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HELLO RESEARCHER,

This has been a great year for the prostate cancer world, with all kinds of progress being made in the diagnostic and therapeutic realm. With this issue of Prostate Insights, we are excited to announce our 2017 Prostate Cancer Conference with one of our best lineups of world-renowned doctors. These doctors and researchers will address a variety of important prostate cancer issues and a very common but often neglected problem called prostatitis. Prostatitis often happens concurrently with prostate cancer and affects the diagnosis and monitoring of the disease. Visit our website to learn more www.pcri.org/2017-conference.

At the 2016 Prostate Cancer Conference, Mark Emberton, MD, from University College London Hospitals, spoke about focal therapy. In this issue, he and Juan Gomez Rivas, MD, from La Paz University in Spain, presents an in-depth examination of High Intensity Focused Ultrasound (HIFU). They analyze its advantages, disadvantages, and the specific methodologies for how it is used. For those who are interested in pursuing HIFU as a treatment, they give practical information about the process and what to expect in terms of the short and long term side effects.

For treatment of High-Risk prostate cancer, surgery and radiation are mainstays of treatment, often in combination with other therapies, depending on the severity of each patient's case. In this issue Amar Kishan, MD, from UCLA, compares the side effects and survival outcomes between the two options.

Charles “Snuffy” Myers, an unrivaled clinical researcher, prostate cancer survivor, and medical oncologist from the American Institute for Diseases of the Prostate, describes how your support for the PCRI can make a direct, positive impact in the lives of patients and caregivers by supporting our educational programs.

The 2017 Moyad + Scholz, Mid-Year Update was an outstanding success. PCRI educational writer Alexandra “Xan” Oakley summarizes the presentations and the event overall, along with information about how to obtain a copy of the DVD.

Our hope is that Prostate Insights will help you to learn more and continue your research. I encourage you to visit our website which contains of further important information. We at the PCRI want to help you take your prostate cancer knowledge to the next level. Visit us at www.pcri.org!
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2017 Prostate Cancer Conference Information
We are excited to announce our 2017 Prostate Cancer Conference coming this September. This year’s speaker lineup will be one of our most exciting and comprehensive yet. Learn more at www.pcri.org/2017-conference.

HIFU for Localized Prostate Cancer: What Every Man Should Know
Mark Emberton, MD, & Juan Gómez Rivas, MD
High-intensity focused ultrasound (HIFU) is a non-invasive, radiation-free technique that uses heat to destroy the area of the prostate gland affected with cancer by means of a probe that gives out a beam of high-intensity focused ultrasound. Drs. Emberton and Rivas examine this novel treatment and explain both technical and practical details about HIFU.

Surgery Versus Radiation in High-Risk Prostate Cancer
By Amar U. Kishan, MD
When faced with high-risk disease, the optimal approach is pursuing a curative treatment like surgery or radiation. This article examines a study comparing cure rates between these two options. Dr. Kishan authored the largest study comparing these two options. In this article, he shares the results.

A Positive Impact
Charles "Snuffy" Myers, MD
Charles "Snuffy" Myers, MD, is a leading medical researcher who has published an unparalleled amount of medical research. He is also a prostate cancer survivor and strong advocate. In this letter, he explains how your donation to PCRI directly helps prostate cancer survivors and caregivers in the ways that they need today.

2017 Moyad + Scholz Mid-Year Update Recap
Alexandra "Xan" Oakley
Our recent Mid-Year Conference was a great success. Our Educational Writer Alexandra "Xan" Oakley recaps the topics covered by the keynote speakers. Read this article to learn how to obtain the Event DVD and see pictures from the event.

Prostate Cancer 101
PCRI Helpline Staff
PCRI has a new resource for prostate cancer patients and caregivers. In collaboration with KMI E-Learning, PCRI is proud to present our Prostate Cancer 101 Video Series available online.

