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KELOWNA PROSTATE CANCER SUPPORT & AWARENESS GROUP

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Publisher/Editor – Bren Witt

VOLUME 27 – ISSUE 7 – (NUMBER 301) – MARCH 2025

Unfortunately, over the past few months we have not had a guest speaker attend our meetings, however, we have had some very lively discussion at these meetings. It started out in December when one of our members suggested we go around the room to see what type of treatments men had to treat their prostate cancer. I believe we covered every treatment available in B.C. at this meeting, including standard open surgery, Robotic surgery, Laparoscopic surgery, standard external beam radiation, LDR Brachytherapy, HDR Brachytherapy, one fellow waiting for SABR radiation and fellows on ADT (hormone therapy). In January we discussed what type of side effects men had suffered following treatment. The most common type of side effect mentioned was incontinence. Last month I brought out some of the items from my 'Toy Box' including an artificial urinary sphincter in order to show those present what the device look like. We have two fellows in our group who have had the surgical procedure one had the device implanted a few years ago and he mentioned he has his life back again and is extremely happy. The other fellow just had it implanted about a week prior to the meeting, and it hadn't been activated yet as the doctors wait 2 months prior to activation.

If you wish to have your name removed from this contact list, please let me know and I will remove your contact information.

Study Reveals How Prostate Cancer Alters Bone Structure, Increasing Fracture Risk

The following is a very brief excerpt of information from a video interview that originated with *UroToday January 7, 2025.* The Authors of the information are Philipe Guersetti, DDS, PhD, Department of Urologic Sciences, Vancouver Prostate Centre & Andrea K. Miyahira, PhD, Director of Global Research & Scientific Communications Prostate Cancer Foundation (U.S.).

About 90% of patients with advanced prostate cancer develop bone metastasis mostly in the vertebrae and ribs. They are extremely painful. And if it affects the vertebrae, it may generate a spinal cord compression and paralysis, dramatically affecting the quality of life of these patients. Also, because of the location, the therapeutic possibilities are really limited. And one specific feature of prostate cancer is that these metastases generate osteoblastic lesions, which means they generate more bone.

So, then we had a few questions about that when we started this project: how prostate cancer bone metastasis that generates more bone associates with bone weakness and pain, if there are any specific subtypes of prostate cancer that are more prone to generate bone pain and fractures, and if we can identify those patients at risk to give them more preventative therapeutics. This paper and the first part of the project is focused on the first question, which is how the structure of the bone changes and is associated with bone weakness and pain when they have prostate cancer metastasis.

To start, I need to explain a bit about bone. Bone is a composite material. It's a tissue that's composed mostly of collagen fibers that are highly aligned, and they are embedded in or coated by minerals. So, it's a composite of material of ceramic minerals – calcium crystals – and collagen fibers.

These collagen fibers align in bundles to form trabeculae (bundles of fibers) that align perfectly vertical to resist compressive forces of the loading. That's the orientation. That's the whole objective of bone.

These bundles of fibers have to be perfectly aligned. The collagen needs to be perfectly aligned in order to resist the forces. And all of this is maintained by a group of cells that live inside of the bone.

The main challenge we have always is obtaining samples of bone. Dr. Guersetti stated that they are hard to obtain because nobody will take pieces of bone for any reason. They obtain most of their samples from the Rapid Autopsy Program of the University of Washington. And we analyze them with the equipment that we have at the Vancouver prostate Centre.

So, the first thing we did, we did a micro-CT, which is a CT scan with a resolution of 5 microns Then we analyzed the prostate cancer patients' bone, some patients have an osteolytic pattern with less bone, with big holes, bigger marrow space. But those patients are really few. What most patients show is increased mineral density or mixed ratios in which most of the medullary space is filled with a mineral material, with new bone, which shows totally abnormal features.

So basically, our take home message is that prostate cancer bone metastases are characterized by the deposition of abnormal bone. Basically, the patient has more bone not less bone, but this bone has irregular organization of the collagen, higher porosity, and abnormal protein composition that we found by immunohistochemistry. And these changes are related to decreased mechanical properties that may increase fracture risk.

Dr. Guersetti's findings were published in the *Journal of Bone and Mineral Research*

WITT'S WIT (ON THE LIGHTER SIDE:) –

The Smart Wife and The Missing Pajamas

A man calls home to his wife and says,

"Honey I've been asked to go fishing at a big lake up in Canada with my boss and several of his friends. We'll be gone for a week. This is a good opportunity for me to get that promotion I've been wanting so would you please pack me enough clothes

for a week and set out my tackle rod and tackle box? We're leaving from the office so I will swing by the house to pick my things up. Oh! Please pack my new blue silk pajamas"

The wife thinks this sounds a little fishy but being a good wife she does exactly what her husband asked.

