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The information contained in this leaflet has been developed by Prostate Scotland and reviewed by its Advisory Group of doctors, nurses and patients. This leaflet is not intended to replace medical advice or seeing a doctor for specific illnesses or symptoms.

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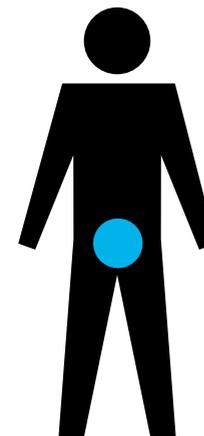
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PROSTATE INFORMATION ●

SPOTLIGHT ON

# Prostate Brachytherapy



## Introduction

You may just have been told that you have prostate cancer and are now facing the decision on which treatment might suit you best. Whilst this may sound daunting to you at first it has been shown that the more you and your family are involved in helping to make the decision about treatment, the more confident and satisfied you may feel with your treatment choice.

It doesn't mean that you need to make this decision on your own; doctors, clinical nurse specialists (CNS) and other men who have been in this same position can give you information, help and support along the way.

This booklet is to help you, your partner and your family understand more about prostate brachytherapy – what it is, who it's suitable for, what happens and the advantages and drawbacks of this treatment and so help you decide if this might be the right treatment choice for you.

There are other treatments available but not all of these might be suitable for you in your particular circumstances; Active Surveillance, Radical or Robotic Assisted Laparoscopic Prostatectomy, External Beam Radiotherapy (EBRT). Your consultant will talk over which treatments may be suitable for you.

## About your prostate

The prostate starts out about the size of a pea then slowly grows reaching the size of a walnut when the man is in his 20s. Around the age of 40, it starts to grow or enlarge again and this may cause problems for a man when passing urine. Only men have a prostate.

It's found inside the pelvis, just below the bladder and in front of the back passage. It wraps around the tube, called the urethra, which allows urine to flow out of the bladder and semen to pass out through the penis. Therefore, the prostate can't be seen or checked from outside the body.

It supplies a thick, clear fluid that mixes with sperm to form semen, called the ejaculate. This fluid helps to nourish and protect sperm during intercourse.

The prostate also makes Prostate Specific Antigen or PSA which is a protein that makes semen more fluid and so helps sperm to move more easily.

## About prostate cancer

Prostate cancer happens when the cells in the prostate develop abnormalities, multiply and grow faster than normal. This causes a growth or a tumour. As the prostate is inside the body this growth can't be seen and often causes no symptoms in the early stages.

## What is prostate brachytherapy?

This is sometimes called LDR brachytherapy or low-dose rate brachytherapy or sometimes seed implants. Brachytherapy is a method of delivering a kind of radiotherapy where tiny metal seeds which emit radiation are very carefully and accurately placed (sometimes called implanted) into the prostate, working to kill cancer cells at the site of the cancer inside your prostate. Because the radiation released doesn't spread more than a few millimetres from each seed it has the potential to cause very little effect on other healthy cells, tissues or organs.

## More about the 'seeds'

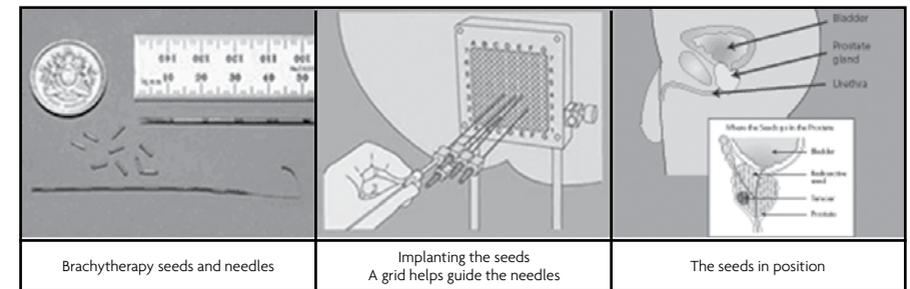


Illustration courtesy of [www.prostatebrachytherapyinfo.net](http://www.prostatebrachytherapyinfo.net)

Each seed is about 5mm long and about 0.5mm thick, about the size of an uncooked grain of rice and contains a measured amount of radioactive material, similar to a very weak type of x-ray. Typically, about 60 – 120 seeds will be placed (implanted) into your prostate to match the shape and size of the prostate and where the cancer cells are. Here, they slowly give off a constant flow of radiation

for about 9 months until they are no longer active. To help you picture how they work it's like the ripple you get when you throw a stone into water, radiation spreads out from each tiny seed just like the ripples in the water. Each seed is placed in the prostate to give the best possible dose of radiation to the cancer while reducing the dose to the remaining tissues.

