Newsletter

Prostate Cancer 101, Inc.

March, 2015

The Prostate Cancer Information and Support Group of the Mid-Hudson

MRI IMPROVES PROSTATE CANCER BIOPSY ACCURACY, STUDY FINDS

New technology spots more aggressive cancer, but fewer low-risk cases

By Dennis Thompson *HealthDay Reporter*

Jan. 27, 2015 (HealthDay News) -- Prostate biopsies that combine MRI technology with ultrasound appear to give men better information regarding the seriousness of their cancer, a new study suggests.

The new technology -- which uses MRI scans to help doctors biopsy very specific portions of the prostate -- diagnosed 30 percent more high-risk cancers than standard prostate biopsies in men suspected of prostate cancer, researchers reported.

These MRI-targeted biopsies also were better at weeding out low-risk prostate cancers that would not lead to a man's death, diagnosing 17 percent fewer low-grade tumors than standard biopsy, said senior author Dr. Peter Pinto. He is head of the prostate cancer section at the U.S. National Cancer Institute's Center for Cancer Research in Bethesda, Md.

These results indicate that MRI-targeted biopsy is "a better way of biopsy that finds the aggressive tumors that need to be treated but also not finding those small microscopic low-grade tumors that are not clinically important but lead to overtreatment," Pinto said.

Findings from the study are published in the Jan. 27 *Journal of the American Medical Association*.

Doctors performing a standard biopsy use ultrasound to guide needles into a man's prostate gland, generally taking 12 core samples from predetermined sections.

The problem is, this type of biopsy can be inaccurate, said study lead author Dr. Mohummad Minhaj Siddiqui, an assistant professor of surgery at the University of Maryland School of Medicine and director of urologic robotic surgery at the University of Maryland Marlene and Stewart Greenebaum Cancer Center in Baltimore.

"Occasionally you may miss the cancer or you may glance the cancer, just get an edge of it, and then you don't know the full extent of the problem," Siddiqui said.

In a targeted biopsy, MRIs of the suspected cancer are fused with real-time ultrasound images, creating a map of the prostate that enables doctors to pinpoint and test suspicious areas.

Prostate cancer testing has become somewhat controversial in recent years, with medical experts debating whether too many men are being diagnosed and treated for tumors that would not have led to their deaths. Removal of the prostate gland can cause miserable side effects, including impotence and incontinence, according to the U.S. National Cancer Institute. But, even if a tumor isn't life-threatening, it can be psychologically difficult not to treat the tumor.

To test the effectiveness of MRI-targeted biopsy, researchers examined just over 1,000 men who were suspected of prostate cancer because of an abnormal

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blood screening or rectal exam.

The researchers performed both an MRI-targeted and a standard biopsy on all of the men, and then compared results.

Both targeted and standard biopsy diagnosed a similar number of cancer cases, and 69 percent of the time both types of biopsy came to exact agreement regarding a patient's risk of death due to prostate cancer.

However, the two approaches differed in that targeted biopsy found 30 percent more high-risk cancers, and 17 percent fewer low-risk cancers.

"You're missing low-risk cancer. This is the type of cancer where this person certainly would have lived their whole life and died of something else," Siddiqui said.

An MRI is great for guiding doctors to serious cancers, but is not able to detect lesions smaller than 5 millimeters, said Dr. Art Rastinehad, director of focal therapy and interventional urological oncology and an associate professor of urology and radiology at Icahn School of Medicine at Mount Sinai in New York City.

"MRI's greatest weakness is also its greatest strength when it comes to prostate cancer," ignoring low-risk tumors while accurately directing a biopsy to potentially lethal cancers, Rastinehad said. "This study does lay the foundation for a possible paradigm shift in the way we screen men for prostate cancer," he added.

Clinical trials still are needed to show whether MRI-targeted biopsy will save lives or reduce future recurrence of cancer, *JAMA* Associate Editor Dr. Ethan Basch argued in an editorial accompanying the study. Basch is also director of cancer outcomes research at the University of North Carolina at Chapel Hill.
"A new test should not be widely adopted in the absence of direct evidence showing benefits on quality of life, life expectancy, or ideally both," wrote Basch.