The following weekend her husband comes home a little tired but otherwise looking good. The wife welcomes him home and asks if he caught many fish. He says, "Yes, lots of Walleye, some bluegill, and a few Pike. But why didn't you pack my new blue silk pajamas like I asked you to do?

"I did they're in your tackle box."

Fred Saad, MD, FRCS Genomic and Genesting Testing –

The following is a very brief excerpt from an interview with Dr. Fred Saad that was in the July/August issue of Prostatepedia

Dr. Saad is a Professor and Chairman of Urology, and Director Genitourinary Oncology at the University of Montreal Hospital Centre.

Dr. Fred Saad, Genomics is a way to try to understand if a patient is at a higher risk of developing cancer. And if they do have cancer to understand if there is a higher risk of early progression or resistance to treatment. In the case of prostate cancer, we're starting to get a glimpse of the importance of genomic testing because we realize that similar genes as in breast cancer can also affect prostate cancer. People don't realize that the breast cancer gene, BRCA, is also found in men with prostate cancer. If the BRCA mutation is a germline mutation, meaning it's in all the cells and it's inherited, and if there's breast cancer in the family, the men in the family are at higher risk of developing cancer. And the cancers they develop are generally more aggressive than the average patient with prostate cancer. Not all patients who have family members with prostate cancer harbor that gene. But the ones who do have a higher risk of developing cancer, and a more aggressive cancer that is less responsive and, unfortunately, with a worse prognosis.

Many patients that I'm following have the BRCA mutation and never developed prostate cancer. It's not a death sentence and is different from breast cancer where there aren't good ways of detecting it before it's spread, so women at high risk may have preventive removal of the breasts. With prostate we're not there with preventive measures because we have PSA to help us detect cancers. We've got imaging so we can follow patients that we know have the mutation but haven't developed prostate cancer yet.

Genomic testing includes the testing of the tumor. Some patients don't have the inherited gene, but their cancer has the mutation. There are more people with the cancer that have this mutation than those that inherited the genomic mutation. You have twice as many cancers that harbor the mutation than patients that have inherited the mutation.

There's a chance that the patient's cancer has the mutation, but if we only look for the inherited mutation in the blood with a germline mutation then we would miss it. There are other mutations that could make the cancer more aggressive and less responsive, but BRCA is the most important. That's why tumor testing is suggested in men with cancer, even if they don't have a family history, because it can alter the way we treat and follow the cancer.

We're still in the early days –

Dr. Saad: We're still in the early days, and we've been talking about personalizing care and precision medicine for 30, 40 years. We're getting there, Breast cancer is much more advanced and thank goodness for that. They're able to predict much more now who should get chemotherapy and who doesn't need chemotherapy. That's where we'd like to go with every tumor.

Investigators Look at Natural Products for Prostate Cancer

The following information is the transcription from an interview with *Channing J. Paller MD* that was published in the *Urology Times* January 26, 2025.

In the interview Dr. Paller gives an overview of the recent *Urologic Oncology* paper, "Harnessing nature's therapeutic potential: A review of natural products in prostate cancer management." Paller is an associate professor of oncology at the Johns Hopkins University School of Medicine.

This study provides a comprehensive review of the role of natural products as complementary treatments for prostate cancer. What we really focus on is their mechanisms and clinical efficacy. There's been a lot of preclinical research with encouraging results. However, the use of natural products in prostate cancer clinical trials has not come to have the same positive results, unfortunately. And so the use of natural products in prostate cancer treatment still remains controversial. This review stresses the need for high-quality rigorous evidence of adequately powered trials to validate the therapeutic potential and safety of these natural products in cancer care and proposes future directions for optimizing therapeutic potential.

The Kelowna Prostate Cancer Support & Awareness group does not recommend treatment modalities or physicians: However, all information is fully shared and is confidential. The information contained in this newsletter is not intended to replace the services of your health professionals regarding matters of your personal health.

The Kelowna Prostate Cancer Support & Awareness Group would like to thank Janssen - and TerSera for their support and educational grants that go towards our newsletters and our support group.

UP COMING MEETING DATES FOR 2024 – 2025

NOTE: – April 12 – May 10 – June 14

Meeting Location:

Our meetings take place in the Harvest Room at Trinity Church located at the corner of Springfield Road and Spall Road. Please enter through the South Entrance off the main parking lot and follow the signs upstairs to the Harvest Room. Our meetings begin at 9:00 A.M. and the doors open at 8:30 A.M. There is elevator access if needed.

NOTE: Many of our past newsletters are available for viewing and printing through our website. – www.kelownaprostate.com

- A big *Thank You to Doris at Affordable Web Design for all her work on our website*