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The annual PCRI Conference is a full-featured educational experience for prostate cancer patients and caregivers. The conference, which is moderated by Mark Moyad, MD, consists of keynote presentations from leading doctors, followed by live Q+A sessions. A wide range of prostate cancer topics are explored in-depth at breakout sessions and support groups which are available throughout the weekend. You can find comprehensive information about your specific type of prostate cancer and become equipped with the newest information to make the best decisions. Register today at www.pcri.org/2017-conference.

Early Bird Registration Extended! Register before July 31st For 50% off Registration

Los Angeles Airport Marriott September 8-10, 2017

A collaborative learning experience for patients + caregivers

The annual PCRI Conference is a full-featured educational experience for prostate cancer patients and caregivers. The conference, which is moderated by Mark Moyad, MD, consists of keynote presentations from leading doctors, followed by live Q+A sessions. A wide range of prostate cancer topics are explored in-depth at breakout sessions and support groups which are available throughout the weekend.

You can find comprehensive information about your specific type of prostate cancer and become equipped with the newest information to make the best decisions. Register today at www.pcri.org/2017-conference.

Speaker Lineup

- Jonathan Epstein, MD
- Charles “Snuffy” Myers, MD
- Jeffrey Demanes, MD
- John Mulhall, MD
- J. Curtis Nickel, MD
- Luke Nordquist, MD
- Mark Moyad, MD
- Mark Scholz, MD

Topics, travel info + registration at: www.pcri.org/2017-conference
FEATURED ARTICLE

WHAT IS HIFU?
High-intensity focused ultrasound (HIFU) is a non-invasive, radiation-free technique that uses heat to destroy the area of the prostate gland affected with cancer, by means of a probe that emits a beam of high-intensity focused ultrasound. It can heat small amounts of tissue to within a few millimetres of accuracy, destroying tissue only in this area. This is known as focal therapy.

More than 50,000 men around the world have been treated with focused ultrasound for prostate cancer. It is the leading clinical application of the technology. There are two focused ultrasound systems approved in the US for the ablation (destruction) of prostate tissue: SonaCare’s Sonablate and EDAP’s Focal One.

WHAT ARE THE ADVANTAGES AND DISADVANTAGES OF HIFU?

Advantages
- You only need a short hospital stay: you can usually go home on the same day as your treatment.
- The recovery time is short: usually one week.
- HIFU doesn’t involve any major surgery.
- You may be able to have HIFU again if your cancer comes back after your first HIFU treatment.
- You may also be able to have other treatments after HIFU if your cancer comes back, such as surgery or radiotherapy.

HIFU may be able to treat only the part of the prostate that contains significant areas of cancer, and therefore eliminate any active cancer tissue. These major benefits can reduce the risk of disease progression, causing fewer side effects and improving quality of life compared to radical treatments (radical prostatectomy or radiotherapy), especially regarding sexual and urinary aspects.

Disadvantages
- HIFU is only available in specialist centers or as part of a clinical trial. It might not be available in a hospital near you.
- Compared with other treatments, we don’t know as much about the risk of side effects or how well it works in the long term (after 10 years).
- As with other treatments, you may get side effects which are explained later in this article.

AM I ELIGIBLE FOR HIFU?
Criteria are different depending on patents characteristics, centers, and clinical trial involved. HIFU might be suitable for you if your cancer is contained inside your prostate (localized). It’s sometimes an option if your prostate cancer has started to break out of your prostate, or has spread to the surrounding area (locally advanced prostate cancer). It’s not an option if your cancer has spread outside your prostate to other parts of your body (advanced prostate cancer).
HIFU can also be used to treat cancer that has come back after radiotherapy (recurrent prostate cancer). This is called salvage HIFU. ▶


BEFORE YOUR TREATMENT
If you’re having focal HIFU, you will usually go to a screening appointment first. You’ll have a magnetic resonance imaging (MRI) scan, which produces detailed images of the prostate and shows the location of the cancer. You may also have a prostate biopsy, which shows the location of the cancer and how likely the cancer is to grow and spread outside the prostate. These tests will help your surgeon target the area of the prostate that needs to be treated.

