Prostate Heidelberg

cancer support group

Information, education and support for men and their families affected by Prostate Cancer

Newsletter **February 2020** – Issue 192

Next Meeting: **Tuesday 18th February 2020**
Meeting Hall, Ivanhoe Uniting Church
19 Seddon Street, Ivanhoe

Prostate Heidelberg provides information, education and support for those affected by Prostate Cancer. At our meetings we:

Show respect to members, speakers and guests.
Allow people to speak and other attendees to listen.
Respect confidentiality

This is our first Newsletter for the year and we would like to wish everyone a Happy, Healthy and Prosperous 2020.

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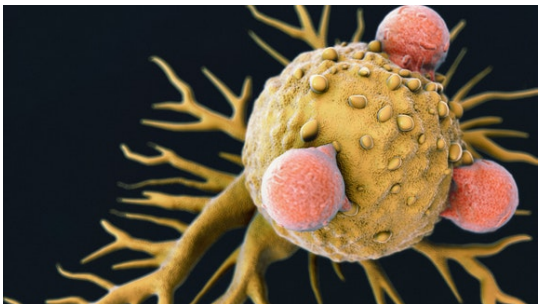
The guest speaker at our meeting on Tuesday 18th February 2020, will be Assoc Prof Joseph Ischia.

Assoc Prof Joseph Ischia is a urologist at Austin health and researcher at the University of Melbourne. He specializes in the robotic-assisted, laparoscopic, and major open surgical treatment of early cancers, as well as the medical management of advanced cancers, of the prostate, bladder, kidneys, and testicles.

Discovery of new T-cell raises prospect of 'universal' cancer therapy



Researchers at Cardiff University have discovered a new type of killer T-cell that offers hope of a "one-size-fits-all" cancer therapy.
T-cell therapies for cancer - where immune cells are removed, modified and returned to the patient's blood to seek and destroy cancer cells - are the latest paradigm in cancer treatments.
The most widely-used therapy, known as CAR-T, is personalised to each patient but targets only a few types of cancers and has not been successful for solid tumours, which make up the vast majority of cancers.
Cardiff researchers have now discovered T-cells equipped with a new type of T-cell receptor (TCR) which recognises and kills

most human cancer types, while ignoring healthy cells.
This TCR recognises a molecule present on the surface of a wide range of cancer cells as well as in many of the body's normal cells but, remarkably, is able to distinguish between healthy cells and cancerous ones, killing only the latter.
The researchers said this meant it offered "exciting opportunities for pan-cancer, pan-population" immunotherapies not previously thought possible.
How does this new TCR work?
Conventional T-cells scan the surface of other cells to find anomalies and eliminate cancerous cells - which express abnormal proteins - but ignore cells that contain only "normal" proteins.
The scanning system recognises small parts of cellular proteins that are bound to cell-surface molecules called human leukocyte antigen (HLA), allowing killer T-cells to see what's occurring inside cells by scanning their surface.
HLA varies widely between individuals, which has previously prevented scientists from creating a single T-cell-based treatment that targets most cancers in all people.
But the Cardiff study, published today in Nature Immunology, describes a unique TCR that can recognise many types of cancer via a single HLA-like molecule called MR1.
Unlike HLA, MR1 does not vary in the human population - meaning it is a hugely attractive new target for immunotherapies.
What did the researchers show?
T-cells equipped with the new TCR were shown, in the lab, to kill lung, skin, blood, colon, breast, bone, prostate, ovarian, kidney and cervical cancer cells, while ignoring healthy cells.
To test the therapeutic potential of these cells in vivo, the researchers injected T-cells able to recognise MR1 into mice bearing human cancer and with a human immune system.
This showed "encouraging" cancer-clearing results which the researchers said was comparable to the now NHS-approved CAR-T therapy in a similar animal model.
The Cardiff group were further able to show that T-cells of melanoma patients modified to express this new TCR could destroy not only the patient's own cancer cells, but also other patients' cancer cells in the laboratory, regardless of the patient's HLA type.
Professor Andrew Sewell, lead author on the study and an expert in T-cells from Cardiff University's School of Medicine, said it was "highly unusual" to find a TCR with such broad cancer specificity and this raised the prospect of "universal" cancer therapy.
"We hope this new TCR may provide us with a different route to target and destroy a wide range of cancers in all individuals," he said.
"Current TCR-based therapies can only be used in a minority of patients with a minority of cancers.
"Cancer-targeting via MR1-restricted T-cells is an exciting new frontier - it raises the prospect of a 'one-size-fits-all' cancer treatment; a single type of T-cell that could be capable of destroying many different types of cancers across the population.
"Previously nobody believed this could be possible."
What happens next?
Experiments are under way to determine the precise molecular mechanism by which the new TCR distinguishes between healthy cells and cancer.
The researchers believe it may work by sensing changes in cellular metabolism which causes different metabolic intermediates to be presented at the cancer cell surface by MR1.
The Cardiff group hope to trial this new approach in patients towards the end of this year following further safety testing.
Professor Sewell said a vital aspect of this ongoing safety testing was to further ensure killer T-cells modified with the new TCR recognise cancer cells only.

