Manitoba Prostate Cancer SUPPORT GROUP

Newsletter

Vol. 315

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January 2018



Medical Advisors

Paul Daeninck M.D. Medical Oncologist

Darrel Drachenberg M.D. Urologist

Arbind Dubey M.D. Radiation Oncologist

Thanks!



Jan. 17 ,2018

Speaker: D'Arcy Bruning-Haid, M.Sc. in Counselling Psychology

Title: "The crazy gifts, challenges and teachings cancer has to offer us"

Location: The First Unitarian Universalist Church of Winnipeg, 603 Wellington Crescent

Time: 7 – 9 pm.



Free Admission Everyone Welcome



The Manitoba Prostate Cancer Support Group offers support to prostate cancer patients but does not recommend any particular treatment modalities, medications or physicians ; such decisions should be made in consultation with your doctor.

MPCSG – active since 1992.

Thought of The Day

Money can't buy happiness, but it sure makes misery easier to live with. ;-)

www.manpros.org

Why Androgen-Deprivation Therapy Doesn't Work For Many Prostate Cancer Patients

January 2018

Metastatic prostate cancer, or prostate cancer that has spread to other organs, often fails to respond to therapy.

In new research published in the journal Science, Roswell Park Cancer Institute scientists have identified two gatekeeper genes that allow prostate cancer to progress and resist treatment.

Their work illuminates the mechanisms behind lineage plasticity, the ability of prostate cancer to adapt to therapy, and highlights opportunities to disrupt and even reverse this deadly process.

"Androgen-deprivation therapy is commonly used to treat patients whose prostate cancer has spread beyond the prostate."

"While most men initially respond to this therapy, the cancer nearly always returns and is often aggressive and lethal."

"We have discovered a mechanism that causes progression to this aggressive form of prostate cancer, providing a new opportunity to prevent or treat lethal forms of prostate cancer," says co-senior author David Goodrich, PhD. "Importantly, these findings offer a new understanding of prostate cancer lineage plasticity, which involves the conversion of cancer cells that are dependent on a specific therapeutic target to cancer cells that are now indifferent to that target's function," adds co-senior author Leigh Ellis, PhD.



"This discovery offers the possibility to reverse or delay lineage plasticity, thereby prolonging the effectiveness of the currently used therapies, like androgen deprivation."

"And this new understanding has the

potential to be applicable in other types of cancers."

Using preclinical models, the scientists demonstrated that loss of the tumorsuppressor gene known as Rb1 induces lineage plasticity and metastatic progression of prostate cancer.

They also show that increased expression of another gene, Ezh2, is associated with lineage plasticity and may be therapeutically exploited.

Treatment of resistant tumors with drugs that inhibit the Ezh2 gene may resensitize prostate cancer to androgendeprivation therapy.

The team expects to pursue these findings further in clinical studies at Roswell Park.

Knowridge Science Report December 18, 2017

News source: Roswell Park Cancer Institute. The content is edited for length and style purposes.

https://knowridge.com/2017/12/why-androgendeprivation-therapy-doesnt-work-for-manyprostate-cancer-patients/

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" To our online donors from Canada Helps.....thank you for your donations to the Manitoba Prostate Cancer Support Group. It's not possible for us to thank each of you personally, but rest assured that we truly appreciate your generosity. Your contribution makes a difference and helps us provide free support to those prostate cancer patients who want and need it. Every bit helps us to better serve our prostate cancer patient community. Thanks again."

> The Board, Manítoba Prostate Cancer Support Group

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Yes, Your Diet Can Help Fight Prostate Cancer

In the past 50 years, the spotlight on our gastronomic habits has revealed that what we eat affects more than just our waistlines.

Researchers around the world are focusing on diet in an attempt to pinpoint how specific foods work inside the body, and whether or not there is such a thing as a smoking gun that instigates or exacerbates cancer and other serious chronic illnesses.

