Prostate Insights

Prostate Cancer Research Institute | The Latest Developments in Prostate Cancer Care

November 2015, Is. 18 Vol. 4

MOYAD & SCHOLZ

2016

MID-YEAR UPDATE

See Pg. 18

EDITORIAL

Peter Scholz,
PCRI Creative Director

Greetings Researcher! We are proud to bring you the November Issue of *Prostate Insights*. It has been a great year for PCRI, and we owe it all to your support and partnership with us.

The 2015 Prostate Cancer Conference was our best yet, and brought more than 800 patients, caregivers, physicians, support groups, and industry partners to the Los Angeles Airport Marriott in California. Later in this issue you can find a recap with photos and a summary of the conference. Thank you to everyone who attended for making this such a special event.

There is a lot of buzz surrounding testosterone replacement, and especially how it affects men who have been diagnosed and/or treated for prostate cancer. Jeff Turner, MD, from Prostate Oncology Specialists, discusses this topic and shares his extensive experience as to when it is appropriate to supplement testosterone, and when it poses more of a risk than a benefit.

Another hot topic is multiparametric MRI. We asked Daniel Margolis, MD, an expert from UCLA on prostate MRI, and a speaker at our 2015 Conference, for a definitive guide on mp-MRI.

Our board member, Harry Hathaway, Esq, will share his own personal experience with prostate cancer, and his thoughts on the value of unbiased information. He explains how your support can change men's lives for the better.

We are excited to introduce our new Helpline Facilitator, Charles Kokaska, PhD. You can read about him in the Helpline Corner of this issue.

Finally, we are preparing for our 2016 Mid-Year Update with Drs. Scholz and Moyad. You can find information about this event at the end of this issue. As always, I hope that you learn something from reading *Prostate Insights*, and get clarity in areas where there is confusion. Thank you for partnering with us.

Prostate Cancer Research Institute
5777 W. Century Blvd., Suite 800
Los Angeles, CA 90045
Phone: 310.743.2116 | **Fax:** 310.743.2113
Helpline: 800.641.PCRI (7274)
E-mail: info@pcri.org
Website: www.PCRI.org

Editorial Staff

Editor:
Peter Scholz

Medical Review Board:
Duke K. Bahn, MD
Stanley A. Brosman, MD
Arthur N. Lurvey, MD
Mark C. Scholz, MD
Michael L. Steinberg, MD

Board of Directors

Chester A. Swenson, ***President, Chairman***
Business Consultant/Entrepreneur

Michael L. Steinberg, MD, ***Vice President***
Professor and Chair, Department of Radiation Oncology, David Geffen School of Medicine

Harry L. Hathaway, Esq, ***Secretary***
Of Councel, Norton Rose Fulbright US LLP

Mark C. Scholz, MD, ***Executive Director/Treasurer & Co-Founder***
Medical Director, Prostate Oncology Specialists

Duke K. Bahn, MD
Director, Prostate Institute of America

Stanley A. Brosman, MD
Medical Director, Pacific Urology Institute

Scott M. Cohen
Chief Executive Officer, 180Fusion

Arthur N. Lurvey, MD, FACP, FACE
Contract Medical Director, JE

Jerry E. Peters
Composer, MCG Records

Claudia B. Sangster, Esq
Director, Family Education and Governance

Jerome S. Seliger, PhD
Professor of Health Administration, California State University, Northridge

PROSTATE CANCER RESEARCH INSTITUTE
Helping Men Research Their Options

©2015 Prostate Cancer Research Institute, All Rights Reserved.

Table of Contents

Is Testosterone The New Therapy for Prostate Cancer?

Jeffrey Turner, MD, Prostate Oncology Specialists, Marina del Rey, California

A board-certified internist and medical oncologist, Jeffrey Turner, MD, may have the most extensive experience administering testosterone to men with prostate cancer. Testosterone deprivation has been a mainstay in prostate cancer therapy for decades. In men whose cancer is under control, testosterone deficiency may need to be addressed with replacement. This article will also explore the far more controversial topic of using testosterone to treat prostate cancer, an area where Dr. Turner's experience is unmatched.

