrenalectomy. The median number of pills dispensed was 30 (range 10-60). The median daily OME dose dispensed was 45 mg (range 21-90 mg). The median total OME dispensed was 225 mg (range 75-450 mg). A total of 121 (93%) of patients were dispensed with >200mg total OME, with 6% receiving >300mg.

Conclusions: This study demonstrates that our minimally invasive postoperative population has received excessive quantities of opioids in the acute postoperative period as determined by standard recommended guidelines. Quantified postoperative prescribing protocols should be implemented to help reduce excessive opioid prescribing practices.

Source of Funding: none

PAPER #17

PAIN CONTROL AFTER VASECTOMY: ARE OPIOIDS REQUIRED?

David W Barham, MD, George B Stackhouse, MD, John Q Schisler, MD, Leah P
McMann, MD: Honolulu, HI
(Presentation to be made by Dr. David Barham)

Introduction and Objective: Vasectomy is one of the most common procedures performed by urologists. However, no formal guidelines exist on post-vasectomy pain management. The AUA clinical guidance on opioid prescriptions recommends using the lowest dose and number of doses to address post-procedural pain. Over prescription of opioids is currently a major problem in the medical community. This study sought to determine if opioids are necessary for post-vasectomy pain control.

Materials and Methods: We performed a retrospective chart review of patients who underwent vasectomy in our Urology Clinic between April 2017 and March 2018. We identified the initial post-procedural pain regimen, telephone calls to a provider, clinic or emergency room visits within 30 days for pain, and subsequent opioid prescriptions (prescribed between post procedure day 1 and 30). Patients were stratified into two groups, those initially prescribed opioids and those not receiving opioid prescriptions at time of vasectomy. Encounters with a medical provider for scrotal pain and subsequent opioid prescriptions were compared between the two groups using Fisher's exact test.

Results: 228 patients underwent clinic vasectomy by 8 urologists between April 2017 and March 2018. 102 patients received opioid containing prescriptions at time of vasectomy and 126 patients received no opioid prescriptions at the time of vasectomy. The initial pain medication regimen was dependent on each provider's standard prescription practices. There was no statistically significant difference between the opioid and non-opioid group in telephone consults (4.9 v 4.8% $p=1.00$), clinic visits (4.9 v 7.9%, $p=0.428$), and ER visits (2.9 v 5.6%, $p=0.279$). There was a statistically significant difference in subsequent opioid prescriptions between groups (1.0 v 9.5%, $p=0.007$).

Conclusions: Opioid medications are unnecessary following routine vasectomy. Routine use of opioids following vasectomy leads to significant over prescription. Only 9.5% of those who were not prescribed opioids initially, eventually went on to receive an opioid prescription. In the face of an opioid epidemic, providers should take action to decrease prescribing of unnecessary narcotics.

Funding: None

PAPER #18

ELIMINATING ULTRASOUND UTILIZATION FOR THE DIAGNOSIS OF CRYPTORCHIDISM: A QUALITY IMPROVEMENT INITIATIVE

Felicia L. Balzano M.D., Thomas Novak M.D.: San Antonio, TX

Presentation to be made by Dr. Balzano

Objective: In accordance with AUA guidelines recommending against ultrasound use for the diagnosis of cryptorchidism, we sought to eliminate ultrasound utilization in the diagnosis of cryptorchidism at our institution.

Methods : We retrospectively looked at all patients age <16 years old who underwent abdominal or scrotal ultrasound from March 2012 until September 2017. Of those patients, we then identified the patients who had ultrasounds performed for undescended testes and their subsequent follow up. We subsequently developed and executed a Quality Improvement initiative restricting ultrasound use for diagnosis of cryptorchidism at the level of the radiologist by way of formal urologic evaluation from September 2017 until the present.

Results: There were 1285 ultrasounds performed during this timeframe prior to the QI initiative. Prior to release of the AUA guidelines, 517 ultrasounds were performed, 33 for evaluation of cryptorchidism. Following guideline release (April 2014 with 6 month adoption period), 768 ultrasounds were performed, 45 for evaluation of cryptorchidism. Of the 78 ultrasounds done, 55 were read by the radiologist as abnormal, 46 of these patients went to urologic referral and 19 had surgical intervention for undescended testicle. Since September 2017, ultrasounds ordered for diagnosis has steadily declined to almost zero.

Conclusion: Specialty guidelines may not have a significant impact on practice patterns of primary care providers without a formal program of education. Unnecessary testing can be reduced or eliminated with an effective QI program.

PAPER #19

CHARACTERIZATION AND MANAGEMENT OF VAGINAL STENOSIS FOLLOWING VAGINOPLASTY IN THE CONGENITAL ADRENAL HYPERPLASIA COHORT

Dix P. Poppas, MD*, Kerlly J. Bernabe, MPH*, Denise Galan PNP*, Kiersten M. Craig, MD, MSE: New York, NY Presentation to be made by Dr. Kiersten M. Craig

Introduction: In the last 20 years, techniques in vaginal restorative surgery have evolved. However, studies evaluating post-operative outcomes following contemporary surgical approaches in congenital adrenal hyperplasia (CAH) patients with congenital genital atypia (CGA) remain scarce. Importantly, vaginal stenosis is a complication of vaginal restorative surgery and requires specialized care and management. We reviewed our surgical experience with CAH patients to understand the occurrence, classification, and management of vaginal stenosis at our institution.

Methods/Materials: We retrospectively reviewed the medical records of CAH patients with CGA who underwent primary vaginoplasty at a single center by a single surgeon from 1996 to 2016. The type of procedure performed based on the operative report, Prader score, and method of treatment were recorded. Patients with any degree of vaginal stenosis on post-operative examination were included in this study. Patients with any of the following characteristics were excluded: male, prior vaginoplasty performed elsewhere, procedures other than vaginoplasty, absence of at least one post-operative visit.

Results: Out of the 161 patients in our CAH database, 126 met inclusion criteria. Ten patients (8%) developed vaginal stenosis of any degree. Vaginoplasty was performed in all patients using a perineal vascularized flap. Concomitant surgery such as clitoroplasty and labioplasty occurred in 90 (71.4%) and 99 (78.6%) patients, respectively. Prader scores 2, 3, 4, and 5 occurred in 2 (9.5%), 68 (53.9%), 17 (13.1%), and 29 (23%), respectively. The vaginoplasty procedure was described as: single peritoneum (SP) flap (88, 69.8%), total urogenital mobilization (TUM) (13, 10.3%), pull-through (PT) (10, 7.9%), partial urogenital mobilization (PUM) (5, 4.0%), PUM & PT (9, 7.1%), or cut-back (1, 4.76%). The management in these 10 patients were: no further treatment (5, 50%), vaginal dilation (1, 10%), vaginal dilation with estrogen cream (2, 20%), vaginal dilation with surgery for prevention (1, 10%), and surgery (1, 10%).

Conclusions: Vaginal stenosis remains a concern following vaginal restorative surgery in CAH patients. This descriptive study is an initial step toward characterization and standardization of vaginal stenosis. In this cohort, vaginal stenosis occurred in 8% of patients with CGA. In the future, standardization of the definition of vaginal stenosis in the patient population will be helpful in assessing clinical outcomes, define risk factors, and tailor management.

Source of Funding: None

PAPER #20

SOCIETIES FOR PEDIATRIC UROLOGY MEETINGS – HOW ARE WOMEN REPRESENTED?

Vi Tran, MD*, Madeline R. Koerner, MD MBA*, Elizabeth B Tullos, MD MPH, Alison Rasper, MD*, Katie Ballert, MD*, Deborah Erickson, MD*, Amanda F. Saltzman, MD*:
New Orleans, LA

(Presentation to be made by Dr. Elizabeth Brooke Tullos)

Introduction: The proportion of women in senior leadership roles within urology remains substantially lower than that of female candidates entering the specialty. It is unclear if women are receiving the visibility, networking opportunities, mentorship, and recognition that are influential to advancement to senior leadership roles. Women comprise a smaller percentage of the urology workforce than men, but we hypothesize that female participation at national meetings should be similar to female membership rates. This study compares the proportion of female participation and weighted female podium time at national pediatric urology meetings with the proportion of female members of the Societies for Pediatric Urology (SPU).

Methods: Annual and fall SPU meeting archives from 2013-2017 (available online) were reviewed. The 2015 fall meeting was excluded as it was unavailable. Presenter gender, role (moderator, invited speaker, podium presenter, moderated poster presenter and video presenter) and time of presentation (minutes) were recorded. Gender was determined by first name of the person listed as speaker in the online programs. In cases of ambiguity, a google search clarified the gender. Participation was then weighted by the time an individual was at the podium. The proportions of female participation, unweighted and weighted by time at the podium, were compared with the proportion of female membership of the SPU (20%) using the Z statistic. A p-value <0.05 was considered statistically significant.

Results: There were 1,592 total participants making up 29,371 total podium minutes over the study period. 29.1% of the conference participants were female, however females comprised only 21.3% when weighted by time at the podium (table). Over time, there was a general increase in female participation (24.5% in 2013 to 34.1% in 2017), and, while weighted participation similarly increased over time, it remained lower than unweighted participation (17.3% in 2013 to 26.3% in 2017). Fall meetings and invited speaker opportunities specifically had lower than expected female participation ($p < 0.001$).

Conclusions: Female participation at SPU meetings overall exceeds the current proportion of female SPU membership, however, when weighted by time at the podium, it appears that female participation decreases. Fall meeting and invited speaker opportunities remain specific areas that lag behind female membership rates.

Funding: N/A

PAPER #21

PREVALENCE AND RISK FACTORS OF POST-OPERATIVE URINARY TRACT INFECTION FOLLOWING ROBOT ASSISTED PROSTATECTOMY

Grace E Park MD, Pansy Uberoi MD, George Kallungal MD, Cristy Landt MS*:

Fort Sam Houston, TX

(Presentation to be made by Dr. Grace E Park)

Objectives: Urinary tract infection (UTI) accounts for up to 40% of hospital acquired infections. These infections are linked to increased hospital costs, length of stay and mortality (schuller). Subgroup analysis report the highest urinary tract infection rates are among urologic patients with a 2.95% risk compared to the lowest group, otolaryngology with 0.42% (qin). This study aims to compare the rate of UTIs in post-operative RALP patients compared to non-RALP urologic (NRU) surgical patients. We hypothesized that RALP patients had a higher risk of UTIs compared to NRU patients due to the requirement for an indwelling foley.

Methods: Patients who underwent urologic surgeries were identified using the ACS-NSQIP database (2016). Rate of UTI and various patient factors were compared between RALP patients and non-RALP urologic surgical patients. Demographics and baseline data such as age group, gender, ethnicity, BMI category, and ASA score were collected. Rates of post-operative complications were also evaluated. A subset analysis was then done comparing cases of RALP with and without UTI. Statistical analysis was done to evaluate for differences between the compared groups.

Results: A total of 41,988 patients were identified using the ACS-NSQIP database (2016) who underwent urologic surgeries in 2016. Of these, 8,487 patients had undergone RALP. RALP was the most common procedure captured in NSQIP at 20%, and other common procedures included transurethral resection of bladder tumors, laparoscopic radical and partial nephrectomies, and transurethral vaporization of the prostate. Overall, 77% were male, 69% were white, 9% were black. Chi Square tests were conducted and the RALP and NRU groups were statistically significantly different for nearly all categories compared. The RALP group was generally healthier than the NRU group with a lower rate of diabetes, smoking, steroid use, and ASA class. The RALP group also had a lower rate of transfusion, sepsis, and readmissions. Contradictory to our hypothesis, the RALP group had a lower rate of UTIs compared to the NRU group. Interestingly, the RALP group had a higher rate of pulmonary emboli (0.7% compared to 0.4%, $p<0.001$) and deep venous thromboses (0.9% vs 0.5%, $p<0.001$).

A subset analysis in the RALP group was done comparing those with UTI to those without UTI. Of the 8487 cases of RALP reported, 162 had UTI. There was no statistically significant difference in race, age, smoking, or steroid usage. The RALP with UTI group had statistically significant differences for diabetes (25.9% vs 13.2%, $p<0.001$), ASA 3 (50.6% vs 38.9%, $p<0.001$), pulmonary emboli (3.1% vs 0.6%, $p=0.004$), deep venous thrombosis (3.1% vs 0.9%, $p=0.015$), sepsis (13.6% vs 0.3%, $p<0.001$), and readmission (32.7% vs 3.5%, $p<0.001$). The RALP with UTI group also were more likely to be obese with BMI greater than 30 (52.8% vs 37.6%, $p<0.001$).

Conclusions: The RALP group had a lower rate of UTIs compared to the NRU group. Within the RALP group, the cases with UTI had a higher rate of diabetes, ASA 3 and 4, pulmonary emboli, deep venous thromboses, sepsis, readmission, and obesity. Attempts to minimize UTI risk may be especially important in patients with the above comorbidities.

Source of Funding: None.

PAPER #22

RACE, TUMOR LOCATION, AND DISEASE PROGRESSION AMONG LOW RISK PROSTATE CANCER PATIENTS WHO ARE ELIGIBLE FOR ACTIVE SURVEILLANCE

Justin Mygatt M.D./Ph.D., Jennifer Cullen Ph.D., M.P.H., Samantha A. Streicher, Ph.D.,
Huai-ching Kuo M.S., Yongmei Chen M.D., M.S., Denise Young, William Gesztes M.D., Shiv
Srivastava Ph.D., Grant Williams M.D., Kevin R. Rice M.D., Inger L. Rosner M.D., Allen
Burke M.D., Isabell Sesterhenn M.D.: Bethesda, MD
(Presentation to be made by Dr. Justin Mygatt)

Objectives: Active surveillance (AS) is an increasingly utilized management option for low risk prostate cancer (PCa) patients. African Americans (AA) monitored on AS may be at increased risk of PCa progression, compared to Caucasian Americans (CA). A potential reason cited is a greater proportion of tumor involvement of the anterior region of the prostate gland, an area difficult to sample with trans-rectal biopsy. The primary aim of this study was to examine whether anterior tumor location and AA race either independently or jointly predict PCa progression among low risk PCa patients who elected to undergo radical prostatectomy (RP).

Materials and Methods: This retrospective cohort study examined patients enrolled at the Walter Reed National Military Medical Center with biopsy-confirmed, NCCN-define, low risk PCa who underwent RP between 1993-2008. Tumor location was recorded for index tumors (i.e., largest/highest grade) in whole-mounted RP specimen sections. Kaplan Meier (KM) estimation curves and multivariable Cox proportional hazard analysis were used to model BCR-free survival as a function of patient race and tumor location.

