

CANADIAN PROSTATE CANCER SUPPORT GROUP

Newmarket, Ontario

Volume 13, Issue 2, October 15th, 2008

**A support group that provides understanding,
hope and information to prostate cancer patients and their families**



Dr. Shabbir Alibhai will be our speaker for the October 16 meeting. The primary focus of his talk will be on Osteoporosis, a potential side effect of hormone treatments. Dr. Alibhai's research interests are in geriatric oncology, with a primary focus in prostate cancer. His major research projects include examining the impact of androgen deprivation therapy on health outcomes (including quality of life, physical function, cognitive function, and bone mineral density). He is also looking at short-term toxicities of treatment of prostate cancer as a function of age, comorbidity, and randomized trials to treat cancer-related fatigue. Come and get other opinions on hormone treatments and the problems they could cause.

Meeting Date: October 16th, 2008

**Place: Newmarket Seniors Meeting Place
474 Davis Drive, Newmarket**

Time: 7:00 to 9:00 pm

Speaker: Dr. Shabbir Alibhai, Toronto General Hospital.

Subject: Osteoporosis

Canadian Prostate Cancer Support Group,
Newmarket, Ontario. 905-830-0447
a member of the



Canadian Prostate Cancer Network

Assisted by the Canadian Cancer Society
Holland River Unit
Cancer Information Service
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The Newmarket Prostate Cancer Support Group does not recommend products, treatment modalities, medications, or physicians. All information is, however, freely shared.

September Speaker notes Dr. Padraig Warde, Southlake Health Centre and Princess Margaret Hospital

Subject: The New Cancer Centre at Southlake

Dr. Padraig Warde, is the deputy Head of the Radiation Medicine program at Princess Margaret Hospital and Professor, Department of Radiation Oncology at the University of Toronto. He is on loan to Southlake to supervise much of the building and equipping of our new regional cancer centre. Padraig gave us a timeline on the progress they are making as to when the cancer centre will be in full production. He also, with the aid of a power point presentation, demonstrated what the new state of the art equipment that they will be installing in 2009 will do. Here is what he had to say . . .



The motto of Southlake Hospital is "Shockingly Effective Service" and that's what we intend to do here with high precision radiation therapy, get maximum tumour control in order to maximize the control of cancer and minimize the side effects. To achieve that, we really want to get the smallest amount of tissue margins. I always tell my residents when they start working with me at first that I can cure every cancer there is, when you put enough radiation in to any cancer, it will obliterate it. The trouble is keeping the normal tissues which are adjacent to the cancer from being damaged at the same time. That's why the precision to actually put the radiation exactly where you want it. So we need to have very precise target definition. We need to know where the tumour is and you'll see the relevance of that when you see how much the prostate moves on a minute to minute basis and also the critical organs. The real critical area for prostate is the rectum. We must be able to deliver the treatment accurately and precisely, the same way every day and minimize any error.

The timelines for the Interim Cancer Centre opened in May of this year, we started a consultation service. The patients are seen in Southlake but we transport patients to Princess Margaret for treatment. The head of Physics at Princess Margaret, David Jaffery, has become the interim Head of Physics for Southlake and also the deputy head of Radiation Therapy. So we have a good team to work with. The new radiation equipment will be commissioned and installed some time in May and June as the building must be completed before we put in the high precision equipment. We will put in three accelerators at a cost of three million dollars each so we don't want to put them in and then have major construction around them. We'll have occupancy in October and have our first patients in November of 2009. I know these are all buzz words but we'll have three IMRT, which is high precision radiation therapy, intensely modulated, they are IGRT, which is image guided and, they are a mirror of the machines we have at Princess Margaret, in fact they are more advanced. They will be matched to the machines we have at PMH so that anything we develop in either institution can be transferred back and forth. So there's a partnership with Princess Margaret and this involves my time up here to help get it open and mentoring support during the start up and the development of high precision radiation therapy. If you look back at all the other Cancer Centres that have been opened in

Ontario in the last few years, generally the way they've done it is to open with fairly good standard techniques but to take over the next three to five years to develop into a high precision program. In fact, Credit Valley Hospital after four to five years is just starting its IMRT, its high precision program. What we aim to do here is jump start that by three to five years and go straight into a High Precision Program, an image guided program by partnering with Princess Margaret and following the policies and procedures of the way they do things from PMH and having a sharing of experience and staff over the first few years of start up and getting going. The aim is that if you go to 40,000 feet in November of 2009 and look down at the two institutions and two patients each went into a room, the treatment should be absolutely identical. I like to say that it will probably be better at Southlake because we will have better machines. Also we're helping the development of research as part of the cancer centre and the education program and various other things.

