



## ISOTOPE BONE SCAN

- Imaging modality of choice in detecting bone metastases. [1,2](#)
- In a patient with foci of increased uptake and a known primary tumour, the scan strongly suggests metastases. [1](#)
- Advantages: allows total body survey. [1,2](#)
- Limitations:
  - Radiographic correlation may be required in some patients with positive bone scan because of the non specificity of findings on radioisotope imaging. [1](#)
  - Some metastases may not show increased uptake on bone scan, particularly those that are lytic, for example kidney, thyroid and melanoma. [1](#)
  - In certain malignancies particularly with lytic bone metastases FDG PET is more sensitive than bone scan. [2](#)

## PLAIN RADIOGRAPHY

- Certain radiographic features may help to distinguish metastases from other conditions and aid in identification of the primary tumour. [1](#)
- Limitations: poor sensitivity for detection of bone metastases. [2](#)

## COMPUTED TOMOGRAPHY

- Superior skeletal detail including bone marrow compared to plain radiography. [3](#)
- Sensitivity for diagnosis of breast cancer metastasis to bone ranges from 71% to 100%. [3](#)
- Multidetector CT is able to scan the whole body in a short period of time and may have a role in screening.

## REFERENCES

1. Rybak LD, Rosenthal DI. Radiological imaging for the diagnosis of bone metastases. Q J Nucl Med 2001;45:53-64. (Review article)
2. Schaffer DL, Pendergrass HP. Comparison of enzyme, clinical, radiographic, and radiographic methods of detecting bone metastases from carcinoma of the prostate. Radiology 1976;121:431-4. (Level III evidence)
3. Hamaoka T, Madewell JE, Podoloff DA, Hortobagyi GN, Ueno NT. Bone Imaging in Metastatic Breast Cancer. J Clin Oncol 2004;22:2942-53. (Level III evidence)

### Website

For more information go to [www.imagingpathways.health.wa.gov.au](http://www.imagingpathways.health.wa.gov.au)

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