# Manitoba Prostate Cancer SUPPORT GROUP

# Newsletter

**Vol. 399** *MPCSG – active since 1992.* **August 2025** 

## **Medical Advisors**

Paul Daeninck M.D. Medical Oncologist

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Thanks!

## Thought of The Day

"Adversity is not a roadblock, but a detour. It's up to us to find a new path forward."

- Jeff Ocaya

# **Next Meeting**

Date: Wednesday, August 20, 2025

**Speaker:** Dr. Paul C. Park MD, PhD Adjunct Scientist, CCMB Research Institute; Assistant Professor, Department of Pathology, Rady Faculty of Health Sciences

**Topic:** "Research highlights in the fight against prostate cancer" (Have your questions answered in the Q&A)



**Time:** 7-9 pm

Free Admission Everyone Welcome Plenty of free parking Door Prizes



Wed Sept 17 2025 7 pm Caboto Centre, 1055 Wilkes Ave., Winnipeg

Celebrating prostate cancer awareness month



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.

August 2025

# Scientists uncover immune cells that help prostate cancer resist treatment and a way to stop them

Scientists at the Fralin Biomedical Research Institute are part of an international team that discovers how prostate cancer turns immune cells into accomplices.

Scientists have revealed how certain immune cells may be quietly helping prostate cancer grow — and how blocking them could help the body fight back.

The study, published as the July cover story in Molecular

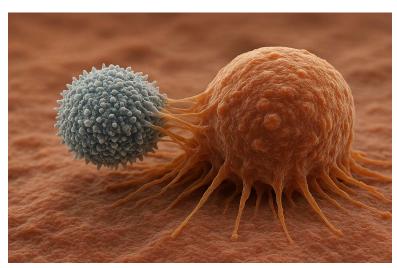
Cancer Research, identifies a group of cells called macrophages that, instead of protecting the body, appear to shield tumors from attack and promote tumor metastasis.

These cells are typically the immune system's housekeeping crew — engulfing dead cells and responding to infection — but in prostate cancer, some are reprogrammed by tumors

to suppress the body's immune responses and promote their own spread.

Led by Assistant Professor Shenglin Mei of the Fralin Biomedical Research Institute Cancer Research Center in Washington, D.C., the study focused on tumor-associated macrophages, in advanced prostate cancer — particularly in the bone, where the disease is most deadly and difficult to treat.

Among four macrophage subtypes identified, one stood out: a group marked by the proteins SPP1 and TREM2. These cells were found clustered inside tumor regions — not in surrounding tissue — and were linked to blood vessel growth, impaired immune activity, and the spread of cancer in the body.



Using spatial analysis — a technique that maps where cells are located within a tumor — researchers found that inflammatory, potentially tumorfighting macrophages tended to remain outside tumor boundaries, but a specific subtype that produces the troublesome SPP1 and TREM2 proteins was found

deep inside the tumors, in close contact with cancer cells.

"Macrophages often aid in fighting cancers," Mei said. "However, certain subtypes foster an immune-suppressive environment, hindering the body's natural defenses."

In follow-up experiments, Mei and his colleagues tested whether blocking these cells could improve treatment. In mice with prostate tumors, they used an antibody to block the SPP1 protein —

and found that tumors were more vulnerable to immunotherapy.

While immune checkpoint inhibitors have worked in many other cancers, they've failed in prostate cancer. But in this study, combining anti-SPP1 treatment with immunotherapy significantly boosted the immune response. "Targeting SPP1/TREM2 tumor associated macrophages reversed immunosuppression,

allowing more T cells — the immune system's primary defenders — to infiltrate the tumor, resulting in slowed cancer progression," Mei said.

Prostate cancer is the second most commonly diagnosed cancer in men in (Continued on page 3)

# 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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the United States and globally, with an estimated 1.47 million new cases worldwide in 2022, according to the World Cancer Research Fund.

Scientists have long suspected that the tumor microenvironment — the mix of immune cells, blood vessels, and signaling molecules around a tumor — plays a role in helping cancer escape detection. But this new study reveals, in greater detail, which cells are involved and how they're working.

To make this discovery, Mei's lab combined advanced techniques — including single-cell RNA sequencing, spatial transcriptomics, and NanoString digital spatial profiling — to map immune cell activity and location. They also analyzed large-scale, publicly available datasets from hundreds of prostate cancer patients, ensuring their findings held up across human samples, mouse models, and disease stages.

"This is about more than just one cell type," said Mei, who also has an appointment with the Department of Biomedical Sciences and Pathobiology in the Virginia-Maryland College of Veterinary Medicine. "It's about using spatial and single-cell analysis together to uncover vulnerabilities that we couldn't see before."

