WINTER 2010

Tulane Urology

Cutting Edge... Without the Cut™

Education

Research

Robotic Surgery

Endoscopic: Ureteroscopy

Urologic Prosthetic Surgery

Erectile Dysfunction

Urinary Incontinence

Stone Disease

Lasers in Urology

Tulane Urology. There's an App for that.

An Invitation to the SESAUA

Our very own **Dr. Raju Thomas** is **President of the Southeastern Section of the American Urological Association,** which is the largest section of the AUA. Dr. Thomas wanted to bring the SES back to Tulane's host city of New Orleans following Hurricane Katrina. This is a unique opportunity to enjoy the renewed ambiance of the city, as well as marvel at its remarkable recovery from the natural disaster. The 2011 program will highlight extensive coverage of the urologic socio-economic status, with a well-organized scientific session that will also include for the first time a non-physician provider session for your nurse practitioners and physician assistants.

The meeting is being held at the **Marriott Hotel in New Orleans, LA** and all details can be obtained by checking the SESAUA website at sesaua.org.

Minimally-Invasive Surgery Thriving at Tulane

Since 1982, the Tulane Department of Urology has made a commitment to pursue minimally invasive options for management of urologic problems for our patients. We began by providing percutaneous lithotripsy for our patients, and there has been no stopping the department since. We have evolved to be the regional referral center for difficult cases in patients who need access to minimally invasive urologic care, and have also become leaders in percutaneus, ureteroscopic, laparoscopic and robotic surgery. The addition of Dr. Benjamin Lee has further enhanced the complexity and sophistication of the minimally-invasive urologic surgery program at Tulane.

For more information on the services offered visit myprostatecancer.com and cureforkidney.com.

Tulane Urology faculty with Dr. James Eastham at the 2010 graduation banquet.

A Rare Learning Experience for Residents

Dr. Wayne Hellstrom is a national and international figure in Andrology (male reproduction, sperm physiology, and microsurgery) male sexual dysfunction (erectile dysfunction, Peyronie's disease, premature ejaculation, hypogonadism), urologic prosthetics (penile prosthesis, artificial urinary sphincter, and male slings), and reconstructive surgery (urethral stricture disease).

Over the past 22 years Dr . Hellstrom's reputation has gone beyond Louisiana, and our referral patterns have greatly enhanced our patient care activities and exposed our residents and fellows to diverse educational experiences.

Current clinical projects are focused on:

- Avanafil in the treatment of post Robotic Radical Prostatectomy erectile dysfunction (BNS)
- Medtronic pelvic stents for treatment of PDE5 inhibitors refractory ED
- Dapoxetine for men with premature ejaculation & concomitant ED
- Xiaflex (collagenase) for treatment of Peyronie's Disease
- 2% topical testosterone for treatment of ejaculatory dysfunction in hypogonadal men.
- Patient-partner health related quality of life in Peyronie's incision and grafting procedures

Research and academics are a large part of the Andrology Section in the Department of Urology at Tulane. Our research fellow Dr. Liman Ma, MD (Shanghai, China) has initiated an exciting research project entitled, "Penile Enhancement Using Stem Cell Seeded Porcine Small Intestinal Submucosa Graft in a Rat Model".

In November, our post-doctorate research assistant, Serap Gur, PhD (Ankara, Turkey) recently was awarded first place research prize at the SMSNA meeting in Miami, FL for her presentation, "Imatinib Mesylate as an Inhibitor of Several Protein Tyrosine Kinases has Potential Role in Inducing Erectile Response in the Rat".

Our third year medical student Niels Johnsen was awarded a $3500 scholarship from the SMSNA for his research project titled, "Does Tadalafil Inhibit Prostate Cancer Growth?"

