A message from the top

An update from Prostate Cancer Foundation of Australia’s national chairman Jim Hughes

Since its formation more than 18 years ago, Prostate Cancer Foundation of Australia has developed from a grassroots community organisation into the peak national body for prostate cancer - and I feel very honoured to have been elected as National Chairman earlier this year.

PCFA is poised for significant growth to achieve its mission of reducing the impact of prostate cancer on Australian men, their partners and families, while recognising the diversity of the Australian community.

In 2011, PCFA was privileged to receive a $4 million grant from the Australian Government through Cancer Australia. Over the past four years this grant has enabled the organisation to achieve many wonderful things, including:

• Developing general information leaflets about prostate cancer, support groups and caring for someone with prostate cancer in English and five other languages (Arabic, Chinese, Greek, Italian and Vietnamese).
• Developing information packs for localised prostate cancer, advanced prostate cancer, gay and bisexual men, younger men, and partners and carers.
• Establishing 90 new support groups around the country.
• Holding a national support group leader training conference in Melbourne.
• Redesigning the PCFA website.
• Launching Network Online for prostate cancer specialist nurses, support group leaders and ambassadors.

With the completion of the Cancer Australia grant, PCFA has come to the end of an important phase of development. As we enter the next era, the CEO and I are consulting widely about how we best support the network over the next three to five years.

Feedback will be prioritised to meet the overall needs of the network within PCFA’s current financial capacity. We are particularly looking for feedback in the following areas:

• PCFA now has 172 affiliated support groups. Should our priority be to establish new support groups, or strengthen and sustain the existing groups?
• Should we have a national or chapter-based conferences? Should they be training conferences, or be more focused on networking opportunities?
• In a recent survey, about half of the participants expressed a desire for further training and half not. Do you feel you would benefit from more training?

CONTRIBUTIONS from all Support Group members to the quarterly Queensland Prostate Cancer Newsletter are most welcome.
Please email items and images to qpcn@cancerqld.org.au

pcfa.org.au qpcn@cancerqld.org.au
The Queensland Chapter of the Prostate Cancer Foundation of Australia is grateful for the generous support of Cancer Council Queensland in the printing of this magazine. The content of this magazine is selected by the Queensland Chapter of the PCFA. Cancer Council Queensland does not necessarily endorse, or otherwise, any content contained within this publication.
Prostate Cancer Support Groups in the Queensland Chapter

There are 30 PCSGs in the Chapter with a total membership of approximately 3,700 men.

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<tr>
<th>Peer Support Group</th>
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<td>Advanced (all areas)</td>
<td>Jim Marshall</td>
<td>07 3878 4567</td>
<td>Hervey Bay</td>
<td>Ros Male</td>
<td>0407 157 590</td>
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<tr>
<td>Biloela</td>
<td>Trevor Douglas</td>
<td>0409 235 891</td>
<td>Innisfail</td>
<td>Peter Coxen</td>
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<td>07 3371 9155</td>
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<td>Len Lamprecht</td>
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<td>Bob Stewart</td>
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<td>Maryborough</td>
<td>Leoll Barron</td>
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<td>Moreton Bay Regional</td>
<td>Fred Travis</td>
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<td>07 4045 1031</td>
<td>North Burnett</td>
<td>Russell Tyler</td>
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<td>David Wells</td>
<td>0411 081 653</td>
<td>North Queensland (Townsville)</td>
<td>Clarke Berglin</td>
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<td>Glass House Country</td>
<td>Bob McLean</td>
<td>07 5496 9601</td>
<td>Northern Rivers (Evening)</td>
<td>Ray Chilton</td>
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<td>Granite Belt</td>
<td>Ian Robbins</td>
<td>0416 169 032</td>
<td>Northern Tablelands</td>
<td>Peter Martin</td>
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<td>Jeff Crane</td>
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<td>North West Qld (Mt Isa)</td>
<td>Greg Humphrey</td>
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<td>Keith Young</td>
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<td>Twin Towns and Tweed Coast</td>
<td>Ross Davis</td>
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Associated Support Groups

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<td>Redcliffe</td>
<td>Fred Travis</td>
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Calendar of Events 2015

November
- Movember fundraising for prostate cancer
- Breast Cancer Awareness Month
- National Skin Cancer Action Week

December 1
- World AIDS Day

February
- Heart Research Month

Anytime
- BBQ for Prostate Cancer [pcfa.org.au]
- C-vivor (free sessions) [cancerqld.org.au]
Benefits of the Mediterranean diet

In June, Dr Olivia Wright gave a presentation to the Brisbane Support Group that outlined eating habits and health - and she concluded that our health is very much a product of our diets.

Dr Olivia Wright is a dietitian and lecturer in Nutrition and Dietetics at the University of Queensland and researcher at the Mater Medical Research Institute. She has also worked with the food industry designing functional foods for specialised groups and has experience in the clinical management of chronic disease, including prostate cancer.

Her primary interest is the correlation between what we eat and our health. In 1825, French gastronomist Anthelme Brillat-Savarin wrote in his book The Physiology of Taste, “Tell me what you eat and I will tell you what you are”. By the 20th century, this had become a common phrase – with nutritionist Victor Lindlahr calling his successful 1942 book You Are What You Eat - but how does this adage stack up in real life?

Early research into this notion of diet tied to personal health was carried out from the 1940s by American physiologist Ancel Keys. The collective study looked at the incidence of heart and vascular diseases among countries having varied traditional eating patterns and lifestyles. Seven countries were involved; United States, Japan, Italy, Greece, the Netherlands, Finland and (what was then) Yugoslavia. The hypothesis was that the rate of coronary disease in populations and individuals would vary in relation to their physical characteristics and lifestyle, particularly in the fat composition of diets and serum cholesterol levels.

