

News from The Deane Center

Michael A. Palese, MD, Associate Professor and The Deane Center's director of Minimally Invasive Urologic Surgery, travelled to Dubai, United Arab Emirates in January 2010 to make three presentations at the 35th Arab Health Conference. He spoke on Novel Concepts and New Treatments for Benign Prostatic Hyperplasia, Basic Laparoscopy and on Basic Techniques in Percutaneous Nephrolithotomy (PCNL), a procedure for removing medium-sized or larger kidney stones from the urinary tract. The three-day event, held at the Dubai International Convention and Visitor Center, attracted some 55,000 people from around the world.



Michael Palese, MD

Drs. Simon J. Hall, Director of the Deane Center and Chairman of Mt. Sinai's Department of Urology and Natan Bar-Chama, Director of Male Reproductive Medicine and Surgery, participated in a conference entitled Genital/Urinary and Sexual Health Issues in the Aging Hemophilia Patient in October 2009 in New York City. Presentations were made on how prostate cancer, bladder cancer, kidney cancer as well as common conditions such as an erectile dysfunction and benign prostatic hyperplasia (BPH) affect hemophiliacs and how these conditions may be treated differently due to the significant bleeding disorders these patients have.



Natan Bar-Chama, MD

Michael A. Diefenbach, Ph.D., Associate Professor of Urology, was invited to review grant applications for the National Cancer Institute's Behavioral Medicine, Interven-



Michael Diefenbach, PhD

tions and Outcomes Study section in San Diego from January 4th-5th. Dr. Diefenbach has also been elected Program Chair for the Annual Meeting and Scientific Sessions of the Society of Behavioral Medicine in Seattle, from April 7th to 10th. The Society of Behavioral Medicine is the premier professional organization of clinicians, educators, and scientists working in the growing field of behavioral medicine. Behavioral medicine promotes the study of the interactions of behavior with biology and the environment, and the application of that knowledge to improve the health and well being of individuals, families, communities and populations.

Several Deane Center physicians have been voted Superdoctors of New York and Best Doctors in New York 2010 by Castle-Connolly Medical, Ltd., a health-care research and information company. They include Simon Hall, Chairman of the Department of Urology and Director of the Deane Center; Natan Bar-Chama, Director of Male Reproductive Medicine and Surgery; Michael J. Droller, The Katherine and Clifford Goldsmith Professor of Urology; Michael A. Palese, MD, Associate Professor and the Deane Center's Director of Minimally Invasive Urologic Surgery; David B. Samadi, Chief, Division of Robotics and Minimally Invasive Surgery; Jeffrey A. Stock, Associate Professor of Urology and Pediatrics. The list of this year's superdoctors, all nominated and then selected by their peers, was scheduled to appear as a special advertising supplement to *The New York Times Magazine* on Sunday, April 25, 2010. ■



Jeffrey Stock, MD

Non-Profit Org.
U.S. Postage Paid
Permit No. 195
Stamford, CT

The Deane Center
QUARTERLY
Mount Sinai School of Medicine
One Gustave L. Levy Place, Box 1272, New York, NY 10029



UPCOMING COMMUNITY EVENTS

MAN TO MAN

Prostate Cancer Education and Support Meetings For Survivors and Families
Wednesday, May 12, 2010, 6-8 pm

Speaker: Neil H. Grafstein, MD, *Director of Reconstructive Urology, Female Urology & Voiding Dysfunction*
Topic: Minimally Invasive Strategies to Improve Urinary Control After Prostate Cancer Surgery

Tuesday, July 13, 2010, 6-8 pm

Speaker: Michael A. Diefenbach, Ph.D., *health/social psychologist and Assistant Professor of Urology and Oncological Sciences at Mount Sinai*
Topic: Decision-Making, Regret, and Quality of Life Among Prostate Cancer Patients

For more information call:

Alison Snow, LCSW/Mount Sinai Rutenberg Treatment Center 212-241-7805 or David Pulli, LMSW/American Cancer Society 212-237-3843

Location: Mount Sinai School of Medicine Hatch Auditorium, 1425 Madison Avenue, Guggenheim Pavillion, 2nd floor