TREATMENT STRATEGIES
Figure 1: Diagrammatic representation of focal therapy strategies. The red lesion represents clinically significant prostate cancer, and the green lesion represents clinically insignificant prostate cancer. The yellow circles represent the neurovascular bundles, and the blue rectangle represents the ablation zone. Lesion-targeted therapy is represented by (a)–(c). In (a), unifocal ablation preserves the contralateral neurovascular bundle. In (b), although clinically significant cancer is present bilaterally, one neurovascular bundle is still spared. In (c), clinically insignificant cancer near the second neurovascular bundle is not treated. Only the index lesion is treated, allowing preservation of one neurovascular bundle. In (d), an example of region-targeted therapy, hemi-ablation, is presented.

AFTER YOUR TREATMENT
You should be able to go home on the same day as your treatment. Your doctor or nurse will check that you’ve recovered from the anesthetic and are fit to go home. You may have pain in the area between your testicles and back passage, but you’ll be given pain-relieving drugs to take at home. You will also get antibiotics to prevent any possible infection, and may be given a medicine called a laxative to help you empty your bowels.

HIFU usually causes the prostate to swell initially, which can make it difficult to urinate. You’ll have a catheter to drain urine from your bladder until the swelling goes away, usually for up to a week after treatment.

TO LEARN MORE, SEE DR. MARK EMBERTON’S LECTURE IN THE 2016 PROSTATE CANCER CONFERENCE EVENT DVD. VISIT PCRI.ORG.
WHAT ARE THE SIDE EFFECTS?
Like all treatments, HIFU can cause side effects. These will affect each man differently, and you might not get all of them. The most common side effects are urinary problems. You're more likely to get side effects if you have more than one HIFU treatment or if you've had other treatments for prostate cancer before HIFU. This is because your first treatment may have already damaged the area around your prostate. Less of the healthy tissue is damaged during focal HIFU than whole-prostate HIFU, so some experts believe it may cause fewer side effects than whole-prostate HIFU. But we need more research before we know if there is a difference in the risk of side effects. These can develop soon after your treatment and may include:

- Blood or tissue in your urine
- Urinary infections
- Urinary retention
- Testicle infections
- An opening between the back passage and the urethra (rectal fistula), This is uncommon, (occurs in 1/800 cases).

You will have check-ups with your doctor or nurse at the hospital. This is often called follow-up. The aim is to:

- Check how your cancer has responded to treatment
- Deal with any side effects of treatment
- Give you a chance to raise any concerns or ask any questions

You will have PSA tests every three to six months for the first few years to check how well the HIFU has worked. You may also have a prostate biopsy or MRI scan after treatment to ensure your prostate cancer has been treated.

If you have focal HIFU, you might have low-risk cancer in another area of the prostate that is not treated on purpose. You will have regular tests to monitor the cancer that is not treated. These might include PSA tests, MRI scans, and prostate biopsies. A continuous rise in your PSA level can be a sign that the cancer has come back. If your cancer does come back, your doctor or nurse will talk with you about further treatment options. You might also have other tests, such as a CT scan, MRI scan, or bone scan, to see if the cancer has spread to other parts of your body. ▲

Mark Emberton, MD, presenting at the 2016 Prostate Cancer Conference
INTRODUCTION
Per the NCCN guidelines, the treatment options for High-Risk prostate cancer are surgery, beam radiation, or a combination of beam radiation plus radioactive seeds. Hormonal therapy (with Lupron for example) is usually given along with the radiation for two to three years. But patients certainly wonder if one of these three treatment options is better than the other two. A study published recently in the October 2016 issue New England Journal of Medicine compared surgery and beam radiation prospectively in men with mostly Low-Risk prostate cancer. It showed equivalent survival rates. A prospective study for High-Risk prostate cancer, however, is unavailable. Only retrospective studies are available.

