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Prostate Heidelberg

March 2022 Issue 216

For Education, Information and Support

Meeting Hall: Ivanhoe Uniting Church 19 Seddon Street, Ivanhoe
POB 241 Ivanhoe Victoria 3079
Email: prostateheidelberg@gmail.com
Website: www.prostateheidelberg.info

Next face-to-face PHCSG Meeting
Tuesday 15 March 10am – 12:30pm

To join via Zoom: Copy link and paste into your browser
https://us02web.zoom.us/j/81789331173?pwd=c0loOUpaTjkyTFpQZ1orZ2Jnb1dJQT09

Prostate Heidelberg Cancer Support Group

PHCSG provides information, education and support for those affected by Prostate Cancer. At our meetings we are committed to:

- showing respect to members, speakers and guests
- allowing members to speak without interruption
- respecting confidentiality

Back to Face to Face Meetings once again!

We look forward to welcoming and supporting existing and new members to our first face-to-face meeting of 2022 at Ivanhoe Uniting Church Hall. If you can't attend in person we hope you will join via Zoom.

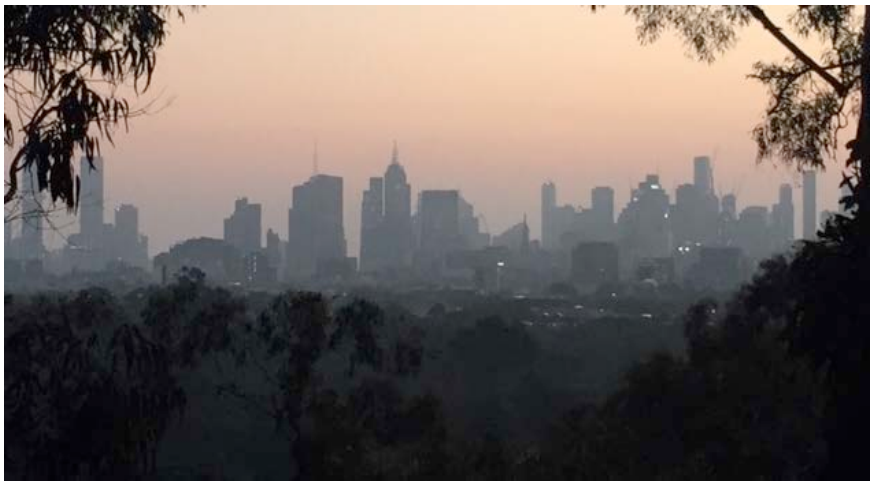
PHCSG Annual Membership Fee is now due to help cover incidental costs and upkeep. Members and their partner or support person are also encouraged to attend. Many thanks to all who have already subscribed.

In this month's newsletter we highlight:

- 2 Will PSA Testing be Replaced? Novel Screening Approches
- 3 How Bipolar Androgen Therapy Works
- 4 Bipolar Androgen Therapy and the Immune System
- 5 The Role of SBRT
- 6 On Metabolic Syndome, Statin Drugs & PCa Progression
- 6 Yoga Improves QoL in Men Newly Diagnoses with PCa
- 7 The Trials & Tribulations of Managing Men with mHSPCa
- 9 How Enzalutamide Impacts QoL in Metastatic Cancer
- 10 PCa Test Cuts False Positives
- 11 Low-meat and Meat-free Diets associated with lower overall cancer risk
- 12 Transdermal Oestradiol for Androgen Suppression
- 13 Triails

If there is anything you want to talk through in relation to your treatment or wellbeing please don't hesitate to ring:

Max Shub	0413 777 342
Mike Waller	0438 616 240
Michael Meszaros	0407 837 538



Will PSA testing be replaced? Novel screening approaches

Source:
16 September 2021
Kalli Spencer
https://www.prostate.org.au/news-media/news/will-psa-testing-be-replaced-novel-screening-approaches/

For now PSA (prostate specific antigen) is the most widely used screening test (as discussed in previous blogs). But there is a large amount of research examining other ways to determine who gets screened and how they will be screened. Prostate cancer screening was very topical at the recent European Association of Urology (EAU) virtual meeting in July. Some new blood tests and formulas have been suggested along with imaging to guide algorithmic developments. This blog will focus on some of these clinical trials.

To start with, its important to review the risk factors for developing prostate cancer:

- Increasing age (>50 years)
- Development of symptoms (urination difficulty/blood in sperm) [Other conditions can cause these symptoms however – but they must be checked)

The following factors are considered high risk:

- > 40 years of age with a father, brother or son who has been diagnosed with prostate cancer, especially if they were diagnosed when they were young
- family history of prostate, breast or ovarian cancer, especially BRCA1 and BRCA2 gene germline mutations.
- Black African ancestry

What is a genetic germline mutation? A gene change in a body's reproductive cell (egg or sperm) that becomes incorporated into the DNA of every cell in the body of the offspring. Germline mutations are passed on from parents to offspring.

The current EAU guidelines (2021) recommend genetic germline testing in the following instances:

- Metastatic prostate cancer
- High risk prostate cancer and a family member diagnosed with prostate cancer <60 years of age
- Multiple family members diagnosed with prostate cancer at age <60 years or a family member who died from prostate cancer
- In those with high-risk germline mutation or a family history of multiple cancers on the same side of the family.

At the EAU meeting a screening algorithm has been proposed based on age, PSA level, PSA density and patient risk factors. From this stratification MRI and consequently a prostate biopsy is offered based on risk. According to their research, only 10% of men 50-59 years old and 25% of men 60-70 years old would move on to risk stratification. PSA density alone results in 30% fewer referrals for MRI and prostate biopsy. The ultimate goal is 50% immediate reduction of overdiagnosis and overtreatment.

The PROBASE trial in Germany (2014-2019), is a risk-adapted screening study for prostate cancer based on age and baseline PSA alone. They found that further diagnostic testing in young men should only be initiated if an increased PSA level is confirmed on a second test.

The prevalence of prostate cancers in 45 year old's is very low and that of unfavorable cancer is even lower.

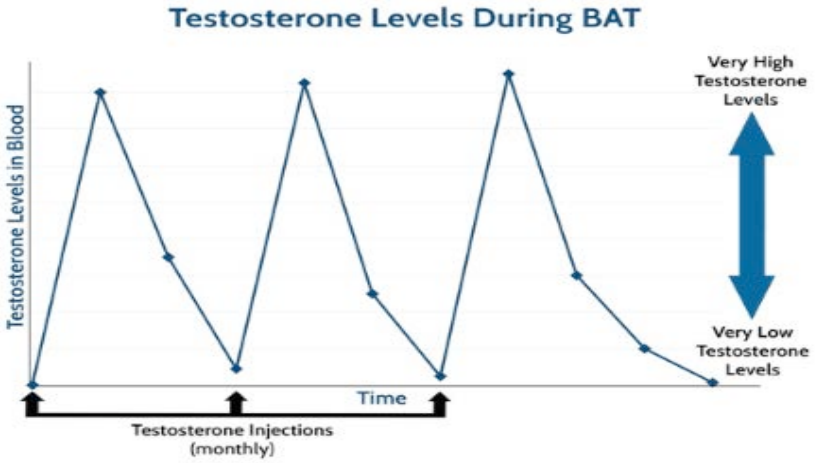
The MVP trial in Canada compared MRI to PSA. The results have not been published but preliminary findings suggest that MRIs are useful on their own with reduced prostate biopsies required but more cancer being diagnosed, including clinically significant cancers.