Results: There were 556 patients (140 AA, 416 CA) who met the study eligibility criteria. The predominant tumor was located in the anterior prostate in 99 cases (17.8%). Anterior versus other tumors were noted to have a far lower prevalence of ERG protein expression compared to tumors arising from other areas of the prostate (14.4% versus 56.1%, $P<0.0001$). No difference in the prevalence of anterior tumor was observed across race (17.1% AA versus 18.0% CA, $P=0.8126$). Comparable pathological stage, grade, surgical margin status, ECE, SVI, and nuclear grade were also observed for AA and CA patients. Patients with anterior tumors had significantly lower pathological grade, less extra-capsular extension (ECE), less seminal vesicle involvement (SVI), and lower nuclear grade. Predominant tumor location and race were not predictors of BCR-free survival independently or jointly.

Conclusions: In a large, racially diverse cohort of low risk PCa patients who underwent RP, no difference in the frequency of anterior tumor involvement was observed for AA versus CA men. However, tumors arising in non-anterior locations had higher pathological grade, greater ECE and SVI, and worse nuclear grade. No racial disparity in outcome was observed, suggesting that AS is a reasonable option for AA men with low risk PCa. Larger, prospective AS studies with long-term follow up for AA men are needed.

Source of Funding: HU0001-10-2-0002, Department of Surgery, Uniformed Services University of the Health Sciences (PI: Rosner)

PAPER #23

SURGICAL DELAY FOR RADICAL PROSTATECTOMY MAY BE ASSOCIATED WITH HIGHER POSITIVE SURGICAL MARGIN RATES AND INCREASED BIOCHEMICAL RECURRENCE

Naveen Nandanan M.D.*, R. Hart Moore B.A.*, B. Mayer Grob M.D.*, Lance K. Hampton M.D.*, Riccardo Autorino M.D.*, Adam P. Klausner M.D.*, J. Tyler Roseman M.D.*:

Richmond, Virginia

(Presentation to be made by Dr. Naveen Nandanan)

INTRODUCTION AND OBJECTIVES: There is limited evidence on whether delays in surgical therapy for prostate cancer lead to adverse outcomes in the long run. At our institution, patients referred from outside facilities for radical prostatectomy (RP) experienced longer time intervals between diagnostic biopsy and surgical intervention, when compared to patients from our own facility. Therefore, the goal of our investigation was to determine any association between delay in RP, and incidence of biochemical recurrence (BCR).

METHODS: We performed a single-institution retrospective study of all patients undergoing RP at our institution between the years 2010 - 2011. Patients were stratified into two groups based on whether they were referred to our institution for surgical intervention, or whether they were already followed by our institution at time of initial biopsy. Patient characteristics and perioperative outcomes were identified. Primary outcome was incidence of biochemical recurrence (BCR), defined by American Urological Association guidelines as two subsequent PSA values ≥ 0.2 ng/mL. Secondary outcomes included time to biochemical recurrence, positive surgical margins, and Gleason score upgrade (defined as an increase in total Gleason score from initial biopsy to surgical pathology).

RESULTS: A total of 71 patients underwent RP at our institution during the study period. Of these, 38 patients were referred from outside facilities (Referred group), and 33 were from our institution (Richmond VAMC group). Preoperative characteristics were similar between delayed and home groups, apart from the interval between initial biopsy and surgical intervention (mean 211.9 and 134.4 days respectively, $p < 0.001$). The delayed group was followed for a mean of 6.5 ± 1.3 years, and the home group for a mean of 6.2 ± 1.4 years. Groups were similar in regards to method of RP (robotic vs. open), Gleason score on surgical pathology, Gleason score upgrade, and extra-capsular extension. There was a trend towards higher rates of positive surgical margins in the delayed group at 21.1% (8/38), vs. the home group at 6.3% (2/32), $p = 0.069$. The incidence of BCR was significantly higher in the delayed group at 36.8% (14/38), vs. the home group at 6.1% (2/33), $p = 0.002$. Among patients with BCR, time to recurrence was similar between delayed and home groups (mean 3.68 ± 1.9 vs. 2.88 ± 0.19 years), $p = 0.817$.

CONCLUSIONS: Our data suggest delays in radical prostatectomy may be associated with a higher rate of BCR in patients with prostate cancer, implying efforts should be made to minimize surgical delay.

SOURCE OF FUNDING: None

PAPER #24

INCIDENCE OF METASTATIC DISEASE IN A RACIALLY DIVERSE, LONGITUDINAL COHORT OF PROSTATE CANCER PATIENTS: 1990-2017

John F. McCauley, MD; Huai-Ching Kuo, MS; Inger L. Rosner, MD; Yongmei Chen, MS, MD; Lauren Hurwitz, MHS; Sean P. Stroup, MD; Joseph A. Sterbis, MD; John Musser, MD; Christopher Porter, MD; Timothy C. Brand, MD; Jennifer Cullen, MPH, PhD: Bethesda, Maryland
(Presentation to be made by Dr. John McCauley)

Objectives: Introduction and dissemination of PSA screening for detection of prostate cancer (PCa) in the 1990s resulted in a spike in the incidence of newly diagnosed, early stage disease. The vast majority of these new cases were treated radically with radiation or surgery which caused concern for over-treatment of clinically insignificant disease. In 2008, the United States Preventive Services Task Force (USPSTF) gave PSA screening a "Grade D" recommendation (i.e., do not screen) for men ≥ 75 years and, in 2012, they extended this recommendation to men of all ages. With concomitant reduction in observed PSA screening rates, there have been valid concerns for a shift toward greater metastatic PCa upon initial cancer detection, supported by several recent studies. The primary goal of this study was to examine temporal trends in metastasis PCa at time of initial diagnosis. Additionally, this study examined the roles of patient age and race on time trends in metastatic PCa, over a 25+ year study period, in an equal access health care system.

Materials and Methods: The Center for Prostate Disease Research (CPDR) Multi-Center National Database was the source of patients for this study. Patients with biopsy-confirmed PCa between January 1, 1990-December 31, 2017 who self-reported as African American (AA) or Caucasian American (CA) were included. Trends in metastatic disease ($\geq N1M1$) at the time of PCa diagnosis were examined for the overall cohort, as well as stratified by race and patient age at diagnosis (< 75 years versus ≥ 75 years). Poisson regression modeling was used with a log link function to estimate annual percent change (APC) in proportion of $\geq N1M1$ disease at PCa diagnosis, divided by all newly diagnosed PCa, per annum. Multivariable logistic regression was used to model predictors of $\geq N1M1$ disease at PCa diagnosis as a function of PSA screening history, race, and age.

Results: There were 15,660 AA and CA men with biopsy confirmed PCa who composed the study cohort. Of these men, 560 (3.6%) had $\geq N1M1$ disease at diagnosis. The APC for the study cohort revealed an overall decrease in metastasis at PCa diagnosis between 1990-2017 (APC = -7.7%, $p < 0.0001$). In the early 1990's, a near-doubling in the proportion of advanced disease was observed for AA versus CA men; however, this difference disappeared over time, and race-stratified APCs revealed superimposed time trends in metastatic disease for newly diagnosed AA and CA PCa patients after 1995 until the end of the study period. When stratified by age, men aged ≥ 75 had a higher incidence of $\geq N1M1$ disease at diagnosis compared to men < 75 years, with both groups showing an overall decrease in the proportion of advanced disease over time (APC for ≥ 75 years = -2.7%, $p = 0.0027$; APC for < 75 years = -9.2, $p < 0.0001$). However, in the most recent years, 2009-2017, the trend for older men reversed, with an increasing proportion of $\geq N1M1$ disease (APC = 8.9%). In multivariable analysis, both patient age and calendar year at PCa diagnosis were found to be strong, independent predictors of odds of metastatic disease ($p < 0.0001$ and $p < 0.0001$, respectively); however, patient race was not predictive of detection with advanced disease ($p = 0.65$). As the total number of prior PSA screenings increased, a reduction in the odds of metastatic disease was observed (1-3 prior PSAs vs. None: OR = 0.48, $p < 0.0001$; ≥ 4 prior PSAs vs. none: OR = 0.42; $p < 0.0001$).

Conclusions: Significant reductions in the detection of newly diagnosed metastatic PCa were observed over this 25+ study period, examining racially diverse patients in an equal access health care system. However, older men (> 75 years) experienced a concerning reversal in these trends, corresponding in time to changes in expert consensus guidelines on the appropriateness of PSA screening for older U.S. men. While racial differences were noted in the early 1990s, these differences were no longer observed, shortly following the introduction and use of PSA screening nationwide. Careful attention should remain on patterns of metastatic disease at initial detection, since PCa can be most successfully treated when diagnosed early.

Funding Source: USUHS-CPDR HU0001-10-2-0002 (ILR)

PAPER #25

THE IMPACT OF DELAY TO RADICAL PROSTATECTOMY FOR PROSTATE CANCER PATIENTS WHO ARE ELIGIBLE FOR ACTIVE SURVEILLANCE

Thomas Gerald, MD*; Huai-Ching Kuo, MS; Timothy C. Brand MD*, John Musser, MD*; Christopher Porter, MD; Sean P. Stroup, MD*; Allen Burke, MD; Isabell Sesterhenn, MD; Jennifer Cullen, PhD, MPH; Inger L. Rosner, MD*, Yongmei Chen, MD, MS; Bethesda, MD
Presentation to be made by Dr. Thomas Gerald

Background: It is unclear whether delaying treatment with curative intent for men newly diagnosed with NCCN-defined low risk prostate cancer (PCa) has an adverse impact on future oncologic outcomes. In this study, a racially diverse cohort of men newly diagnosed, biopsy-confirmed low risk PCa in an equal access health care setting were evaluated to determine the impact of delaying radical prostatectomy (RP) on short-term and intermediate PCa outcomes.

Methods: A retrospective cohort study was conducted, using patients enrolled in the Center for Prostate Disease Research Multicenter National Database who underwent RP from 1990-2017. Multivariable (MV) logistic regression was used to model Gleason upgrading, extraprostatic extension (EPE), and positive surgical margins, while MV Cox proportional hazards analysis was used to examine biochemical recurrence-free (BCR) and distant metastasis-free survival. Time between PCa diagnosis to RP ("delay to RP") was examined categorically as <6 months, 6-12 months, 1-2 year, and 2-6 years.

Results: A total of 3,078 low risk PCa patients with a median follow-up 6 years composed the study cohort. Median patient age at PCa diagnosis was 60.7 years. There was no significant difference of proportion of delay to RP between African-American and Caucasian men (8.8% vs. 7.2%, respectively; $p = 0.075$). A significant and incrementally higher odds of Gleason upgrading was observed for those with delay to RP of 1-2 years (OR= 2.13, 95% CI: 1.23–3.68, $p=0.0069$) and 2-6 years (OR=5.74, 95% CI: 2.89-11.43, $p<.0001$), compared to those who had RP <6 months after PCa diagnosis. A higher odds of EPE was also observed for those with the longest delay to RP of 2-6 years vs. < 6 months (OR= 2.70, 95% CI: 1.38–5.26) and positive margins (OR=2.05, 95% CI: 1.06-4.00). However, delay to RP did not result in poorer BCR-free survival. Poorer distant metastasis-free survival was observed for those with delay to RP of 6-12 months (HR=3.54, 95% CI: 1.35-9.29) but not for longer delay (1-2 and 2-6 years).

Conclusions: Delay to RP was associated with greater odds of adverse pathologic features but longer median follow-up time is needed to confirm the impact of delay on BCR-free and distant metastasis-free survival, since shorter follow up times were observed for those who had the longest delay to RP. As the proportion of men who are managed with AS after diagnosis with low and favorable-intermediate risk PCa continues to increase, future studies will be needed to define the effect of treatment delay on long-term disease outcomes.

Funding Source: USUHS-CPDR HU0001-10-2-0002 (ILR)

PAPER #26

27-YEAR PATTERNS IN HIGH RISK PROSTATE CANCER TREATMENT IN A RACIALLY DIVERSE, EQUAL ACCESS HEALTH CARE SETTING

Nicholas R. Rocco M.D.¹, Michael G. Santomauro M.D.¹, Audry H. Robertson B.S.*², John E. Musser M.D.², Timothy C. Brand M.D.², Christopher R. Porter M.D.*², Inger L. Rosner M.D.², Claire Kuo M.S.*², Jennifer Cullen, Ph.D., MPH*², Sean P. Stroup M.D.¹

¹San Diego, CA, ²Bethesda, MD

(Presentation to be made by Dr. Nicholas Rocco)

Objectives: Despite the significant stage migration of prostate cancer (CaP) over the last two decades, many patients continue to be diagnosed with clinically high-risk disease. Few CaP series provide long term cancer outcomes or are able to evaluate healthcare disparities in a diverse population. To address these limitations, we examined 27-year outcomes among men treated for high risk CaP in a large, racially diverse, equal access system.

Materials and Methods: A retrospective review was conducted of all newly diagnosed, biopsy-confirmed CaP patients consented to enrollment in the Center for Prostate Disease Research Multi-Center National Database from 1990-2017. Of the 17,015 newly diagnosed CaP patients, 2,432 (14.3%) men were NCCN-defined high risk. Demographic and clinico-pathological variables were evaluated, stratified by patient self-reported race and primary treatment type (i.e., no treatment, hormonal therapy (HT), radical prostatectomy (RP) or radiation therapy (RT)). Primary study outcomes included evaluation of racial disparities in treatment intensity and type across time. Secondary outcomes included biochemical recurrence-free (BCR) survival and distant metastasis-free survival using Kaplan-Meier (KM) estimation curves and multivariable Cox proportional hazards models to assess outcomes, stratified on primary treatment type.

Results: Mean patient age at CaP diagnosis was 68.1 years and median PSA level was 20.5 ng/mL (IQR: 7.7 - 34.7). African Americans made up 25.1% of the study cohort. Biopsy Gleason score was ≥ 8 in 52.8% of patients. Mean follow up time was 7.7 years (median: 6.8 years). Over this 27-year study period, 767 (32%) underwent RP, 1031 (42%) underwent RT, 313 (13%) received primary HT, and 290 (12%) had no treatment. A decreasing trend of primary HT, with relatively stable rates of RP and RT was observed. Median time to BCR for those undergoing RP and RT was 2.6 and 3.8 years, respectively. After RP and RT, 50.8% and 38.1% experienced BCR, while 10.6% and 12.2% experienced distant metastasis, respectively. There were no significant differences in treatment choice, BCR-free survival, metastasis-free survival, or treatment intensity between Caucasian and African American patients.

Conclusions: In this longitudinal series of racially diverse, high risk prostate cancer patients, no significant differences were noted across race in treatment choice, BCR-free survival, and metastasis-free survival. Moreover, even among high risk patients, with a median follow-up period of 7 years, nearly 50% did not experience BCR, and only 1 in 10 men demonstrated metastasis.