Another open question also remains -- whether the new technology, which requires an MRI for each suspected case of prostate cancer and new equipment to fuse the MRI with an ultrasound scan, would be worth the extra expense.

Pinto believes the new technology might actually save money in the long run, by reducing overtreatment.

"We have to be very thoughtful, especially where health care dollars are scarce, to bring in technology that will not only help men but will be cost-efficient," he said. "That work has not been done completely, although some studies imply this technology may decrease considerably the number of unnecessary biopsies performed every year, and so could help control costs."

More information
There's more on prostate cancer and radiation treatment at the American Cancer Society.

Source: Prostate Cancer Foundation

Medicare Reimburses 3 Prostate Cancer Diagnostic Tests

by Mary K. Caffrey Published Online: Sunday, January 4, 2015

After months of delay, the Medicare Administrative Contractor (MAC), with jurisdiction over most molecular diagnostic tests used to treat cancer, made a series of decisions this fall that will allow Medicare reimbursement for several well-known tests, including 3 used in the treatment of prostate cancer.

On September 23, 2014, Palmetto GBA's MolDx program issued a draft local coverage determination (LCD) for the ConfirmMDx test, made by MDxHealth, which is designed to avoid repeat biopsies.[1] On October 16, 2014, Palmetto GBA issued an LCD for Myriad's Prolaris test and for Decipher Prostate Cancer Classifer, made by GenomeDx Biosciences, for different indications.[2,3]

Myriad's Prolaris test received draft language for reimbursement for approximately 50% of prostate cancer patients defined as low and very low risk, while the Decipher test received draft reimbursement language for using the test with men who have undergone radical prostatectomy. Per Medicare rules, the draft LCD is subject to a minimum 45-day public comment period; once comments are considered, the final language goes into effect after a minimum notification period of 45days.

Ten days after Medicare's reimbursement announcement, Myriad announced that Prolaris had been included in the prostate treatment guideline of the National Comprehensive Cancer Center (NCCN), regardless of risk category. In its statement, Myriad said NCCN guidelines are considered the "gold standard" in cancer treatment.[4]

Palmetto GBA's action on reimbursement for molecular diagnostic tests for prostate cancer drew plenty of attention across the industry, given this year's disputes with CMS on reimbursement issues. In recent years, CMS generally, and Palmetto GBA, specifically, have been under scrutiny over the MolDx program, which was developed to handle reimbursement questions involving this emerging industry. MolDx increasingly required testing companies to build evidence that demonstrated "clinical utility," a standard that means a test makes a difference in physicians' Treatment decisions.

But what should be required became a matter of disagreement. On April 18, 2014, the California Clinical Laboratory Association sued the HHS, of which CMS is a part, over what the plaintiffs claimed was an unlawful transfer of CMS' authority to set reimbursement policy and, especially, to allow diagnostic companies to appeal an unfavorable LCD.[5]

ConfirmMDx. Last year, during a presentation at Oral Oncolytics in Philadelphia, Pennsylvania, MDxHealth officials said ConfirmMDx still uses an intial biopsy as the "gold standard," while recognizing the standard 12-core method might miss cancerous tissue. ConfirmMDx seeks to confirm the presence of an epigenetic "halo" that exists around a tumor, which might be present even though the cells look normal under a microscope.

The test relies upon DNA methylation, a biochemical process that can alter gene expression as cells divide and result in the silencing of tumor suppressors. When DNA methylation goes awry, unfolding either too quickly or too slowly, cancer can result. This process does not happen all at once; thus, DNA methylation can be used as a readout for a pre-cancerous or cancerous state.

