

Targeted Prostate Cancer Screening More Effective Than Traditional Method

A newer prostate cancer screening method is outperforming standard prostate biopsies, according to a study from the University of Cincinnati.

Researchers found prostate cancer screenings were more accurate when using MRI and ultrasound to inspect suspicious lesions in the prostate gland, and target a biopsy to a specific area rather than doing a standard biopsy.

The findings could lead to a more efficient standard for men's prostate

cancer screenings, says Abhinav Sidana, MD, director of urologic oncology and an author on the study.

Traditionally, doctors collect a number of samples from random parts of the prostate. "However, this can lead to over-diagnosis of clinically insignificant cancer, meaning prostate cancer where treatment is not needed, under-diagnosis of clinically significant cancer, meaning prostate cancer where treatment is needed, and has a high false-negative rate, meaning tests that

read negative for cancer when it is truly malignant," Sidana says.

The data is published in the journal Urologic Oncology.

Sidana says the MRI fusion biopsy is a promising alternative, especially for patients with previously negative prostate biopsies.

"Patients with continued suspicion of prostate cancer and negative prior

(Continued on page 2)

Medical Advisors

Paul Daeninck M.D.
Medical Oncologist

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M.D. Urologist

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Thanks!



The Manitoba Prostate Cancer Support Group offers support to prostate cancer patients but does not recommend any particular treatment modalities, medications or physicians ; such decisions should be made in consultation with your doctor.

MPCSG – active since 1992.

Next Meeting:

Wednesday, June. 20 ,2018

Speaker: Dr. Jason Ediger

Title: "What about when bad things really do happen?
Coping with the worry and uncertainty of prostate cancer.

Location: The First Unitarian Universalist Church of
Winnipeg, 603 Wellington Crescent

Time: 7 – 9 pm.

(First hour for general discussion; second hour for expert guest speaker)

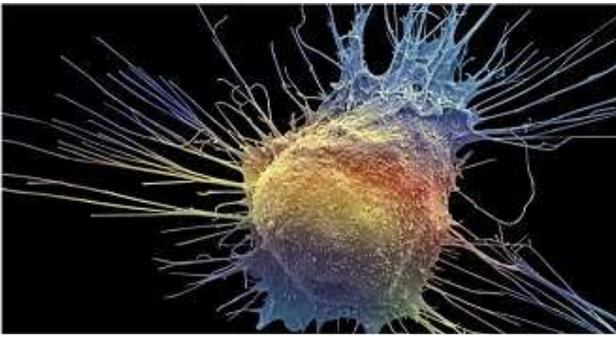
Free Admission Everyone Welcome

Plenty of free parking



Thought of The Day

A bank is a place that will lend you money, if you can prove that you don't need it.



lesions with only a 10 to 25 percent cancer detection rate even after the fourth repeat biopsy. These multiple re-biopsies also lead to increased cost, delayed diagnosis and could contribute to progression of a patient's disease."

The average age of patients was 63. Of the 779 patients, cancer was detected in 346 patients (44 percent), and the clinically significant cancer detection rate was 30.7 percent with fusion biopsy detecting 26.3 percent (205 cases) and systematic biopsy detecting only 4.4 percent (34 cases).

05 / 15 / 18

By TANA WEINGARTNER

PROVIDED / UC ACADEMIC HEALTH CENTER

<http://wvxu.org/post/targeted-prostate-cancer-screening-more-effective-traditional-method>

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(Continued from page 1)

prostate biopsy are a diagnostic challenge, and around 38 percent will undergo repeat standard or saturation biopsy over five years in order to obtain a diagnosis," he says. "Unfortunately, repeating this has little efficacy in identifying cancerous

About The Study

The cases of 779 patients—each with a history of one or more negative biopsies who also underwent MRI biopsy fusion—from four institutions were analyzed making it one of the largest studies in this population.

2018 Ride-For-Dad Gets Underway



On Friday, April 13, at the Windsor Park Canad Inn in Winnipeg the official launch of the 2018 RFD fundraising drive took place. This year's ride happens to be the 10th anniversary of this event. An intense advertising and promotional campaign raises awareness of prostate cancer and helps support research to fight this disease. The actual ride took place on Saturday, May 26. If you enjoy the snarly sound of hundreds of Harley's and similar machines this is where you wanted to be. If you missed it this year, you can still look forward to next year.

