Prostate Examiner Summer Newsletter

Visit us at www.prostatecancersupporttbay.org

Prostate Cancer Support Thunder bay

Looking for Support

Local men available to talk to you

Gary Allen 621-0552
Grant Arnold 807 355 8235 or 519-584-5125
Marc Breton 628-9944 (en francais)
Bill Everitt 767-5768
David Everitt 628-5287
Marcel Girouard 705-362-8154 (en francais)
Bill Horde 767-1490
Ed Long 628-6915
Milton Marion 475-0760
Dez Stolz 577-9515

Women available to talk to you

Beth Long 629-4774
Carmen Marion 475-0760
Lise Pollard 623-3102(en français)

Northwestern Ontario Region

Atikokan
Ron Speck 807-597-2219
Dryden
Horst Lang 808-223-5516
Fort Francis
need a contact
Hearst
Marcel Girouard 705-362-8154 (en français)
Kenora
need a contact
Terrace Bay/ Schreiber
Mike Regis 807 825 9696
Geraldton
Ron Adams 807 854 1476

55 Plus **Resolute Forest Products**

Health Fairs were held at both the above locations and were very well attended.
Pictured above manning the booth are, on the left, Bill Horde and Bill Komar and on the right, Ed Long and Mike Aldrich. Many thanks to the other volunteers who helped make our attendance at this event possible.
We were able to chat with many people and spread the word.

Email us at
info@prostatecancersupporttbay.org

Prostate Cancer Support Thunder Bay

June 2024

Ketone supplement boosts efficacy of prostate cancer immunotherapy

University of Notre Dame April 26 2024

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 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. 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.”

—Xin Lu, the John M. and Mary Jo Boler Collegiate Associate Professor in the Department of Biological Sciences

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.
The research was supported by a grant from the American Institute for Cancer Research, funding from the National Institutes of Health and a core facility grant from Indiana Clinical and Translational Sciences Institute. Other support included the Department of Defense and the Boler Family Foundation at the University of Notre Dame. A provisional patent application has been filed based on this study by the IDEA Center at Notre Dame

-Source:University of Notre Dame
-Journal reference:Murphy, S., et al. (2024). Ketogenic diet alters the epigenetic and immune landscape of prostate cancer to overcome resistance to immune checkpoint blockade therapy. Cancer Research. doi.org/10.1158/0008-5472.can-23-2742.

IN PERSON MONTHLY MEETINGS AT 55 PLUS

The multi purpose room has been booked for the **third Thursday of every month from 7 PM till 9 PM**
Seating will be appropriate for safe distancing and masks are welcome.
The meeting will also be available on Zoom for those who are not comfortable with in person yet.

Prostate Cancer Support Thunder Bay

June 2024

8:16 AM Sat Apr 27 — digital.chroniclejournal.com — VPN 91%

Thunder Bay 50/50 Helps Bring New PET/CT to Thunder Bay

Your Impact: New PET Replaces Ageing Unit and Provides New Possibilities

BY GRAHAM STRONG

When Thunder Bay got its first PET/CT scanner in 2008, it was a major accomplishment. We were one of the first hospitals in Ontario to get this advanced scanner – PET/CT wasn't even approved for use in Ontario at the time except for research. It quickly became a very useful tool for diagnosing cancer as well as planning and monitoring treatments.

But 16 years is a long time in the medical technology world. The original unit was becoming obsolete and more prone to breakdowns. **Thanks in part to your purchase of Thunder Bay 50/50 Draw tickets, the Thunder Bay Regional Health Sciences Foundation was able to support replacing this unit.**

Sandra Willson, Manager of MRI, Ultrasound, and Nuclear Medicine at the Thunder Bay Regional Health Sciences Centre, said the new unit isn't just a replacement though – it represents a huge advance in technology.

"The real upgrade is the way that the software works with the PET/CT," Willson said. Advanced features such as motion correction decrease blur, making the images clearer and easier to read.

