



## Low Dose Rate Brachytherapy

What is LDR brachytherapy?

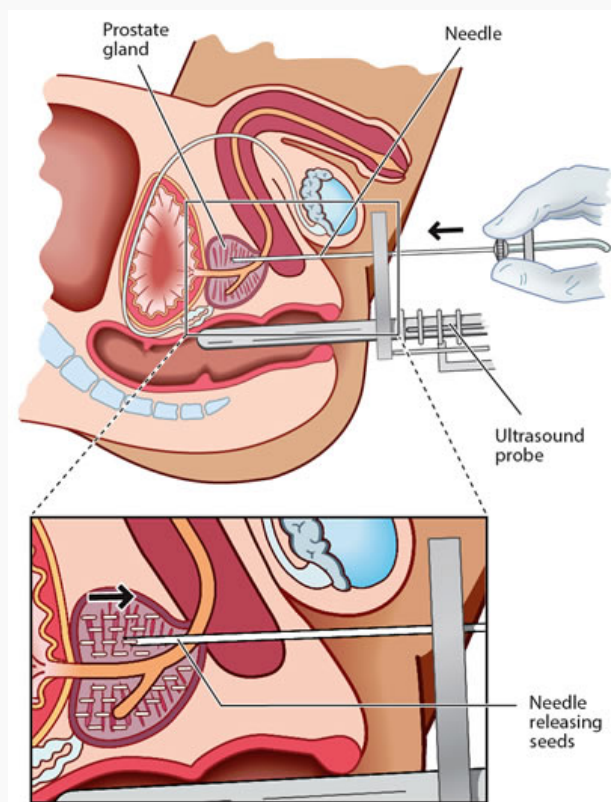


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This minimally invasive treatment for prostate cancer involves placing radioactive seeds into the prostate. The idea is that these seeds kill off prostate cancer cells from the inside. It is a well-established treatment, and has been used in South Australia for almost 10 years.

In selected patients, the cancer outcomes are as good as other treatments for prostate cancer, and the side effect profile can be less severe. For example:

- Compared to radical prostate surgery, brachytherapy is simple, less invasive, has a shorter recovery time and is less likely to affect urinary incontinence. Erectile function straight after the procedure tends to be better with brachytherapy, but does depend on a number of other factors. Please [click this link](#) to be taken to a journal article that explains this. (JCO)
- Compared to external beam radiotherapy, brachytherapy is less likely to cause long-term rectal problems and involves fewer visits to hospital. (JCO)

## Suitability for LDR brachytherapy?

Patients must be carefully selected for this treatment, and it doesn't suit every person or every kind of prostate cancer. Some of the considerations are include:

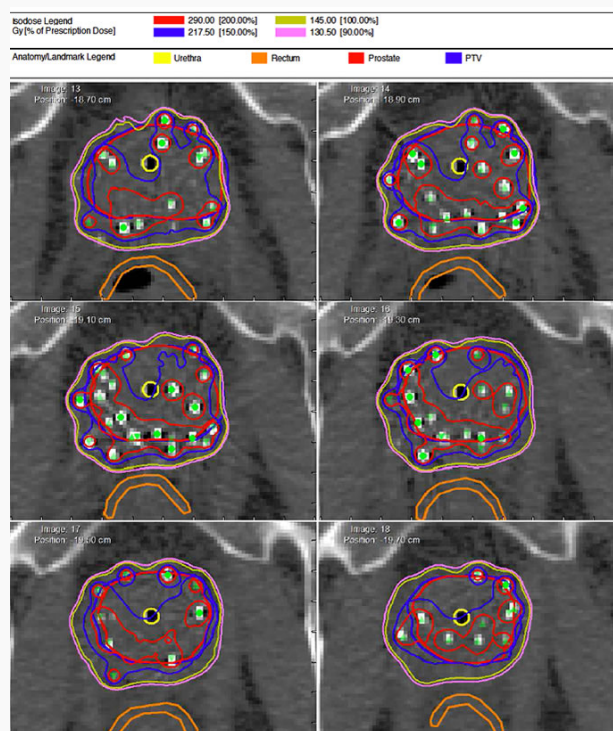
- Your other medical conditions
- Your urinary symptoms
- The size of your prostate gland
- The local extent of cancer - it must be confined to the prostate
- How aggressive the prostate cancer cells are on biopsy

## LDR brachytherapy procedure

### Radiation therapy with brachytherapy

Seed implantation is performed under general anaesthetic. You will have a catheter inserted which will be in place for a short time after you wake up.

The seeds are implanted with needles that puncture the skin below the scrotum. The needles are guided with the help of transrectal ultrasound. After the procedure, you will have a CT scan to confirm the position of the seeds, and to confirm that the radiation dose to the prostate is adequate. This is called post-implant dosimetry, and the diagram below shows an example of this.



## What to expect after the procedure

You are likely to stay in hospital for one night after the procedure; occasionally patients can go home the same day. You will have a urinary catheter in place when you wake up, but this will be removed before you go home.

Initially you may have slight bleeding from the needle puncture sites and have swelling or bruising around the scrotum.

There may be some blood in your urine, and some upset to your waterworks for a short time, but this generally settles down within a few days. Rarely, urine retention can develop; you must come back to the hospital or attend your nearest emergency department if this happens.

Infection in the urine is rare, and needs antibiotic treatment.

More serious infection (sepsis) is very rare. However, if you develop symptoms such as feeling very unwell, a high or swinging temperature, chills, shaking, or a fast heartbeat, immediate medical attention is needed. Please contact your GP or urologist immediately or go straight to your nearest emergency department.

The level of radiation emitted by the seeds is not a danger to other people. However, as a precaution it is advised that pregnant women and young children maintain a distance of a metre from you (except for short periods - hugs and cuddles) for the first month after the procedure.

You will then be followed up every few months when examinations and PSA tests will be done to assess how effective the treatment has been.

Very rarely, follow-up tests may indicate that the seed implant has not adequately treated the prostate cancer, and further treatment may be needed.

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