PCCN Markham

Prostate Cancer Canada Network

Newsletter

Volume 20 Issue 5 **January, 2019**

NEXT MEETING

Tuesday, January 8, 2019 - 7:30PM

St. Andrews Presbyterian Church – Main St Markham

Rose Room - DOWNSTAIRS

(Free Parking off George St)

Group 'Round Table' Discussion
Survivors ask questions, share concerns
moderated by your peers

IN THIS ISSUE ...

HAPPY NEW YEAR!!!!

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Thriving with localized prostate cancer

There's a lot you can do to improve your outcome if you're taking an active surveillance approach to your diagnosis.

Harvard Men's Health Watch *Published: January, 2019*

Image: © Nastasic/Getty Images

About 90% of men diagnosed with prostate cancer have the localized kind, which means the cancer is confined to the prostate gland. And for many, a reasonable approach is active surveillance, in which men choose to monitor their cancer instead of going straight into invasive treatments, such as surgery or radiation therapy.

Active surveillance includes a doctor visit about every six months, most often with a prostate-specific antigen (PSA) blood test and digital rectal exam.

A repeat prostate biopsy is usually done within the first year and may be repeated periodically in the future. If your test results change, your doctor would then talk with you about treatment options.

It might seem hard to accept what can feel like a passive wait-and-see approach when faced with such news as a cancer diagnosis. But that doesn't mean you can't be proactive.

"For some men, a diagnosis like this can be used as a wake-up call to change their lifestyle, improve their health, and possibly keep their cancer from becoming more aggressive," says Dr. Marc Garnick, a urologic cancer expert at Harvard-affiliated Beth Israel Deaconess Medical Center.

So what can you do? Quitting smoking is the first step, says Dr. Garnick. After that — no surprise — it boils down to two areas: diet and exercise.

Diet: Go Mediterranean

There is no specific prostate cancer diet, and the jury is still out on whether specific dietary habits, like increasing your intake of omega-3 fatty acids, can influence prostate cancer growth.

"A better approach would be to examine your diet as a whole and make sure you adopt one that is low in red meat and sugar, which can increase inflammation. Instead, try to eat lots of whole fruits and vegetables, legumes, fatty fish, and grains," says Dr. Garnick.

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The Mediterranean diet follows these guidelines and is highly touted for its heart-healthy benefits. Plus, an observational study published in the February 2018 issue of *The Journal of Urology* suggested that it also may be helpful for men with prostate cancer.

The researchers compared three types of eating patterns — Western, prudent, and Mediterranean — on almost 2,000 men, average age 66, who either had prostate cancer or were healthy.

The Western diet included large amounts of fatty dairy products, refined grains, processed meat, caloric beverages, sweets, fast food, and sauces. The prudent diet had low-fat dairy products, whole grains, fruits, vegetables, and juices. And the Mediterranean diet consisted of fatty fish (high in healthy omega-3 fatty acids), fruits, vegetables, legumes, and olive oil, and low consumption of juices.

After five years, the researchers found that men who strictly followed a Mediterranean diet had a much lower risk of aggressive prostate cancer, while men who ate the other two diets did not see the same benefit.

The Mediterranean diet could have multiple benefits for prostate cancer, according to the researchers. For instance, its core foods, like fruits and olive oil, can help lower inflammation, which may reduce the chances that cancer will grow or spread.

The weighty risk of prostate cancer

Overweight men have a greater chance of developing aggressive prostate cancer, and the cause may be higher insulin levels. Insulin has the potential to stimulate cancer growth. Being overweight causes resistance to insulin's ability to help move sugar (glucose) out of our blood and into cells, known as insulin resistance. Blood glucose levels rise and the pancreas needs to put out more insulin in response. "A healthy weight can have a domino effect too," says urologic cancer expert Dr. Marc Garnick. It also can keep blood pressure and cholesterol levels under control, and both high blood pressure and high cholesterol are linked with more aggressive prostate cancer.

Exercise: Intensity matters

Researchers have long suspected that physical activity — given its influence on a wide range of biological processes, including anti-inflammatory and insulin pathways — may be linked to a lower risk of prostate cancer. Now, a study published online Oct. 6, 2018, by *European Urology* found that vigorous activity may offer the greatest benefit.

Scientists from the Harvard T.H. Chan School of Public Health analyzed data, including medical records and pathology reports, from 49,160 men ages 40 to 75 who were followed for 26 years.