Low testosterone ("Low T") or hypogonadism is typically encountered by men when they arrive at middle or late stages of life. The symptoms are increased body fat, weight gain, low sex drive, fatigue, anemia, depression, poor memory, osteoporosis, and a higher risk of diabetes. The first step when considering whether testosterone replacement is appropriate is to determine if the cause is primary or secondary. "Primary hypogonadism" is when the testicles themselves fail to produce adequate amounts of testosterone. "Secondary hypogonadism" occurs when the pituitary gland stops producing sufficient amounts of LH (leutinizing hormone), the hormonal factor that stimulates the testicles to produce testosterone.

When a diagnosis of primary hypogonadism is made, direct replacement with testosterone is a reasonable course of action. In secondary hypogonadism, men can take medications, such as Clomid, which work by stimulating the pituitary gland to produce more LH, which in turn stimulates increased production of testosterone from the testicles.

Why do we care about the specific methodology of increasing testosterone? Because long-term testosterone replacement can further suppress any residual testosterone production from the testicles causing testicular atrophy. By stimulating natural production with Clomid, the functionality of the testicles is maintained in a natural state.

Even though testosterone is a natural hormone, supplementation or replacement is not completely free of potential side effects. Higher testosterone levels can enlarge the prostate, cause balding, acne, fluid retention, breast enlargement, testicular atro-

Continued »

Continued

If you've spent time perusing the internet or television, you must have noticed the ads of Dr. Jeffrey Life, the physician in his 70's who has a body that rivals those seen in FLEX magazine. Advertising sells, so the attraction to using testosterone has been growing. Constant media exposure to testosterone continues to stir up interest, whether you're visualizing a career in the NFL or Hugh Hefner looking for limitless libido to keep up with the Playboy Playmate of the month. Judging by all the excitement, "low T" has reached almost epidemic proportions and many men are seeking ways to increase their testosterone levels.

phy, emotional lability, decreased sperm count, and an excess of red blood cells. Due to this latter factor of increased red cell production, there is even a potential risk of heart attack and stroke if men who are treated with testosterone fail to be monitored.

For those who have prostate cancer or a history of prostate cancer, the use of testosterone is even more controversial. Historically, more than 99% of physicians would never consider supplementing a patient who has ever been diagnosed with prostate cancer in the past. This is because most doctors believe that testosterone will fuel prostate cancer growth. This association between testosterone and prostate cancer growth was documented back in 1941 by urologist Dr. Charles Huggins.

There is, however, no concrete evidence whatsoever that testosterone causes prostate cancer though it is clear that testosterone can stimulate existing prostate cancer cells to grow. The take home message, therefore, is that men who appear to have been cured of prostate cancer can indeed consider taking testosterone without concern that it will induce new tumors. There is currently a wealth of studies (including randomized controlled trials) in patients who have been treated with surgery or radiation who went on to use testosterone replacement without any evidence of higher relapse rates. This is, of course, a very different scenario from patients who have existing cancers, especially those who have aggressive, widespread, and castrate-resistant disease. Potentially such individuals could be harmed by taking testosterone.

"Men who appear to have been cured of prostate cancer can indeed consider taking testosterone without concern that it will induce new tumors."

Despite historical evidence indicating that testosterone is universally bad for men with active cancers, some avant-garde researchers have been hypothesizing that testosterone administration to castrate-resistant patients may help in restoring hormone-sensitivity and thus aid in transforming bad cancers into a less aggressive phenotype. The emergence of something termed "Bipolar Androgen Therapy" has now surfaced. Bipolar therapy is the concept of rapid cycling between high blood levels of testosterone and low blood levels of testosterone using hormone blockade and testosterone supplementation in a cyclical fashion. Preliminary studies done on tissue cultures in the lab have demonstrated that in certain cases high doses of testosterone do cause suppression of prostate cancer cell growth, whereas normal doses of testosterone stimulate cell growth. This concept that high dose testosterone may suppress cancer growth has been tested in men with prostate cancer in very small, retrospective studies. In one study, for example, that evaluated giving large doses of testosterone on a cyclical

basis to 10 men with metastatic castrate-resistant prostate cancer resulted in lower PSA levels and radiologic evidence of tumor shrinkage.

