

# Ewing's sarcoma of the hand

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## DESCRIPTION

A 54-year-old woman presented with a 12-month history of pain and a firm fixed mass on the dorsum of the right hand (figure 1). Physical examination revealed a firm circumferential swelling of the hand. The laboratory findings were within normal limits.

A plain radiograph (figure 2A) revealed a lytic, expansile lesion involving the third metacarpal with poorly defined margins and an associated large soft-tissue mass (figure 2B) but without periosteal reaction. The CT confirmed this pattern



**Figure 1** Clinical view showing swelling of the right hand.

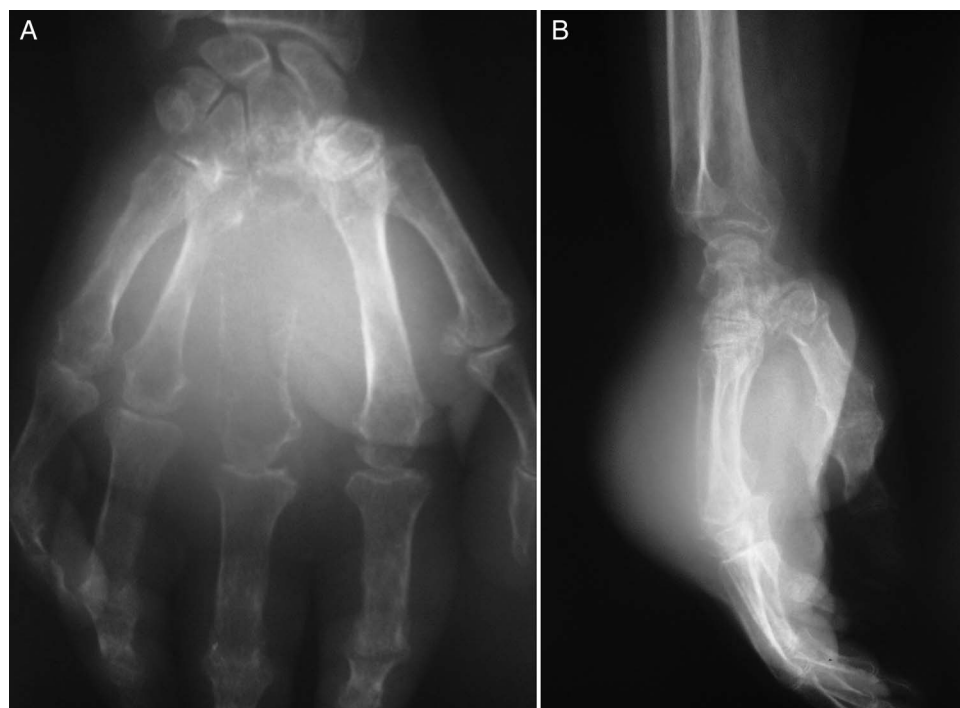


**Figure 3** Axial CT in bone window demonstrating large cortical destruction associated with soft tissue involvement.

(figure 3). An open surgical biopsy was performed. The immunological and histological findings supported a diagnosis of Ewing's sarcoma.

Ewing's sarcoma is rarely seen in adults. Classically, it occurs in the diaphysis of long bones. The hand is an uncommon location making the diagnosis easy to miss.<sup>1</sup> Lesions are seen most frequently in the metacarpals and phalanges.<sup>1</sup>

Radiographically, Ewing's sarcoma features often include a permeative lesion containing many small



**Figure 2** Anteroposterior (A) and lateral (B) views of the hand showing diffuse permeative destruction of diaphysis with expansion and marked overlying soft-tissue swelling.



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## Learning points

- ▶ Despite the extreme rarity of Ewing's sarcoma in the extremities and in adults, the diagnosis should be considered and the radiographic appearance known to ensure a prompt and accurate assessment.
- ▶ Expansion, cystic or honeycomb pattern, lack of laminated or spiculated periosteal reaction and absence of cortical thickening are more common in Ewing's sarcoma of extremities than in Ewing's sarcoma of other locations.

holes, cortical destruction, irregular areas of sclerosis, a wide zone of transition, lamellated or spiculated periosteal reaction and a large soft-tissue mass. However, these findings are missed

in 43% of patients at initial presentation and can be different when Ewing's sarcoma occurs in the hand.<sup>2</sup> As shown in our patient, expansion, cystic or honeycomb pattern, lack of laminated or spiculated periosteal reaction and absence of cortical thickening are more common in Ewing's sarcoma of extremities than in Ewing's sarcoma of other locations.<sup>3</sup>

**Competing interests** None.

**Patient consent** Obtained.

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