

**Patient  
Information**

# Radium-223 for the treatment of prostate cancer bone metastases

## Introduction

You have been referred to the Nuclear Medicine Department for radium-223 therapy. This is a type of intravenous radiotherapy treatment for prostate cancer that has spread to your bones.

Radium-223 is an effective treatment for the relief of bone pain. Studies have shown that there might also be an increase in life expectancy.

The information in this leaflet describes the treatment, possible side-effects and the radiation protection advice that you will need to follow throughout the course of your treatment. If you have any questions, please contact the Nuclear Medicine Department. The contact details are at the end of this leaflet.

## What is radium-223 and when is it used?

Radium-223 is a radio-isotope (radioactive version of the metal radium). It behaves like calcium in the body and is absorbed by the bones.

Some patients with prostate cancer may develop painful bone metastases (where the cancer spreads to the bone). If other treatments used to control your disease become less effective, your oncology consultant may feel you could benefit from radium-223 treatment. The radium-223 is absorbed into the painful areas within the bones and delivers a small radiation dose to help relieve the pain.

## How is radium 223 given?

Radium-223 is given as an intravenous injection, via a cannula (thin tube) placed into a vein in your hand or arm. Usually, the outpatient treatment appointment will take around 30 minutes. Once the cannula has been removed you may leave the hospital.

Reference No.

**GHP11539\_06\_23**

Department

**Nuclear  
Medicine**

Review due

**June 2026**

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## What does the treatment involve?

Treatment is given every 4 weeks and, depending on how you tolerate and respond to the radium-223, a maximum of 6 treatments will be given.

The week before each treatment you will have an appointment with your oncology consultant to check your weight, blood count and general well-being. You will also need to have a blood test around this time. This can be done either at your local hospital or your GP's practice. We will supply a blood test request form each time you attend for your treatment appointment.

On the day of your treatment, you will be seen by one of the Nuclear Medicine team who will talk to you about the therapy and answer any questions you might have. When you are happy to go ahead with the treatment a cannula will be placed into a vein and the injection will be given. The cannula will then be removed and you can leave the hospital.

Before you leave, we will give you a yellow treatment card which you need to carry with you every time you leave your home until 6 weeks after the end of your treatment course. Please bring the card with you when you attend for subsequent treatments. We will update it each time with the radium-223 dose and the date it was given.

**Please let us know as soon as possible if you are unable to attend any of the appointments, as this treatment is ordered 1 week in advance and cannot be reused.**

## Contraindications

Calcium supplements may compete with the radium-223 to be absorbed into your bones. This can cause increased side effects, such as diarrhoea. If you are taking calcium supplements, please discuss this with your oncologist.

Other treatments that lower your blood count, thin your blood or that contain steroids may affect your experience of radium-223.

**Please discuss all the medicines you take regularly with your oncologist.**

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### What are the side effects of Radium-223?

After the radium-223 is absorbed into the areas affected by the bone metastases it can cause a temporary increase in pain. This may last for a few days. If required, your pain medication can be changed or increased.

Other possible side effects include: constipation, diarrhoea and/or nausea (feeling sick). These side effects typically last for a few days only.

Radium-223 can lead to a decrease in your blood counts; for example, white cells, haemoglobin, platelets.

If you feel unwell at any point after receiving radium-223, particularly with shortness of breath, tiredness, bleeding (such as bruising) or infection (such as fever), please call the oncology department's 24-hour Emergency Helpline number on **0300 422 3444**.

You should drink plenty of fluids in the 24 hours following each injection, otherwise you can eat and drink normally.

Your ability to drive will not be affected by the treatment.

### Are there any radiation protection restrictions?

During the first week after each treatment there will be some radioactivity in your body fluids such as blood, faeces (stools), vomit and urine.

You must take the following precautions for the first **7 days** after each treatment:

- Flush the toilet twice after using it
- Wear disposable gloves when handling any body fluids and dispose of them in the bin immediately after use
- Immediately wash and rinse well any stained clothing and bedding separately from other items
- Avoid any tests requiring blood, stool or urine samples

Contact the Nuclear Medicine Department for advice if needed; the telephone number is at the end of this leaflet.

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You will be given a yellow card that you must keep with you at all times until 6 weeks after your final injection. Please show this to any medical staff you see during this time.

Other radiation protection information:

- If you use a catheter or stoma bag, contact the Nuclear Medicine Department before treatment for further advice
- If you are sexually active use a condom during the first week after each injection. You should not father a child during the course of treatment or in the 6 months following the completion of your treatment

## Medical attention

For up to 6 weeks following a radium-223 injection, the radioactivity will still be present within your body. If you become unwell within this period and need to seek medical care, please inform the clinicians caring for you that you have recently received radium-223.

We will write to your GP to inform them that you are starting a course of radium 223 injections.

In the event of your death, a member of your family should inform the funeral directors and the Nuclear Medicine Department. Due to the levels of radioactivity, if you wish to be cremated there may be a slight delay. This will depend on individual circumstances, and the Medical Physicist within the Nuclear Medicine Department will be able to offer advice to your family.

## Contact information

### Nuclear Medicine Department

Tel: 0300 422 4036

Monday to Friday, 9:30am to 16:30pm

We have an answering machine service outside of these times. Please leave a message, including your name and contact number, and a member of the team will call you back as soon as possible.

### Oncology 24-hour Emergency Helpline

Tel: 0300 422 3444

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### Further information

#### Xofigo Patient Support Video

Website: [www.mcrpcpatientvideo.co.uk](http://www.mcrpcpatientvideo.co.uk)

#### Macmillan

Website: [www.macmillan.org.uk](http://www.macmillan.org.uk)

#### Cancer Research UK

Website: [www.cancerresearchuk.org](http://www.cancerresearchuk.org)

Content reviewed: June 2023

## Making a choice

### Shared Decision Making

If you are asked to make a choice, you may have lots of questions that you want to ask. You may also want to talk over your options with your family or friends. It can help to write a list of the questions you want answered and take it to your appointment.



### Ask 3 Questions

To begin with, try to make sure you get the answers to three key questions if you are asked to make a choice about your healthcare.

1. What are my options?
2. What are the pros and cons of each option for me?
3. How do I get support to help me make a decision that is right for me?

These resources have been adapted with kind permission from the MAGIC Programme, supported by the Health Foundation

\* Ask 3 Questions is based on Shepherd HL, et al. Three questions that patients can ask to improve the quality of information physicians give about treatment options: A cross-over trial. Patient Education and Counselling, 2011;84: 379-85



<https://aqua.nhs.uk/resources/shared-decision-making-case-studies/>