

An update for GPs on modern radiation therapy & hormones for prostate cancer

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Disclaimer – who am I?

- I am a radiation oncologist (24 years in GU cancers)
- I work only in the public sector & have no financial conflict of interest
- I am the Clinical Lead for the RANZCR Faculty of Radiation Oncology **Targeting Cancer Campaign** raising awareness of, and better knowledge around, modern radiation therapy
- I believe that *patients deserve to be fully informed* about all their treatment options
- I believe GPs are critical in supporting this process



Take home messages

- Modern radiation therapy (RT) is as effective as **prostatectomy** in curing prostate cancer
- **GPs can help ensure men know treatment options**
- Advances in RT have significantly reduced serious side effects & improved the patient experience
- Treatment for prostate cancer is rarely urgent
- Hormone therapy (ADT) is often used with RT in the curative setting & **GPs have a key role in managing potential ADT morbidity**



Session plan

This session will cover:

- Modern radiation therapy (RT) advances
- Case study – localised prostate cancer
- Treatment options
- Role of GPs in helping men access options
- The patient experience with RT
- Hormone therapy – GPs' role
- RT in palliation of bone metastases

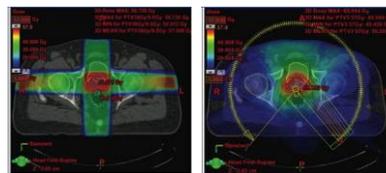


Advances in radiation therapy

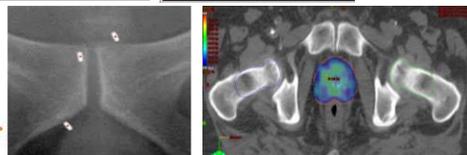
- Increased targeting of cancer/area to be treated (more 'conformal')
- Avoidance of adjacent organs
 - reduced side effects
 - higher doses given safely -> better cure rates
- Imaging of cancer/organ on daily basis
 - image-guided RT (IGRT)
- Faster daily treatments



Increasing Sophistication



Gorayski P et al.
Advances in radiotherapy technology for prostate cancer: What every GP should know.
Aus Fam Phys: 44:663-67, 2015



Types of radiation therapy

- External beam radiation therapy (EBRT)
 - photon (Xray) beams directed from outside the body
 - MRT, VMAT = tightly targeted modern radiation therapy
- OR
- Brachytherapy – high/low dose rate
 - internally placed radiation sources (go to targetingcancer.com.au)



Case Study – Intermediate Risk PrCa

- 67 year old man
- otherwise fit and well
- mild - mod. LUTS increasing over 2 years
- first (only) PSA 12ng/ml
- DRE – normal feeling prostate gland (T1c)
- referred to a urologist
 - TRUS biopsies– Gleason 4+3=7 adenocarcinoma in 6 of 12 biopsies +/- MRI
- what are his treatment options?



What happens now?
As his GP, what is your experience?



Management options

	Low risk	Intermediate risk	High risk
PSA	0 to 10 ng/ml	10 to 20 ng/ml	>20 ng/ml
T-stage	T1 – T2a	T1-T2b	T2c – T4
Gleason	6 or lower	Gleason 7	8 or higher
Management options	<ul style="list-style-type: none"> Active surveillance Radical prostatectomy External beam RT LDR brachytherapy 	<ul style="list-style-type: none"> Radical prostatectomy External beam RT +/- ADT LDR brachytherapy (selected cases) 	<ul style="list-style-type: none"> External Beam RT + ADT Radical prostatectomy + adjuvant EBRT EBRT/HDR brachytherapy + ADT



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Treatment Outcomes

- No evidence for superiority of surgical treatments over radiation therapy (+/- hormones)
- There is growing evidence that RT and hormones offer better control for high risk prostate cancer – adjuvant/salvage RT required post-op in $\geq 40\%$
- No good evidence that planned ‘multi-modal therapy’ improves cancer outcomes – definitely worsens side effects and costs



Decision-making in PrCa

- Men may miss out on having full information about options before surgery
- Many studies show this leads to psychological morbidity = ‘decisional regret’*
 - especially if toxicity, options and costs are inadequately discussed
- Referral pathway can differ from other cancers
- **There usually is more than one ‘good’ option – therefore often comes down to patient preference**



* Christie D et al, Psycho-Oncology, 2015



Prostate cancer Treatment options

Other questions to ask your doctors
ISP radiation oncologist & urologist

Make the choice that's right for you

There are a number of treatment options available for men with prostate cancer. It is important to have a discussion with your doctor about the benefits and risks of each option. You may be unsure about what treatment option is best for you, but it's important that you know the pros and cons of each option.