Details of the study can be read online at sevencountriesstudy.com

It concluded that better outcomes were linked to the post-war peasant diet that emphasised fruits, vegetables, grains, beans and fish.

The healthiest men were from the Greek Island of Crete, where the research team described the typical male as “a shepherd, small farmer, beekeeper, fisherman or a tender of olives or vines, who walks to and from work on a daily basis. His midday meal is eggplant, mushrooms, crisp vegetables and bread dipped in olive oil. Once a week there is lamb and once a week chicken, with fish twice a week. Other meals are hot dishes of legumes seasoned with meats and condiments. The main meal is followed by salad, dates, Turkish sweets, nuts or fresh fruits. A local wine completes this cuisine. He has the lowest heart attack risk, the lowest death rate and the greatest life expectancy in the Western World.”

These findings form the basis of the Mediterranean diets, which are not a single dietary pattern but do share common features. There is an emphasis on vegetables, fruits, beans, nuts, seeds, breads, unrefined grains and olive oil, with the inclusion of fish and wine and minimal intake of meats and full-fat dairy products. The diets are rich in total monounsaturated and polyunsaturated fats. They are highly nutrient dense, low in saturated fat and rich in the good fats, omega-3s, antioxidants and anti-inflammatory compounds. Please refer to The Mediterranean Diet Pyramid on page 4.

Many subsequent studies in Western economies have shown that people with high blood pressure, lipid problems or obesity respond well to a Mediterranean diet and the risks of having a heart attack or stroke caused by cardiovascular disease are considerably reduced.

Can a Mediterranean diet assist men living with prostate cancer? The answer is definitely YES! In a large cohort with long follow-up, higher Mediterranean diet scores were unassociated with incident prostate cancer progression and prostate cancer-specific death but the higher scores were associated with lower overall mortality, suggesting that this diet improves the general health in men with prostate cancer.

The following slides illustrate the results of some of the research examining the connection between prostate cancer and diet.

Your current eating patterns can be switched to a Mediterranean diet over a period of time by setting goals to change and adapt eating habits.

Continued on page 4...
IDEAL RECOMMENDATION:
- Olive oil, at least 4 tablespoons a day
- Tree nuts and peanuts, at least 3 serves a week
- Fresh fruits, at least 3 serves a day
- Vegetables, at least 2 serves a day
- Fish (especially fatty fish) and seafood, at least 3 serves a week
- Legumes, at least 3 serves a week
- Sofrito (a spiced Spanish tomato-based sauce), at least 2 serves a week
- Choose white meat instead of red meat
- Wine with meals, but no more than 7 glasses a week

DISCOURAGED:
- Fizzy soft drinks, less than 7 a week
- Commercial bakery goods, sweets and pastries, less than 3 serves a week
- Don’t use spreads containing saturated fats
- Eliminate red and processed meats, or reduce to 1 serve a week

The Mediterranean Diet Pyramid

The Mediterranean diet is abundant in foods that may protect against cancer and is associated with longevity and reduced cardiovascular and cancer morality.

Compared with many Western countries Greece has lower prostate cancer mortality and Greek migrant men in Australia have retained their low risk for prostate cancer.

Consumption of a traditional Mediterranean diet, rich in bioactive nutrients may confer protection to Greek migrant men, and his dietary pattern offers a palatable alternative for prevention of this disease.


Research investigating the fat intake of 4,577 men with non-metastatic prostate cancer from 1986 to 2010 showed that men who replaced as little as 10% of their daily carbohydrates and animal fats with healthy vegetable fats benefitted from a 29% lower prostate cancer mortality risk than those that didn’t change their diets.

They also reduced their risk of dying by any other cause by 13%.

Daily nut intake similarly reduced prostate cancer death risk by 18% and death by other causes by 11%.

Making medical research leaps at QIMR Berghofer

At the Brisbane Support Group’s August meeting, QIMR Berghofer’s community relations officer Sara-Jane Dean spoke about current research being undertaken at this important institute.

Medical Research Institute after a generous donation from Toowoomba-based philanthropist Clive Berghofer AM, who has been an invaluable patron and financial backer of medical research for many years.

In September 2015, QIMR Berghofer was ranked seventh in the world in a new index measuring innovation and industry impact. It was the only Australian institution among the Top 15 in The Times’ Higher Education Company UK Index.

Cancer treatments

Under the guidance of Dr Michele Teng, QIMR Berghofer is now researching emerging forms of treatment for men with metastatic disease. Recent forms of immunotherapy have emerged, based on strongly re-boosting a patient’s weakened immune reaction to the cancer. These include several new vaccines and the T-cell Checkpoint inhibitor antibodies Ipilimumab and Nivolumab/Keytruda (anti-CTLA-4 and anti-PD-1 respectively). While Ipilimumab may not be suitable for all patients with metastatic castrate-resistant prostate cancer, it appears that 15-20 per cent of patients using this immunotherapy may enjoy durable disease control that improves overall survival.

Interestingly, patients with bone metastasis often receive denosumab, an antibody reactive with RANK ligand (RANKL) to prevent bone destruction by the cancer. However RANKL is also expressed by some regulatory immune T-cells and QIMR Berghofer research recently found in mice that anti-RANKL combines extremely effectively with the T-cell checkpoint antibodies anti-CTLA-4 or anti-PD-1, to suppress both melanoma and prostate cancer spread. This study is determining, in mice and humans, which immune cells in prostate cancers express these target molecules and their counter receptors. In mice, the study is also examining exactly how this combination has superior anti-cancer activity, and whether it can benefit men with advanced prostate cancer.