Source of Funding: None

PAPER #27

SALVAGE CRYOABLATION OF PROSTATE WITH TRANSPERINEAL DENONVILLIERS' SPACE EXPANSION WITH SPACEOAR: POSTOPERATIVE OUTCOMES

Caitlin W. Shepherd, M.D.*, Harry S. Clarke, M.D., Ph.D.* Charleston, South Carolina
(Presentation to be made by Dr. Caitlin Shepherd.)

Objectives: Transperineal injection of a degradable hydrogel, SpaceOAR, is FDA approved for expanding the space between the prostate and rectum during radiation therapy (RT) to reduce rectal dose. We previously described the use of this agent in treating patients undergoing salvage cryoablation (SC) for recurrent prostate cancer (CaP). We now report patient outcomes after one year of use of this novel modality at our institution.

Methods: We analyzed results of patients who underwent cryoablation of the prostate with concomitant injection of SpaceOAR from July 2017 to July 2018. A retrospective database was created and postoperative outcomes at 2-weeks 3, 6, 9 and 12 months are reported using the Clavien-Dindo Classification along with PSA values for patients with available data.

Results: 16 patients underwent cryoablation of the prostate with the injection of SpaceOAR; 15 SC and 1 primary cryoablation. Mean age was 69 years; initial clinical stratification was low (5/16), intermediate CaP (2/16), high risk (1/16) and 8 patients with unknown pathology at time of cryotherapy. Previous treatment for those undergoing SC consisted of radiation alone (7/16), radiation plus androgen deprivation therapy (4/16), external beam, brachytherapy and androgen deprivation therapy (2/16), radiation followed by SC (1/16), proton beam therapy (1/16). A mean prostate volume of 20.3g was recorded. At initial post-operative follow up, a third of patients reported a grade 1 complication including scrotal swelling, perineal pain or dysuria (5/15) with one patient reporting a grade 2 complication (inpatient admission for UTI at an outside facility). At 3 months postop, two patients continued to have grade 1 complications (perineal pain) and one patient that had previously undergone SC presented with a grade 3 complication (rectoprostatic fistula). No further complications were noted. No grade 4-5 complications have been noted. The patient with the rectorprostatic fistula required further surgical intervention for repair. PSA nadired to undetectable as defined as PSA <0.1ng/dl in 40% of patients with at least 3 month follow up with PSA data (4/10).

Conclusions: Use of SpaceOAR with prostatic cryoablation is associated with minor complications with only one reported grade 3 complication in our series. Further studies evaluating the long term outcomes of this new technique are needed.

Source of Funding: None

PAPER #31

ROBOTIC ASSISTED TRANSABDOMINAL POSTERIOR URETHROPLASTY FOR TRAUMATIC URETHRAL TRANSECTION

Elizabeth I. Roger M.D., Kurt A. McCammon* M.D., Brian E. Weiss* M.D., Matthew A. Nielsen* M.D., John B. Malcolm* M.D.: Norfolk, Virginia

(Presentation to be made by Dr. Elizabeth Roger)

Objectives: Posterior urethroplasty has traditionally been performed via an open perineal approach. In the current literature, there are no documented cases of robotic assisted transabdominal and transvesical repairs for traumatic posterior urethral injuries. In the accompanying video, we present a novel technique for robotic assisted posterior urethroplasty.

Methods: A 26-year old man sustained two gunshot wounds to the buttock and was found to have total prostatic urethral disruption. A suprapubic catheter was initially placed for urinary diversion. Subsequent cystoscopy and retrograde urethrogram revealed an obliterated posterior urethra distal to the bladder neck and proximal to the verumontanum. Four months after his trauma, the patient underwent posterior urethroplasty with robotic assistance. Simultaneous retrograde urethroscopy assisted in identifying the viable posterior urethral segment during dissection.

Results: Operative time was 155 minutes with estimated blood loss of 50 mL. There were no operative complications. Patient was discharged on post-op day one with a foley catheter and suprapubic tube. Post-operative cystogram and VCUG at 3 weeks revealed an open bladder neck and posterior urethra without evidence of leak. Foley and suprapubic tube were removed. On follow up assessment, patient denied issues with voiding and reported strong voided stream.

Conclusions: Robotic assisted transabdominal primary anastomotic posterior urethroplasty is a safe and technically feasible alternative to open repair. Laparoscopy offers shorter hospital stay and faster recovery compared to traditional techniques. Further experience with and assessment of this approach can reveal additional advantages.

Source of Funding: None

PAPER #32

INCREASED RISK OF ACUTE KIDNEY INJURY FOLLOWING WEIGHT-BASED GENTAMICIN ADMINISTRATION FOR UROLOGIC PROSTHETIC SURGERY IN A VETERAN POPULATION

Robert H Moore BA*, Sarah C Krzastek MD*, Uzoma A Anele MD*, Adam P Klausner MD*, J Tyler Roseman II MD*: Richmond, VA

(Presentation to be made by Dr. Sarah Krzastek)

Objectives: The veteran population is unique, with unique healthcare needs extending to all aspects of patient care. Studies have shown that veterans experience different rates of medical comorbidities than the general population. For example, it has been suggested that the prevalence of chronic kidney disease in the veteran population is as high as 47%, compared to the estimated 14% in the general US population. Baseline impaired renal function increases the risk of developing acute kidney injury (AKI) following exposure to nephrotoxic agents. Erectile dysfunction (ED) is also common in both the general and veteran population and is a condition commonly managed by Urologists in the VA. Urologists treating veterans may be seeing an increase in erectile dysfunction, not only as we treat the aging male population, but also as we treat younger men returning from recent foreign conflicts suffering with higher rates of sexual dysfunction. In addition to ED resulting from cardiovascular, diabetic, and psychogenic comorbidities, ED, as well as urinary incontinence (UI), may result from treatments for prostate cancer, which is also high in the veteran population and may be linked to chemical exposures such as Agent Orange. As the incidence of ED and UI increase, so do the frequency of treatments, including prosthetic implants. As we do more of these surgeries, it is crucial to understand patient outcomes surrounding all aspects of these surgeries, and specifically how the veteran population may differ from the general population. Despite the known nephrotoxicity of gentamicin, multiple societies (including the American Urological Association in 2008 and American Society of Health-System Pharmacists in 2013) have published guidelines recommending a single perioperative gentamicin dose of 5 mg/kg ideal body weight for antimicrobial prophylaxis during urologic prosthetic surgery. This recommendation is based on the theoretical renal safety and increased antimicrobial activity of a single large dose. In 2014, our own VA institution revised its prophylaxis protocol from gentamicin 80 mg to weight-based dosing. The goal of our investigation was to identify and characterize rates of AKI in urologic prosthetic surgery both before and after the implementation of weight-based gentamicin dosing in the veteran population.

Methods and Materials: We performed a single-institution retrospective study of all patients receiving perioperative gentamicin during implant, revision, or explant of inflatable penile prostheses, malleable penile prostheses, or artificial urinary sphincters between the years 2000 – 2017 at our VAMC. Patients were stratified into two groups, based on administration of either weight-based gentamicin (5 mg/kg ideal body weight, 3 mg/kg ideal body weight in cases of chronic kidney disease) or standard-dose gentamicin (80 mg). Patient characteristics and perioperative outcomes were identified. Patients with available preoperative and postoperative (≤ 7 days) serum creatinine values were included. AKI was defined by Kidney Disease: Improving Global Outcomes (KDIGO) criteria as a rise in serum creatinine of at least 0.3 mg/dL within 48 hours, or an increase of 50% within 7 days. Comparative analyses were performed between patients receiving weight-based gentamicin and standard-dose gentamicin.

Results: A total of 415 urologic prosthetic surgeries were performed during the study period. Of these, 124 met inclusion criteria with paired preoperative and postoperative serum creatinine values. Fifty-seven received weight-based gentamicin (mean dose 4.90 ± 0.11 mg/kg) and 67 received standard-dose gentamicin (mean dose 1.12 ± 1.24 mg/kg), $p < 0.001$. There were no significant differences in preoperative renal function or various comorbidities such as diabetes mellitus, hypertension, or obesity between groups; however, the weight-based group was slightly older (mean age 64.0 ± 7.4 years) compared to the standard-dose group (mean age 60.5 ± 8.5 years), $p < 0.05$. The weight-based group was also comprised of fewer explant cases (1.8%, 1/57) than the standard-dose group (13.4%, 9/67), $p = 0.02$. The rate of AKI was significantly higher in the weight-based group (15.8%, 9/57) compared to the standard-dose group (3.0%, 2/67), $p = 0.02$ (Figure 1). Device infection rate was similar between the weight-based group (5.3%, 3/56) and standard-dose group (5.2%, 3/58), $p = 1.00$.

Conclusions: Our data suggest that weight-based perioperative gentamicin dosing may be associated with an increased risk of AKI, without a noticeable improvement in infection rate. Weight-based gentamicin dosing may warrant closer perioperative monitoring of renal function, and merits larger investigations to determine the appropriate risks and benefits. Additional study is required to determine if this rate of AKI is similarly seen in the general population following urologic prosthetic surgery.

Source of Funding: None

PAPER #33

A MULTICENTER ASSESSMENT OF STRICTURE LOCATION AND TYPE OF URETHROPLASTY ON ERECTILE FUNCTION

Jonathan Wingate M.D., Sean Elliot M.D.*, Alex Vanni M.D.*, Bradley Erickson M.D.*, Jeremy Myers M.D.*, Benjamin Breyer M.D.*, Nejd Alsikafi M.D.*, Jill Buckley M.D.*, Bryan Voelzke M.D.*: Seattle, WA
(Presentation to be made by Dr. Jonathan Wingate)

Purpose: Urethroplasty has been associated with erectile dysfunction, likely due to the close proximity of the cavernous neurovascular bundle to the membranous and bulbar urethra. However, the relationship between erectile dysfunction and stricture location is under-reported. We hypothesized that more proximal stricture locations would be associated with erectile dysfunction (ED).

Materials and Methods: We performed a retrospective review from 8 participating centers in the Trauma and Urologic Reconstruction Network of Surgeons. The study period included April 2007 to February 2017. Erectile function was measured using the Sexual Health Inventory for Men (SHIM) pre- and post- operatively. Stricture location was classified as membranous, proximal bulbar, or mid/distal bulbar. Type of urethroplasty was classified as anastomotic or other. A clinically significant decrease in erectile function was defined as a SHIM decrease ≥ 5 .

Results: There were 1139 patients who met inclusion criteria. Mean age was 47.6 years. Mean follow up time to first and last post-op visits were 5.0 and 18.7 months, respectively. The mean SHIM scores stratified by stricture location and type of repair are listed in Table 1. Patients had mild preoperative ED without a significant change in erectile function at time of last follow up visit. There were 97 (8.5%) patients with a clinically significant change in erectile function.

Conclusions: Urethral stricture patients have mild baseline erectile dysfunction. Stricture location or anastomotic repairs are not associated with worsening erectile function. Further research is needed to identify those patients who will experience a clinically significant reduction in erectile function.

PAPER #34

RISK FACTORS FOR ANESTHESIA-RELATED COMPLICATIONS DURING UROLOGIC SURGERY: A QUALITY IMPROVEMENT STUDY

Carolyn Salter, M.D., Jacob McFadden, M.D., Brent Nosé, M.D., Robert Dean,
M.D.: Bethesda, MD

(Presentation to be made by Dr. Jacob McFadden)

Objectives: Optimizing anesthesia quality during urologic procedures requires careful patient assessment and understanding of procedural goals. Urologic surgeries vary considerably in anesthesia requirements. This study sought to capture rates of suboptimal anesthesia and identify risk factors for anesthesia-related complications in a single-center retrospective analysis.

Materials and Methods: Minor modifications were made to the Leiden Surgical Rating Scale - a validated anesthesia quality scoring system - to rate anesthesia quality in the GU surgical setting. Residents rated anesthesia quality using the modified L-SRS for urologic cases from 01 May 2018 - 01 June 2018. Patient, procedure, and anesthesia-related details were recorded in addition to case commentary. Wilcoxon rank sum and Fisher's exact tests were applied to identify factors associated with suboptimal anesthesia-related outcomes.

Results: During a 31-day period, participating residents recorded data on 51 urologic cases. Anesthesia quality was judged to be optimal in 80.4% of cases, and acceptable in 100% of cases. Mean patient age in cases with suboptimal anesthesia differed significantly from cases with optimal anesthesia (72.2 versus 53.73 years old, $p = 0.006$). Transurethral resection procedures were the most common type of procedure with suboptimal anesthesia (3/10), while breathing-related complications were the most common subtype of anesthesia-related complications. Case duration ($p = 0.6696$) and types of anesthesia administered ($p = 0.2432$) were not significantly different when comparing suboptimal to optimal anesthesia cases.

Conclusions: Advanced age was associated with suboptimal anesthesia scores based on our surgical rating system. Though overall anesthesia quality was very high in our short-term study, our data suggest that improvements in anesthesia delivery, particularly for patients >80 years old, may improve surgical outcomes and efficiency. Long term studies may be warranted to better understand the risk factors for anesthesia-related complications, with an overall goal of maximizing anesthesia quality to improve the quality and efficiency of urologic procedures.

Source of funding: None

PAPER #35

STRIKING DIFFERENCES IN THE EFFECTS OF $\beta 3$ -ADRENOCEPTOR AGONISTS AND ANTIMUSCARINICS ON BLADDER FILLING/VOIDING FUNCTION IN CHRONIC SPINAL CORD INJURED RATS

Bradley A. Potts M.D., Danielle J. Degoski* B.S., Jillene M. Brooks* M.S.,
Matthew O. Fraser* Ph.D.: Durham, NC
(Presentation to be made by Dr. Bradley A. Potts)

Objectives: $\beta 3$ -adrenoceptor agonists (BARA) and antimuscarinics are mainstays in the treatment of overactive bladder. We previously demonstrated significant positive effects with a rat-specific BARA, CL-316,243 (CL), in chronic suprasacral spinal cord transected (SCI) rats. We present the results of a selective post-hoc analysis of CL and atropine effects from a multi-drug study designed to assess myogenic vs neurogenic contributions to SCI-induced neurogenic detrusor overactivity (NDO).

Materials and Methods: External urethral sphincter (EUS) EMG electrodes and catheters (femoral vein, ureteral diversion and transvesical) were placed in isoflurane-anesthetized female Sprague-Dawley rats (4 weeks post-SCI at T9-10, n=14). Conscious continuous cystometry was performed for ≥ 60 min using Ballman cages. The infusion was stopped, bladder emptied, and vehicle (normal saline) was administered prior to resuming bladder infusion. Following 30min, the infusion was again stopped, the bladder emptied, and i.v. drugs were delivered prior to subsequent 30min infusion cycles. Six animals received 0.4mg/kg atropine and the other eight received 10mg/kg verapamil; following the same methods, the verapamil-treated group received 100ug/kg CL prior to the next fill cycle. Total bladder capacity (TBC), filling compliance, non-voiding contraction (NVC) counts, frequency and average amplitude, voiding duration (VD) and efficiency (VE), and EUS phasic firing frequency (PFF) were measured/determined. Data were analyzed using non-parametric 1- or 2-Way RM-ANOVA, or linear regression.