THE BEST COMPARATIVE STUDY FOR HIGH-RISK PROSTATE CANCER
I recently authored a study that compares surgery versus beam radiation, versus beam radiation plus radioactive seeds, in men with High-Risk prostate cancer. Specifically, only men who had Gleason 9 or 10 were included. This was a multi-institutional retrospective study. Our study, published in July 2016, in European Urology, compared three groups of men: 230 men treated with beam radiation, versus 87 men who had beam radiation plus seed radiation, versus 170 men who had surgery. The largest study previously published evaluating men with Gleason 9 or 10 only included 363 total patients (and did not focus on comparing treatments), making our study the largest of its kind to date.

ABOUT THE AUTHOR
Amar U. Kishan, MD, is an Assistant Professor-in-Residence at the University of California, Los Angeles, where he practices radiation oncology. He has specific clinical and research expertise in treating prostate cancer and other genitourinary malignancies, and is actively involved in trials investigating the role of novel radiation oncology techniques in the treatment of high-risk prostate cancer.
Our results were as follows: The estimated 10-year cure rate (judged by PSA) was 16% for surgery, versus 60% for beam radiation, versus 70% for radiation plus seeds.

VARIATIONS BETWEEN THE THREE GROUPS
The patients in our study who had surgery had a substantially more favorable clinical status compared to the other two groups: They were younger (median age of 62, versus 70), had lower PSA levels, and their disease stage was lower. It should also be noted that about half of the men initially treated with surgery subsequently underwent treatment with radiation as well. As for the two groups that underwent radiation, the duration of hormonal treatment administered to the men who had radiation plus seeds was shorter (12 months) compared to the men who had radiation alone (24 months).

WHAT DID WE FIND?
The estimated 10-year cure rate (PSA levels that continued stable at a low level) was 16% for surgery, versus 60% for beam radiation, versus 70% for radiation plus seeds. There was a trend towards better survival from cancer in the men who had radiation plus seeds. Survival was 88% with radiation plus seeds, 78% with radiation, and 80% with surgery. Patients treated with seeds had significantly fewer metastases compared to the other two groups (rates of 10% versus 39% and 33%, respectively).

SUMMARY AND FUTURE DIRECTIONS
Short to medium duration hormonal therapy with seeds, therefore, appears to offer the greatest chance of preventing metastases when compared with either RP or dose-escalated radiotherapy combined with longer duration hormonal therapy. These results are interesting, but should be interpreted realizing that our study was not a randomized trial. It is possible that factors outside our control may have influenced the results. Nevertheless, it is encouraging to note that even for this very aggressive type of prostate cancer, the 10-year survival rate from prostate cancer is over 80%. So, patients with Gleason score 9 to 10 disease should certainly pursue aggressive curative treatment. Further studies are in process. Our group has now gathered data from 10 institutions across the country to replicate this study on a larger scale. The final analysis is not complete, but preliminary analysis appears to show once again that seed implantation results in better survival than either beam radiation or surgery. ▲
Dear PCRI Supporter,

Like you, prostate cancer has majorly impacted my life. As a medical oncologist, a clinical pharmacologist, and a prostate cancer survivor, I know the critical importance of education, support, and empowerment when facing the trial of prostate cancer. The Prostate Cancer Research Institute has provided these for over 20 years, ensuring that you and your loved ones gain a clear understanding of your situation. This enables you to partner with your doctor and make informed treatment decisions.

Each year, nearly 28,000 men die from prostate cancer in the United States (that’s 76 men a day). Globally, a million men are diagnosed each year. They need guidance, accurate information, and a trusted source to rely on. They need the PCRI.

To continue their mission, PCRI needs you. Your donation keeps the PCRI Helpline operating so their facilitators can assist patients and caregivers like you, free of charge. Your donation ensures that support groups receive vital educational resources to continue the work in their communities across the United States and other countries. Your donation positively impacts the lives of the 1,000,000 people who reach out to the PCRI each year. When you donate to PCRI and become an active advocate, you ensure that men, their loved ones, and the medical community receive the aid, encouragement, education, and empowerment they critically need to keep fighting.

