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### **NEXT MEETING**

Tuesday, April 9, 2019 - 7:30PM

St. Andrews Presbyterian Church – Main St Markham

Youth Room - Upstairs

**Details below** 

(Free Parking & Room access off George Street)

### **Speaker**

Dr. Andrew Loblaw MD, FRCPC, M.Sc Sunnybrook HSC

**Topic: SABR** 

A new form of radiotherapy that may significantly improve survival for people with prostate cancer.

Dr. Loblaw is a radiation oncologist, clinician scientist and an associate professor with focus on prostate cancer

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# Ontario urged to update law forbidding cremation of bodies with radioactive implants

Province says it is examining law forbidding the cremation of human remains containing nuclear material

Nick Boisvert · CBC News · Posted: Mar 07, 2019 5:00 AM ET | Last Updated: March 7



In a file photo from 2001, radiation oncologist Dr. Gerard Morton inserts needles into the prostate of a patient during high dose-rate brachytherapy in Toronto. (Aaron Harris/The Canadian Press)

Radiation and cancer experts say it's time for Ontario to change an outdated law that prevents people who have received a certain type of radiation treatment from being cremated.

The procedure, known as brachytherapy, involves permanently implanting dozens of minuscule radioactive seeds in a localized area to attack cancer cells.

It has become a common and effective method for treating prostate cancer, in addition to other forms of the disease, but patients who opt for the treatment — and their families — are often shocked to find out that it is illegal to cremate a body containing the implants.

The issue made headlines last week when CBC Toronto published a story about a family who were told they could not cremate their father due to the existing regulations.

"It means that a fairly large group of people that have end-of-life plans that include cremation ... are now not getting the best therapies that they might need," said Curtis Caldwell, the chief scientist at the Radiation Safety Institute of Canada.

Caldwell's organization says Ontario's law forbidding the cremation of patients who have received brachytherapy or other forms of seed implants is excessive and unnecessary.

The most common form of brachytherapy treatment involves radioactive isotopes with a half-life of around 60 days, which means that the total amount of radioactive material is reduced by half every two months.

"About two years after this has been administered, you really need no precautions at all, no matter how much you treated the patient," Caldwell explained.



Upwards of 100 tiny radioactive seeds like these are permanently implanted as a form of cancer treatment. Experts say they are not dangerous if handled properly. (Curtis Caldwell/Submitted)



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#### Thousands have received the treatment

He went on to say that even if a patient dies sooner than two years after receiving treatment, taking basic precautions during the cremation process — such as wearing a mask — is enough to prevent harmful radiation exposure.

In 2012, around 400 men in Ontario were treated with brachytherapy for prostate cancer. The total annual number of patients receiving the treatment is believed to be well into the thousands.

"I think if the politicians involved were aware of the issue, they would probably agree with trying to get this changed," he added.

In an email to CBC Toronto, a spokesperson for the Ministry of Government and Consumer Services said the government is aware of the concerns.

"This is a complex issue that we are currently examining in greater detail for all available options," wrote David Woolley.

Ontario and Saskatchewan are the only provinces with strict laws forbidding the cremation of human remains that contain nuclear substances.

Quebec updated its laws earlier this year to permit cremation two years after treatment.

#### Families unaware of law

The family in last week's CBC Toronto story said multiple funeral homes around Toronto all refused to cremate the remains.



The family of Al Monk wasn't sure if he had theraseeds implanted to treat prostate cancer. As a result, the funeral home said he would not be eligible to be cremated.

The deceased man, Al Monk, arranged to have his remains cremated, and his family says he was never told by Highland Funeral Home that past radiation treatments could prevent that from being done.

However, after providing a medical history showing that implants were never used, the family was able to go through with the cremation.

#### Patients declining treatment due to law

Jean-Pierre Bissonnette, a medical physicist at the University of Toronto, said brachytherapy can be among the most effective and least taxing cancer treatments available

"A normal course of external radiation therapy would stand probably on the order of five to seven weeks, whereas a permanent seed implant would involve a single visit to the hospital," he explained.

The seeds can also reduce side effects in other forms of radiation treatments, he said.