These findings mirror my own experience using high-dose testosterone to treat men with prostate cancer. On a number of occasions, I have certainly used both standard doses of testosterone and high doses of testosterone to treat prostate cancer patients. What I have found is that it is much safer to use testosterone in patients who are in remission after treatment with previous surgery or radiation. Supplementing castrate-resistant men with high doses of testosterone is a much riskier proposition. Even so, I have indeed seen rare cases where men with castrate-resistant prostate cancer have been able to cycle between hormone blockade and testosterone replacement and keep their disease in check for over 10 years without developing radiologic progression of their disease. Unfortunately, for every one of these success stories, I have encountered far more cases where the disease not only failed to respond but the cancer appeared to progress more rapidly due to the high doses of testosterone.

So in my judgement, using high-dose testosterone in men who are hormone resistant is a RISKY proposition. What I believe is particularly inappropriate is administering testosterone to men with large tumors in the prostate or who have metastases in the spine. Such men risk catastrophic events such as urinary obstruction, spinal cord compression and paraplegia/quadriplegia due to progression of disease. Most of the men who I have treated with metastatic castrate-resistant disease first underwent aggressive cancer debulking with hormone blockade and chemotherapy. But even with this aggressive preparatory protocol, the results were discouraging in the vast majority. Men would typically develop a relatively rapid rise in PSA and manifest radiologic progression quickly, prompting a return to aggressive therapy with chemo and hormone blockade. It is true that a small minority of men with high-risk prostate cancer seemed to have their disease suppressed for a longer duration of time with high doses of testosterone. However, I found it to be impossible to determine in advance who might benefit and who would end up with rapid disease progression.

In conclusion, testosterone replacement is a viable option for prostate cancer patients who are suffering from the symptoms of low testosterone, as long as they are monitored closely. Monitoring should include regular PSA testing, digital rectal examination, and ideally prostate imaging such as color Doppler ultrasound or multiparametric MRI. Patients need to be fully informed regarding all the potential risks. In my experience, testosterone replacement is quite safe in low-risk patients who have undergone adequate local therapy and are considered to be in remission. Testosterone replacement in men with more advanced cases with metastatic castrate-resistance disease is far more risky. Further studies to evaluate testosterone in this role are ongoing. For the present, I recommend patients exhibit cautious skepticism before embarking on such a treatment outside of a clinical trial as the risks may certainly outweigh the benefits.

Everything You Need to Know about Prostate MRI

Daniel Margolis, MD, University of California, Los Angeles

The diagnosis of prostate cancer is straightforward. However characterizing it—what kind of prostate cancer—is crucial to disease management. The PSA blood test is a validated screening tool, but can neither prove the presence of cancer in the prostate nor accurately determine how much or how aggressive it is. New tests, such as Opko 4K can better determine who is likely to have significant cancer, which may help identify which men need a biopsy, and which men do not. However, random biopsy remains the standard of prostate cancer diagnosis, despite the limitations of potentially missing the worst part of the disease and not being able to determine if it has spread outside of the prostate. Prostate MRI holds the promise of improving not only the characterization of prostate cancer, but improving biopsy diagnosis.

Editor's note: This article is an excerpt from the upcomming book "The Five Shades of Blue" authored by Dr. Mark Scholz, and various other authors.

Daniel Margolis, MD

Magnetic resonance imaging, or MRI, uses powerful magnetic fields to generate images of the human body. Nearly any tissue can be characterized by MRI. It uses no ionizing radiation (unlike X-rays, CT scans, or nuclear medicine) and is completely safe except for patients who have certain types of metal implanted in their bodies. The main drawback to MRI compared to CT scans is that it takes longer (on the order of 30 minutes to an hour) and generally only evaluates the pelvis, unlike PET or nuclear medicine bone scans, although there is research in the use of MRI to screen the entire body for cancer, just like a PET scan.