Results: VP had no effect on any parameter and, due to its 2min half-life, we compared the effects of atropine to CL. Both atropine and CL significantly increased TBC (47%, $P=0.0016$ and 61%, $P=0.0018$, respectively), but atropine increased NVC counts and frequency (167%, $P=0.0001$ and 31%, $P<0.0001$, respectively) and CL decreased NVC frequency (-22%, $P=0.0009$). Both drugs overall decreased NVC amplitudes ($P=0.0221$). Only atropine significantly decreased VE (-68%, $P=0.0060$) and VD (-42%, $P=0.0009$) and VD and VE were positively associated ($P=0.0007$, $R^2=0.70$). Compliance and PFF were unaffected by any drug treatment.

Conclusions: While TBC was increased and NVC amplitude decreased by CL and atropine, atropine increased NVC count and frequency and CL preserved VE and reduced NVC frequency. The strong relationship between VD and VE suggests that VD is also an important factor for VE effects of antimuscarinics. These results support the continued study of BARA for NDO treatment.

Source of Funding: DoD SCIRP IIR-SC110031

PAPER #36

REPAIR OF IATROGENIC HYPOSPADIAS IN SPINAL CORD INJURED PATIENTS

Naveen Nandan M.D.*, Sarah C. Krzastek M.D.*, R. Hart Moore B.A.*, Eugene D. Bell III M.D.*, Adam P. Klausner M.D.*, J. Tyler Roseman M.D.*:

Richmond, Virginia

(Presentation to be made by Dr. Naveen Nandan)

INTRODUCTION AND OBJECTIVES: Spinal cord injuries (SCI) frequently result in neurogenic bladder, urinary incontinence and urinary retention, which are commonly managed with a chronic indwelling urethral catheter. The Veterans Health Administration provides care to more than 27,000 veterans with SCI and related disorders each year, which is approximately 26% of SCI patients in the United States. Iatrogenic hypospadias is common in our population of veterans with SCI despite efforts to avoid prolonged urethral catheters. This complication arises from the downward pressure and resultant pressure necrosis to the underlying tissue caused by long-term urethral catheters. Though not life threatening, hypospadias can have devastating physical and psychological consequences. We seek to highlight our surgical techniques for the repair of iatrogenic hypospadias.

METHODS: Ten veterans with SCI and iatrogenic hypospadias desired surgical repair. If patients were being managed with chronic urethral catheters, they were required to be willing to transition to clean intermittent catheterization (CIC) or suprapubic tube for bladder management postoperatively. Seven patients had at least six months of follow-up and three had one-month or less of follow up. A standard technique was employed, separating the urethral plate from the skin and mobilizing it off of the corporal bodies. Retubularization of the urethra was performed around a 20-French catheter. Tissue advancement flaps, which included the use of Dartos and Byars' flaps, were used to cover the repair as deemed necessary intraoperatively. Glanuloplasty and skin closure were performed in the standard fashion to complete the reconstruction. A 16F Foley was left for 1-2 weeks, after which usual bladder management was resumed with CIC or suprapubic tube. All patients were advised on resuming sexual activity.

RESULTS: Most of the patients were pleased with the excellent cosmetic results in the immediate post-op and subsequent follow up appointments. Six patients continued bladder management with a suprapubic catheter. One patient had previously undergone urinary diversion with ileal conduit. A patient satisfaction survey was conducted up to 2 years postoperatively and three out of the five patients who were able to be reached continued expressed satisfaction in their repair. Two patients did report that the repair had broken down. Three others were not able to be reached and two had unfortunately passed away.

CONCLUSIONS: Iatrogenic hypospadias can be a devastating condition in the veteran population with neurogenic bladder managed with chronic indwelling urethral catheters, but very little literature exists on this topic. While prevention is key, surgical correction should be considered to improve patient quality of life. In our experience, surgical reconstruction can provide significant benefits including improved patient self-image and sexual function while optimizing bladder management.

SOURCE OF FUNDING: None

PAPER #37

RECURRENT URETHRAL LEIOMYOMA

Lt Col Heather Barbier, USAF, MC, CDR Erik Grossgold, MC USN,
LT Francisco Kortman, MC USN, LT Matthew Boles, MC USN, Naval Medical Center
Portsmouth

Background: The differential diagnosis of a periurethral mass includes a diverticulum, caruncle or prolapse, leiomyoma, carcinoma, Skene's gland cyst, vaginal wall cysts. We present a patient with a recurrent periurethral mass.

Case: A 37 year old female was referred to Urology. She had a history significant for two prior periurethral mass excisions 11 and six years ago. The mass had recurred and she had urethral pain and obstructive voiding symptoms. She was noted to have a mass at the urethral meatus that was not reducible and prohibited passage of a cystoscope in the office. An MRI was notable for a 4.5cm well-circumscribed soft tissue mass arising from the anterior portion of the distal urethra that did not appear infiltrative. Exam under anesthesia was significant for the same urethral meatal mass with an unremarkable bimanual exam and cystourethroscopy was normal. Core biopsies were obtained significant for a benign smooth muscle tumor. Excision was later undertaken via an abdominal (extraperitoneal) and suprameatal approach. The bulk of the mass extended to the retropubic space with a distinct plane between the bladder and proximal urethra but was incorporated into the distal anterior urethra. Urethroplasty was required following excision. The pathology was consistent with a urethral leiomyoma.

Conclusion: Vaginal approach to excise urethral leiomyoma has been described. Imaging should be considered to ensure the entire mass is appreciated and to allow for surgical planning, particularly with a recurrent mass. This patient did well with a combined surgical approach after review of the MRI findings.

The views expressed in abstract reflect the results of research conducted by the author(s) and do not necessarily reflect the official policy or position of the Department of the Air Force, Department of the Navy, Department of Defense, or the United States Government.

I am a military service member. This work was prepared as part of my official duties. Title 17 U.S.C. 105 provides that "Copyright protection under this title is not available for any work of the United States Government." Title 17 U.S.C. 101 defines a United States Government work as a work prepared by a military service member or employee of the United States Government as part of that person's official duties.

PAPER #38

UNUSUAL SUSPECT: A CASE REPORT OF TUBULOCYSTIC RENAL CELL CARCINOMA WITH FEATURES OF CYSTIC RENAL ONCOCYTOMA

Jacob D. McFadden, M.D., Isabell A. Sesterhenn, M.D., and

Sean Q. Kern, M.D.: Fort Belvoir, VA

(Presentation to be made by Dr. Jacob McFadden)

Objectives: Tubulocystic renal cell carcinoma (TC-RCC) is an uncommon subtype of renal cell carcinoma that was only recently acknowledged by the World Health Organization. There is a relatively small collection of literature dedicated to the features and clinical course of this lesion. Our goal is to underscore the key differences that help differentiate tubulocystic renal cell carcinoma from other cystic renal masses in the context of our rare case, in which the tumor showed remarkable similarity to a cystic renal oncocytoma.

Materials and Methods: Relevant clinical history and cross-sectional imaging were reviewed, and set in the context of previously described risk factors for tubulocystic renal cell carcinoma. Immunohistochemical analysis and its key role in diagnostics for cystic renal masses was reviewed with expert analysis provided by our consulting pathologist. A review of current literature was performed to provide additional description and data on this seldom-observed malignancy.

Results: Our 59 year old male patient with a right interpolar Bosniak III renal cyst elected to pursue surgical extirpation. He was diagnosed with a pT1a tubulocystic renal cell carcinoma based on histopathologic features – namely, multiple cysts of various size with tumor cells appearing in a "hobnail" pattern; diffuse and strong reaction for vimentin; and the lack of positivity for CD117. This rare tumor is more common in older men, has been associated with simple and complex cysts (Bosniak I through Bosniak IV), and often has a "bubble wrap" appearance when the gross specimen is sectioned; fortunately, the prognosis for most cases is favorable.

Conclusions: We present a case report of tubulocystic renal cell carcinoma (TC-RCC) with remarkable similarity to cystic renal oncocytoma, highlighting the diagnostic challenges associated with this unusual renal malignancy.

Source of funding: none

PAPER #39

MICROWAVE ABLATION OF T1A RENAL CELL CARCINOMA: IMMEDIATE SHORT TERM OUTCOMES

Timothy D McClure, MD, Kiersten M Craig, MD, Brian D Sullivan, MD, Douglas S Scherr, MD,
Joseph Del Pizzo, MD: New York, NY
(Presentation to be made by Dr. Kiersten Craig)

Introduction: The American Cancer Society estimates approximately 63,340 new cases of kidney cancers in 2018. The incidence of renal tumors has increased at rate of 2 to 3 % each year. A majority of these tumors are incidentally found to be T1a tumors. The 2017 American Urologic Association (AUA) guidelines on the management of clinically localized renal masses suspicious for renal cell carcinoma (RCC) conditionally recommend thermal ablation with radiofrequency ablation (RFA) or cryoablation in tumors less than 3 cm. This conditional recommendation is based on studies that have shown an increased likelihood of tumor persistence or local recurrence after primary ablation with these modalities. Microwave ablation (MWA) is capable of generating frictional heat 100 times faster than RFA. This is thought to decrease the susceptibility to pitfalls of thermal ablation such as heat sink. Studies demonstrating the technical efficacy and short-term outcomes in patients with cT1a small renal masses treated with microwave ablation are lacking. As such the AUA has no current recommendations regarding microwave ablation (MWA) in clinically localized T1a renal cell carcinoma. We aim to describe our initial experience with microwave ablation in these patients to demonstrate technical efficacy and clinical outcomes.

Methods/ Materials: We performed an Institutional Review Board approved single-center retrospective analysis of percutaneous microwave ablations at our institution. Seventy-nine small renal masses in 72 consecutive patients were identified between October 2016 and June 2018. Patients with an embolization, biopsy alone, or benign pathology were excluded from evaluation leaving 53 renal masses in 50 patients. Patient, tumor, ablation, admission, and follow-up characteristics were documented including: age, race, BMI, Charlson index, tumor size, RENAL nephrometry score, pathology group, power, duration of ablation, admission length, post-operative complications, presence of recurrence, and length of follow up. Successful ablation of the renal cell carcinomas was evaluated using technical success and technique efficacy as defined by the International Working Group on Image Guided Tumor Ablation in October 2014.

Results: Patient, tumor, ablation, admission, and follow up characteristics are shown in table 1. A single Clavien Dindo I complication (nausea with vomiting) and no grade II-V complications occurred in this patient population. A renal mass biopsy was performed prior and during ablation in 10 (18.9%) and 43 (81.1%) of 53 renal tumors, respectively. The renal biopsy was diagnostic in 100% of the patients. Immediate follow up 4.4 (0.4- 16.8) months showed technical success and technique efficacy in 53 (100%) and 52 (98%) of 53 ablated tumors respectively. Specifically, primary technique efficacy was achieved in 98% of patients with 1 of 53 tumors showing residual unablated tumor on follow up imaging. Secondary efficacy was achieved after retreatment of this tumor.

Conclusions: In this initial evaluation of 53 T1a renal cell carcinomas in 50 patients at our institution between October 2016 and June 2018 microwave ablation has excellent immediate technical success and technique efficacy with low morbidity at a mean follow up of 4.4 (0.4-16.8) months.

Sources of Funding: None

PAPER #40

DURABLE DISEASE CONTROL: A CASE REPORT OF PEMBROLIZUMAB IN METASTATIC POORLY DIFFERENTIATED BLADDER CANCER

Katherine A. Carlisle, MD, John E. Musser: Honolulu, HI
(Presentation to be made by Dr. Katherine Carlisle)

OBJECTIVE: Urothelial cell cancers of the bladder with variant histology behave more aggressively than their conventional counterparts. In all forms, metastatic urothelial cancer is highly lethal. Platinum-based combination chemotherapy has been the mainstay for treatment of metastatic disease; however, recent studies of monoclonal antibodies to programmed death (PD)-1 such as pembrolizumab have shown robust antitumor activity and an alternative treatment to second line chemotherapy.

RESULTS: A case report of durable response to pembrolizumab in a 42 year old African American patient with metastatic poorly differentiated bladder cancer. Initial clinical diagnosis following transurethral resection of bladder tumor and staging imaging revealed locally advanced poorly differentiated urothelial cell carcinoma of the bladder. He underwent neoadjuvant chemotherapy with four cycles of gemcitabine and cisplatin after which repeat staging imaging suggested progression of disease with worsening hypermetabolic adenopathy extending to the level of the aortic bifurcation. He elected for radical cystoprostatectomy with bilateral extended pelvic and retroperitoneal lymph node dissections. Pathology proved metastatic disease with distant nodal involvement in the paracaval and para-aortic nodes. Unfortunately, post-operative imaging showed interval worsening of adenopathy and he was started on pembrolizumab three months after surgery. Four months into treatment, repeat imaging showed a dramatic response to therapy with complete metabolic resolution of diffuse adenopathy. He remains without evidence of disease presently, more than 14 months into treatment, having completed 21 cycles of pembrolizumab with minimal side effects.

CONCLUSIONS: Immunotherapy with pembrolizumab has been shown in an international phase 3 randomized trial, KEYNOTE-045, to significantly extend overall survival in patients with advanced urothelial cancer that progressed during or after platinum-based chemotherapy. In this study, pembrolizumab resulted in a significantly higher objective response rate than chemotherapy and, like in our case, most responses occurred quickly and were reported at the first scheduled imaging assessment.

SOURCE OF FUNDING: none

PAPER #41

PLACEMENT OF A VENTRICULO-URETERAL SHUNT IN THE MANAGEMENT OF REFRACTORY HYDROCEPHALUS

Thomas S. Gerald, MD*; Nicholas S. Szufliata, MD*, Charles A. Miller, MD*; Brian P. Curry, MD*; Michael L. Horsey, MD*; Jason Hawksworth, MD*; Laurence Davidson, MD*; Lisa M. Cartwright, MD: Bethesda, MD
Presentation to be made by Dr. Thomas Gerald

Objective: Successful management of elevated intracranial pressure secondary to hydrocephalus is typically achieved via cerebrospinal fluid (CSF) diversion by the Neurosurgeon. Ventriculoperitoneal shunt systems are the most commonly used, but alternative shunt systems include ventriculo-atrial, -pleural, and -cholecystic shunts. Shunting of CSF to the urinary tract is an uncommonly used method of diversion that was described as early as 1925 with direct anastomosis of the spinal cord subarachnoid space and dura to the ureter but has fallen out of favor in recent decades. The authors describe a case of ventriculo-ureteral shunt placement in a patient with renal transplant and multiple medical comorbidities in whom numerous prior ventricular shunts had failed.