If a patient has a negative biopsy but a positive result with Confirm- MDx, the doctor can either treat as if the patient had a positive pathology result, or limit additional cores to the area of known "hot spots," reducing costs, discomfort, and side effects. Thus, the ConfirmMDx test can not only limit costs but also improve quality of life.[6]

Prolaris. The Prolaris test, which came on the market in 2010 and costs $3400, is a 46-gene test designed to gauge the aggressiveness of prostate cancer in individual patients, based on the expression of cell cycle regulator genes. Unlike the prostate-specific antigen (PSA), which offers a snapshot of the cancer on a given day, Prolaris' supporters say it offers a window into the future, assigning a score that increases along with the risk of progression.[7]
See more at:

http://www.onclive.com/publications/oncology-business-news/2014/december-2014/medicare-reimburses-3-prostate-cancer-diagnostic-tests/1#sthash.iYDNheSQ.dpuf

Decipher. GenomeDx describes Decipher as a "unique genomic test intended for men who have had prostate surgery and are considered by guidelines to be at high risk for their cancer returning." It is designed for men with specific risk factors for cancer recurrence, including positive surgical margins, stage T3 disease (seminal vesicle invasion, extraprostatic extension, and bladder neck invasion), or rising PSA after an initial drop-off.[3]

Breast Cancer Test Receives LCD

On October 15, 2014, BioTheranostics announced that it had received a positive local coverage determination from Palmetto GBA for its Breast Cancer Index, or BCI, test, a gene expression test that assesses risk during the following periods:

- In the first 5 years after diagnosis
- Late recurrence beyond 5 years after diagnosis
- Overall 10-year risk

In a statement, BioTheranostics said that the draft Medicare language calls for covering BCI to predict risk of late (5–10 years) distant recurrence in women with early stage, estrogen receptor-positive breast cancer who are considering extended therapy but are concerned about continuing anti-hormonal therapy because of documented toxicity or possible significant patient-specific side effects.

"We are pleased that we have attained such a significant milestone within the first eight months of full commercialization of the Breast Cancer Index— the only molecular test covered by Medicare that accurately assesses a patient's individualized risk of breast cancer recurrence after 5 years and is validated to identify which patients will benefit from extended hormone therapy," Nicolas Barthelemy, who recently joined BioTheranostics as president and CEO, said in a statement. "This critical information will allow many women to avoid unnecessary treatment and potential side effects that can adversely affect their health and quality of life."[8]

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Source: http://www.onclive.com/publications/oncology-business-news/2014/december-2014/medicare-reimburses-3-prostate-cancer-diagnostic-tests/2#sthash.RE9yGN68.dpuf

Transperineal Prostate Biopsy 'Well Tolerated,' Study Shows

By Kate Johnson March 23, 2015

MADRID — For patients who undergo prostate biopsy, patient-reported adverse effects and attitudes are similar when either a transperineal approach or the more traditional transrectal approach is used, according to a prospective questionnaire-based study.

"The best thing is to try to avoid going through the fecal route, if possible. Obviously, the transperineal route is ideal for that, if we can get it working," lead investigator Karan Wahda, MD, from the University of Cambridge, United Kingdom.

Although evidence points to lower infection rates and better prostate cancer detection rates with transperineal biopsies, the transrectal approach is still used by most clinicians because it can be done in an office setting without general anesthesia, Dr Wahda told Medscape Medical News.

He presented results from the first prospective evaluation of patient-reported complications, symptoms, and experience with systematic transperineal prostate biopsy here at the European Association of Urology 30th Annual Congress.

The newer transperineal procedure, which is performed with the patient under general anesthesia, is also used with some MRI fusion biopsy techniques, Dr Wahda explained. It has become popular in recent years because the rate of cancer detection is higher than with transrectal ultrasound-guided biopsy of the prostate, especially in the repeat biopsy setting, and the rate of postprocedure infection is lower.

The study involved 429 men with an elevated prostate-specific antigen level or abnormal findings on digital rectal examination. Of the cohort, 201 underwent systematic transperineal biopsy guided by ultrasound and MRI and 228 underwent transrectal biopsy guided by ultrasound.

Men in the transperineal group underwent about half the number of biopsies as men in the transrectal (27.1 vs 12.3).

For men undergoing transperineal procedures, it was their second biopsy, whereas for men undergoing transrectal procedures, it was their first biopsy, Dr Wahda reported. Although the patient populations were therefore inherently different, the comparison still provided a benchmark, he said.

Patients were asked about their experience using the Prostate Biopsy Effect (PROBE) PROM tool immediately after the procedure and at follow-up 7 to 14 days later.
There was little difference between the two groups in attitudes about the procedure; the procedures were described as "uncomfortable" or a "minor intervention" by a similar number of men in each group.

