



Royal Berkshire
NHS Foundation Trust

Radium 223 (Ra223) for the treatment of bone metastases from prostate cancer

Information for patients
and relatives

Nuclear Medicine / Medical Physics: 0118 322 7355

King Edward Ward:

0118 322 7464

This leaflet explains what happens when you have been referred for Radium 223 treatment – an effective treatment for bone pain in patients with bone metastases from prostate cancer. It outlines treatment, possible side effects and aftercare advice.

The treatment plan

You have been referred to the Nuclear Medicine & Medical Physics Department at the Royal Berkshire NHS Foundation Trust for treatment of your bone metastases with a radioactive substance called Radium 223.

Once you have decided to go ahead, a member of the Physics Team will ring you to discuss the treatment with you. Treatment is given as an outpatient, with appointments usually taking around 30 minutes. Treatment is given every four weeks and, depending on how you tolerate and respond to the Radium 223, a maximum of six treatments will be given.

What is Radium 223 and when is it used?

Some men with prostate cancer may develop bone metastases (when the cancer spreads to bones), which can become painful. If the treatment that has been used to control your disease becomes less effective, your doctor may decide to treat you with Radium 223 which is a radio-isotope. When the isotope is injected, it behaves like the calcium in your body and is absorbed by the bones. This then delivers radiation directly to the bones and should help to give relief from pain.

On the day of treatment

You may bring a relative or friend with you to the treatment appointments. On arrival at the Medical Physics Department, you will be seen by a member of the Physics team and you will have your weight taken. After checking that you are happy to proceed with treatment, a cannula (small plastic tube) will be placed in your arm and the Radium will be given to you by a slow injection. The cannula will be removed from your arm before you leave. You can leave the hospital straight after the injection has been given.

You will be given a yellow card to carry at all times for one week after treatment. The card has daytime phone numbers, which are also printed at the end of this leaflet.

What are the side effects of radium 223?

The radium is absorbed into the areas of the bone metastases, which can sometimes cause pain to worsen about 24 to 36 hours following the injection. This can last for about 36 to 48 hours.

It is important that you increase your painkillers to cover this period, if required. Your pain should then improve, but it is important that you reduce your painkillers carefully.

This treatment can affect your blood cells, which may lead to symptoms such as fatigue, unusual bruising, or more bleeding than usual after an injury. You may have an increased risk of infection, so try to avoid crowds or close contact with people who are unwell.

Please report a temperature of 38C or higher immediately to the Chemotherapy Unit on telephone number 0118 322 7464 or Nuclear Medicine & Medical Physics on 0118 322 7355.

Previous studies have shown that there is a possibility of the following:

- Some diarrhoea and nausea or vomiting after treatment. If these symptoms occur, they shouldn't last long. **However, if you notice black, tarry stools, or blood in your stools, you should tell your GP straight away.**

- You may have fewer red blood cells than normal in your blood (anaemia), which may require a blood transfusion.
- An injection site reaction (e.g. reddening, pain and swelling). If this should occur, **you should tell the Chemotherapy Unit straight away.**
- Although an uncommon side effect, you may experience pain, swelling, numbness of the jaw, a 'heavy jaw feeling', or loosening of a tooth (osteonecrosis of the jaw). You are more likely to experience this if you have received bisphosphonate (bone strengthening medication) treatment in the past.

The treatment will have no effect on your ability to drive or to use machinery. You can eat normally. We would ask you to drink plenty of fluids for 24 to 48 hours after the injection.

Are there any radiation protection restrictions?

The Radium is absorbed into the bones and emits radiation as it decays. During the first week after treatment, there may be some radioactivity in your body fluids, particularly your urine and stools, so there are a few precautions that we would like you to follow for the week following treatment:

- There are no restrictions on normal contact with other people immediately after treatment.
- When passing urine, we would like you to sit on the toilet rather than using a urinal, and flush the toilet twice. Always wash your hands very thoroughly.
- If any body fluids need to be handled, particularly urine or stools, please use medical gloves (we can provide these if necessary) to clean up, using tissues, and flush the tissues away.
- Immediately wash any stained bedding or clothes separately from other items, and rinse them thoroughly.
- Avoid having any tests or samples taken of your stools for the first week after treatment, unless considered necessary. Contact the

unit for advice if necessary.