MEN'S HEALTH SEMINARS WITH MOUNT SINAI PHYSICIANS

April 22, 6:30-7:30 pm

Registration: 6:00 pm

Speaker: Natan Bar-Chama, MD, *Director of Male Reproductive Medicine and Surgery*

Topic: Erectile Dysfunction Treatment Options When Medications Don't Work

Location: Seminar Room, East Building, 1425 Madison Avenue

RSVP: Telephone (1) 877-433-2873

June 23, 6:30-7:30 pm

Registration: 6:00 pm

Speakers: Natan Bar-Chama, MD, *Director of Male Reproductive Medicine and Surgery* and

Neil H. Grafstein, MD, *Director of Reconstructive Urology, Female Urology & Voiding Dysfunction*

Topics: Erectile Dysfunction and Male Urinary Incontinence—Treatment Options When Medications Don't Work

Location: Seminar Room, East Building, 1425 Madison Avenue

RSVP: Telephone (1) 877-433-2873

CONTACT US If you have a comment about an article, or would like to see a particular topic featured in *The Deane Center Quarterly*. We'd love to hear from you. We welcome your feedback. Moving? Let us know your new address, so you don't miss an issue. Contact: Cristi Kneec, [Title? 212-241-Phone #? or cristi.kneec@mountsinai.org](mailto:cristi.kneec@mountsinai.org). The medical information in this newsletter is provided as an information resource only and is not to be used or relied on for any diagnostic or treatment purposes or as a substitute for professional diagnosis and treatment. Please consult your healthcare provider, or contact The Barbara and Maurice Deane Prostate Health and Research Center for an appointment before making any healthcare decisions or for guidance about a specific medical condition. The Barbara and Maurice Deane Prostate Health and Research Center and The Mount Sinai Medical Center expressly disclaim responsibility and shall have no liability for any damages, loss, injury, or liability whatsoever suffered as a result of your reliance on the information contained in this newsletter. The Barbara and Maurice Deane Prostate Health and Research Center and The Mount Sinai Medical Center do not endorse specifically any test, treatment, or procedure mentioned in this publication.

THE BARBARA AND MAURICE DEANE PROSTATE HEALTH AND RESEARCH CENTER

The Deane Center QUARTERLY

SPRING 2010

TODAY AT THE DEANE CENTER

PSA Blood Test: What to Do?



Simon J. Hall, MD

In March of this year, the American Cancer Society updated its prostate cancer screening guidelines, essentially saying what it has said before: that men need to understand the benefits and risks of screening for the prostate specific antigen (PSA) in order to make informed decisions about whether to be tested. The next week, Richard B. Ablin, Ph.D., the researcher who discovered PSA in 1970, published an opinion (Op Ed) piece in *The New York Times* arguing against PSA screening of "an entire population of men over 50" and maintaining that the test is "hardly more effective than a coin toss".

It's true that the PSA is not a perfect test: it does not tell us who has prostate cancer (you need a biopsy for that), only who may be at higher risk, and it can't distinguish between insignificant and deadly prostate cancers. That said, since screening began after the FDA approved the PSA test in 1994, the mortality rate from prostate cancer in the United States has significantly decreased for both Caucasian and African-American men. What's more, when prostate cancer is diagnosed as a result of PSA testing instead of via digital rectal exam as in the past, the disease is more likely to be confined to the prostate and thus successfully treated by surgery or radiation therapy. For that reason, we need to strike a balance

Continued on p.4

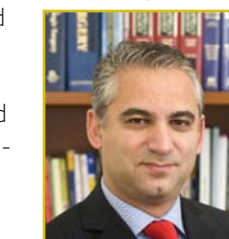
Is Robotic Prostate Cancer Surgery as Good as Open Radical Prostatectomy?

Prostate cancer surgery has been much in the news recently. At issue: whether or not relatively new, minimally invasive procedures are as good for the long-term health of patients as the conventional open operation. On the most important issue of all—cancer control—studies to date have shown that these procedures yield essentially the same results in terms of cancer recurrence. The controversy rests with which one has better "functional" outcomes in terms of incontinence and impotence as well as lower rates of post-operative complications.