The Stockholm3 MRI trial, which is another risk-adapted screening protocol uses a genomics test and MRI3. STHLM3RS is a blood test that analyses PSA and 4 proteins, 101 genetic markers, and clinical information (family history, age, earlier biopsies, and use of 5-alpha reductase inhibitors). The aim of this study was to compare traditional screening with a web-based risk prediction combined with MRI-targeted biopsies for prostate cancer screening. They found that combining the Stockholm3 test with an MRI target biopsy for cancer screening decreases overdiagnosis while maintaining detection of clinically significant prostate cancer.

In Australia, the National Institute of Integrative medicine is trialling a new screening blood test which detects circulating tumour cells (CTC) called ISET4. Preliminary published findings show the test to be highly sensitive and accurate for detecting prostate cancer. It will be interesting to see the long-term outcome of this study. The trial team are actively recruiting for the next phase of the trial.

While these screening approaches are still experimental, one tried and trusted test remains: the PSA Test. It is very important for those who are at high risk to start testing from age 40 or 45, every 2 years till age 69, with the starting age depending on the strength of family history.

How Bipolar Androgen Therapy Works



How BAT Works

Several years ago, medical oncologist Samuel Denmeade, M.D., Co-Director of the Johns Hopkins Prostate Cancer Program, and colleagues came up with a remarkable concept for attacking prostate cancer: alternating ADT with high-dose testosterone.

Patients have asked Denmeade if this treatment, called Bipolar Androgen Therapy (BAT), could be used as *initial* therapy for metastatic cancer instead of androgen deprivation therapy (ADT), or even as primary therapy instead of prostatectomy or radiation. "No and no," says Denmeade. "BAT was designed to work against castration-resistant prostate cancer (CRPC)."

In CRPC, the cancer's environment is significantly different than it is in earlier- stage cancer. As CRPC cells learn to adapt to the lack of testosterone with ADT, "they crank up the androgen receptor (AR) to high levels," and make themselves comfortable in the new environment. But with high levels of AR, the cancer cells are sitting ducks, vulnerable to the shotgun blast of a hefty dose of testosterone. "Flooding the prostate cancer cell with testosterone gums up the works: suddenly, the cancer cells have to deal with too much androgen (male hormone) bound to the receptor. This disrupts their ability to divide. They either stop growing or die."

It's all about creating chaos in the environment, so the cancer cells can't thrive, and timing is critical. "ADT initially works because prostate cancer cells are suddenly deprived of testosterone, and most of them can't survive this shock." Cancer cells die by the thousands, PSA PSA plummets, imaging scans show cancer shrinking, and symptoms improve. But prostate cancer, like the Road Runner, is elusive. Over time, the hardy band of surviving cells regroups, adapts to living in the low-testosterone environment, and begins to grow again. "BAT is a similar type of hormone shock – just in the opposite direction," says Denmeade. "A key feature of BAT is the rapid change from a very high- to low-testosterone level." Men remain on ADT, and receive monthly shots of high-dose testosterone, which gradually fades, then bumps back up again with the next monthly shot. That's the bipolar part of Bipolar Androgen Therapy (see Figure). The repeated shocks of BAT cycling don't give the cancer cells time to adapt, "because the underlying environment is always changing."

So far, in four clinical trials at Hopkins, Denmeade and colleagues have given BAT to about 350 men with CRPC, most of whom have also received enzalutamide (Xtandi), abiraterone (Zytiga), or both. For men with CRPC whose disease is worsening on ADT or on AR-blocking drugs like enzalutamide or abiraterone, BAT is highly promising. In the recent TRANSFORMER study, "we compared BAT head-to-head with enzalutamide" in patients with CRPC who had progressed on ADT and abiraterone. "It was kind of a weird study, comparing a drug to its exact opposite: an androgen vs. an anti-androgen. I don't know if anybody's ever done a study like that. To our amazement, BAT and enzalutamide were nearly identical in terms of their effect." PSA levels dropped in about 25 percent of men on either treatment, and for both treatments, the response lasted about six months.

Source:
02 February 2022
Janet Farrar Worthington
https://www.pcf.org/c/how-bipolar-androgen-therapy-works/

Researchers Drive PCa "BATty" – Part Two: Cycling Testosterone Shocks Cancer Cells

Prostate Cancer Foundation
Curing Together.

PLEASE NOTE:
Treatments may vary in Australia. Please ensure you discuss your diagnosis and treatment options with your consulting specialist

Continued page 4

However, the real difference between the treatment arms was seen after cross-over – when men on BAT were switched to enzalutamide or vice versa. "If we gave BAT first and *then* enzalutamide, almost 80 percent responded, and the response lasted almost a year. That's quite an improvement in the rate of response and duration." Among patients who received enzalutamide only 23 percent.

This begs the question: Why stop after one round of BAT then enzalutamide? Why not just keep going? "We should be able to cycle back and forth over and over again," says Denmeade. The STEP-UP trial, of 150 patients at Johns Hopkins and eight other centers nationwide, is looking at just this, "sequencing androgen and anti-androgen. There are two BAT treatment arms: in one, the patients just switch every two months – two months of testosterone, two months of enzalutamide. In the other, the men stay on testosterone until their PSA goes up, and then switch to enzalutamide, and stay on that until their PSA goes up," then repeat. Cancer response is also monitored by regular CT and bone scans. Patients stop treatment if scans show cancer progression.

The BAT studies thus far have been small, Denmeade says. "We need a big phase 3 study; we've just been nipping at the edges." For now, BAT remains investigational; positive results from larger randomized trials are needed for it to be considered standard of care. While not a cure for advanced prostate cancer, BAT may become an option for extending life and, importantly, improving quality of life.

Note: BAT is not recommended for men with symptomatic bone pain from metastatic prostate cancer, because it can make that pain worse. "This pain increase occurs within hours of testosterone injection, and resolves as testosterone levels in the blood decline over the first cycle of BAT," says Denmeade. "The worsening pain is not due to rapid growth of prostate cancer, but more likely to testosterone-stimulated release of inflammatory factors."

Bipolar Androgen Therapy and the Immune System

Source:
15 February 2022
Janet Farrar Worthington
https://www.pcf.org/c/bipolar-androgen-therapy-and-the-immune-system/

Researchers Drive PCa "BATty" – Part Three: The potential of Combination Therapy

Prostate Cancer Foundation
Curing Together.

Some men are exceptional responders to Bipolar Androgen Therapy (BAT). Its pioneer, medical oncologist Samuel Denmeade, M.D., Co-Director of the Johns Hopkins Prostate Cancer Program, has a few patients who have remained on BAT alone for several years. But for many men, the response is temporary; just a few months. Why? Could it have something to do with mutated genes? What about the immune system?

"One of the things observed in the lab by our colleague Dr. Sushant Kachhap is that when we give testosterone, the prostate cancer cells get stressed and turn on all these immune factors," says Denmeade. "Testosterone activates immune pathways." When three men who had participated in BAT trials later had "dramatic" responses to immunotherapy – 100-percent decreases in PSA, and one man remains in long-term remission – "we thought that might be the secret: androgen plus immunotherapy."

