

ORCHID

Formed in June 1996 by cancer patient Colin Osborne, Orchid exists to save men's lives from testicular, prostate and penile cancers through pioneering research and promoting awareness.

Orchid produces a range of awareness material, including an award winning DVD resource pack, to improve education about cancers that are unique to men, and understanding about how they are treated.

If you would like to know more about Orchid, male cancers, or how you could help, please contact us:

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Printing donated by:

Inspirational print management
= Charterhouse

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Tel: 01707 262222

ORCHID
website designed and sponsored by:



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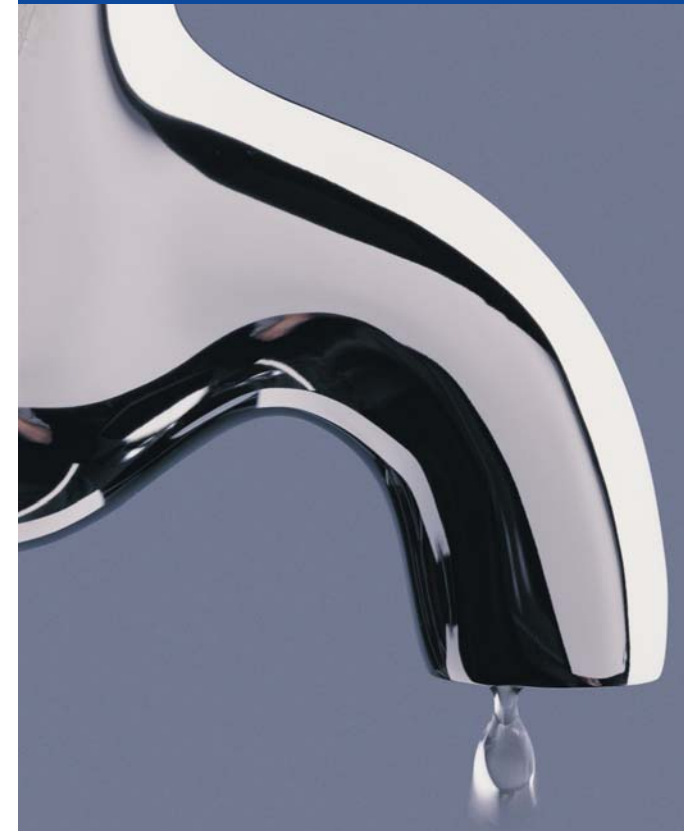
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Registered in England with the Charity Commission No. 1080540. Company No. 3963360

Mar 08

INFORMATION ON PROSTATE CANCER

BRACHYTHERAPY TREATMENT



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BRACHYTHERAPY TREATMENT INFORMATION

WHAT IS BRACHYTHERAPY

Brachytherapy (BRT) is one type of treatment that can be used to treat prostate cancer. It is not suitable for all prostate cancers.

It is radiotherapy delivered internally, rather than more traditional radiotherapy given by external beams (EBRT). Brachytherapy has been used to treat prostate cancer for at least 30 years, but only in the last six years has the technique become more streamlined and its results equivalent to those of surgery.

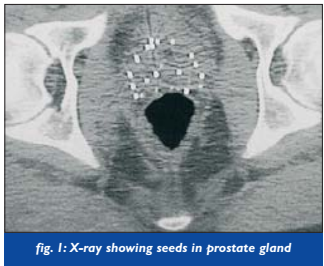
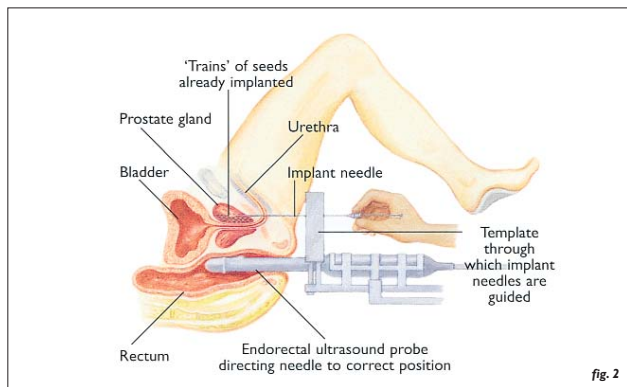


fig. 1: X-ray showing seeds in prostate gland

Brachytherapy involves implanting dozens of tiny radioactive seeds directly into the prostate gland. This has the advantage of delivering a high dose of radiation to tissues in the immediate area of the tumour, while minimising the damage to healthy tissues such as the rectum and bladder.