The men also responded to biennial questionnaires that included questions about diet, health, and physical activity. Among the participants, 6,411 developed prostate cancer and 888 had aggressive prostate cancer — cancer that spread or caused death during the study period.

The results showed that men who engaged most frequently in vigorous activity had a 25% lower risk of developing aggressive prostate cancer compared with men who exercised the least. And you don't need to do much, either. On average, men in the highest category of vigorous activity did about 25 minutes of running per day. (Other activities that would be equal to this, depending on duration and intensity, include cycling, swimming, heavy outdoor work, and playing sports like tennis or racquetball.)

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Why does the level of activity seem to matter? Besides helping with weight management, which can further reduce your risk (see "The weighty risk of prostate cancer"), it might affect prostate cancer on a cellular level. The study also explored the impact exercise had on a common molecular alteration in prostate tumors called TMPRSS2:ERG, a gene fusion that occurs in the tumors of about half of prostate cancer patients.
The results showed that long-term vigorous physical activity was specifically associated with a lower risk of developing TMPRSS2:ERG, too
https://www.health.harvard.edu/mens-health/thriving-with-localized-prostate-cancer

An innovative new study advances personalized medicine for prostate cancer patients

IND.234 is the first prostate precision medicine trial to use liquid biopsies for genomic testing

Friday, November 30, 2018

Dr. Kim Chi, Medical Oncologist, and Medical Director at BC Cancer leading the trial with Dr. Alexander Wyatt who is leading the DNA analysis and is a Senior Research Scientist at the Vancouver Prostate Centre and the Vancouver Coastal Health Research Institute.

A new clinical trial, opening across Canada, is considered a major advancement in precision medicine for prostate cancer and the first of its kind in the world. The IND.234 clinical trial, conducted by the Canadian Cancer Trials Group (CCTG), uses liquid biopsy technology to screen for genomic markers in prostate cancer

After the liquid biopsy analysis, patients with specific DNA markers are assigned to one of five new therapies targeted at their unique form of prostate cancer. Researchers want to see if the markers identified in the screening process can help predict which patients will be helped the most by the targeted treatments.
“There is an urgent need to find more effective therapies for men with advanced prostate cancer and an individual’s cancer is unique, so a one-size-fits-all solution may not be the best,” says Dr. Kim Chi, Medical

Oncologist, and Medical Director at BC Cancer leading the trial. "We want to identify men whose cancers will have the best chance to respond to the experimental new drug therapies we are testing in this trial."
Jim, one of the first trial participants, shares his experience, "When I was first diagnosed with prostate cancer, I understood that this type of cancer was not good. When my oncologist offered me the chance to receive a new potential treatment, I was willing to try anything that might make a difference. They sent my blood to be tested in BC and then I was enrolled, it was simple — now I take my pills and track any side effects."
Although tumour samples taken at diagnosis can be tested for DNA markers, in order to provide current genomic information patients would need an additional invasive biopsy – using a liquid biopsy to provide the information could remove the need for surgery.
"The technology and computation required to study a persons' cancer using only a blood sample is very novel and experimental. This team has helped lead the charge for liquid biopsies to be part of prostate cancer clinical research," says Dr. Alexander Wyatt who is leading the DNA analysis and is a Senior Research Scientist at the Vancouver Prostate Centre and the Vancouver Coastal Health Research Institute. "Few other research studies in the world are able to draw upon this combination of advanced prostate cancer focus and liquid biopsy tools."
Dr. Wyatt's work on this project is supported by Prostate Cancer Canada as a recipient of its Movember Rising Star Award, which recognizes outstanding new researchers and supports their pursuit of groundbreaking research like this.

Canadian research innovation and collaboration

"The IND.234 trial is a perfect example of Canadian excellence in research and innovation translating into new treatment approaches. The Canadian Cancer Society is committed to supporting the full range of cancer research – from the basic laboratory science behind game-changing discoveries to the clinical trials that bring discoveries to patients," explains Judy Bray, Vice President, Research, Canadian Cancer Society. "Trials like this one would be not be possible without the generosity of our donors, who enable us to fund the best cancer research and offer hope to patients across the country."
"BC Cancer Foundation's passionate donors have enabled a world-first precision medicine trial using liquid biopsies to come to fruition, which will significantly improve patient outcomes," says Sarah Roth, president and CEO, BC Cancer Foundation. "The brilliant minds at BC Cancer continue to move the dial in research and care, benefiting families across Canada facing cancer today."
IND.234 is the first trial that evaluates a precision medicine approach for patients with advanced prostate cancer using liquid biopsies for genomic testing. It involves the collaboration of many key stakeholders in the Canadian cancer research landscape. The trail is supported by a core grant from the Canadian Cancer Society, with funding from the BC Cancer Foundation and 3CTN. The Vancouver Prostate Centre performs the biopsy testing supported by Prostate Cancer Canada with additional partners contributing to specific treatment arms of the study.
https://www.ctg.queensu.ca/cctg_news/innovative-new-study-advances-personalized-medicine-prostate-cancer-patients