COMBAT, a small, phase 2 study supported by PCF, co-led by Hopkins investigators Mark Markowski, M.D., Ph.D., and Emmanuel Antonarakis, M.D., (now Director of Genitourinary Oncology at the University of Minnesota) tested the combination of BAT and immunotherapy in 45 men with metastatic castration-resistant prostate cancer (mCRPC). The men were treated with BAT in combination with nivolumab (an immunotherapy agent). "We saw an impressive clinical response rate of 40 percent," says Markowski. "We also observed a durable benefit, lasting over a year, in a few patients who had received extensive prior therapies." The results suggested that BAT alone has significant efficacy, while nivolumab improves responses in some patients. The combination of BAT with nivolumab was safe and well tolerated by the participants. Markowski and Antonarakis are designing a randomized Phase 3 study to compare combined BAT plus nivolumab versus standard treatments for patients with mCRPC.

In the COMBAT trial, "we treated a group of incredible men who agreed to have tumor biopsies before and after three cycles of BAT," says Denmeade. "We are studying the heck out of these biopsies," looking for specific biomarkers or gene mutations that might help predict who will have the deepest and longest-lasting responses. The team is also performing additional studies of the interactions between BAT and the immune system to discover how this treatment can be improved.

The Role of Sterotactic Body Radiotherapy (SBRT)

Source:
Kalli Spencer
MBBCh, FC Urol (SA), MMed (Urol),
Dip.Couns (AIPC)
https://onlinecommunity.pcfa.org.au/t5/Research-Blog/BLOG-The-role-of-stereotactic-body-radiotherapy-SBRT/ba-p/6625

SBRT is a form of radiotherapy that is delivered at a higher radiation dose per day but over a shorter period of time, 4-6 sessions versus 20-45 sessions (conventional external beam radiation therapy). The radiation dose is precisely targeted to the area containing cancer in a small number of fractions (hypofractionation) thereby avoiding surrounding structures and reducing toxicity. In the initial session, a team of experts that include radiation oncologists, radiation therapists, and medical dosimetrists can plan with precision how the dose can be most accurately delivered. Sometimes three small metallic markers (fiducial) are inserted into the prostate so the team can track exactly where the prostate is, especially as it moves with normal breathing. A high-resolution CT scan (simulation scan) is done after the markers are placed which helps to formulate the final customised radiation plan. The image-guided radiotherapy (IGRT) is then delivered with an advanced linear accelerator. The CyberKnife is a robotic system that uses artificial intelligence to deliver precise doses of radiation with extreme accuracy in select circumstances.

Endorectal devices

These devices are used to control the movement of the prostate and the rectum, either by fixing the rectum or by separating it from the prostate, decreasing the exposure of the rectal wall to high radiation dosages. Some examples of these devices are the endorectal balloon, hydrogel spacer and rectal retractor.

Localised prostate cancer

SBRT has demonstrated a favourable disease control and safety profile in several studies for low risk and intermediate risk localised prostate cancer as a definitive primary treatment. It is a recommended treatment option in multiple Uro-Oncology guidelines (ASTRO/ASCO/AUA).

Metastatic prostate cancer

Patients who have less than five metastatic deposits (oligometastatic disease) may be amenable to SBRT. This treatment is also known as metastasis-directed therapy (MDT). The aim of SBRT in this clinical setting is not only to eradicate malignant secondary lesions, but also to prevent further metastatic development and delay subsequent treatment escalation. It may also delay the progression to a castrate-resistant state.

It has been shown that the maximum efficacy in terms of biochemical progression free survival is obtained within the first 6 months after treatment. This oncological advantage is still maintained at 24 months for a significant proportion of patients.

Studies are underway to assess whether in the future SBRT may be given alone but for now it usually given with systemic therapy (androgen deprivation therapy). The biological rationale behind MDT effect relates to the prevention of disseminated subcellular clones from metastatic sites to the rest of the body improving oncological outcomes, treatment-free survival and thereby creating a positive impact on quality of life. The benefits of MDTs can be higher than those of ADT, particularly in patients wishing to delay systemic treatments for quality of life or comorbid illness concerns. There may also be an economic benefit.

Research in this area is ongoing.

Salvage therapy

In a meta-analysis by Valle et al. SBRT has been shown to be an effective management option for those who have disease recurrence after receiving radiation as the initial treatment for localised prostate cancer[4]. It may also be used as a salvage therapy to the prostate bed for disease recurrence after a radical prostatectomy.

Future trials should address the use of SBRT in different clinical scenarios providing more information about total treatment dose, fractionation, combination therapy with ADT and lymph node irradiation.

Learn to be your own researcher to make the best treatment decisions, by being proactive and an advocate for your own health

On metabolic syndrome, statin drugs, and prostate cancer progression

Source:
9 February 2022
https://www.lifeonadt.com/life-on-adt-blog/2022/2/9/on-metabolic-syndrome-statin-drugs-and-prostate-cancer-progression

One of the more worrisome and medically significant side effects of ADT is metabolic syndrome. Metabolic syndrome is a suite of features that includes elevated blood pressure, elevated triglycerides, an increase in fasting blood sugar, and an elevated BMI characterized by an increase in fat carried around the waist. The features that define metabolic syndrome are markers for increased risk of diabetes and cardiovascular disease.

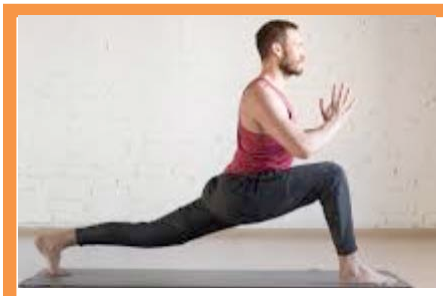
When we talk about managing the medically serious side effects of ADT, we often focus on avoiding or controlling metabolic syndrome. In this new paper, the researchers come at this topic from a slightly different direction and ask, *How effective are the drugs used to treat metabolic syndrome in slowing prostate cancer disease progression?* "Progression," here, signifies a transition from a "castrate-sensitive" state, where ADT can control the disease, to a "castrate-resistant" state, where the cancer can grow even without testosterone.

Various drugs, such as the statins that are used to control cholesterol, and metformin, which is used to control diabetes, can help men on ADT live longer by reducing their risk of a heart attack or diabetic crisis (i.e., by controlling metabolic syndrome). But can they slow the progression of the prostate cancer itself?

This new study, involving 409 men on ADT, came to a firm conclusion that statins can significantly slow the progression of prostate cancer to the castrate-resistant state. Whereas the authors found that statins are protective against castrate-resistant prostate cancer, they noted that metformin may not confer the same protective effects. They acknowledged though that their sample size of men on both ADT and metformin was too small to confirm that.

This is yet one more study endorsing the use of statins for patients who are planning to go on ADT or who are already on it. What's new about this paper is that it shows that statins not only help to protect against the cardiovascular risks of high cholesterol, but they can also help slow progression of the prostate cancer itself.