Materials and Methods: The patient is a 5 year old boy, born at 24 weeks gestational age, with prolonged and complicated NICU course notable for grade III and IV intraventricular hemorrhage and subsequent hydrocephalus. He ultimately developed end stage renal disease for which he underwent a deceased donor renal transplant at age 4. From the age of 2 months to 5 years, he underwent numerous procedures and revisions for CSF drainage, including ventriculo-atrial, -pleural, and -peritoneal shunts. Multiple shunting procedures failed due to clotting of the catheter and inability to resorb the CSF. Ultimately, in order to better manage his CSF diversion, the patient underwent choroid plexus ablation, which halved CSF production. Approximately 3 weeks following choroid plexus ablation, he developed a shunt infection necessitating emergent explanation of his ventriculo-peritoneal-pleural shunt which had previously required management with weekly pleural taps due to poor CSF absorption from the pleura. After clearance of infection, urology was consulted for placement of a ventriculo-ureteral shunt. A voiding cystourethrogram showed vesicoureteral reflux into the transplant ureter but none to the native ureters. Renal sonogram demonstrated a healthy transplant kidney as well as bilateral atrophic native kidneys with no evidence of hydronephrosis. The operation was performed in coordination with Neurosurgery. The left ureter was accessed through an extraperitoneal Gibson incision and ligated proximally. Once the ventriculostomy had been created, the neurosurgery team passed the tubing to the subcutaneous tissue of the upper abdomen. A defect was created in the anterior abdominal wall fascia through which the shunt tubing was passed, and then inserted into the distal ureter and secured extraperitoneally. Redundant shunt tubing was gently looped in the retroperitoneum to allow for growth.

Results: In the immediate post-operative period, the patient demonstrated no signs of shunt obstruction. A post-operative shunt series demonstrated appropriate placement of the retroperitoneal tubing with a slight superior curve at the intra-ureteral aspect without kinking. Electrolytes remained stable and within normal limits. He was monitored in the pediatric intensive care unit, where bowel function and baseline activity level quickly returned. He was maintained on daily nitrofurantoin prophylaxis for his history for vesicoureteral reflux to the transplant ureter.

Conclusions: It is an exceedingly rare instance in which relief of hydrocephalus requires assistance from the Urologist. In the situation in which drainage of CSF into the urinary tract is desired by the Neurosurgical service, the skill set of the Urologist is well-suited to accomplish this goal. Adherence to fundamental principles, including an extraperitoneal approach, careful handling of the ureter on its vascular supply, and tension-free tying of the shunt tubing to the ureter, are critical in the avoidance of intra- and post-operative frustration and complications. Given that this patient had two native ureters associated with non-functioning kidneys, one of the major historical drawbacks of ureteral shunting necessitating nephrectomy or ureteral reconstruction to a healthy kidney was not a concern in this case. This, in conjunction with the urinary diversion of CSF not necessitating CSF absorption upon diversion, made ureteral shunting an attractive alternative for this complex child. While improvements in operative techniques and technology (e.g. shunt tubing and valves) likely increase the success rates of ventriculo-ureteral shunting versus those published previously, it is unlikely that sufficient numbers of cases will be attained to develop well-described methods for drainage of CSF into the urinary tract, and each presentation should be carefully evaluated on a case-by-case basis.

Source of Funding: None

Please note, abstracts are not cleared in lieu of final text/presentation. Final text/presentation must still be submitted for clearance. The views expressed in this abstract are those of the author and do not reflect the official policy of the Department of Army/Navy/Air Force, Department of Defense, or U.S. Government.

PAPER #42

CLINIC ON MANAGEMENT AT TRIPLER ARMY MEDICAL CENTER

John Q. Schisler MD, John E. Musser MD: Honolulu, HI
(Presentation to be made by Dr. John Schisler)

Objectives: The rise of dedicated multidisciplinary oncology clinics (MDC) represents a positive step toward patient centered care. A small number of studies have shown that MDC can affect management. We reviewed our first year of MDC experience to determine how patient management was affected, with attention paid to choice of initial treatment modality, adherence to plan of care, and number of patients lost to follow-up.

Methods: We retrospectively reviewed patients who were diagnosed with prostate cancer in 6 month period in 2011, before our MDC clinic started, and a 6 month period following the start of our MDC clinic in June of 2016. Data were obtained for age, primary treatment modality, duration of care, adherence to plan of care, and loss to follow-up. Data were compared between the pre-MDC and MDC groups.

Results: A total of 47 patients were included in the review, with 26 patients in the pre-MDC group and 21 patients in the MDC group. We found that choice of treatment modality did not differ significantly with active surveillance (31% vs 29%; $p = 1$) or surgery (23% vs 19%; $p = 1$), but there was a trend toward a significant difference in patients who elected for radiation (27% vs 38%; $p = 0.053$). In patients who elected for active surveillance, more of them adhered to the plan of care in the MDC group (67% vs 25%; $p = 0.27$). In general, more patients adhered to the plan of care (73% vs 90%; $p = 0.15$) and less patients were lost to follow-up (14% vs 5%; $p = 0.36$) in the MDC group, although these differences did not reach statistical significance due to the low number of patients.

Conclusion: The use of a multidisciplinary cancer clinic has the potential to alter management. In our clinic, there was a trend toward an increased use of radiation therapy. There was also a trend toward improved adherence to the plan of care, especially in active surveillance patients.

PAPER #43

"HEAD TO HEAD" COMPARISON OF THREE STATE OF THE ART VIRTUAL REALITY ROBOTIC SURGERY SIMULATORS

Alexandria M. Hertz, MD, Evalyn I. George BS, Christine M. Vaccaro, DO, and Timothy C. Brand, MD: Tacoma, Washington

(Presentation to be made by Dr. Alexandria Hertz)

Background/Objectives: There are several different commercially available virtual reality robotic surgical platforms. There is a paucity of data regarding the comparative performance of these simulators, and the technology is rapidly evolving. The objective of this paper is to compare the face and content validity of the three most prevalent of these simulators, as well as to include discussion regarding pricing and availability.

Materials/Methods: 15 participants were asked to complete one task of the participant's choice on three different robotic trainers, in any order: Mimic dvTrainer, Intuitive daVinci Surgical Skills Simulator (DVSS), and Symbionix RobotiX Mentor. Following the completion of the task on each trainer the participants completed face and content validity questionnaires as well as a demographics questionnaire (both of which have been previously validated). The average scores of the face and content validation portions for each trainer were then compared using ANOVA using SPSS software.

Results: 15 participants with an average age of 29.6 (range 25-41), the majority being surgical trainees, with an average of 8.6 robotic primary cases completed tasks on the three surgical trainers and then completed questionnaires. Average scores of the face and content questionnaires for the trainers were as follows: DVSS- 27.18/27.96, dvTrainer- 21.36/23.34, and RobotiX- 24.72/26.82. This was on a scale of 5-30 consisting of multiple domains. Analysis of Variance (ANOVA) showed a significant difference between the DVSS and dvTrainer for face validity ($p=0.001$), favoring the DVSS. There was no significant difference for the RobotiX Mentor compared with dvTrainer ($p=0.092$), but there was a trend favoring the RobotiX Mentor. There was no significant difference between daVinci trainer and RobotiX mentor. Similar results were seen for content validity between the different trainers with significant differences seen between the DVSS and dvTrainer ($p=0.021$), and trend towards significance between RobotiX mentor and dvTrainer ($p=0.092$). There was no significant difference between the DVSS and RobotiX mentor ($p=1.0$).

Discussion: The trainers, as a whole, demonstrate good face and content validity. The DVSS though it has the highest scores, is limited by the fact that a surgeon console must be available for use with simulation (with a console), unless a console and DVSS is purchased separately, which would be very expensive. The cost of the DVSS is \$80,000 and another console is \$500,000. The dvTrainer and the RobotiX Mentor seem to have similar face and content validity and similar cost (\$119,000 and \$137,000, respectively, with training modules).

Conclusions: The DVSS has the highest scores for face and content validity in this series, however this simulator may be usually unavailable due to clinical workload. The RobotiX mentor seems to perform similarly to the DVSS, and there is a trend towards greater performance for that simulator. Other factors may factor into robotics simulation purchasing, such as the performance of the educational tracking software and curriculum management tools.

Source of Funding: None

PAPER #44

OUR INITIAL EXPERIENCE WITH TESTOSTERONE UNDECANOATE IN THE SETTING OF A SHARED MEDICAL APPOINTMENT FOR TESTOSTERONE DEFICIENCY

Tarah Woodle B.S.*¹, Nicholas R. Rocco M.D.²,
Michael G. Santomauro M.D.² -1Bethesda, MD / 2San Diego, CA
(Presentation to be made by Tarah Woodle)

Objectives: Testosterone testing and prescriptions have nearly tripled in recent years. This increase in patient load, combined with the ever-increasing demand to optimize health care value (defined as quality/cost) has led our practice to choose an alternative coping strategy. The shared medical appointment's (SMA) goal is to improve efficiency while simultaneously delivering high quality care. To ensure that we optimize our time during the SMA and deliver the best possible testosterone replacement formulations to our patients, we evaluated our initial experience with testosterone undecanoate.

Materials and Methods: We retrospectively reviewed all patients referred to the testosterone deficiency SMA appointments and started on testosterone undecanoate in the Naval Medical Center San Diego Urology Clinic from May 2017 to July 2018. Testosterone undecanoate was administered per the manufacturer's protocol. Primary measured outcomes consisted of mean baseline total testosterone and steady state total testosterone after initiation of testosterone undecanoate. Secondary measured outcomes included attrition rate and further analysis of the patients that discontinued therapy, such as percent of this subgroup on prior testosterone therapy and their baseline mean total testosterone.

Results: Of the patients seen in the shared appointment during this time frame, 66 were started on testosterone undecanoate. Nine (13.6%) were lost to follow up and were eliminated from further analysis. The mean patient age was 49. The mean baseline total testosterone level was 456.25 ng/dL (median: 347.5 ng/dL). The number of testosterone naïve patients prior to initiation of testosterone undecanoate was 14 (21%), with a mean baseline total testosterone level of 238.8 ng/dL. Mean steady state total testosterone level was 373 ng/dL (median: 343 ng/dL). 11 patients (16%) discontinued testosterone undecanoate with 63% of those patients either returning to or starting short-acting injectable testosterone. Only 2 of the patients, who discontinued therapy, were testosterone naïve (18%). Mean baseline total testosterone level of patients who discontinued therapy was 616.6 ng/dL compared to mean baseline total testosterone level 417.8 ng/dL patient who continued therapy.

Conclusions: In this retrospective analysis of testosterone deficient patients initiated on testosterone undecanoate in the setting of a shared medical appointment, attrition rate was 16%. Of those patients that discontinued therapy, the majority had received prior testosterone replacement therapy and had a higher baseline mean total testosterone level than individuals who chose to continue therapy.

Source of Funding: None

PAPER #45

AROUSAL INCONTINENCE IN MEN FOLLOWING RADICAL PROSTATECTOMY: PREVALENCE, IMPACT, AND PREDICTORS

Carolyn Salter MD, Philip Vu Bach MD*, Darren Katz MD*, Chris Nelson PhD*,
John Mulhall MD MSc FECSM FACS*, New York, New York
(Presentation to be made by Dr. Carolyn Salter)

Objectives: Arousal incontinence (AI) has been described during physical or psychological sexual stimulation in men status post radical prostatectomy (RP). The goals of this study are to describe the characteristics of men experiencing AI, outline the nature of their symptoms, and assess for predictors of this condition.

Materials and Methods: A survey with questions on AI, stress urinary incontinence (SUI), and climacturia, as well as the IIEF (International Index of Erectile Function) and the IPSS (International Prostate Symptom Score) were sent out to men who had undergone an RP within the past 24 months at a single institution. The data was de-identified and analyzed using descriptive statistics. Comparisons between men with and without AI were made using t-test, Chi-square, and Fisher Exact tests. Logistic regression in univariable and multivariable analyses were used to define predictors of AI.

Results: Two-hundred and twenty-six men responded. Almost half (49%) of men post RP experienced AI at some point during their recovery. Thirty-nine percent of men avoided sexual intercourse because of these symptoms. In terms of frequency and quantity of urinary leakage, 62% of men reported AI in less than half of sexual encounters with the amount of urine leakage being equivalent to a tablespoon or less in 89% of men. On univariate analysis, increasing degree of SUI, as measured by pads per day (PPD), was predictive of AI ($p=0.01$). The increasing IPSS was also a predictor ($p=0.05$). On multivariate analysis, only PPD was predictive of AI ($p=0.05$).

Conclusion: AI occurred in almost half of the men in our study and led to avoidance of sexual activity in over one third of men. Worsening SUI, as measured by PPD, was predictive of AI on univariate and multivariate analysis. Thus, AI should be discussed with patients preoperatively to allow for realistic expectations.

Source of funding: none

PAPER #46

SONOGRAPHIC EVALUATION OF THE HIGH SUBMUSCULAR TECHNIQUE FOR INFLATABLE PENILE PROSTHESIS RESERVOIR PLACEMENT

Felicia L. Balzano M.D., Steven J. Hudak M.D.: San Antonio, TX

Presentation to be made by Dr. Balzano

Objective: Recent evolution in inflatable penile prosthesis (IPP) design has allowed reservoir placement in a number of alternative locations. Since 2012, we have employed the high submuscular reservoir placement technique in the majority of patients. However, a recent cadaveric study suggested that reservoirs intended for the high submuscular location are frequently placed into other unintended locations (i.e. intraperitoneal, intramuscular, etc.). The objective of this study was to evaluate the ultimate anatomic location of IPP reservoirs as identified on postoperative abdominal ultrasound.

Methods: All patients presenting for follow up after IPP placement or revision by a single surgeon (SJH) from December 2017 to September 2018 were retrospectively reviewed. This corresponds to a time period where the operative surgeon began performing limited bedside abdominal sonography to confirm the postoperative location of each IPP reservoir. Sonography was performed using a BK 6-2MHz abdominal probe in the outpatient urology clinic by the operating surgeon to evaluate the location and configuration of the existing IPP reservoir. If the reservoir was not clearly seen on ultrasound, a CT was performed to definitively evaluate the location of the reservoir. The following demographic and perioperative parameters were evaluated: age, BMI, interval of time between placement and ultrasound, brand of implant, history of prostatectomy, history of pelvic radiation, laterality of reservoir, and functionality of device.