Because the seeds send out low level radiation very little escapes from the prostate or your body, so don't worry, you won't be radioactive. As it won't do you any harm the seeds will be left inside your prostate.

At the present time prostate brachytherapy is undertaken in 2 centres in Scotland – Edinburgh and Glasgow. Brachytherapy is available to all men with prostate cancer (who are suitable for and select this treatment option) across Scotland. Eligible patients will be referred to the brachytherapy consultant in Edinburgh or Glasgow by their local hospital urology or oncology team. Patients opting for this treatment should be prepared to travel to Edinburgh or Glasgow.

### When might brachytherapy be suggested?

- When the cancer is contained within the prostate and is thought to be low or intermediate risk. (Please see Early Prostate Cancer Explained page 29 for explanation of low/intermediate risk);
- When your Gleason Score is 7 and below or Prognostic Grade Group 1, 2 or 3;
- When the prostate is measured and is not too bulky (less than 50 cc). Sometimes, hormone treatment is used to shrink prostate glands that are between 50 and 70 cc, so brachytherapy can be used;
- For men who are expected to live for at least 10 years;
- When the PSA level is below 20 ng/ml;
- For men who don't have severe problems when passing urine; in other words have a strong flow of urine;
- For men who have not had external beam radiotherapy (EBRT) to the pelvis;
- If you have previously had a Transurethral Resection of the Prostate (TURP) then brachytherapy may be a less suitable treatment option for you. The oncologist or CNS responsible for your care will give you more advice on this.

*(The information that follows about prostate brachytherapy is meant as general guidance. As procedures may vary slightly from hospital to hospital, ask for more advice from staff at the hospital you are attending. If you have been given any specific guidance by the hospital then it is important that you follow their instructions.)*

### Before your implant

Most likely you will have to attend a pre-assessment clinic:

- Possibly have some tests done such as your blood pressure checked;
- Be asked a series of questions to make sure that you are fit enough and suitable to have this type of treatment;
- If you normally take aspirin or other anti-coagulant drugs (like Plavix, Ticlid or Persantin), you will be asked to stop these for about 5-7 days before your seed implant as these may increase bleeding in your prostate. Your oncologist or CNS will most likely give you more advice on this. Remember to let the nurse at this clinic know about any medication that you take such as medicines that are prescribed, over-the-counter medicines that you buy or any herbal medications/supplements that you take. It may be helpful to make a list of all medicines that you take together with the dose and take this to the clinic with you. Also let staff know of any allergies that you have to medicines or plasters;
- More about brachytherapy will be explained along with the advantages and drawbacks of the treatment;
- Once you are happy to go ahead with brachytherapy, you will be asked to sign a consent form.

### What happens?

The amount of radiation, and the effect it has on the cancer cells, is decided by the number of seeds implanted (put) into the prostate and by getting them into exactly the right place; the number of seeds and where they are placed will vary from patient to patient.

Brachytherapy is usually done in two stages.

In both Edinburgh and Glasgow, the 2 stages are done on the same day using a single anaesthetic.

***Why might I have to have hormone therapy before brachytherapy?***

Some men may need hormone treatment. If your prostate is too large for the seed implant, your oncologist may decide to give you hormone treatment for around 3 months to shrink your prostate prior to your brachytherapy.

***What is hormone therapy?***

Hormone treatment can be given in two ways, by an injection or taking tablets. At the beginning, you will often have both.

***Tablets***

By taking a tablet, testosterone can be blocked from getting into the cancer cells. This may be given for a week or two before starting injections and may be continued for a week or so after your injections have started.

***By injection***

Testosterone production is ‘switched off’ by having an injection. The site (where on your body) and how often you are likely to have the injection will vary according to individual circumstances. Injections might be given once every 4 weeks or every 12 weeks or every 24 weeks. You will most likely be given the injection by your GP or nurse at your local clinic.

***What are the potential side-effects of hormone treatment?***

Side-effects vary from person to person and can be similar to those experienced by women going through the menopause. Although you might not have all of these, the most common side-effects are:

- Hot flushes of your face and neck and sweating;
- Tiredness and lack of energy;
- Not being able to get and keep an erection;
- Lack of sexual desire (you may hear this called loss of libido);
- Mood swings – feeling upset or depressed;
- Swelling and tenderness around the breast area;
- Longer term effects, can include some weight gain especially around your tummy area;
- A potential impact on bone density and bone health particularly with the injections. This is called Osteoporosis or bone thinning.