"There are plenty of hurdles to overcome however if this testing is successful, then I would hope this new treatment could be in use in patients in a few years' time," he said.

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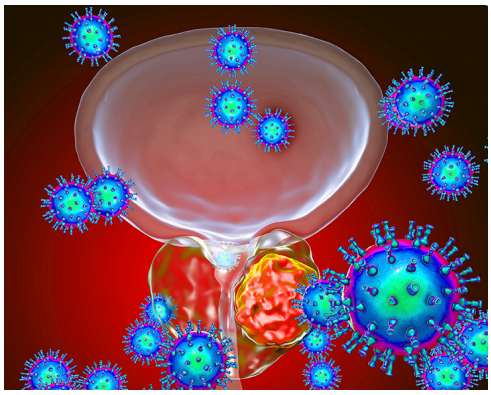
New, Non-Hormonal Target identified for Advanced Prostate Cancer



Drug tested in lab studies halts cancer cells that are impervious to hormone therapy.

Hormone therapies for prostate cancer have greatly prolonged the lives of patients, but the drugs eventually become ineffective and the disease grows lethal.

Resistance occurs because a small percentage of prostate cancer cells are completely impervious to the therapies, and actually thrive when the drugs are used. Targeting this subset of virulent cancer cells is the focus of a study led by Duke Cancer Institute researchers.

The researchers, publishing online Dec. 4 in Science Translational Medicine, identified a cell surface receptor that is essential for the function and survival of resistant prostate cancer cells, and showed in laboratory studies that this receptor can be targeted to halt tumor growth. A clinical trial is underway using a drug originally intended for lung diseases.

"We noticed in prostate cancer there are two types of cells," said senior author Jiaoti Huang, M.D., Ph.D., chair of Duke's Department of Pathology. "The vast majority are luminal tumor cells, which are susceptible to hormone therapy. But a minor component of cells are neuroendocrine cells, and they are very important. They do not express the androgen receptor, so they will survive hormonal therapy.

"Our hypothesis was that this minor population, because they have the ability to survive, contribute to tumor recurrence," Huang said. "And that's exactly what we found."

Huang and colleagues -- including corresponding author Qing Cheng, Ph.D., associate professor in Duke's Department of Surgery -- isolated the neuroendocrine cells from fresh human prostate cancer tissue and studied them in the lab. In early-stage prostate cancer, they constitute no more than 1% of all tumor cells, but their numbers are much larger in late-stage and metastatic disease, and they make up almost all of a particularly lethal form of prostate cancer called small cell neuroendocrine carcinoma.

Current prostate cancer treatments exclusively target the majority population of luminal tumor cells, and they do that job well. But not only do hormone therapies leave neuroendocrine tumor cells untouched, the researchers found, they actually enrich the neuroendocrine cell population.

This occurs because tumor growth is driven by a receptor on the surface of neuroendocrine cells called CXCR2, which creates the optimal environment for prostate tumor cells to proliferate and spread. CXCR2 is also expressed by immune cells and involved in inflammation, and a drug that inhibits its function is being developed for patients

with chronic obstructive pulmonary disease (COPD).

Huang's research team tested the drug, navarixin, in laboratory and animal studies, demonstrating that it killed hormone-resistant tumors in combination with enzalutamide, where enzalutamide failed on its own.

"Because CXCR2 is ubiquitously expressed by neuroendocrine cells in prostate cancer of all stages, targeting CXCR2 may particularly benefit patients whose tumors are advanced, recurrent, and resistant to currently available therapies," Huang said.

"The real implications of our findings need to be tested in clinical settings to determine whether patients with advanced prostate cancer benefit from CXCR2 inhibition, alone or in combination with a hormone inhibitor," he said.