Results: During the 10 month period reviewed, 16 men had ultrasound results available for review. Median age was 64.5 years (IQR 59.6-69.4), median BMI 29.3 (IQR of 27-31.5), 10 patients had undergone primary IPP placement, and 6 underwent IPP removal and replacement. The majority of men had a history of prostate cancer treatment (7 radical prostatectomy, 1 external beam radiotherapy). IPP reservoir type was AMS Conceal in 14 men and Titan 125CL in 2. Median time between surgery and ultrasound was 20 days with 11 of the 16 performed at the first postoperative visit. The reservoir was identified deep to the anterior abdominal wall musculature but superficial to the peritoneal envelope in 15 of the 16 men. In one patient, with a BMI of 38.5, the reservoir could not be definitively identified on bedside ultrasound; subsequent CT scan identified it in the posterior pelvic retroperitoneum. The majority of IPP reservoirs were not palpable on physical examination (15 of 16, 94%) and all 16 devices were fully functional.

Conclusion: The high submuscular technique for IPP reservoir placement is a safe and effective alternative to conventional placement into the space of Retzius. Postoperative limited abdominal ultrasound is a useful tool to confirm postoperative reservoir location.

PAPER #47

BOTHER ASSOCIATED WITH CLIMACTURIA AFTER RADICAL PROSTATECTOMY: PREVALENCE AND PREDICTORS

Carolyn Salter MD, Philip Vu Bach MD*, Eduardo Miranda MD PhD*, Lawrence C
Jenkins MD MBA*, Chris Nelson PhD*, John Mulhall MD MSc FECSM FACS*

New York, New York

(To be presented by Dr. Carolyn Salter)

Objectives: Climacturia is one of the lesser studied prostatectomy complications and little is known about the prevalence and predictors of patient bother regarding this condition. The aim of this study is to ascertain the prevalence and predictive factors of patient bother secondary to climacturia.

Materials and Methods: Men presenting to a single center for sexual dysfunction after radical prostatectomy (RP) were queried on various domains of sexual dysfunction. This included erectile dysfunction (ED), orgasmic dysfunction, and sexual incontinence (including climacturia and arousal incontinence). Patients were specifically asked about the frequency and amount of climacturia. Additionally, questions addressed patient bother and the perceived bother of their partners. Descriptive statistics were used for patient characteristics. A t-test was used for comparing frequency of patient and partner bother and the Pearson correlation test compared relationships between bother and predictors. Multivariable analysis (MVA) used for predictors of bother.

Results: Two-hundred and fifty-two men completed the surveys. Climacturia was endorsed by 59% of men. Bother was experienced by 39% of patients and perceived in 13% of their partners. Patient bother was associated with perceived partner bother ($p<0.001$) and inversely correlated with relationship duration ($p=0.05$). Perceived partner bother was inversely correlated with the duration of their relationship ($p=0.02$). On MVA of patient bother, only perceived partner bother was predictive ($p<0.01$) whereas on MVA of perceived partner bother, both patient bother ($p<0.01$) and duration of relationship ($p=0.05$) were predictive.

Conclusion: Climacturia and associated bother are common after RP. On univariate analysis, perceived partner bother and shorter relationship duration were predictive of patient bother. The only predictor of patient bother on MVA was perceived partner bother.

Source of funding: none

PAPER #48

IMMUNE EXPRESSION IN CHILDREN WITH WILMS TUMOR

Stephanie J. Sexton MD, Ashley W. Johnston MD*, Jonathan C. Routh MD

MPH*, Smita K. Nair PhD*, Eda K. Holl PhD: Durham, NC

(Presentation to be made by Dr. Stephanie Sexton)

Objective: Given improvements in multimodality therapy, survival among children with Wilms tumor (WT) exceeds 90%. However, 15% of children with favorable WT and 50% of children with anaplastic WT experience recurrence or progression. Of these patients with advanced disease only 50% survive to adulthood. In adult malignancies including renal tumors, survival has improved with the advent of immunotherapy. Little is known regarding the immune microenvironment of WT. Our objective was to perform an exploratory, descriptive analysis of the immune milieu in WT.

Methods: Between 2016 and 2017, all pediatric patients with WT underwent ex vivo wedge biopsy following their nephrectomy. The fresh tumor tissue and serum, also collected at the time of surgery, were enzymatically digested to analyze the tumor infiltrating immune infiltrate and effector cells using flow cytometry. Immunohistochemistry was also performed for CD4, CD8, and PD-L1 expression.

Results: A total of 6 patients were enrolled from our institution. One patient with primary renal neuroblastoma was excluded. The 5 included patients (mean age 3.5 years, 3 females/2 males) included: 2 with unilateral WT (resected prior to chemotherapy), 2 with bilateral WT (resected after neoadjuvant chemotherapy), and 1 with Denys-Drash syndrome, end-stage renal disease, and a distant history of WT in the contralateral kidney enrolled as a control. Immune analysis showed that WT were infiltrated by immune cells both prior to and following chemotherapy. The prominent T cell subtype in the blood were of CD4 origin. Conversely, CD8 were the dominant subtype in tumor tissue. Compared to the blood, there were elevated levels of NK cells infiltrating the tumor specimens. Unlike the predominantly alpha-beta TCR T cells found in the blood, 33% of the T cells infiltrating the tumors were positive for TCR gamma-delta receptors, a more active phenotype.

Conclusions: These pilot data suggest an inflammatory tumor microenvironment is present within WT. This implies that WT may be susceptible to immunotherapy similar to adult renal tumors and other adult malignancies. Follow-up studies are currently underway.

Source of Funding: None

PAPER #49

PROLONGED LENGTH OF STAY WITH HEMINEPHRECTOMY COMPARED TO URETEROURETEROSTOMY FOR MANAGEMENT OF UPPER POLE OBSTRUCTION

Ardavan Akhavan M.D.*, Kiersten M Craig M.D., Tianyi Sun M.S.*, Jialin Mao M.D.,M.S.*,
Art Sedrakyan M.D.,Ph.D*: New York, NY
(Presentation to be made by Dr. Kiersten M Craig)

Objectives: There is no consensus on the ideal surgical management upper pole obstruction in a duplex kidney. Upper pole heminephrectomy (HN) and ureteroureterostomy (UU) are both viable options, and can be performed through both open and minimally invasive modalities. This retrospective database review seeks to identify the patterns in the surgical management of patients with duplex systems and compare the surgical outcomes of both open and minimally invasive HN and UU. We hypothesize that neither HN nor UU is superior with respect to postoperative complications or outcomes.

Materials and Methods: A retrospective database review of patients in the 2012 Kid's Inpatient Database (KID) database was performed. The database was queried based on diagnosis codes 753.3 and 753.23, to capture duplex kidney and congenital ureterocele, respectively. Patients under 18-years old with ICD 9 procedure codes HN (55.4) and UU (56.75) were queried for mortality, wound infection, anemia requiring transfusion, febrile urinary tract infection (UTI). Prolonged length of stay (LOS) and excessive total charges (defined as charges or stay greater than 75th percentile, respectively). The weighted numbers for demographics and outcomes were generated using the discharge weight variable from the KID database. Study groups with less than 11 patients were not reportable. The odds ratios of complications, prolonged LOS, and excessive total charges were calculated comparing HN and UU, adjusted for open and minimally invasive procedures, defined as having either the laparoscopic (54.21) or robotic assisted laparoscopic modifier (17.4).

Results: In 2012, 126 HN (109 open,17 minimally invasive) and 43 (40 open, 3 minimally invasive) UU patients were identified. Baseline characteristics of the two groups, including insurance status, procedure type, geographic region, and hospital volume were not statistically significant between the two groups. There was no difference in the proportion of each group undergoing minimally invasive surgery ($p=0.32$). The rate of prolonged hospitalization was significantly lower in the HN group (median: 1.6 days) compared to the UU group (median=2.2 days) ($p=0.04$, $OR=0.42$ with 95% $CI=0.18$ to 0.98). There was no difference in the rate of any complications ($p=0.37$), or excessive charges ($p=0.19$) comparing two groups. Minimally invasive surgery did not have a main effect on complications, prolonged hospitalization, or excessive charges when comparing the two surgeries. Outcomes during hospitalization based on weighted number
Odds ratios for outcomes stratified by procedure type.

Conclusions: Data from the 2012 KID database demonstrates that HN is superior to UU with respect to length of hospitalization, but neither is superior for postoperative complications, or excessive costs.

Source of Funding: None

PAPER #50

NON-GENITOURINARY COMPLICATIONS ASSOCIATED WITH ROBOT-ASSISTED LAPAROSCOPIC AND RADICAL RETROPUBIC PROSTATECTOMY: A SINGLE INSTITUTION ASSESSMENT OF 1100 PATIENTS OVER 11 YEARS

JA Brown, MD, NA Brooks, MD*, RS Boland, MD*, ME Strigenz, MD*, SL Mott, MS*: Iowa City, Iowa

(Presentation to be made by Dr. James A. Brown)

Objectives: Robot-assisted laparoscopic prostatectomy (RALP) and radical retropubic prostatectomy (RRP) provide similar outcomes in terms of biochemical recurrence, postoperative continence and erectile function. Little is known about other complications of these procedures. To further address this, we examined patient outcomes at our institution over an 11-year period.

Methods: A retrospective review of 1,113 prostatectomies (646 RALP, 467 RRP) performed over 11 years by 9 different urologists at a single U.S. academic center was undertaken. Preoperative data collected included age, body mass index (BMI), prostate-specific antigen (PSA), biopsy Gleason score, and tumor (T) stage. Postoperative data included pelvic lymph node dissection (PLND), intensive care unit (ICU) admission rate, length of stay (LOS), ileus, wound infection rate, umbilical hernia occurrence, inguinal hernia occurrence, ophthalmic complications, upper and lower extremity complications, postoperative neuropathy, residual cancer and cancer recurrence.

Results: Significant differences between RRP and RALP included performance of PLND (54.1% vs 35.9%, $p < 0.0001$ respectively), umbilical hernia rates (2.4% vs 6.5%, $p = 0.0015$ respectively), inguinal hernia rates (5.4% vs. 2.5%, $p = 0.0101$ respectively), and LE complications (9.0% vs. 5.1%, $p = 0.016$ respectively). No difference was observed regarding ICU admission, LOS, ileus, wound infection, ophthalmic or upper extremities complications.

Conclusions: RRP patients were more likely to have lower extremity complications and inguinal hernias, whereas RALP patients had an increased umbilical hernia rate and a trend toward more corneal abrasions.

PAPER #51

SELF-ESTEEM AND RELATIONSHIP (SEAR) QUESTIONNAIRE AND AROUSAL INCONTINENCE

Carolyn Salter MD, Philip Vu Bach MD*, Darren Katz MD*, Chris Nelson PhD*, John Mulhall MD MSc FECSM FACS*

New York, New York

(To be presented by Dr. Carolyn Salter)

Objectives: Arousal Incontinence (AI) is a lesser known complication of radical prostatectomy (RP) and there is little data on its impact on self-esteem and sexual relationships. The goal of this study is to assess the impact of AI on self-esteem, confidence, and sexual relationships.

Materials and Methods: Surveys with the SEAR questionnaire as well as questions on AI, stress urinary incontinence (SUI), climacturia and the IPSS (International Prostate Symptom Score) were sent out to men who had undergone an RP in a single institution within the past 24 months. The data was de-identified and analyzed using descriptive statistics.

Results: Two-hundred and twenty-six men completed the surveys. Forty-nine percent of these men experienced AI at some point during their post-operative course, with 38% currently experiencing AI. Bother was endorsed in 41% of men and 27% of their partners with 39% of men avoiding sexual activity because of this. There was no difference in total SEAR score or subdomains of self-esteem, sexual relationship or confidence between men with current AI versus no AI.

Conclusion: While AI is a common occurrence post-RP and is associated with patient bother and avoidance of sexual intercourse in over 1/3 of men, it does not impact self-esteem, confidence or sexual relationships compared to post-RP men who have not experienced AI.

Source of funding: none

PAPER #56

CELL CYCLE PROGRESSION SCORE HAS POTENTIAL PROGNOSTIC VALUE FOR STAGE T1 CLEAR CELL RENAL CELL CARCINOMA

JA Brown, MD, JM West, MD*, D Ma*, SL Mott, MS*, S Stone* : Iowa City, Iowa
(Presentation to be made by Dr. James A. Brown)

Objective: There is an ongoing effort to identify a biomarker which predicts metastatic progression of clear cell renal cell carcinoma (ccRCC). Expression levels of cell cycle progression (CCP) genes have been found to be associated with progression in several different cancers including ccRCC. We evaluated the utility of CCP score in metastasis free survival in ccRCC after local resection of pathologic T1 disease.

Materials and Methods: Pathologic T1 tumors at the University of Iowa were reviewed in patients who had a radical or partial nephrectomy between 1995 and 2010. Patients with known or suspected metastasis, who had received chemotherapy, developed metastasis within 60 days of surgery, or had less than 5 years follow-up. Final analysis included 163 patients. Measured levels of 31 cell cycle genes and 15 control genes from the tumor were calculated and reported as a CCP score. The sensitivity, specificity, PPV, and NPV for the development of a metastasis or new primary within 5 years of resection was calculated for varying CCP score cutoffs.

Results: 163 patients were included in the analysis. A total of 4 (2.5%) patients developed metastasis, and 7 (4.3%) developed a new primary renal mass. A CCP score of >0.25 had a 100% sensitivity and 43% specificity for predicting metastatic progression. A CCP score of >0.7 had a 100% sensitivity and 20% specificity for predicting the development of a new renal primary.

Conclusions: The CCP score has potential prognostic value in predicting metastatic progression of a ccRCC. If validated, a CCP score cut-point might be a useful tool for the management of stage T1 RCC.

PAPER #57

PATHOLOGICAL RESPONSE AT RADICAL CYSTECTOMY WITH CISPLATIN-BASED CHEMOTHERAPY: DOES VARIANT HISTOLOGY MATTER?

Ryan W. Speir MD, Adam Calaway MD*, Elhaam Bandali*, Naveen Krishnan, MD*, Clint Cary, MD*, Timothy Masterson, MD*, Thomas Gardner, MD*, Richard Bihrlé, MD*, Richard S. Foster, MD*, Michael Koch, MD*, Hristos Kaimakliotis, MD*:
Indianapolis, IN

(Presentation to be made by Dr. Ryan W. Speir)

Introduction: Neoadjuvant chemotherapy (NACT) prior to radical cystectomy improves survival in patients with urothelial carcinoma (UC). The benefit in patients with variant histologies is unknown. We sought to assess the pathological response rate of histological variants to NACT and compare to patients with pure UC.

Methods: Our prospectively maintained bladder cancer database was queried to identify all patients who were treated with cisplatin-based NACT prior to radical cystectomy from 2008 until June 2018. Patients with small cell histology were excluded. Pathological response after chemotherapy was defined as complete response (pT0N0), any response (<pT2N0) and no response (≥pT2Nany) based on cystectomy pathology. Based on our goal of assessing the index tumor response to NACT and consistent with prior studies, pTis in the cystectomy pathology was included as complete response of the index tumor. Chi Square tests were used to compare pathological response. A logistic regression model estimated the odds of chemotherapy response based on preoperative variables.