Minimally invasive prostatectomy done via five or six small incisions has been rapidly growing in popularity, particularly since the advent of robotically assisted operations. According to Intuitive Surgical Inc, maker of the DaVinci robot, 86% of prostatectomies in the United States are now being performed with robotic assistance. However, some have questioned whether this new procedure measures up to the gold-standard open operation. A study to evaluate this concern was published in the October 2009 issue of the *Journal of the American Medical Association*. The investigators, led by Jim C. Hu, MD, from Brigham and Women's Hospital in Boston, looked at Medicare data to determine the outcomes of 1,938 men who had minimally invasive surgery from 2003 to 2007 compared to 6,899 men who had open surgery.

This study found that men who underwent minimally invasive procedures had shorter hospital stays, lower rates of blood transfusions and fewer respiratory and other miscellaneous surgical complications. These men were also more likely to experience incontinence and impotence in addition to other urinary complications than men in the study who had "open" prostatectomy. *The New York Times* subsequently ran a front page article reporting that nationally, prospective patients are turning down open prostate surgery and seeking out robotic surgery—a trend that the physicians quoted attributed to aggressive marketing of robot-assisted surgery by parties with a vested interest often with unsubstantiated claims of better outcomes.

Dr. David B. Samadi, Chief of the Division of Robotic and Minimally Invasive Surgery in the Department of Urology, takes issue with the findings of the study comparing minimally invasive surgery to open prostate surgery. He notes that the investigators looked at Medicare data from 2003 to 2007 in nine states (not including New York). During that period, Dr. Samadi notes, minimally invasive surgery with the aid of a robot was relatively new in the United States (it was



David Samadi, MD

Continued on page 2

Is Robotic Prostate Cancer Surgery as Good as Open Radical Prostatectomy?

Continued from page 1

introduced here in 2003) and thus many surgeons performing these procedures were still in the learning stage. What's more, the study didn't separate out robot-assisted procedures from laparoscopic minimally invasive operations, which are less popular now due to increased use of the robot.

Furthermore, the incidences of incontinence and impotence were not hugely different and were based on billing records of subsequent diagnostic or operative procedures which is not as inclusive as asking the patients directly, says Dr. Samadi. Since detailed information of the degree of pre-existing impotence or urinary problems or co-existing medical conditions

which could influence either of these problems was not collected, it is difficult to link the exact procedure to the reported outcome in a retrospective study, Dr. Samadi noted. Lost in much of the discussion is the fact that open surgery was associated with higher transfusion rates and higher rates of scarring where the bladder was sewn to the urethra in addition to other post-operative complications. So which type of surgery is best? That depends on the experience and skill of the surgeon, says Dr. Samadi. But for the record, here's a summary of what to expect:

Procedure Pros and Cons

■ **Open Surgery:** This requires an incision up to eight inches long and carries a 20–25 percent risk of blood loss that will require a transfusion. Patients can expect to spend two to three days in the hospital and to require pain medication during and after discharge from the hospital. "The issue with open surgery is that there is a lot of blood in the field," says Dr. Samadi. This means that the surgeon may not be able to see well and must use his fingers to feel his way to the prostate which is located up under the pubic bone. Nerve damage that could lead to impotence can result from the "finger dissection and blind spots" inherent in this method, said Dr. Samadi.

■ **Minimally Invasive Surgery:** These procedures, done through five or six keyhole incisions, present a much lower risk of blood loss and transfusion than open surgery. The use of a miniature camera inserted through one of the incisions provides 10 to 15 times visual magnification, allowing the surgeon to see much better than is possible with open surgery, said Dr. Samadi. Most patients can go home the following day. Following either procedure, patients will need a catheter for a week after surgery.

■ **Minimally Invasive Robot-Assisted Surgery:** There's no magic about the robot. "It's a tool operated by the surgeon," said Dr. Samadi. While the robot holds the surgical instruments, it is the surgeon sitting at a nearby console who controls what they do via hand, wrist, and finger movements. But robotic technology can pay off for the patient. First of all, it makes possible better magnification—15 times, compared to 10 times in the usual minimally invasive procedures. It also gives the surgeon a three-dimensional view and greater precision of movement inside the incision. This should minimize the risk of complications and allow for a better operation.

An Informed Choice

Whatever procedure appeals most, the choice of surgeon is key, said Dr. Samadi. Patients clearly want someone who knows what he or she is doing, but may not know the right questions to ask. As far as robotic-assisted surgery is concerned, the learning curve is steep, 300 cases, says Dr. Samadi, adding that "it's reasonable for a surgeon to do five to 10 of these operations a week." A very high volume of surgery suggests that the surgeon may not be doing all the procedures himself.