- If you use a urinary catheter, please let the nurse know **before** you attend for treatment, as they will give you further advice about this.
- If you are sexually active, please use a condom for the first week after each injection, as small amounts of radioactivity may be present in bodily fluids. You should also avoid causing a pregnancy for six months after treatment.
- Get plenty of rest and eat well.
- We will give you a yellow card to carry for one week after each treatment, detailing the treatment that you have received. You should show this card to any medical staff you have contact with, so that they know that you have received treatment with radioactivity.
- In the unlikely event that you die within four weeks of treatment, there may need to be a delay before your body can undergo a post-mortem examination or be cremated, due to residual levels of radioactivity. In some cases this delay might need to be as long as three to four weeks. It is important that your family are aware of this so that they can share this information with the people caring for your body.

Contacting us

If you have any queries, please contact the Chemotherapy Unit on 0118 322 7464 or Nuclear Medicine / Medical Physics on 0118 322 7355.

If no one is available, please leave a message and we will return your call as soon as we can. Alternatively, you can email us at PhysicsDepartment@royalberkshire.nhs.uk.

Further information

[www.macmillan.org.uk https://www.macmillan.org.uk/information-and-support/treating/radiotherapy/internal-radiotherapy-explained/radioisotopes.html#14162](https://www.macmillan.org.uk/https://www.macmillan.org.uk/information-and-support/treating/radiotherapy/internal-radiotherapy-explained/radioisotopes.html#14162)

[www.cancerresearchuk.org http://www.cancerresearchuk.org/about-cancer/cancer-in-general/treatment/radiotherapy/internal/radioactive-liquid-treatment/radium-223](http://www.cancerresearchuk.org/about-cancer/cancer-in-general/treatment/radiotherapy/internal/radioactive-liquid-treatment/radium-223)

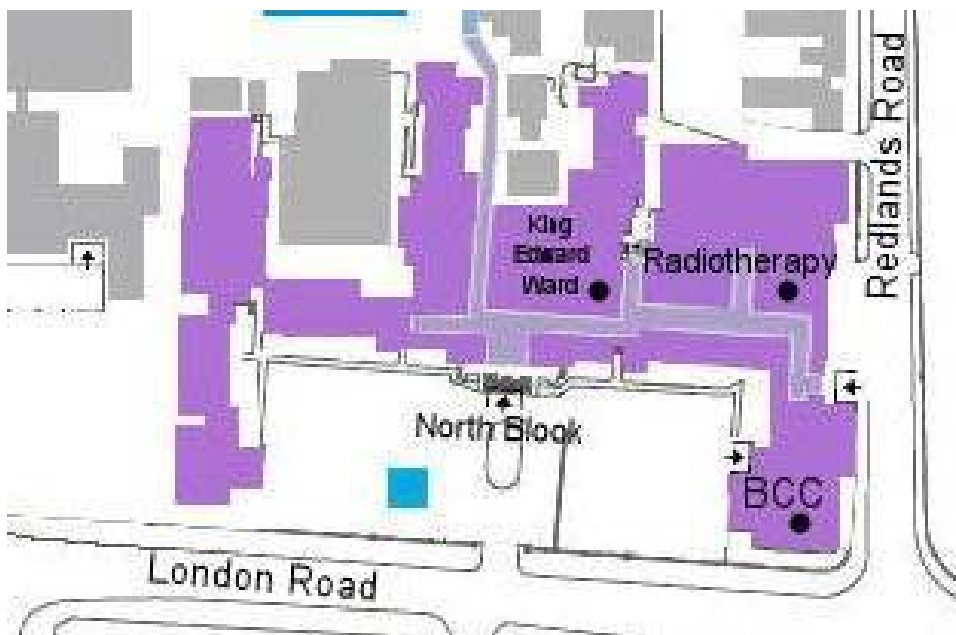
[www.prostatecanceruk.org https://prostatecanceruk.org/prostate-information/treatments/new-treatments#what-is-radium-223](https://prostatecanceruk.org/prostate-information/treatments/new-treatments#what-is-radium-223)

With thanks to University Hospitals Bristol NHS Foundation Trust

Your appointments

Radium treatment	Blood test	Clinic appointment	Treatment date
Cycle 1			
Cycle 2			
Cycle 3			
Cycle 4			
Cycle 5			
Cycle 6			

Where to find us



To find out more about our Trust visit www.royalberkshire.nhs.uk

Please ask if you need this information in another language or format.

RBFT Nuclear Medicine, July 2024

Next review due: July 2026