It's no secret that the rich Western diet -- high in animal fats, poor in fruit, vegetables and grains consumption -has played a starring role. We like our bacon cheeseburgers, T-bone steaks and French fries, but does that really make us ticking time bombs?

According to the research, maybe.

Researchers at UCLA wanted to know if the traditional Western diet played a role in prostate cancer, the most common cancer among American men.

It turns out it does.

The typical Western diet increases pro-inflammatory substances inside the body that have been associated with cancer. These

substances contribute to cancer cell survival, proliferation and migration.

Researchers call this the cell cycle progression (CCP), a measure used to predict whether or not cancer is likely to develop or return.

The findings are especially important for men previously diagnosed with prostate cancer because the higher the CCP score, the higher your risk for developing future aggressive prostate cancer.

While not every prostate cancer is

deadly, the CCP score can predict with reasonable accuracy which patients will potentially die from their cancer.

However, William Aronson, a clinical professor of urology at UCLA and chief of urologic oncology at the West Los Angeles Veterans Affairs Medical Center, and colleagues have found a way to alter the cell's composition.

Men with prostate cancer who ate a low-fat diet and took fish oil supplements had lower levels of proinflammatory substances in their blood and a lower CCP score than men who ate a typical Western diet, UCLA researchers reveal in a study published in the early online edition of Cancer Prevention Research.

The new study is a follow-up to a smaller 2011 study by Aronson and his team in which they found a low-fat diet with fish oil supplements eaten for four to six weeks prior to prostate removal slowed the growth of cancer cells in

> human prostate cancer tissue compared to a traditional, high-fat Western diet.

"These studies show that, in men with prostate cancer, you really are what you eat," Aronson said in a press

release. "The studies suggest that by altering the diet, we may favorably affect the biology of prostate cancer."

In this study, funded by the National Institutes of Health, Aronson wanted to examine what potential biological mechanisms were at work in the lowfat fish oil diet that may be providing protection against prostate cancer growth and spread.

To do this, the researchers measured levels of the pro-inflammatory substances in the blood and examined the prostate cancer tissue to determine the CCP score.

Further, Aronson and his team analyzed one pro-inflammatory substance called leukotriene B4 (LTB4) and found that lower blood levels of LTB4 after the diet also coincided in lower CCP scores.

Now Aronson has been funded to start a prospective, randomized trial at UCLA in 2014 that aims to monitor slow-growing prostate cancer in 100 men using imaging and biopsy instead of treating the disease.

Lynette Summerill is an awardwinning writer and Scuba enthusiast who lives in San Diego with her husband and two beach loving dogs. In addition to writing about cancerrelated issues for EmpowHER, her work has been seen in publications internationally.

By Lynette Summerill

Sources:

Men with Prostate Cancer Who Ate a Low-Fat Fish Oil Diet Showed Changes in their Cancer Tissue that May Help Prevent Disease Growth and Recurrence. UCLA Press Release, Kim Irwin. 18 Nov. 2013 and You are what you eat: Low-fat diet changes prostate cancer tissue. UCLA Newsroom News release. By Kim Irwin, 18 Nov. 2013. http://newsroom.ucla.edu/portal/ucla/you-are-whatyou-eat-low-fat-diet-249402.aspx

"Effect of a Low-fat Fish Oil Diet on Proinflammatory Eicosanoids and Cell Cycle Progression Score in Men Undergoing Radical Prostatectomy." William J. Aronson et al., Cancer Prev Res; Published OnlineFirst October 29, 2013; doi:10.1158/1940-6207.CAPR-13-0261. Abstract online:

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> Reviewed December 5, 2013 by Michele Blacksberg RN Edited by Jody Smith

http://www.empowher.com/prostate-cancer/content/ yes-your-diet-can-help-fight-prostate-cancer

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Metastasis-Directed Tx Improves PFS in Prostate Cancer

Nearly doubled survival time without androgen deprivation

Metastasis-directed therapy for oligometastatic prostate cancer improves progression-free survival when compared to the use of surveillance alone, according to Belgian investigators.