Heart problems

When your testosterone level drops, your blood pressure and cholesterol level may increase and some studies suggest that this may put the man at greater risk of developing heart problems. The longer you are on hormone therapy the greater the risk becomes. The team looking after you will respond to any concerns that might arise.

It may be helpful to think about some healthy lifestyle changes such as stopping smoking, not drinking more alcohol than the healthy guideline limits, having a well-balanced diet and taking exercise.

These side-effects should gradually subside when hormone treatment is stopped.

After about 3 months your prostate volume (the shape and size of your prostate) will be measured to check if the prostate has shrunk enough to allow the implant to go ahead.

Ask your oncologist or CNS if this may be necessary for you. For more information about hormone therapy Prostate Scotland has a booklet ‘*Spotlight on hormone therapy for prostate cancer*’ which can be downloaded from our website or call us and a copy can be sent to you.

**Stage 1**

**The planning stage.**

This measures the size and shape of the prostate and you may hear this called your prostate volume. Most of you will already have had an ultrasound of your prostate when you had your prostate biopsy done so this is a similar scan but without the biopsy. The scan also makes sure that your prostate is not too large.

This information helps the specialist team work out a plan on how many radiation seeds to use and where to put them, so the plan is made to suit the individual man. After your prostate volume has been checked, you will

either have the seeds implanted the same day or be given a later date for the brachytherapy seed implant.

## Stage 2

### Seed implants.

In both Edinburgh and Glasgow, you will be admitted to the ward on the day that you are having your seed implants done.

Because you need to have your bowel empty for the operation you may be given an enema prior to the brachytherapy. You will be asked not to eat or drink for about 8 hours before your operation although you can have clear fluids. Please ask the nurse or doctor what you can drink if you are at all unsure.

### Will I have an anaesthetic before the implant?

Yes. You will usually have a general anaesthetic (where you will be asleep) and the operation generally takes about 1-2 hours. Very occasionally, a spinal anaesthetic may be used instead of a general anaesthetic.

### How is the implant done?

An ultrasound probe will be passed into your back passage to enable the oncologist to see exactly where each needle is going.

The seeds are loaded into about 20 - 35 very fine, hollow needles. To make sure the needles reach the correct area of the prostate, a metal grid or template which has a very regular pattern of holes is placed in front of the perineum. (The perineum is the skin behind your scrotum and in front of the back passage). The needles containing the seeds are inserted through the grid and perineum into the target areas in the prostate. When the doctor confirms that all the needles are in the correct position to accurately target the tumour(s), the seeds are pushed out of the needles and the needles are withdrawn. Usually between 60-120 seeds are passed through the needles, either as individual seeds or as strands with several seeds joined together. The seeds stay in the prostate slowly giving out radiation until they are no longer radioactive. The seeds remain in the prostate forever.

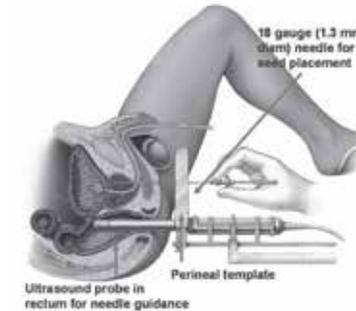


Illustration courtesy of [www.prostatebrachytherapyinfo.net](http://www.prostatebrachytherapyinfo.net)

## What happens after the procedure is done?

Once you are in the recovery room you may be given an ice pack to put between your legs to help with any swelling where the needles were passed into your prostate.

You will most likely find that a catheter has been put into your bladder while you were in theatre for your operation but it's usually removed once you are settled in the ward.

Once you're back on the ward, you'll get something to eat and the staff will want you to get dressed and up on your feet soon afterwards.

Most likely you'll be given some medication to help you to pass urine. When you need to pass urine you may be asked to use a urine bottle rather than the toilet. Although it's not very common, a seed(s) may pass out in your urine but this is nothing to worry about. If it happens don't empty your urine down the toilet and don't touch the seed just let the staff on the ward know.

## Will I have to stay in hospital?

You may have to stay in hospital overnight or in some hospitals you may be discharged on the day you had your implant done. Ask the CNS or oncologist what usually happens in the hospital you are attending. It's a good idea to wear some loose fitting trousers for going home so that you feel comfortable.

**Are there any potential side-effects for prostate brachytherapy?**

Side-effects vary from man to man so you may possibly not have all of these and it varies as to how much any of these will affect you.

*Discomfort:*

Any discomfort is usually for just a short time and is caused by the needles going through the perineum into your prostate. You will be given a pain-killer to help with this. For the first 2-3 days, you may find it tender over your bottom when you sit down. You'll most likely have some bruising and tenderness underneath your scrotum and possibly going down your thighs, but this should disappear within a week or two. A warm bath may help ease any discomfort.