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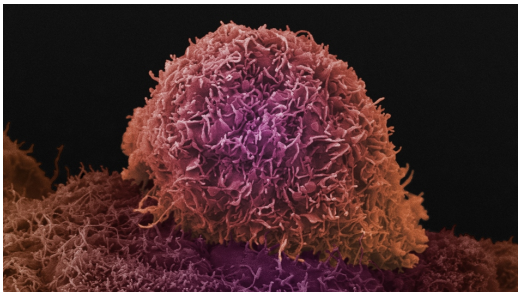

Olaparib becomes the first gene-targeted medicine to show benefits in prostate cancer.

A pioneering precision medicine already licensed for breast and ovarian cancer can also slow or stop tumour growth in some men with advanced prostate cancer, a new clinical trial shows.

The phase II trial found that over 80 per cent of men with prostate cancer whose tumours had mutations in the BRCA genes responded well to treatment with the targeted drug olaparib.

Men in the study had already received chemotherapy and their disease was advanced. Patients treated with olaparib whose prostate cancers had DNA repair defects lived for more than 13 months on average – and nearly 18 months among those with BRCA mutations – raising the prospect that it could become the first ever gene-targeted drug to be approved for prostate cancer.

The TOPARP-B trial was led by a team at The Institute of Cancer Research, London, and The Royal Marsden NHS Foundation Trust.

Men with BRCA mutations responded best to olaparib, with more than 80 per cent responding and 40 per cent remaining free of disease progression for more than a year.

Additionally, over half of patients carrying PALB2 mutations responded to olaparib, as well as 37 per cent of those with ATM mutations. Some 20 per cent of patients with other DNA repair gene alterations also responded to olaparib.

The median overall survival with olaparib was 17.7 months for patients with BRCA mutations, compared with 16.6 for men with ATM mutations, and 13.9 months for those with PALB2 mutations.

Olaparib is one of a class of drugs called PARP inhibitors which are licensed for women with ovarian and breast cancer who have mutations in the BRCA genes. Scientists at The Institute of Cancer Research (ICR) were the first to discover how to genetically target olaparib, and they went on to develop the drug in clinical trials with colleagues at The Royal Marsden.

The researchers believe men with advanced prostate cancer should now routinely have their tumours tested for DNA repair defects such as BRCA mutations, so that where appropriate they can benefit from PARP inhibitors.

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Olivia Newton-John Cancer Wellness & Research Centre

At the Olivia Newton-John Cancer Wellness & Research Centre, patients experience world-leading treatment and care, complemented by wellness programs to support patients in body mind and spirit. They have over 200 clinical trials in progress, providing access to new breakthrough therapies.

A new service providing exercise classes for people undergoing cancer treatment is now available on;

Tuesdays, Wednesdays and Fridays

Further information can be obtained from one of the exercise physiologists, Kirsty or Lachlan.

To arrange an appointment, contact:
ONJEXERCISE@austin.org.au
Ph; (03) 9496 9445 (Leave a message)

You can also drop in and use the centre to relax, wait for appointments, meet with others, or attend any of the wellness programs that you may benefit from.

Open Mon-Fri: 8.30am - 4.30pm
(Located past Level 3 Cafe, Lift accessible)

Level 3R, ONJ Centre
145 Studley Road
Heidelberg VIC 3084
P: 03 9496 3799
E: wellness@austin.org.au

More information can be found on their website:
https://www.onjcancercentre.org/

The impact of diet and exercise on prostate cancer

There are many ways you can positively influence your health. Lifestyle choices, such as diet, exercise, and smoking or drinking, are influenced by habit, culture, and preferences and are different for each individual. Every day the foods you choose to eat and the amount of physical activity you get can impact your overall health as well as your prostate cancer risk, recovery, and survival.

A good starting point if you are contemplating diet and exercise changes is the American Institute for Cancer Research (AICR) recommendations. To prevent cancer and to improve long-term survival in cancer survivors, AICR advises people to:

1. Be as lean as possible without becoming underweight.
2. Be physically active for at least 30 minutes every day, including activities such as walking, dancing, or participating in sports.
3. Avoid sugary drinks. Limit consumption of energy-dense foods, particularly processed foods high in added sugar, low in fiber, or high in fat.
4. Eat a greater variety of vegetables, fruits, whole grains, and legumes.

5. Limit consumption of red meats (such as beef, pork, and lamb), and avoid processed meats (such as ham, bacon, sausage, hot dogs, and salami).
6. Limit alcoholic drinks, if you consume them at all, to two per day for men (and one per day for women).
7. Limit consumption of salty foods.
8. Don't rely on supplements to prevent or protect against cancer.

