Manitoba Prostate Cancer SUPPORT GROUP

Newsletter

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Medical Advisors

Paul Daeninck M.D.
Medical Oncologist

Darrel Drachenberg M.D. Urologist

Arbind Dubey M.D.
Radiation Oncologist

Piotr Czaykowski M.D.
Medical Oncologist

Thanks!

Next Meeting

Date: Wednesday, May 15, 2024

Speaker: **Dr. Sean Ceaser**, ND Naturopathic Doctor Centre for Natural Pain Solutions:

Topic: "Naturopathic Medicine offers additional options towards better management of your prostate cancer"

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

Time: 7-9 pm

Free Admission Everyone Welcome Plenty of free parking Door Prizes

Thought of The Day

"Courage is resistance to fear, mastery of fear - not absence of fear."

- Mark Twain

Component of keto diet plus immunotherapy may reduce prostate cancer

Adding a pre-ketone supplement—a component of a high-fat, low-carb ketogenic diet—to a type of cancer therapy in a laboratory setting was highly effective for treating prostate cancer, researchers from the University of Notre Dame found.

Recently published online in the journal Cancer Research, the study from Xin Lu, the John M. and Mary Jo Boler Collegiate Associate Professor in the Department of Biological Sciences, and collaborators tackled a problem oncologists have battled: Prostate cancer is resistant to a type of immunotherapy called immune checkpoint blockade (ICB) therapy. ICB therapy blocks certain proteins from binding with other proteins and paves the way for our body's fighter cells, T cells, to kill the cancer.

"Prostate cancer is the most common cancer for American men, and immunotherapy has been really influential in some other cancers, like melanoma or lung cancer, but it hasn't

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SHARING IS CARING

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.

(Continued from page 1)
been working almost at all for prostate cancer," said Lu, who is affiliated with the Boler-Parseghian Center for Rare and Neglected Diseases. Adding a dietary supplement might overcome this resistance, the lead author in the study, Sean Murphy, suggested.

Murphy, a '24 alumnus who was a doctoral student in Lu's lab, had been following a keto diet himself. Knowing that cancer cells feed off of sugar, he decided that depriving mouse models of carbohydrates—a key component of the keto diet—might prevent cancer growth.

He divided the models into different groups: immunotherapy alone, ketogenic diet alone, a pre-ketone supplement alone, the ketogenic diet with the immunotherapy, the supplement with the immunotherapy, and the control. While the immunotherapy alone had almost no effect on the tumors (just like what happens to most patients with prostate cancer), both the ketogenic diet with the immunotherapy and the pre-ketone supplement with the immunotherapy reduced the cancer and extended the lives of the mouse models.

The supplement with the immunotherapy worked best.

"It turned out this combination worked really well," Lu said. "It made the tumor become very sensitive to the immunotherapy, with 23 percent of the mice cured—they were tumor-free; in the rest, the tumors were shrinking really dramatically."

The evidence points to the possibility that a supplement providing ketones, which are what is produced in the body when people eat a keto diet, might prevent the prostate cancer cells from being resistant to immunotherapy. This may lead to future clinical studies that examine how ketogenic diets or keto supplements could enhance cancer therapy.

While keto diets allow for minimal carbohydrates, the success of this study is not about the lack of carbohydrates, Murphy and Lu stressed. It is about the presence of the ketone body, a substance produced by the liver and used as an energy source when glucose is not available. The ketones disrupt the cycle of the cancer cells, allowing the T cells to do their job to destroy them.

The discovery was also exciting on a molecular level, Lu said. Any type of dietary study can suffer from the potential issue of causation: Are the results from the diet or other changes made because of the diet? But Lu and his collaborators confirmed their results using single-cell RNA sequencing, which examines the gene expression of single cells within the tumor.

"We found that this combination of the supplement and the immunotherapy reprogrammed the whole immune profile of the tumors and recruited many T cells into the tumors to kill prostate cancer cells," Lu said.

The successful therapy also reduced the number of a type of immune cell called neutrophils. Once in the tumor microenvironment, neutrophils' natural properties become greatly distorted, and they become largely responsible for inhibiting T cell activities and allowing more tumor progression. Dysregulation of neutrophils is also associated with many other diseases.