New drugs from Queensland plants

Scientists at QIMR Berghofer are also researching an experimental drug produced from the seeds of a rainforest plant which has been successfully used to destroy or shrink solid tumours in pre-clinical trials. The study, led by Dr Glen Boyle of the Cancer Drug Mechanism Group, has found that a single injection of the drug, code named EBC-46, has led to rapid breakdown of tumours in a range of human tumour models.

Dr Boyle says these pre-clinical trial findings suggest the drug could be effective in human patients. EBC-46 works in part by triggering a cellular response which cuts the blood supply to a tumour. “We were able to achieve very strong results by injecting EBC-46 directly into melanoma models, as well as cancers of the head, neck and colon,” says Dr Boyle. “In most cases, a single injection caused the loss of viability of cancer cells within four hours and ultimately destroyed the tumours. In more than 70 per cent of these pre-clinical cases, the response and cure was long-term and enduring with very little relapse over 12 months.”

EBC-46, which is a compound extracted from the fruit of the blushwood tree found in North Queensland, was discovered by Queensland biotechnology company EcoBiotics, and while regulatory approval is still required for a Phase 1 Human trial, veterinary clinical trials are underway in Australia and the US. It has been used by veterinarians to successfully treat tumours in dogs,

Continued on page 6...
cats and horses. “We must stress that EBC-46 will only be trialled in the short-term for tumours which can be accessed by direct injection or topical application,” says Dr Boyle. “There is no evidence to suggest EBC-46 would be effective against metastatic cancers.”

Picato gel is another plant-derived drug being developed as an anti-precancer treatment. Dr Jim Aylward first explored the potential of the plant known as radium weed, and approached QIMR in 1997 to research its possibilities. Its active ingredient, ingenol mebulate, was isolated and work began on how to use it in treatment.

In 2013, the Therapeutic Goods Administration approved Picato gel as a topical treatment for solar keratoses, or sunspots, which are a precursor to the second most common type of skin cancer, squamous cell carcinoma. Picato gel, only available on prescription, is applied once a day for two or three days, depending on the area of the body being treated, reducing lengthy treatment times, pain and irritation. The treatment has been approved by the FDA for use in the US.

Other recent QIMR Berghofer cancer research highlights include:

- Finishing Phase 1 clinical trials which have led to positive results in patients with aggressive throat cancer (nasopharyngeal carcinoma).
- Discovering that a key protein (CD-96) on the surface of immune cells helps to camouflage cancer, offering a new treatment target.
- Discovering a new, more powerful predictor for aggressive breast cancers, to give women a more accurate prognosis and ensure they receive the most effective treatment.
- Introducing an experimental immunotherapy treatment on patients with glioblastoma multiforme - an aggressive form of brain cancer. This world-first clinical trial began in Brisbane during September 2015.
- Continuing work on Q-Skin, which is the largest skin cancer research study conducted in Australia.
- Developing a more accurate way of identifying people at high-risk of bowel cancer.

**Infectious diseases**

In the area of infectious diseases, QIMR Berghofer research has progressed in combating malaria and the way the body’s early immune response can be hijacked by the malaria parasite. In conjunction with the CSIRO, a new lead for tests for diagnosing malaria has been discovered by detecting distinctive compounds in the breath of infected patients.

Another interesting study involves the Epstein-Barr virus and how the virus eludes the immune response system in patients, particularly in those who have undergone organ transplants where anti-rejection drugs may have compromised the immune system.

**Mental Health**

A third area of QIMR Berghofer research covers mental health and other complex disorders. This includes a trial of a rheumatoid arthritis medication to treat asthma; work on a diagnostic test for depression; identifying 10 genetic variants that increase a risk of allergies; a study designed to prioritise high-risk patients on colonoscopy waiting lists, and the launch of D-Health, Australia’s largest study investigating the role of Vitamin D in preventing disease.

**Anorexia Study**

QIMR Berghofer is also playing a key role in the world’s largest genetic investigation of anorexia nervosa, an eating disorder associated with low body weight, difficulty in maintaining a healthy body weight, fear of weight gain and an extreme focus on weight and shape. ANGI (the Anorexia Nervosa Genetics Initiative) will recruit 8000 women from Australia, US, Sweden and Denmark to identify which genes play a role in risks for this eating disorder, which affects all age groups but is particularly common in adolescent girls, affecting around one in every 100.

“Having these genes doesn’t mean that you’ll definitely get anorexia nervosa,” says Professor Nick Martin from the QIMR Berghofer Genetic Epidemiology Group. “If men and women who have the disease now, or have ever had the disease, can take 30 minutes to fill in our internet survey and provide a blood sample, they can make a real difference to our understanding of this condition which will, in turn, help other patients.”

Volunteers need to complete a 30-minute online questionnaire and, if eligible to partake in the test, provide a blood sample. Sample collection kits can be mailed anywhere in Australia and the blood sample taken at the nearest pathology collection point. All costs are covered by the researchers and all information remains confidential. To find out more about ANGI or take part in the study, visit angi.qimr.edu.au or freecall 1800 257 179.

**Q-Farm and Q-Gen facilities**

In addition to research operations, QIMR Berghofer operates two other facilities with important links to the medical research and pharmaceutical industries, called Q-Pharm and Q-Gen. Q-Pharm Pty Ltd is a specialised contract research organisation which undertakes a broad range of early (Phase I and Phase II) clinical trials for national and international pharmaceutical and biotechnology industries, and is the major provider of bioequivalence studies in Australia. Its core business is first-time-in-human studies, pharmacokinetic studies supporting new molecule development and reformulation of established drugs and vaccines. Q-Pharm operates within the RBWH Herston campus in a purpose-built 40-bed medical facility that can accommodate clinical trial participants for weeks, if necessary.