The research is the product of a multiinstitutional collaboration that included Virginia Tech, Harvard Medical School, Massachusetts General Hospital, the University of Chicago, and Sweden's Karolinska Institute.

Many of the co-authors are physicianscientists who provided access to patient samples and clinical insights, Mei said. The project was supported by the Prostate Cancer Foundation, which awarded Mei a Young Investigator Award, and by the National Institutes of Health. Mei is among a cohort of new cancer research faculty at the research institute whose recruitment was supported by the Red Gates Foundation.

This work builds directly on Mei's earlier studies — a 2021 Cancer Cell paper that revealed an immunosuppressive tumor microenvironment in bone metastases, and a 2023 Nature Communications study that mapped immune cell patterns in primary tumors.

The new study expands on that foundation, integrating old and new datasets to reveal a previously hidden player in prostate cancer progression.

"This is exactly the kind of innovative and collaborative precision medicine research that we hope to foster with this new center," said Chris Hourigan, director of the Fralin Biomedical Research Institute Cancer Research Center in Washington, D.C. "Integrating cancer genomics and computational oncology expertise may lead not only to new biological understanding but also, we hope, to potentially actionable solutions for the problem of cancers."

DOI: 10.1158/1541-7786.MCR-24-0791

By John Pastor 10 Jul 2025

Source: https://news.vt.edu/ articles/2025/07/research-fralinbiomedprostatecancer.html

https://aacrjournals.org/mcr/article-abstract/doi/10.1158/1541-7786.MCR-24-0791/756659/Single-Cell-and-Spatial-Transcriptomics-Reveal-a

# Pfizer, Astellas' Xtandi combo extends survival in early prostate cancer setting

Pfizer and Astellas announced Thursday that in the Phase III EMBARK study, the combination of Xtandi (enzalutamide) and leuprolide significantly improved overall survival (OS) versus leuprolide alone in men with non-metastatic hormone-sensitive prostate cancer (nmHSPC) with biochemical recurrence. The companies noted that Xtandi is the first androgen receptor inhibitor-based regimen to demonstrate a survival benefit in this setting.

"These positive results add to the robust clinical support for the use of Xtandi and broaden clinical confidence,

offering men with high-risk BCR evidence that they might live longer when they start Xtandi early," remarked Johanna Bendell, Pfizer's oncology chief development officer.

Previous results from the EMBARK trial had shown that Xtandi plus leuprolide significantly reduced the risk of metastasis or death by 58% versus leuprolide alone, meeting the primary endpoint. Findings from the study — which enrolled 1068 patients with nmHSPC with biochemical recurrence at high risk for metastasis — supported approvals of the regimen in the US and EU.

Pfizer and Astellas noted Thursday that the combination also led to a statistically significant and clinically meaningful improvement on the key secondary endpoint of OS over leuprolide alone. However, while the Xtandi monotherapy arm showed a favourable trend towards improved OS versus leuprolide alone, the difference was not significant, the companies noted.

Source: https://firstwordpharma.com/story/5980238 https://pfizer.com/news/press-release/press-release-detail/ xtandir-plus-leuprolide-significantly-improves-survival

Matthew Dennis July 10, 2025

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# For Advanced Prostate Cancer, This Drug Offers Hope. Also Risks

A UBC student's research could help doctors use the promising but costly new medicine.

A University of British Columbia student was recognized at the largest cancer conference in North America for her recent work identifying potential side effects of a promising cancer drug.

Patients in B.C. fought for and won access to Pluvicto, a treatment that delivers targeted radiation to prostate cancer cells. The treatment costs around \$27,000 per dose, and can require around six doses.

In B.C. the drug will be available through BC Cancer's Compassionate Access Program. Only Ontario, Nova Scotia and Alberta have publicly funded the drug. In Canada Pluvicto is approved for treatment of late-stage prostate cancer.

Between 250 and 300 patients will be eligible for treatment with Pluvicto each year, according to BC Cancer. Around 4,165 people are diagnosed with prostate cancer in B.C. annually, which kills around 30 people per year.

Scientists need to understand what risks there are for any cancer treatment so they can know how to mitigate them, said Asli Munzur, one of the winners of the 2025 Novartis Oncology Young Canadian Investigators Awards.

Munzur took the prize home after presenting an overview of her research at the American Society of Clinical Oncology annual meeting in June.

She's a PhD candidate working at the Vancouver Prostate Centre and a student at UBC.

