

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

Out-of-hours guidance for I-131

You may have been directed to this page as you are caring for a patient who has had Iodine-131 treatment. This may be for an overactive thyroid or thyroid cancer.

The guidance below is relevant for patients wearing a YELLOW wristband with 'Iodine-131 – 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 administration of I-131. 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 for 'Day 0 – Day 15 since administration'.

This advice has been written for health professionals across the UK.

For UHBW staff consulting this guidance. This guidance is only applicable for patients that have returned to hospital after their discharge. Please also see 'Local Rules for Ward and other Department Staff (including ED)', on DMS. Other nursing guidance applies when they are an inpatient in the radiation isolation rooms on D603: 'Nursing Protocol WI 844' on DMS <http://nww.avon.nhs.uk/dms/download.aspx?did=8847>.

2 For further advice

The guidance below provides initial guidance on how to safely treat I-131 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 I-131 treatment information

I-131 treatment is a radioactive treatment which destroys cells of the thyroid gland, or residual thyroid tissue. It is a mixed beta and gamma radiation emitter, so there is a potential hazard due to

external radiation from spending too long in close proximity to the patient. In addition the patient's bodily fluids, urine in particular (although also sweat, saliva, faeces and blood), will be radioactive so there is an external radiation hazard from handling urine (e.g. in a catheter bag) and an internal radiation hazard from ingesting radioactive contamination (e.g. from handling urine spills, without gloves and inadequately washing hands).

Radiation protection guidance for the patient depends on how much radiation they have been given, which may be any number of different prescriptions. The radiation risk reduces as time elapses after treatment. Guidance here gives initial advice on radiation safety before obtaining more tailored advice from your own nuclear medicine or molecular therapy department.

Bristol Molecular Radiotherapy treats patients across the UK so a patient may attend another hospital for further care.

4 Care of a patient attending for emergency care or requiring in-patient care

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

Day 0 – Day 15 since administration

Contact with patient:

The patient should be placed in a single room if at all possible, ideally with own toilet and shower/washbasin. If this is not possible then the allocated bed should be at least 2 m from another patient's bed/nursing station, with 1 m between the bed and any visitor's chairs.

It is recommended for staff to limit very close contact with the patient where possible.

- If not directly attending to patient try and keep at least 2 m away
- Limit very close contact where possible
- Avoid the same nurse attending to patient for multiple shifts until tailored advice specific to the situation is provided
- Standard hygiene precautions should be followed as normal, including use of Personal Protective Equipment (PPE)
- Wash hands well with soap and water after any contact with the patient
- Pregnant/breastfeeding staff – pregnant or breastfeeding staff should avoid caring for the patient if possible – radioactive I-131 is taken up by the fetal thyroid if ingested by the mother so dealing with contaminated bodily fluids should be avoided as a precaution.

Bodily fluids:

When dealing with bodily fluids (particularly urine) wear standard PPE including double gloves and remove and replace outer gloves if contaminated with bodily fluids.

- If patient is able, encourage them to use the toilet rather than a bed pan. They should 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.
- If a catheter is used, empty bag frequently, disposing of urine as above.

- Any waste that is contaminated with bodily fluids should be kept separately, labelled as 'Radioactive, not for disposal'. Contact your local Molecular Therapy or Nuclear Medicine department for advice on local practice for disposal.
- Any linen that is contaminated with bodily fluids should be 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/laundrying.
- Avoid taking samples (particularly urine) 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.

Contamination of an area with bodily fluids:

If a large area (e.g. floor) becomes contaminated with bodily fluids use double gloves, sleeves/gowns with arms, overshoes, while clearing up and bag all waste separately. Change outer gloves regularly. Cover the area e.g. with incontinence pads taped to the floor and seek advice from your local Molecular Therapy or Nuclear Medicine department.

Surgery:

For surgical intervention – be aware the most radioactive part of the patient will be in their thyroid/neck area, and to a lesser extent the kidneys/urinary tract.

- standard PPE/universal hygiene precautions must be used, **plus** a second pair gloves. Change outer gloves regularly
- Tissue excised from thyroid will be radioactive and should be directly handled as little as possible. It should be labelled as radioactive if being sent for analysis (see samples or waste advice above).
- Limit time spent in close proximity to the neck of the patient as much as possible. Staff should stand at a distance of greater than 1 m where possible.

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

Day 15 – Day 30 since administration

Contact with patient: It is safe for staff to have a normal level of 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.
- Consider keeping pregnant/breastfeeding staff from caring for patient (for peace of mind, rather than because of significant radiation risk)

Bodily fluids: Unlikely to be significantly radioactive. No special handling advice.

Surgery: See 'Surgery' above. This guidance applies for Day 15-30.

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. Follow guidance for 'contact with patient' above if patient dies within 15 days of treatment.

- Cremation: There are unlikely to be any restrictions on cremation. **Please contact your local Radiation Protection Adviser or contact the Molecular Therapy Department, Bristol** if the patient died within 8 days of treatment who will be able to provide suitable advice.
- Handling and storage of body: If patient dies within 15 days of treatment follow guidance for 'contact with patient' above. There are no restrictions on handling or storing the body after this time as long as no invasive procedures are carried out. Universal hygiene precautions provide sufficient protection.
- Post-mortem/embalming: For up to 4 weeks post administration, contact a Radiation Protection Adviser or the Molecular Therapy Department, Bristol, for advice 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).