"With the main ketone body depleting neutrophils, it opens the door for investigating the effects of the keto diet and the ketone supplement on diseases ranging from inflammatory bowel disease to arthritis," Murphy said.

Lu agreed.

"What's exciting is that we're getting closer to the mechanism, backed up by genetic models and what we're seeing in the tumors themselves, of why this works," he said.

Co-authors include Sharif Rahmy, Dailin Gan, Guoqiang Liu, Yini Zhu, Maxim Manyak, Loan Duong, Jianping He, James H. Schofield, Zachary T. Schafer, Jun Li and Xuemin Lu, all from the University of Notre Dame.

More information: Sean Murphy et al, Ketogenic diet alters the epigenetic and immune landscape of prostate cancer to overcome resistance to immune checkpoint blockade therapy, Cancer Research (2024). DOI: 10.1158/0008-5472.CAN-23-2742

Journal information: Cancer Research
Provided by University of Notre Dame

by Deanna Csomo Ferrell,
University of Notre Dame

Source: https://medicalxpress.com/news/2024-04-component-keto-diet-immunotherapy-prostate.html

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Learning the basics about prostate cancer

As part of our outreach activity we provide speakers available to any community service group interested in learning about and upgrading their knowledge about prostate cancer. If you are part of a group that would like to learn, or review, the important basics that everyone should know about this disease, presented at an easy-to-understand layperson level, please contact any board member to schedule a presentation.
It takes about an hour and allows for active engagement between speaker(s) and audience to explore a variety of interests and concerns. There is no cost for this service. Size of the group doesn't matter, but the more the merrier. You provide the audience and we'll provide the speaker.

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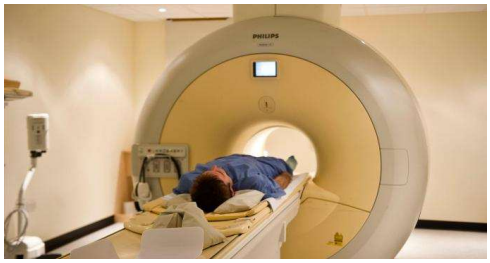
New Prostate Cancer Treatments Offer Hope for Advanced Cases

Major discoveries during the past 10 years have transformed prostate cancer treatment, enabling it to proceed even for the most advanced form of the disease

Deciding how to diagnose and treat prostate cancer has long been the subject of controversy and uncertainty. A prime example involves prostate-specific antigen (PSA) testing, a blood test for a telltale protein that can reveal cancer even when the patient has no symptoms. After its introduction in the early 1990s, PSA testing was widely adopted—millions of tests are done in the U.S. every year. In 2012, however, a government task force indicated that this test can lead to overtreatment of cancers that might have posed little danger to patients and so might have been best left alone.



While arguments for and against PSA testing continue to seesaw back and forth, the field has achieved a better grasp on what makes certain prostate cancers grow quickly, and those insights have paved the way for better patient prognoses at every stage of the disease, even for the most advanced cases. A prostate cancer specialist today has access to an enhanced tool set for treatment and can judge when measures can be safely deferred.

The importance of these advances cannot be overstated. Prostate cancer is still one of the most prevalent malignancies. Aside from some skin cancers, prostate cancers are the most common cancers among men in the U.S. Nearly 270,000 people in America will be diagnosed with prostate cancer this year, and it is the fourth most common cancer worldwide. Fortunately, the vast majority of patients will live for years after being diagnosed and are more likely to die of causes unrelated to a prostate tumor.

At its most basic level, prostate cancer is a malignancy that occurs in the prostate gland, which produces fluid that mixes with sperm from the testicles to make semen. The prostate is located in front of the rectum, below the bladder and above the penis, and cancer in the gland has four major stages.