Q-Gen is a fully integrated facility for translational research within QIMR Berghofer, providing Good Manufacturing Standard facilities for translating QIMR Berghofer’s clinical research to the bedside. Its testing laboratories, office space, storage rooms and facilities are available for external researchers and organisations. In June Q-Gen was granted approval to manufacture cellular therapies for human use, opening the way for clinical trials of new cancer treatments. It is the first centre in Australia granted regulatory approval to prepare clinical grade T-cell therapies.

QIMR Berghofer regularly hosts groups for free tours of the Herston operations. Visitors can inspect some of the laboratories and speak to researchers. Tours can be arranged by calling 1800 993 000.
Understanding exercise programs for men with localised and advanced prostate cancer

The September meeting of the Brisbane Support Group featured accredited exercise physiologist Kirsten Adlard and dietitian Brenton Baguley, both from the University of Queensland’s School of Human Movement and Nutrition Studies. They spoke about the benefits of exercise for men with, or recovering from, prostate cancer.

Despite a rapidly growing fitness industry, most Australians fail to exercise regularly.

Exercise can be divided into four groups:

Cardiovascular Exercise
- Aerobic or endurance
- Walking, jogging, gardening, swimming, etc.

Resistance Training
- Weight training or strength training
- BW, resistance bands, dumbbells, machine weights

Flexibility
- Stretches

Balance Exercises
- Proprioception
- Heel to toe walk, backwards walk, single leg standing

For those starting an exercise program, it’s essential to have a medical check before putting on a pair of shorts and running a half marathon. Considerations for men with or recovering from prostate cancer should include their type of treatment, any co-morbidities, age, fatigue, metastatic disease and metastatic bone disease, incontinence, pain and current level of fitness.

With a program in place, start exercising gently and gradually increase the intensity of exercises over the following weeks. Many men start with good intentions but fail to follow through and their program falls away. To avoid this and overcome other distractions, it’s necessary to set aside specific times as exercise periods. Maintain a daily or weekly record of your progress. Set goals and when they’re reached, try for a bit more. Exercising with a friend or group will help you maintain interest, and do activities you enjoy. If in doubt about your program, seek guidance from an accredited exercise physiologist.

Guidelines for cardiovascular (aerobic) and resistance exercises are set out below:

Aerobic Exercise Guidelines
- Frequency: 3-5 times/week
- Intensity: Moderate
  - 50-75% VO_{max}
  - 60-80% HR_{max}
  - RPE 11-14
- Duration: 150 minutes/week
  - Aim for at least 20-30 mins continuous exercise
- Progression: slow and gradual
- Large muscle activities
- Warm up and cool down

Resistance Exercise Guidelines
- Frequency: 1-3 times/week, with rest days between sessions
- Exercises: 8-10 targeting major muscle groups
- Repetitions: 8-12 per set
- Sets: 1, preferably 2-3, with 1-2 minutes rest
- Intensity: 50-80% 1 repetition maximum or 8-12 repetition maximum, symptom limited
- Duration: <1 hour
- Velocity 2-3 seconds concentric/eccentric

Continued on page 8...
**Progression:** Slow and gradual

**Perform flexibility exercises**
for all trained muscle groups
to help maintain ROM (2-4 x 30 seconds)

In all men, aerobic exercises will reduce the risk of cardiovascular morbidity and death, coronary heart disease including heart attack and diabetes. Resistance exercises will increase whole body lean mass, bone mass and muscle strength while decreasing whole body fat mass and fracture risks.

Men on androgen deprivation therapy (ADT) or hormone therapy as part of their prostate cancer treatment will particularly benefit from resistance exercises. Over time, these men will have a 5 to 10 fold loss of bone density compared to men diagnosed with prostate cancer but not on ADT. Their body composition will also change, losing muscle and gaining fat mass. This can lead to declining physical function, fatigue, depression and anxiety, increased risk of co-morbidities and reduced quality of life. The graph below illustrates the loss of bone mass density after various cancer treatments.

To acquaint yourself with stretching and balancing routines, join a local tai chi group that usually meets weekly or fortnightly. Cost is minimal and participants can learn basic exercises to perform at home or other pleasant environments.

When done correctly, exercise is safe and beneficial. If you’re unsure about where to start, Cancer Council Queensland can offer tips and reading material, or visit an accredited exercise physiologist (some private health funds offer rebates). Your GP can give a referral to an accredited exercise physiologist for subsidised sessions, which can include chronic disease management plans, enhanced primary care, T2DM management plans, DVA gold/white card services, or you could become involved in local research projects about exercise. To find an accredited exercise physiologist, go to essa.org.au and click on ‘find an AEP near you’.

Exercise is only one part of maintaining health and vitality. A well-rounded healthy lifestyle also requires a sensible diet and weight management (outlined in the Brisbane Support Group’s June report on the Mediterranean diet in this newsletter).

Unless you’re super-fit, a guide to your ideal weight can be calculated by working out your Body Mass Index. Dividing your weight in kilograms by your height in metres squared. If the result is between 18 and 24, you’re OK. If it’s 25 or above, you need to think about a change in eating habits and shedding some kilograms.

**Important take home messages:**

- When done correctly, exercise is safe and significantly beneficial
- ‘Something is better than nothing’
- Speak to your oncologist/GP before commencing an exercise program
- Perform a mixture of aerobic, resistance, flexibility, balance and functional exercises
- Exercise can improve myriad other conditions leading to increased quality of life.

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Cancer Treatment Induced Bone Loss

The Brisbane Prostate Cancer Support Group will hold two more meetings with guest speakers for 2015.