Cancer care is moving towards what's known as precision medicine, where each patient's unique genes and the genetic and molecular profile of their cancer are used to choose the best treatment for a patient, BC Cancer said in an emailed statement.

"Personalizing treatment in this way may lessen harmful side effects, reduce damage to healthy cells and make it more likely that a treatment will work," BC Cancer told The Tyee. "Precision medicine can also be used to predict cancer risk, diagnose cancer earlier and help people make treatment decisions that are right for them."

To personalize cancer care, BC Cancer says it's expanding precision radiotherapy, where patients receive targeted radiation at higher doses with less damage to neighbouring healthy tissues. The agency is also increasing access to new chemotherapy drugs, immunotherapy, hormone therapy and targeted therapy tailored to specific cancer types.

Pluvicto, which is the brand name for lutetium vipivotide tetraxetan, is injected intravenously and carries lutetium, the radioactive molecule, through the body until it attaches specifically to the outside of a prostate cancer cell.

This lets doctors "deliver targeted radiation to those cells only, which will minimize damage to other tissues," Munzur said.

Treatment for prostate cancer usually starts with hormone therapy that suppresses a body's testosterone production, which is known as "chemical castration." When the cancer starts to advance again, becoming "castration resistant," it's time to move on to chemotherapy or Pluvicto.

If the cancer spreads elsewhere in the body it's called metastatic cancer, or late-stage cancer, which can be incurable. Treatment at this stage can help give patients a couple of extra months to live, but cannot cure the cancer, Munzur said.

"The way drug approval works is they're first tested at the very late stages of cancer, when the patient has exhausted all other options," Munzur said. "If the drug demonstrates clinical benefits at that stage, it slowly moves to clinical trials in earlier stages."

In March 2025 Pluvicto was approved by the U.S. Food and Drug Administration for use before a patient tried chemotherapy.

Shortly after the FDA's approval, BC Cancer announced it had also approved Pluvicto and would treat patients at the INITIO Medical Group facility in Burnaby and at Royal Jubilee Hospital in Victoria starting in June, and at other facilities across the province later in the year.

Pluvicto seems to have fewer side effects than chemotherapy and is widely considered to be a "transformative drug," for cancer care, Munzur said.

But because it's relatively new more work is needed to understand its potential side effects, which can help doctors understand how to limit them.

#### Possible side effects of Pluvicto

One possible risk is a condition known as secondary leukemia.

This does not mean that Pluvicto causes secondary leukemia. Instead it increases the number of mutated blood cells a patient might have, which is a "known and established risk factor" for future blood cancers, Munzur said.

Secondary leukemia can develop when (Continued on page 5)

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an original cancer treatment affects the body's blood stem cells and causes the cells to transform into a very lethal, treatment-resistant form of leukemia. This can happen after a patient receives chemotherapy, radiation, or a drug like Pluvicto, she said.

This is where Munzur's research comes in.

She used targeted DNA sequencing, which looks at specific regions of a DNA strand to check for mutations, to evaluate blood samples from a 2018 Australian clinical trial where 180 patients were given either Pluvicto or chemotherapy.

She said her research goals were to compare how these treatments impacted a patient's risk of future cancer, which can be measured by checking their levels of clonal hematopoiesis, the word for cellular mutations in blood.

Before patients started treatment, blood mutations were "prevalent" in their blood, she said, which was expected because prostate cancer and blood mutations tend to happen in older patients, she said.

Munzer said she found that cancer patients who'd been given Pluvicto had a higher risk of blood cell mutations, which puts them at higher risk of future blood cancers.

Patients who received Pluvicto had 3.2 times the risk of developing mutations compared to patients that received the chemotherapy drug. Munzer also found the amount of mutated blood cells increased as well, with Pluvicto causing 87 per cent expansion in mutations and chemotherapy drugs causing 33 per cent expansion.

"This is high-risk. If the mutations are expanding within the time frame of months, then that's a concern for a future blood malignancy," she said.

That's good to know if the drug continues to be approved to treat earlier and earlier stages of prostate cancer, she said, because this means patients will have to live with side effects for longer.

It's also helpful to know that doctors can test a patient's blood to check for these DNA "signatures" that signal which patients might be at higher risk of later developing secondary leukemia, she said, adding it's too early to say how doctors might want to use this information clinically.

Novartis is a multinational pharmaceutical company based in Switzerland and considered one of the largest pharmaceutical companies in the world. It is the manufacturer of Pluvicto and has been choosing recipients of the Novartis Oncology Young Canadian Investigator Awards for 22 years.

Munzur said it's "meaningful" the company who made the drug recognized her work because it shows company dedication to better understanding what the drug does, "not just to the cancer but to the patient's entire body."

