

## University Hospitals Bristol and Weston NHS Foundation Trust Bristol Haematology and Oncology Centre

### Out-of-hours guidance for Ra-223 - Xofigo

You may have been directed to this page as you are caring for a patient who has had Radium-223 (Xofigo) treatment.

The guidance below is relevant for patients wearing a BLUE wristband with 'Ra-223 – search 'Molecular Radiotherapy Bristol'' on it, or are carrying a card with the same search direction or QR code.

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### 1 How to use this guidance

All patients will have received an instruction card which gives details about the date of their last administration of Ra-223. This should be on their person, or a relative or the patient themselves may be able to advise. This information is important as advice for handling the patient varies depending on the length of time since treatment. If unsure follow the guidance below for 'Day 0 – Day 7 since last administration'.

**This advice has been written for health professionals across the UK. For UHBW staff consulting this guidance please also see 'Local Rules for Ward and other Department Staff (including ED)', on DMS.**

### 2 For further advice

The guidance below provides initial guidance on how to safely nurse / care for Ra-223 patients. For further advice please contact your local Nuclear Medicine or Molecular Therapy department, Radiation Protection Adviser or **Molecular Radiotherapy Bristol on 0117 3422694** during working hours.

### 3 Ra223 treatment information

Ra-223 (Xofigo) treatment is a radioactive treatment, predominantly an alpha radiation emitter, which travels only a very short distance in the human body. This means that you can be close to the patients, as the main hazard from Ra-223 is if it was ingested or inhaled (e.g. via contact with bodily fluids (particularly faeces), or ash (during cremation) or bone dust (during orthopaedic surgery)).

Ra-223 treatment is a palliative treatment so it is possible that patients will attend for emergency care including emergency surgery, need intensive nursing, or pass away.

Bristol Molecular Radiotherapy treats patients across South West and Wales so a patient may attend another hospital for further care.

#### **4 Care of a patient attending for emergency, or in-patient care**

**At all times it is safe for staff to have close contact with the patient. Standard hygiene procedures should be followed as normal, including use of PPE.**

**Immediate emergency care of the patient should not be compromised because of the radiation hazard.**

#### **Day 0 – Day 7 since last administration**

**Contact with patient:** It is safe for staff to have close contact with the patient. Standard hygiene precautions should be followed as normal, including use of Personal Protective Equipment.

- Wash hands well with soap and water after any contact with the patient.

**Bodily fluids:** Faeces are particularly radioactive and should be handled and disposed of with care. Urine, blood and vomit may be slightly radioactive and are less of a concern.

- If patient is able, encourage them to use the toilet rather than a bed pan. They should also sit to urinate. The toilet should be flushed twice after use.
- If a bed pan is used, dispose of carefully down a toilet or sluice, flushing twice, then macerate the bed pan. Wear PPE, including arm covering and a face mask.
- If patient is faecally incontinent, to clear up wear two pairs of gloves, and other protective clothing (e.g. sleeved theatre gown) and face mask.
- Any linen or waste that is contaminated with bodily fluids should be double bagged and kept separately, labelled as 'Radioactive, not for disposal'. Contact your local Molecular Therapy or Nuclear Medicine department for advice on local practice for disposal/laundry\*.
- Avoid taking faecal samples if possible (although this should not be detrimental to patient's treatment). If necessary label as 'Radioactive' and alert pathology in advance for them to follow safe handling techniques (using appropriate PPE). The sample may need to be disposed of as radioactive waste so again follow local practice.
- Blood and urine samples are only mildly radioactive and can be handled as normal.

**Contamination of an area with bodily fluids:** if a large area (e.g. floor) becomes contaminated with bodily fluids (particularly faeces) use double gloves, sleeves/gowns with arms, overshoes, face masks while clearing up. All waste that cannot be put down sluice is bagged and labelled 'Radioactive, not for disposal'. Cover the area e.g. with incontinence pads taped to the floor and seek further advice from your local Molecular Therapy or Nuclear Medicine department.

**Surgery:** For any surgical intervention where bone dust may be generated (e.g. bone sawing/drilling) – **there is a radiation hazard from inhaling radioactive bone dust**

- An approved orthopaedic theatre with adequate functioning ventilation (preferably laminar flow) should be used

- Theatre staff should wear well-fitting face masks, including during clearing up post-procedure. A Stryker mask may be appropriate.
- standard PPE/universal hygiene precautions must be used
- waste should be bagged and labelled as above, and disposed of as per local protocols – contact your local Nuclear Medicine or Molecular Therapy department\*

For any surgical intervention involving the intestines

- standard PPE/universal hygiene precautions must be used, **plus** a second pair gloves. Change outer gloves if contaminated with faeces.

\* By risk assessment, the radioactivity in a day's worth of waste, or waste from a surgical procedure, in a 0.1 m<sup>3</sup> bin is unlikely to exceed the limit for disposal as Very Low Level Waste and can therefore be disposed of as normal waste. But it is important to check local permits/practice for radioactive waste disposal. It may be preferable to dispose of soiled linen rather than store and wash if suitable facilities for prewashing are not available. Contact your local department or Radiation Protection Advisor.

**Death of patient:** See 'Death of Patient' below

### Day 8 – Day 42 since last administration

**Contact with patient:** It is safe for staff to have close contact with the patient. Standard hygiene precautions should be followed as normal, including use of PPE.

- Wash hands well with soap and water after any contact with the patient.

**Bodily fluids:** faeces, blood, urine and vomit will only be mildly radioactive now. Universal hygiene precautions are sufficient for safe handling of bodily fluids.

**Surgery:** See 'Surgery' above.

**Death of patient:** See 'Death of Patient' below

## 5 Death of patient:

- **Burial:** There are no restrictions on **burial** of a patient at any time after treatment.
- **Cremation:** There are restrictions on cremation because of the risk of inhaled radiation during the cremation process. **Please contact your local Radiation Protection Adviser or contact the Molecular Therapy Department, Bristol for further advice** who will be able to advise on a suitable delay period. Delay periods *may* be:
  - Death within 1 week of administration: possible delay 40-60 days
  - Death 1-2 weeks since administration: possible delay 20-40 days
  - Death 2-3 weeks since administration: possible delay 0-20 days
- **Handling and storage of body:** There are no restrictions on handling or storing the body after death as long as no invasive procedures are carried out. Universal hygiene precautions provide sufficient protection.
- **Post-mortem/embalming:** For up to 6 weeks post administration, contact a Radiation Protection Adviser or the Molecular Therapy Department, Bristol, on 0117 3422694 during

working hours as they will be able to provide advice specific to the procedure being carried out.

## **6 Legislative requirements**

As you are now working with radioactive materials you may need to register with, or notify, the Health and Safety Executive that you are doing so. Please contact your local Radiation Protection Adviser, Nuclear Medicine/Molecular Radiotherapy department or Bristol Molecular Radiotherapy on 0117 3422694 during working hours for advice. (Not applicable to UHBW).