

KELOWNA PROSTATE CANCER SUPPORT & AWARENESS GROUP NEWSLETTER



**OKANAGAN PROSTATE
RESOURCE CENTRE
SOCIETY**

Okanagan Prostate Resource Centre

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Dr. *Juanita Crook*, Radiation oncologist at the Cancer centre for the Southern Interior in Kelowna was our guest presenter at our support group meeting in May. She gave everyone present an update on some of the new happenings relating to prostate cancer treatment that have taken place and some new treatments that will take place shortly at our cancer treatment facility in Kelowna. Dr. Crook mentioned that they are treating an average of four prostate cancer patients a week using *low dose rate brachytherapy*. This form of treatment uses permanently implanted radio active seeds that use Iodine 125 as their radioactive source.

Dr. Crook then mentioned that in a short period of time the Cancer Centre for the Southern Interior in Kelowna will begin using ***High Dose Rate Brachytherapy*** for some prostate cancer patients. High Dose Rate Brachytherapy uses temporary radioactive implants that stay in place for 6 – 8 minutes – it is usually combined with External Beam Radiotherapy. The patients are generally given two insertions. The patients generally receive 9.5 to 15 Gray of Radiation in less than 15 minutes.

Approximately 16 to 18 special needles or tubes that are hooked up to a special machine that delivers the radiation. The radioactive source used in High Dose Rate Brachytherapy is *Iridium 192*.

High dose Rate Brachytherapy is considered to be the most precise form of radiation; it is a very favorable form of treatment for low risk disease. Critical organ doses can also be tightly controlled using High Dose Rate Brachytherapy.

WITT'S WIT (ON THE LIGHTER SIDE) -

Just a Tap on the Shoulder

A passenger in a taxi leaned over to ask the driver a question and gently tapped him on the shoulder to get his attention. The driver screamed, lost control of the cab, nearly hit a bus, drove up over the curb and stopped just inches from a plate glass window.

For a few moments everything was silent in the cab. Then, the shaking driver said "are you OK? I'm so sorry, but you scared the daylights out of me..."

The badly shaken passenger apologized to the driver and said, "I didn't realize that a mere tap on the shoulder would startle someone so badly."

The driver replied, "No, no, I'm the one who is sorry, it's entirely my fault, today is my very first day driving a cab. I've been driving a hearse for 25 years..."

CORRECTION:- In last month's newsletter I had a large article attributed to Johns Hopkins – entitled – "Cancer Update from Johns Hopkins" - according to information just received this article was falsely attributed to Johns Hopkins, and they do not endorse its contents. In this issue I will go over an excerpt of some of the truths put out by Johns Hopkins and I will use more in the next issue.

The Truth About the "Cancer Update" Email –

"It has become such a problem that the National Cancer Institute, American Cancer Society, and individual cancer centers like the Johns Hopkins Kimmel Cancer Center have posted warnings on their web sites. Emails offering easy remedies for avoiding and curing cancer are the latest Web-influenced trend. To gain credibility, the anonymous authors falsely attribute their work to respected research institutions like Johns Hopkins. This is the case with the so-called "Cancer Update from Johns Hopkins."

The gist of this viral email is that cancer therapies of surgery, chemotherapy, and radiation therapy do not work against the disease and people should instead choose a variety of dietary strategies.

Traditional therapies, such as surgery, chemotherapy, and radiation

therapy, work. The evidence is the millions of cancer survivors in the United States today who are alive because of these therapies. We recognize that treatments don't work in every patient, or sometimes work for awhile and then stop working, and there are some cancers that are most difficult to cure than others. These problems are the focus of ongoing cancer research.

Email hoax contentions #1 & 2: Everyone has Cancer Cells –

Cancer is a genetic disease resulting from a variety of mutations and alterations either inherited from our parents or, more commonly, acquired over time due to environmental exposures and behaviors, such as smoking and poor diet. These alterations turn off important cell growth regulators allowing cells to continually divide unchecked, explains Louis Diaz, a clinician-scientist at Ludwig Center for Cancer Genetics. This type of cell is called a malignant or cancer cell. Among the trillions of cell in the human body, inevitably everyone has some abnormal or atypical cells that possess some of the characteristics of cancer cells, most resolve themselves and never result in cancer, says Diaz.

There is not single standard test for cancer. There are ways to screen for certain types of cancers with tests such as colonoscopy for colon cancer, mammography for breast cancer, PSA for prostate cancer, and the PAP smear for cervical cancer, and these tests can detect cancers in a very early and curable stage. For many cancers, there currently are no screening tests, and they are diagnosed when they begin to cause symptoms.

Diaz and other Kimmel Cancer Center researchers are working on new tests that detect abnormal DNA shed by cancer cells into the blood and body fluids and have the ability to find cancers before they can cause any symptoms.

New Prostate Drug Shrinks Tumors, B.C. Scientists Say –

The following is an excerpt of a couple of articles one by *Pamela Fayerman* and appeared in the *Vancouver Sun*, and one by *Melissa Lampman* that appeared in *Kamloops This Week*.

For those who have attended our meetings for several years you may remember that we have had **Dr. Marianne Sadar**, a Senior Scientist with the BC Cancer Agency in Vancouver speak to our group about some prostate cancer research she has been involved with. Dr. Sadar recently sent me some information that appeared in the medical journal **Cancer Cell**.