*Passing urine:*

Don't be alarmed if you see traces of blood in your urine for several days after your treatment – this is quite normal. It's beneficial to drink at least 2 litres of fluid every day especially in the first few weeks, as this helps to flush out the bladder and reduce the risk of any blood clots from forming in the bladder.

You may find some discomfort or pain or have a burning feeling when passing urine. You might also notice that you have a slow stream when passing urine and need to pass small amounts of urine much more often. Sometimes it helps to sit down when you pass urine rather than standing up. Symptoms usually settle after about 10-12 weeks, occasionally taking up to 6-12 months. Only rarely will you have a catheter.

*Difficulties with erections:*

As with most treatments for prostate cancer, some men may find increased difficulty in getting and keeping an erection. If this is the case, let your CNS or oncologist know as there are treatments available.

- It's quite usual to find that the first few times you ejaculate it is slightly painful;
- You may notice that the ejaculate is a different colour, stained dark brown or red, because of bleeding in the prostate but this should go back to normal in a few weeks;

- Because the prostate produces fluid that is part of semen, after your treatment, you might notice a reduction in the amount (or absence of fluid) when you ejaculate– this is quite normal;
- For the first 2-3 months (or for 6 ejaculations) you should use a condom during intercourse just in case you pass a seed;
- You should double wrap condoms before putting in the bin.

**Possible risks of procedures under general anaesthetic**

Your oncologist will most likely discuss these with you before you sign the consent form.

Possible complications	Prevention/notes
<p><b>FORMATION OF BLOOD CLOTS</b> Possible results: deep vein thrombosis of the leg (DVT), pulmonary embolus or PE (a clot in the lung), stroke</p>	Compression stockings and compression system used at time of implant. Early mobilisation back on the ward. Very rare complication
<p><b>PROBLEMS ARISING FROM POSITIONING</b> Possible results: skin irritation or damage pressure sores, nerve damage (with associated muscle weakness)</p>	Careful cushioning of the legs on the leg supports. Very rare complication
<p><b>SKIN DAMAGE</b> Arising from allergic reaction to the disinfectant, sterile gowns (used during the procedure)</p>	Very rare complication
<p><b>BLEEDING/HAEMATOMA</b> The prostate receives a high blood flow with the result of a risk of bleeding during the procedure</p>	Some bruising is common, possibly going down your thighs but this should disappear within a week or two. Blood loss is generally under 30mls and hence transfusion or further intervention is extremely rare

### Specific risks from brachytherapy treatment

Your oncologist will most likely discuss these with you before you sign the consent form.

Possible complications	Prevention/notes
<b>URINARY RETENTION</b> Inability to pass water following the procedure Urinary retention can occur in 5% of men treated	Treatment would be a urinary catheter for 1 - 2 weeks. Very rarely required for longer and can be changed to a supra pubic catheter. Medication will reduce the risk of retention and is given routinely after the procedure (A supra pubic catheter means that a small cut is made just below your tummy and the catheter is put into the bladder through this cut)
<b>URINARY INFECTION</b> Post treatment infection	Antibiotics given at the time of the procedure and for 10 - 14 days after going home
<b>URETHRAL STRICTURE</b> Narrowing of the urethra making passing urine difficult	Quite uncommon but can occur even a few years post treatment and requires stretching/dilating the urethra under a general anaesthetic and sometimes subsequent intermittent passing of a small dilating tube down the urethra to keep it open
<b>CYSTITIS/FREQUENCY/URGENCY</b> Bothersome urinary symptoms	Quite common until the radiation has all been delivered and can be treated with a high fluid water intake, cranberry juice (not if on warfarin), reducing caffeine and alcohol and using simple pain killers
<b>ERECTILE DYSFUNCTION (IMPOTENCE)</b> Inability to get erections	This can occur a number of years after treatment Various types of treatment are available and are often helpful.
<b>INFERTILITY</b> Ejaculate is reduced due to a reduction/absence of seminal fluid production from the prostate	Infertility is not 100% therefore contraception is required if partner is of child bearing age