New Computational Strategy Designed For More Personalized Cancer Treatment

Mathematicians and cancer scientists have found a way to simplify complex biomolecular data about tumors, in principle making it easier to prescribe the appropriate treatment for a specific patient.

The new computational strategy transforms highly complex information into a simplified format that emphasizes patient-to-patient variation in the molecular signatures of cancer cells, the researchers say.

The digital approach from scientists at the Johns Hopkins University was detailed recently in the journal *Proceedings of the National Academy of Sciences*.

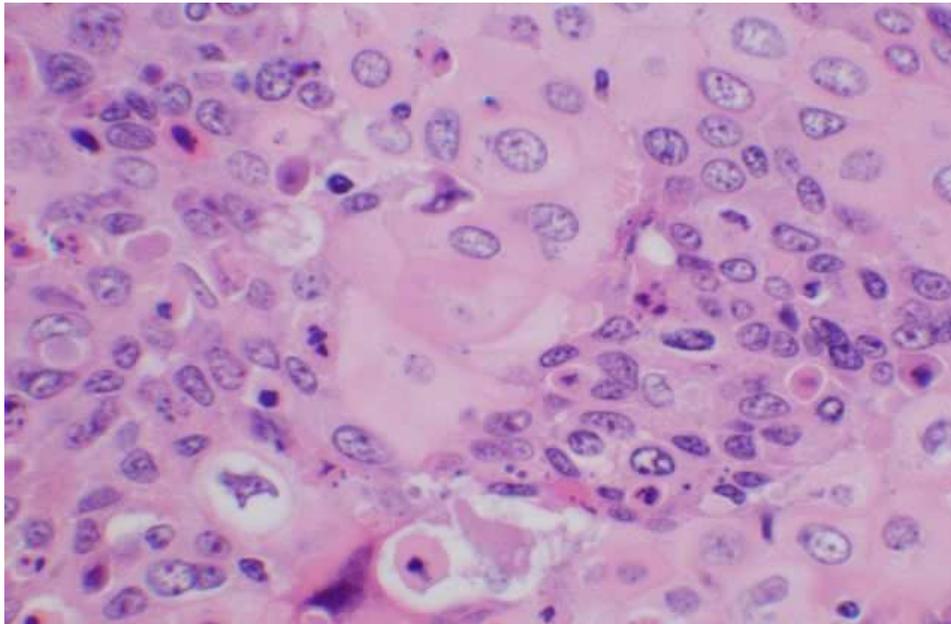
"The main point of this paper was to introduce this methodology," said Donald

Geman, a professor in the Department of Applied Mathematics and Statistics who was senior author of the PNAS article. "And it also reports on some preliminary experiments using the method to distinguish between closely related cancer phenotypes."

A key challenge for doctors is that each primary form of cancer, such as breast or prostate, may have multiple subtypes, each of which responds differently to a given treatment.

"One of the things that people in this field have noticed over the past 10 years—and, in fact, it has been startling—is how much heterogeneity there is even between two patients with

the same subtype of cancer," Geman said. "By that, I mean that in two patients who were both diagnosed with melanoma, the skin lesions may look quite similar to the naked eye but the cancerous cells may be very different at the molecular level. They may have different forms of dysregulation, including different genetic variants and different gene expression profiles."



Knowing as much as possible about the genetic makeup and impaired biological pathways of a particular patient could help physicians make more informed decisions about the prognosis and treatment, adjusting them to the particular molecular profile.

"They want to know if they are looking at a profile of a woman who likely will or will not respond to a particular drug," Geman said. "Or does the data indicate the patient will likely relapse within the next five years? Or does a man have a particularly aggressive type of prostate cancer? Or is it necessary to surgically remove the lymph nodes to determine the presence or absence of metastases in a patient with some form

of head and neck cancer?"