Their randomized, phase II study found that patients treated with metastasisdirected therapy (MDT) had a median androgen deprivation therapy (ADT)free survival of 21 months compared to 13 months for the surveillance group.

The results of the Surveillance or Metastasis-directed Therapy for Oligometastatic Prostate Cancer Recurrence (STOMP) trial, led by Piet Ost, MD, PhD, of Ghent University Hospital, were published in the Journal of Clinical Oncology.

For patients who experience oligometastatic prostate cancer recurrence, the standard treatment approach is ADT. While ADT has significant survival advantages, it is associated with castration resistance and significant adverse events.

Previous retrospective studies have demonstrated the possibility that MDT delays additional clinical progression in patients with biochemically recurrent prostate cancer (PCa) -- and the start of subsequent palliative ADT -- and results in minimal adverse events. The STOMP trial is the first prospective study to look at this question.

In this study 62 patients were recruited in six Belgian institutions. To be included in the study PCa patients had to have a biochemical recurrence after primary treatment (radical prostatectomy, primary radiotherapy, or a combination of both), and three or fewer extracranial metastatic lesions on PET-CT.

The patients were randomly assigned to either surveillance with delayed ADT, or MDT of all detected lesions. Those randomly assigned to surveillance underwent clinical examinations and serum PSA measurements every 3 months, while patients assigned to the MDT group either underwent metastasectomy or stereotactic body radiotherapy.

Patients in both groups were monitored for toxicity and PSA progression every 3 months until the primary endpoint (ADT-free survival) was met, and, after that, according to the European Association of Urology guidelines.

Ost and his colleagues found that the median ADT-free survival was 13 months (80% CI 12 to 17 months) for the surveillance group and 21 months (80% CI 14 to 29 months) for the MDT group (HR 0.60, 80% CI 0.40 to 0.90).

The investigators also found that 75% of patients treated with MDT experienced a PSA decline, compared to 35% in the surveillance arm.

Sixty of the 62 patients in the study completed baseline quality of life questionnaires and the researchers found no clinically relevant changes in quality of life scores between the two groups. While six MDT patients developed a grade 1 toxicity in the MDT arm, no patient developed grade 2 to 5 toxicities.

The investigators noted that the results of previous retrospective studies looking at this question have been promising, the low number and heterogeneity of patients in these studies, and the absence of comparative or randomized trials, led the authors of a recent systematic review to conclude MDT shouldn't be considered a standard of care.

January 2018

Yet, Ost and his colleagues also pointed out that about two-thirds of experts at the 2017 Advanced Prostate Consensus Conference consider MDT a treatment option with oligorecurrent PCa. With the results of this trial, they concluded that MDT should be tested in larger phase III studies.

In an editorial accompanying the study Ryan M. Philips, MD, PhD, Johns Hopkins Medicine in Baltimore, and colleagues, noted that the STOMP trial enrolled its patients on 1:1 basis, and therefore "limited the statistical power to detect differences in efficacy and lending itself to certain, perhaps inevitable, imbalances between the those arms."

For example, they pointed out that the surveillance arm in the study had more Gleason 6, low T-stage and pN0 patients than the MDT arm, which meant that patients in the MDT arm had more advanced disease at diagnosis. This suggests, Philips and his colleagues wrote, "that the observed effect of MDT in STOMP may in fact be an underestimation."

Philips and his colleagues also wrote that while forestalling systemic therapy is a an attractive way of avoiding nasty adverse effects, the combination of MDT and immediate ADT "also warrants additional investigation," considering that the immediate initiation of ADT can improve overall survival compared to delayed therapy.

While great progress has been made in managing prostate cancer, questions remain, particularly concerning the management of oligometastatic cancer, Philips and

The Manitoba Prostate Cancer Support Group Newsletter

(Continued from page 4) his colleagues concluded. "The STOMP trial represents an important advance in this pursuit and provides a strong argument for continued investigation of the role of MDT in the management of oligometastatic prostate cancer."