Possible complications	Prevention/notes
<b>DIARRHOEA/PROCTITIS</b> Bothersome bowel symptoms (Proctitis is inflammation of the lining of the rectum)	5% of men may notice this until the radiation has all been delivered and can be treated with Fybogel or Proctosedyl as required
<b>RECTAL FISTULA</b> A hole in the rectal wall	Very rare complication indeed less than one man per 1000 treated where the radiation causes a hole in the rectum requiring surgical repair
<b>FATIGUE</b> Excessive tiredness	25% of men report increased fatigue for up to 12 months before full recovery
<b>EMBOLISATION OF SEED TO LUNGS</b> Passage of a seed in the veins to the lungs	This can occur if a single loose seed is placed in a small blood vessel in the prostate and is carried to the lungs. Stranded seeds may be used to reduce this risk so it is extremely rare and if it were to occur does not generally cause any concerns
<b>LATE COMPLICATIONS OF RADIATION</b> These are rare events that can happen from 6 months onwards after completion of treatment	Blood in the urine or back passage can occur due to tearing of delicate blood vessels called telangiectasia which can form following radiation treatment (less than 5%). Usually mild and intermittent but may require cauterisation (sealing) in the bladder or laser cauterisation if in the rectum
<b>RADIATION INDUCED SECOND CANCER</b> Theoretical risk of radiation to surrounding tissues	From the evidence there appears to be a very low risk of secondary cancers from brachytherapy on its own and indeed it is very uncommon

### Will I need to take any medicines?

#### *Pain-killers*

You may not have any side-effects for the first few days. However, if you feel any discomfort you can take simple painkillers, such as paracetamol or ibuprofen, to help with this.

### *Antibiotics*

You will be prescribed a course of antibiotics to take for around 10-14 days to prevent an infection after the implant. Remember to finish all the antibiotic tablets.

### *Alpha blockers*

This medicine relaxes the muscle around the urethra (waterpipe) to help make it easier for you to pass urine. It will most likely be started just after your operation and you may be advised to take it for anything from 3 – 6 months until your symptoms settle down. A small supply of alpha blockers will most likely be given to you when you are discharged from the ward which will then be continued by your GP.

### *Anti-inflammatory pain-killers*

For a few months you may be given Ibuprofen or Diclofenac to help with inflammation and the burning feeling you may have when passing urine.

## **Getting home.....**

### *Activity*

It's quite normal to feel a bit tired.

- For the first few days, you shouldn't do any heavy lifting or strenuous exercise;
- After a few days you can probably go back to your normal day-to-day activities;
- You can probably go back to work a few days afterwards as you usually recover quite quickly. If your job involves a lot of physical activity it might take slightly longer;
- You shouldn't drive until 24 hours after the operation and some men wait for a few days before driving.

### *Drinking*

Drinking about 8-10 glasses of water each day helps flush out the bladder and so helps reduce the risk of blood clots. Having a glass of cranberry juice each day may help reduce the risk of infection but if you're on warfarin you shouldn't drink cranberry juice. Caffeine irritates the bladder and can affect how much urine you pass so if having tea or coffee, decaffeinated types are

better. Cola type drinks also contain caffeine so try to buy those without caffeine. Remember, too, that some energy drinks or shots contain large amounts of caffeine so it may be better to avoid these meantime.

### *Constipation*

Keeping your bowel movements regular helps to prevent any discomfort because of the swelling in your prostate or straining. If you find that constipation is a difficulty then include at least 5 portions of fruit and vegetables every day and have wholemeal bread and cereals. If constipation becomes a real difficulty your GP may be able to prescribe something to help or have a word with the pharmacist. Fybogel is often suggested to help keep your bowel movements regular and help with any diarrhoea.

### *Intimacy*

It's quite safe to sleep in the same bed as your partner right after your implant (except if she's pregnant) although you are advised not to have sexual intercourse for at least a week. You will notice that your ejaculate may well be discoloured, possibly dark red or brown because of bleeding during the operation. Because there is the very slight chance of a seed being passed into the ejaculate, you should use a condom for at least the first 2-3 months (or 6 ejaculations) during intercourse. If your partner is pregnant and you have sexual intercourse then you should use a condom for the full pregnancy. To dispose of the condom, twist, tie and double wrap before putting in the bin.

### *Checking your urine*

You may be asked to check your urine for a few weeks afterwards to look for any seeds in the toilet bowl which may have passed into your urine. The CNS or oncologist will most likely give you more information about what to do if you do pass a seed in your urine. If you happen to pass a seed, it's nothing to worry about but always let the doctor or nurse know when you go back to the clinic. Even if you do lose one or two seeds that shouldn't mean your treatment won't work as well.

**Remember to finish the full course of antibiotics that you were given**

### *When to contact your doctor*

Although this doesn't happen very often, if you have any of the following signs then you should get in touch with your GP or NHS 24 as these can be signs of an infection:

- Your temperature goes up;
- You feel chilled and are shivering;
- You can't pass urine;
- Your urine is very bloody or there are blood clots in your urine;
- You have difficulty in passing urine.