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New prostate cancer treatment guidelines show early success in stopping its return

ABC Coffs Coast By Melissa Martin Posted yesterday at 8:17pm

Being diagnosed with prostate cancer is daunting but when the cancer returns after initial treatment it can leave devastation in its wake.

New guidelines, developed by the Royal Australian and New Zealand College of Radiologists (RANZCR), offer a lifeline to those who previously had little to no hope.

While only recently published, co-author of the guidelines Associate Professor Tom Shakespeare has been using them for the past two years and has noted early indications of a 90 per cent success rate in preventing a return of prostate cancer.

"It is early days and we need longer follow up to get a good idea of longer-term success, and likewise longer follow up is required before we can make accurate comparisons against men not treated on these protocols," Associate Professor Shakespeare said.

While comparisons could not yet be made on the survival rates, the guidelines were a significant breakthrough, given many secondary prostate cancer patients were told the disease kill them.

"In the past, patients who have been diagnosed with recurrent prostate cancer have often been told it is incurable," Associate Professor Shakespeare said.

"We now believe that these patients can be cured with radiation therapy."

The world-first guidelines cover the role and timing of post-prostatectomy radiotherapy, the management of regional nodal metastases and oligometastases, and the management of local prostate recurrence after definitive radiotherapy.

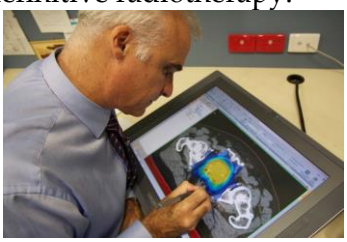

Photo: Associate Professor Tom Shakespeare said early results showed up to 90 per cent of patients have had no relapse of their cancer. (Supplied: Mid North Coast Health Unit)

Finding the answers

Prostate cancer may be the most common cancer in Australian men, with 16,665 diagnoses in 2017, but the development of the guidelines came about simply because there were none.

"We determined that there was a real lack of guidance for specialists and GPs on what to do in a situation where prostate cancer comes back after its initial treatment, and there's really no guidelines available for people to follow," Associate Professor Shakespeare said.

"Some people were told there's nothing you can do — and that actually was very common — while other people would offer varying treatment, but it wasn't standardised and it wasn't very evidence-based."

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As a result, RANZCR's Faculty of Radiation Oncology Genitourinary Group (FROGG) convened a national conference of Australian and American experts in 2017 to review new evidence relating to the treatment of recurring prostate cancer and develop consensus on the guidelines which had already begun to be used.
About 100 patients have already been treated using the guidelines — published in the international journal Radiotherapy and Oncology — by Associate Professor Shakespeare at the Mid North Coast Cancer Institute in NSW.

> "We've seen probably at this stage up to around 90 per cent of people have really had no relapse of their cancer," Associate Professor Shakespeare said.

"Cancer is something you need to follow over time and some of these people are still receiving treatment, so the proof will be years down the track to really see how these people go."

Hope for patients

Robert Adams, a patient with secondary prostate cancer, had surgery when he was first diagnosed in 2017 and had hoped that would be the end of his cancer journey.

Photo: Robert Adams is hopeful his recent treatment under the new guidelines can cure his prostate cancer. (Supplied: Robert Adams)

However, tests three months following the surgery showed an aggressive form of prostate cancer had returned.
"I thought, 'I've had the operation, I'm free to run amok', and then to hear that the secondary cancer was aggressive, and I had to go further and I had only a 60 per cent chance — it does play upon you," Mr Adams said.
Mr Adams recently finished six weeks of radiation therapy which involved 33 rounds of treatment.

> "If it keeps me on the top side of the grass I'm pretty happy," he said.

"It's made a big difference to me, and the other fellas I spoke to [at the Mid North Coast Cancer Institute] were very much the same — that they're hoping for a long-living result."

A collegiate approach

While developed by radiologists, the guidelines have been welcomed within the surgical community.
Urologist and director of genital urinary oncology at Peter MacCallum Cancer Centre in Melbourne Associate Professor Declan Murphy said the report was timely because the question of which men benefitted from radiotherapy after surgery for prostate cancer was changing.

