

## Diagnostic Images

# Painful foot

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### The patient

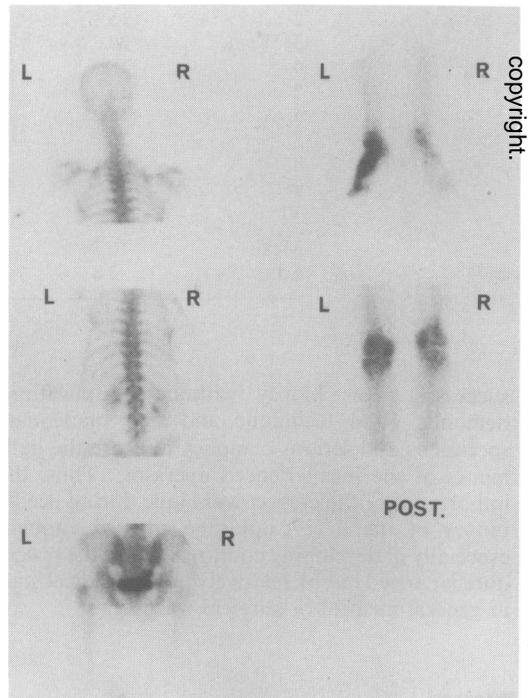
A woman of 57, known to have had a mastectomy for breast carcinoma, presented with a painful and slightly swollen left foot.

### Investigations

Radiograph of left foot and isotope bone scan.



**Figure 1** The 3rd metacarpal shows marked irregular bone loss, absent cortex and nodular sclerosis. There is diffuse sclerosis of the 2nd and 4th metatarsals with thin periosteal reactions. The tarsus shows marked diffuse loss of bone density with marginal accentuation but no localized bone loss to indicate bone destruction of any of the tarsal bones.



**Figure 2** The isotope bone scan demonstrates intense uptake in the left foot in keeping with active bone turnover as occurs with metastases. There is also slight increased isotope uptake at the left greater tuberosity of the femur.

## Comment

The appearances of proximal tarsal osteopenia, a destructive or lytic lesion in the third metatarsal and diffuse sclerosis of the 2nd and 4th metatarsals associated with a minimal periosteal reaction could be due to osteomyelitis but there was no systemic or local evidence of infection. Tuberculous dactylitis can produce local bone destruction but diffuse sclerosis of adjacent metatarsals would be very unusual. Mycoses such as madura foot cause marked soft tissue swelling with multiple bones affected by irregular bone destruction and sclerosis. Diffuse bone lysis with marked soft tissue swelling occurs in lymphangiomatosis and lymphoma. The proximal osteopenia, as evidenced by the diffuse diminished density with preservation of the margins that by comparison appear dense, is quite common with disuse whether due to trauma, inflammation or tumour as the primary lesion.

In this case, however, the known history of breast carcinoma points to the likely diagnosis as the combination of a lytic destructive bone lesion and associated sclerosis. This is common with breast metastases and while not common in peripheral bones is well documented. An infective aetiology was excluded.

## Acknowledgements

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## References

- Lisbon, E., Bloom, R.A., Husband, J.E. & Stoker, P.J. Metastatic tumours of bone of the hand and foot. *Skeletal Radiol* 1987, **16**: 387–392.