To help provide answers, Geman and his team envisioned something similar to the bloodwork summaries commonly produced when a patient visits a doctor for an annual physical exam. These generally report whether blood sugar, cholesterol and other results are within or are outside of healthy levels. Taking a cue from

these tests, Geman's team found a way to greatly simplify the data on tens of thousands of molecular states by converting these data to binary labels, indicating whether a measurement falls within or beyond healthy levels.

Geman, who previously devoted many years to improving computer vision technology, is

encouraged by the cancer-related project and hopes it will serve as a model for other fruitful collaborations involving advanced math and medicine.

"The goal," he said, "is taking classification problems of genuine clinical interest and producing an algorithm that is accurate, interpretable and makes sense biologically."

May 14, 2018 Johns Hopkins University

<https://medicalxpress.com/news/2018-05-strategy-personalized-cancer-treatment.html>

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More Men with Low-risk Prostate Cancer are Rejecting Aggressive Treatment

A sea change is occurring among men with low-risk prostate cancer: Increasing numbers are avoiding immediate surgery or radiation and are opting instead for close monitoring of the disease to see whether it worsens. The shift is sharply reducing unnecessary treatment that can cause serious side effects including incontinence and sexual problems, experts say, without increasing the risk of death.

The latest evidence of the long-term trend came in a large study published Tuesday that involved more than 125,000 veterans diagnosed with nonaggressive prostate cancer between 2005 and 2015. Researchers found that in 2005, only 27 percent of men under 65 chose to forego immediate therapy and instead signed up for "watchful waiting" or "active surveillance" to keep track of the tumor. By 2015, the situation had flipped - 72 percent rejected immediate surgery or radiation in favor of such monitoring. The data for men older than 65 was similar.

The study, which appeared in *JAMA*, was conducted by researchers at NYU Langone Health and Department of Veterans Affairs NY Harbor Healthcare System.

"I think it's hugely important," said Otis Brawley, chief medical officer of the American Cancer Society who was not involved in the study. "Remember that until 2010, a man diagnosed with prostate cancer was told to get your prostate out, next week at the latest."

Brawley, who has long warned about the dangers of overtreatment of prostate and breast cancer, said the study shows that efforts are beginning to pay off to convince patients that some low-risk malignancies don't immediately require aggressive responses. And he said the

study is a leading indicator of where the rest of the country is going; about half of non-VA patients with the same type of malignancies are now rejecting immediate treatment and the number is growing quickly.

"The VA is the tip of the spear," he said. "Five years from now, the whole country will be at 70 percent."



Stacy Loeb, who led the study and is a urologist at NYU and the Manhattan Veterans Affairs Medical Center, said the change represents "a historic reversal, at least at the VA, in the decades-long overtreatment of men with prostate cancers least likely to cause harm, and brings their care more in line with the latest best practice guidelines." The guidelines include recommendations, issued in recent years by the American Urological Association and the American Society of Clinical Oncology.

Over the years, most of the increase in the surveillance-only arm, she said, occurred in a category called "active surveillance," in which men are subjected to more rigorous monitoring and testing than those in "watchful waiting." While 4 percent of men chose active surveillance in 2005, 39 percent selected it in 2015, the study showed.

The researchers said that there were

likely many reasons why VA was adhering to national guidelines at a higher rate than other parts of the health care system - including the lack of financial incentives for the salaried physicians to recommend more aggressive treatment.

Jonathan Simons, president of the Prostate Cancer Foundation, which helped fund the study, said that while the VA medical system has some problems, when it comes to the "No. 1 cancer of veterans, prostate cancer, the outcomes are better in VA hospitals than in the rest of American medicine."

Clark Howard, an Atlanta resident who writes and does a radio show on consumer issues, was one of the earliest patients to opt for active surveillance rather than aggressive treatment. He was diagnosed with low-risk prostate cancer at age 53 in 2009, and his doctors pressed him to immediately schedule an operation. He refused.

"My wife thought I was crazy and burst into tears," he said. "I have never seen her scream and weep like that, she was so mad."