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Despite those advantages, Caldwell says patients — particularly those with religious beliefs that call for cremation — sometimes opt for other forms of treatment due to the existing cremation restriction. In some cases, he said families have shipped human remains overseas to be cremated in jurisdictions without similar laws. With files from Katherine Brulotte

https://www.cbc.ca/news/canada/toronto/radiation-implants-cremation-laws-1.5045668

### Hormonal treatment may trigger depression in men with prostate cancer

European Association of Urology

17-Mar-2019

Men who receive anti-hormonal treatment after having their prostate removed are 80% more likely to suffer from depression than men who don't receive this treatment. This leads researchers to suggest that patients receiving androgen deprivation therapy should be monitored for post-surgical depression. This is presented at the European Association of Urology congress in Barcelona.

Increasingly doctors are becoming aware that for many men, a cancer diagnosis and treatment leads to depression, with suicide rates seen rising disproportionately for those with urological cancers. Now a group of Danish researchers has shown that men who receive anti-hormonal treatment after a radical prostatectomy have an increased tendency to depression.

"The anti- hormonal treatment is given to control the growth of tumour cells" said lead researcher Dr Anne Sofie Friberg from the Rigshospitalet in Copenhagen. "Unfortunately, we have found that it is also associated with depression."

The researchers examined medical records of 5,570 men from the Danish Prostate Cancer Registry. They found that 773 of these men were treated for depression after surgery. They found that men treated with anti-hormonal medicines were 1.8 times more likely to suffer from depression than men who did not receive the additional treatment. The researchers also checked whether radiotherapy after radical prostatectomy was associated with depression, but these results were inconclusive.

Anne Sofie Friberg said:

"The treatment prevents the production of androgen hormones, like testosterone. We know from other studies that low testosterone can affect a man's well-being, so it may be that limiting testosterone production might have the same effect, perhaps especially after a major stress such as cancer treatment.

It is important to note that compared to men without prostate cancer the patients treated with prostatectomy as a whole has an increased risk of depression. After surgery, erectile dysfunction and urinary incontinence are frequent symptoms. In case of recurrence and hormonal treatment, these symptoms may worsen and in addition, altered body image and loss of libido are common. These treatment effects are likely to increase the risk of depression. Also, low testosterone levels may directly affect mood centres of the brain"

As many as 25% of men undergoing radical prostatectomy will relapse and may be offered hormonal treatment. These men appear to be at a higher risk of developing depression once hormonal treatment is



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introduced. The reason could be either a consequence of failing surgery, directly caused by the hormonal manipulation, or both."

They note that the definition of depression - antidepressant prescriptions or referral to a psychiatric department for depression - is a possible limitation of the study (not all would have sought treatment, and sometimes anti-depressants are prescribed for other conditions). But the large numbers in the study means that the results are likely to be robust.

Commenting, EAU Adjunct Secretary General for Education, Prof Hendrik Van Poppel (University Hospitals of the KULeuven, Belgium) said:

"This is a large study which shows that prostate cancer treatment can spill over to cause other issues. We need to be aware of this potential. As urologists we have a responsibility to treat the whole patient, so this argues for a multi-disciplinary approach to treating prostate cancer, and underlines the value of following evidence-based guidelines to try to ensure that the patient receives comprehensive care".

Mr Erik Briers MS PhD (patient member of the EAU guidelines committee on prostate cancer) said: "This study is very relevant from the patient's point of view; it again shows the importance of the holistic treatment of prostate cancer patients and in this treatment the importance of including psycho-oncology and socio psychology professionals. The care for prostate cancer patients does never stop, consequences can show up very late".

Type of study: Not peer reviewed/observational study/human subjects
Neither Professor Van Poppel nor Erik Briers were involved in this research, these are independent comments
This work was funded by the Danish Cancer Society and the Capital and Zealand Region of Denmark fund.

### Study suggests personality tests may improve care for prostate cancer patients

by European Association of Urology March 16, 2019

Scientists have found that men with high neuroticism—between a quarter and a fifth of men in developed countries—are significantly more likely to suffer from adverse events such as erectile dysfunction and incontinence, which may put their recovery from prostate cancer surgery at risk. The researchers say that this means cancer teams may need to consider testing for personality types to try to ensure that patients being treated for prostate cancer receive the best care. This work is presented at the European Association of Urology Congress in Barcelona.

