

KELOWNA PROSTATE CANCER SUPPORT & AWARENESS GROUP

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In this month's newsletter I write about some of the major changes taking place at BC Cancer Kelowna. We are also seeing the hiring of more Radiation and Medical Oncologists for our Kelowna facility. With these upgrades in equipment and the hiring of more staff this make us one of the most up-to-date cancer treatment facilities anywhere. We should be very proud of the accomplishments being done in Kelowna.

If anyone wants their name removed from this contact list, please let me know and I will remove your contact information.

If anyone has any questions that I may be able to help with, please contact me either through telephone or email.

BC Cancer Kelowna Undergoes Major Equipment Updates

The following is information from our Cancer Centre in Kelowna with a great deal of help from Dr. Nathan Becker one of our local Physicists.

Our cancer centre in Kelowna has been undergoing some major updates in equipment over the past several months. Two new Varian TrueBeam Linear Accelerators have been installed. Linear Accelerators, also referred to as Linacs are the core of the equipment used in the Radiation Therapy (RT) department to treat cancer patients. Kelowna started replacing older models of the Varian TrueBeam; late last year and this change-out is expected to take a couple of years to complete.

The Kelowna Cancer Centre opened in 1998 with four radiation therapy treatment rooms with room for a fifth when needed in the future. In 2010 the first major change took place at the centre by adding the fifth treatment room with the installation of the latest Varian TrueBeam linear accelerator.

At that time the cancer centre also saw the installation of the Brachytherapy suite. The replacement of the four original linacs took place over the following year with new Varian TrueBeam linacs. These new linear accelerators had some major updates including a built in CT scanner and a multileaf collimator (MLC) in the head of the linac that is used to shape the radiation beam. They would also have the ability to perform intensity modulated radiation therapy (IMRT). Our first linacs would radiate the patient from four angles, front, back, left side and right side, the radiation beam on the new linacs delivered the radiation dose in a 360-degree arc around the patient called (VMAT).

With the installation of these latest linacs over the next couple of years, it will be the third change-out of Linear Accelerators since our Cancer Centre opened in 1998. The linacs are generally changed out about every 12 years or so.

This latest version of the Varian TrueBeam linac have several advantages over the previous model including providing a variety of treatment options including advanced imaging,

This new Varian TrueBeam linac comes with an advanced robotic couch. This couch allows for translating and rotating the patient to align the treatment, and allows for localized, highly accurate and efficient RT treatments.

Another advantage that these new linacs have over older models is

that the leaves in the multileaf collimator are much thinner. A multileaf collimator is a device that is located in the head of the linac that consists of individual “leaves” that can move independently in order to provide conformal shaping of the radiation beam. This allows clinicians to match the borders of the target area. While sparing the surrounding healthy area from receiving radiation. These finer “leaves” allows for more control of the radiation beam thus making it more capable of treating much smaller targets than was previously possible.

The treatment rooms have also had some major upgrades with the installation of an advanced patient tracking system called “Identify”. This system consists of 4 sets of cameras and projectors which can very accurately track any patient movements during treatment. This allows the beam to be stopped if any unexpected movement occurs and allows for tighter margins when treating a patient with increased safety.

Hyperarc: is another new advanced feature for treating brain cancer. This delivery mode: allows for automated treatment delivery with the ability to treat and place the beam at different angles. Normally this advanced treatment option would only be available in Vancouver, but now is available in Kelowna, allowing more patients to stay local during treatment.

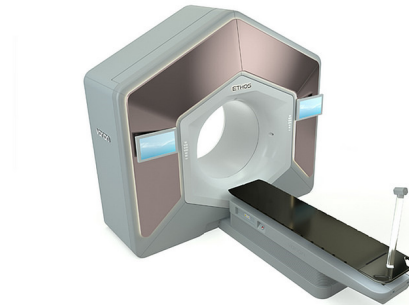
The installation of these two new linacs with the high definition

multi leaf collimator will also allow for more precise Stereotactic body radiation therapy (SBRT), which is sometimes used to treat prostate cancer patients.

Later this year another new linac is going to be installed in our cancer centre, this linac is called the Varian ETHOS. This is the newest generation of linac and is cosmetically different from previous models. The new geometry makes this linac more efficient and patient friendly, however, under the covers it still has the key parts of a standard linac. The Varian ETHOS also has advanced artificial intelligence (AI) technology which enables a new treatment technique called adaptive radiotherapy (RT). With the advanced computation capabilities, it is much faster to develop a patient plan, taking approximately half an hour instead of multiple hours or even days. Images will be taken every day and a new plan can be rapidly produced that will adapt to any changes or movement in the tumour position. Previously, a radiation therapy treatment plan would be made and would not change during the course of treatment. Adaptive radio therapy is a state-of-the-art technique, and we will be the first Cancer Centre in all of Canada with an ETHOS machine.



The previous picture is of the Varian TrueBeam linac. The picture below is of the new new ETHOS linac



WITT'S WIT (ON THE LIGHTER SIDE) -

Little Jonny

Everyone was seated around the table as the food was being served. When little Jonny received his plate, he started eating straight away.

"Jonny, wait until we've said our prayer," his mother reminded him.

"I don't have to." The little boy replied.

"Of course, you do." - his mother insisted. "We say our prayer before eating at our house."

"That's at our house," Jonny explained, "but this is Grandma's house, and she knows how to cook."

New Prostate Cancer Research at University of Windsor –

The following was obtained from the University of Windsor Website

Scientists at the University of Windsor are leading a team of researchers in the battle against prostate cancer.

Dr. Lisa Porter and Dr. John Trant of the University are working with an international group to find methods of pinpointing aggressive drug-resistant forms of the disease. The aim of the research is to identify alternative protein markers present in the cancer, thereby increasing the likelihood of an accurate diagnosis.

So far, the team has developed a fluorescent probe that can identify proteins that are unique to the aggressive neuroendocrine form of prostate cancer. It is the type of malignancy that is not detectable by the standard PSMA test that doctors use.

For Dr. Porter, the findings are promising. “The multidisciplinary approach that we used here also used some new models – so, we used this cool little fish model where we can actually put human cells into the fish and look and see how tumors evolve,” said Dr. Porter.

So, this kind of model could be something that we can use for other types of cancers as well.”

Dr. Porter is the director of the WE-SPARK Health Institute, a networking health and research science organization that works to implement local research findings from the lab into

clinical environments that could help treat patients in the Windsor-Essex community.

“If we can catch this progression early, we can save a life – we want to help people detect their cancers faster,” said Dr. Porter.

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 their educational grants towards our newsletters and our support group.



UP COMING MEETING DATES FOR 2022 –

Due to the COVID-19 virus we are still NOT holding monthly Support group Meetings.

NOTE: I will be in touch with everyone whenever it is safe to get back to holding regular meetings.

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.*