Piet Ost reported relationships with Ferring Pharmaceuticals, Yaer AG, Merck, and Ipsen. Note that this small randomized trial suggested that, among men with recurrent metastatic prostate cancer, directed therapy targeting metastases may improve progression-free survival.

Be aware the study was underpowered to look at overall survival, which is a much more salient outcome when certain lesions are being aggressively treated which would expect to decrease progression rates.

January 2018

by Mike Bassett,

Contributing Writer,

MedPage Today

December 18, 2017

Assistant Professor, Section

of Nephrology, Yale School

Journal of Clinical Oncology

Source Reference: Ost P, et

metastasis-directed therapy

of Medicine and Dorothy

Caputo, MA, BSN, RN,

Nurse Planner

Primary Source

al "Surveillance or

12.19.2017

Reviewed by F. Perry

Wilson, MD, MSCE

for oligometastatic prostate cancer recurrence: A prospective, randomized, multicenter phase II trial" J Clin Oncol 2017; DOI: 10.1200/JCO.2017.75.4853.

Secondary Source Journal of Clinical Oncology Source Reference: Phillips R, et al "STOMPing out hormone-sensitive metastases with local therapies in prostate cancer" J Clin Oncol 2017; DOI: 10.1200/JCO.2017.76.5495.

https://www.medpagetoday.com/ urology/prostatecancer/69966

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For Aggressive Prostate Cancer, High-Dose Radiation Therapy Is As Good As Surgery

For aggressive prostate cancer, high-dose radiation therapy is as good as surgery A study by researchers at the UCLA provides convincing evidence that radiation-based treatments and surgery are equally effective treatments for aggressive prostate cancer.

It also suggests that a particular form of radiation therapy, consisting of external radiation followed by brachytherapy (a type of radiation treatment in which a radioactive source is placed into the tumor directly) provides the best chance of preventing metastatic disease.

This study was the first of its kind to directly compare outcomes between radiation-based treatments and surgery for patients with cancers that are Gleason score nine or 10 (the highest score possible, which represents the most aggressive form of cancer).

Prostate cancer is the most common form of cancer among men in the United States, with nearly 180,000 new cases expected to be diagnosed in 2016 alone.

Therefore, identifying the optimal treatment strategies for this malignancy is particularly important.

In the past oncologists suggested that surgery and radiation-based treatments offer equivalent outcomes. However, optimal treatment for prostate cancer patients remains controversial, in part because technologies and treatment strategies are continually improving.

Both surgery and radiation-based treatments have vocal supporters and detractors within the medical community.

The relative efficacy of these treatments is particularly relevant for the most

aggressive forms of prostate cancer, which

will most likely lead to metastatic disease and eventually death.

The aggressiveness of prostate cancer is dependent on many factors, one of which is the Gleason score—a grading system of how aggressive the disease appears under the microscope.

Researchers analyzed 487 prostate cancer patients treated for Gleason scores of 9 or 10 prostate cancer between 2000 and 2013 at UCLA, the California Endocurie Therapy Center and Fox Chase Cancer Center. Institutional databases were used to identify patients, and clinical follow up was obtained.

The findings only included advanced prostate cancer patients who were treated since 2000, because the standard of care for these patients has significantly changed over time, particularly for radiation-based treatments.

"Our study focuses on a particularly aggressive form of prostate cancer, and provides the largest series of outcomes for patients with this diagnosis who were treated in the modern era," said Dr. Amar Kishan, a chief resident in the department of radiation oncology at

Surgery vs Radiation Therapy

"Our conclusions are relevant to

UCLA.

both physicians advising patients about the effectiveness of different treatment options, and patients who would like to learn more about these options on their own."

The treatments received by patients included in the study are much more likely to be similar to treatments being offered to patients at various medical institutions across the world today.