To read the study abstract, see: https://pubmed.ncbi.nlm.nih.gov/35075214/

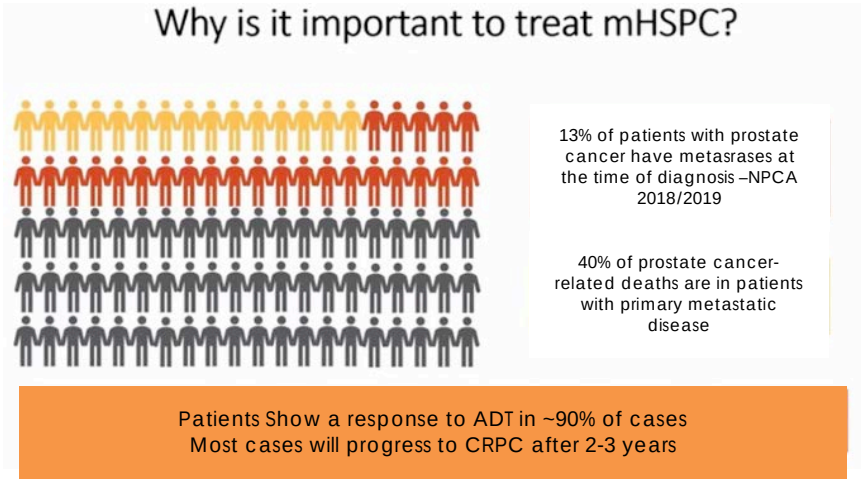


Yoga Improves Quality of Life in Men Newly Diagnosed with Prostate Cancer

Source:
https://www.pcf.org/blog/from-the-prostate-cancer-research-desk/

Nearly one-third of men diagnosed with prostate cancer experience anxiety and distress related to their disease and its treatment, resulting in lower quality of life. Many patients with prostate cancer report using complementary and alternative medicine, such as acupuncture, massage, and supplements. Research suggests that yoga could offer physical and psychological benefits. In a small randomized trial of 29 newly-diagnosed men, those who participated in 6 weeks of guided Hatha yoga practice before prostatectomy experienced meaningful improvement in quality of life vs. patients who did not receive the yoga intervention. The greatest benefits were seen in sexual function, fatigue, quality of life related to prostate cancer, and well-being. Yoga practice was also linked to a robust anti-tumor immune response and decreased inflammation.
Check with your provider before starting a yoga program if you are new to exercise. For more tips on stress reduction and incorporating exercise into your life, see PCF's guide, *The Science of Living Well, Beyond Cancer*.

The Trials and Tribulations of Managing Men with Metastatic Hormone-Sensitive PCa



(UroToday.com) In a session entitled Clearer Vision chaired by Dr. Bertrand Tombal at the 2021 ANZUP Annual Scientific Meeting, Dr. Heather Payne discussed issues relating to the care of men with metastatic hormone sensitive prostate cancer (mHSPC).

Dr. Payne began by emphasizing the importance of treating men with mHSPC: while treatment with androgen deprivation therapy (ADT) provides initial responses, progression is common and a large proportion of prostate cancer-related deaths occur among men initially diagnosed with metastatic disease (40%) despite this comprising 13% of men diagnosed with prostate cancer.

She then highlighted the potential rationale for whether we can improve treatment outcomes with treatment intensification highlighting that early intensification allows upfront treatment of de novo testosterone independent clones early and that patients may be too frail for chemotherapy at the time of progression. In contrast, for those with prolonged responses to ADT, initial intensification may be overtreatment.

Moving then to data on treatment intensification, she first highlighted data from CHAARTED and STAMPEDE which demonstrated significant improvements in overall survival for patients with mHSPC who received docetaxel in addition to ADT, compared to ADT alone. She emphasized that the CHAARTED study further contributed a new definition of high volume metastatic prostate cancer. In the CHAARTED cohort, a statistically significant benefit of docetaxel was only seen in those with high-volume disease. However, Dr. Payne emphasized that these subgroups weren't powered to be definitive. In contrast, subgroup analyses from STAMPEDE have demonstrated improvements in overall survival for patients with both low- and high-burden metastatic prostate cancer for patients treated with docetaxel.

Utilizing real world data, she emphasized that there are significant toxicities to docetaxel including rates of treatment-related death of approximately 2%, febrile neutropenia of more than 15%, and grade 3-4 toxicity or hospitalization of 34%. These rates are somewhat higher than was observed in clinical trial populations.

SOURCE
ANZUP Mini ASM 2021
https://www.urotoday.com/conference-highlights/anzup-mini-asm-2021/anzup-2021-gu-malignancies-prostate/133398-anzup-mini-asm-2021-the-trials-and-tribulations-of-managing-men-with-metastatic-hormone-sensitive-prostate-cancer.html

	STAMPEDE (Arms C + E, n = 1,185)	CHAARTED (n = 397)	GETUG-15 (n = 192)	WoSCAN (n = 103)
Treatment-related deaths (%)	0.7	0.2	2.1	1.9
Rate of febrile neutropenia (%)	14.0–15.0	6.0	4.1	16.5
Grade 3–4 toxicity/hospitalization (%)	52.0	16.6	37.3 (approx.)	34.0

She then moved to a discussion of the rationale for the addition of androgen receptor targeting agents (ARTA) to ADT in mHSPC, given that resistance to ADT may happen early and that these agents improve OS in mCRPC. Here, two trials (STAMPEDE and LATITUDE), demonstrated comparable improvements in overall survival for the addition of abiraterone and corticosteroid to ADT. Dr. Payne emphasized however that the patient populations differed somewhat with LATITUDE particularly enriched with patients having high-risk features, including 2 or more of Gleason score 8 or greater, more than 3 lesions on bone scan, and measurable visceral disease. Further, patients had to have de novo metastatic disease. She further noted that tolerability of abiraterone showed no new signals in this disease indication compared to mCRPC.

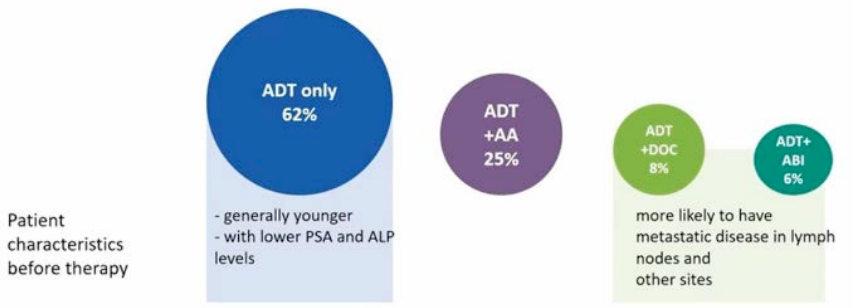
Continued page 8

She then highlighted long-term follow-up of the abiraterone + standard of care vs standard of care alone comparison from STAMPEDE which was presented at ESMO 2020. This shows the prolonged benefit of this treatment approach out to 8 years, with a median survival benefit of almost 3 years (6.6 vs 3.8 years among patients with M1 disease). Further, this report demonstrated no difference in benefit between patients with low- and high-burden of disease.

She further highlighted that the use of docetaxel is associated with an initial decrease in global health related quality of life whereas abiraterone had superior global health related quality of life throughout follow-up.

Dr. Payne then moved to discuss the role of enzalutamide in this disease space. ARCHES allowed prior, but not concomitant, docetaxel and demonstrated improved radiographic progression free survival and overall survival with preserved quality of life and manageable toxicity. She noted fatigue was somewhat less problematic in this indication compared to mCRPC. TITAN assessed apalutamide in the same indication with similar design to ARCHES with prior docetaxel allowed. Again, over a median follow-up of 44 months, apalutamide significantly improved overall survival. She noted in particular that apalutamide was associated with a rash relatively commonly and hypothyroidism relatively uncommonly, though frequently enough that monitoring of thyroid function is indicated.