It is possible that the general anesthesia led to a significantly better experience with the transperineal procedure than with the transrectal procedure. However, "until we can perform transperineal under local anesthesia, this is our best comparison," Dr Wahda said.

The questionnaire asked about symptoms, the idea of a rebiopsy, the use of healthcare, adverse events, and erectile dysfunction.

Pain was considered a moderate/major problem by fewer patients in the transperineal group than in the transrectal group (4.7% vs 8.1%; P = .178).
In addition, the rate of hematochezia was significantly lower in the transperineal group than in the transrectal group (1.1% vs 14.2%; P < .001).

And urinary retention requiring catheterization was slightly less common in the transperineal group than in the transrectal group (5.6% vs 8.3%; P = .286).

However, there were no differences between groups in terms of self-reported pain, fever, shivers, hematuria, hemoejaculate, nausea, feeling unwell, postprocedure healthcare contact, use of painkillers, or antibi-

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otic requirements.

Men in both groups experienced erectile dysfunction after the procedure, but most said they would have a repeat biopsy if necessary.

Performance of the transperineal procedure under local anesthesia is being investigated and will a key factor in getting it into most office settings, said Dr Wahda. However, there are still some challenges to this.

"With the MRI-fusion software we use, the patient has to be very still. All the factors that affect the movement of the prostate will be magnified 100-fold if the patient is awake," he explained. "If we can develop it to a point where we feel that the accuracy we're getting under general anesthetic is the same as we're getting under local, we'd be very happy to do it under local."

The investigators "should be congratulated for examining patient-reported outcomes after prostate biopsy," said Stacy Loeb, MD, from New York University in New York City. She was involved in a systematic review of complications related to prostate biopsy (Eur Urol. 2013;64:876-892).

Her team found that "the rates of various biopsy-related complications varied widely in the literature, largely due to a lack of standardization in how they were evaluated."

Therefore, "asking patients directly about their experience with the two techniques using a validated questionnaire" is a useful contribution, said Dr Loeb.

"Previous studies have suggested that transperineal biopsy may have a lower risk of infection. However, it is interesting to note that, in this study, the rate of requiring an antibiotic prescription appears similarly high between men who had a transrectal and a transperineal biopsy (approximately 9%)," she noted.

In addition, she said, "I am surprised that the frequency of patients expressing discomfort was so high with transperineal biopsy, considering that the procedures were performed under general anesthesia. I am also surprised at the results for urinary retention. Previous studies have reported higher rates of retention after transperineal biopsy."

Dr Wahda and Dr Loeb have disclosed no relevant financial relationships.

European Association of Urology (EAU) 30th Annual Congress: Abstract 120. Presented March 21, 2015.

Source: Medscape.com

STRATEGY MIGHT THWART RESISTANCE TO A COMMON PROSTATE CANCER TREATMENT

Small study suggests that alternating testosterone levels may make hormonal therapy work longer

By Steven Reinberg

January 7, 2015 (HealthDay News) -- Conventional wisdom has it that high levels of testosterone help prostate cancers grow.

However, a new, small study suggests that a treatment strategy called bipolar androgen therapy -- where patients alternate between low and high levels of testosterone -- might make prostate tumors more responsive to standard hormonal therapy.

"As the researchers explained, the primary treatment for advanced prostate cancer is hormonal therapy, which lowers levels of testosterone to prevent the tumor from growing. But there's a problem: Prostate cancer cells inevitably overcome the therapy by increasing their ability to suck up any remaining testosterone in the body.

The new strategy forces the tumor to respond again to higher testosterone levels, helping to reverse its resistance to standard therapy, the researchers say.

If confirmed in several ongoing larger trials, "this could lead to a new treatment approach" for prostate cancers that have grown resistant to hormonal therapy, said lead researcher Dr. Michael Schweizer, an assistant professor of oncology at the University of Washington School of Medicine in Seattle.

"It needs to be stressed that bipolar androgen therapy is not ready for adoption into routine clinical practice, since these studies have not been completed," he said.

