

KELOWNA PROSTATE CANCER SUPPORT & AWARENESS GROUP NEWSLETTER



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Our very special guest speaker at the August meeting of the Kelowna Prostate Cancer Support and Awareness Group was **Dr. Marianne Sadar, Ph.D.** Program Leader for Prostate Cancer Research, British Columbia Cancer Agency – Senior Research Scientist Genome Sciences Centre, British Columbia Cancer Agency. It was a great pleasure to welcome Dr. Sadar to speak in Kelowna. Dr. Sadar and her team have set the stage for the development of innovative approaches to treat androgen-independent prostate cancer. She has engineered a molecule in her lab that blocked the growth of prostate cancer and shrank the size of the tumor.

Prostate cancer is fuelled when the androgen-receptor is activated which occurs when the male hormone testosterone (androgen) binds to it. However, the receptor can also be activated without testosterone – a process that may underlie androgen independent tumor growth. Dr. Sadar discovered that an unknown agent causes this activation when the agent binds to a unique region of the androgen-receptor. Dr. Sadar and her team created decoy molecules that are copies of the region on the androgen-receptor believed to be essential for the unknown agent to connect. These decoy molecules were tested on mice.

Two different types of laboratory experiments were conducted involving mice, one where the tumor was engineered with the decoy molecule and the other where the tumor was injected into the tumor. In both experiments the tumor volume was greatly reduced and in one of the experiments out of nine mice only two developed tumors after one year.

Dr. Sadar and her team are now trying to find a vaccine that will replicate what their lab has found in their work with mice. This involves assessing over 60,000 different vaccines.

This was an extremely interesting, educational and dynamic presentation.

Under Diagnosis and Over Diagnosis of Prostate Cancer:

The following information was obtained from *UroToday.com* and was written by *Christopher P. Evans, M.D.*

BERKLEY, CA. – According to reports from the U.S. and Europe it is more common that prostate cancer (CaP) is under diagnosed than over diagnosed. Both studies appeared in the July 2007 issue of the *Journal of Urology*.

Dr. Graif and the group of *Dr. William Catalona* evaluated 2,126 men with stage T1c CaP who were treated with radical prostatectomy (RP) during three time periods; era 1 – 1989-1995, era 2 – 1995-2001, and era 3- 2001-2005. In era 1 a PSA of 4.0ng/ml was used as the indication for quadrant biopsy but in era 2 a PSA threshold of 2.5ng/ml resulted in a biopsy of at least 6

cores. Era 3 was a referral group of 740 men with stage T1c prostate cancer.

Over diagnosis was defined as tumor volume <0.5cc, Gleason Score <7, organ confined CaP, and clear surgical margins. Under diagnosis was defined as non-organ confined CaP, to include extracapsular extension, seminal vesicle invasion, positive surgical margins, or lymph node metastases. Calculations were also made including or excluding surgical margins status when it was the only criteria met.

Between 1989 and 2005 27% of men met the criteria of under diagnosis and 5% met the criteria of over diagnosis. The 5-year progression-free survival for men with under diagnosis was 79% but decreased to 74% when the sole criterion of a positive surgical margin was excluded. The 5-year progression-free survival for men who did not meet the criteria for under diagnosis was 92%. The 5-year progression-free survival for men with over diagnosis criterion was 100%. Over diagnosis was more common in men younger than 55 years old. Lowering the PSA threshold for biopsy from 4.0ng/ml to 2.5ng/ml resulted in a 4% decrease in under diagnosis and a 7% increase in progression free survival. This also increased the overall rate of over diagnosis by 5.8%. Among patients with a PSA of 2.5-4.0ng/ml, 19% had under diagnosed CaP compared to 33% who had a biopsy for a PSA >4.0ng/ml. The overall study likelihood of over diagnosis was 5% (1.3%-7.1%) and the under diagnosis range was 25%-30%.