Not only that, imaging and processing times will be faster. That means less time for patients, both in terms of lying still on the table and reviewing the images before they leave.

"Whereas it could take 15 minutes to process those images on the old scanner, now it might take one or two minutes. That means we will be able to scan more patients in an hour, and get those patients in and out faster," Willson said.

PET/CT is a type of molecular imaging that uses medical radioisotopes, many made in our cyclotron. These radioisotopes light up cancer cells, allowing doctors and technologists to pinpoint tumours in the body.

The upgraded PET/CT scanner offers new imaging possibilities. Recently, our Hospital introduced a new PET imaging technique specifically for prostate cancer called Prostate Specific Membrane Antigen (PSMA). This technique lights up cancer cells not detectable by other imaging methods to check for recurrence in some prostate cancer patients. In the future, the upgraded technology can also be used for cardiac PET/CT and expanded research capabilities including potential clinical trials, which would directly benefit patients.

Our Hospital recently launched a cutting-edge prostate cancer diagnostic imaging method using the new PET/CT scanner. The upgraded unit, installed in August 2023, is a great example of how your purchase Thunder Bay 50/50 Draw tickets brings healthcare improvements to Northwestern Ontario.

"Having this new PET/CT scanner will increase our capacity not only in number of patients but also in technology and the number of ways we can use it," she said.

What's really exciting is that having both the new PET/CT and our cyclotron will offer many "build it and they will come" moments. New PET/CT imaging techniques for a wider array of cancers and other diseases are developed every year. Having our own cyclotron to produce many of those custom radioisotopes opens up more possibilities for diagnostic imaging and research.

You helped bring this new and vital technology to our Hospital! This is just one example of how your purchase of Thunder Bay 50/50 tickets brings closer-to-home healthcare to our region. Buy your tickets online at: thunderbay5050.ca

UPCOMING EVENTS

June 16th- Fathers Day Walk for Dad 2:00 PM, at Boulevard parking lot.

June 20th- Beef on a Bun Social at 55 Plus Centre (PCS 30th Anniversary)

September- Prostate Cancer Month

Prostate Cancer Support Thunder Bay

June 2024

Breakthrough imaging method enhances precision in prostate cancer treatment

Society of Nuclear Medicine and Molecular Imaging April 17 2024

A novel SPECT/CT acquisition method can accurately detect radiopharmaceutical biodistribution in a convenient manner for prostate cancer patients, opening the door for more personalized treatment. Utilizing lead-212 (212Pb), the new imaging technique has the potential to change practice and increase access for patients around the world. The first-in-human images from this method were published in the April issue of The Journal of Nuclear Medicine. There is significant interest in the development of 212Pb-PSMA–based targeted alpha therapy (TAT) for patients with metastatic castration-resistant prostate cancer. However, 212Pb is a challenging isotope to image because of the high-energy gamma rays generate significant scatter.

“The ability to acquire imaging of an alpha-emitter with a standard SPECT camera and standard collimator within a convenient acquisition time for the patient could provide more precision in how we treat patients with prostate cancer, and patients with other cancers, in the future. Confirming the presence of the drug in the target is important because it serves as a quality assurance and can be used to derive an understanding of the biodistribution and pharmacokinetics of the drug.”
Stephen Rose, PhD, head of Translational Medicine and Clinical Science at AdvanCell

In the study, researchers administered 60 MBq of 212Pb-ADVC001 to a 73-year-old man with metastatic castration-resistant prostate cancer. SPECT/CT imaging occurred at 1.5, 5, 20, and 28hours after infusion.

