

*Olivia Newton-John Cancer
Wellness & Research Centre*

Prostate Cancer Foundation of Australia

EXPLORING THE ROLE OF RADIATION ONCOLOGY FOR THE TREATMENT OF PROSTATE CANCER

The Prostate Cancer Nursing Service & Radiation Oncology Team invite you to attend an information forum at the Olivia Newton-John Cancer Wellness & Research Centre (ONJ Centre).

Thursday, 24 August 2017 from 5.30pm

5:30 Registration

Dinner and drinks

6:00 Welcome and introduction

6:15 Role of radiation therapy in the treatment of prostate cancer

- Radiation therapy
- Androgen deprivation therapy
- Clinical trials
- Brachytherapy
- Managing side-effects
- New innovations

7.00 Radiation therapy - a patient's experience

7.15 Radiation Oncology department tour

8.00 Finish

Location: Wellness Centre, Level 3R ONJ Centre,
145 Studley Road Heidelberg 3084
opposite Heidelberg Railway Station.

Parking Left parking bay adjacent to the ONJ Centre

RSVP Seating is limited so please confirm your attendance and any dietary requirements no later than Friday, 18 August.

wellness@austin.org.au or 03 9496 3799

*A partnership between Austin Health and the Olivia
Newton-John Cancer Research Institute.*

OUR SPEAKER for 19th September is Dr NIK ZEPS

Negotiating a way through the medical system and life for cancer patients.



Dr Nik Zeps has been recently appointed as the inaugural Group Director of Research for Epworth HealthCare.

He is an Adjunct Professor at Monash University Medical School, in the School of Health Sciences at Curtin University, the Centre for Comparative Genomics at Murdoch University and at Notre Dame Medical School.

He is an Adjunct Associate Professor in the School of Surgery and the School of Pathology and Laboratory Medicine at the University of Western Australia.

He is the chair of the Cancer Biology Group of the Clinical Oncology Society of Australia (COSA) and a member of the Scientific Advisory Committee of the Australasian Gastro-intestinal Trials Group (AGITG) and of the Primary Care Collaborative Cancer Trials Group (PC4) Advisory and Scientific committees.

He is a founding director of the Australian Clinical Trials Alliance (ACTA). He is the Australian representative on the Ethics and Policy Committee of the International Cancer Genome Consortium (ICGC) and was recently appointed Co-Chair of the Communication Committee of the ICGC-Precision Medicine initiative.

2017 CALENDAR OF SPEAKERS

- 24 Aug** *ONJCWC from 5:30pm*
Exploring the Role of Radiation Oncology for the Treatment of Prostate Cancer
- 19 Sept** *Ass Prof Nik Zeps*
Negotiating your way through the medical system and life for cancer patients (a must for anyone diagnosed with Prostate Cancer).
- 19 Dec** *Carla D'Amico*
A nurse led Prostate Cancer survivorship clinic.

RADIOTHERAPY ADVANCES IN PROSTATE CANCER

Dr Daryl Lim Joon

Senior Radiation Oncologist, Austin Health and Olivia Newton-John Cancer and Wellness Centre

Notes from presentation to Prostate Heidelberg, 18th July 2017

RADIOTHERAPY UTILIZATION

Curative intent

- Primary Radiotherapy
- Salvage radiotherapy after prostatectomy
- Adjuvant Radiotherapy

Palliative intent

- Palliation of symptoms particularly pain
- Local control

RADIOTHERAPY TYPES

External Beam Radiotherapy is delivered today as **Image Guided Radiotherapy (IGRT)**, **Volumetric Arc Therapy (VMAT)** or **Stereotactic Ablative Body Radiotherapy (SABR)**

Brachytherapy

- Low Dose Rate - Seeds
- High Dose Rate - Iridium Wire

RADIOTHERAPY VERIFICATION

At Austin Health, Gold or Polymer seeds are used in every case to verify where the cancer is before treatment.

The benefits are improved accuracy and outcomes, with a decrease in rectal side effects.

SPACING ORGANS AT RISK (SpaceOAR)

The SpaceOAR system reduces rectal injury in men receiving prostate cancer radiation therapy by acting as a spacer - pushing the rectum away from the prostate and the radiotherapy area.

MRI

mpMRI (multiparametric Magnetic Resonance Imaging)

A Magnetic Resonance Imaging (MRI) can show significantly smaller volumes of prostate cancer, while excluding normal tissue. As such, a MRI reduces dose to normal tissue.