Mp-MRI of the prostate uses different parameters to characterize cancer, thus the term "multiparametric MRI" or "mp-MRI." Standard tissue contrast images are generated on T1 and T2-weighted imaging. These images cannot discriminate cancer from benign changes, but have the highest spatial resolution and are the best for delineating the prostate capsule. Therefore, they are used to determine if prostate cancer is confined to the prostate or not. Diffusion-weighted imaging (DWI), along with the accompanying apparent diffusion coefficient (ADC) map, measure Brownian free water motion, and therefore the degree of cellular density and disorder. This has been shown to be the best measure of the aggressiveness of prostate cancer, but it is much lower in resolution compared with T2-weighted imaging. Although it correlates well with grade of cancer, it is not as accurate to estimate the stage of cancer compared to T2-weighted imaging. Blood flow is disordered in most tumors and some other conditions. Dynamic contrast enhanced (DCE) perfusion imaging uses continuously acquired images of the prostate during intravenous

injection of a contrast dye containing gadolinium—a rare earth element—to map blood flow. Although it is not as accurate as T2-weighted images or DWI in the detection of significant cancer, it is a valuable adjunct in problem cases, and is invaluable for characterizing the prostate after therapy (including hormonal and radiation treatment). Spectroscopic imaging can measure the concentrations of specific chemicals in the category of "metabolites" and can be especially useful in problem cases. However, the procedure takes the longest, requires the use of an endorectal coil (a small probe in the rectum), and may result in additional costs.

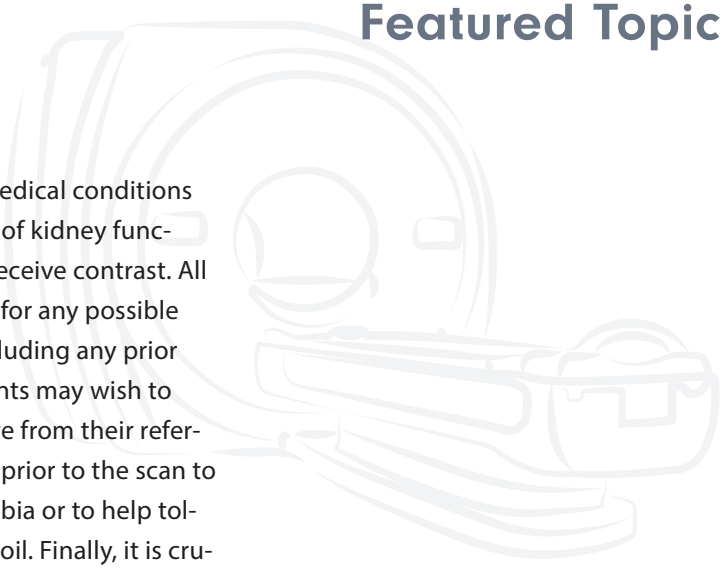
Prostate MRI can be tweaked to address specific clinical scenarios in the face of an elevated PSA and negative biopsies, or for active surveillance, where the main question is whether the prostate harbors any significant cancer. A limited scan of just the prostate, without an endorectal coil, can take just half an hour (or less, depending on the facility). For radiation planning, one may want to add in the rest of the pelvis and maybe the abdomen to the scope of the scan. Surgical planning may require the use of an endorectal coil to better visualize the lining of the prostate which helps the surgeon determine whether it is safe to spare one or both nerve bundles that run alongside the prostate.

There is some preparation for prostate MRI. Patients with a history of kidney or heart disease, diabetes, high blood pressure, or some other medical conditions will need a blood test of kidney function before they can receive contrast. All patients are screened for any possible metal in the body, including any prior surgeries. Some patients may wish to request a mild sedative from their referring physician to take prior to the scan to help with claustrophobia or to help tolerate the endorectal coil. Finally, it is crucial that all patients empty the rectum prior to scanning. This is imperative for an endorectal coil, but just as important for other scans, because gas or stool in the rectum distorts the magnetic field and can compromise image quality.

MRI for Targeted Biopsy Planning

One of the most important contributions of prostate MRI is that unlike other tests to determine whether cancer is clinically significant, such as PCA3, PHI, or Oncotype DX, prostate MRI can additionally determine the cancer's location. Prostate MRI provides a 3-dimensional image of the prostate to give physicians a sense of where the suspicious areas are, how suspicious they are, and the extent of the suspicious area. This means that, rather than systematically sampling evenly-spaced areas in the prostate hoping to find cancer, the most suspicious area can be pinpointed. **MRI targeted biopsy has been shown to improve the likelihood of finding significant cancer when it exists and provides increased confidence that no significant cancer will be overlooked for men on active surveillance.**

Continued on pg. 16



Help us spread the word about mp-MRI for prostate cancer. Visit **www.pcri.org** to donate to our MRI awareness campaign!