Representative 212Pb SPECT/CT images showed rapid tumor uptake of 212Pb-ADVC001 in agreement with tumor burden shown on the pretreatment 18F-DCFPyl PET/CT images. Images acquired after 20hours showed persistent tumor uptake despite low counts due to 212Pb decay.
"In the future, this imaging technique can help to streamline the drug development process, driving conviction in the agents we bring to larger scale trials. In addition, the ability to image 212Pb with a standard SPECT camera in a relatively short timeframe means that 212Pb is a true theranostic alpha-emitter and could be a valuable in selecting patients for targeted alpha-therapies," said Rose

He continued, "What's more, access to PET imaging is a bottleneck, in the United States and globally. SPECT cameras are more widely available and may address this critical issue, as SPECT imaging can be used for patient selection, therapy decision making, and guiding adaptive dosing strategies based on changes of target expression and tumor volume during treatment."

The study was published online in February 2024.

Source:
Society of Nuclear Medicine and Molecular Imaging
Journal reference:
Griffiths, M. R., et al. (2024). First-in-Human 212Pb-PSMA–Targeted α-Therapy SPECT/CT Imaging in a Patient with Metastatic Castration-Resistant Prostate Cancer. Journal of Nuclear Medicine. doi.org/10.2967/jnumed.123.267189.

Prostate Cancer Support Thunder Bay

June **2024**

PRESIDENTS MESSAGE

Do you remember the first person that you had contact within our support group? Did that contact create feelings of hope and understanding? Countless men have experienced that. We went to a meeting, listened, and we found a place to learn and to talk about things that we couldn't talk about with most men that we know. What a relief to ask questions in an open way with men who understand. What a relief to share our frustration when things didn't go the way we wanted with our bodies. What a relief to laugh with others about things that had felt so heavy before we realized we weren't the first that it happened to.

On June 20th at our social we will be celebrating 30 years since the founding of this support group. It's changed its name a couple of times in those years, but the main task has been the same, to support men with prostate cancer. It will be a great time to celebrate those people who first gave us hope.

We are looking forward to summer with its warmth and its green leaves and green grass. We look forward to time with family and special places and visiting with people who live in distant places. Part of the reason we can look forward to this summer is because of those who have welcomed us into this support group and walked this journey with us.

We won't be meeting over the summer. Everybody's lives are busy and we want to enjoy the warm summer days around Thunder Bay. But we know that prostate cancer and the effect of prostate cancer continues so we are still available to hear your questions and to share our experience. We can talk over the phone over or over a cup of coffee.

I wish you all a good summer. Remember and thank those who helped you along the way and be one of those people for somebody else. Know that we are only a phone call away and happy to talk with you.

I ask again that you ask men who are requesting reimbursement to give their age, number of PSA test and where they heard about our program. It is very difficult to get stats on the effectiveness of our offer and our advertising without that information. It saves us the time and effort to have to call or email to ask for this information.

Sincerely
Your President

Ed Long

DONATIONS

Prostate Cancer Support Thunder Bay is a charitable organization that relies entirely on donations to remain in operation.

donations can be e-transferred to info@prostatecancersupporttbay.org

Prostate Cancer Support Thunder Bay

June 2024

PCS THUNDER BAY

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prostatecancersupportbay.org

Recently diagnosed with Prostate Cancer ?

NEED SOMEONE TO TALK TO?

Please feel free to call anyone listed on the left side of the front page of this newsletter.

They have been where you are now and will be happy to listen to your concerns and questions.

Prostate Examiner Monthly News

Please forward photos or information that benefits communication to Prostate Cancer Support Thunder Bay members to the attention of Mike Aldrich.
email: mraldrich@tbaytel.net

Prostate Cancer Support Thunder Bay

June **2024**

GET YOUR PSA TESTED

Its important

We believe in it so strongly that

we will reimburse you for your PSA test !!!

The PSA test is a key step in early diagnosis of prostate cancer

Early Detection Saves Lives
Get Informed!

Talk to your health care professional! Get your blood work done!

Send us the receipt

Address below or check us out on our website

Has been extended to December 31 2024. Available for men in NWO.

PCS T Bay Members, please share the above message !

Inform your family, relatives, friends and neighbours to request a

PSA Test

Awareness Support Research

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