

BONE MARROW SCAN
UPDATED: APRIL 2010

CPT CODE: 78104

Indications:

- Determination of extent of marrow myeloproliferative disorders
- Detection of ischemic or infarcted regions (sickle cell disease, dysbaric osteonecrosis, avascular necrosis)
- Detection of asymmetrical marrow distribution (e.g. tumors such as myeloma and Hodgkin's disease)
- Assessment of regional differences in marrow (e.g. metastatic disease)
- Confirmation of effect of cytokine

Patient Prep:

None.

Scheduling:

Allow 105 minutes of time (75 minutes camera time).

Radiopharmaceutical

& Dose:

8-12 mCi Tl-201 sulfur colloid (this radiopharmaceutical can be filtered like the lymphoscintigraphy agent to enhance marrow uptake). Dose will be adjusted for patient ≤ 17 yr of age and weight if ≤ 45 kg. If adult patient weights ≥ 127 kg, consult with NM physician.

Imaging Device:

Gamma camera with LEHR collimator.

Imaging Procedure:

1. Perform a standard 6-view liver/spleen scan at 30 minutes post-injection.
2. Obtain whole body image. The liver or spleen should be shielded with lead to prevent scatter.

Interpretation:

The distribution of marrow that takes up tracer is normally limited to the axial skeleton with some localization in the proximal femurs. Generally, the distribution is symmetrical, but frequently activity in the femoral heads is asymmetrical. With expanded active marrow, this distribution is increased into the axial skeleton. With focal replacement of marrow, defects are seen. As focal disease (solid or marrow tumors) increases, the number of lesions increases, and involves the appendicular skeleton too. An agent likely to replace this is the labeled MoAB to WBC precursors - currently available in Europe.

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