Results: One-hundred and sixty-eight patients met inclusion criteria. Eighty-two (48.8%) patients had variant histology on TURBT or cystectomy pathology. The median percentage of variant histology within the pathologic specimens in this group was 20% (IQR 5%-80%). The overall cohort pT0/pTisN0 and <pT2N0 rates were 45.2% and 51.8%, respectively. Variant histology pT0/pTisN0 and <pT2N0 rates were 40.2% and 42.7%, respectively. The complete response rate (p=0.20) did not differ based on the presence of variant histology; however, those patients with any response were more likely to have pure urothelial carcinoma compared to variant histology (60.4 vs 40%, p=0.02). The response rates to NACT based on histologic variants groupings are depicted in Figure 1. Suspected high-risk variants (micropapillary, plasmacytoid, and sarcomatoid) were less likely to demonstrate complete response (27 vs 50%, p=0.01) or any response (29.4 vs 60.4%, p<0.01) to NACT when compared to pure UC. High-risk variant histology was associated with lower likelihood of complete (OR 0.259, p < 0.01) or any (OR 0.35, p=0.01) pathological response when controlling for age and chemotherapy regimen.

Conclusions: Presence of variant histology may influence response to NACT. Aggressive variants are less likely to respond to NACT, perhaps necessitating enrollment in novel NACT trials or early surgical intervention.

Source of Funding: None

PAPER #58

A HISTOLOGIC COMPARISON OF PATIENTS PRESENTING WITH PURE CHORIOCARCINOMA VS MIXED NSGCT WITH SERUM HCG LEVELS >20,000 IN PATIENTS UNDERGOING PC-RPLND

RYAN W. SPEIR, ADAM C. CALAWAY, MARCELO P. BARBOZA, RICHARD FOSTER, CLINT CARY

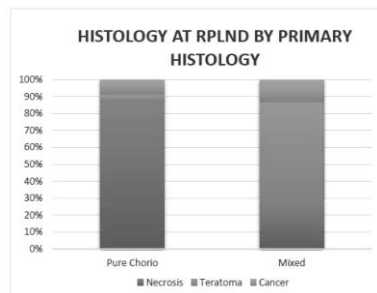
Introduction: Choriocarcinoma tumors of the testis are rare and usually present with significantly elevated HCG levels and hematogenous metastasis. When curable, it is felt to be largely a result of chemotherapy with little role for RPLND. We sought to determine the histologic characteristics for those undergoing PC-RPLND and compare them with metastatic NSGCT patients with similarly elevated HCG levels.

Methods: We reviewed the medical records of men who underwent PC-RPLND between 1988-2017 with post-orchietomy, pre-induction chemotherapy HCG levels greater than 20,000 mU/mL. They were stratified by primary tumor histology into two groups: pure choriocarcinoma and mixed NSGCT. Clinical, pathologic and serologic data were reported and logistic regression was used to assess for predictors of necrosis /fibrosis in the PC-RPLND specimen.

Results: Our cohort consisted of 152 men. The mixed group (N=129) had a median HCG of 108,001 mU/mL, a post chemotherapy node size of 4.45 cm, of whom 25.6% also received salvage chemotherapy prior to RPLND. The pure choriocarcinoma group (N=23) had a median HCG of 110,358 mU/mL, a post chemotherapy node size of 5.0 cm, of whom 30.4% received salvage chemotherapy prior to RPLND. In patients with pure choriocarcinoma, 87% had necrosis/fibrosis in the PC-RPLND specimen compared to only 29.5% of the mixed NSGCT group ($p = <0.0001$, Figure 1). While controlling for receipt of salvage chemotherapy, pre-chemotherapy HCG levels, node size and marker status, pure choriocarcinoma patients were 20 fold more likely to have necrosis on RPLND specimen compared to mixed NSGCT group (OR 20.68 (95% CI 5.279-81.114)). Of importance, 4 additional major procedures were performed concomitantly with PC-RPLND in the pure choriocarcinoma group (2 pulmonary resections, 1 hepatic wedge resection and 1 nephrectomy), 100% of which had necrosis in the final RPLND pathology. This contrasts with the mixed NSGCT group in that of the 48 patients who required additional procedures, only 8.3% were done in the setting of necrosis in the final RPLND specimen.

Conclusion: While in a majority of patients with residual masses after chemotherapy, a PC-RPLND remains the gold standard, patients with pure choriocarcinoma presenting with significantly elevated HCG levels represent a unique patient population where necrosis is found more often than anticipated.

Figure 1:



PAPER #59

ASSOCIATION OF A-DYSTROGLYCAN IMMUNOREACTIVITY WITH MORTALITY IN PATIENTS UNDERGOING RADICAL PROSTATECTOMY FOR NODE POSITIVE PROSTATE CANCER

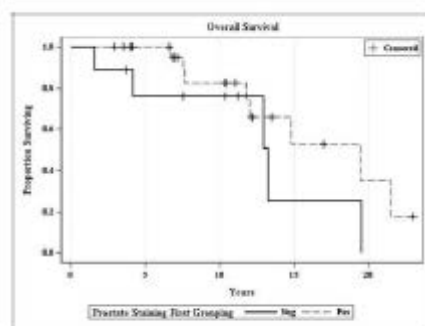
JA Brown, MD, A Alzubaidi, MD*, K Nepple, MD*, A Vollstedt, MD*, L Dahmouh, MD*, D Ma, MD, PhD*, M Henry, PhD*: Iowa City, Iowa
(Presentation to be made by Dr. James A. Brown)

Background: Dystroglycan (DG) is a cell surface receptor for extracellular matrix proteins involved in tissue mechanical stability and matrix organization. Initial work has demonstrated that a-DG expression is decreased in many types of adenocarcinoma, including renal and prostate. Decreased DG expression has been associated with decreased survival in many adenocarcinomas including pancreatic, gastric, and clear cell renal carcinoma (ccRCC). However, its association with survival in patients with prostate cancer has not been reported. Identification of an immunohistochemical marker associated with prostate cancer mortality would have potential clinical value.

Methods: Node positive, margin negative, radical prostatectomy specimens at a single institution from 1982 to 2012 were reviewed and identified 35 prostate specimens, including 26 patients with available tissue from both the primary prostatectomy and metastatic lymph node specimens. The expression levels of the a-DG subunit were analyzed using immunohistochemistry and divided into positive and negative staining groups. Survival was compared in different staining pattern groups.

Results: The median overall survival was shorter in those without a-DG staining in the prostate compared to those with positive staining, but this difference was not statistically significant (13.2 years vs. 19.4 years, $p=0.21$, figure 1). The median overall survival was similar in those with and without a-DG staining in the lymph nodes (13.2 years vs 12.0 years, $p=0.90$, figure not shown).

Conclusions: As opposed to adenocarcinomas from several other organs, our small cohort of node positive prostate cancer patients with negative surgical margins demonstrated no association of a-DG staining with overall mortality.



PAPER #60

FUNCTIONAL PROTEOMIC ANALYSIS REVEALS THAT ABL KINASES SUPPRESS THE MALIGNANT PHENOTYPE OF METASTATIC CASTRATE- RESISTANT PROSTATE CANCER VIA INHIBITION OF AKT SIGNALING PATHWAYS

JA Brown, MD, M. Marchal*, D. Moose*, A.Varzavand*, M Henry, PhD*, & C
Stipp, PhD*: Iowa City, Iowa
(Presentation to be made by Dr. James A. Brown)

Introduction and Objective: Our recent studies have revealed a suppressor function for Abl kinases in pre-clinical models of metastatic castrate-resistant prostate cancer (mCRPC), but the molecular mechanism was unknown. The aim of this study was to identify the signaling pathways that account for the aggressive behavior of Abl kinase-deficient mCRPC.

Materials and Methods: We used a combination of genetic and pharmacological approaches to manipulate Abl kinase activity in a pre-clinical model of mCRPC and determined the impact on malignant behavior, including tumor cell motility and growth in 3D matrix. A reverse phase protein microarray functional proteomics approach was used to identify signaling pathways altered in Abl-deficient cells.

Results: Abl kinase-deficient mCRPC cells displayed dramatically increased cell motility and growth in soft 3D extracellular matrix. Stable depletion of both Abl kinase isoforms by RNAi produced the strongest effect, indicating that Abl1 and Abl2 cooperate to limit malignant behavior. Functional proteomic analysis of over 300 signaling proteins revealed that Abl kinase-deficient mCRPC growing out in 3D matrix showed increased activation of AKT kinase and downstream signaling pathways compared to control cells. Key results were independently confirmed by immunoblotting. MK-2206, an AKT inhibitor under clinical development, abolished the increased 3D growth of Abl deficient cells.

Conclusion: Abl kinases can have paradoxical tumor suppressor functions in mCRPC linked to their ability to limit survival signaling through the AKT pathway. Abl kinase expression status should be considered in any mCRPC clinical trial involving the use of multi-tyrosine kinase inhibitors that cross inhibit the Abl kinase family.

Source of Funding: This research funded in part by Andersen-Hebbeln Prostate Cancer Research grant

PAPER #61

COMPARING PERIOPERATIVE OUTCOMES IN RADICAL PERINEAL PROSTATECTOMY, RADICAL RETROPUBIC PROSTATECTOMY, AND ROBOT ASSISTED LAPAROSCOPIC PROSTATECTOMY

Bijan W. Salari, M.D., Univ. of Toledo, OH; MAJ Toby Lees MC, USAF, WPAFB, OH; Adrienne Stolfi M.S.P.H., Wright State Univ., OH; LT COL Tavis Shaw MC, USAF, JBER, AK

Purpose: As robot assisted laparoscopic prostatectomy (RALP) increases in popularity for the treatment of clinically localized prostate cancer, few studies have compared the three surgical approaches: radical perineal prostatectomy (RPP), radical retropubic prostatectomy (RRP), and RALP. The purpose of this study is to compare the surgical outcomes, including positive surgical margins (PSM), as well as analyze the pre and 3-month post-operative PSA values in RPP, RRP, and RALP.

Methods: This was an IRB approved, non-randomized, retrospective review of RPP (n=23), RRP (n=48), and RALP (n=15) performed at one institution.

Results: Length of stay was significantly lower in RPP (2.0 days) and RALP (1.6 days) compared to RRP (3.1 days). Mean surgery time was significantly lower for RPP (232 min) compared to both RRP (268 min) and RALP (308 min). There was no statistical difference among PSM for RRP at 19, RPP at 8, and RALP at 3 ($p = 0.355$). Tumor volume and pathological Gleason total score were statistical predictors for PSM, regardless of surgery type. 3-month post-op PSA values were not statistically different among surgery groups.

Conclusion: There are three operative approaches to clinically localized prostate cancer, and RPP remains an excellent alternative.

PAPER #65

A REVIEW OF THE NOTABLE CAREERS OF DR. JOHN BARRY, USAF MC FS, AND CAPT MITCH EDSON, CAPT, USN (RET).

Presented by Tom Turlington, M.D., Brig Gen USAF (ret)

We have been honored to have numerous Senior Urologists attend the Kimbrough Society Annual Meetings. Many members of this select group gave their first professional presentations at this meeting, just as the current group of young Urologists test their "wings" in the world of professional meetings.

I will give a brief biographical summary of these two icons of the SGSU and "Urology America". Their loyalty to this meeting and devotion to training, in addition to recognizing their contributions post-Military are unsurpassed.

PAPER #67

THE DISTRIBUTION OF POST-VOID RESIDUAL VOLUMES (PVR) IN PEOPLE SEEKING CARE: ANALYSIS OF 880 PARTICIPANTS OF THE SYMPTOMS OF LOWER URINARY TRACT DYSFUNCTION NETWORK (LURN) OBSERVATIONAL COHORT STUDY

Andrew C. Peterson MD, Abigail R. Smith PhD*, Matthew O. Fraser PhD*, Claire C. Yang MD*, John O.L. DeLancey MD*, Brenda W. Gillespie PhD*, John L. Gore MD MS*, Pooja Talaty MS, MHA*, Victor P. Andreev PhD DSc*, Karl J. Kreder MD MBA, Margaret G. Mueller MD*, H. Henry Lai MD*, Bradley A. Erickson MD MS*, Ziya Kirkali MD*, and the LURN Study Group.: Durham, North Carolina (Presentation to be made by Dr. Peterson)

Objectives: We sought to describe the distribution of PVR across patients with and without lower urinary tract symptoms (LUTS) and examine relationships between self-reported voiding symptoms, storage symptoms, prior urinary tract infections and PVR.

Materials and Methods: PVR and demographic data were obtained from the Symptoms of Lower Urinary Tract Dysfunction Research Network (LURN) observational cohort study. Self-reported symptoms were collected using the American Urological Association Symptom Index (AUA-SI) and the LUTS Tool. PVR values were obtained from two other cohorts; living kidney donors with unknown LUTS from the Renal and Lung Living Donors Evaluation Study (RELIVE), and continent women in the Establishing the Prevalence of Incontinence (EPI) study, a population-based study of racial differences in urinary incontinence prevalence.

Results: Across the three studies, median PVRs were similar: 26ml in LURN (n=880, range 0-932 mL), 20mL in EPI (n=166, range 0-400 mL), and 14ml in RELIVE (n=191, range 0-352 mL). In LURN, males had 3.6 times higher odds of having PVR>200ml (95% CI=1.72-7.48). In RELIVE, median PVR was significantly higher for males (20 mL vs. 0 mL, p=0.004). Among women, only the intermittency severity rating was associated with a probability of an elevated PVR. Among men, incomplete emptying and burning severity rating were associated with a higher odds of elevated PVR but urgency severity ratings were associated with lower odds of elevated PVR. Median measured PVR was not different by UTI status for males or females (median PVR [ml] for UTI vs. no UTI: 29.5 vs. 27 for males and 26 vs. 25.5 for females). There was no difference in elevated PVR (>200ml) by UTI in either sex (11.1% vs. 7.7% in males and 2.7% vs. 2.1% in females).

Conclusion: Care-seeking patients have PVRs similar to those in people with unknown LUTS (RELIVE) and without self-reported LUTS (EPI). Although PVR was correlated with voiding symptoms, the mean differences only explain ~2% of the variance. Furthermore, PVR in care-seeking people is not associated with the self-reported incidence of recurrent UTI.

Source of funding: National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) grant numbers: U01DK097780, U01DK097772, U01DK097779, U01DK099932, U01DK100011, U01DK100017, U01DK097776, U01DK099879

PAPER #68

BREAKING STONES IN THE HOT SUN – CALCULI IN A DEPLOYED ENVIRONMENT, WHY WE NEED TO TREAT IT

Roland Bartmuss MD, Karl von Dobschuetz MD MBA: Ulm Germany
(Presentation made by Roland Bartmuss)

Objective: In deployed environments like the middle east or Afghanistan stone are likely to occur even in young and healthy soldiers. A renal colic due to a stone present a severe threat to the combat readiness of the individual soldier and the unit itself (i.e. pilots, drivers or other specialized troops).