Michelle Gamage July 8, 2025

The Tyee

Michelle Gamage is The Tyee's health reporter. This reporting beat is made possible by the Local Journalism Initiative.

Source: https://thetyee.ca/News/2025/07/08/ Prostate-Cancer-Drug-Hope-And-Risks/

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# Study uncovers how prostate cancer becomes deadly, offers hope for new treatments

In a significant advancement for prostate cancer research, a first-of-its-kind study led by Emory researchers uncovered how the disease transforms into its most lethal form and identified a promising new treatment strategy.

The findings, published in Nature Genetics, offer critical insights into why some prostate cancers become resistant to therapy and how that shift could be blocked.

Researchers from Emory University have mapped a novel step-by-step process by which prostate cancer cells change into a more aggressive type known as neuroendocrine prostate cancer (NEPC). This transformation, which occurs in up to 20% of advanced cases, leads to rapid disease progression and currently has no effective treatment options.

"Prostate cancer is one of the most commonly diagnosed cancers, affecting countless patients and families," says lead author Jindan Yu, MD, Ph.D., a professor of urology in the Emory School of Medicine.

"While it often responds well to hormone therapy, many cases eventually develop resistance. One major pathway leading to treatment failure and disease progression is the transformation of prostate tumor cells into NEPC, a new beast that lacks the targets for existing prostate cancer drugs."

#### Mapping the cells in 3D

Using cutting-edge genomic tools and in collaboration with Dr. Jonathan Zhao, associate professor in human genetics, the team created the first-ever 3D map of how prostate cancer cells rewire themselves over time to become a new threat. This map shows how the

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DNA folds and loops inside the cell nucleus—changes that help activate genes driving the deadly transformation.

The researchers discovered that two proteins—FOXA2 and NKX2-1— play a central role in this process. FOXA2 acts as a pioneer, opening up regions of DNA that are normally inaccessible. This allows NKX2-1, a gene typically found in brain and lung cells, to activate a new set of instructions that reprogram the cancer cells into NEPC. Yu explains that together, they reshape the cell's identity and drive its transition to a deadlier form.

The study also revealed that enzymes called CBP and p300 are essential for this deadly transformation as they evolve to turn on a new set of oncogenes (targets).

Importantly, the researchers showed that CBP/p300-inhibiting drugs, such as CCS1477, currently in clinical trials, are able to target the moving targets and stop NEPC tumor growth in lab and animal models.



This research has major implications for patients, families, and the future of prostate cancer treatment.

By identifying the molecular drivers of NEPC and showing how to block them,

the study opens the door to new therapies that could dramatically improve outcomes.

More information: Xiaodong Lu et al, NKX2-1 drives neuroendocrine transdifferentiation of prostate cancer via epigenetic and 3D chromatin remodeling, Nature Genetics (2025). DOI: 10.1038/s41588-025-02265-4

https://dx.doi.org/10.1038/s41588-025-02265-4

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nature-genetics/

by Emory University July 25, 2025 The GIST

Source: https://medicalxpress.com/ news/2025-07-uncovers-prostate-cancerdeadly-treatments.html

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# If You're Caring for Someone with Prostate Cancer, Here's How to Care for Yourself Too

Cancer caregiving can be taxing in many ways, from physical to emotional, as well as on the caregiver's time and resources. Here's how to help prevent burnout

According to the American Cancer Society, one in eight American men will be diagnosed with prostate cancer in their lifetime. There will be approximately 314,000 new cases of prostate cancer this year alone. Often called a "silent killer," prostate cancer typically shows no symptoms early on, allowing it to progress without the patient's awareness. In its later stages, it can become more aggressive, and the course of treatment requires support from loved ones.

That's where caregiving comes in, as thousands of people in the United States know from personal experience. According to the AARP, approximately one in five adults are caregivers, a responsibility that, while deeply meaningful, can also be overwhelming. It can feel all-consuming, particularly when family members or friends are thrust into the role without preparation or training, relying just on their love for the patient to help power them through the demanding role.

"You have to keep reminding yourself that you're doing a big thing here. You're taking care of a whole human being, maybe 24/7, and you're a human being yourself," says Nancy Keller, LPN, a Connecticut-based hospice nurse. "You need things along the way, and you can't give everything to the patient."

The most common issue she sees is caretaker burnout—when the physical and emotional stress of caring for someone takes a toll on the caregiver's well-being. "They're doing everything for this person and oftentimes they either don't have consistent support from [others], or help comes in spurts," says Keller.