> "This a very useful and timely set of guidelines which contains a very good multi-disciplinary mixture of not just radiation oncologists, nuclear medicine experts and some urologists," he said.

"One of the biggest effectors of change is the role of imaging — the role of scanning technologies that have emerged in recent years to try and help us select which patients might benefit from some radiotherapy after surgery."

Associate Professor Murphy believed the guidelines would help urologists determine the best outcomes for patients who could be left with side effects including sexual dysfunction.

Photo: Associate Professor Declan Murphy says the treatment guidelines will help urologists cure their patients of prostate cancer, and prevent over-treating them. (Supplied)

"Urologists are often worried about the additional side effects of radiotherapy on top of the side effects that men may already be recovering from," he said.

"I think part of the important value of this document is that it helps us try to work to select these patients as best we can, so that number one, we don't miss the opportunity to have them be cured of their recurring cancer, but number two, that we don't over-treat patients who perhaps don't need treatment at a particular time."

The next steps

Now the guidelines have been published, it is expected data on their success will grow.

"It's been a long process and we've had positive reaction from around the world," Associate Professor Shakespeare said.

> "I think I've probably been referred close to a couple hundred of patients that would never have been referred to me previously."

Associate Professor Shakespeare expected to review his own treatment results more formally early next year.

"Obviously we need long-term data and over the next year or two, we will be formally reviewing our results, but there's no doubt that some of these patients will be totally cured of their cancer and that's something that previously — if they were not offered treatment — these patients would have died."

https://www.abc.net.au/news/2018-12-17/new-prostate-cancer-guidelines-to-save-lives/10626314

This new test could be used to detect and diagnose all types of cancer

Researchers have developed a test that could be used to diagnose all cancers. It is based on a unique DNA signature that appears to be common across cancer types.

The test has yet to be conducted on humans, and clinical trials are needed before we know for sure if it can be used in the clinic.

Each cancer type, whether it be breast or bowel cancer, has different genetic and other features. A test that detects one cancer may not work on another. Researchers have long been looking for a commonality among cancers to develop a diagnostic tool that could apply across all types.

Our research, published in the journal Nature Communications, has found that cancer DNA forms a unique structure when placed in water. The structure is the same in DNA from samples of breast, prostate and bowel cancers, as well as lymphoma. We used this discovery to develop a test that can identify the cancerous DNA in less than ten minutes.

How our test works

Current detection of cancer requires a tissue biopsy – a surgical procedure to collect tissue from the patient's tumour. Researchers have been looking for a less invasive diagnostic test that can detect cancers at an earlier stage. One possibility, still in development, is a liquid biopsy, testing for circulating cancer DNA in the blood. Our test also uses circulating cancer DNA but involves a different detection method.

Nearly every cell in a person's body has the same DNA, but studies have foundthat cancer's progression causes this DNA to undergo considerable reprogramming.

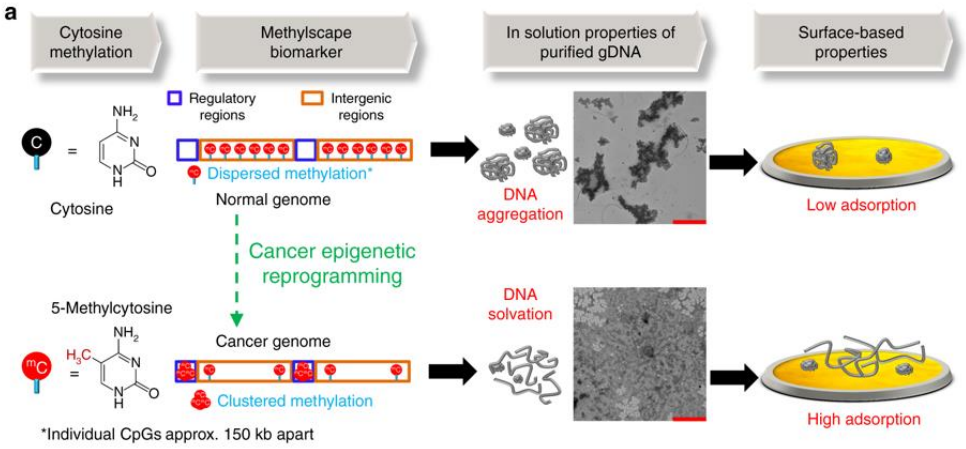

Image: Nature Communications

This change is particularly evident in the distribution pattern of a tiny molecule called a methyl group, which decorates the DNA.