In a study from *Dr. Pelzer* and collaborators in Austria and Italy, there were similar conclusions. The researchers used a database of 680 men with CaP and PSA levels 2.0-10ng/ml who had a radical prostatectomy between 1996 and 2005. The patients were stratified into low PSA (2.0-3.9ng/ml) and high PSA levels (4.0-10.0ng/ml). Digital rectal exam was not part of the screening process.

Over diagnosis was defined as Gleason Score <7, stage pT2a disease and negative surgical margins. Under diagnosis was defined as >stage pT3 disease, or positive surgical margins.

Over diagnosis was identified in 19.7% of the low PSA group and 16.5% of the high PSA group. Under diagnosis was found in 18.9 % of the low PSA group and 36.7% of the high PSA group. There was a statistical difference in the amount of under diagnosis between the low and high PSA groups. The combined group over diagnosis rate was 30.3%. In a subset of 69 men having tumor volume available, there were only 8.7% meeting the criteria of insignificant disease. As opposed to epidemiology reports, these database studies suggest that over diagnosis is of lower frequency and under diagnosis is a greater likelihood in the assessment of newly diagnosed prostate cancer.

<p>Botox Being Used To Treat Prostate Cancer –</p>

The following information was obtained from the Internet and from *Google Alerts-Prostate Cancer*.

You've probably heard of botox, and what it can do for wrinkles. But now there's news that the same injection is being used to treat prostate problems.

One of the things men talk about when they're with other men might surprise you. One man says, "I'd say when men reach their late 50's and early 60's, my experience is that a common topic of conversation in a men's only environment is prostate problems." *Dr. David Ginsberg* says, "That includes issues of frequency, and urgency, meaning I gotta go, when I gotta go, I gotta go right now. Getting up in the middle of the night."

Myron Nack was taking medicine to control those symptoms, but it led to other side effects such as weakness and low blood pressure. And one when he was babysitting his granddaughter... Myron says, "For the first time in my life, I actually fainted." He needed to find another solution. The answer surprises many...Botox. It's usually used to get rid of frown lines by relaxing facial muscles. In this treatment, botox is injected through an ultrasound probe, right into the prostate. It sounds severe, but it may be safer than some medicines and may be easier than surgery. *Dr. Ginsberg* says, "It takes 5 minutes, it's very easy, you go home the same day, little bit of local anesthetic, no time spent in the hospital, no time spent in the surgery center, no time spent in the operating room."

Some experts believe the botox works by shrinking or actually killing

some of the prostate cells. Some studies show a year after treatment, 90-percent of men saw their symptoms improve... Myron included. In the United States the procedure costs about 2 thousand dollars, and is sometimes covered by insurance.

WITT'S WIT (ON THE LIGHTER SIDE) -

A Cute Story

Here's a truly heartwarming story about the bond formed between a little 5-year old girl and some construction workers that makes you believe that we CAN make a difference when we give a child the gift of our time.

A young family moved into a house next door to a vacant lot. One day a construction crew turned up to start building a house on the empty lot.

The young family's 5-year old daughter naturally took an interest in all activity going on next door and spent much of each day observing the workers.

Eventually the construction crew, all of them gems in the rough, more or less adopted her as a kind of project mascot. They chatted with her, let her sit with them while they had coffee and lunch breaks, and gave her little jobs to

do here and there to make her feel important.

At the end of the first week they even presented her with a pay envelope containing a couple of dollars. The little girl took this home to her mother who said all the appropriate words of admiration and suggested that they take the two dollar 'pay' she had received to the bank the next day to start a savings account.

When she got to the bank, the teller was equally impressed and asked the little girl how she had come by her very own pay check at such a young age. The little girl proudly replied, "I worked last week with the crew building the house next door to us."

"My goodness gracious," said the teller, "and will you be working on the house again this week, too?"

The little girl replied, "I will if those assholes at the Building Center ever deliver the #@****#@ sheet rock..."

Its stories like this that just bring a tear to your eye.

