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## IMAGES IN THORAX

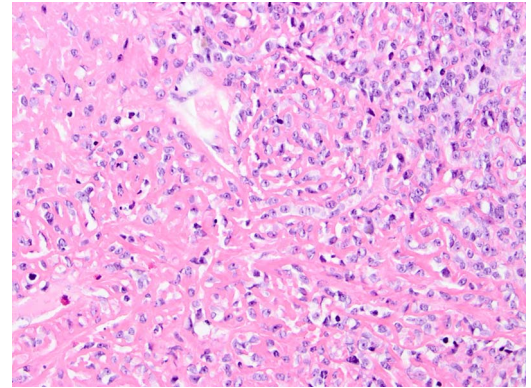
# Pulmonary metastasised extraskelatal osteosarcoma

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A 63-year-old Caucasian man who smoked presented with lower back pain, dyspnoea and weight loss. A chest CT showed multiple bilateral cavitating lesions, consolidations and ground glass lesions (figure 1). Because a CT-guided pulmonary biopsy elsewhere revealed chronic inflammation with caseating granulomas, he had initially been treated with tuberculostatics and subsequently antifungal medication without clinical improvement. Since the patient had also developed a lesion in the neck, this was biopsied and revealed an undifferentiated round cell tumour. Subsequently, a video-assisted thoracoscopy was performed. Pathological analysis demonstrated metastasis of an osteosarcoma; therefore, the final diagnosis was metastasised extraskelatal small cell osteosarcoma (figure 2).

Despite treatment with radiotherapy for bone metastasis and doxorubicin-based chemotherapy, he died a few months later.

Extraskelatal osteosarcomas are high-grade mesenchymal soft tissue malignancies accounting for 1% of all soft tissue sarcomas and approximately 2–4% of all osteosarcomas. By definition, they produce osteoid or cartilage matrix in a sarcomatous pattern and originate in soft tissue without attachment to adjacent osseous structures. They typically affect patients in the sixth decade of life



**Figure 2** Round cell tumour and osteoid matrix.

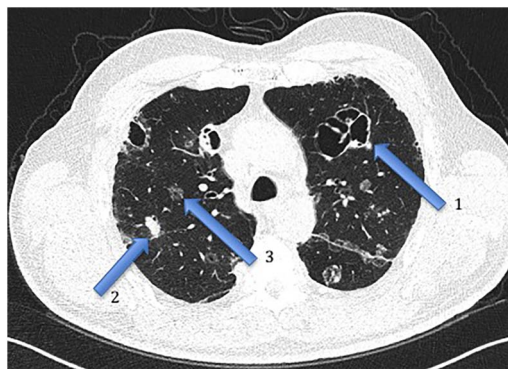
with a slight male predominance.<sup>1</sup> The lower and upper extremities are most commonly affected, followed by the retroperitoneum and other body sites. Although prior radiation therapy is a known risk factor, 90% of cases are idiopathic. Radiological features include soft-tissue opacities, while calcifications or osteoid matrix. Depending on the degree of necrosis, tumour enhancement is seen on CT or MRI after intravenous contrast.<sup>2</sup> Metastases commonly comprise the lungs, bones, lymph nodes, brain, liver and skin. Preferential treatment is surgical resection of the primary tumour. For metastasised disease doxorubicin-based chemotherapy and radiotherapy are commonly used although overall prognosis is poor, with a 5-year survival rate approximately 10%.<sup>1</sup>

**Competing interests** None declared.

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**Figure 1** Cavitating lesions (1), ground glass lesions (2) and consolidations (3).



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