As part of the monitoring of his cancer, Howard gets PSA (prostate-antigen specific) tests twice a year and biopsies every other year. He also has had two MRI-based tests. His cancer hasn't worsened; if it does, he says, he'll get treatment then. "So many people are conditioned that cancer must be treated aggressively and immediately and if you don't, you are going to die," he said.

May 16, 2018

Laurie McGinley *The Washington Post*

<http://www.chicagotribune.com/lifestyles/health/ct-low-risk-prostate-cancer-aggressive-treatment-20180516-story.html>

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The Latest Advice on Prostate Cancer Screening

With more than 2,200 new cases of prostate cancer expected to occur in Kentucky this year and nearly 400 deaths, it's worth taking note of new screening guidelines by an expert panel.

The U.S. Preventive Services Task Force recently issued a recommendation that men between the ages of 55 and 69 chat with their physicians about the potential benefits and harms of prostate cancer screening and make an individual decision on whether to get tested.

Dr. Michael Flynn

The panel's advice represents a shift from 2012, when it recommended against routine use of PSA (prostate-specific antigen) testing, saying it has little lifesaving benefit and carries significant risks, such as the possibility of false positives and treatment downsides, such as erectile dysfunction.

The new recommendation "means you're going to provide the service basically to certain patients, depending on individual circumstances," said Dr. Joseph Flynn, chief administrative officer of the Norton Medical Group and physician in chief of the Norton Cancer Institute. "I don't consider it an oh-my-gosh-stop-the-presses change."

However, he said, it does bring to mind the need to be a strong advocate for your health. "Especially with prostate cancer screening," Flynn said, "you should take the time to read what are the risks of being screened ... and what are your risks of harm from some of the secondary evaluations."

It's also good to know whether you're at increased risk of prostate cancer because of your race or family history, so the task force included a special section to help those men and their

clinicians make decisions about screening.

"African-American men are more likely to develop prostate cancer than white men," the task force notes in a Q&A. "They're also more than twice as likely as white men to die of prostate cancer. This is due in part to African-American men having higher rates of more aggressive cancer and the fact that African-American men tend to be diagnosed when their cancer is more advanced."

The PSA test checks to see whether a man has an elevated PSA level, which could be the result of prostate cancer or another condition, such as having an enlarged prostate or inflammation of the prostate.

"Research suggests that 20 to 50 percent of men diagnosed with prostate cancer after screening may be overdiagnosed," which refers to being diagnosed with cancer that wouldn't affect the man's health during his lifetime, the Q&A notes. "The discovery of an overdiagnosed cancer can result in overtreatment, including invasive procedures, chemotherapy, and radiation, which can have significant harms."

But there's new evidence that screening men in the 55-to-69 age group can reduce the risk of metastatic cancer — the type that's spread to other areas of the body — and reduce the chance of dying from prostate cancer, the task force notes.

Still, "the net benefit is small," Flynn said, so the task force's advice isn't "an overwhelming recommendation to get screened."

The panel took note of the fact that

there's been increased use of "active surveillance," which is an alternative to rushing every patient into invasive treatment.

Active surveillance is a type of cancer monitoring that includes regular repeated PSA testing as well as often repeated digital rectal examination and biopsy of the prostate.

This monitoring "has become a more common treatment choice for men with localized, low-grade prostate cancer over the past several years and may reduce the potential harms of screening in low-risk men who choose this option," the Q&A notes.



The American Urological Association issued a statement supporting the task force's recommendation for the 55-to-69 age group but said it doesn't

think all men who are above that age should be ruled out for screening. The task force recommends against screening those who are age 70 and up.

"While we agree that a number of older men are not candidates for prostate cancer testing, we believe that select older, healthier men may garner a benefit," the association said. "We urge those men to talk with their doctors about whether prostate cancer testing is right for them."

Flynn said men should be alert to signs or symptoms, such as pain or having to get up a lot at night to urinate "If you're having symptoms, you should be seen."

By DARLA CARTER May 16, 2018

<https://insiderlouisville.com/health/mens-health-the-latest-advice-on-prostate-cancer-screening>

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Automated Bone Scan Index Offers Accurate, Speedy Prognostic Information About Prostate Cancer

A software tool to automatically calculate how extensively bones have been infiltrated by prostate cancer is both accurate and speedy, capturing key prognostic information related to survival and the development of symptoms over time.