### **Follow up appointments and check-ups**

After your seed implant you will still have regular check-ups with your oncologist or urologist.

- After 4 - 6 weeks you will most likely go back to the hospital to have a CT scan to check that the dose and position of the seeds were correct. This scan doesn't tell if your treatment is working so you won't get any results but you may be told that the seeds are in the correct place.
- Very importantly, you will want to know if your treatment has worked. You will have a PSA blood test in about 3 months and then 3 - 6 monthly afterwards. The PSA level often falls slowly over a few years.

Occasionally at around 2 years the PSA may 'bounce' or 'spike'. This doesn't necessarily mean that your treatment isn't working and your CNS or oncologist will most likely want to chat over why this might happen. However, if your PSA level keeps on rising over the course of a year, this **may** be due to the cancer recurring and your oncologist or CNS will talk this over with you.

When you go back to the clinic, let the staff know of any problems or if you have been having any side-effects from your treatment. To help with this you may want to ask your doctor or CNS for a copy of the Prostate Log Book to record your results. This is also available from the Prostate Scotland website [www.prostatescotland.org.uk](http://www.prostatescotland.org.uk) or by calling us and a copy will be sent to you.

### **Safety and your seed implants**

#### **Contact with others**

You may worry that because of your implant you could be a danger to your partner, family and friends or if something might happen to them because of your implants. As most of the radiation remains within your prostate it won't be transmitted and so this shouldn't be a problem. It may be reassuring to know that you won't be 'radioactive' so it won't affect the things that you touch or come into contact with and your urine, blood, sweat, saliva or motions won't be radioactive either.

To be on the safe side for the first 3 months after implant:

- Contact with children. It's recommended that you don't sit children or babies in your lap for long periods of time or sit very close to them. There's no harm in giving them a quick hug or cuddle;
- Contact with women. Women who are or may be pregnant shouldn't sit beside or be too close to you.

#### **Your Brachytherapy Information Card (BIC card)**

After your implant you will be given or sent an information card to carry. The card gives other doctors and nurses who may be treating you essential information that they need to know to keep them safe. You, the CNS or doctor should fill in any blanks on the card with the information about your treatment. If you're not given a card, it may be a good idea to ask for one.

Your BIC card from the Beatson or Western General Hospital may include slightly different information and be written in a slightly different way from the sample information given overleaf. Please use the card that you have been given by your hospital.

- i. **The name and address of the hospital where you had your treatment;**
- ii. **Telephone numbers and possibly names of staff at the hospital where you were treated who may be contacted if further information is required;**
- iii. **Your name and date of birth may be on the card;**
- iv. **Why you had the treatment and the type of implant you were given eg the number of permanent radioactive iodine 125 seeds that were placed in your prostate;**
- v. **The date the seeds were implanted;**
- vi. **Safe date. The date that you no longer need to carry the card ie when the seeds will no longer be radioactive. For example, this means it will be a safe for medical staff to carry out planned pelvic surgery without additional precautions;**
- vii. **Where the card should be returned in the event that you lose the card;**
- viii. **It will state that you should show this card to any doctor or nurse who is treating you.**

### **Things to remember about your Brachytherapy Information Card with regard to treatment for other medical conditions, security monitors and eventual disposal of the card.**

- Please let your partner, family member or friend know about the card in case you become ill and need to be treated as an emergency, or if you pass away from another illness or in some other emergency situation so they can let people know about the implants;
- Remind your GP when he/she is referring you to hospital for **treatment of another** illness to include in your referral letter that you have had brachytherapy treatment and when you had it. At any hospital that you attend show the doctor or nurses your information card. If you have to go to hospital or see different doctors or nurses about another medical condition, especially in the first 20 months after your implant, then you should always let them know that you have had brachytherapy treatment to your prostate. Showing them your brachytherapy information card is essential. If you're having any further surgical treatment to your prostate

- or around your pelvis you should let the doctors know, even though your brachytherapy treatment will most likely be in your case notes;
- If you pass away within the first 20 months of having your implants for any reason, then your family should be aware that you would have to be buried and not cremated. This is because at high temperatures radiation could be released and would be harmful to funeral workers. Hospital staff who carry out post-mortems also need to know that you've had brachytherapy so it's essential that your family let these people know about your treatment. Then if they're unsure they will be able to contact hospital staff for more information and advice.

### **Security monitors**

- It's essential to carry this card with you at all times, especially if travelling away from home or going abroad. Some security monitors, such as at airports, are very sensitive and can detect low levels of radiation. To get over this difficulty, you should show your brachytherapy information card which gives details about your seed implants so you can confirm your treatment with security people and they may wish to contact the hospital for more information. Your doctor or CNS will give or send you this card and you should carry it with you all the time for the first 20 months after treatment.