The report was published Jan. 7 in the journal Science Translational Medicine.

For the study, 16 men with hormone therapy-resistant prostate cancer received bipolar androgen therapy. Of these patients, seven had their cancer go into remission. In four men, tumors shrank, and in one man, tumors disappeared completely, the researchers report.

Overall, "50 percent of patients had declines in their PSA [prostate specific antigen] and 50 percent had shrinkage of their cancer," Schweizer said. PSA levels are a standard signal of prostate cancer activity, as measured in a blood test.

Senior study author Dr. Samuel Denmeade is co-director of the prostate cancer program at Johns Hopkins University in Baltimore. He believes the new approach has benefits beyond its effect on cancer cells. That's because restoring a man's testosterone levels also reduced the side effects of hormone therapy, which include mood swings and not being able to have intercourse.

"For the most part, men said they felt great," Denmeade said. "Most of the men felt like they had more energy. Men on hormone treatment who couldn't have sex could have sex again, so they were very happy about that." And although testosterone levels alternated between high and low, the men seemed to tolerate the treatment well, he added.

Denmeade stressed that this treatment is not a cure, but a way to make men feel better and extend the time standard hormonal therapy remains effective. "Maybe men will live longer, but we don't know that yet," he said.

According to Denmeade, men enrolled in the study didn't have any symptoms from their cancer, such as pain, and had been on standard hormonal therapy for an average of four years. They had also suffered a side effect of standard hormonal therapy -- impotence -- for at least one year.

Bipolar androgen therapy is probably not for "men who have not [yet] had any treatment for prostate cancer," he added.

Moreover, the long-term effects or dangers of the therapy aren't yet known, he said. Only longer, larger trials will help uncover any risks associated with the treatment.

And one expert worries that al-

ternating testosterone levels could actually shorten men's lives.

"A cancer cell could escape and grow, as happened in breast cancer when this method was tried with estrogen, causing early death," said Dr. Anthony D'Amico, chief of radiation oncology at Brigham and Women's Hospital in Boston.

D'Amico agreed with the study authors that bipolar androgen therapy is not ready to be used in clinical practice and doctors should wait for the results of ongoing trials before offering it to men.

Source: Prostate Cancer Foundation

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AR (Androgen Receptor) "Identity Crisis" in Prostate Tumors Helps Therapeutic Targeting in Patients

Natasha Kyprianou, M.D., Ph.D. Professor and James F. Hardymon Chair in Urology Research University of Kentucky College of Medicine and Markey Cancer Center Compelling findings accumulating at a rapid pace have enhanced our understanding of the relationship between the emergence of genetic changes in the androgen receptor (AR), treatment failure, and clinical progression of prostate cancer in patients on antiandrogen treatment. Almost all prostate cancer patients with metastatic disease respond to androgen deprivation induced by first-generation antiandrogens (via induction of tumor cell death), but they invariably relapse and are ultimately confronted with the emergence of castration-resistant prostate cancer (CRPC).

Thus, a long-standing challenge has been to overcome this therapeutic resistance and prostate tumor progression to lethal disease. What we have learned through seminal work by Charles Sawyers, Steven Balk, and Jun Luo, and others supported by the Department of Defense PCRP, is that the AR remains the critical driver of therapeutic response and resistance in patients with metastatic CRPC. We now know that overexpression of the AR and promiscuous mutations within the AR lead to resistance to antiandrogens (including enzalutamide and abiraterone) in CRPC. Adding more complexity to the promiscuous nature of AR, is sizzling evidence implicating truncated AR splice variants (AR-Vs), which lack the ligand binding domain (LBD), as principal drivers of resistance to antiandrogen therapies. The occurrence of AR amplifications, mutations, and splice variants in castration resistant patients points to such genomic adaptations as key contributors to therapeutic failure by permitting AR signaling despite androgen deprivation therapy.