The software, called the automated bone scan index, was tested in a large, global multicenter study led by Duke Cancer Institute researchers. Findings from the phase 3 study were published May 17 in JAMA Oncology.

"This study describes major improvements over older techniques doctors used to measure bone metastases to predict survival and help guide treatments for patients with advanced prostate cancer," said lead author Andrew Armstrong, M.D., associate professor of medicine and surgery and associate director of the Duke Cancer Institute's Prostate and Urology Cancer Center.

"It's important to know how widespread metastatic disease is – both for patients to understand the likely course of their disease, and for doctors to determine the best potential treatments," Armstrong

said. "It is also a necessary point of reference in clinical trials, to understand whether investigational therapies are working and to quantify and predict possible outcomes."

The current method to measure bone metastases includes a CT or MRI scan along with a nuclear medicine test that involves a manual assessment of the bone metastases. Manual bone scan assessments using a formula based on bone mass and the number of cancer lesions can be done, but that process is both subjective and time-consuming, so is not used regularly in clinic.

The new automated Bone Scan Index, or aBSI, is a software program that scans the radiographic studies and quantifies the degree of bone metastases in a matter of seconds.

In the Duke-led study, 721 men with advanced, recurrent prostate cancer were evaluated using the aBSI software and followed for the duration of their

care.

The researchers found that the aBSI technology was significantly better than the older, manual calculation at predicting survival time for the men regardless of how widespread their bone metastases were. Added to other key clinical information, the technology provided prognostic information about patient outcomes and improved the ability to predict the time to symptom progression and the onset of pain.

"It's important for doctors, patients and cancer researchers to have a reliable bone marker to better treat patients and prevent or delay bone metastases," Armstrong said.



www.news-medical.net/news/20180517/Automated-bone-scan-index-offers-accurate-speedy-prognostic-information-about-prostate-cancer.aspx

www.dukehealth.org May 17, 2018

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Research Finds 'Achilles Heel' for Aggressive Prostate Cancer

UC San Francisco researchers have discovered a promising new line of attack against lethal, treatment-resistant prostate cancer. Analysis of hundreds of human prostate tumors revealed that the most aggressive cancers depend on a built-in cellular stress response to put a brake on their own hot-wired physiology. Experiments in mice and with human cells showed that blocking this stress response with an experimental drug — previously shown to enhance cognition and restore memory after brain damage in rodents — causes treatment-resistant

cancer cells to self-destruct while leaving normal cells unaffected.

The new study was published online May 2, 2018 in Science Translational Medicine.

"We have learned that cancer cells become 'addicted' to protein synthesis to fuel their need for high-speed growth, but this dependence is also a liability: too much protein synthesis can become toxic," said senior author Davide Ruggero, PhD, the Helen Diller Family Chair in Basic Cancer Research

and a professor of urology and cellular and molecular pharmacology at UCSF. "We have discovered the molecular restraints that let cancer cells keep their addiction under control and showed that if we remove these restraints they quickly burn out under the pressure of their own greed for protein."

"This is beautiful scientific work that could lead to urgently needed novel treatment strategies for men with very advanced prostate cancer," added

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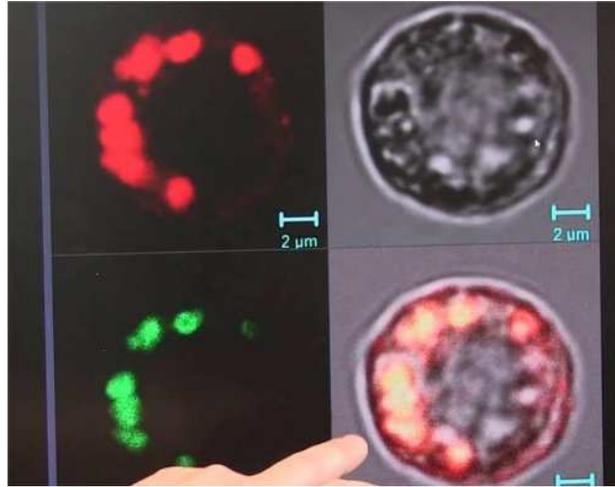
(Continued from page 6)

renowned UCSF Health prostate cancer surgeon Peter Carroll, MD, MPH, who is chair of the Department of Urology at UCSF and was a co-author on the new paper.

