

Nuclear Medicine Technologist interview questions

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What to expect

Interviews for nuclear medicine technologist roles in Australia usually combine a panel interview with a practical or technical assessment. The panel will want to confirm your AHPRA registration, your understanding of radiation safety, and how you work with patients and physicians.

- **Process and registration questions:** Questions about your AHPRA registration, your qualification pathway and your routine for preparing and administering radiopharmaceuticals.
- **Technical and equipment questions:** Questions about gamma cameras, PET scanners, hybrid imaging, image processing software and how you troubleshoot poor image quality.
- **Safety and compliance questions:** Questions about radiation safety, ARPANSA guidance, radioactive waste handling and infection control in a nuclear medicine department.
- **Behavioural and patient care questions:** Questions that ask for real examples of supporting anxious patients, communicating with physicians or working in a multidisciplinary team.
- **Scenario and judgement questions:** Hypothetical situations such as a patient who cannot stay still, a scanner fault during a scan or an unexpected dose spill.

Typically you will start with a phone or video screen, then attend an in-person panel interview with a chief nuclear medicine technologist, a nuclear medicine physician and sometimes a practice manager. After the panel, you may have a practical session in the department where you walk through scanner setup, dose preparation or image processing. Some employers ask for a short written safety scenario. Expect the whole process to take one to three weeks.

1. Can you walk me through your process for preparing and administering a radiopharmaceutical, from patient identification to post-scan monitoring?

Why they ask

This question checks your technical routine, your patient safety habits and how you follow regulatory requirements.

How to structure your answer

A process walk-through. Break it into clear steps: patient identification and consent, dose check and preparation, administration technique, scan setup and monitoring, then post-scan care and documentation.

Example answer

"I start by confirming the patient's identity with two identifiers and checking the request form, pregnancy status and any allergies. I explain the procedure and what to expect, then verify the prescribed radiopharmaceutical and activity against the protocol. I prepare the dose using aseptic technique and check the dose calibrator reading before administration. I position the patient comfortably, administer the injection, and note the time so I can match the imaging protocol. During the scan I monitor the patient on the camera and stay within sight or voice contact. After the scan I check the injection site, give aftercare advice and document the administered activity, any extravasation and the patient's condition. I also dispose of radioactive waste in the designated bins and survey the area before moving on."

2. Tell me about a time you noticed a potential radiation safety issue. What did you do?

Why they ask

This looks at your safety mindset, your knowledge of ARPANSA and state radiation regulations, and whether you act or wait.

How to structure your answer

STAR: Situation, Task, Action, Result. Keep the result focused on safety and documentation, not on numbers.

Example answer

"In a previous department, I noticed that a new staff member was about to enter the scanning room without checking the dose rate on the survey meter. I asked them to pause and we stepped back. I explained that the survey meter reading needed to be checked before anyone entered, especially after a high-activity dose. We reviewed the department's radiation safety protocol together, and I showed them where the meter was kept and how to use it. I documented the near miss in the incident log and raised it at the next team meeting. The result was a short refresher for all staff on pre-entry checks, and no one was exposed. I would rather speak up than let a routine become a risk."

3. A patient becomes anxious and claustrophobic just before their PET scan. How would you handle the situation?

Why they ask

This tests your patient care, communication and ability to complete a scan without adding stress.

How to structure your answer

Judgement under pressure. Acknowledge the emotion, assess the clinical need, adapt your approach, and know when to escalate.

Example answer

"I would stop and acknowledge how they are feeling. I would sit at eye level and explain that the scan is important, but that we can take it slowly. I would offer a short break, a drink of water if appropriate, and a chance to ask questions. I would check whether a mild sedative or a different appointment time might help, and I would involve the nuclear medicine physician if the anxiety is severe. If we can proceed, I would adjust the scan to be as short as possible, use a calm voice and let them know they can speak to me at any time. If they cannot proceed, I would document the situation and arrange a follow-up. Patient comfort and safety come first."

4. How do you ensure accurate image quality when a patient moves during a scan?

Why they ask

This checks your technical judgement, your knowledge of motion artefact and your problem-solving.

How to structure your answer

Technical problem-solving. State the cause, your immediate fix, your preventive techniques, and when to repeat or escalate.

Example answer

"Motion artefact can blur uptake and make a scan hard to interpret. If I see movement on the monitor, I pause the acquisition and check on the patient. Sometimes they are uncomfortable or cold, so I adjust cushions, offer a blanket or reposition them. I explain why staying still matters and give them a countdown or breathing instructions. For some scans I use respiratory gating or shorter acquisition frames. If the motion is significant, I would repeat that bed position rather than risk an unreadable study. I also document the movement so the physician knows. Prevention is the main thing: good positioning, clear instructions and checking in with the patient before I start."

5. Describe your experience with Siemens syngo.via, GE HealthCare Xeleris or similar processing software. How do you approach learning a new system?

Why they ask

Employers want to know you can process studies efficiently and adapt to their platform.

How to structure your answer

Technical and adaptability. Give one concrete example of using a system, then walk through your learning method.

Example answer

"I have used Siemens syngo.via and GE HealthCare Xeleris for processing and reviewing nuclear medicine studies, including PET/CT and bone scans. On syngo.via I regularly reconstructed images, applied corrections and prepared studies for reporting. When I moved to a department that used Hermes Medical Solutions, I spent my first week working through the user guide and asking a senior technologist to walk me through their standard protocols. I built a one-page cheat sheet for common tasks and practiced on archived studies. Within a month I was processing independently. I take the same approach with any new system: learn the safety-critical steps first, then the reporting workflow, and always ask before I guess."

6. Why do you want to work as a nuclear medicine technologist at this hospital or clinic, and how do you keep your knowledge current?**Why they ask**

This checks your motivation, your fit with the employer and your commitment to continuing professional development.

How to structure your answer

Motivation and professional development. Link your reasons to the employer's setting, then describe concrete ways you maintain your registration and skills.

Example answer

"I want to work here because your department handles a mix of oncology, cardiac and thyroid studies, and I enjoy the variety of nuclear medicine. I also value the chance to work with a team that includes physicians, nurses and radiographers, because that is how I learn best. To keep current, I complete my continuing professional development through the Medical Radiation Practice Board of Australia, attend ANZSNM meetings and read updates from ARPANSA. I also do practical skills refreshers on new scanner software and radiation safety. I see this role as a long-term fit, not just a job."