### **Finally**

- After twenty months you no longer need to keep the card but please shred or cut up before throwing out.

### What advantages and drawbacks are there to think about with brachytherapy?

Advantages	Drawbacks
Offers cure rates for low and intermediate-risk disease equivalent to surgery and external beam radiation (EBRT)	If there is local recurrence in the prostate despite brachytherapy then salvage (potentially curative) treatment carries more potential side effects such as incontinence and impotence. For some men re-implantation with more seeds (a focal salvage seed implant) may also be an option. Salvage prostatectomy, which is not often performed, requires an experienced surgeon. Cryotherapy and HIFU are other options that can be considered. For some men observation and delayed hormone therapy may be more appropriate
Short procedure under general anaesthetic with short hospital stay and catheter removed on the ward when the man wakes up. Minimal time off work and can continue normal activities	Some discomfort when the implant is done and for a short period afterwards.
Very low risk of incontinence and reasonable chance of maintaining erections	Not suitable for all men who have poor urinary functions Discomfort, frequency and urgency in passing urine until the radiation has died down. Rarely retention of urine requiring a catheter. Some difficulties with erections but treatments available as with surgery Infertility – although it has been known for pregnancies to occur following brachytherapy treatment
Lower risk of bowel problems than with external beam radiation (EBRT)	From the evidence there appears to be a very low risk of secondary cancers from brachytherapy on its own and indeed it is very uncommon

Before choosing brachytherapy you may have some questions to ask your oncologist or CNS. A full list of possible questions is given below. Think about what you would like to know, so perhaps you would need only to ask a few of these, or you may have questions of your own.

- Is brachytherapy a suitable option for me to think about? Is it available in my area?
- If brachytherapy is not available in my area, where would I be referred to and how can I be referred?
- What do you expect the brachytherapy to do to the cancer? Could it cure my cancer?
- Would I need to have hormone therapy before the brachytherapy? If I do, how long will this be for and what are the side-effects of hormone therapy?
- Would I also need to have EBRT?
- Why do you think brachytherapy or brachytherapy and hormone therapy might be the best option for me?
- Could having brachytherapy make me feel worse?
- Can you explain what the risks and side-effects are likely to be? Are these likely to affect me in the short term or are they more likely to be longer term?
- Because of the radiation, will it be safe for me to be around pregnant women and children?
- In your unit, after having brachytherapy, roughly how many men do you find have problems with incontinence and erectile dysfunction and for how long?
- Is there anything I could do to help with the side-effects?
- How does this treatment work?
- How do I have the treatment?
- Are the seeds put into the prostate only where the cancer is or do the seeds cover the whole prostate?
- When would I have the brachytherapy?
- Where would I have the treatment?
- How many times would I be in hospital and for how long?
- When and how will we know whether the brachytherapy treatment has

been successful? What check-ups would I have and how often would I need check-ups? What would be done at the check-ups – PSA , scan, etc?

- If brachytherapy is not successful then what would my options be?
- Are there other suitable treatment choices that I could think about?
- Why would brachytherapy be better for me than a radical prostatectomy or EBRT?
- What is the outlook for me?
- Is there someone that I can talk to about brachytherapy who has already had this treatment?
- What happens if I go through airport security with these seeds in my prostate?

### High Dose Rate Brachytherapy implant or HDR Brachytherapy

HDR brachytherapy is generally considered for men with high-risk prostate cancer. It combines 3 - 4 weeks of EBRT with 1 - 2 fractions of HDR to boost the radiation dose to the tumour.

The HDR needles are inserted into the prostate using the same technique as for LDR seeds under a general anaesthetic or spinal anaesthetic. The planning computer will then determine the time and position that the implant source spends within each needle to deliver the required dose. The needles are then connected to a machine that contains the brachytherapy source Iridium 192. The Iridium source travels from the machine into each needle in turn to deliver the required dose.

At the end of the treatment the source returns to its machine and no seeds remain in the prostate. The needles may remain in position within the prostate overnight if a second fraction of treatment is required and the process is repeated the next day. This treatment is currently not available in Scotland but may be available in the future.

## Useful contacts

### For more information.....

If you have any questions, then you can speak to your CNS, oncologist or GP. It may also help to look at the following websites or contact the organisation by phone or email. These organisations also have information leaflets available and some offer telephone helplines which you can contact for support or to answer your questions. There may be a prostate cancer support group in your area where you can talk to other men (and often their family) who have been diagnosed with prostate cancer. These support groups may provide you with additional information. Often these men share their experiences when they were diagnosed with prostate cancer, how they decided on treatment and about the various types of treatment they are having or have had.