Prostate cancer is the second leading cause of cancer death for men in the United States: More than one man in ten will be diagnosed in his lifetime, and one in forty-one will die of the disease, according to data from the American Cancer Society. Tumors that recur or fail to respond to surgery or radiation therapy are typically treated with hormonal therapies that target the cancer's dependence on testosterone. Unfortunately, most cancers eventually develop resistance to hormone therapy, and become even more aggressive, leading to what is known as "castration-resistant" disease, which is nearly always fatal.

As part of a "growth first" strategy, many cancers contain gene mutations that drive them to produce proteins at such a high rate that they risk triggering cells' built-in self-destruct mechanisms, according to studies previously conducted by Ruggero and colleagues. But aggressive, treatment-resistant prostate cancers typically contain multiple such mutations, which led

Ruggero and his team at the UCSF Helen Diller Family Comprehensive Cancer Center to wonder how such cancers sustain themselves under the pressure of so much protein production.



Deadliest Cancers Throttle Excess Protein Synthesis

To explore this question, Ruggero's team genetically engineered mice to develop prostate tumors containing a pair of mutations seen in nearly 50 percent of patients with castration-resistant prostate cancer: one that causes overexpression of the cancer-driving MYC gene, and one that disables the tumor suppressor gene PTEN. They were surprised to discover that the highly aggressive cancers associated with these mutations actually had lower rates of protein synthesis compared to milder cancers

with only a single mutation.

"I spent six months trying to understand if this was actually occurring, because it's not at all what we expected," said Crystal Conn, PhD, a postdoctoral researcher in the Ruggero lab and one of the paper's two lead authors. But she saw the same effects again and again in experiments in mouse and human cancer cell lines as well as in 3-dimensional "organoid" models of the prostate that could be studied and manipulated in lab dishes.

Conn's experiments eventually revealed that the combination of MYC and PTEN mutations trigger part of a cellular quality control system called the unfolded protein response (UPR), which reacts to cellular stress by reducing levels of protein synthesis throughout the cell. Specifically, these mutations alter the activity of a protein called eIF2a (eukaryotic translation initiation factor 2a key regulator of protein synthesis, by turning it into an alternate form, P-eIF2a, which tunes down cellular protein production.

Source Newsroom: UCSF Helen Diller Family Comprehensive Cancer Center

<http://www.newswise.com/articles/view/694368/>
14-May-2018

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"You Can Help Spread The Word About Prostate Cancer"

Prostate cancer is one of the most common cancers in men. Discovered early, it can be successfully treated in the majority of cases. Such early discovery is dependent on men being aware of the facts about this disease and getting checked. *Early discovery saves lives.*

To help raise awareness and encourage "getting checked" the Manitoba Prostate Cancer Support Group is happy to provide speakers to make presentations to interested groups in the community. There is no charge for this

service and the size of the group doesn't matter. If you are involved with a group that would like to learn more about prostate cancer, and perhaps save some lives in the process, please contact Pat Feschuk (tel: 204-654-3898; email: lizpat@shaw.ca). *Remember that if a man has prostate cancer the sooner he learns about it the better. Not knowing about it simply allows it to grow and spread.*
So do something about it help spread the word.

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FUTURE MEETINGS 2018

18 July
 Speaker: Dr. David Dawe
 Title: "Advances in treating hormone-resistant prostate cancer"

15 Aug 2018
 Speaker: Dr. Piotr Czaykowski
 Title: "Prostate cancer, you and CancerCare Manitoba"

 All meetings (except September) will be held at :
 The First Unitarian Universalist Church of Winnipeg,
 603 Wellington Crescent

All meetings are 7 – 9 pm.
 (First hour for general discussion;
 second hour for expert guest speaker)

Everyone Welcome Plenty of free parking

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