"If you want to make a substantial contribution to medicine for this decade and maybe for the century, address yourself to the problem of imaging cancer within the prostate gland."

-Patrick Walsh, 2008 American Urological Society Whitmore Lecture, Chicago, IL

Thank you to everyone who made this conference the best one yet!

The 2015 Conference Recap

The Annual Prostate Cancer Conference is a unique event where patients gather and learn about the latest advancements in the prostate cancer world. Patients also have access to general prostate cancer information and are presented with various resources. These include leading doctors, fellow patients, support groups, and industry partners.

Thanks to your support, the 2015 Prostate Cancer Conference was our best one yet! Our speakers delivered phenominal presentations, and patients were intently engaged in the support groups and various breakout sessions. Overall, we believe it was the best experience we have created for our attendees so far. Over 800 attended; patients, caregivers, support groups, industry partners, and doctors came from across the nation (and some internationally!) to be a part of the 2015 Conference experience. Everyone who attended synergistically created a spirit of collaboration and hope.

The conference embodies our belief that the best care, and empowerment come about when there is a free flow of conversation between doctors and patients. At the conference, we take this further by bringing in support groups and industry partners, who can provide unique information which cannot be found elsewhere. To ensure that the information was understandable to patients, Mark Moyad, MD, the conference moderator posed poignant questions to the speakers during the second half of their presentations. This collaboration was especially pronounced during the smaller, more intimate Q&A sessions that followed each speakers' presentation.

2015 PROSTATE CANCER CONFERENCE

Moyad and Scholz at the Conference

In addition to our regular presentations, Q&A sessions, breakout sessions, and support groups, we added a *New Technologies Workshop* to our lineup. A big part of the conference, and one reason that brings people back every year, is that we present the newest developments and technologies every year. To build on this, on Friday afternoon, Mark Scholz, MD, moderated as industry partners presented information about the new genomic tests available. After the individual presentations, the presenters answered questions from the audience.

"The conference embodies our belief that the best care, hope and empowerment come about when there is a free flow of conversation, and interaction between doctors and patients."

Subsequently, members of our helpline staff answered questions in a panel format. The subject matter primarily focused on the doctor patient relationship and covered key concepts about getting the most from your interactions with your doctor. After this, patients gathered in the Champions bar next door to rub elbows with the other attendees.

On Saturday, **Tomasz Beer, MD,** from the University of Oregon, provided an update on the two new hormonal agents, Zytiga and Xtandi. He reviewed the present thinking on treatment sequencing for men who become resistant to Lupron.

Charles Drake, **MD,** from Johns Hopkins, a preeminent expert on immune therapy for prostate cancer, presented exciting data on how many of the new immune drugs work synergistically when given in combination.

Peter Grimm, DO, often called "The Father of Seed Implant Therapy," delivered a candid overview of radiation therapy, emphasizing the improved cure rates

and reduced toxicity of seed implant therapy. He also spoke on how increased financial incentives to do IMRT, Proton therapy and SBRT, can distort the decision making process.

Daniel Margolis, MD, an expert on prostate imaging from UCLA, presented information on 3-Telsa, multiparametric MRI's capability as a substitute for random needle biopsy in men with elevated PSA who have never been previously diagnosed with prostate cancer.

John Mulhall, MD, the preeminent expert on sexuality and prostate cancer from Memorial Sloan Kettering, emphasized mindfulness in the selection of treatment. He stressed that it is better to minimize damage by selecting the least toxic form of prostate cancer treatment than trying to fix an already established problem.

Fabio Almeida, MD, spoke on behalf of Dr. William Oh about a form of injectable radiation called Xofigo. He presented a notable case of a patient from his clinic who received Xofigo and experienced almost total remission of his bone disease.

Matthew Cooperberg, MD, from UCSF spoke on several important themes. He presented new findings that show that the pool of men who can consider active surveillance is expanding. Previously only men in the low-risk category were considered good candidates for active surveillance. Presently, even men with favorable types of intermediate-risk disease can consider active surveillance.