From managing appointments and medications to handling daily tasks, and easing emotional challenges, it's a heavy load. But it ultimately boils down to this: If you don't take care of yourself, you can't effectively care for someone else. Ahead, we've gathered practical tips and thoughtful guidance to help you navigate the complexities of caregiving for a loved one with prostate cancer.

#### Learn to let go

We sometimes think that we can (and must) "do it all," but that's not the case. Yes, caregivers are superheroes, but it is okay to ask for help. If the person

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in your life suffering from prostate cancer is at a stage where they need continuous care, reach out to family, friends, or neighbors who can come and sit with them while you run an errand.

And once help arrives, embrace it. Sometimes even though we know we need the help, it's hard to accept it when it comes for fear that we're shirking our responsibilities.

Keller says she sees that often in her job. "In hospice we have aides that are scheduled to come in at certain times and so we say to the caregiver, 'When the aide comes to give your dad or husband a bath, let her do her thing. She's trained to do that, so let her, and then you go and take a walk down the street for a bit."

#### Schedule in self-care

The physical part of caring for someone may be second nature, but the time management component (and emotional aspect, but more on that later) often gets overlooked, explains Keller. That's why it's crucial to schedule your own breaks with the same importance you'd give a doctor's appointment.

Is physical therapy at 4:00? Use that time to step out for a coffee. Have a quiet window in the morning? Try to fit in a workout a few times a week. Put these things in the calendar and treat them as meetings you can't miss. You can't just hope for downtime—you must plan for it.

If your loved one can't be left alone, consider looking into a respite care volunteer service which provides temporary relief. Another idea to put you at ease? Even small tools like baby monitors or home cameras can bring peace of mind, allowing you to check in without being in the room.

#### Adjust your routine to theirs

When you're caring for someone, their schedule—whether it's doctor appointments, chemo treatments, or medication routines—often takes center stage. But by thoughtfully aligning parts of your day with theirs, you can create a sense of balance. For example, if you're driving them to an appointment, plan to knock out an errand on the way home. Do they eat dinner at 6:00 every evening? Sit down and eat with them. It's easy to skip meals when you're focused on someone else, but sharing mealtime gives you a chance to refuel and reconnect. Food has a way of grounding us and bringing people together.

#### Phone a friend

Prioritizing your emotional well-being is just as important as managing the physical demands of caregiving. Maintaining relationships outside of the one you have with the person you're caring for can be a crucial lifeline.

"It means staying connected—to a family member, a close friend, a neighbor, or maybe a pastor at your church," says Keller. "You need a safe space to vent and be heard." That could mean a weekly phone call, a coffee date, or dinner with someone in your support circle.

"I always say—get away from the caregiving situation whenever you can, without compromising the patient's safety, and do something just for you," Keller advises. Because as it bears repeating often: If you don't take care of yourself, you won't be able to truly care for someone else.

#### Get adequate sleep

Of course that may be easier said than done. But without prioritizing your health and recharging with sufficient shut-eye, your battery will eventually be depleted.

"One of the most important things for

the person doing the care is to get enough sleep," says Keller. "That can be a hard thing because not only are you doing a lot, but you're thinking a lot which can be distracting and keep you up at night." To ease yourself to sleep, find a nightly ritual that works for you—listen to a meditation app, have a cup of herbal tea, take a warm bath, read a chapter or two of a good book, or all the above. Whatever helps you unwind, make it a habit.

#### Don't overlook their emotional state

When you're caught up in the daily grind of managing your loved one's physical needs, you may unintentionally overlook their emotional needs — which can end up being tough for both of you.

"The emotional connection someone needs during this time is ultimately more important than the physical," says Keller, especially with a diagnosis like prostate cancer, which may not present itself with physical pain in its early stages. "There's not much you can do physically for prostate cancer, but emotionally—you can do a lot."

Instead of dwelling on the weight of the diagnosis, focus on the present. Life is still happening. Encourage visits from friends and family, find ways to add moments of joy into the day, and try to keep a sense of normalcy wherever you can. Everyone will be better for it.

#### Seek out organizations for help

A social worker can be an invaluable ally, connecting you with a range of support services—from educational resources and respite care to guidance on local support groups. Start by speaking with your loved one's oncologist—they can often point you in the right direction.

By Holly Carter July 8, 2025

Source: https://people.com/if-you-re-caring-forsomeone-with-prostate-cancer-here-s-how-to-care-foryourself-11749290

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#### **FUTURE MEETINGS 2025**

Mark your calendar for next month

17 Sep: September prostate cancer Awareness Evening

Our highlight event of the year at the Caboto Centre Watch for details

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15 Oct: TBA

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For general information please contact Jos Borsa at number listed above