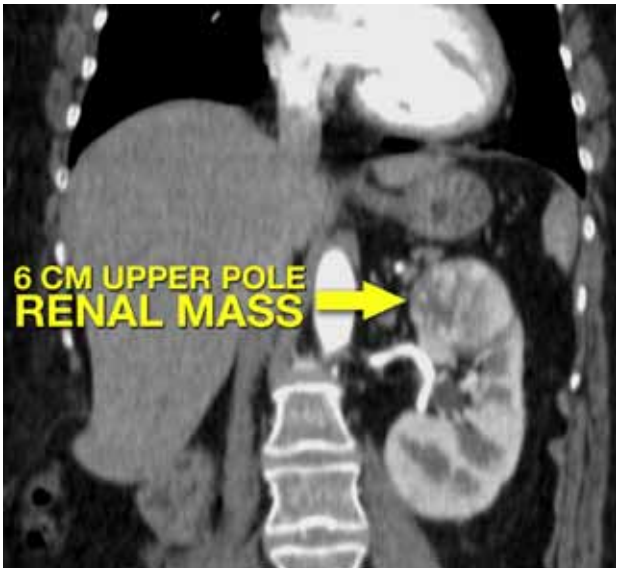
Benjamin R. Lee, MD: Expanding Horizons for Robotic Partial Nephrectomy

Robotic Partial Nephrectomy for renal masses as large as 7cm, solitary kidneys, hilar masses and endophytic lesions are being performed routinely at the Tulane University Medical Center. Current clinical studies are now establishing endoscopic techniques of cold hypothermia in patients with solitary kidney. A technique of continuous retrograde cold irrigation was developed by Benjamin Lee, M.D., F.A.C.S., Professor of Urology, whereby renal hypothermia in a low pressure system is achieved to lower cortical and medullary renal tissue temperatures down to 20 degrees Celsius during Robotic Partial Nephrectomy. The work was presented at the World Congress of Endourology in Chicago, Illinois in September 2010. Renal hypothermia may provide an additional nephro-protective effect in patients with solitary kidney which could improve post-operative morbidity in patients with significantly impaired preoperative renal function. With recent AUA guidelines recommending nephron sparing surgery in all T1 renal masses, in order to minimize the consequences of chronic renal insufficiency, cardiovascular morbidity and higher rates of inpatient morbidity and mortality, a greater number of Robotic Partial nephrectomies are being performed. Currently, 609 patients with Renal Cell Carcinoma or Transitional cell carcinoma have undergone Robotic/Laparoscopic Partial nephrectomy, nephrectomy, or nephroureterectomy at the Tulane Medical Center.

Further techniques are also being performed for Off Clamp Robotic Partial Nephrectomy resection, to avoid clamping the renal artery entirely, and optimizing renal function. In patients with von Hippel Lindau Syndrome, with multiple renal masses, resection of as many as nine (9) separate tumor resections on 1 kidney can be required to render the patient cancer free.

Single port Laparoscopic Cryosurgery has allowed treatment of high risk patients at Tulane who have cardiac risk factors or multiple abdominal incisions. Via either a retroperitoneal or transperitoneal technique, freezing of the tumor has achieved greater than 90% disease free status in these high risk patients.

Cytoreductive nephrectomy in patients with metastatic renal cell carcinoma has changed in light of new immunotherapy agents beyond interferon, Sunitinib, and Sorafenib, with new mTOR inhibitor



agents such as Temsirolimus and Everolimus which is now FDA approved as a 1st treatment option for sunitinib/sorafenib failures. In addition, Pazopanib was FDA approved in October 2009, with an 11.1 months progression free survival vs 2.8 month placebo. Finally, a greater role of Bevacizumab (Avastin), which is an antibody to VEGF, prolongs time to progression, option for mTOR inhibitor failures, greater role in metastatic disease. With a multidisciplinary approach for kidney cancer patients together with the Tulane Cancer Center, these high risk patients can be offered several options for treatment.

"Our job is to save nephrons, and avoid dialysis!" says Dr. Lee.

Research Fellow Joins Tulane Urology

Dr. Zijun Wang, Research Fellow, has joined Dr. Benjamin Lee from the Department of Urology, Ningxia People's Hospital, near Beijing, China. Dr. Wang's project will focus on renal ischemia and the measurement of Isoprostene levels to quantitate renal damage following variable lengths of ischemia.