In general, when choosing a surgeon, ask what training he or she has received, including specialized oncological training, ask how long he or she has been in practice and how often the surgeon has been performing the operation—the more experience the better. In addition, it's a good idea to talk to patients who have had the procedure you're contemplating. Ask about the overall experience and about how accessible the surgeon and his or her team are before and after the operation. The more you know beforehand, the more comfortable and confident you're likely to be with your treatment. Adds Dr. Simon J. Hall, Director of The Deane Center, it is the training and experience of the urologist which counts the most and not so much the surgical technique itself. There are advantages and trade offs to each which the patient must take into account before making a final choice. ■



Dr. Samadi at the robot controls

After Prostate Removal: The Incontinence Story

New and Better Treatment... for Those Who Need It

It's true that after surgery to remove the prostate, many men will experience some incontinence. Fortunately, most recover on their own within six months to a year. "Incontinence after surgery doesn't suggest that prostate cancer is advanced or has spread. Although we cannot always determine why it occurs nor predict who will suffer from it. Incontinence results when the sphincter muscle used to control urine flow is compromised by the surgery," says the Deane Center's Neil Grafstein, MD, Director of Reconstructive Urology, Female Urology & Voiding Dysfunction. The treatment of post-prostatectomy



incontinence is a major focus of Dr. Grafstein's clinical practice and research.

"By six months after surgery, the sphincter recovers its function and most men will no longer be bothered by urinary leakage," explains Dr. Grafstein; many other patients with mild or moderate leakage will improve within the following six months. For that reason, treatment for post-prostatectomy incontinence usually isn't considered until a year after surgery, although in severe cases earlier treatment may be recommended.

Fortunately, highly effective, minimally invasive treatment options are now available to help men overcome post-prostatectomy incontinence.

The Male Sling

This latest approach was introduced four years ago and has come into widespread use only within the last two years. The sling is a piece of synthetic tape that pulls the sphincter back toward the natural position it was in before the surgery. "Prior to surgery, the prostate, via its bony attachments, keeps the sphincter muscle fixed in place behind the pubic bone. Once the prostate is removed, the sphincter can move from its proper position" leading to incontinence, explains Dr. Grafstein. The purpose of the sling is to reposition and secure the sphincter muscle back to its original position, and allow men to regain urinary control.

Incontinence results when the sphincter muscle used to control urine flow is compromised by the surgery.

The minimally invasive surgery needed to insert the sling usually is an outpatient procedure that takes about a half an hour. It is done under anesthesia. The surgery itself involves making a small incision in the skin behind the scrotum and two small needle-size entry points in the inner thigh so that the sling can be fixed in place, Dr. Grafstein explains.

Not all men with post-prostatectomy incontinence are candidates for this new treatment. The ideal candidate is a man whose sphincter muscle and urethra look healthy and anatomically intact upon examination—in other words, not scarred, says Dr. Grafstein. Putting a scarred, unhealthy sphincter back in place wouldn't do any good because of the condition of the sphincter, he explained. With the ideal candidate, Dr. Grafstein estimates that the sling has a treatment success rate of 85 to 90 percent.

Artificial Sphincter

Before the male sling, there was the artificial urinary sphincter (AUS), a time-tested device that has been used for more than 25 years on more than 100,000 men. Made of a silicon rubber material the AUS is placed completely in the body and wraps around the urethra, not unlike the way a blood pressure cuff wraps around the arm. Pressure from the cuff keeps the urethra closed so that urine doesn't flow out until the pressure is released by gently squeezing an implanted pump hidden in the scrotum.

Surgery to implant the AUS usually is done on an outpatient basis and takes about 90 minutes. A general or spinal anesthetic is used. The surgery itself requires two small incisions, one behind the scrotum and the other in the groin. Complications are uncommon at the Deane Center, Dr. Grafstein says, but those that occur are the usual risks of surgery—bleeding, infection and pain. In about two percent of all cases, the AUS, once in place, can become infected and must be removed (but can often be replaced later). In about three percent of all cases, the AUS erodes into the urine tube and must be removed on an emergency basis (but can be often be replaced).