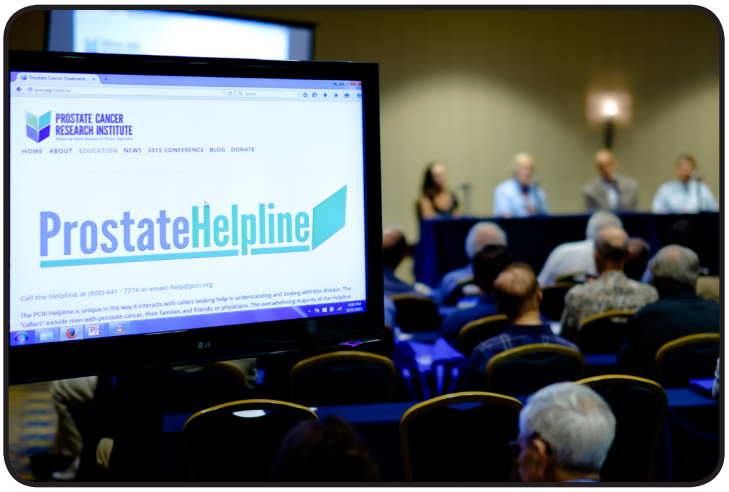
Advanced Cancer Support Group at the 2015 Conference with Malecare's Joel Nowak, the recipient of the 2014 Harry Pinchot Award

Final Thoughts:

By connecting with other patients, doctors, support groups, and industry partners, attendees were able to enjoy a full featured collaborative learning experience at the 2015 Conference. We look forward to seeing you at a future PCRI event.

DVDs which include all the presentations and Q&A sessions from the 2015 Conference, will be available soon. For more information, visit www.pcri.org.

New Technologies Workshop



Helpline Panel

2015 Harry Pinchot Awardee Russ Thomas from Prostate Forum of Orange County

Dr. Margolis During his Q&A Session

Saturday Evening Gala Dinner with the Steve McCann Jazz Band

Sunday Ask The Experts Breakout Sessions

A Better Outcome

Dear Friend and PCRI Supporter,

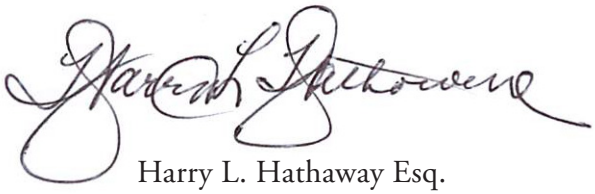
I am a prostate cancer survivor. I feel very fortunate to have been spared the pain and damage of surgery.

When first diagnosed at a well-known cancer hospital, I was advised to undergo immediate surgical removal. This recommendation was the culmination of many previously painful and fruitless biopsies. Then I found PCRI through a referral from a friend. The PCRI directed me to a variety of different options available for treatment. My subsequent research soon revealed that many physicians have inherent biases, each pushing a treatment related to their specialty, whether it be surgery, radiation or some other form of treatment. While many of my friends who had been diagnosed with prostate cancer had accepted the advice of the first physician they contacted (many had surgery), I explored in depth the educational materials offered by PCRI and experienced a far better outcome.

Today, I am cancer free with all of my faculties, without having undergone the risks of surgical removal of the prostate as was initially recommended to me. I am convinced that all of the resources made available to me by PCRI set me on the correct path by leading me to the treatments which have provided me with a better long term quality of life than I might have otherwise experienced.

Please avail yourself of the rich resources provided by the Prostate Cancer Research Institute. Also, like I do, please support the PCRI with a generous tax-deductible contribution that will help fight prostate cancer through education and awareness about the many available treatment options. The foundation of knowledge afforded me by PCRI gave me the power to effectively fight my cancer the right way! Help us do the same for more men like me.

Sincerely,



Harry L. Hathaway Esq.
Secretary, PCRI Board of Directors

Helpline Corner:
Introducing Charles Kokaska, PhD

We are proud to welcome our newest helpline facilitator Charles Kokaska, PhD. Chuck was diagnosed with prostate cancer in 2001 and his own journey has led to personal experience with various aspects of prostate cancer care, from treatments to side effects. He is a leader of the UsTOO Support Group in Long Beach, California. An active member of the prostate cancer community, he is always helping men to and learn about their disease and supporting them through their own journey.