The researchers surveyed 982 men who had undergone <u>prostate</u> surgery (<u>radical prostatectomy</u>) at the University Hospital in Oslo, Norway. 761 of the respondents reported on their recovery from the surgery while also self-reporting on neuroticism with a standard questionnaire.

22% of the men scored high for neuroticism, which is in line with the prevalence of high-neurotic personality in national surveys in Norway (22%,) and other countries such as the Netherlands (25%). These men showed significantly worse scores when surveyed on their recovery from radical prostatectomy.

Lead researcher, Dr. Karol Axcrona (from Akershus University Hospital, Norway) said:



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"Around a fifth of the men scored highly for neuroticism, which is pretty much what would be expected. These men showed significantly more <u>adverse effects</u> after prostate <u>cancer</u> surgery. We use a standard questionnaire to measure the Quality-of-Life in men after prostate cancer surgery, and on average the highly neurotic patients scored around 20% worse than the non-neurotic patients on a variety of side effects, including <u>erectile dysfunction</u>, urinary leakage, and bowel problems. This mirrors work which has shown the effect of personality on disease recovery in general, but we still need to see this work replicated in other studies".

Until now differences in outcomes from prostate cancer surgery had been thought to be largely due to differences in surgical technique and the circumstances of the <u>prostate cancer</u>. This work shows that personality may also be a contributory factor to surgical outcomes.

Dr. Axcrona continued:

"Neuroticism is not an illness, but a basic personality trait, like extraversion or openness; we all have some degree of neuroticism. What we found was that those patients who show a greater tendency towards neuroticism have worse outcomes 3 years after <u>prostate cancer surgery</u>. This is a real effect, and doctors need to take account of this, in the same way that we would take physical factors into account before and after cancer treatment. This means we may need better advance personality testing for identification and counselling, and perhaps a more specialised follow-up of those men who might be at risk of poorer outcomes. We believe the increased risk of <u>adverse events</u> is likely to impede the overall patient recovery, although the study was not designed to measure that"

Commenting, Director of the European Association of Urology Scientific Office, Professor Arnulf Stenzl (Tuebingen, Germany) said:

"This is interesting and novel work. It would be very valuable for those affected, but it may be difficult to test all patients; so in practical terms we may need to pre-select those who are at most at risk. We know that roughly one out of five will tend to neuroticism, but we need to be more sure how this translates into postoperative clinical or psychological effects, so more we need more data".

https://medicalxpress.com/news/2019-03-personality-prostate-cancer-patients.htm

# Black men with advanced prostate cancer achieve longer OS with docetaxel than white counterparts

Halabi S, et al. J Clin Oncol. 2018;doi:10.1200/JCO.18.01279. March 6, 2019

Black men treated for <u>metastatic castration-resistant prostate cancer</u> with docetaxel had longer OS (Overall Survival) than their white counterparts after adjustment for prognostic factors, according to a meta-analysis of clinical trial data published in *Journal of Clinical Oncology*.

"Several studies have reported that among patients with localized prostate cancer, black men have a shorter OS time than white men, but few data exist for men with advanced prostate cancer," **Susan Halabi, PhD,** associate professor of biostatistics and bioinformatics at Duke University School of Medicine, and colleagues



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wrote. "The primary goal of this analysis was to compare the OS in black and white men with metastatic castration-resistant prostate cancer who were treated in phase 3 clinical trials with docetaxel plus prednisone or a docetaxel plus prednisone-containing regimen."

Halabi and colleagues conducted a systematic literature review of phase 3 trials and pooled data on 8,820 men from nine trials that met inclusion criteria. The final analysis, which eliminated Asian men and men classified as unknown or other ethnicity, included 8,028 men. Of them, 7,528 were white (median age, 69 years, 95% performance status 0 to 1) and 500 black (median age, 68 years, 90% performance status 0 to 1).

Black men had a higher median testosterone level (28 ng/mL vs. 18 ng/dL), median PSA level (127 ng/mL vs. 85 ng/mL) and median hemoglobin level (12 g/dL vs. 13 g/dL) than white men (P < .001 for all).