Bones and Hormones –

The following information was contained in the July 2007 issue of The Digital Examiner the Calgary Support Group's

Monthly newsletter. Dr. Dean Reuther, GU Tumor Group Leader, and Chief of Medical Staff at the Tom Baker Cancer Centre in Calgary, prepared this article for the Calgary Support Group.

“Why do I need to worry about bone health and osteoporosis? I am already dealing with prostate cancer. Can anything be done about it anyway?”

Osteoporosis is a common problem, affecting 1 in 4 women and 1 in 8 men over their lifetime. It is a significant health concern for men, *particularly men with prostate cancer*. Keeping bones healthy must be an integral part of how a man with prostate cancer cares for his health.

Bone is a living tissue, remodeled on a continuous basis. Its strength is a product of bone quality and bone density. Old bone is reabsorbed by cells called osteoclasts and new bone laid down by osteoblasts. Beginning in our mid thirties, osteoclasts work faster than osteoblasts. With aging, bones become less dense and more fragile.

Osteoporosis is a disease characterized by low bone mass and deterioration of bone tissue, resulting in increased fragility and fracture risk. Fractures characteristically occurring in the spine, hip, and wrist. And are associated with morbidity and mortality. And negative impacts on quality of life.

Bone density is measured using a noninvasive X-ray technique. Measurements are taken through various bones to assess overall bone density and are expressed as a ‘T’

score. The T score is compared to measurements from average young adults. An individual’s score is expressed as a deviation from the norm, either positively or negatively.

The following table shows the WHO (World health organization) definitions for osteopenia and osteoporosis according to T score.

Osteopenia – is defined as lower than normal bone density.

Diagnosis	T Score
Normal	> -1
Oseopenia	-1 to -2.5
Osteoporosis	< -2.5
Severe Osteoporosis	<-2.5 and < 1 with fractures

Osteoporotic Fractures usually occur at the hip, and wrist (related to falls), and in the spine (vertebral body compression fractures). Compression fractures result in spinal deformity that can affect gait and balance, reduce lung function, and cause gastric distress. These clinical consequences are associated with disability and reduced quality of life.

Seventy percent of hip fractures are associated with osteoporosis, and while often manageable by surgery, result in ongoing disability in 50% of patients who undergo surgical repair or replacement. The mortality rate associated with a hip fracture may be as high as 20%.

Well recognized risk factors for osteoporosis include: Advanced age, female gender, slight body build

(low bone mass) and race (Whites and Asians are at higher risk than Blacks). A family history of osteoporosis is important. Lifestyle factors, including smoking, alcohol, calcium intake and level of exercise all impact bone health.

Prostate Cancer is often treated by manipulating the body's hormonal environment. Reducing testosterone to castrate levels can very successfully manage the disease, but unfortunately, a castrate level of testosterone increases the risk of developing osteoporosis. The longer such therapy is used, the more likely it is to affect bone density and lead to problems.

If you are at risk for osteoporosis talk to your doctor. Learn what you can do to affect the health of your bones. Regular weight bearing exercise is important and can include something as simple as a good walk on a regular basis.

STOP SMOKING (do you need another reason?). Smoking affects your bones.

Diet affects bone health. Moderate your alcohol and caffeine intake. Make sure you are getting enough calcium and vitamin D each day.

For men 25-65, 1,000 mg/day of calcium is recommended. For men over 65, the recommendation is for 1500 mg/day.

Many food products are supplemented with vitamin D, and when out in the sun we make vitamin

D in our skin. To ensure good bone health, you should be getting 400-800 IU a day of vitamin D.

When osteoporosis requires treatment, Bisphosphonates may be considered. The **Bisphosphonates** are a group of drugs that affect the mechanisms in bone responsible for bone turnover. They slow the action of osteoclasts.

Why is bone health of additional concern for a man with prostate cancer? Prostate cancer is a common disease. Osteoporosis is a common disease. Osteopenia and osteoporosis are found in 30-40% of men at the time of diagnosis of prostate cancer. A diagnosis of prostate cancer is associated, in itself, with a higher risk of problems with bone density.