Tulane Urology Receives Another Prostate Cancer Research Grant

At a Glance

Principal Investigator:
Asim Abdel-Mageed, Ph.D.
Co-investigators:
Raju Thomas, MD, FACS, MHA
Krishnarao Moparty, MD

Project title:
Adipose Stem Cell-Based Therapeutic Targeting of Residual Androgens in African-Americans With Bone-Metastatic Prostate Cancer

Proposed Start Date:
04/01/2011
Proposed End Date:
03/31/2014
Total Budget Requested:
$902,884

The Principal Investigator hypothesizes that adipose tissue-derived mesenchymal stem cells (ADMSCs) have bone tumor-homing abilities and mediate local testosterone synthesis. Evidence is presented that ADMSCs from African-American men with prostate cancer have higher tropism toward prostate cancer cells and can more efficiently synthesize testosterone than ADMSCs from Caucasian men with prostate cancer. In Aim 1, the Principal Investigator will test whether ADMSCs from African-American men are more effective than ADMSCs from Caucasian men at modulating growth and metastatic potential of prostate cancer cells in *in vitro* and *in vivo* models of androgen deprivation and prostate cancer progression. In Aim 2, the Principal Investigator will test whether ADMSCs expressing alpha-hydroxysteroid dehydrogenase (alpha-HSD), which can degrade testosterone and dihydrotestosterone (DHT), can inhibit the growth of prostate cancer cells *in vitro*. In Aim 3, the bone tumor-homing properties of ADMSCs will be exploited for a gene therapy approach wherein ADMSCs expressing alpha-HSD will be tested for their ability to target prostate cancer bone tumors *in vivo*. A major **strength** of this application is that it is highly innovative. The Principal Investigator proposes the novel concept that ADMSCs may migrate to and associate with prostate tumors and synthesize testosterone locally, suggesting a very interesting link between obesity and prostate cancer development and progression.

Staff Spotlight

Leah Grossman, Clinical Research Coordinator

Leah Grossman was born in Memphis, TN and raised in sunny Los Angeles. After completing her undergraduate degree at UC Berkeley with a major in chemistry, she worked in nuclear physics at Lawrence Berkeley Lab. Leah then obtained her Master's degree in Neurosciences at Tulane, and accepted a position here with the Department of Urology.

Clinical Studies:

- A Multicenter Clinical Study of the Sonablate® 500 (SB-500) for the Treatment of Locally Recurrent Prostate Cancer with HIFU
- Evaluation of Contemporary Management of Renal Cell Carcinoma
- Evaluation of Factors Affecting the Outcomes of Robotic Laparoscopic Radical Prostatectomy

Animal Studies:

- Laparoscopic Training Course for International Urologists, Residents and Medical Students
- Measurement of Biomarkers for Renal Ischemia in a Rat Model
- Feasibility and Safety of Single Port Laparoscopic Surgery for Partial Nephrectomy on Porcine Model

Genie Ogden, Clinical Research Coordinator

Genie Ogden is a native of New Orleans but was born in Monterrey, Mexico. She completed her undergraduate degree at Loyola University, New Orleans in Biology. Previously she has worked as manager of the animal facility at LSU and in the IRB and Cancer Center at Baylor.

Current Studies

- The Safety and Efficacy of Avanafil in the Treatment of Erectile Dysfunction Following Bilateral Nerve-sparing Radical Prostatectomy
- The Medtronic Zotarolimus- Eluting Stent System for the treatment of Erectile Dysfunction in Males with Sub-Optimal Response to PDE5 Inhibitors

Upcoming Studies

- Efficacy and Safety of Dapoxetine in Men with Premature Ejaculation and Concomitant Erectile Dysfunction treated with a Phosphodiesterase-5 Inhibitor Measurement of Biomarkers for Renal Ischemia in a Rat Model
- Safety and Effectiveness of AA4500 Administered Twice per Treatment Cycle for up to Four Treatment Cyles in Men with Peyronie's Disease

Tulane Urology

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Find us online at:
myprostatecancer.com
cureforkidney.com
tulane.edu/som/departments/urology/