OS served as the study's primary endpoint. The researchers used a Cox proportional hazards regression model to evaluate the prognostic significance of race (black vs. white) adjusted for known risk factors common among the trials, including age, <u>PSA</u>, performance status, alkaline phosphatase, hemoglobin and metastatic site.

The median follow-up was 31 months, and 5,045 deaths occurred.

In general, researchers saw little variation across trials in median OS for black men.

Although median survival was similar among black and white men (21 months), the combined multivariable HR of 0.81 (95% CI, 0.72-0.91) indicates that, after adjusting for prognostic factors, black men had a statistically reduced risk for death compared with white men (P < .001).

Additionally, black men had longer median OS than white men (21 months vs. 20 months) in three trials sponsored by the National Clinical Trials Network (pooled multivariable HR = 0.76; 95% CI, 0.66-0.88). These trials enrolled a higher proportion of black men compared with industry trials (12% vs. 4%).

https://www.healio.com/hematology-oncology/prostate-cancer/news/online/%7B3333cfe0-d513-4c28-970e-df8e795dff15%7D/black-men-with-advanced-prostate-cancer-achieve-longer-os-with-docetaxel-than-white-counterparts

# Cheap blood pressure drugs could increase survival chances by almost half for men with prostate cancer

By <u>Ben Spencer Medical Correspondent For The Daily Mail</u> Published: 20:01 EDT, 18 March 2019 | Updated: 20:01 EDT, 18 March 2019

- Men taking pills known as ARBs have a lower chance of prostate cancer death
- Researchers from the University of Tampere in Finland studied nearly 8,300 men
- But other types of blood pressure drugs could actually increase death risk

Cheap blood pressure drugs taken by thousands of people could increase survival chances for men with prostate cancer, research suggests.

A study of nearly 8,300 men with prostate cancer found that a particular class of blood pressure pills cuts the chance of an early death by up to 42 per cent.

Other types of blood pressure drugs, on the other hand, may actually increase the risk of death.



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Certain types of blood pressure medication – angiotensin II receptor blockers (ARBs) – improve prostate cancer survival rates, according to research (stock image)

The researchers - presenting their findings at the European Association of Urology Conference in Barcelona - said the findings are crucial because four fifths of men with prostate cancer are also on blood pressure medication.

So it is vital that doctors select a type of pill that could extend their life, rather than potentially shorten it. The researchers, from the University of Tampere in Finland, tracked 8,253 men with prostate cancer for seven and a half years after they were diagnosed.

Most of the men, who had an average age of 68 at the start of the study, also happened to be taking pills for high blood pressure.

The researchers compared the type of blood pressure medication with the participants' death rates, and found they varied significantly depending on the class of the drug.

Those who were taking angiotensin II receptor blockers (known as ARBs) - which include common pills such as Valsartan and Losartan - had the lowest chance of death during the study period.

Men who been taking the pills before they were diagnosed had a 30 per cent lower chance of dying from their prostate cancer than those who were taking no blood pressure medication, and those who started taking them after diagnosis had a 42 per cent reduced risk.

ACE-inhibitors - another common drug - also seemed to have a protective effect, with an 18 per cent lower death risk if they started on the pills after diagnosis.

But other treatments, such as diuretics, seemed to increase the risk of mortality by up to 161 per cent.

Angiotensin II receptor blockers - which cost as little as 70p a day - have been used for blood pressure for more than 30 years and come with few side effects.

Researcher Professor Teemu Murtola said the method by which Valsartan and similar treatments lower blood pressure may slow the growth of prostate tumours.

Other drugs work in different ways, so may not have the same effect.

He said he doubts any blood pressure drugs actually increase the risk of death by themselves - it may just be that men on those drugs are at greater risk because they have underlying heart problems which make them more vulnerable to cancer.

But he stressed that with so many prostate cancer patients taking blood pressure pills, the choice of treatment could make a big difference.



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'Up to 80 per cent of men in our study population had at least one prescription for antihypertensive drugs, demonstrating how common the usage is among men with prostate cancer,' Professor Murtola said.

'Therefore, it is essential to know their potential impact on cancer prognosis.

'Of course other studies are needed to confirm these results - but there could be real benefits to selecting certain medication rather than others. It is definitely worth studying further.'

High blood pressure - known by the medical name of hypertension - affects one in three adults, more than 17million of the British population.