Summarizing these data, she highlighted that the current ESMO and EAU guidelines support the level 1 evidence for using ADT plus one of four additional options (docetaxel, abiraterone, enzalutamide, or apalutamide). She suggested that nearly no patients should be



receiving ADT alone baring "extremely special circumstances", however, real world data suggest a dramatic underutilization of these agents with the majority of newly diagnosed men receiving ADT alone.

In the UK, prior to the COVID-19 pandemic, only docetaxel was indicated for mHSPC and the utilization was poor. However, as a result of the pandemic, the NICE guidelines recommended use of subcutaneous or oral agents which opened the option of enzalutamide in this disease space.

Dr. Payne then discussed the ENZAMET trial which allowed concurrent docetaxel and randomized allocation to enzalutamide or first-generation anti-androgen. The use of enzalutamide was demonstrated to significantly improve overall survival. However, this was driven by those patients who did not receive docetaxel: for those who did receive docetaxel, outcomes were similar whether they received enzalutamide or a first-generation anti-androgen. There was an increase in toxicity associated with this "triple" therapy.

In the meantime, results from PEACE-1 have been presented examining the role of abiraterone in a population in which the standard of care has evolved over time and included docetaxel eventually being mandated. Among those patients who received docetaxel as standard of care, the addition of abiraterone improved radiographic progression-free survival by a median of 2.5 years. Presented recently, there was a demonstration that this approach improved overall survival as well, with a relative decrease of 25% in the risk of death.

Moving forward, Dr. Payne suggested that PEACE-1 is potentially practicing changing though longer-term follow-up from ENZAMET and ARASENS data is needed, particularly to guide care for patients with low-volume disease. She further suggested that her standard of care is ADT + ARTA and that none of these studies assess whether adding docetaxel to this combination is beneficial (rather, only that the converse is). She emphasized that quality of life studies are critical and that numerous other combinations are actively being examined.

Presented by: Heather Payne, MBBS, FRCP, FRCR, professor, and consultant in clinical oncology at University College Hospital, London, NHS

Written by: Christopher J.D. Wallis, University of Toronto Twitter: @WallisCJD during the 2021 Australian and New Zealand Urogenital and Prostate (ANZUP) Cancer Trials Group Annual Scientific Meeting (ASM), Sunday, Oct 17 – Monday, Oct 18, 2021.

Like all treatment decisions, you have to weigh how you feel about the potential benefits against the potential risks. No one can do that for you.

How Enzalutamide Impacts Quality of Life in Metastatic PCa

Sucharita Mistry, PhD

Enzalutamide was associated with net benefits in deterioration-free survival at 3 years, despite having some negative effects on health-related quality of life.

Treatment with enzalutamide was associated with worsening of self-reported fatigue, physical function, and cognitive function, but not overall health and quality of life (OHQL), in patients with metastatic hormone-sensitive prostate cancer (HSPC) enrolled in the ENZAMET trial. These results were published in the *Journal of Clinical Oncology*.

The phase 3 ENZAMET trial (ClinicalTrials.gov Identifier: NCT02446405) included 1125 patients with metastatic HSPC. They were randomly assigned 1:1 to receive enzalutamide (160 mg daily) or active control (physician's choice of bicalutamide, flutamide, or nilutamide).

Patients in both arms received luteinizing hormone-releasing hormone analogue or underwent surgical castration. Baseline characteristics were similar between the arms.

Previously published results showed longer overall survival and progression-free survival with enzalutamide.[2] In the current analysis, researchers evaluated health-related quality of life (HRQL) in both treatment arms.[1]

HRQL was assessed at baseline, weeks 4 and 12, and then every 12 weeks until clinical progression using the European Organisation for Research and Treatment of Cancer core quality of life questionnaire. The questionnaire measures quality of life as related to functioning (physical, role, cognitive, emotional, and social), symptoms (fatigue, pain, and nausea and vomiting), and OHQL. HRQL was also assessed with the organization's disease module for prostate cancer (QLM-PR25).

The proportion of patients who completed the HRQL questionnaire ranged from 93% at 4 weeks to 86% at 156 weeks. The median follow-up was 34 months.

There was a modest difference in OHQL score between the enzalutamide arm and the control arm (difference, 1.2; *P* =.10). The researchers observed a greater deterioration of the score at 12 weeks in the enzalutamide arm (difference, 1.9; *P* =.07), but values remained relatively stable after that.

The differences in overall means for the functional domains favored the control arm for physical functioning (2.6; *P* <.001), role functioning (3.6; *P* =.001), social functioning (3.3; *P* <.001), and cognitive functioning (4.0; *P* <.001), but not for emotional functioning (*P* =.8).

The differences in overall means for selected symptoms favored the control arm for fatigue (5.2; *P* <.001), appetite loss (2.5; *P* =.001), urinary symptoms (1.9; *P* =.003), and dyspnea (1.8; *P* =.05). The arms were similar for pain, nausea and vomiting, insomnia, constipation, diarrhea, hormonal symptoms, and sexual activity or sexual dysfunction (all *P* >.08).

At 3 years, the deterioration-free survival rates favored enzalutamide over control for OHQL (31% vs 17%; *P* <.001), cognitive functioning (31% vs 20%; *P* <.001), and physical functioning (31% vs 22%; *P* =.0013), but not fatigue (24% vs 18%; *P* =.16). The effects of enzalutamide on HRQL were seen regardless of patients' baseline characteristics.

"The adverse effects of enzalutamide on HRQL were additive to those of early docetaxel," the researchers noted. "These effects were most evident early in the treatment course. Enzalutamide was associated with net benefits in deterioration-free survival at 3 years despite these effects on HRQL."

SOURCE
11 February 2022
https://www.renalandurologynews.com/home/news/urology/prostate-cancer/prostate-cancer-enzalutamide-impacts-quality-life-treatment-risk/?utm_source=newsletter&utm_medium=email&utm_campaign=run-update-hay-20220215&cpn=&hmSubId=YjtdV5GLH1E1&hmEmail=h6HhlsSWB1yP-

Like all treatment decisions, you have to weigh how you feel about the potential benefits against the potential risks. No one can do that for you.

Prostate Cancer Test Cuts False Positives

SOURCE
3 March 2022
https://www.thetimes.co.uk/article/prostate-cancer-test-cuts-false-positives-vgth7tw7l

Existing tests look for prostate-specific antigen (PSA), a protein produced by cells in the prostate, and a raised level can suggest problems with the prostate, including cancer. Men aged 50 and above can request a PSA test from their GP.

But that test can miss some harmful cancers and also raise false alarms, either causing unwarranted distress or sometimes meaning harmless cancers are needlessly treated.

In a new paper in the *Journal of Medical Screening*, researchers calculated that if PSA alone was used, and found 90 per cent of cancers, 4.5 per cent would be false positives. However, testing for PSA and hK2 (human kalliknein peptidase) together was more accurate.

After comparing blood samples from men who later died from prostate cancer with others never diagnosed with the disease, researchers developed an algorithm that looked at how far a man's readings on the two markers were from the average for his age. All men estimated to have a one in 20 or greater risk of developing prostate cancer in the next five years were counted as "screen positive". If men aged 55 and above were screened at least once every five years using that risk level, they found 90 per cent of cancer cases would be detected and only 1.2 per cent false positives.