Early on, localized tumors show no evidence of extension beyond the prostate gland. A second, "regionally advanced" form of the disease remains close to the prostate. Then there are metastatic prostate cancers, which spread outside the gland to other parts of the body. Treatment of tumors in this category has benefited from improved diagnostic imaging tests. In fact, with these tests, cancer specialists have characterized the fourth category, oligometastatic prostate cancer, a disease stage on a continuum between localized prostate cancer and more broadly dispersed metastatic disease. Major discoveries in the past 10 years have transformed the way we approach each type of prostate cancer, and these advances are likely to continue for decades to come.

The first treatment steps for people with localized cancer involve risk stratification. Through this process, a physician gauges the likelihood of a cancer's being eliminated or cured by local treatment (usually surgery or radiation) and, if it does abate, of its returning. A physician determines the risk based on PSA results, physical examination of the prostate gland and inspection of cells from the biopsied tumor.

The right course of action for a patient with elevated PSA levels continues to undergo constant revision. Until five to seven years ago, a physician evaluated a person with high PSA by feeling their prostate gland for potentially cancerous abnormalities. Invariably, the next step would be a needle biopsy—an uncomfortable procedure in which the physician obtains snippets of prostate tissue through the rectum.
But we now have a way to biopsy through the perineum—the area between the back of the scrotum and the anal-rectal area. Thanks to technical improvements, it can be done in an outpatient setting without general anesthesia or sedation. The technique reduces the patient's risk of infection and need for antibiotics because it doesn't disrupt the bacterial flora in the rectum. In a recent study, researchers compared outcomes in patients who underwent a trans-rectal biopsy and received antibiotics with those for people who had a transperineal biopsy with minimal to no antibiotics. They found the two approaches comparable in terms of complications from infections.

Even more exciting is the prospect of eliminating biopsies altogether. When a patient has an abnormal PSA value but their rectal examination shows no obvious evidence of cancerous deposits, physicians can now use magnetic resonance imaging (MRI) to look at the prostate and surrounding tissue. MRI scans are best for identifying clinically significant cancers—those that, if left untreated or undiagnosed, could eventually spread. MRI can also uncover more extensive cancer spread or tumors in unusual locations such as the front of the prostate.

Another benefit of MRI procedures is that they identify fewer clinically insignificant cancers—those that are unlikely to cause problems and might best be left alone. In this case, failure to detect certain cancers is a good thing because it spares people unnecessary treatment. In some medical centers in the U.S. and many in Europe, a physician will perform a biopsy only if the MRI scan does reveal evidence of clinical significance. Studies that have compared the two diagnostic approaches—routine biopsy for all patients with elevated PSA levels versus biopsies based on abnormal MRI findings—found they are similarly effective at detecting clinically significant cancers.

Once a patient is diagnosed with prostate

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cancer, what happens next? For decades the debate over treatment has been just as contentious as the debate over diagnosis. Fortunately, new research from the U.K. has provided some clarity. Investigators there studied several thousand people with elevated PSA levels whose prostate biopsies showed cancer. These patients were randomized to receive surgical removal of the cancerous gland, radiation treatments or no active treatment at all. At the end of 15 years of comprehensive follow-up, about 3 percent of patients in each group had died of prostate cancer, and nearly 20 percent in each group had died of unrelated causes.

Based on the results of this study and others, more people are now being offered "active surveillance" after a prostate cancer diagnosis, in which treatment is either delayed or avoided altogether. Careful monitoring of patients who have not undergone surgery or radiation is becoming more common; it is now being extended even to those with more worrisome tumors. The monitoring involves a range of measures: PSA testing every three to six months, physical examination of the prostate gland and assessment of the patient's urinary symptoms. Those tests are followed by repeat biopsies at increasing intervals, as long as there are no significant pathological changes.

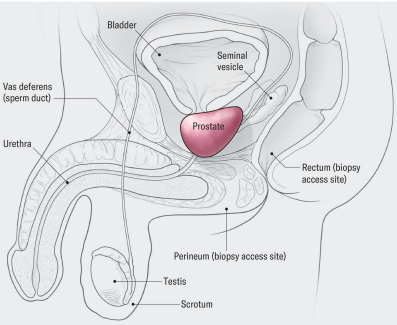
If a cancer is identified as having either intermediate- or high-risk features, doctors need to track its progression, usually with bone scans using radio--pharma-ceut-i-cals and with abdominal-pelvic computed tomography (CT) scans, which may show any spread in the areas to which prostate cancer most often metastasizes. Unfortunately, these techniques are not sensitive enough to reliably detect cancer in structures less than a centimeter in diameter, such as lymph nodes. Consequently, small areas of metastatic disease may go undetected. These cases are said to be "understaged."