December 20, 20173898

News source: UCLA. The content is edited for length and style purposes.

https://knowridge.com/2017/12/foraggressive-prostate-cancer-high-doseradiation-therapy-is-as-good-as-surgery/

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Hormone Treatment For Prostate Cancer

January 2018

Androgens or male sex hormones can stimulate the growth of prostate cancer cells. Testosterone is the main type of androgen, which is mainly produced by the testicles and some by the adrenal glands. Now, hormone treatment for prostate cancer involves the process of either inhibiting testosterone from being used by body, or by decreasing the body's production of testosterone. Either way, hormone therapy – as it is called – will be able to block testosterone from getting into the prostate cancer cells.

Inhibiting the body's use of testosterone would mean taking medications that prevents testosterone in reaching said cancer cells. Anti-androgens as bicalutamide, nilutamide and flutamide are used. These medications are in tablet form, and are usually taken one to three times a day – depending on the brand.

Decreasing the body's production of testosterone would require the individual to take luteinizing hormone-releasing hormone (LH-RH) agonists, which places a chemical blockade that prevents your testicles in receiving signals to produce more testosterone. Medications as goserelin and leuprolide are usually injected once every three months into your body.

The downside though of hormone treatment for prostate cancer is that there are side effects one has to deal with. These are reduced sex drive, impotence, weight gain, breast enlargement and reduction in bone mass to name just a few. These medications for hormone treatment of prostate cancer may also cause fatigue, nausea, diarrhea and liver damage.

At the extreme approach for hormone treatment for prostate cancer is the removal of one's testicles or what is called castration. This is usually done and may be effective for those in the advanced stages of prostate cancer.

Hormone treatment for prostate cancer may involve both approaches – preventing the use of testosterone in the body, and preventing the body from producing testosterone. And with such, some doctors also employ radiation treatment or at times, surgery – as hormone therapy tends to shrink large tumors, and thus the convenience of taking these out. One should however give it due thought before going into hormone treatment for prostate cancer. Ask your doctor, and consider taking a second opinion by another expert. Take time to read about this approach and weigh things well.

Remember that it is also shown that just by the hormone treatment for prostate cancer would not kill all of the cancer cells. As years go by, the cancer comes back as it is able to thrive without testosterone. Thus, the ineffectiveness of hormone therapy at this stage.

It is thus best to talk with your doctor on how hormone treatment for prostate cancer will go for your case. Ask how it may work for you, and how it may work against you in the future. In the end, consider what your doctor recommends and go for what is best for your situation.

December 14, 2017

http://health-womens.com/hormone-treatment-forprostate-cancer/

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A Kiss of Death For Prostate Cancer

Hokkaido University researchers have uncovered a cellular protein that stabilizes a tumor promoting signaling pathway, suggesting a new target to treat prostate cancer.

The drug Gefitinib is used to treat breast, lung, and other cancers by inhibiting epidermal growth factor receptor (EGFR) signaling, but it has only a limited effect on prostate cancer. EGFR, present on the cell membrane, is involved in cell proliferation and the development of dermis, lung, and digestive tissues. When a mutation causes its over-activation, it can lead to increased cell proliferation and tumor formation.

Tadashi Matsuda of Hokkaido University and his colleagues in Japan investigated

human prostate cancer cells to determine if there is an unknown up-regulation mechanism in the EGFR pathway.

When EGFR is attached to a small protein called ubiquitin, it is given "the kiss of death" and tagged for degradation inside the cell. This tagging process is facilitated by a protein called c-CBL. The degradation of EGFR leads to less signaling from the receptor and reduced cell proliferation.

Matsuda and his team found that signaltransducing adaptor protein-2 (STAP-2) stabilizes EGFR by inhibiting its c-CBLmediated ubiquitination. Furthermore, when the team suppressed STAP-2, the prostate cancer cells showed reduced proliferation and did not form a tumor when transplanted into mice. "STAP-2 inhibitors could play a role in treating Gefitinib-resistant prostate cancers. Further studies on STAP-2 will provide new insights into cancer physiology and support the development of anticancer therapies," says Tadashi Matsuda. The study was published in the Journal of Biological Chemistry.