Lead author Professor Sir Nicholas Wald of UCL said: "A key drawback of screening for prostate cancer using a PSA test alone is the higher risk of a false positive, which can lead to an unnecessary, invasive biopsy and the unnecessary treatment of a clinically insignificant cancer that would not have caused harm anyway.

"Our study shows a different screening approach could reduce the number of false positives by three quarters. This would make screening for prostate cancer safer and more accurate, reducing over diagnosis and overtreatment.

"The next step is to test the feasibility of this approach in practice with a pilot project inviting healthy men for screening. If the project is successful, we believe this approach ought to be considered as part of a national screening programme for all men."

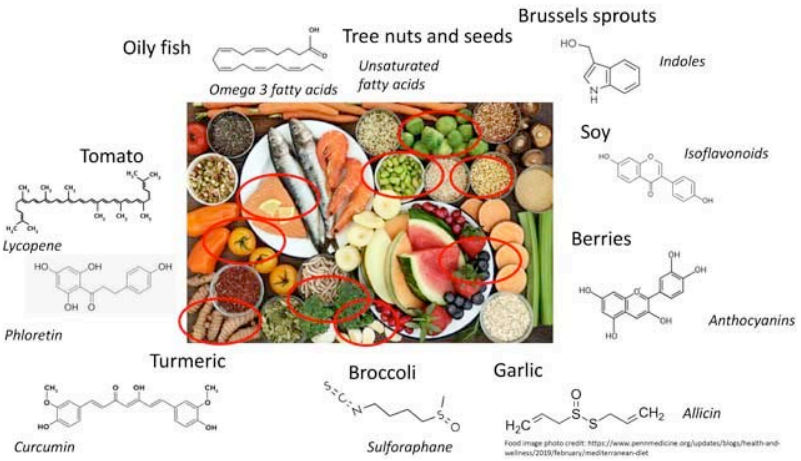
Co-author Jonathan Bestwick of Queen Mary University of London said: "The approach is innovative for cancer, as it screens people on the basis of their overall risk rather than the results of a single test. This is the same approach used in screening during pregnancy for certain fetal and maternal health conditions."

They looked at data and blood samples from more than 21,000 men recruited for a study over 40 years ago. They compared 571 men who went on to die from prostate cancer with 2,169 controls who were never diagnosed with the disease.

They found that, while hK2 was a relatively weak marker for prostate cancer viewed alone, it was relatively independent of PSA. That meant combining the two offered a more accurate test.

Alice Davies, health information manager at Cancer Research UK said: "There is no national screening programme for prostate cancer because the current test we have, the PSA test, isn't reliable enough. This early research shows the potential of more advanced prostate cancer risk calculator tools to improve diagnosis. However, as this study looked at a relatively small group of men we still need larger studies that follow-up men over many years to see if this test's promise holds out, and if it can help reduce prostate cancer deaths."

Low-meat and meat-free diets associated with lower overall cancer risk



Eating meat five times or less per week is associated with a lower overall cancer risk, according to a study published in the open access journal *BMC Medicine*.

SOURCE
24 February 2022
https://www.sciencedaily.com/releases/2022/02/220223202818.htm?utm_medium=email&utm_source=rasa_io

Cody Watling and colleagues from the University of Oxford, UK investigated the relationship between diet and cancer risk by analysing data collected from 472,377 British adults who were recruited to the UK Biobank between 2006 and 2010. Participants, who were aged between 40 and 70 years, reported how frequently they ate meat and fish and the researchers calculated the incidence of new cancers that developed over an average period of 11 years using health records. They accounted for diabetes status and socio demographic, socio economic and lifestyle factors in their analyses. 247,571 (52%) of participants ate meat more than five times per week, 205,382 (44%) of participants ate meat five or less times per week, 10,696 (2%) ate fish but not meat, and 8,685 (2%) were vegetarian or vegan. 54,961 participants (12%) developed cancer during the study period.

The researchers found that the overall cancer risk was 2% lower among those who ate meat five times or less per week, 10% lower among those who ate fish but not meat, and 14% lower among vegetarians and vegans, compared to those who ate meat more than five times per week. When comparing the incidence of specific cancers with participants' diet, the authors found that those who ate meat five times or less per week had a 9% lower risk of colorectal cancer, compared o those who ate meat more than five times per week. They also found that the risk of prostate cancer was 20% lower among men who ate fish but not meat and 31% lower among men who followed a vegetarian diet, compared to those who ate meat more than five times per week. Post-menopausal women who followed a vegetarian diet had an 18% lower risk of breast cancer than those who ate meat more than five times per week. However, the findings suggest that this was due to vegetarian women tending to have a lower body mass index (BMI) than women who ate meat.

The researchers caution that the observational nature of their study does not allow for conclusions about a causal relationship between diet and cancer risk. Additionally, as UK Biobank dietary data was collected at a single time-point, rather than over a continuous period of time, it may not be representative of participants' lifetime diets.

The authors suggest that future research could investigate the associations between diets containing little or no meat and the risk of individual cancers in larger populations with longer follow-up periods.

Glossary of Terms:

Prostate Cancer is full of acronyms.

To help you navigate all the terms we have produced a list on our Website:

www.prostateheidelberg.info

Transdermal oestradiol for androgen suppression in prostate cancer:

Long-term cardiovascular outcomes from the randomised Prostate Adenocarcinoma Transcutaneous GUIDEHormone (PATCH) trial

Summary

Background

Androgen suppression is a central component of prostate cancer management but causes substantial long-term toxicity. Transdermal administration of oestradiol (tE2) circumvents first-pass hepatic metabolism and, therefore, should avoid the cardiovascular toxicity seen with oral oestrogen and the oestrogen-depletion effects seen with luteinising hormone releasing hormone agonists (LHRHa). We present long-term cardiovascular follow-up data from the Prostate Adenocarcinoma Transcutaneous Hormone (PATCH) trial programme.

Methods

PATCH is a seamless phase 2/3, randomised, multicentre trial programme at 52 study sites in the UK. Men with locally advanced or metastatic prostate cancer were randomly allocated (1:2 from August, 2007 then 1:1 from February, 2011) to either LHRHa according to local practice or tE2 patches (four 100 μg patches per 24 h, changed twice weekly, reducing to three patches twice weekly if castrate at 4 weeks [defined as testosterone ≤1·7 nmol/L]). Randomisation was done using a computer-based minimisation algorithm and was stratified by several factors, including disease stage, age, smoking status, and family history of cardiac disease. The primary outcome of this analysis was cardiovascular morbidity and mortality. Cardiovascular events, including heart failure, acute coronary syndrome, thromboembolic stroke, and other thromboembolic events, were confirmed using predefined criteria and source data. Sudden or unexpected deaths were attributed to a cardiovascular category if a confirmatory post-mortem report was available and as other relevant events if no post-mortem report was available. PATCH is registered with the ISRCTN registry, ISRCTN70406718; the study is ongoing and adaptive.