B.C. Scientists have developed an experimental new drug to shrink prostate cancer tumours, based on molecules extracted from a marine sponge collected in New Guinea.

Their study, published on June 14th in the journal *Cancer Cell*, shows the experimental drug – **EPI-001** – not only shrunk tumours but did so without apparent toxic effects on the cancer-afflicted laboratory mice who got injections of the drug.

“The day I saw the way tumours were actually shrinking I ran all around the building showing everyone the pictures,” said Marianne Sadar, a scientist with the

BC Cancer Agency. Sadar has spent many years looking for new drugs to help men who suffer relapses when their cancer becomes resistant to what's called androgen ablation therapy: surgical or drug treatment to stop production of male hormones (testosterone) that fuel tumour growth.

In such men, prostate cancer begins to grow again and standard therapies may increase survival by only about two months, according to the new study.

Several years ago, Sadar teamed with **Raymond Anderson**, a natural compounds chemist and University of B.C. professor, who has spent much of his career combing the seas for natural compounds to be used as anti-cancer medicines.

Sadar said there have been a number of chemotherapy drugs developed from sponges. And a survey by the U.S. National Cancer Institute showed that natural products or synthetic versions of natural products make up about 64 per cent of anti-cancer compounds currently in pre-clinical studies or clinical trials. More than 70 per cent of the Earth's surface is covered by oceans and it's been estimated there are more than 100,000 species of invertebrates in the oceans. Sponges are considered ideal for providing raw materials for the development of new drugs.

But in a surprising turn of events, scientists discovered that the compounds in the marine sponge had a chemical composition resembling a compound called **BADGE** (*Bisphenol A Diglycidic*

Ether) which indicated that the sponge was harvested from contaminated water possibly polluted by ship traffic. Sadar said the sponge material was collected from a shipping route and it would appear the sponge "bio-accumulated the metabolites or by products of bisphenol A," a ubiquitous compound used in the plastics industry, among others.

Bisphenol A – or BPA – is the subject of much scrutiny and concern as research has shown it can be an endocrine system disrupter and may be especially harmful to infants and children.

Sadar said she and her team of scientists isolated and extracted only the sponges' desired compound – EPI-0001 – into a purified form and then synthesized it. The drug does not contain BPA and indeed, in the study, mice getting high doses of EPI-00 suffered no ill-effects on their internal organs as shown by pathological examination. Furthermore, future studies must satisfy Food and Drug Administration guidelines before being used in humans in clinical trials.

Sadar said researchers hope to set up a cancer agency spinoff company, garner venture capital and perhaps partner with a pharmaceutical company to enter the next phase of research – trials in humans.

In a commentary in the journal, the research by Sadar and her 13 co-authors is praised by **Dr. Timothy C. Thompson**, of the University of Texas M.D. Anderson Cancer Centre: "It is a rare occasion

in prostate cancer research when such a unique and promising therapeutic agent for advanced prostate cancer is developed.”

The Vancouver Sun article also contained a photograph showing that within 25 days after the first injection of the experimental drug – EPI-001 - the prostate cancer tumours in the mice had not only shrunk substantially but has also lost a lot of their blood supply and had turned almost white in colour.

Dr. Marianne Sadar was raised in Kamloops and still has ties to that community today.

The Kamloops This Week article mentioned that this new drug – EPI-001 targets a protein that is thought to be behind the fatal progression of the cancer.

This drug is the first to target the *N-terminal* of the androgen receptor, which regulates gene reception, and was originally discovered in a sea sponge after testing several thousand natural marine products.

The N-terminal is a difficult region of the protein because it doesn't actually have any structure.

Despite the difficulty, Sadar said it makes sense to target the “engine” if you want to stop a protein from moving. She equated this to a car. If you want to make a car stop moving you can remove the wheels and steering wheel but if you remove the engine that car is not going anywhere.

It's been a theory of Sadar's for more than 12 years.

Although she has had some successes along the way, such as the discovery of the decoy, proving the animal model is a therapeutic target in 2007 and then beginning the screening of anti-cancer drugs in 2008, this latest triumph is unlike any other.

“This one brings it closer to the clinic,” Sadar said.

“The clinic is almost in our reach – you can almost see the finish line there and it's just money stopping us from getting it into the clinics.

The next step will be getting the drug into humans in a phase I clinical trial.

But before that happens, there needs to be a series of safety and toxicity tests in order to get government approval for human clinical trials.

Sadar mentioned that it will take upwards of \$8 million in order to bring it forward. Because this is considered commercialization of the new drug, the money has to be raised through private dollars, such as venture capital, angel investors and other business people.

Sadar also stated that if the money was in place they could go to the first clinical trial in about two years.

Lets all keep our fingers crossed that Dr. Sadar and her team of scientists in B. C. can get the funding and support in order to bring this new and very interesting drug to clinical trials within a few years.

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-

- August 14th – September 11th – October 9th – November 13th -

Meeting Location:

Our regular monthly meetings are held on the second Saturday of each month in the meeting rooms of the Rutland Senior Citizens Centre – 765 Dodd Road. Our meetings begin at 9:00 A.M. and are generally over by 11:00 A.M.

I would like to thank both AstraZeneca manufacturer of Zoladex® and Casodex® and Sanofi Aventis manufacturer of Eligard® and Taxotere® 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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