Understaging can now be studied through more precise diagnostic testing. Typically patients whose disease is understaged are not treated until the cancer becomes detectable through symptoms such as urination problems or pain. The disease then may require intensive therapies, and there is less of a chance of long-term remission. One technology that can help address understaging is advanced scanning that combines radiodiagnostic positron-emission tomography (PET) with CT.

These scans can detect molecules commonly found in prostate cancer cells, such as prostate-specific membrane antigen (PSMA). If PSMA is present outside the prostate gland, such as in pelvic lymph nodes, the affected areas can be identified, and a plan can be made for targeted radiation treatments or surgical removal.

A Vulnerable Spot

The site of one of the most common cancers, the prostate is a walnut-size gland in the pelvic cavity. It generates fluid that mixes with sperm from the testes and seminal vesicle fluid to make semen, which exits the body through the urethra during ejaculation.



David Cheney

Let's consider how PET-CT scanning can be used in clinical practice. One of my patients, a 68-year-old man, was diagnosed with prostate cancer that was localized but had high-risk features. The traditional diagnostic bone and CT scans did not show any evidence of cancer spread outside the prostate. A PET-CT scan for PSMA, however, did reveal the presence of several small deposits of cancer cells in well-defined areas of the pelvis, indicating the cancer had spread to the lymph nodes. This finding prompted treatment that included radiation therapy in the prostate gland and the cancerous lymph nodes, as well as androgen-deprivation therapy (ADT), a treatment that reduces levels of testosterone, the hormone that enables prostate cancer to grow and progress.

The more precise identification of small tumor deposits in a limited number of pelvic lymph nodes—diagnosed as oligometastatic prostate cancer—enabled a new use for an old technology in oncology called metastasis-directed therapy (MDT), which targets cancer-containing lymph nodes or bony areas with radiation. At times, surgical removal of the abnormal lymph nodes may also be incorporated into MDT. Recently published studies on the use of MDT in conjunction with conventional treatments show, in some cases, long-term remission lasting through years of follow-up. Until recently, such a scenario was unthinkable for people whose prostate cancer had spread to their lymph nodes. My patient had the PSMA scan and MDT, as well as a relatively short course of ADT. He is cancer-free for now.

Precise identification of small metastatic deposits has other positive benefits. ADT has for decades been the mainstay for treating many forms of prostate cancer. Patients must continue the therapy for years, sometimes for the rest of their lives. Side effects of ADT are similar to those experienced during menopause. In fact, "andropause" is the term that captures the effects of ADT. Lower levels of testosterone are accompanied by a multitude of symptoms, including but not limited to loss of libido, erectile dysfunction, weight gain, hot flashes, bone loss, cognitive impairment, mood changes, diminished energy, and worsening of preexisting heart and vascular problems.

Studies of MDT for oligometastatic prostate cancer have raised the question of whether ADT could be delayed, administered for a shorter duration or even omitted in patients who otherwise would have required it. By strategically deploying traditional forms of localized treatment—usually surgery to remove the prostate gland or radiation—with added MDT for oligometastatic disease, doctors can significantly shorten the duration of ADT or potentially eliminate it. Such an approach would have been difficult to imagine five years ago. Longer-term

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follow-up studies will help scientists determine whether some people diagnosed in this fashion can go into an extended remission.

For advanced forms of prostate cancer that have spread to other parts of the body, ADT has been the main treatment. Physicians historically have generally recommended surgical removal of the testicles—the primary source of testosterone—or the administration of other hormones that block the production and action of testosterone. In the mid-1980s I was involved with research on drugs called luteinizing hormone–releasing hormone analogues that lowered testosterone by shutting off the signal in the brain that instructs the testicles to make testosterone. Today newer agents have been added that further lower and block testosterone's action.