Story Source:

Materials provided by Hokkaido University. Note: Content may be edited for style and length.

Journal Reference:

Yuichi Kitai, Masashi Iwakami, Kodai Saitoh, Sumihito Togi, Serina Isayama, Yuichi Sekine, Ryuta Muromoto, Junichi Kashiwakura, Akihiko Yoshimura, Kenji Oritani, Tadashi Matsuda. STAP-2 protein promotes prostate cancer growth by enhancing epidermal growth factor receptor stabilization. Journal of Biological Chemistry, 2017; 292 (47): 19392 DOI: 10.1074/jbc.M117.802884

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Gel Based on Horse Chestnut Seen to Improve Cancer Imaging

A gel, made from a horse chestnut extract, may improve the imaging of tumors, including prostate cancer, using radioactive tracer molecules.

A research team now hopes that, using the gel, it will be possible to develop a skin cream that might improve cancer detection in the clinic.

The team — led by Dr. George John, a professor in the Division of Science at City College of New York, and Dr. Jan Grimm, a physician-scientist at Sloan Kettering Institute and the Memorial Sloan Kettering Cancer Center — published their findings in the journal ACS Applied Materials & Interfaces.

The study was titled "Radiation-Responsive Esculin-Derived Molecular Gels as Signal Enhancers for Optical Imaging."

The so-called Cerenkov light is often used in cancer imaging. The light which is the blue glow seen in nuclear reactors — can also illuminate biological molecules, but is not really optimal for use in the body. It has a low intensity, and blue light is scattered and absorbed in tissues, the researchers said.

So while it is a valuable tool in cancer diagnostics, scientists are trying to find ways to improve its use. synthesize ... hydrogels offers imageaiding systems which are not only functional but also potentially economical, safe, and environmentally friendly," John said in a press release.



Researchers turned to a compound found in horse chestnut, called esculin. Their esculin-containing gel turned out to have the right properties to improve imaging using Cerenkov light — by having both scintillating and fluorescent properties, the gel alters the way light is reflected in tumors.

"Tailoring biobased materials to

This is important for John, whose research builds on the idea that innovative technologies can be both economical and sustainable. He also believes that innovation can be inspired by nature — possibly explaining the choice of horse chestnut.

"The possibility of developing a topical application from the gel makes this innovation an attractive potential improvement to current techniques of cancer

imaging with Cerenkov light," said Grimm, who is also affiliated with Weill Cornell Medical College.

DECEMBER 20, 2017 Magdalena Kegel

https://prostatecancernewstoday. com/2017/12/20/gel-based-on-horsechestnut-seen-to-improve-cancerimaging/

"Raising Awareness.....Spreading the Word"

The Manitoba Prostate Cancer Support Group works to increase education, awareness and support for the prostate cancer community. These services are provided through a variety of activities and are available without cost to the existing patient population as well as to the public at large.

Raising awareness is especially important to encourage more men, who may already have prostate cancer but don't yet know about it, to get checked. Early detection makes all the difference in effecting a cure.

As part of our efforts to raise awareness our group provides speakers to community groups, as well as attending "health fairs" in shopping malls and the like.

If your group would like to have a speaker talk about prostate cancer contact board member Pat Feschuk (Special Events organizer; telephone 204-654-3898; or email at lizpat@shaw.ca) to make arrangements.

Publications Agreement # 40037332



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2018 MEETINGS

Jan. 17 ,2018

Speaker: D'Arcy Bruning-Haid, M.Sc. in Counselling Psychology Title: "The crazy gifts, challenges and teachings cancer has to offer us"

Feb .21, 2018

Speaker: Dr. Iain Kirkpatrick Title: "MRI Imaging in diagnosis and treatment of prostate cancer"

All meetings (except September) will be held at : The First Unitarian Universalist Church of Winnipeg, 603 Wellington Crescent

> All meetings are 7 – 9 pm. Everyone Welcome

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