Findings

Between Aug 14, 2007, and July 30, 2019, 1694 men were randomly allocated either LHRHa (n=790) or tE2 patches (n=904). Overall, median follow-up was 3·9 (IQR 2·4–7·0) years. Respective castration rates at 1 month and 3 months were 65% and 93% among patients assigned LHRHa and 83% and 93% among those allocated tE2. 157 events from 145 men met predefined cardiovascular criteria, with a further ten sudden deaths with no post-mortem report (total 167 events in 153 men). 26 (2%) of 1694 patients had fatal cardiovascular events, 15 (2%) of 790 assigned LHRHa and 11 (1%) of 904 allocated tE2. The time to first cardiovascular event did not differ between treatments (hazard ratio 1·11, 95% CI 0·80–1·53; p=0·54 [including sudden deaths without post-mortem report]; 1·20, 0·86–1·68; p=0·29 [confirmed group only]). 30 (34%) of 89 cardiovascular events in patients assigned tE2 occurred more than 3 months after tE2 was stopped or changed to LHRHa. The most frequent adverse events were gynaecomastia (all grades), with 279 (38%) events in 730 patients who received LHRHa versus 690 (86%) in 807 patients who received tE2 (p<0·0001) and hot flushes (all grades) in 628 (86%) of those who received LHRHa versus 280 (35%) who received tE2 (p<0·0001).

Interpretation

Long-term data comparing tE2 patches with LHRHa show no evidence of a difference between treatments in cardiovascular mortality or morbidity. Oestrogens administered transdermally should be reconsidered for androgen suppression in the management of prostate cancer.

Funding

Cancer Research UK,and Medical Research Council Clinical Trials Unit at University College London.

SOURCE
13 February 2021
https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)00100-8/fulltext

PLEASE NOTE:
Treatments may vary in Australia. Please ensure you discuss your diagnosis and treatment options with your consulting specialist

PCa Clinical Trials & Studies

For Further information on current and recruiting trials visit:

https://www.anzup.org.au/content.aspx?page=prostatecancertrialdetails

GUIDE

A randomised non-comparative phase II trial of biomarker-driven intermittent docetaxel versus standard-of-care (SOC) docetaxel in metastatic castration-resistant prostate cancer (mCRPC)

The purpose of this study is to see if a prostate cancer marker in the blood (mGSTP1) can be used to guide chemotherapy treatment. Based on the level of this blood marker, some men may be able to have breaks in treatment rather than having chemotherapy continuously which is the current standard of care. This study will tell us if having these treatment breaks guided by mGSTP1 can improve how men feel during treatment while still treating the prostate cancer effectively.

The target population is men with mCRPC receiving docetaxel chemotherapy, with a detectable mGSTP1 at baseline (80% of all men commencing docetaxel for mCRPC)

Goulburn Valley Health
St Vincent's Hospital – Melbourne

Further Information
ClinicalTrials.gov

NINJA

Novel Integration of new prostate radiation therapy schedules with adjuvant androgen deprivation

The NINJA clinical trial aims to compare two emerging schedules of radiotherapy in the treatment of intermediate or high risk prostate cancer. Participants will be randomly assigned to one of two radiotherapy schedules as part of this study. In schedule 1 (called Stereotactic Body Radiotherapy) participants will receive 5 radiotherapy treatments over 2 weeks, and in schedule 2, (called Virtual High Dose Rate Boost), participants will receive Stereotactic Body Radiotherapy delivered in 2 treatments over 1 week followed by 12 treatments of conventional external beam radiotherapy over 2 and a half weeks. It is hoped this research will potentially improve the accuracy and quality of radiotherapy treatment in prostate cancer.

Peter MacCallum Cancer Centre

Further Information
ClinicalTrials.gov

Like all treatment decisions, you have to weigh how you feel about the potential benefits against the potential risks. No one

Prostate Heidelberg Cancer Support Group Meetings

PHCSG organizes specialists and consultants to speak to members on a regular basis.

Details to follow

Did you Know?

One of the interesting phenomena associated with radiation treatment is the abscopal effect, whereby treatment of one metastatic lesion can produce regression in other, non-treated deposits. It has long been suspected that this has an immunological basis, which has led to hope that high-dose radiation to metastatic lesions can prime otherwise non-responsive tumours to immunotherapy such as ICIs (Immune Checkpoint Inhibitors).

Internet Resources

Members have found the following websites useful

Prostate Cancer Foundation of Australia for guides & help
https://www.pcfa.org.au
https://onlinecommunity.pcfa.org.au/

Australian Cancer Trials Information on clinical trials
https://www.australiancancertrials.gov.au

USA Prostate Cancer Foundation (Guide) PDF guide for men newly diagnosed with PC
https://www.pcf.org/guide/

Us TOO International PCa Education (USA) USA PC support groups' information & newsletter
https://www.ustoo.org

Cancer Council Victoria for general support services
https://www.cancervic.org.au

ExMed Cancer Program Melbourne based 'best practice' exercise medicine program
https://www.exmedcancer.org.au

ProstMate (PCFA) A companion to record PC results

Beyond Blue for help with depression and anxiety
HELPLINE 1300 22 4636

Continence Foundation of Australia for assistance with incontinence aids
HELPLINE 1800 33 0066

PCRI Prostate Digest (USA) Prostate Cancer Research Institute supporting research and disseminating information to educate and empower patients, families and the medical community
https://pcri.org/insights-newsletter

PAACT Newsletter (USA) Patient Advocates for Advanced Cancer Treatments
http://paact.help/newsletter-signup/

A Touchy Subject
https://www.youtube.com/channel/UCdyuxGuAuCWJbe-kZvwVSzQ

The internet is a good source for research but it should not be trusted to give you answers for your personal care. Always speak to your doctor to clarify any medical advice.

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PHCSG Committee

Mike Waller Convener
Max Shub Co-Facilitator
Spiros Haldas Library
David Bellair Web Site
Michael Meszaros Welfare Officer
Sue Lawes Secretary/Newsletter

PHCSG Meetings 2022 10am – 12:30pm

Tues 15 Feb
Tues 15 March
Tues 19 April
Tues 16 May
Tues 21 June
Tues 19 July
Tues 16 August
Tues 20 September
Tues 18 October
Tues 15 November
Tues 13 December (the second Tues to avoid the week prior to Xmas. Includes Xmas lunch – subject to COVID restrictions)

Disclaimer: *Information in this newsletter is not intended to take the place of medical advice. Please ask your doctor to clarify any details that may be related to your treatment. PHCSG have no liability whatsoever to you in connection with this newsletter.*

2022 PHCSG Articles

If you have any feedback or wish to include articles on specific aspects of Prostate Cancer please contact Sue at:

prostateheidelberg@gmail.com

January 2022

- Links between Gut Microbiome & Aggressive PCa
- Radpid PCa Screening Kits
- How Much Should You Eat?
- Abiraterone/DT Combo Associated with High Metastasis-Free Survival Rate
- Terbiom-161 Clinical Study Collaboration
- Electrical Pudendal Nerve Stimulation vs Pelvic Floor Muscle Training
- Identifying PSA Patterns in mHSPC Treated with Abiraterone & Prednisone
- Viagara Linked to Lower Risk of Alzheimer's
- Ductal Adencarcinoma
- BAT vs Enzalutamide in MCRPC
- Systemic Therapy Patterns in MCRPC
- Exercise May Stop Disease in its Tracks
- AI Accurately diagnoses PCa
- New Insights into Molecular Drivers of Treatment Resistance in PCa
- Decreased Fracture Rate by Manadating Bone Protecting Agents