- November 11 at 9.30am: Leah Zajdlewicz, psychologist from Cancer Council Queensland, will speak about “Psychological distress, Quality of Life and Advanced Prostate Cancer”.
- December 9 at 7pm: Break-up Evening and Party will feature Professor Pamela Russell AM, from the Cancer Research Centre - IHBI Translational Research Institute, who will talk on the latest research relating to prostate cancer. This is a low-key evening where guests are invited to bring along some goodies, and we’ll have a sing along.
Help needed for University of Queensland study

The University of Queensland’s School of Human Movement and Nutrition Sciences is conducting a study and looking for assistance from:

- men who have had prostate cancer
- men who had been treated with androgen deprivation (hormone) therapy for more than three months at any time during the course of their initial treatment, or over the course of their recovery
- men currently being treated with androgen deprivation therapy for at least three months.

Eligible participants will see an accredited practicing dietitian fortnightly and an accredited exercise physiologist three times a week over an eight-week period. The study’s duration is for 20 weeks and will be held in the School of Human Movement and Nutrition Sciences Building at the University of Queensland’s St Lucia campus. Free parking will be provided for eligible participants.

At the completion of the study, participants will be provided with details of their nutrition analysis, exercise results and body composition.

If you’re interested in participating in the study and would like more information, please contact Brenton Baguley (b.baguley1@uq.edu.au) or Kirsten Adlard (k.adlard@uq.edu.au), or phone 0431 674 866.

Prostate cancer death risk linked to stress


High stress levels are associated with an increased rate of prostate cancer-specific mortality among men treated for clinically localised prostate cancer, according to Swedish researchers.

Dr Michael Jan and collaborators at the Karolinska Institutet in Stockholm surveyed 4105 men treated for clinically localised prostate tumours.

Those with the highest levels of perceived stress had a 66 per cent increased risk of prostate cancer-specific mortality compared with men who had low stress levels. The highly stressed patients also had a high frequency of grieving and sleep loss, and had fewer people with whom to share their emotional problems, according to the investigators.

“This study contributes to the growing field of psychosocial quality-of-life research in men with prostate cancer,” the investigators posted online in the Scandinavian Journal of Urology. “The findings of this study could prove useful to target interventions that improve the quality of life in men with prostate cancer.”

Circumcision statistics linked to lower prostate risk


Circumcised men may have a lower risk of prostate cancer, according to a study published in the Asian Journal of Andrology.

Professor Emeritus Brian Morris of the University of Sydney wrote that countries where more than 80 per cent of the males are circumcised have a prostatic carcino-ma mortality rate approximately 45 per cent lower than in countries with lower rates of circumcision.
New efforts to outsmart advanced prostate cancer

International research involving the University of Adelaide has helped explain how tumour cells become resistant to common therapies used in the treatment of prostate cancer.

The findings, published in *Nucleic Acids Research*, may lead to better patient management and new drugs for men with advanced prostate cancer.

University of Adelaide prostate cancer researcher Professor Wayne Tilley says it has previously been unclear how prostate cancer cells evade common hormone therapy treatments.

"In this study, done with the Masonic Cancer Centre at the University of Minnesota, we have shown that a variant of a protein present in most tumours is an important driver of resistance to hormone therapy in advanced prostate cancer," says Professor Tilley, who is director of the University’s Dame Roma Mitchell Cancer Research Laboratories.

“This research provides important insight into how prostate cancers advance to a lethal phase. And we’ve shown that a new class of drug in clinical development for blood cancers—not previously tested in prostate cancer—can effectively inhibit the variant protein that drives drug resistance and lethal disease.

“While we are a long way from a cure for advanced cases, this research opens the door to the development of new treatments that will be able to prolong a patient’s life.”

University of Adelaide research colleague Dr Luke Selth (also from the Freemasons Foundation Centre for Men’s Health) says cancer cells are resilient and highly adaptive, and this research is aimed at addressing how to outsmart them.

“Many men can be cured of their prostate cancer if it is diagnosed early, through surgery and radiation therapy. However, for some men, their cancer will progress to a stage that is invariably lethal; our research is especially targeted at this group of men,” says Dr Selth. “The next stage will see us further testing and developing newer generation drugs.”

Hormone therapy may raise heart-related deaths in some prostate cancer patients


Giving androgen deprivation therapy (ADT) to men with prostate cancer who also have certain heart problems may increase their odds of dying from a heart-related cause.

“ADT is a mainstay of prostate cancer therapy, but may not be the best option for all men,” says lead researcher David Ziehr of Harvard Medical School in Boston, whose report was published online in the journal BJU International. "The greatest cause of death among men with prostate cancer is heart disease, and patients and doctors must ensure that treatments and lifestyle choices harmonise to improve men's overall health.”

Among men with heart failure or a past heart attack, ADT was associated with a 5 per cent absolute increased risk of death from heart disease in five years. However, there is evidence that many men with prostate cancer are helped by hormone therapy. “When prescribing ADT for prostate cancer, physicians should take their patients' heart health into consideration,” says Ziehr. Interestingly, this study wasn't designed to prove that hormone therapy was the direct cause of the increased deaths. Ziehr and colleagues collected data on more than 5000 men treated for prostate cancer between 1997 and 2006, with 30 per cent treated with hormone therapy. Over an average follow-up of nearly five years, Ziehr’s team found that men treated with hormone therapy who had heart failure or who had a previous heart attack were more likely to die from a heart-related cause than similar men not given ADT (7 per cent versus 2 per cent).

Ziehr said that based on these findings, giving hormone therapy to 20 men with heart failure or a history of heart attack could result in one heart-related death. The researchers did not find any significant link between ADT and heart-related deaths among men who didn't have heart disease or in men with diabetes, high blood pressure or high cholesterol.

Dr Gregg Fonarow, a professor of cardiology at the David Geffen School of Medicine at the University of California, says the benefits of hormone therapy appear to outweigh its risks.