Contemporary MRI of the prostate uses three parameters (hence, the term 'multiparametric').

RADIOTHERAPY OUTCOMES

1. Very good local control i.e. within prostate
2. May prevent development of spread of disease (with ADT)
3. Side effects relate to bladder and bowel (ED)
4. Moderately severe side effects are now uncommon
5. Very severe side effects are very rare but can happen and may require major surgery.

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VOLUMETRIC MODULATED ARC THERAPY (VMAT) or DOSE SCULPTING

Dose Sculpting is a radiation therapy technique that delivers the radiation dose continuously as the treatment machine rotates. As such it is Intensity Modulated Radiotherapy in 3D.

HYPERBARIC OXYGEN THERAPY (HOT)

This is a healing tool that should be used sooner rather than later.

STEREOTACTIC ABLATIVE BODY RADIOTHERAPY (SABR)

A form of external beam radiotherapy that delivers high dose precision targeted radiotherapy to certain areas. It is used for secondary deposits, oligometastatic, oligoprogressive, cardinal lesion or for primary prostate cancer.

HYPOFRACTIONATION

Hypofractionation is higher dose and shorter treatments. There is no difference in outcomes as yet but may increase some side effects.

PROTON BEAM THERAPY

Proton Beam Therapy (PBT) focuses beams of protons instead of x-rays on the cancer; but it provides similar outcomes at a much higher cost.

CYBERKNIFE

CyberKnife is a robotic radiosurgery targeting treatment more accurately than standard radiotherapy. The two main elements are:

1. The radiation is produced from a small linear particle accelerator (linac).
2. A robotic arm allows the energy to be directed at any part of the body from any direction.

There is no difference in outcomes as yet but may be an increase in some side effects.

LUTETIUM-177 PSMA TRIAL

Many prostate cancers express a unique substance on their cell surface called prostate-specific membrane antigen (PSMA). Using this fact,

clinical trials are underway where Lutetium-177 PSMA (LuPSMA) is delivered high doses of targeted radiation to sites of prostate cancer while sparing most normal tissues.

Prostate Heidelberg's own Paul Hobson and Barry Elderfield have been on the LuPSMA Trial clinical trial at Peter MacCallum Cancer Institute. Patrick Woodlock was rejected because only some of his cancer expressed the PSMA and, a good reason, at the time his PSA was going down.

Barry and his wife Lorraine were the patient representatives (hence they became TV personalities) when the next stage of the trial was launched last month. The trial is looking for 200 men across Australia: 100 men will receive Lutetium, and 100 men will be treated with something else.

THE FUTURE

RADIATION ONCOLOGY / RADIOTHERAPY

1. Technical Technology based speciality
2. Mature Technology, and greater knowledge has led to improved outcomes
3. Greater cure rates
4. Less side effects
5. Pace of change is accelerating:
"The best is yet to come"

LATEST RESEARCH SHOWS SURGERY FOR EARLY STAGE PROSTATE CANCER DOESN'T SAVE LIVES

<https://theconversation.com/latest-research-shows-surgery-for-early-stage-prostate-cancer-doesnt-save-lives-81089>

From the 1980s, when prostate screening became available, many men over 40 were diagnosed with early stage prostate cancer. As, understandably, the word "cancer" strikes fear into the hearts of

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many, and most would assume the best course of action would be to have the cancer removed, whatever the side effects may be.

But impotence and incontinence are no small side effects, especially when you consider, as two new studies have done, removing the cancer isn't necessarily the best option, and the cancer may not in fact require treatment at all.

Most prostate cancers take decades to exit the prostate, and most men will usually die with (and but not from) prostate cancer. Autopsy studies reveal prostate cancer in up to 40% of men in their forties and 65% in their sixties, but a much smaller figure of 3-4% of Australian men actually die of prostate cancer at a median age of 82.

Two recent clinical trials undermine the categorisation of prostate cancer as a death sentence. They are unambiguous in their findings and seismic in their implications. Both found men with early stage abnormalities of the prostate who do not undergo surgery or radiation treatment (and now live with its immediate consequences, including incontinence, intimacy issues, bowel problems and intervention regret), but whose condition is monitored for any progression of the cancer, live just as long as men who opted for surgery or radiation.