Dr. Warde then gave his slide presentation showing how they try to pinpoint the exact location of the prostate. Radiation techniques have evolved over the years. Originally, radiation treatments were applied from the front and the sides. Because of the prostate's location and proximity to other organs, we were limited as to how much radiation we could put into that area as we were simultaneously treating parts of the bladder a rectum. With this technique, the most radiation dose we could put in was 65. Then we got to a 3D conformal and could avoid the rectum a bit. Now we have a IMRT strategy and we can actually put a radiation dose wherever we want. We can place a higher dose into the prostate and very little of it goes into the rectum. By doing this we actually can drive the dose from 65 units up to around 82 units. That's a huge increase that we could only have dreamed about five or ten years ago. With intensely modulated radiation therapy, if the area you want to treat is a very irregular shape, now you can actually shape it to whatever way you want. That's what we're going to have in Southlake. For each patient, we actually work out what we're going to treat then two or three days before we start the treatment, we roll in a phantom, which looks like a patient but it's made out of plastic. We know where the prostate is and have the position there and we put in a radiation detector. We run the beams then check the detector and physics associates work overnight checking to make sure that everything is correct. For the first ten years of my practice, we didn't have the technology to take a picture everyday to see how things were progressing. We would take a picture

the first day to make sure everything was O.K. but we didn't have the facility to be able to take a radiation picture every day. In order to cope with that we took a big area around the cancer and we would treat the whole area. That way we were pretty sure. Then we brought in a system of imaging where we could take a picture every day, which was a little bit more accurate but we still had to treat a big area in order to be sure that we attacked the cancer. The trouble with IMRT is that you can paint exactly where we want it to go but we can't be sure that our target is still in that position. With IGRT, each day when the patient is on the bed we can actually take a image and see exactly where the tumour is, where the prostate is, so that we can be both accurate and precise, so we can hit the cancer and avoid the other tissues. Dr. Ward then showed us several visuals indicating how the prostate can move from day to day. He also showed an MRI scan showing a dramatic movement of the prostate over the period of an hour. So what Southlake is going to have is a complete Image Guidance System (IGRT), which will pinpoint exactly the location of the prostate and other organs as needed during treatment. This will also allow us to push the dose higher and because we are so precise, we're looking at shortening the period of the treatment down to four weeks.

We did a study on 120 patients, which looked very promising. My colleague, Dr. Catton, is now doing a world-wide study in which half the patients get four weeks treatment, with the other half getting the regular eight weeks standard treatment and we'll see what the results will be over a period of time. Because of the connection with Cancer Care Ontario and Princess Margaret, we will hopefully be able to offer patients at Southlake the opportunity of participating in quite a few clinical trials. While clinical trials are very important to give us some answers for the future, I also think that patients have a right to know what trials are available and they can learn and decide whether or not they can participate. I encourage all patients to ask what trials are available.

What we're looking at, over time, is how we can individualize treatment by looking at the biology of the patient. My colleague, Robert Bristow is working on individualization therapy. Currently, what we are doing is, if five patients come into my office with the same problem, I give them much the same treatment suggestions, with minor variations, with very little individualization. What we would like to do is to be able to take people with prostate cancer and actually look at them and do a little bit more testing than we do now. Particularly we're looking at some new genetic tests and bio markers. These could be on the blood test, on the tumour itself on the biopsy and looking at various things. What we hope to be able to achieve is "Joe, you should definitely have radiation because it's highly likely to be curative, with minimal complications." "You know, Mike, I don't think so. We probably could cure you but your chances of getting a lot of side effects from the radiation are very, very high, because of the way you live, because of your genetic make up. You should probably go to surgery." To be able to say that someone has a

very high risk of a second cancer from radiation. Your tumour is very low in oxygen and we know that is a marker to us that radiation isn't going to work. Or, if you have to have radiation because you can't have surgery in that setting, then there are new drugs we can use to have with the radiation to combat the low oxygen, so that the radiation does work. There are various other things that we can look at. There are some things that might indicate that you shouldn't have hormones because they are not going to work for you. This is what Robert has been working on for five or ten years and slowly but surely we're beginning to understand more. I wouldn't want you to think that we will be there tomorrow, or next week, or next year but we're beginning to understand which type of patients will get radiation toxicity and beginning to understand which type of patients will be at high risk of getting a second cancer. Stay tuned.

The other thing we're looking at is this whole concept of once you start a course of radiation: You're having 39 treatments, we see you once a week to make sure you're O.K. The question patients ask the most is "How is the treatment working?" The truth is, I don't know and won't know until long after the treatment is over to see if the PSA is going down. We're getting to the point now of being able to actually look at the response during treatment and beginning to see, maybe at the end of treatment, or close to the end, if there is still live cancer there and maybe we should increase the dose there. Maybe he should have an implant as well. This is more than a few years away but we've also thought of the concept of doing a biopsy after five treatments, before the rectum starts getting too swollen and being able to assess the amount of radiation damage from the biopsy. It may indicate that we should go a different route, such as surgery or hormone treatment along with the radiation. We're coming to this concept of individualization therapy and I believe we'll get much closer there in the next three to five years. This is what I was talking about, the monitoring of response during treatment. The monitoring of patient's specific response. For instance, looking at which patients will respond to hormone therapy and then we can adapt to change in terms of pushing the fractionation up because your tumour looks like it needs that. We may be able to do some other things, like biological manipulation of normal tissues. As the radiation machine is moving around, the technology has now evolved that we can actually change the speed by slowing down and the beams that are going across, we can speed them up; the dose rate coming out of the machine can be changed and we can also change the position. What this can do is to a) give you much better targeting of the tissue and b) our standard of treatment time is about 15 minutes, with the new technology we can cut the time to 10 minutes. That might not make much difference to you but to me it increases how many patients I can treat. This is particularly relevant in Southlake because we're opening with three machines and we hope to treat about 1200 patients in the first year. If we achieve that, we're actually more efficient than any other cancer centres in the province.