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Active surveillance
This option involves monitoring your prostate cancer with regular PSA tests and clinical exams. It is suitable for men with low-risk prostate cancer who do not want to undergo surgery or radiation therapy.

Radiation Therapy (RT)
This treatment involves using high-energy X-rays to kill cancer cells in the prostate. It is suitable for men with low to intermediate-risk prostate cancer.

Hormone Therapy
This treatment involves stopping the production of testosterone, which can help to slow down the growth of prostate cancer. It is often used in combination with radiation therapy.

Surgery
This involves removing the prostate gland and any nearby lymph nodes. It is suitable for men with low to intermediate-risk prostate cancer.

Other questions to ask your doctors

- What treatment options would be suitable for me, and are there any characteristics of my prostate cancer which may affect the treatment choices?
- Can you tell me the benefits and risks of the treatment you have recommended?
- What are the side-effects of the treatment, how likely are they to happen, and how can they be treated?
- What is the chance I may need to have more than one of the treatments listed above?
- How soon do I need to make a choice about which treatment I prefer?
- Where and how do I get a second opinion?
- Where can I have treatment, and how much is it likely to cost?
- Are there any clinical trials I might be suitable for, and how can I find out about these?
- What tests and follow up care will I have?

There are several options. Ask which treatment is suitable for you.

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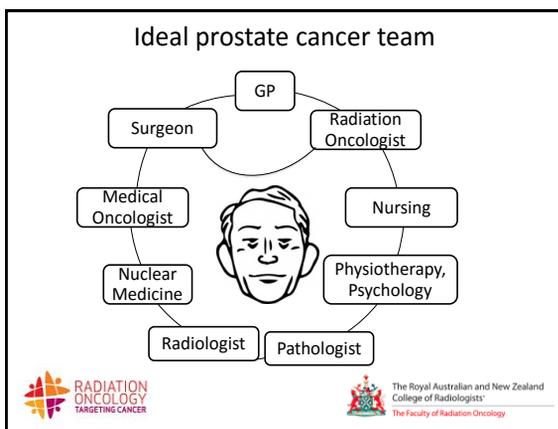
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MDT model in cancer care

- Patient assessment & decision-making requires multidisciplinary panel of experts
- Prostate cancer has lowest rate of MDT meeting discussions for all major cancers (Vic Data)
- Many MDT discussions occur *after* surgery
- Radical prostatectomy rates are increasing – ‘the robot’
- GPs can play a key role helping men get expert opinions & in their decision-making



Gorayski P et al. Advances in radiotherapy: Ensuring balance in the discussion. *AFF*; 44; 11; Nov 2015

Your patient

What you might do if there is a suspicion of PrCa (as well as referring to a urologist):

- encourage him to explore all treatment options (suggest he returns for discussion & communicate this to urologist)
- if biopsies +ve, suggest (and make) a referral to a radiation oncologist
- reassure him that there is likely *no urgency* to decide on treatment



Prostate Cancer

Your GP Discusses any problems, carries out any necessary tests if needed. Makes any specialist referrals.

Urologist Decides if biopsies are needed. If biopsies show cancer, starts discussions of treatment options. They are the surgical experts.

Radiation Oncologist If there is cancer, asks your urologist or GP for a referral to a radiation oncologist. They are the experts in radiation therapy options.

Do you know the radiation therapy can cure prostate cancer?

RESOURCES

Visit the Targeting Cancer website: www.targetingcancer.com.au

Treatment by cancer type To read more about prostate cancer

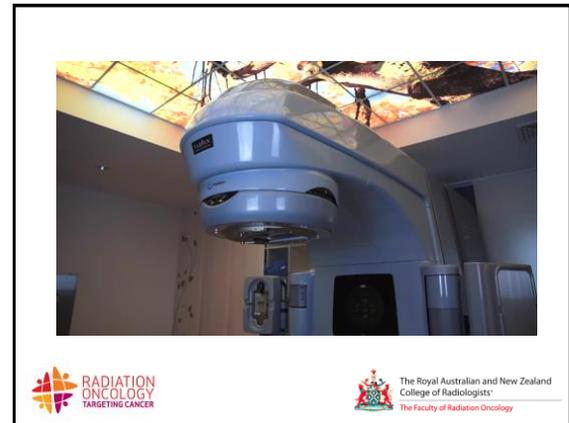
Radiation Therapy To learn about Radiation Therapy as a prostate cancer treatment