Chuck is a retired university professor and academician. He taught primarily at Cal State University, Long Beach for more than 30 years specializing in teaching about the development and education of persons with learning disabilities. His lighthearted spirit, dry humor, and particularly his extensive involvement in the prostate cancer community is a great addition to our team. We are excited to have him on board.

The PCRI Helpline is staffed by patients, and advocates, not doctors. They understand the needs of prostate cancer patients and are directly involved with the community. They are equiped with resources and training from recognized doctors and they are available to help you along your journey. Working with a helpline facilitator can enable you to have better and more productive interactions with your healthcare professionals.

Call the PCRI Helpline at 800.641.PCRI (7274)

ProstateHelpline

Everything You Need to Know about Prostate MRI, Continued from Pg. 9

Types of Targeted Biopsy

There are three main kinds of targeted biopsy. The oldest, and simplest, but with the greatest risk of mis-targeting, is known as "cognitive fusion." This method consists of reviewing the MRI to get a sense of where the cancer is, and then using landmarks in the prostate to find the same area with ultrasound. The advantage is that no specialized software or hardware is needed, so there is no additional expense. However, it is the most demanding of the "operator," or physician performing the biopsy. He or she must be familiar with prostate anatomy and landmarks on both MRI and ultrasound, and be able to mentally compensate for differences in orientation and compression. Additionally, some landmarks, and many tumors, are invisible on ultrasound, so small tumors far away from the rectum can be difficult to target with this method. One scientific study found that for tumors invisible on ultrasound, nearly a quarter of targeted biopsies were off by more than 3 mm.

The most common form of targeted biopsy, which is rapidly gaining popularity, is software and hardware image fusion targeted biopsy. There are at least 6 separate systems available for image fusion targeted biopsy, each with its own respective strengths and challenges. Because this is an area undergoing rapid development, by the time one of the systems is validated, it is close to being outdated with the rapid deployment of upgrades in software and hardware. Therefore, the "best" system is generally the one that the operator feels most comfortable with. These systems have the benefit that a complex algorithm can fuse the location and shape of the prostate on ultrasound with that from MRI, and compensate for changes in orientation and compression. However, it relies on some statistical assumptions of how the prostate changes from the MRI to the ultrasound based on the position of the patient and the ultrasound probe. It also relies on the expertise of both the radiologist to identify and outline the correct target, and the ultrasound operator to segment the prostate and target the same area. When the system fails, he or she can always fall back to "cognitive fusion," but the cases where this is necessary are often the hardest cases to target.

The least common method, the most expensive, and most technically demanding, is also possibly the most accurate. "In-bore" MRI-guided biopsy, where a patient lies face-down in the MRI scanner with a needle guide that can guide the biopsy device to the exact place found on the diagnostic scan. This is the only method when a repeat MRI can be done with the biopsy needle in place, confirming that the area is biopsied. However, it is more expensive, takes longer, and can be more uncomfortable. Also, the systematic biopsies are generally not done with this technique. Finally, no head-to-head comparisons yet exist to prove that this is more accurate than image fusion or even cognitive fusion targeted biopsy.

The best targeted biopsy technique varies based on the clinical scenario. For a large tumor in the posterior prostate, near the rectum, any of the techniques would likely work well, so cognitive or image fusion biopsy probably makes the most sense. For a small tumor in the anterior of an enlarged prostate, the in-bore technique probably holds the greatest likelihood to characterize the tumor accurately.

Targeted Biopsy for Patient Management

Targeted biopsy can be used in three common scenarios. The two best established areas are for men with rising PSA and prior negative systematic biopsies, and for men on active surveillance. Targeted biopsy is a newer and increasingly popular choice for men who have never had a biopsy, but want to make sure that the most suspicious area is biopsied the first time. In some countries, such as Great Britain, this last method is becoming routine, where only targets are biopsied – no systematic biopsies are done in most cases.