The goal of prostate cancer treatment at later stages is to eliminate multiple sources of testosterone. As noted earlier, testosterone in the body comes predominantly from the testicles; the adrenal glands also produce a small amount. But prostate cancer cells can evolve to produce their own androgens. Testosterone and its active form, dihydrotestosterone (DHT), traverse the membranes of prostate cancer cells and interact with androgen receptors in the cytoplasm, a cell's liquid interior. The receptors then transport DHT to the nucleus, where it instructs the cancer cell to grow, replicate and spread.

Traditional ADT does little to affect either the production of testosterone by the adrenal glands or androgen-producing prostate cancer cells, and it doesn't block the activity of androgen receptors. But new approaches to ADT may address these shortcomings. Drug combinations that affect all these processes have substantially improved survival in people with metastatic prostate cancer—and, more important, patients are able to tolerate these more intensive treatment programs.

Instead of just one drug to decrease testosterone, new standards for treatment prescribe combinations of two or even three drugs. In addition to traditional ADT, there are medications such as docetaxel, a chemotherapy, and other new drugs that can block the production of testosterone by the adrenal glands or cancer cells or stop it by interfering with the activity of androgen receptors. All these drug combinations have resulted in meaningful improvements in survival.

Yet another therapy for advanced disease involves the identification of PSMA-expressing cancer cells that can be targeted with pharmaceuticals designed to deliver radioactive bombs. An injectable radiopharmaceutical can be delivered selectively to these cells, leaving healthy cells mostly unaffected. This therapy, lutetium-177--PSMA-617 (marketed as Pluvicto), has been approved by the U.S. Food and Drug Administration for the treatment of prostate cancer that has become resistant to other forms of ADT and chemotherapy. It is likely to become an important therapy for even earlier stages of prostate cancer.

Genetics and genomic testing of patients and cancers have also helped in the quest for improvement of symptoms and longer survival. Some genetic mutations that are known to increase the risk of breast and ovarian cancer have also been associated with a heightened risk of prostate cancer. Testing for such mutations is becoming much more common, and patients who have them can be treated with specific therapies that block their deleterious effects, leading to better outcomes.

An understanding of the type of mutation is also critical—for both patients and their family members. Germline mutations are inherited from a patient's biological parents by every cell in the body. These mutations can be passed along to the patient's children. A somatic mutation, in contrast, is not inherited but develops in the cancer itself. Targeted therapies designed specifically to correct the effects of either germline or somatic mutations have produced significant improvements in patient longevity. Some of the most commonly recognized cancer mutations—either somatic or germline—are those in BRCA genes, which have been associated with early-onset breast and ovarian cancer.

When researchers studied cancer in families with BRCA mutations, they uncovered many cases of prostate cancer. This finding led to the discovery that BRCA mutations appeared in both men and women in these families. The mutations change the way DNA is repaired, introducing defects that can result in cancer formation. Drugs have now been developed that treat cancers linked to the BRCA mutations. Several such drugs—those in a class called poly-(ADP-ribose) polymerase (PARP) inhibitors—have recently received FDA approval for use as a treatment in people with these mutations. This research has led to more widespread genetic testing of patients with prostate cancer and, when germline mutations are found, family genetic counseling.

All these advances have occurred over the past decade—an incredibly short interval in the context of cancer oncology. Current options for early-stage prostate cancer enable physicians and patients to feel more at ease with conservative choices rather than immediate interventions with negative side effects. For patients whose cancers are advanced at initial diagnosis or progress and become metastatic, the treatment of oligometastases now often leads to long-term remission and requires fewer treatments with harmful systemic side effects. For those with more widespread metastatic disease, their cancer can now be managed with improved therapeutics based on a better understanding of disease biology. These new strategies have begun to transform this once rapidly fatal disease into a chronic condition that people can live with for years or even for their full life expectancy.