Studies suggest that maintaining a healthy diet and engaging in regular exercise may lower your risk for prostate cancer. It also can help you prepare for and recover after cancer treatment and may help keep your cancer from coming back.
In addition, watching your weight may reduce the risk of dying from prostate cancer. According to a study by researchers at Fred Hutchinson Cancer Research Center, the risk of dying from prostate cancer is more than double in obese men diagnosed with the disease compared with men of normal weight at the time of diagnosis. Obese men with local or regional disease have nearly four times the risk of their cancer metastasizing, or spreading.

Diet and exercise may help you fight prostate cancer and deal with treatment.

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Family History, Genetic Risk Score Combined Improves

A recent study found that combining family history and genetic risk score in men can better stratify their inherited risk for prostate cancer to determine a more personalized screening strategy.

Such an inherited risk stratification strategy will benefit not only men at high risk by recommending earlier and more frequent prostate cancer screening but also men at low risk by recommending decreased or delayed (prostate cancer) screening," the researchers wrote in the study, published in JAMA Network Open.

Single nucleotide polymorphisms, the most common type of genetic variation among people that are associated with prostate cancer risk have been identified over the years. With polygenic risk score methods, researchers have been able to demonstrate a correlation between single nucleotide polymorphisms and prostate cancer risk using genetic risk scores.

However, the researchers pointed out there is little known about how age at prostate cancer diagnosis can be associated with these genetic scores. Age at prostate cancer diagnosis is a critical piece of evidence that will not only strengthen researchers association with prostate cancer risk but more importantly provide direct evidence for their use in determining patient age for PSA screening.

Therefore, the researchers aimed to evaluate the association between genetic risk score and patient age at diagnosis, as well as to compare the genetic risk score with family history risk stratification. To do so, they performed a secondary analysis of the four-year, randomized, double-blind, placebo-controlled, multicentre, chemoprevention trial known as *(REDUCE) Reduction by Dutasteride of Prostate Cancer Events.*

https://www.ncbi.nlm.nih.gov/pubmed/18588452

The researchers performed a well-established, population-standardized genetic risk score for each participant based on 110 known prostate cancer risk-associated single nucleotide polymorphisms. Men were then stratified

into low-, average- or high-risk groups.

Of the 3,225 men who were a median age of 63 years, 683 (21%) were classified as low risk, 1,937 (60%) as average risk and 605 (19%) as high risk based on genetic risk score alone, compared with 2,789 (86%) classified as low or average risk and 436 (14%) as high risk based on family history alone.

When the researchers combined genetic risk score and family history for overall genetic risk, 957 men (30%) were at high genetic risk, 1,667 men (52%) were at average genetic risk and 601 men (19%) were at low genetic risk.

The median diagnosis-free survival was 74 years for men at high genetic risk, 77 years for men at average genetic risk, and more than 80 years for men at low genetic risk.

They found that higher (genetic risk scores) were significantly associated with an earlier age at prostate cancer diagnosis. Furthermore, the association of genetic risk score with patient age at prostate cancer diagnosis was independent of family history. As a result, a combination of genetic risk score and family history offers a more informative tool for risk stratification than does family history alone.

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Anti-Parasite Drug May Help to Treat Prostate Cancer, Say Norwegian Scientists

Researchers in Norway have found that a drug used to kill parasites like tapeworms can slow the growth of prostate and colon cancer cells.

A group from the **University of Bergen** have been testing hundreds of drugs to see how they affect cancer cells. They have now found a drug taken to treat intestinal parasites, Giardia and tapeworms, which acts as a tailored medicine against prostate and colon cancer. A widely used anti-parasite drug, **nitazoxanide (NTZ)**, is able to break down a protein called beta-catenin, which is found at high levels in prostate and colon cancer cells and supports their growth and survival. This opens up the possibility of repurposing the drug for the treatment of these cancers.

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Correspondence

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2020 Meetings: 10:00am -12:30pm

We meet on the third Tuesday of each month, except January.

Following are our dates for 2020.

Feb 18
Mar 17
Apr 21 *** Guest Speaker ***
Dr. Cleola Anderiesz General Manager, Service Development and Clinical Practice at Cancer Australia
"National data to improve cancer outcomes"

May 19
Jun 16 *** Guest Speaker ***
Professor Grant McArthur Executive Director of the Victorian Comprehensive Cancer Centre
Jul 21
Aug 18
Sep 15
Oct 20
Nov 17
Dec 15 (Including Xmas Lunch)

Meetings include a general discussion and round robin. New members in particular are invited to introduce themselves and share their journeys with the Group.