A normal cell DNA's distinct methyl pattern is crucial to regulating its machinery and maintaining its functions. It is also responsible for turning genes on and off. Altering this pattern is one of the ways cancer cells regulate their own proliferation.

This methyl patterning has been studied before. However, its effect in a solution (such as water) has never been explored. Using transmission electron microscopy (a high-resolution microscope), we saw that cancerous

DNA fragments folded into three-dimensional structures in water. These were different to what we saw with normal tissue DNA in the water.

In the lab, gold particles are commonly used to help detect biological molecules (such as DNA). This is because gold can affect molecular behaviour in a way that causes visible colour changes. We discovered that cancerous DNA has a strong affinity towards gold, which means it strongly binds to the gold particles.

This finding directed us to develop a test that can detect cancerous DNA in blood and tissue. This requires a tiny amount of purified DNA to be mixed with some drops of gold particle solution. By simply observing the colour change, it is possible to identify the cancerous DNA with the naked eye within five minutes.

The test also works for electrochemical detection – when the DNA is attached onto flat gold electrodes. Since cancer DNA has higher affinity to gold, it provides a higher relative electrochemical current signal in comparison to normal DNA. This electrochemical method is highly sensitive and could also eventually be used as a diagnostic tool.

Why this matters

For this test to work properly the DNA must be pure. So far we have tested more than 200 tissue and blood samples, with 90% accuracy. Accuracy is important to ensure there are fewer false positives – wrongly detecting cancer when there is none.

The types of cancers we tested included breast, prostate, bowel and lymphoma. We have not yet tested other cancers, but because the methylation pattern is similar across all cancers it is likely the DNA will respond in the same way.

It is a promising start, though further analysis with more samples is needed to prove its clinical use.

The next step is to do a large clinical study to understand how early a cancer can be detected based on this novel DNA signature. We are assessing the possibility to detect different cancer types from different body fluids from early to later stages of cancer.

We are also considering whether the test could help monitor treatment responses based on the abundance of DNA signatures in body fluid during treatment.

Man's risk of prostate cancer linked to inflammatory bowel disease

AFP Relaxnews / 03:04 PM December 17, 2018

New United States research has found a link between inflammatory bowel disease and an increased risk of being diagnosed with prostate cancer.

Carried out by researchers at Northwestern University, the study looked at 1,033 men with inflammatory bowel disease and 9,306 men without the disease who acted as a control group.

After following the group of men over an 18-year period, the researchers found that those with inflammatory bowel disease had a four to five times higher risk of prostate cancer and higher PSA (prostate-specific antigen) levels. PSA is a protein produced by both normal and malignant prostate gland cells, with levels often higher in men with prostate cancer.

The findings, published in the journal European Urology, are also the first to show that men with inflammatory bowel disease have a higher-than-average level of PSA and an increased risk of this type of cancer.

"Many doctors think their PSA is elevated just because they have an inflammatory condition," said lead study author Dr. Shilajit Kundu. "There is no data to guide how we should treat these men."

"These patients may need to be screened more carefully than a man without inflammatory bowel disease," added Dr. Kundu. "If a man with inflammatory bowel disease has an elevated PSA, it may be an indicator of prostate cancer."

Inflammatory bowel disease (IBD) is a chronic condition which includes Crohn's disease and ulcerative colitis and is characterized by chronic inflammation of the gastrointestinal (GI) tract. Symptoms include persistent diarrhea, abdominal pain, rectal bleeding, bloody stools, weight loss and fatigue.

According to the Centers for Disease Control and Prevention (CDC), around 3 million American adults reported having IBD in 2015. ***JB***

https://lifestyle.inquirer.net/317938/mans-risk-of-prostate-cancer-linked-to-inflammatory-bowel-disease/#ixzz5Zx8iqrSh

NOTABLE

Study uncovers link between body weight, cancer

ANI | Washington D.C. [USA] December 17, 2018 Last Updated at 18:35 IST

Excess body weight or obesity is responsible for 3.9 per cent of cancer globally, a new study has found.

The study, published in the journal Cancer, highlighted a relationship between obesity and the risk of 13 types of cancers, including postmenopausal breast cancer and liver cancer, and a probable relationship with three others, including prostate cancer.

"In particular, not many people are aware of the link of overweight/obesity to cancer risk," said Hyuna Sung, a participant researcher of the study.