Our stories To watch videos on the treatment process & how radiation works



The patient pathway

- Discussion & decision regarding treatment
- If having radiation therapy:
 - ADT commenced if required (4-6 months before RT starts; often after RT as well if high risk)
 - Planning arrangements – fiducials, ?MRI
 - CT planning scan (non-contrast)
 - Tailored radiation plan developed on CT scan (man not present)
 - Treatment delivered – patient reviewed on RT



The patient experience

- Outpatient treatment program
- Treatment sessions (fractions) every work day (or 9/fortnight)
- Usually 30 - 40 mins in department
- Usually 39 - 40 treatments over 8w
- Men can work, drive & do their usual activities through treatment
- Soon: 1- 4 week options for some men
- Follow-up with PSA & clinical review



Side effects of RT to prostate

- Acute
 - short-term, usually mild & settle 2-6w after RT
 - highly variable between men
 - usually start 3-4 w & build towards end
 - fatigue, urinary (frequency, nocturia, dysuria), rectal (discomfort, tenesmus, mucus)
 - 80% men notice some acute effect
- Late
 - urinary incontinence <1%, strictures 2-3%
 - rectal: bleeding, urgency, mucus ~5%
 - sexual dysfunction



Radiation therapy – costs

- Around 60% of radiation therapy is given in the public setting; 40% private
- All centres in Australia are well-equipped
- Waiting lists are rarely a problem
- Public hospitals: most bulk bill
- Private: out of pocket costs range from \$0 - \$8000 total, typically few \$K for curative course of prostate RT



tonicTV



How to refer?



- GPs can refer direct to radiation oncologists
- radiation oncology centres have a nurse or a RO you can get advice from for your patient



Androgen deprivation therapy

- **Used in combination with RT (higher cure rates for intermediate and high risk PrCa)**
 - 6 months – 2 years; LHRH analogues
- Given to men with PSA-relapse with or without metastatic disease on imaging
 - Continuous or intermittent
- Indicated alone for men not well enough for other therapy (uncommon)



Potential morbidity of ADT

- Short term
 - Hot flushes, loss of libido and erections, lethargy
 - Testosterone typically recovers 6 – 12 mo
- Longer term
 - Weight gain, loss of muscle mass, loss of bone density, mood & cognitive changes, non-fatal cardiac events, reduced glucose tolerance, 'metabolic syndrome'
- Highly variable impact on quality of life



Managing ADT-related morbidity

- Short term ADT
 - regular exercise and prevention of weight gain
- Longer term ADT >12 months
 - monitor cardiac risk factors/?cardiology review
 - BSL, cholesterol, lipids
 - bone health – annual DEXA scan, ?bisphosphonates/endocrinologist review
 - resistance **exercise** key (physio/exercise physiologist)



Teleni L et al. Exercise improves QoL in ADT-treated prostatecancer Endocr Relat Cancer Feb 1, 2016:101-112



Radiation therapy for palliation

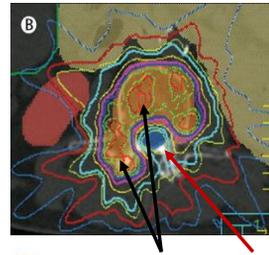
- Bone mets are common
- Simply palliated with RT
- 1 – 5 treatments (fractions)
- 75 - 80% pain response
- Reduction in opioids
- Side effects minimal
- Can be repeated



Morris L et al. Back Pain in a Cancer Patient: A Case Study. *AFR* : 43; 8; Aug 2014



What next for RT in PrCa?



Stereotactic body radiation therapy (SBRT):

- select cases of bone metastases **OR**
 - prostate gland
- e.g. only 5 treatments in curative setting (studies underway)



vertebral metastasis

spinal cord



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More resources for patients & GPs

www.targetingcancer.com.au

For GPs

Navigation links: About Radiation Oncology, Radiation Therapy, Treatment By Cancer Type, Our Stories, Talking To Your Doctor

Website content: Radiation therapy, Safety through targeted technology