

### Bone Scintigraphy checklist

Acquisition	Checklist	See page
• Nuclide	$^{99m}\text{Tc}$ -HMDP, $^{99m}\text{Tc}$ -MDP	
• Dose	Generally 740 MBq, but decrease as necessary for children.	
• Time between administration and start of acquisition	Generally at least 3 h, but may be after 2 h for HMDP because of the difference in clearance.	
• Pretreatment	Urination immediately before scanning.	
• Patient body type/sex	Make sure the body does not protrude outside the field of view, and use proximity imaging if possible.	
• Collimator	LEHR with an emphasis on resolution recommended	
• Energy window	140 keV $\pm$ 10%	

Whole-body	Checklist	See page
• Positioning	In principle bilaterally symmetrical, without protruding outside the field of view. Immobilize with belts as appropriate to prevent body movements.	
• Matrix size	256 $\times$ 1024	
• Scanning speed	$\leq$ 15 cm/min	
• Distance between patient and collimator	As close as possible	

Planar	Checklist	See page
• Positioning	Bilaterally symmetrical. Oblique imaging is useful for the ribs and sternum, and magnified acquisition for the arms and legs.	
• Matrix size and magnification	256 $\times$ 256 or 512 $\times$ 512. Adjust magnification between 1.0 $\times$ and 1.5 $\times$	
• Acquisition count	Regulate the timer with the aim of achieving 500 kcounts for matrix 256 and 1000 kcounts for 512.	

SPECT	Checklist	See page
• Positioning	Use the whole-body scan to decide the sites where SPECT is required. For areas outside the effective field of vision of the camera, perform whole-body SPECT two or more times. Also determine the locations required on the basis of the request form, medical record, or images from other modalities. Immobilize with belts as appropriate to prevent body movements.	
• Matrix size and magnification	128 $\times$ 128. 1.0 $\times$	
• Number of sampling directions	60	
• Acquisition time	10 s/step	
• Acquisition mode	Continuous rotation	
• Body position	Raise the patient's arms if they are within the visual field	
• Diameter of rotation	As close as possible (20–25 cm)	
• Circular trajectory/close-proximity trajectory	Close-proximity trajectory	

	Checklist	See page
• Body movement correction	Not generally used	
• Scatter correction	Not used	
• Preprocessing filter	Butterworth	
• FBP/OSEM (iterations and subsets)	OSEM is recommended if possible. In the case of 60 directions, around 5 iterations and 6 subsets are recommended.	
• Attenuation correction	Not used	

• Spatial resolution correction	Perform if required. Image processing techniques that reduce noise while maintaining spatial resolution are now coming into use.	
Display	Checklist	See page
• Cutoff level	For whole-body scans, generally upper 100% and lower 0%, while for planner and SPECT imaging they are generally upper 100% and lower 0%-10%.	
• Gradient		
• Color display	Not generally used	
• Magnification	Adjust as necessary to fit the size of the diagnostic display or film.	
• Display slice thickness	Generally, the original slices (around 5 mm) are displayed, but two slices may also be added together for layout-related reasons.	
• MIP (number of directions)	8 directions	