There are many several classes of hypertension medication - with little to choose between them in terms of price or side effects - and often patients cycle through several different drugs to find the most effective one. The Daily Mail is campaigning to end needless prostate deaths through better treatments and earlier diagnosis.

Some 47,000 men are diagnosed with prostate cancer in the UK each year - and 11,600 men die as a result. Last year official figures revealed rising prostate cancer deaths saw it become a bigger killer than breast cancer for the first time.

Simon Grieveson of Prostate Cancer UK, said: 'This research suggests that different blood pressure medications may have differing effects on outcomes for men with prostate cancer, with some, such as angiotensin receptor blockers, possibly even helping to extend life.

'However, whilst these are certainly interesting findings, the number of men included to investigate the effects of ARBs on prostate cancer mortality was rather small, and so further research is needed with larger numbers of men to see if this really leads to better survival, and if so, how the drug might cause this effect. 'Blood pressure medicines can be very effective, and we certainly wouldn't suggest that men change or stop taking their prescriptions as a result of this research.'

https://www.dailymail.co.uk/health/article-6823479/Cheap-blood-pressure-drugs-increase-prostate-cancer-survival-chances.html

### Coffee chemicals could curb prostate cancer

Published Monday 18 March 2019

By Tim Newman Fact checked by Carolyn Robertson

Following a series of experiments, researchers conclude that two compounds found in coffee might help slow the growth of prostate cancer cells. Although the findings are preliminary, they are encouraging.



Scientists are dissecting coffee in search of cancer cures.



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Coffee is one of the most popular drinks on the planet and is a complex cocktail.

In fact, coffee can contain more than <u>1,000</u> nonvolatile chemical compounds and in excess of 1,500 volatile ones.

The type and concentrations of these chemicals can vary wildly, depending on several factors, including how the makers <u>prepare</u> the beans.

Scientists have been intrigued by coffee's potential impact on health for many years. A drink that contains so many active ingredients — and one that people consume so widely — is likely to have an effect on the population at large.

Some <u>studies</u> have concluded that, overall, coffee might be a force for good. However, questions remain.

Recent studies have started identifying <u>links</u> between coffee consumption and lower <u>prostate cancer</u> risk. As evidence mounts, people are directing more attention to this relationship.

According to the Centers for Disease Control and Prevention (CDC) in the United States, prostate cancer is one of the <u>leading causes</u> of <u>cancer</u> death in men. If chemicals from coffee can help reduce the risk, it is a line of investigation worth pursuing.

#### Coffee and prostate cancer

Scientists are now delving deeper into coffee's chemical makeup to understand how its constituent parts might work against cancer.

Recently, researchers from Kanazawa University Graduate School of Medical Science in Japan tested a range of coffee compounds against prostate cancer in mice. Specifically, they used cells that were resistant to standard cancer drugs, such as cabazitaxel.

This week, the scientists presented their results at the European Association of Urology congress in Barcelona, Spain. In December 2018, they also <u>published</u> their findings in the journal *The Prostate*.

Initially, the scientists looked at the effects of six coffee compounds. Then, they narrowed their focus to just two: kahweol acetate and cafestol. Both chemicals are hydrocarbons that naturally occur in Arabica coffee.

In their preliminary experiments, they showed that when they added kahweol acetate and cafestol to prostate cancer cells in a petri dish, the cells grew less rapidly.

Next, they tested the two compounds on prostate cancer cells that they had transplanted into mice. In all, they used 16 mice: four were controls and had no treatment; they gave a further four kahweol acetate; four had cafestol, and they treated the remaining four with both kahweol acetate and cafestol.



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"We found that kahweol acetate and cafestol inhibited the growth of the cancer cells in mice, but the combination seemed to work synergistically, leading to a significantly slower <u>tumor</u> growth than in untreated mice," explains study leader, Dr. Hiroaki Iwamoto.

The effects were striking, and Dr. Iwamoto continues:

"After 11 days, the untreated tumors had grown by around [3.5] times the original volume (342 percent), whereas the tumors in the mice treated with both compounds had grown by around just over [1.5] (167 percent) times the original size."

#### Much more work is needed

It is important to remember that the scientists conducted this study on mouse cells. Also, as they explain, this is a pilot study. Consequently, they will need to carry out more work before they can ascertain whether the compounds are safe and effective in humans.

