

## Insertion of gold markers before radiotherapy to the prostate

You have been recommended to have radiotherapy treatment to your prostate. To help us see the position of the prostate during treatment, we implant inert gold markers (also called fiducials or seeds) into your prostate. These markers can be seen on x-rays and confirm the exact position of your prostate - this improves treatment accuracy and may reduce radiotherapy side effects.

### How will the markers be inserted?

You will have three or four gold markers inserted into your prostate under ultrasound guidance. This procedure is very similar to a transrectal prostate biopsy, although quicker to carry out. The healthcare professional performing the procedure will use ultrasound to guide a needle through the wall of your rectum into your prostate gland to implant the markers. The implanted markers are very small; their diameter is 1 mm x 3 mm (smaller than a pin-head).

### Is there anything I should do before the procedure?

If you are taking medication which thins your blood such as aspirin (more than 100 mg daily), clopidogrel, warfarin, apixaban, rivaroxaban or dabigatran you will be given specific advice on when to stop this medication in advance of the procedure (if safe to do so). You may need temporary medication to prevent blood clotting during this time. The doctor will discuss this with you in clinic. Typically this medication can be restarted 24 - 48 hours after the procedure, as long as there is no significant bleeding.

If you are taking medication which thins your blood and have **not** been given any advice about stopping these tablets before your procedure then please contact the uro-oncology specialist radiographers (see page 4 for contact details).

I need to stop taking my \_\_\_\_\_ tablets on **(please complete in clinic)**

\_\_\_\_\_ **(date)**

There is a risk of developing an infection after fiducial marker insertion. This risk can be reduced by taking a course of antibiotic tablets by mouth (oral ciprofloxacin and oral metronidazole).

In preparation for marker insertion it is important you take the oral tablet antibiotics following the schedule below, starting **two hours before** the procedure time. After the procedure it is very important that you complete the course of tablet antibiotics as prescribed. You must **not** take



dairy products such as milk or yoghurt or fortified fruit juices (such as calcium-fortified orange juice) for two hours **before** and **after** taking these antibiotics. You must also avoid indigestion remedies (such as antacids and omeprazole) and medicines containing iron or zinc for two hours before and after taking the antibiotics.

The Metronidazole tablets react with alcohol so you must **not drink any alcohol until at least 48 hours after your last dose of metronidazole.**

**Antibiotic schedule:** please follow unless advised otherwise by a healthcare professional (*please complete in clinic*)

Fiducial appointment: Date _____				
2 hours before At _____	1 hour before At _____	Procedure time _____	6 hours after At _____	11 hours after* At _____
↓	↓		↓	↓
400 mg oral metronidazole	500 mg oral ciprofloxacin	Procedure	400 mg oral metronidazole	500 mg oral ciprofloxacin

\* Or first thing in the morning.

At least one week prior to the procedure, a rectal swab is sent to check that these antibiotics are correct for you. Occasionally it is necessary to vary the antibiotics depending on your medical history or the swab results. If this is necessary, your doctor or the uro-oncology specialist radiographers will contact you to discuss.

If you suffer from epilepsy, have been diagnosed with myasthenia gravis or have a history of tendon problems following previous antibiotic use, please also contact the uro-oncology specialist radiographers to discuss before taking the antibiotic tablets (contact details on page 4).

### What happens when I arrive at the department?

The location of your appointment depends on your hospital site and day of your appointment:

Site	Day of the week	Location
Chelsea	Monday	The Rapid Diagnostic & Assessment Centre, Dovehouse Street, The Royal Marsden
Sutton	Tuesday	The Stanley Cohen Rapid Diagnostic & Assessment Centre, First Floor, West Wing, The Royal Marsden
	Friday	The Radiotherapy Department, Basement, East Wing, The Royal Marsden

Please report to the reception desk on arrival.



The healthcare professional carrying out the procedure will explain the procedure and risks to you in detail and answer any further questions you may have. They will also confirm you have given written consent for the procedure to be carried out.

You may be more comfortable if you empty your bladder before the procedure.

### **What happens during the procedure?**

We will ask you to undress from the waist down, put on a gown and lie on the examination couch on your left-hand side. The healthcare professional will then examine your prostate gently with their finger before inserting the ultrasound probe into your back passage. Once inserted, the probe is moved around to examine the prostate gland. You may find this a little uncomfortable - please let us know if you do.

The markers are inserted via needles which pass through the wall of your rectum into your prostate. Each needle only remains in the prostate for around five seconds and the process of inserting the markers typically takes 5-10 minutes. Most men find this procedure uncomfortable but few find it painful - if you do experience pain, please let the healthcare professional know.

### **Are there any side effects?**

After the procedure you may notice:

#### Bleeding

- Blood in your urine which should clear within one week, but may continue longer. Drinking two to three extra glasses of water a day will help this clear up.
- Blood from your back passage which should settle within one to three days.
- Blood in your semen which may last for several weeks.

**If bleeding becomes heavy, please go to your local accident and emergency department.**

#### Infection

Within the week after the procedure, if you develop a temperature (38.0°C/ 100.4°F or higher), feel shivery, feel like you are developing the flu or have stinging, burning and pain on urination, **it is important that you attend your nearest accident and emergency department**. You should tell the doctor there that you have had a transrectal ultrasound and marker insertion with metronidazole and ciprofloxacin antibiotic cover (on completion of the procedure you will be given a discharge letter with this information, you should give this to the accident and emergency department if needed).

#### Pain

You may experience some discomfort following the procedure. Taking a simple painkiller such as paracetamol should help. **Please note** you should **not** take anti-inflammatory medicines, such as ibuprofen or aspirin as these may increase bleeding.



## Contact details

If you have any questions about the preparation for your gold seeds or are concerned about any side effects after the procedure, please contact us.

During working hours you can speak to the uro-oncology specialist radiographers, clinical nurse specialists and support workers on:

Uro-oncology specialist radiographers	Chelsea & Sutton	020 8642 6011 ext.4990
Uro-oncology specialist radiographers	Sutton	020 8642 6011 ext.4405/4251
Uro-oncology specialist nurses	Chelsea	020 7352 8171 ext.4508
Uro-oncology specialist nurses	Sutton	020 8661 3831
Urology cancer support worker	Chelsea	020 7352 8171 ext.4945
Urology cancer support worker	Sutton	020 8642 6011 ext.4440

Alternatively, please call: **The Royal Marsden Macmillan Hotline:** 020 8915 6899  
(Available 24 hours a day, 7 days a week)