Today at The Deane Center

Continued from page 1

Perhaps the biggest disadvantage of the AUS is that over time it will stop working and must be replaced. On average, this happens within 10 years after it was implanted.

Most men can resume their daily activities in five to seven days after the procedure and return to work in a week or two, although it's best to postpone exercise and heavy lifting for at least a month. During a follow up appointment four to six weeks after surgery the AUS is activated and patients are taught to use it. Until then, men must continue wearing pads to deal with urinary leakage. ■

Non-Surgical Options

While the male sling and the artificial urinary sphincter are the most effective treatments for post-prostatectomy incontinence, the following options may be helpful in some cases:

■ **Exercises:** Pelvic floor or "Kegel" exercises may help speed the return of urinary control after surgery but aren't likely to be helpful for persistent incontinence. These are designed to strengthen the pubococcygeus muscle—the one you tighten to stop the flow of urine. Essentially, all that's involved is squeezing the muscle, holding for 10 seconds and releasing.

■ **Medication:** If incontinence is due to an overactive bladder rather than a weakened or damaged sphincter, medication may be helpful. Although there are no FDA approved drugs for post-prostatectomy incontinence, certain drugs (imipramine, Cymbalta) may help in mild cases, Dr. Grafstein said, adding that "in general, treatment with medication is not highly successful."

■ **Urethral bulking agents:** Through a cystoscope, agents can be injected into the urethra to "bulk-up" a poorly functioning sphincter muscle. It is a procedure performed without general anesthesia and is incisionless. However, success rates are extremely low compared to the sling and AUS. Furthermore, multiple courses of injections are often required.

between concerns that PSA testing may lead to over-diagnosis and over-treatment and the fact that 30,000 men in the United States still die from this disease every year.

Much of the current controversy about PSA testing stems from the results of two large studies published last year. One, known as the U.S. Prostate, Lung, Colorectal and Ovarian Cancer Screening Trial, did not show a survival advantage for men screened versus the men who were not screened. However, it was clear that this was not truly a screened v. non-screened trial since most of the "non-screened" men had had prior PSA tests. Furthermore, this study revealed very similar numbers of cancers diagnosed in both groups of men. That wouldn't be the case in a comparison of men who had been screened and men who never had been. I and other investigators believe that this study is flawed because it included men who had previously had PSA screening in the past and for that reason will never answer the question of whether PSA screening is worthwhile.

The other study, from Europe, was a randomized trial of prostate cancer screening. It did demonstrate a significant survival advantage and a reduced death rate of 20 percent for men who were screened compared to those who were not. As one would expect, there were twice the number of cancers in the screened versus the non-screened group because the unscreened group may have had an equivalent number of cancers that were undetectable without screening. This study also found that many men who are diagnosed and treated will never die from prostate cancer for one of two reasons:

- Some of the cancers found were so small and so slow-growing that they required only observation and may never need treatment; or
- Regardless of how aggressive their prostate cancer may be, some men won't live long enough to benefit from treatment and will die from other causes.

Over time, the European investigators expect to see a further enhancement in survival between the men diagnosed in the screening group versus the non-screened group, especially in men who were younger at diagnosis, since these men will live longer than the older patients and thus are more likely to benefit from treatment. Eventually, this study will most likely generate guidelines on the age at which we can stop screening men, undoubtedly earlier than we do at this time.

I still recommend that men concerned about prostate cancer have annual PSA tests. If an abnormality shows up (or is found via a digital rectal exam) in a man who has a life expectancy of at least 10 years, the only way to definitively diagnose—or rule out—cancer is with a biopsy. If cancer is found, the patient, his family and physician need to discuss treatment versus non-treatment with a clear understanding of the risks and benefits.

I wish we had a better method of screening men for prostate cancer, but I'm confident that within the next few years we will. The science of diagnosis and prognostication of prostate cancer is advancing rapidly. Soon new tests will allow us to more reliably determine the risk of cancer and perhaps equip us to distinguish non-lethal from lethal disease. Then, we'll be better able to make more specific recommendations for screening, diagnosis and treatment of individual patients. For the present, however, the PSA test is the best tool we have. ■

Simon J. Hall, MD
Kyung Hyun Kim, MD Chair in Urology
Chairman, Department of Urology
Director, Deane Prostate Health and Research Center