Probing patient blood samples for lethal metastatic cancer cells that can be traced directly back to the primary tumor of origin and that harbor genomic changes (such as AR mutations, PTEN deletion, or TMPRSS2: ERG fusions) can provide us with the ability to detect metastatic spread during the course of therapeutic treatment and redirect therapeutic efforts towards elimination of resistance and lethal disease. Valuable new mechanistic insights into these "druggable" oncogenic events can be learned from pre-clinical studies using engineered mouse models harboring distinct signatures consisting of recurrent genomic aberrations (chromosomal losses, gains, rearrangements, and gene mutations) in order to determine the impact of the tumor microenvironment in prostate cancer metastatic progression.

One may argue that the challenge in overcoming resistance to endocrine therapy is the tremendous tissue heterogeneity in the land-

scape of prostate tumors. Indeed progression of CRPC is dependent on factors produced by the tumor microenvironment that help to increase the essential supply of blood to the tumor (i.e. angiogenesis), and increase invasion and survival of tumor cells. Since both the tumor and the microenvironment are under selection pressure by treatment regimes, they both undergo adaptations resulting in therapeutic resistance. Identifying additional genomic alterations that drive the metastatic spread of cancer cells becomes crucial to combating therapeutic resistance. To the call for cloning of circulating genetic material to help plan chemotherapy and antiandrogen treatment in CRPC patients, two recent studies by Luo (supported by the PCRP) and Attard responded beautifully by introducing sequential monitoring in patients with advanced prostate cancer, and defining a critical role for AR variants in the therapeutic resistance to antiandrogens.

The emerging promise is that analysis of circulating tumor genomic material from patient blood samples can help to optimize and personalize therapeutic strategies. The recent PREVAIL study involving men with metastatic CRPC treated with enzalutamide before chemotherapy, revealed an increase in patient survival to 17 months. Having recognized that this is a significant increase in survival, do we find ourselves asking with hope whether we can actually do better, extend that survival to more than 5 years, perhaps even 10 years in this subpopulation of patients? The stagespecific response to therapeutic strategies (with taxane chemotherapy being more effective at later stages of prostate cancer progression than antiandrogens) has taught us that prostate cancer undergoes an evolution during disease progression.

Ongoing efforts coordinated by the PCRP Clinical Consortium and fueled by the Transformative Impact Award supporting Steve Plymate's work on targeting the aberrant AR in advanced treatment-resistant prostate cancer, aim to understand the genomic causes of treatment failure and resistance to androgen signaling targeting, as well as to taxane chemotherapy and build a new molecular scenario, whereby individual drugs would be replaced by a sequencing strategy of multiple drugs targeting cancer cells with specific mutations. Careful interpretation of these exciting clinical findings will enable us to disrupt the lethal disease progression in patients with CRPC.

The PCRP can meet this new challenge through the vision of its leadership and focus on the cause. The PCRP has not only maintained a strong momentum in the discovery process, but it consistently plays a crucial role in the implementation of cutting -edge, paradigm-shifting science that is having a major impact on patients, through enabling the transition of scientific breakthroughs from the laboratory to the clinic, and empowering the training of a new generation of physician-scientists to carry the torch.

The results of this commitment to innovative and translational research have led to interrogation of the molecular landscape of prostate cancer, and to the development of personalized medicine approaches applied with finesse and mechanism-driven understanding. The return on this intellectual investment has been phenomenal as valuable answers keep coming towards eliminating pain, suffering, and ultimately death due to metastatic prostate cancer, while new opportunities are presented at a vigorous pace to improve the quality of life in all men affected by prostate cancer.

Dr. Kyprianou is a leading investigator in prostate cancer research and is an internationally recognized expert in Urology, Molecular and Cellular Biochemistry, Pathology and Toxicology. She has served on the PCRP Integration Panel since 2008.

Source: CDMRP (Congressionally Directed Medical Research Programs) http://cdmrp.army.mil/pcrp/

Celebrate Our 20th Year! 1995-2015

It doesn't seem possible, but this year marks 20 years that our Kingston group was formed in the spring of 1995. To celebrate this auspicious occasion we would like to have a dinner at Frank Guido's Little Italy in late May or early June. The price will be between $25 and $30.00, excluding bar beverages and open to members and their families. Please let me know if you are interested in attending, so that I can make further arrangements.