Organisation	Website	Contact number	Helpline available
Prostate Scotland	<a href="http://www.prostatescotland.org.uk">www.prostatescotland.org.uk</a>	0131 603 8660	Telephone information service (not a helpline) 0300 666 0236
NHS 24	<a href="http://www.nhs24.com">www.nhs24.com</a>	111	✓
Prostate Link UK	<a href="http://www.prostate-link.org.uk">www.prostate-link.org.uk</a>		
Prostate Cancer UK (includes some support group contact details)	<a href="http://www.prostatecancer.org.uk">www.prostatecancer.org.uk</a>	0141 314 0050	✓ 0800 074 8383
Macmillan Cancer Support Support nurses	<a href="http://www.macmillan.org.uk">www.macmillan.org.uk</a>	020 7840 7840 0808 808 0000	✓
Cancer Research UK Cancer Information Nurses	<a href="http://www.cancerresearchuk.org">www.cancerresearchuk.org</a>	020 7242 0200 0808 800 4040	✓
Edinburgh and Lothian Prostate Cancer Support Group (also offer Buddy Support)	<a href="http://www.elprostatecancersupport.co.uk">www.elprostatecancersupport.co.uk</a> Email: <a href="mailto:info@elpcsg.co.uk">info@elpcsg.co.uk</a>	07933 260 066	✓
Livingston group (for West Lothian)	Email <a href="mailto:charliehogg@blueyonder.co.uk">charliehogg@blueyonder.co.uk</a>	01506 845 981	

Organisation	Website	Contact number	Helpline available
Prostate Cancer Support Group, Maggie's Dundee	Email Lorna.McGoldrick@maggiescentres.org	01382 632999	
Prostate Cancer Support Group Maggie's Gartnavel General Hospital, 1053 Great Western Road Glasgow G12 0YN	glasgow@maggiescentres.org	0141 357 2269	
UCAN Care Centre Ward 209, Aberdeen Royal Infirmary	www.ucanhelp.org.uk	01224 550333 (voicemail)	
Prostate Cancer Support Network Fife	Maggie's Centre, Victoria Infirmary, Kirkcaldy	01592 647 997	
Scottish Borders Prostate Cancer Support Group	Macmillan Centre Borders General Hospital	01721 722 655	
Highland Prostate Cancer Support Network	Maggie's Centre, Raigmore Hospital, Old Perth Rd, Inverness IV2 3FL	01463 706306	
Webmd	www.webmd.com		
Patient UK	www.patient.co.uk		
Medicine net	www.medicinenet.com		

**Maggie's Aberdeen**, Aberdeen Royal Infirmary, Elizabeth Montgomerie Building, Westburn Road, Foresterhill, Aberdeen, AB25 2UZ, telephone 01224 645928, email aberdeen@maggiescentres.org

**Maggie's Dundee**, Ninewells Hospital, Tom McDonald Avenue, Dundee, DD2 1NH, telephone 01382 632999, email dundee@maggiescentres.org

**Maggie's Edinburgh**, The Stables, Western General Hospital, Crewe Road, Edinburgh, EH4 2XU, telephone 0131 537 3131, email edinburgh@maggiescentres.org

**Maggie's Fife**, Victoria Hospital, Hayfield Road, Kirkcaldy, KY2 5AH, telephone 01592 647997, email fife@maggiescentres.org

**Maggie's Centre Forth Valley**, Forth Valley Royal Hospital, Stirling Road, Larbert, Stirlingshire, FK5 4WR, telephone 01324 868 069.

**Maggie's Glasgow**, Gartnavel General, 1053 Great Western Road, Glasgow, G12 0YN, telephone 0141 357 2269, email glasgow@maggiescentres.org

**Maggie's Highlands**, Raigmore Hospital, Old Perth Road, Inverness, IV2 3FL, telephone 01463 706306, email highlands@maggiescentres.org

**Maggie's Lanarkshire**, Monklands Hospital, Monkscourt Avenue, Airdrie, ML6 0JS, telephone 01236 771199, email lanarkshire@maggiescentres.org

Please note Prostate Scotland is not responsible for the content of any of the external websites.

### Prostate Scotland

Other booklets from Prostate Scotland that you may find useful:

- **'Early prostate cancer explained'**
- Spotlight on **'Pelvic floor exercises for men'**
- Spotlight on **'Prostate conditions and erectile dysfunction'**
- Spotlight on **'Incontinence as a symptom of prostate problems'**
- Spotlight on **'Hormone therapy for prostate cancer'**

