

IAEA Regional Training Course on Radiation Protection in  
Therapeutic Nuclear Medicine

COUNTRY: SLOVENIA

Presenter: Uroš Čotar

10 – 14 March 2025, Sofija

# 1. Type of NM therapy in your hospital

## Questions

## Answers

<b>What type of radionuclides and radiopharmaceuticals (for NM therapy) do you have available regularly?</b>	<ul style="list-style-type: none"><li>• <b>I-131 solution, capsule</b></li><li>• <b>Ra-223 solution</b></li><li>• <b>Lu-177 solution</b></li><li>• <b>Y-90 (rarely)</b></li><li>• <b>Sm-153 (rarely)</b></li></ul>
<b>Are NM therapy procedures in your hospital conducted on an outpatient or inpatient basis?</b>	<ul style="list-style-type: none"><li>• <b>I-131 inpatient</b></li><li>• <b>Ra-223 outpatient</b></li><li>• <b>Lu-177 inpatient (for now)</b></li><li>• <b>Y-90 outpatient</b></li><li>• <b>S-153 outpatient</b></li></ul>
<b>What is the average number of patients treated per month for each type of NM therapy in your hospital?</b>	<ul style="list-style-type: none"><li>• <b>I-131 &lt; 12</b></li><li>• <b>Lu-177 &lt; 8</b></li><li>• <b>Ra-223 &lt; 9</b></li><li>• <b>Y-90 (rarely)</b></li><li>• <b>Sm-153 (rarely)</b></li></ul>

## 2. Radiation protection practice in your hospital

Questions	Answers
How is your department equipped regarding radiation protection (available space, decontaminable surfaces, ventilation system, shielding, etc.)?	<ul style="list-style-type: none"> <li>• Laminar air flow LAF 3x</li> <li>• Glossy surfaces (<b>varnished floor</b>)</li> <li>• PbO<sub>2</sub> glass</li> <li>• Applicator</li> </ul>
<p>What specific radiation protection measures are implemented to ensure safety during these procedures?</p> <p>[In particular, do you have a liquid waste tanks system, available space, decontaminable surfaces, ventilation system, shielding, etc.?)</p>	<ul style="list-style-type: none"> <li>• Fast and precise work</li> <li>• glass and lead shielding</li> <li>• Decontamination room with shower</li> <li>• Personal protection (gloves, coat, collar)</li> <li>• liquid waste tanks – yes</li> </ul>
Do you have a regular process for optimizing staff doses?	<ul style="list-style-type: none"> <li>• Circular work, shift</li> <li>• Dose recording and analysis</li> </ul>

### 3. The most common challenges

#### Questions

#### Answers

**What are the primary radiation protection challenges associated with NM therapy in your hospital?**

- **Bed lining contamination**
- **contaminated waste**
- **Helping patient in case of shock**
- **Ra-223 patients are fragile → sometimes dose is not administered → wasted**

**Challenges related to individualization and optimization of the patient doses?**

- **Lu-177 Pluvicto - not able to order reduced activity**
- **I-131 order – 2 weeks before therapy**

**What challenges do you anticipate as NM therapy services expand in the future?**

- **Not enough room**
- **Financial challenges**
- **Distribution challenges**