For men with rising PSA and prior negative systematic biopsies, targeted biopsy, in all of its varieties, has shown added value, finding cancer in somewhat more than half of all such men, although the rate of finding cancer depends on clinical factors such as number of prior biopsies, PSA or PSA density, and factors such as ethnicity, age, and diet. This is the best proven use of targeted biopsy for management of an elevated PSA.

"Targeted biopsy is a newer and increasingly popular choice for men who have never had a biopsy, but want to make sure that the most suspicious area is biopsied the first time."

For men on active surveillance, prostate MRI provides two advantages: It can find suspicious areas that might have been missed by systematic biopsies, and it provides a baseline for follow-up. Although current active surveillance strategies do not use MRI to determine whether repeat biopsies can be avoided, this concept is gaining traction. New data suggests that in a subset of men, this may be possible. Additionally, the overall assessment of suspicion—based on the standardized Prostate Imaging Reporting and Data Systems, or "PI-RADS," and other measures of prostate MRI—correlates with the likelihood that significant cancer may have been missed. This helps to stratify which patients may need targeted biopsy.

Final Thoughts

The use of MRI to screen for which men do or do not need biopsy is controversial. MRI can miss over 10% of significant cancers, although it may be that many of these are small and would typically be found during an annual screening before they would have a chance to spread. The decision to perform MRI in advance of the first systematic biopsy, and whether to perform random systematic biopsies in addition to targets, is unclear and should be part of a discussion with ones physician. ■

Announcing the second annual:

MOYAD + SCHOLZ
MID-YEAR UPDATE

3.26.2016 // Los Angeles Airport Marriott

Our spring conference

Registration is now open at $25

Space is limited, reserve your seat today!

www.pcri.org/2016-mid-year-update/

MOYAD & SCHOLZ 2016 MID-YEAR UPDATE

Featuring

- **WORLD RENOWNED PHYSICIANS**
- **THE LATEST INFORMATION ON ACTIVE SURVEILLANCE**
- **INFORMATION ABOUT THE LATEST RESEARCH IN TESTOSTERONE REPLACEMENT AND SEXUAL SIDE EFFECTS**
- **EXHIBITS FROM LEADING INDUSTRY PARTNERS**
- **EXTENDED Q&A SESSION WITH DRS. MOYAD & SCHOLZ**

Speakers and Faculty

Laurence Klotz, MD
Sunnybrook Health Sciences
The Status of Active Surveillance in 2016

Mohit Khera, MD
Baylor College of Medicine
New Approaches in the Treatment of Male and Female Dysfunction: Testosterone Therapy & Other Options

Mark Moyad, MD
University of Michigan
Health and Nutrition & Moderating Extended Q&A Session

Mark Scholz, MD
Prostate Oncology Specialists
PCRI Executive Director
Moderating Extended Q&A Session

Event Overview

The Mid-Year Update is an afternoon of lectures and Q&A's with leading doctors in the medical community. This year's conference features presentations on two of the biggest topics in prostate cancer right now: Testosterone replacement for men with prostate cancer and active surveillance for men with low and intermediate-risk disease. Mohit Khera, MD, is a recognized expert in the field of testosterone replacement and management of sexual side effects of treatment. We are proud to welcome back Laurence Klotz, MD, an esteemed expert and leader in the field of active surveillance.

Mark Moyad, MD, will be moderating the Q&A sessions along with Mark Scholz, MD, PCRI's Executive Director. Don't miss the popular Extended Q&A Session with Moyad and Scholz at the end of the event. Join us at the Los Angeles Airport Marriott on March 26th for an afternoon of informative and entertaining presentations. We look forward to seeing you! Registration is now open for $25.

Register online at www.pcri.org or by calling 310.743.2116

PROSTATE CANCER RESEARCH INSTITUTE

Helping Men Research Their Options

Non-Profit Org.
U.S. Postage
PAID
BULLSEYE
MARKETING

Twitter
@PCRIProstateLA

Follow us on
Facebook

The Prostate Cancer Research Institute is a 501 (c)(3) charitable not-for-profit organization located in Los Angeles, California. Our mission is to help men research their options. We assist them with their research by disseminating information that educates and empowers. Our programs help them understand their type of prostate cancer and the best way to treat and manage it.

BEST IN AMERICA
CERTIFIED BY
INDEPENDENT CHARITIES OF AMERICA