BY MARC B. GARNICK

Source: www.scientificamerican.com/article/treating-prostate-cancer-at-any-stage

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A new hope for men with metastatic prostate cancer

MUHC patients are the first enrolled in a new global Phase 1 clinical trial testing Actinium-225, a therapeutic agent used in nuclear precision medicine

The Research Institute of McGill University Health Centre (RI-MUHC) has enrolled this week the first patients to take part in an early-stage, multi-centre clinical trial of Actinium-225, a radioactive isotope used as a treatment for metastatic prostate cancer. The RI-MUHC is proud to be selected as the first site worldwide to launch this new clinical trial, which introduces a promising new therapy in precision medicine for patients who have exhausted all other options in the treatment of their disease.

The third leading cause of cancer-related-death in men, prostate cancer will affect approximately 1 in 8 Canadian men during their lifetime and cause the death of 1 in 30, according to the Canadian Cancer Society.

Led at the RI-MUHC by Dr. Ramy Saleh, Medical Oncologist at the MUHC's Cedars Cancer Centre and Medical Director, Oncology, at the Centre for Innovative Medicine (CIM) at the RI-MUHC, the study will evaluate the safety (i.e. the drug's ability to act without adverse effects) and tolerability (i.e. the subject's ability to withstand adverse effects) of Actinium-225, which works by targeting the prostate-specific membrane antigen (PSMA).

PSMA, which is found in more than 80 percent of patients with metastatic prostate cancer, is highly expressed in prostate tumoral cells, but is very little present in the rest of the body. Actinium-225 binds to PSMA receptors, finds the cancer cells and emits radiation to kill them by breaking their DNA strands. A potential advantage of this targeted mode of action is the sparing of healthy organs.

"We are very excited to be testing Actinium-225 and to be the first centre in the world to start this clinical trial," says Dr. Saleh. "It's a great satisfaction for our team because it's the result of our sustained efforts to bring the latest therapeutic advances to our patients."

The experimental treatment, developed by the US company POINT Biopharma, will be administered by intravenous injection to 50 patients with metastatic castration-resistant (mCRPC) or biochemically recurrent (BCR) prostate cancer, for whom standard of care treatments have failed. Different doses will be tested and patients will be followed for five years to monitor any side effects.

In addition to assessing the safety of the drug for patients, the study will monitor how the drug interacts with tumours and healthy organs, find out if it is well tolerated, and determine the right dose that could be used in future studies.

"Other clinical trials have shown that similar treatment with drugs that target PSMA can reduce prostate cancer tumour burden and potentially improve prognosis. So, although we don't know if the drug we're studying will improve the health of our patients, we see this trial as our best hope," adds Dr. Saleh, who is also Medical Director of the Phase 1 Research Unit at the CIM, Investigator in the Cancer Research Program at the RI-MUHC and Assistant Professor in the Gerald Bronfman Department of Oncology at McGill University.

Clinical trials: the path to better health outcomes

Research is essential to improve cancer treatments and survival rates. Phase 1 clinical trials are a critical part of research, because they can determine whether to continue or stop development of a new drug.

Established in 2018, the Phase 1 Research Unit at the CIM is dedicated to providing high-quality care to its cancer patients while supporting the drug development process. One of the distinguishing elements of the unit is its state-of-the-art facilities and equipment, which allow for precise and efficient study conduct. In addition, the unit often works with a multidisciplinary team of experts to ensure comprehensive and robust clinical trial designs.

"This world first confirms that the RI-MUHC, by fostering collaboration between its researchers and industry experts, has established a leadership position in Canada's clinical trials ecosystem. The Centre for Innovative Medicine not only brings the latest experimental therapies to patients, but also attracts the most innovative pharmaceutical companies, both nationally and internationally, at every stage of clinical trials," says Dr. Louise Pilote, Director (interim) of the CIM and Deputy Director of the RI-MUHC.