INTERNAL RADIATION THERAPY

Brachytherapy, or "internal radiation therapy," relies on ultra-sound or CT scanning to guide the placement of thin-walled needles through the skin underneath the scrotal sack. Seeds made of radioactive palladium or iodine are delivered through the needles into the prostate. A customized pattern that conforms to the shape and size of the individual prostate is generated using sophisticated computer programmes. The seeds emit radiation for several weeks, then remain permanently and harmlessly in place.



The implantation procedure can be completed in an hour or two. Most patients have a general anaesthetic although it can sometimes be done using local anaesthesia. The patient usually goes home the same day.

An alternative approach uses much more powerful temporary implants over several days. This requires hospitalisation, but it may be combined with low doses of external beam radiation. Modern internal radiation therapy techniques are a relatively recent development and their long-term results are still being assessed, however more than 90% of patients remain free of disease for five years after treatment.

Internal radiation therapy is not suitable when the prostate cancer is large or advanced or for men with severe bladder problems. It should never be used if the patient has previously been treated by transurethral resection of the prostate (TURP). This is because such patients run an increased risk of urinary complications that can include total urinary blockage. It is suitable for men with small, well differentiated tumours. The treatment is less invasive, has fewer side effects, takes less time to do and requires less time in the hospital.

IT MAY BE SUITABLE FOR YOU IF:

- you are under 75 years and in general good health
- your PSA is less than 15ng/ml
- your prostate volume has been measured to be less than 50cc. If it's larger than that, the number of seeds required will result in too much radiation, although it may be possible to have hormone treatment to shrink the prostate gland first
- you have not had a Transurethral Resection of the Prostate (TURP)
- you have not had radiotherapy affecting your pelvis before
- your bone scan is normal
- your disease has not spread outside the prostate

WHAT WILL MY TREATMENT INVOLVE

There are two approaches to prostate seed implantation: temporary implants (high dose-rate brachytherapy), in which radioactive seeds are placed in the gland for a short period of time, and permanent implants (low dose-rate brachytherapy), where seeds remain in the prostate indefinitely.

The first stage of the treatment is a Volume Study, which is undertaken in the operating theatre. A specially-designed rectal probe and a computer-controlled stepping unit are used for multiplane scanning of the gland. The

probe is mounted in the unit as shown in Fig.2. This unit permits the physicist to accurately plan their treatment in accordance to the shape and size of the prostate.

Temporary implants: a template is used to guide a machine that unloads seeds into the prostate through a pre-positioned tube called a catheter. This occurs during three 60 to 90 minute treatment sessions over a 36 hour period, and involves a stay in hospital.

Permanent implantation is streamlined by comparison, involving one procedure lasting roughly one to two hours. Some patients have some EBRT (external radiotherapy) as well.

PERMANENT IMPLANTS AND SURGERY

The likelihood of having a normal PSA five years after treatment seems to be the same for men who have had permanent Brachytherapy for their low risk prostate cancer as it is for those who have had other treatments such as surgery or EBRT.

There are, as yet, no prospective randomised trials which compare the outcomes of the various forms of treatment but they appear to be similar. You may wish to ask your doctor for his/her individual results.

COMPLICATIONS OF TREATMENT

The discomfort that follows placing implants in the prostate gland can usually be controlled by simple tablet painkillers. There may be problems with urine control in the first few weeks after treatment, but long term complications, such as prostatitis or urinary incontinence, are uncommon and generally mild. Sexual impotence can occur, but it is less frequent after brachytherapy than after surgery.