Locally advanced and advanced (metastatic) prostate cancer is treated by Androgen Deprivation Therapy (ADT). The aim is to produce castrate levels of testosterone and inhibit the stimulating affect of testosterone on prostate cancer cells. ADT improves survival, and can inhibit the stimulating affect of testosterone on prostate cancer cells. ADT improves survival, and can delay the time to development of bone metastasis, but has side effects and risks. These can include fatigue, depression, decreased libido, erectile dysfunction, hot flashes and loss of bone mass. ADT's affect on bone is cumulative: the longer the exposure to ADT, the higher the risk of osteoporosis. Early intervention with Bisphosphonates in men treated for

prostate cancer is being studied as a way of trying to prevent bone loss that occurs with cancer treatment. Studies in small numbers of patients suggest that Bisphosphonate therapy can help prevent deterioration in bone density occurring in association with ADT. ADT is also commonly known as hormone therapy.

Bone metastases are the most common site of disease outside of the prostate, when disease is more extensive. Bone involvement, occurring in 75% of patients with advanced cancer, causes significant morbidity and pain. Fractures occur at sites of bone weakened by disease. Vertebral body compression fractures can cause compression of the spinal cord. Fractures, especially of the hip, often require surgery for repair.

In other cancers that commonly spread to bone (breast, cancer and multiple myeloma), Bisphosphonate therapy has been shown to help manage bone pain, reduce complications of bone disease, and slow progression of metastatic bone disease. Bisphosphonate therapy may be beneficial in metastatic hormone refractory prostate cancer. Zoledronic Acid (Zometa) in patients with metastatic prostate cancer showed a decrease in skeletal complications, including fractures, a delay of approximately 6 months to the first episode of a skeletal complication and improvements in pain management for patients who received IV Zoledronic Acid (Zometa). To date Zoledronic Acid is the only bisphosphonate to show

benefit for men with metastatic hormonal refractory prostate cancer.

I am often asked by patients I see with prostate cancer "What can I do to help myself?"

Here is a list:

- 1) STOP SMOKING.
- 2) Ensure adequate intake of vitamin D and calcium.
- 3) Moderate your alcohol and caffeine intake.
- 4) Engage in regular weight bearing exercise.
- 5) Talk to your doctor about your concerns around bone health and ask if a bone density test is needed.
- 6) If ADT is part of your therapy for prostate cancer, ensure that your bone density is being monitored.

Osteoporosis management has improved significantly over the last 20 years. The treatment of prostate cancer is improving. Our ability to manage the complications of the disease and its treatment are also improving. There are new therapies on the horizon that will impact the treatment of prostate cancer patients and improve outcomes. The benefits of therapy are positively impacted when patients take an active part in their care.

NOTE: We are having a special meeting on Sept. 22, at the United Church Hall. Guest Speaker *Dr. Alan So, from the Prostate Centre VGH.*

The Kelowna Prostate Cancer Support and Awareness Group does not recommend treatment modalities; however, all information is fully shared and confidential. The information contained in this newsletter is not intended to replace the services of your health care professionals. You are advised to consult with your health professional regarding matters of your personal health.

UP COMING MEETING DATES-

October 13th – November 10th – December 8th -

Our regular monthly meetings are held on the second Saturday of each month in the meeting rooms of the Kelowna Health Centre – 1340 Ellis Street. Our meetings begin at 9:00 A.M. and are generally over by 11:00 A.M.

I would like to thank Sanofi Aventis manufacturer of Eligard®, Taxotere® and Xatral® for their support in producing this newsletter.

Thank you for helping us "Win the War Against Prostate Cancer."

The Okanagan Prostate Resource Centre operates on donations. We would like to thank the Companies, Service Clubs, Organizations and Individuals that have made donations in order to help us operate this very valuable center. If you wish to make a donation please feel free to fill out the form below. Your support is gratefully appreciated. Our official Registered Charitable Number is - 89269 1718 RR0001

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