About the Research Institute of the McGill University Health Centre

The Research Institute of the McGill University Health Centre (RI-MUHC) is a world-renowned biomedical and healthcare research centre. The Institute, which is affiliated with the Faculty of Medicine of McGill University, is the research arm of the McGill University Health Centre (MUHC) – an academic health centre located in Montreal, Canada, that has a mandate to focus on complex care within its community. The RI-MUHC

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supports over 600 researchers and close to 1,700 research trainees devoted to a broad spectrum of fundamental, clinical and health outcomes research at the Glen and the Montreal General Hospital sites of the MUHC. Its research facilities offer a dynamic multidisciplinary environment that fosters collaboration and leverages discovery aimed at improving the health of individual patients across their lifespan. The RI-MUHC is supported in part by the Fonds de recherche du Québec – Santé (FRQS). www.rimuhc.ca

Media contact

Fabienne Landry
Communications coordinator, Research, MUHC
Fabienne.landry@muhc.mcgill.ca

April 11, 2024

Source: https://muhc.ca/news-and-patient-stories/news/new-hope-men-metastatic-prostate-cancer

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PET/MRI combination reduces unnecessary prostate biopsies, study shows

PET/MRI can improve diagnostic accuracy for prostate cancer patients and help avoid unnecessary biopsies, according to new research published in the April issue of The Journal of Nuclear Medicine. By applying the PRIMARY scoring system to PET/MRI results, researchers found that more than 80 percent of unnecessary biopsies could be avoided at the expense of missing one in eight clinically significant prostate cancer cases.

"PI-RADS 3 lesions present a dilemma to both urologists and patients because immediate biopsy could be unnecessary; however, a monitoring strategy could lead to some missed diagnoses of clinically significant prostate cancer. Hence, specifically ruling out clinically significant prostate cancer among PI-RADS 3 lesions has significant clinical implications."

Hongqian Guo, MD, urologist at Nanjing Drum Tower Hospital at the Affiliated Hospital of Nanjing University Medical School in Nanjing, China

The Prostate Imaging Reporting and Data System (PI-RADS) is a five-point scale used to evaluate suspected prostate cancer on MR images. PI-RADS category 3, which presents an unclear suggestion of clinically significant prostate cancer, remains a diagnostic challenge. Although biopsy is recommended under the current guidelines, less than 20 percent of PI-RADS 3 lesions contain clinically significant prostate cancer.

In this study, 56 men with PI-RADS 3 lesions underwent 68Ga-PSMA PET/MRI. The five-level PRIMARY system, which is based on a combination of 68Ga-PSMA pattern, localization, and intensity information, was used to report prostate 68Ga-PSMA PET/MRI findings. After imaging, all patients underwent prostate systematic biopsy in combination with targeted biopsy to determine clinically significant prostate cancer.

Among the 56 patients, clinically significant prostate cancer was detected in eight patients (14.3 percent) by biopsy. When a PRIMARY score of at least four was used to make a biopsy decision in men with PI-RADS 3 lesions, 40 of 48 (83.3 percent) participants could have avoided unnecessary biopsies, at the expense of missing 1 in 8 (12.5 percent) of clinically significant prostate cancer cases.

"By demonstrating the additive value of 68Ga-PSMA PET/MRI in classifying PI-RADS 3 lesions, this study provides new insight into the clinical indication for 68Ga-PSMA PET/MRI," noted Guo. "In the future, PI-RADS 3 patients could be referred for 68Ga-PSMA PET/MRI before prostate biopsy."

This study was published online in March 2024.

Source:
Society of Nuclear Medicine and Molecular Imaging

https://www.news-medical.net/news/20240413/PETMRI-combination-reduces-unnecessary-prostate-biopsies-study-shows.aspx

Apr 13 2024

Journal reference:
Shi, J., et al. (2024). The Value of68Ga-PSMA PET/MRI for Classifying Patients with PI-RADS 3 Lesions on Multiparametric MRI: A Prospective Single-Center Study. The Journal of Nuclear Medicine. doi. org/10.2967/jnumed.123.266742.

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FUTURE MEETINGS 2024

19 June **Dr. Aldrich Ong** MD, M Sc, FRCPC
Radiation Oncologist, CancerCare Manitoba
Topic: "Radiation therapy for prostate cancer: 2024 version"

17 July **Dr. Kevin M. Coombs**, PhD
Professor, Medical Microbiology University of Manitoba
Topic: "Anti-cancer treatment from an unexpected source: Viruses as killers of cancer cells"

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