Donate with me today and help PCRI continue their lifesaving mission. Call 800-641-7274 or donate online at pcri.org.

Sincerely,

C. Myers

Charles “Snuffy” Myers, MD
Dear PCRI Supporter,

Sincerely,
Charles "Snuffy" Myers, MD

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Donate with me today and help PCRI continue their lifesaving mission.

Call 800-641-7274 or donate online at pcri.org.

July 2017
Charles "Snuffy" Myers, MD
Director, American Institute for Diseases of the Prostate

The 2017 Moyad + Scholz Mid-Year Update was an incredible and enlightening experience. Conferences hosted by the PCRI are created to provide education, empowerment, and support for all attendees. This year, patients and caregivers came together to learn the most recent, accurate information on prostate cancer, have the opportunity to ask questions directly to speakers, and find a peaceful environment to interact with others who understand their situation.

This conference featured Drs. Dreicer and Rossi. Robert Dreicer, MD, from Cleveland Clinic, gave an in-depth presentation on advanced prostate cancer. Carl Rossi, MD, from Scripps Proton Therapy Center, provided exceptional information on radiation therapy, proton therapy, and salvage radiation after failed radiation. Mark Scholz, MD, PCRI’s executive director and a medical oncologist, spoke on active surveillance for men with newly diagnosed prostate cancer and covered many issues that surround new diagnosis. Mark Moyad, MD, from the University of Michigan Medical Center (and PCRI’s entertainer extraordinaire), spoke about diet and nutrition and moderated all the proceedings.

The conference was filled with crucial information helpful to a broad range of prostate cancer patients. Like all of PCRI’s conferences, it also provided the additional benefit of a positive environment for attendees to find encouragement and feel free to ask questions in a safe space, a place for coming together to be mutually empowered. The eagerness to learn and the surrounding support at these conferences is a vibrant force! I can confidently speak for everyone at PCRI when I say that we are grateful to play a role in these events and to advocate for the men and caregivers we serve. For anyone who was not able to attend, you can purchase the DVD online for a donation of $50 at www.pcri.org.
Opposite, Clockwise from top: Robert Dreicer, MD, during his presentation about treatments for advanced prostate cancer | Mark Moyad, MD, and Mark Scholz, MD, Extended Q+A | Post presentation Q+A with Robert Dreicer, MD, and Mark Moyad, MD | Carl Rossi, MD delivering his presentation on radiation therapy.

Clockwise from top: Carl Rossi, MD during Q+A with Mark Moyad, MD | View from Marina del Rey Marriott | PCRI Helpline Facilitator Johnathan Levy at the PCRI Table answering questions and distributing educational materials | Mark Moyad, MD and Mark Scholz, MD, Extended Q+A | Patient and caregiver attending general session | Jonathan Levy in the Exhibit Hall | Free healthy drinks at the PCRI table donated from Suja Juice.
The Helpline is a free resource for patients and caregivers. Our Helpline staff has both first-hand experience and unrivaled knowledge learned from medical experts about all things prostate cancer. The staff can help you find the most relevant information for your personal case, and answer any questions you may have. Give them a call today!
Watch PCRI's New Prostate Cancer 101 Video Series!

Want to learn the basics of prostate cancer? We have a Prostate Cancer 101 animated video series on our website!

Prostate cancer research starts with a foundational understanding about one's medical records and the basic tests associated with prostate cancer. These videos help explain essential concepts. These videos, created in partnership with KMI E-Learning, are entertaining and easy to understand.

Video topics:
- The Gleason Score Demystified
- All About Imaging
- What's the Deal with the PSA Test?
- For the Loved Ones of Prostate Cancer Patients
- So Your PSA is High, What Now?

Watch the video series at www.pcri.org/videos
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.