Committee

Max Shub,	Facilitator 0413 777342
Mike Waller,	Treasurer
Spiros Haldas,	Library
David Bellair,	Web site
Ray Dudley,	Newsletter
Michael Meszaros,	Committee Member
Sue Lawes,	Committee Member

2020 SUBSCRIPTIONS $20

The 2020 annual subscription remains at **$20 per individual, couple or family**. Pay at your next meeting, by mail to the address below, or directly into the Prostate Heidelberg bank account: BSB 083-256; Account 583244292 (include your name in the details).

Prostate Heidelberg,
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ProstateHeidelberg@gmail.com
www.ProstateHeidelberg.info

Following is the Prostate Heidelberg Cancer Support Groups, Treasurer's report for 2019

A summary of the Group's finances over calendar 2109 is shown in the table below. The figures are on a cash basis, i.e. they reflect when income and payments are recorded in the PHSCG bank account. Income over the year totalled $1705.08 generated by the $20 membership subscriptions ($10 for post June new members), donations of $25, and reimbursements of Group eligible expenses by the Prostate Cancer Foundation of Australia (PCFA). The PCFA covers our venue hire, telephone and internet expenses and promotional stationery, accounting for some 70 per cent of 2019 outgoings that totalled $1582.24. Overall, we therefore generated a small surplus of $122.84, resulting in an increase in our bank balance from $2965.43 at end 2018 to $3088.27 in December 2019. The current outlook for 2020 suggests a similar result, driven by a stable or slightly increased paid up membership of some 30 in 2019.

	end Dec 18	Jan19	Feb19	Mar19	Apr19	May19	Jun19	Jul19	Aug19	Sep19	Oct19	Nov19	Dec19	TOTALS
Income														
Member Subscriptions/donations			220.00	160.00		40.00	20.00				80.00		80	600.00
PCFA reimbursements		220.00			180.00	274.58							430.50	1,105.08
Total income		***220.00***	***220.00***	***160.00***	***180.00***	***314.58***	***20.00***				***80.00***		***510.50***	***1,705.08***
Expenses														
Rental of hall					143.50			215.25			215.25		215.25	*789.25*
External subscriptions											200.00		100.00	*300.00*
Consumables (ink etc)				62.56	136.00	18.00			100.00					*316.56*
Website hosting/software				130.00		46.43								*176.43*
Total expenses				***192.56***	***279.50***	***64.43***		***215.25***	***100.00***		***415.25***		***315.25***	***1,582.24***
Surplus (deficit)		220.00	220.00	(32.56)	(99.50)	250.15	20.00	(215.25)	(100.00)	0.00	(335.25)	0.00	195.25	***122.84***
Cash in bank	***2,965.43***	3,185.43	3,405.43	3,372.87	3,273.37	3,523.52	3,543.52	3,328.27	3,228.27	3,228.27	2,893.02	2,893.02	**3,088.27**	**122.84**

Internet Resources

Use the internet to find questions to ask your specialist. It should not be trusted to find answers for your personal case. The web is general. Your specialist specifically knows you. Our members have found the following **websites** to be useful.

Prostate Cancer Foundation of Australia www.PCFA.org.au
For guides and help.
Australian Cancer Trials www.australiancancertrials.gov.au/
Information on the latest clinical trials in cancer care, including trials that are currently recruiting new participants.
USA Prostate Cancer Foundation (Guide) www.PCF.org/guide/
PDF guide for men newly diagnosed with prostate cancer
Us TOO International PCa Education (USA) www.UsToo.org
USA Prostate Cancer support groups information and newsletter.
Cancer Council Victoria www.CancerVic.org.au
For general help and to understand services supporting men with cancer.
Ex MED Cancer program http://www.EXMedCancer.org.au/
A Melbourne-based best-practice exercise medicine program for people with cancer.
ProstMate (PCFA) www.ProstMate.org.au
The companion for those impacted by prostate cancer, particularly to record all your results.
Beyond Blue www.BeyondBlue.org.au
HELPLINE – 1300 22 4636; f*or help with depression or anxiety.*
Continence Foundation of Australia www.Continence.org.au/
HELPLINE – 1800 33 0066. *For assistance with incontinence and for aids (such as pads).*
Australian Advanced Prostate Cancer Support Group www.JimJimJimJim.com
For men diagnosed with advanced metastatic prostate cancer.
PCRI Prostate Digest (USA) https://pcri.org/insights/
Prostate Cancer Research Institute supports research and disseminates information that educates and empowers patients, families, and the medical community
PAACT Newsletter (USA) http://paact.help/newsletter/
Patient Advocates for advanced Cancer Treatments.