It will be a time to celebrate and reminisce and to be thankful for life itself. Hope you can attend. Diane Sutkowski dsutkowski@hvc.rr.com 845-331-7241

Vitamin D may keep low-grade prostate cancer from becoming aggressive

American Chemical Society March 22, 2015
Bruce Hollis, Ph.D.

Taking vitamin D supplements could slow or even reverse the progression of less aggressive, or low-grade, prostate tumors without the need for surgery or radiation, scientists say.

His team will describe the approach at the 249th National Meeting & Exposition of the American Chemical Society (ACS).
If a tumor is present in a prostate biopsy, a pathologist grades its aggressiveness on a scale known as the Gleason Grading System. Tumors with Gleason scores of 7 and above are considered aggressive and likely to spread, requiring surgical removal of the prostate gland (prostatectomy) or radiation therapy. In contrast, prostate tumors with Gleason scores of 6 and below are less aggressive, and in some cases may cause no symptoms or health problems for the duration of the man's life.

In cases of low-grade prostate cancer, many urologists do not treat the disease, but instead do what's called "active surveillance," says Bruce Hollis, Ph.D., who is at the Medical University of South Carolina. "The cure -- meaning surgery or radiation -- is probably worse than the disease, so they wait a year and then do another biopsy to see where the patient stands."

However, knowing that they have even low-grade prostate cancer can cause patients and their families excessive anxiety, which prompts some of the men to undergo an elective prostatectomy, despite the risk of complications such as infection, urinary incontinence and erectile dysfunction. But a man must wait 60 days from the time of his biopsy before he can undergo a prostatectomy, so that inflammation from the biopsy can subside.

Hollis wondered if giving these men vitamin D supplements during the 60-day waiting period would affect

their prostate cancer. His previous research had shown that when men with low-grade prostate cancer took vitamin D supplements for a year, 55 percent of them showed decreased Gleason scores or even complete disappearance of their tumors compared to their biopsies a year before (*J. Clin. Endocrinol. Metab.*, 2012, DOI: 10.1210/jc.2012-1451).

In a new randomized, controlled clinical trial, his team assigned 37 men undergoing elective prostatectomies either to a group that received 4,000 U of vitamin D per day, or to a placebo group that didn't receive vitamin D. The men's prostate glands were removed and examined 60 days later.

Preliminary results from this study indicate that many of the men who received vitamin D showed improvements in their prostate tumors, whereas the tumors in the placebo group either stayed the same or got worse. Also, vitamin D caused dramatic changes in the expression levels of many cell lipids and proteins, particularly those involved in inflammation. "Cancer is associated with inflammation, especially in the prostate gland," says Hollis. "Vitamin D is really fighting this inflammation within the gland."

The protein most strongly induced by vitamin D was one called growth differentiation factor 15 (GDF15). Previous studies by other groups showed that GDF15 dials down inflammation, and many aggressive prostate cancers make little or no GDF15.

The new research suggests that vitamin D supplementation may improve low-grade prostate cancers by reducing inflammation, perhaps lessening the need for eventual surgery or radiation treatment. "We don't know yet whether vitamin D treats or prevents prostate cancer," says Hollis. "At the minimum, what it may do is keep lower-grade prostate cancers from going ballistic."

Hollis notes that the dosage of vitamin D administered in the study -- 4,000 U -- is well below the 10,000-20,000 U that the human body can make from daily sun exposure. "We're treating these guys with normal body levels of vitamin D," he says. "We haven't even moved into the pharmacological levels yet."

Theresearchers acknowledge funding from Gateway for Cancer Research, the Department of Veterans Affairs, National Institutes of Health and South Carolina Clinical and Translational Research Institute.

Source: http://www.sciencedaily.com/releases/2015/03/150322080155.htm

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Men to Men Group
Our brothers in support and education

Meetings are held the First Thursday of the month at the Central Hudson Auditorium on South Road in Poughkeepsie, starting at 6:30 p.m. Various doctors and speakers are on the agenda and one on one help is available after the meeting.

Contact
Paul Totta 845 297-7992
or Jim Kiseda 223-5007

If you need or want to help:

PCa 101 Seminar
First Tuesday of every month

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