“An analysis of randomised clinical trials found no evidence of excess cardiac deaths,” he says. "While the balance of data are reassuring with benefits outweighing potential risks, further studies are needed to determine if any specific group of patients are at increased risk with the use of ADT.”
A randomised controlled trial comparing the use of permanent radioactive implants (brachytherapy) with dose-escalated external beam radiotherapy in patients with prostate cancer showed that the men who received brachytherapy were twice as likely to be cancer-free five years later.

Professor James Morris, from the Department of Radiation Oncology at the Vancouver Cancer Centre, presented these results at the 3rd ESTRO Forum in Barcelona. His ASCENDE-RT trial is the only existing trial comparing low-dose-rate prostate brachytherapy (LDR-PB) for the curative treatment of prostate cancer with any other method of radiation therapy delivery.

The trial enrolled 398 men with cancer that had not spread outside the prostate gland who were judged to be at high risk of treatment failure, based on standard tests for a number of features of the cancer. The patients initially received androgen deprivation therapy (ADT), aimed at reducing levels of the male hormones that stimulate prostate cancer cells to grow. After eight months of ADT, all patients received 46 Gy of external beam radiotherapy to the prostate and regional lymph nodes.
Scientists at Tel Aviv Medical Center in Israel have found that oral modified citrus pectin (MCP) enhances the anti-cancer and anti-metastatic effects of radiation therapy in the treatment of androgen-independent (AI) aggressive prostate cancer cells. The results, presented at the 2015 American Association for Cancer Research Annual Meeting, demonstrate that MCP enhances radiation treatment of prostate cancer by increasing radio-sensitivity of aggressive prostate cancer cells.

Previous research had demonstrated MCP’s anti-cancer actions, including induction of apoptosis, inhibition of proliferation and metastasis, and synergy with chemotherapeutic drugs and botanical compounds. MCP also protects against inflammation and fibrosis, via its binding affinity for the pro-inflammatory protein, galectin-3. However, this is the first study to clearly demonstrate MCP’s ability to radio-sensitise the aggressive AI prostate cancer cells.

“Radio-resistance is a key contributor to the decreasing effectiveness of radiation treatment for aggressive, androgen-independent prostate cancer,” says Dr Isaac Eliaz, one of the study’s lead investigators. “The potential of MCP to increase radio-sensitivity in aggressive prostate cancer is encouraging news for researchers and patients. MCP’s ability to protect against inflammation and fibrosis via galectin-3 inhibition helps to minimise fibrotic damage to healthy tissues, which is a common side effect of radiation treatment.”

In the study, researchers used cellular viability and clonogenic assays to evaluate the effects of MCP on the viability of AI-prostate cancer cell lines DU-145, PC-3 and CI-1, alone and in combination with radiation treatment. Alone, MCP induced a dose-dependent decrease in cell viability. The combination of MCP and radiation treatment produced synergistic effects against prostate cancer cell lines DU-145 and CI-1, and additive effects against cell line PC-3. Treatment of cells with MCP reduced cell migration by 20 per cent and reduced cell invasion by 40 per cent. These results demonstrate MCP to be an effective radio-sensitiser of AI prostate cancer cells, suggesting that MCP may be used to selectively enhance cytotoxicity and overcome radio-resistance.

The researchers say LDR-PB is an extremely cost-effective treatment, but does require prolonged training and experience to produce consistent results, which may limit more widespread adoption. An additional problem is that, in the trial, the LDR-PB patients experienced more urinary side effects than those who received DE-EBRT.

In a separate presentation at the conference, Prof Morris’s Clinical Research Fellow Dr Sree Rodda, said the incidence of severe late urinary side effects was three times higher in patients who received LDR-PB than in those who had DE-EBRT. “Many of these severe adverse effects were temporary and reversible, or could be ameliorated by procedures. Moreover, more than 80 per cent of patients in the LDR-PB arm had few or no long term urinary side effects,” said Dr Rodda. “The long-term prevalence of severe urinary toxicity in the LDR-PB patients was 8 per cent compared to just 2 per cent for the DE-EBRT patients. An important challenge for the future will be the reduction of these adverse effects while maintaining the advantages of LDR-PB.”
Understanding penile curvature in adults: Peyronie’s Disease, Dupuytren’s Contracture

Reference: By Dr Liji Thomas, NEWS Medical, April 21, 2015

The penis normally has a slight curvature, within 25 degrees of a straight line, but when it is bent beyond this degree in an adult, it is known as Peyronie’s disease. This abnormal curvature, most obvious during erection, is due to the formation of a fibrous band inside the penis which restricts the normal enlargement that accompanies erection. It affects 1-8 per cent of men, mostly aged between 40 and 70 years.

This disease is more common after surgical or radiation treatment for prostate cancer - possibly due to scarring from surgical, radiation or accident-induced injury to the cells inside the penis. It is also more common in men with hypertension or diabetes.

The injury may not be acute, but rather a series of repeated injuries due to vascular blockages, or minor trauma during athletic movement. Men with the blood marker HLA-B7 are at higher risk for Peyronie’s disease. The disease also has a familial tendency, and the condition is characterised by:

- painful erections.
- pain and difficulty during intercourse, which is often the earliest symptom.
- swelling and pain in the penis after intercourse.
- shortening and narrowing of the penis in some cases.
- an easily-felt firm area or lump inside the penis, at the point of curvature.
- obvious indentation at the site of curvature, because of the presence of scar tissue.
- inability to have intercourse due to the severe curvature of the penis.
- painless but very obvious curvature with an easily palpable firm area.
- depression and other mental symptoms due to interference with normal life.

The disease may be mild or severe, and has two phases. The first acute phase is more painful, and lasts from one to two years. This is followed by lessening pain, but the plaque becomes calcified and is harder to treat. As the disease progresses, it produces a permanent angulation of the penis, erectile dysfunction, total failure of penetration and often depression.