The researchers noted that by 2030, 21.7 million new cancer cases and 13 million cancer deaths are expected to occur around the world.

The study looked at cancer and excess body weight on the basis of gender. The total number of cases for women was nearly double that of men, with breast cancer being one of the largest contributors. For men, liver cancer was one of the highest contributors.

Researchers, during the study, used publicly available or already published parameters and estimates to show regional and global trends of obesity and overweight for the past four decades. During that period, the prevalence of excess body weight rose from 21 per cent in men and 24 per cent in women to approximately 40 per cent in both sexes in all regions of the world.

"The simultaneous rise in excess body weight in almost all countries is thought to be driven largely by changes in the global food system, which promotes energy-dense, nutrient-poor foods, alongside reduced opportunities for physical activity," Sung said.

https://www.business-standard.com/article/news-ani/study-uncovers-link-between-body-weight-cancer-118121700847_1.html

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New Guidelines Advise MRI Scan Could Best Detect Prostate Cancer And Save Men Needless Surgery in the Process

Medicine December 17, 2018 No Comments David Martin

All men should be screened for prostate cancer, at some point, but those who are most at risk for the condition might no longer need a biopsy and surgery under brand new guidelines from the National Institutes of Health and Care Excellence (NICE). Approximately 100,000 men under biopsies every year because of prostate cancer concerns.

New research indicates that instead of probing needles, thousands of men could learn about their potential prostate cancer diagnosis through a simple MRI scan. As such, the researchers say that practitioners should offer MRI scans as the "first line investigation" for any and all patients suspected to have localized prostate cancer. As a matter of fact, research from last year—published in the medical journal Lancet—found that among those men who have cancer, this new technique detected 93 percent of the most aggressive cases, but traditional biopsy only managed to detect 48 percent of them!

The data on this research also suggests that this could allow for at least 25 percent of cases to get clearance without having to take any more (invasive) tests. More importantly, the data says this technique could even be twice as effective at finding the most deadly tumors and that means the earlier diagnosis, which leads to better treatment options, which leads to higher survival rates.

And with these new guidelines on testing for men who are at highest risk, the guidance also intimates that those men who may be considered at "low risk" should be provided clearer options about potential surgery, available radiotherapy methods, or to simply remain under "active surveillance"—a type of cancer monitoring also known as "watchful waiting."

These lower-risk men should also be given more detailed information about not only the benefits of treatment but the associated risks as well, as some can cause incontinence and even erectile dysfunction.

In case you were not aware, prostate cancer is the most common cancer in men. Approximately 47,000 prostate cancer cases are reported every year, with nearly 25 percent of these leading to death.

http://chronicleofnews.com/news/new-guidelines-advise-mri-scan-could-best-detect-prostate-cancer-and-save-men-needless-surgery-in-the-process/

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QUOTABLE

"New Year's Day now is the accepted time to make your regular annual good resolutions. Next week you can begin paving hell with them as usual." Mark Twain

“Stay positive and happy. Work hard and don't give up hope. Be open to criticism and keep learning. Surround yourself with happy, warm and genuine people”. Tena Desae

“I will keep smiling, be positive and never give up! I will give 100 percent each time I play. These are always my goals and my attitude”. Yani Tseng

“Your success and happiness lies in you. Resolve to keep happy, and your joy and you shall form an invincible host against difficulties”. Helen Keller

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Prostate Cancer Support Group

Meets the 2nd Tuesday
Every month
September – June
St. Andrew's Presbyterian Church
143 Main St Markham

The Markham PCCN Prostate Support Group is generously supported by Dr John DiCostanzo, Astellas Pharma. PCCN, St. Andrews Presbyterian Church, and the Canadian Cancer Society.

The group is open to all; survivors, wives, partners, relatives and those in our community who are interested in knowing about prostate health. Drop by St Andrews Presbyterian Church 143 Main Street Markham at 7:30PM, the 2nd Tuesday every month from September to June. The information and opinions expressed in this publication are not endorsements or recommendations for any medical treatment, product, service or course of action by PCCN Markham its officers, advisors or editors of this newsletter.

Treatment should not be done in the place of standard, accepted treatment without the knowledge of the treating physician.

The majority of information in this newsletter was taken from various web sites with minimum editing. We have recognized the web sites and authors where possible.

PCCN Markham does not recommend treatment, modalities, medications or physicians. All information is, however, freely shared.

Email *markhampccn@gmail.com*

We look forward to your feedback and thoughts. Please email suggestions to markhampccn@gmail.com

Website www.pccnmarkham.ca
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