February 2022

- Why Aren't More Men Electing to Have an Orchiectomy?
- Could More Testosterone be the Key to Fighting PCa? Part one
- Inflammation from ADT may Cause Fatigue
- Optimal Duration of ADT Depends on the Type of Radiation
- How does ADT Affect the Brain?
- Pomegranate may Help Reduce Certain Cancers – Study
- The Perils & Pitfalls of PSA in Advanced PCa
- One Man's Mission to Make PCa Fix Open for All
- Physical exercise can Improve Quality of Life
- Gather My Crew
- Does One Recover Testosterone Faster when Stopping LHRH Antagonist or Agonist?
- Clinical Trials & Studies

March 2022

- Will PSA Testing be Replaced? Novel Screening Approches
- How Bipolar Androgen Therapy Works
- Bipolar Androgen Therapy and the Immune System
- The Role of SBRT
- On Metabolic Syndome, Statin Drugs & PCa Progression
- Yoga Improves QoL in Men Newly Diagnoses with PCa
- The Trials & Tribulations of Managing Men with mHSPCa
- How Enzalutamide Impacts QoL in Metastatic Cancer
- Low-meat and Meat-free Diets associated with lower overall cancer risk
- Transdermal Oestradiol for Androgen Suppression
- PCa Test Cuts False Positives

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2021 PHCSG Articles

If you have any feedback or wish to include articles on specific aspects of Prostate Cancer please contact Sue at:

prostateheidelberg@gmail.com

January 2021
- Exercise Infographic
- Sexual Dysfunction & Shared Decision Making
- FDA Approves first Oral Hormone Therapy
- Prolonged ADT Reduces Cardio Fitness
- Reducing the Burden of Out-of-Pocket Expenses
- BAT Sensitizes CRPCa to Subsequent Therapy
- Targeting Bone Mets with Radiation in Oligorecurrent Men

Prostate Cancer Trials
- PEACE V:STORM
- UpFront PSMA Phase II
- NINJA

February 2021
- Advantages of Coffee
- Our Biological Clock
- Statins tied to Better Outcomes
- What's New in Inflammation
- New PC Management Techniques
- About the Patch Trial
- Eating a Colourful Diet
- Dose Painting
- Advancement in Focal Therapy

Prostate Cancer Trials
- Enza-P
- DASL-HiCaP Trial
- Lu-177-PSMA-617
- Adding Apalutamide to Radiotherapy & LHRH Agonist

March 2021
- Challenging Your Private Health Provider
- How Research is Prioritised – Norman Swan podcast
- Metastatic PCa – Don't Accept Complacency
- An mRNA Vaccine for Cancer
- Life After Treatment – Wellness Program
- Focal Therapy – If It Sounds Too Good to be True
- Immune Checkpoints on CTCs

April 2021
- Study finds cancer cells evade chemo by going dormant
- High Risk Localised PCa: Changing the rules
- Automated Pathological Assessment of PCa Biopsy Slides
- Final Results from TITAN Study
- SBRT for High Risk Patients
- Benefit of taking 1year of ADT after radiation for high risk PCa
- Novel Radiopharmaceutical beats Cabazitaxel in MCRPC
- Novatis announces phase III positive results
- Estrogen – Our Sister Hormone

Prostate Cancer Trials
- Enzalutamide With Lu PSMA-617 Versus Enzalutamide Alone
- Darolutamide Augments Standard Therapy for Localised Very High-Risk Cancer

May 2021
- Full on Kitchen Sink for High Risk Localized PCa
- Calcium & Vitamin D Supplements
- Favourable prognosis with adjuvant ADT after RT
- Healthy Lifestyle may offset Genetic Risk
- Additional Treatment Option
- New Type of Treatment could reawaken Immune Response
- Penile Rehabilitation
- Prostate Cancer Trial Results

June 2021
- Dry July
- Breakthrough in Disease resistance to drugs
- PyL PSMA Pet Imaging
- Does thel level of your Testosterone matter when on ADT?
- Stay Bone-Healthy
- ADT and the risk of Cariovascular Disease
- The Pros & Cons of Orchiectomy
- Risk of Serial Biopsies
- Reflections on 10 years on AS
- Improvements on Oligo-recurrent Therapies
- Time Pressure Decisions
- Research making Chemo Friendlier
- Trial Results on Exercise

July 2021
- Ground Breaking Early Cancer Detection
- What Should You Eat
- ADT What You Really Need to Know
- Anti Androgen Therapy
- Overall Survival with Metachronous MHSPC
- New Guidelines for Salvage Radiation
- Help for ED after RP
- Germline Testing

Prostate Cancer Trials
- Enz-P; DASL HiCaP; NINJA; Upfront PSMA
- 45 & Up Study Results

August 2021
- Targeting PSMA
- What is the Role of Modern Imaging
- Observation Vs SBRT for Oligometastatic PC
- Combined High-dose Salvage RT & HT in Oligorecurrent Pelvic Nodes
- Long Term Urinary & Erectile Function following RP
- Bone Resportion Inhibitors
- RT After RP
- Take Responsibility

Prostate Cancer Trials
- UpFront PSMA & MOSES Study

September 2021
- Targeting PSMA
- PEEK Study
- Skeletal Events & Bone Modifying Agents in Castration Resistant PC
- Abiraterone +docetaxel+ADT for Newly Diagnoses Metastatic PC
- Brief, Intense Radiation & Hormone Therapy for Very High Risk PCa
- Progression-directed Therapy for Oligoprogression
- Insights into PC metabolism
- Diagnostic Accuracy of PSMA 18F-DCFPyL PET/CT
- Risk of PC in relatives of PC
- Relugolix – Expected to Alter Treatment
- Whole-pelvic radiation Therapy for High-Risk Patients
- It's time to Retire a Common Biopsy
- Cognitive Function / Marital Status & PC Incidence
- Covid Passports
- Medical Bills: Out of Pocket Costs
- Prostate Cancer Trials
- UpFront PSMA & ENZAp

October 2021
- Continuous vs Intermittant ADT
- Predict Risk Tool
- Doubling Time Tool
- High Discontinuation Rate in AS
- AI Program Helps Detect PCa
- Plant Based Diet
- Obesity Ups MCRPCa Survival
- Impact of Hypofractionated RT on Patient Outcomes
- Controversy Around Testosterone Therapy
- Medications for ADT Hot Flashes
- Best Way to recover Urinary Continence after PR
- Diabetic Risk & ADT
- Abiraterone for NMPC
- When to Use Chemo

November 2021
- New PCa drug helping men live lomger
- What predicts who goes on continuous vs intermittent ADT
- Gut Bugs can drive PCA growth & resistance
- Exception to early salvage radiation
- PCa Urine Test
- New Strategy against Treatment resistant PCa
- Blood Test may help treat PCa
- Prostate Cancer Studies
- Caregiver Health Literacy/Supportive Care Program/access to Nutrition Info
- Optimal Dietary & Exercise

December 2021
- PCa Thwarted by Gut Microbiota
- Exercise is Medicine
- Giving Cancer a "Brown-Out"
- Wake Up! It's Time to Address Sleep Issues
- The Complex Natural Biochemistry of a Healthy Diet
- ADT: What You Really Need to Know
- Andropause and the Treatment Nobody Talks About
- Unlocking the Secrets of Sleeping Cancer Cells
- Treatment-Related Regret
- New PCa Treatment Coul d Improve Outcomes for Advanced Patients
- PCa Trials – Recruiting
- Promising Treatments & New Methods

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