Diagnosis is made by palpating the fibrous plaque inside the penis. Sometimes an ultrasound of the penis, with dye injection into the spongy part, is helpful in localizing the fibrosed part, especially when treatment is being planned. An X-ray will show calcium deposits when present. Sometimes a photograph of the erect penis is required to determine the degree of fibrosis. If surgical repair is planned, more detailed testing of the penis may be needed.

Treatment options have improved in recent years, but will not necessarily be beneficial in all cases. Talk to your doctor about which treatments may be right for you. Initial treatment may include:

- injections of corticosteroids into the fibrous tissue to reduce inflammation.
- oral treatment with drugs including pentoxifylline, colchicine and vitamins, such as vitamin E.
- shockwave lithotripsy to break up hard plaque.
- radiation.
- other medications such as PABA, verapamil or tamoxifen.

Colchicine inhibits actively growing cells and is supposed to prevent fibroblast proliferation and fibrous tissue deposition. Verapamil is usually used to treat hypertension, but is helpful in Peyronie’s disease by breaking down a protein involved in scarring.

Recently an injectable form of the collagenase enzyme from the bacterium Clostridium histolyticum has been used successfully to treat this condition. This enzyme breaks up the fibrous collagen tissue of the scar. Alpha-interferon injections are also being used with some success.

Surgery is the last resort, especially for cases suffering intractable pain during intercourse, or when the degree of curvature makes intercourse impossible, or when the disease has entered the chronic phase despite the use of other treatment methods. Surgery carries the risk of impotence, and may entail insertion of a penile prosthesis. Surgery should always be delayed until the disease has clearly stopped progressing, to prevent the formation of a fresh fibrous scar after the surgical procedure.
More precise imaging to detect high-grade prostate cancer lesions

Reference: Society of Nuclear Medicine, August 21, 2015

A molecular imaging biomarker can detect fast-growing primary prostate cancer and distinguish it from benign prostate lesions, addressing an unmet clinical need. The new research, published in the July 2015 issue of The Journal of Nuclear Medicine, is significant for patients with suspected prostate cancer that has not been confirmed by a standard biopsy.

“We were able to demonstrate in our research that PSMA PET imaging was more specific than MR imaging for detecting clinically significant high-grade prostate cancer lesions, and importantly was able to distinguish benign prostate lesions from primary prostate cancer, currently a difficult diagnostic imaging task,” says Dr Steven P. Rowe, resident at Johns Hopkins Medical Institutions in Baltimore. "This work demonstrates a direct correlation between PSMA PET radiotracer activity in prostate cancer and prostate adenocarcinoma aggressiveness (Gleason score)."

The study enrolled 13 patients with primary prostate cancer, who were imaged with F-18 DCFBC PET before a scheduled prostatectomy, with 12 patients also undergoing pelvic prostate MR imaging. Prostate 18F-DCFBC PET was correlated with MR imaging and histologic and immunohistochemical analysis on a prostate-segment (12 regions) and dominant-lesion basis. There were no incidental extraprostatic findings on PET suggestive of metastatic disease.

Results showed that MR imaging was more sensitive than 18F-DCFBC PET for detection of primary prostate cancer in a per-segment (sensitivities of 0.17 and 0.39 for PET and MR imaging, respectively) and per-dominant (sensitivities of 0.46 and 0.92 for PET and MR imaging, respectively) lesion analysis. However, 18F-DCFBC PET was more specific than MR imaging by per-segment analysis (specificity of 0.96 and 0.89 for PET and MR imaging for non-stringent analysis and 1.00 versus 0.91 for stringent analysis, respectively) and highly specific for detection of high-grade lesions greater than or equal to 1.1 mL in size (Gleason 8 and 9).

Senior corresponding author of this study Dr Steve Cho (Associate Professor at the University of Wisconsin School of Medicine and Public Health) says the findings contribute to the importance of PSMA-based PET imaging for detecting and characterising the biology of the prostate cancer.

“There are a number of PSMA-based PET agents currently being introduced into prostate cancer imaging, many with improved signal to background uptake and sensitivity from this earlier first-generation PSMA 18F-DCFBC PET radiotracer, which should further improve the detection of prostate cancer,” says Dr Cho. "While it is difficult to predict which of the numerous prostate cancer molecular imaging agents being developed will ultimately become clinically adopted, this work, and that of other groups, suggests there are important advantages to the PSMA ligands for prostate cancer molecular imaging.”

Resources

Andrology Australia
andrologyaustralia.org
Phone 1300 303 878
Andrology Australia is the Australian Centre of Excellence in Male Reproductive Health.

Australia Prostate Cancer BioResource
apcbioresource.org.au
Phone (07) 3176 1891
The national tissue resource bank underpinning continued research into prostate cancer.

Australian Prostate Cancer Research Centre – Queensland
australianprostatecentre.org
Research, collaborative opportunities, clinical trials and industry news.

BeyondBlue For Men
beyondblue-men.org.au
Phone 1300 224 636
Therapy for men feeling anxious or depressed after prostate cancer treatment.

Cancer Council 13 11 20
cancerqld.org.au
Confidential information and support, 8am-6pm Monday to Friday (excluding public holidays).

Cancer Council Queensland
cancerqld.org.au
For information and support:
Phone 13 11 20, 8am-6pm Monday to Friday.
Supporting research to beat cancer and comprehensive community support services.

Cochrane Library
cochrane.org
Australians now have free access to the best available evidence to aid decision-making.

Lions Australian Prostate Cancer
prostatehealth.org.au
The first stop for newly diagnosed men seeking information about the disease.