THE HARD EVIDENCE

In a UK trial (**ProtecT Trial**), three groups of men were assigned to either surgical removal of the prostate (553 men), radiation treatment (545 men) or active monitoring (545 men). After ten years, the total number of deaths due to any cause was 55, 55 and 59, respectively in each group.

Thus 90% of men were still alive after ten years, including those who did not receive any radical intervention. Although surgery delayed the development of metastases (or secondary cancers) in a small number of men, the number of deaths definitively attributable to prostate cancer in

each of the groups was low, only three, four and seven deaths respectively. So the odds of dying specifically from prostate cancer in the first ten years is of the order of 1%.

In a second study from the US published last week, two groups of men were assigned to either surgical removal of the prostate (364 men) or active monitoring (367 men). After nearly 20 years of follow up, the number of deaths due to any cause was 223 and 245 respectively in each group. So once again nearly the same number of men in each group were still alive after 20 years.

Surgery did not prevent death any more than active monitoring. Strikingly, the number of deaths definitively attributable to prostate cancer in the two groups was only 18 and 22 respectively. This means the odds of dying specifically from prostate cancer in the first 20 years after a cancer diagnosis from a prostate-specific antigen (PSA) test was about 5% for the surgical group and 6% for the active monitoring group.

The survival from prostate cancer is so high it's not a question of deciding which treatment is best, but whether any early radical treatment is required at all. The current position has been clearly articulated by the Chief Medical Officer of the American Cancer Society, Dr Otis Brawley, an expert on prostate cancer screening. He points out aggressive PSA screening and treatment has resulted in more than one million American men undergoing needless treatment.

This is not to mention that patients who have undergone surgery are four times more likely to require absorbent pads for incontinence and three times more likely to have erectile dysfunction. These are not issues that are routinely highlighted.

THE FUTURE

The latest DNA research has had minimal impact on how to tell whether an early stage prostate

cancer will grow slowly or whether it will become aggressive and spread outside the prostate, and lead to death. The current evidence is the future behaviour of any cancer is determined very early, and diagnosing it early and actively monitoring its progress will have no effect on the outcome.

The key problem in searching for genetic and DNA based markers is that most pre-clinical studies focus on human prostate cancer cells in dishes, or in mice. This is far removed from cells growing in a patient. Mice are not small humans and their prostates, hormonal balances, diet and genetics are quite different from our own.

Similarly, while MRI scanning means we can find sites in a prostate gland that are abnormal, we can't yet distinguish between the potentially dangerous and the indolent cell populations. More research is needed to develop better screening techniques.

THE CURRENT IMPLICATIONS

For the moment, the first step must be to educate doctors so they can provide full disclosure to any patient of the results of these two trials. The second step is that in speaking to their own doctors about possible treatment options, patients should be active in asking them about the most up-to-date evidence. Surgery or radiation is a big step to take for any condition.

Our Meetings

Prostate Heidelberg provides information, education and support for those affected by prostate

cancer. At the meetings, we

- *Show respect to members and speakers;*
- *Allow people to speak and we listen;*
- *Respect confidentiality;*
- *Allow new ideas to be shared.*

We meet on the **3rd Tuesday** of each month (except January) from 10:00am - 12:30pm at the Uniting Church Meeting Room, Seddon St, Ivanhoe (behind the Commonwealth Bank in Upper Heidelberg Rd). Free parking is available in a large public parking area at rear of the church. Ivanhoe railway station and various bus routes are nearby.

Meetings are open to anyone interested in getting support or information on a prostate cancer journey. Partners or carers are welcome to all meetings. There is no charge for attending. After the meeting you are welcome to join us for lunch in a local Thai restaurant (depending on numbers). If you can't attend daytime meetings, the Diamond Valley Prostate Cancer Support Group has evening meetings:

<http://www.dvpcsg.org.au/>

CORRESPONDENCE

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COMMITTEE:

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| Chris Ellis | |
| Spiros Haldas, Library | |
| Janis Kinne | |

Please contact Patrick Woodlock to redirect or cancel receipt of this Newsletter.

CALENDAR

2017 Meetings: 10:00am -12:30pm
Tues 15th Aug
Tues 19th Sept Nik Zeps “Survivor Pathways”
Tues 17th Oct
Tues 21st Nov
Tues 19th Dec Carla D’Amico & Xmas lunch

2018 Meetings: 10:00am -12:30pm
Tues 20th Feb
Tues 20th March
Tues 17th April
Tues 15th May
Tues 19th June
Tues 17th July
Tues 21st August
Tues 18th September

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