However, the researchers remain confident, and they are excited about the findings.

"What it does show is that these compounds appear to have an effect on drug-resistant cells prostate cancer cells in the right circumstances." Dr. Hiroaki Iwamoto

The scientists are already planning on expanding their work. Dr. Iwamoto explains that "we are currently considering how we might test these findings in a larger sample, and then in humans."

The fact that preparation alters the chemical makeup of coffee opens up another important line of investigation, and it is still not clear whether brewing or filtering might remove kahweol acetate and cafestol from the final drink.

Although these results are exciting, there are still many questions that need answers.

As Dr. Iwamoto says, "These are promising findings, but they should not make people change their coffee consumption. Coffee can have both positive and negative effects ..." He remains upbeat, however, concluding that "if we can confirm these results, we may have candidates to treat drug-resistant prostate cancer." <a href="https://www.medicalnewstoday.com/articles/324730.php">https://www.medicalnewstoday.com/articles/324730.php</a>

# Diet, exercise intervention improves outcomes for men undergoing androgen deprivation therapy

May 22, 2018 Brian C. Focht

A personalized, group-mediated diet and exercise intervention appeared associated with improved mobility among men with prostate cancer who underwent androgen deprivation therapy, according to study results. **Brian C. Focht, PhD,** associate chair of the department of human sciences and professor of kinesiology in the College of Education and Human Ecology at The Ohio State University, and colleagues from the university's comprehensive cancer center conducted a single-blind, randomized pilot study with 32 patients.



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Half of the men underwent a group-mediated, cognitive-behavioral exercise and diet intervention. The other half served as controls.

Change in mobility performance served as the primary outcome. Body composition and muscular strength served as secondary outcomes.

Researchers observed significant improvement in the primary endpoint at 3 months among men assigned the diet and exercise intervention (P < .02). Men assigned the intervention also demonstrated significant improvements in muscular strength (P < .01), body fat percentage (P < .05), and fat mass (P < .03). HemOnc Today spoke with Focht about the theory behind this approach, the nature of the intervention and the

#### Question: Can you describe the rationale behind this approach?

benefits it may confer, and how such programs could be more widely applied.

Answer: A number of factors played into it. Exercise had been used fairly consistently in some prior studies as a supportive care intervention for men with prostate cancer on ADT but, interestingly enough, very few studies had looked at the combination of exercise and diet — at least when we wrote the grant. There were no studies looking at the potentially synergistic benefits of putting those two things together. When we really started evaluating what the main concerns from both a longevity perspective and a quality-of-life perspective tend to be for these patients, we felt there could be value to addressing both the energy expenditure side from an exercise perspective, as well as the energy intake side with regard to total caloric values and dietary composition. A caveat is that I'm kind of a weight management researcher in disguise, so this is something that is well established in the weight management literature. We were surprised there were very limited data on this related to patients with prostate cancer, so that was the initial impetus for us. It was clear to us that this worked from the behavioral weight management literature, so we thought it could be a really important population in which to explore it.

#### Q: Can you explain how diet and exercise interact with ADT?

**A:** Although <u>androgen deprivation is an incredibly powerful treatment</u> for cancer control purposes, there are adverse effects. By reducing testosterone to castrate levels, individuals lose muscle mass and muscle strength. As a consequence, they develop functional limitation in performing the activities of daily living. As they lose muscle mass, many gain fat mass. This cascade of events leads to risk for sarcopenic obesity. We wanted to see if there was feasibility and efficacy for putting exercise and diet together to try to reverse this risk of sarcopenic obesity, and also the functional quality of life consequences that go with it.