Prostate Cancer Foundation of Australia
cpfa.org.au
Phone 1800 22 00 99
Assistance with the experience of diagnosis and treatment for prostate cancer.

Queensland Chapter
pcfa.org.au
Information, patient support materials and contacts for advice on living with prostate cancer in Queensland.
News Round-up

Additional risks identified for older ADT patients, 16 April, 2015
Prolonged androgen deprivation therapy for men diagnosed with prostate cancer aged older than 70 has been associated with increased risk of diabetes and cardiovascular disease, especially among those with comorbidities. The Geriatric Research, Education and Clinical Center in Nashville reports this after examining the correlation of ADT exposure with incident diabetes and cardiovascular disease in men with non-metastatic prostate cancer.

Tumour upgrade risk unlikely while weighing surgery choice, 26 June, 2015
Men with low-risk prostate cancer on active surveillance whose tumours are upgraded after a biopsy might not have to rush into surgery. New research published in the July issue of the Journal of Urology shows that risks of tumour upgrading are low for such men if they choose to remain on surveillance for a while. “For men who want some additional time to think about their best course of action, it’s likely to be safe to wait for treatment,” says research author Dr Christopher Welty of the University of California.

More men opt for watchful waiting, 7 July, 2015
Men with early-stage prostate cancer are increasingly opting for regular monitoring and delaying treatment unless the disease progresses. Data published in JAMA Oncology shows that active surveillance, or watchful waiting, among men with localised prostate cancer was low from 1990 through to 2009, but rose sharply between 2010 and 2013.

No automatic candidates for active surveillance, 16 July, 2015
Men with newly diagnosed, clinically low-risk prostate cancer cannot be assumed as being automatic candidates for active surveillance. Dr Paul Nguyen and colleagues from Harvard Medical School in Boston reported in the August issue of the Journal of Urology that among 10,000 men diagnosed with clinically low-risk prostate cancer in 2010 and 2011, nearly half had tumour upgrades at the time of prostatectomy and 10 per cent had an increase in disease stage.

Radiation success differs for high and low-risk cancers, 17 July, 2015
Higher doses of radiation may improve survival in men with intermediate and high-risk prostate cancers, but doesn’t do the same for those with low-risk disease. Dr Anusha Kalbasi of the University of Pennsylvania published a study in JAMA Oncology that examines data from 42,481 prostate cancer patients. Some of the men had received the standard dose of radiation, while others had higher-dose radiation.

Australian cancer death numbers falling, 23 July, 2015
Cancer death rates in Australia continue to fall, but not quickly enough, according to Cancer Council Australia. The council’s Director of Public Policy, Paul Grogan, says Australian Institute of Health and Welfare data projections are based on trends showing a steady decrease in cancer deaths since the late 1960s, with a steeper drop from the late 1990s.

Five types of prostate cancer identified, 30 July, 2015
Scientists have identified five distinct types of prostate cancer and found a way to distinguish between them. Researchers from the Cancer Research UK Cambridge Institute published a study in Ebiomedicine that could have important implications for how doctors treat prostate cancer by identifying tumours more likely to grow and spread aggressively through the body. The study examined healthy and cancerous prostate tissue from more than 250 men.

Positive outcomes from chemo and ADT partnership, 6 August, 2015
Chemotherapy at the start of androgen deprivation therapy can extend the lives of men with metastatic, hormone-sensitive prostate cancer. Research published online in the New England Journal of Medicine by Christopher Sweeney, an associate professor of medicine at Harvard Medical School in Boston, reached these findings after randomly assigning 790 men with prostate cancer (average age 63) to ADT plus docetaxel, or ADT alone.

Study on monitoring non-aggressive cancers, 1 September, 2015
With careful monitoring by a urologist, a man with relatively non-aggressive prostate cancer is unlikely to develop metastatic prostate cancer or die from the disease. Researchers from Brady Urological Institute at John Hopkins University in Baltimore have analysed data on long-term survival outcomes for 1298 men with prostate tumours classified as low or very low-risk for aggressiveness. Speaking about the findings published in the Journal of Clinical Oncology, study author Dr H. Ballentine Carter says “Our goal is to avoid treating men who don’t need surgery or radiation”.

Mushroom powder may have positive effect, 2 September, 2015
For patients with biochemically recurrent prostate cancer, treatment with white button mushroom powder may reduce PSA levels, according to Dr Przemyslaw Twardowski from the City of Hope National Medical Center in California. His study, published in the September issue of Cancer, examined the effects of the powder on serum PSA levels in 36 patients with biochemically recurrent prostate cancer and continuously rising PSA levels.

- Information sourced from Cancer Daily News.
Tell your story

Letters for publication may be forwarded to QPCN by post to PO Box 201, Spring Hill Qld 4004, or email qpcn@cancerqld.org.au. We would love you to share your prostate cancer story with us (and anonymity can be preserved if requested). For assistance with your writing, you can contact the Queensland Writers Centre, which is located in the Queensland State Library and offers seminars and advice to budding writers and authors.

Contact: qldwriters@qwc.asn.au Ph: 07 3842 9922

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Forward a copy of QPCN to a friend, a neighbour or relative. The key to conquering prostate cancer is prevention, greater awareness and early diagnosis. Invite a new reader to QPCN. You can never be too young or too old to become interested in prostate cancer.

Contact details: Queensland Prostate Cancer News (QPCN) Mail: PO Box 201, Spring Hill Qld 4004 Phone: via Cancer Council 13 11 20 E-mail: qpcn@cancerqld.org.au

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Prostate Cancer Foundation of Australia and Queensland Chapter Council
Mail: PO Box 10444 Adelaide Street, Brisbane, QLD 4000 Email: queensland@prostate.org.au Phone: 07 3166 2140

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