High Fat Diet May Encourage Prostate Cancer Progression

Additional investigations looking at associations between post-surgery dietary changes and disease progression would be worthwhile

By Joene Hendry

Wednesday, July 2 (Reuters Health) - Diets high in saturated fat may increase the risk of prostate cancer progression, researchers from the University of Texas M. D. Anderson Cancer Center in Houston report.

In a follow up study of men who had their cancerous prostates removed, researchers found that men who consumed higher amounts of saturated fat — mostly from steaks, burgers, cheese, ice cream, salad dressings, and mayonnaise — were nearly two times more likely to experience disease progression after surgery than men with lower saturated fat intake.

“Diet before surgery, especially saturated fat, may modulate patient outcome after surgery,” Dr. Sara S. Strom, who was involved in the study, told Reuters Health.

Strom and colleagues also found significantly shorter “disease-free” survival times among obese men who ate high amounts of saturated fat compared with non-obese men consuming diets low in saturated fat.

These results expand upon the team’s previous finding linking obesity with prostate cancer progression “and suggest that saturated fat intake plays a role in prostate cancer progression,” the researchers note in the *International Journal of Cancer*.

Strom’s group used standard food questionnaires to assess the saturated fat intake of 390 men during the year before surgery for localized, or “organ-confined” prostate cancer. The researchers also assessed the men’s medical and family history for other risk factors for disease progression.

The men, all Caucasian, were about 60 years old on average and consumed between 600 and 5,000 calories daily. Overall, 293 men averaged 10 percent of their daily energy from saturated fat (low intake) while 97 men averaged 14 percent (high intake).

Obese men with a high saturated fat intake had the shortest survival time free of prostate cancer (19 months), while non-obese men with low intake survived the longest time free of the disease (46 months).

Non-obese men with high intake and obese men with low intake had “disease-free” survival of 29 and 42 months, respectively, the researchers report.

Additional investigations looking at associations between post-surgery dietary changes and disease progression would be worthwhile, Strom suggests.

SOURCE: *International Journal of Cancer*,

Studies from over there

An international study led by researchers at The Institute of Cancer Research will pave the way for a test to be used to better tailor treatments and hopefully extend the survival of men with aggressive forms of metastatic prostate cancer.

The study, to be published tomorrow for *Cancer Clinical Research* (available online Oct 1,) has found that this analysis of Circulating Tumour Cells (CTC) can be utilised to study the prognosis of prostate cancer and is an independent indicator for overall survival of the disease.

Lead researcher Dr Johann de Bono at The Institute of Cancer Research and The Royal Marsden Hospital says:

“CTC testing, used in conjunction with the existing prostate specific antigen (PSA) test, may allow doctors to more accurately evaluate the effect of treatment on a patient’s tumour.”

“These studies are a very promising development, allowing cancer cells to be detected using a simple blood test and may eventually allow us to tailor cancer treatments to maximise the benefit for patients. Hopefully this will lead to improving the survival of patients with metastatic prostate cancer.”

The PSA test has been widely adopted as the benchmark test for prostate cancer in the UK, but it is not always possible to identify a clear relationship between a raised PSA level and the status of the disease.

Circulating tumour cells (CTCs) are cancer cells that

have broken away from an existing tumour and have entered into the bloodstream. The presence of these cells in the blood provides valuable insights into disease progression.

This study has shown that the monitoring and detection of CTCs can provide valuable information on the patient’s prognosis. Further studies are taking place to evaluate if the CTC test may be used to allow doctors to make treatment decisions more quickly and more reliably for the benefit of patients.

The test has already been incorporated into several prostate cancer drug trials that are taking place at The Institute and The Royal Marsden.

The test has been cleared by the FDA in the United States to determine the prognosis of patients with metastatic breast, colorectal or prostate cancer.

The study was in partnership with the New-York based Memorial Sloan-Kettering Institute and involved 231 patients undergoing chemotherapy treatment. Sixty-five clinical centres in Europe and the U.S. took part in the study.

The patients underwent monthly CTC monitoring to measure the level of circulating tumour cells in the blood. A count of more than 5 CTC per 7.5 ml of blood was seen as an indicator towards an “unfavourable” prognosis whereas a count of less than 5 CTC per 7.5ml was considered “favourable”. This was compared with the progression of the metastatic prostate cancer tumours.