 $\underline{https://www.healio.com/hematology-oncology/prostate-cancer/news/online/\%7B7eb09c50-796f-4977-94ad-0d54682e5281\%7D/diet-exercise-intervention-improves-outcomes-for-men-undergoing-androgen-deprivation-therapy.}$ 



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### **NOTABLE**

### **Guidelines for a Healthy Diet**

- Your diet should be:
  - o Primarily plant based
  - o Include plenty of fruits and vegetables
  - High in fiber
  - Low in fat
  - o Limited in the amount of simple sugars

#### **Diet Tips for Prostate Health**

- 1. Eat Fruits and Vegetables
  - Fruits and vegetables contain large amounts of cancer-fighting and inflammation-reducing substances like vitamins, polyphenols, antioxidants, minerals and natural fiber. Most men and women do not consume the recommended daily intake of fruits and vegetables. If you are working to change the way you eat, aim to make manageable changes. Try to include a variety of fruits and vegetables in your diet.
    - Cruciferous vegetables (includes broccoli, cauliflower, Brussels sprouts, kale and cabbage) have phytochemicals that reduce Oxidative stress or oxygen free radicals in the body which means a lower risk of prostate cancer and its aggression
    - Carrots are rich in nutrients and contain antioxidants beta-carotene and falcarinol that reduce the risk of cancer
    - **Tomatoes** are a rich source of a phytochemical called lycopene which attacks free radicals helping the body lower the risk of prostate cancer and its aggression
    - Mushrooms help fight cancer by building the immune system with a supply of compounds called beta glucan and proteins called lectin which have shown to attack cancer cells
    - Pomegranates, particularly pomegranate juice, have been shown to slow PSA doubling time and may help prevent prostate cancer recurrence after primary treatment
    - Grapes and grape juice are rich sources of resveratrol, a type of natural phytochemical
      that belongs to a larger group of phytochemicals called polyphenols that possess
      potent antioxidant and anti-inflammatory properties
    - Grapefruit contains several phytochemicals including naringenin, limonin, betacarotene and lycopene



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 Oranges, lemons and other citrus fruits help protect against DNA-damaging free radicals because they contain hundreds of bioactive compounds including flavonoids and monoterpenes

- Avocados contain the highest amount of the carotenoid luteinutein of all common fruit
- Peppers and jalapenos contain a chemical, capsaicin, which neutralizes certain cancer causing substances
- **Apples** are a good source of fiber, vitamin C and contain quercetin, a flavonoid that shows both anti-oxidant and anti-inflammatory properties
- **Berries** (raspberries and blueberries) are an excellent source of vitamins C and K, manganese and a good source of fiber and blueberries are among the fruits highest in antioxidant power because of the many phytochemicals they contain

#### 2. Limit Consumption of Animal Protein

 Diets high in red meat, dairy products and animal fat have frequently been connected with the development of prostate cancer. Red meat (such as beef, pork, and lamb) is particularly tied to aggressive prostate cancer.

#### 3. Seek Plant Protein

o Plant-based protein like beans, flax and nuts contain quercetin and lignans that suppress the growth of many kinds of cancer including prostate cancer.

#### 4. Green Tea

 Green tea contains polyphenols and flavonoids which are strong antioxidants. Tea is the best source of catechins which are being studied for their anti-cancer properties. Green tea has been shown to slow and/or prevent the development of prostate cancer.

#### 5. Whole Grains

 Whole grains include brown rice, oatmeal, corn, whole wheat bread, barley, bulgar, kasha, millet, faro, quinoa, and more. Whole grains are great sources of fiber and magnesium and provide protein. Choose food made with whole grain over processed foods.

#### 6. Limit Sugary Drinks

 Cutting down on surgery carbonated beverages and drinking water can speed metabolism and flush the body of cancer-causing substances.

#### 7. Choose Organic Foods when Possible

Organically grown food is free of harmful chemicals and pesticides, including BPA, a known prostate cancer carcinogen. Organically grown foods have more nutrients than usually taste better. Click here for tips on Buying Organic Food on a Budget. Click here for tips on starting an herb garden.

https://zerocancer.org/learn/current-patients/maintain-qol/diet-and-nutrition/



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### **QUOTABLE**

"Worrying is like a rocking chair: it gives you something to do, but doesn't get you anywhere". Van Wilder

"To know the road ahead, ask those coming back". Chinese Proverb

"Life is tough, and if you have the ability to laugh at it you have the ability to enjoy it." Salma Hayek

#### **PCCN Markham**

### **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, St. Andrews Presbyterian Church, PCCN, 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 2<sup>nd</sup> 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 <a href="markhampccn@gmail.com">markhampccn@gmail.com</a>

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

Website <u>www.pccnmarkham.ca</u>
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