Assessment: To minimize those risks proper screening before deploying is vital. Furthermore treatment should be available in theater. It should exceed minimal requirements like ureteral stents (pigtail), but providing a state of the art in theater treatment to get the soldier combat ready again. It also reduces overall costs by making a STRATAIRMEDEVAC unnecessary.

With the dawn of excellent single use flexible ureteroscopes and miniaturized laser units including single use fibers sterilization is no longer an issue. State of the art stone treatment therefore is possible.

Conclusion: Minimal invasive treatment of renal or ureteral calculi in theater is possible due to advanced single use instruments. It reduces the time between the onset of the symptoms to a definite treatment. The soldier can remain in theater. Considering the costs of STRATAIRMEDEVAC plus a needed replacement, the in theater treatment is economically reasonable.

Source of funding: None

PAPER #69

UROLIFT PROSTATIC ANCHOR IMPLANTATION: EXPERIENCE IN A RURAL COMMUNITY HOSPITAL

Ari Allen, B.A.

Objectives: Urolift transprostatic anchor implantation is one of multiple treatment options for men with life style limiting Benign Prostatic Hyperplasia (BPH). Approved by the Center for Medicare Services in January 2015 it has quickly become a commonly selected modality for the treatment of lifestyle limiting bladder outlet obstructive symptoms. The purpose of this study is to review the experience and outcomes of a single surgeon at a rural community hospital which was the first in the state to perform this procedure. A general comparison between these results and those of the Lift Study will be reviewed.

Materials and Methods: Data from the office outpatient electronic medical records was used for this study. Cross correlation with operating room logs was employed to confirm capture off all patients from May 1 2015 through July 30, 2018. Values compared included age of presentation, number of implants, preoperative American Urologic Association symptom score and postoperative symptom scores at 2 - 3 weeks, 3 months, 6 months, 1 year, 2 years and 3 years.

Results: A total of 78 men underwent Urolift in the period of time reviewed. The average age at time of surgery was 71.54 years. Mean prostate volume was 43.09 grams with a range of 23 to 73. Mean preop AUA bother.score was 19.18 with a quality of life index of 4.61. Mean improvement was 9.83/2.55 (bother/qol) at postop, 9.13/2.47 at 3 months, 9.2/2.33 at 6 months, 7.55/1.9 at one year, 9.54/2.0 at 2 years and 11.66/2.0 at 3 years. All values reached statistical significance at ($P<0.05$) except for the 3 year value because of sample size.

Conclusions: Urolift transprotatic anchor implantation is an effective method of treatment for men with lifestyle limiting bladder outlet obstructive symptoms. A general comparison between these results and those of the initial Lift Study by Roehrborn et al., show similar outcomes. Urolift is a minimally invasive outpatient procedure which offers attractive benefitis for the treatment of men with lifestyle limiting bladder outlet obstruction due to benign prostate hyperplasia.

PAPER #70

OVERVIEW OF MILITARY UROLOGY NSQIP DATA. MAXIMIZING TRI-SERVICE COOPERATION TO BE AT THE FOREFRONT OF QUALITY AND SAFETY

CDR R. Chanc Walters, MD, USN Portsmouth, VA Maj. Mark Anderson, MD USA,

Maj. Tara Ortiz, MD: USA Fort Bliss, TX.

Presentation to be made by Dr. Walters

Purpose: To provide an overview of NSQIP and more specifically DoD Urology NSQIP data to highlight the current position of Tri-Service military Urology results. To show how we can work through our unique relationships to be at the forefront for military quality and safety.

Materials and Methods: NSQIP is a nationally validated, risk-adjusted, outcomes-based program to measure and improve the quality of surgical care that collects data directly from the patients chart. Currently DOD hospitals account for 48 of the 708 hospitals collecting NSQIP data worldwide and the DOD is one of the 45 ACS collaborative groups. Individual outcomes are collected in over 500 categories (35 in Urology) and are scored as Exemplary if the hospital is a low statistical outlier (95% confidence) or in the 1st adjusted quartile; Needs Improvement if the hospital is a high statistical outlier (95% confidence) or in the 4th adjusted quartile; or As Expected if the hospital is neither a statistical outlier nor in the 1st or 4th adjusted quartile.

Results: From the most recent NSQIP data released in July 2018 for all cases the only needs improvement category is return to the Operating room. The DOD was exemplary in 8 areas most importantly in morbidity and mortality. In Urology 34 DOD facilities are collecting data. There are 12 large complications groups collected. All programs were performing as expect in cardiac outcomes and renal failure. For the other 10;

1. Morbidity – 2 exemplary, 6 needs improvement;
2. Pneumonia – 1 needs improvement;
3. Readmission – 1 exemplary, 3 needs improvement;
4. Return to the OR – 1 exemplary, 2 needs improvement;
5. Sepsis – 2 needs improvement
6. Surgical Site Infections – 1 exemplary 5 needs improvement
7. Unplanned Intubations – 2 needs improvement
8. UTI – 1 exemplary, 2 needs improvement
9. Ventilator greater than 48 hours – 2 needs improvement
10. VTE – 2 needs improvement

Conclusions: NSQIP and patient safety data will continue its importance in the future. Currently 7 military Urologist are active at local and DOD levels in NSQIP. This is an area which military Urology can use to drive improved patient outcomes.

Source of Funding: None

PAPER #71

OPIOID PAIN MEDICATION USE AFTER VASECTOMY.

A PROSPECTIVE STUDY TO DETERMINE THE APPROPRIATE AMOUNT

LT Benjamin Baker*, USN, MC, LCDR Janelle Fox, USN, MC, LCDR Ines Stromberg, USN, MC, CDR Erik Grossgold, USN, MC, CDR R. Chanc Walters, USN, MC. Portsmouth, VA

Presentation to be made by Dr. Baker

Objective: The purpose of the study is to understand the opioid medication requirements for patients undergoing a vasectomy.

Methods: We prospectively consented subjects who underwent a vasectomy in 2018 with multiple surgeons. Procedural technique was not standardized. All subjects received Hydrocodone/acetaminophen 5-325mg tablets (Take 1-2 pills every 4 hours as needed for severe pain #15 pill); and Ibuprofen 800mg tablets (take 1 pill every 8 hours as needed for lesser pain #30 pills). The subjects were then contacted by phone 1-2 weeks after their procedure with a follow-up questionnaire focused on used of narcotic medication. Data collected included age, weight, number of pills used and pills remaining, number of days pain medication used, need for additional medication, pain treatment satisfaction, disposal knowledge, and complications.

Results: A total of 100 patients were consented with follow-up data available on 77 subjects. In total, 88.3% rated excellent pain treatment satisfaction with score ≥ 4 (scale 1-5). 18.2% used no opioid medication, 33.8% used 1-5 opioid tablets, and 24.7% used all 15 tablets. Using a Pearson correlation younger age was significantly related to number of pills used. ($p < .001$) In total 648 extra narcotic tablets were given. In terms of disposal, 20 (25.9) subjects disposed of extra medication, 14 (24.7%) used all medication, and 50.6% did not dispose of medication. With disposal, 43 (55.8%) correctly new how to dispose of extra medication. At the end, 9 subjects (11.7%) reporting needing more pain medication than given.

Conclusions: Use of opioid medication after a vasectomy is variable though correlated with age. A limited need for opioid medication should be expected. That numbers likely would be around 5 tablets (52%) or 10 tablets (70%).

Funding: None

PAPER #72

VASECTOMY REVERSAL IN AN OPEN ACCESS SYSTEM: A 14-YEAR EXPERIENCE

Alexandria M. Hertz MD, Andrew W. Stamm MD, Mark I. Anderson MD,

Karen C. Baker MD: Tacoma, WA/Durham, NC

Presented by Dr. Hertz

Introduction: Few men (6%) pursue vasectomy reversal following initial surgical sterilization. Influencing factors often include expense and the limited number of urologists who perform the surgery. The goal of this study was to evaluate success rates (patency and pregnancy), potential influences from comorbidities including smoking and any notable effects from resident involvement in an open access system with no constraints on access to the procedure.

Methods: An institutional review board approved retrospective chart review was performed on all men who underwent vasectomy reversal at a single institution from January 1, 2002 to December 31, 2016. Descriptive statistics encompassing patient demographics and resident participation were also performed. Student t-test and analysis of variance (ANOVA) were used to compare different factors affecting success rate.

Results: A total of 526 microscopic vasectomy reversals were performed in the 14-year period. The mean patient age at reversal was 36.56 (range 23-76) and mean spouse age was 31.01 (range 19-46). The mean time to reversal was 7.87 years (range of 0-34 years). The most common reconstruction type was bilateral vasovasostomy which constituted 83% of reversals (438/526). 102/526 (19.4%) of subjects didn't complete a postoperative semen analysis. The overall patency rate (regardless of reconstruction type) was 368/526 (69.96%), and overall pregnancy rate was 104/526 (20.34%). When evaluating by reconstruction type (including patients who did not have post-operative semen analysis): bilateral vasovasostomy- 315/438= 71.9%, bilateral vasoepididymostomy- 6/15= 40%, unilateral vasovasostomy- 23/36= 63.89%, unilateral vasoepididymostomy- 3/8= 37.5%, vasovasostomy and vasoepididymostomy- 21/28= 75%. All of these parameters increased when removing the patients who didn't complete semen analyses. Thirty-four reversals were "re-dos". The vast majority of cases included resident participation with the average post-graduate year (PGY) being 3. Only two surgeons had completed subspecialty training in infertility. There were 151/526 patients who had active tobacco use at the time of reconstruction.

When looking at patency by patient age, the younger the patient there was a trend towards younger age resulting in increased patency ($p=0.093$). Increased time to reversal resulted in significantly poorer patency rates ($p=0.0023$). ANOVA of reconstruction type by patency rate, bilateral vasovasostomy was significantly more patent ($p=0.0008$). The overall amount of pregnancy information was low, however when evaluating the role of spouse age with post-operative pregnancy we did not find a statistical difference ($p=0.473$). Chi-square was performed to evaluate the effects of active tobacco use on patency and no difference was found ($p=0.5396$). Other patient comorbidities did not significantly affect patency rates ($p=0.59$), even when evaluated by reconstruction type ($p=0.11$). Re-do reversals were less likely to be successful ($p=0.043$), however there was no difference in pregnancy rates in the re-do cohort ($p=0.16$). Resident PGY did not affect patency ($p=0.19$). Different primary surgeon also did not significantly change patency rates ($p=0.8$).

Conclusions: In an open access system, patency rates were not affected by surgeon, resident training year, or tobacco use. The patency rates by reconstruction type and time since vasectomy are similar to previously published series, in a diverse patient population. Data for pregnancy was small in this cohort but did not seem to be affected by spouse age or redo status. Compliance with post-operative semen analysis was fairly low given no barriers to access. This large patient cohort demonstrates that diverse patient selection and surgeon background do not profoundly affect outcomes of vasectomy reversal.

Source of Funding: None

PAPER #73

UPPER URINARY TRACT UROTHELIAL TUMORS (UUTUT) IN THE VETERAN POPULATION

Moore, M.D., Robert G, M.D., Debora K and Balaji, M.D. Kethandepatti*,
Salisbury, NC

Introduction and Objective: In the general population UUTUT are uncommon, accounting for 5% of all urothelial tumors. UUTUT occur in patients ages 75-79 years. Bilateral UUTUT is present in 1.6% with 80% of these patients have a history of prior bladder cancer in the general population. We reviewed our Veteran Population examining mean age of presentation, incidence of bilateral disease, prior history of bladder cancer and progression to metastatic disease.

Methods: A retrospective chart review was conducted from 1/2013 to present. A total of 24 patients was identified.

Results: The mean age of onset for UUTUT was 65.9 years (range: 54-83 yrs). The incidence of bilateral UUTUT is 7/26(26.9 %). 6/7 were high grade (HG) and 1/7 were low grade (LG) with only 1/7 of the bilateral UUTUT having a prior history of bladder cancer. Overall, 18/26(69.2 %) UUTUT were HG and 7/26 (26.9%) were LG. 34.6(9/26) had prior bladder cancer. 7/26 progressed to metastatic disease (all HG) in 19-96 months and 1/24 presented with metastatic disease. 4/26 patients are deceased.

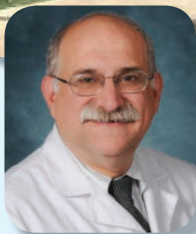
Conclusion: In the Veteran population UUTUT presents at a younger age, has a higher incidence of bilateral institutional disease as well as a higher rate of progression to metastatic disease. These findings need to be confirmed with multi-institutional studies.

CME-Accredited Luncheon Symposium



Evolving Treatment Paradigms in Advanced Prostate Cancer

Individualizing Treatment Strategies Based on Advancing Clinical Data



PRESENTER

Dr. Leonard Gomella MD, FACS

Chair, Department of Urology

Director, Kimmel Cancer Center Network

Jefferson University Philadelphia, PA

SATURDAY

January 19, 2019

12:00 pm – 1:20 pm

Keahuou 2 Ballroom

Notes



Join the SGSU
during the AUA's Annual Meeting in
Chicago, IL, May 3-6, 2019

Visit the SGSU Booth #2334 &
Attend the SGSU Member Reception
Saturday, May 4, 4:30pm-6:30pm
(Place to be determined)
&
USAV Annual Meeting
Sunday, May 5, 1:00pm-5:30pm
Hyatt Regency McCormick Hotel

Society of Government Service Urologists
c/o DeSantis Management Group
1950 Old Tustin Avenue,
Santa Ana, CA 92705
TEL: 714.550.9155 / FAX: 714.550.9234
www.govurology.org / info@govurology.org

*Thank
You*

To Our SGSU Benefactors

Benefactor Level 1

Brian Auge, MD
John M. Barry, MD
Charlie H. Bridges, MD
Joseph Y. Clark, MD
Timothy Donahue, MD
Martin L. Dresner, MD, FACS
Harold Frazier, MD
Michael Hermans, MD
Leo Kusuda, MD
Steve Lynch, MD
Drew Peterson, MD
Francisco R. Rodriguez, MD
Thomas A. Rozanski, MD
Kara C. Taggart, MD
Tom Turlington, MD
Chanc Rustin Walters, MD
John W. Weigel, MD

Benefactor Level 2

Chrisopher Allam, DO
William Hughs, MD, FACS
Stacey G. Koff, MD
Herbert D. McKay

*Join the SGSU
next year in
Charlotte, North Carolina*

*67th Annual Kimbrough Seminar
Hilton Charlotte University Place
January 15 - 19, 2020*

**Course Directors:
Dr. Christopher Allam &
Dr. George Kallingal**

