

General Reference:

SNMMI Procedure Standard Practice Guideline for Bone Scintigraphy 4.0.pdf

Common Indications:

Metastatic evaluation, elevated alkaline phosphate levels, trauma, arthritic change, skeletal pain

Note: Patients with clinical indications or complaints of stress fracture, osteomyelitis, bone graft viability, neck/ back/ extremity pain, loose prosthetic implants or other hardware, reflex sympathy disorder/ complex regional pain syndrome (RSD/ CRPS), or tumor or “mass” will be better served with a **“Bone Scan - Triple Phase”**. Consult with the nuclear medicine physician if you think a three-phase bone scan may be indicated.

Pre-scan Clinical History:

Determine history related to stated clinical history. Locate any pertinent imaging results which describe related findings.

Patient Preparation:

None

Relative Contraindications (if present, consult with nuclear medicine physician prior to scan):

1. Recent nuclear medicine studies
2. Pregnancy

Radiopharmaceutical and Route of Administration:

22 mCi Tc99m MDP or HDP, intravenous. For pediatric doses, use the following formula: $(0.25)(\text{weight in kg})$; for calculated doses less than 1.0 mCi, contact the Nuclear Medicine physician before proceeding with the examination.

Procedure:

1. Perform intravenous injection of Tc99m prepared radiopharmaceutical.
2. Instruct the patient to consume 32 - 64 ounces of liquids over the next 3 hours delay.
3. Have the patient return in 3 hours
4. Acquire Anterior/ Posterior whole body imaging, typically LEHR collimation, 256x1024 matrix, 12cm/ minute sweep rate. The patient's right side must be denoted with a radioactive marker in all delayed images.
5. On completion, check with the nuclear medicine physician to determine need for additional spot imaging, or for SPECT(/CT).
6. Delay statics as needed to be acquired 128x128 matrix, 300 seconds per frame.
 - a. The right side on all delays must be marked with a Co57 marker.
7. SPECT(/CT) as needed to be acquired 128x128 matrix, 20 seconds per stop for 64 stops

Review:

Prepare images and documents for clinical review as per **Nuclear Imaging Acquisition and Presentation Guidelines**.