

# A lung cancer patient with painful fingers

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## CASE REPORT

A 59-year-old man with a recently diagnosed T<sub>4</sub>N<sub>2</sub>M<sub>1</sub> squamous cell carcinoma of the lung with hepatic and adrenal gland metastasis presented after the third chemotherapy cycle with a painful fourth finger of the right hand. Physical examination revealed swelling, redness and tenderness of the distal phalanx of the fourth digit of the right hand (*figure 1*).

Under suspicion of a paronychia, the patient was referred to a surgeon for incision and drainage, but exploration did not reveal any pus. The differential diagnosis included arthritis for which he was treated with prednisone. However, after two weeks of prednisone treatment, there was no improvement. Now he also had symptoms of the left hand. Additional X-rays of the hands were performed (*figure 2 and 3*).

**Figure 1.** Swelling, redness and tenderness of the distal phalanx of the fourth digit of the right hand at initial presentation



## WHAT IS YOUR DIAGNOSIS?

See page 435 for the answer to this photo quiz.

**Figure 2.** Anteroposterior radiographs of the right hand; complete destruction of the bone of the distal phalanx of the fourth digit of the right hand



**Figure 3.** Anteroposterior radiographs of the left hand; substantial osteolysis of the distal phalanx of the first and third digit of the left hand



## DIAGNOSIS

The X-ray examination showed complete destruction of the bone of the distal phalanx of the fourth digit of the right hand and substantial osteolysis of the distal phalanx of the first and third digit of the left hand. A specimen of the lesion of the third digit of the left hand, obtained through needle aspiration, confirmed the suspicion of a metastasis of the known squamous cell carcinoma. He was treated with a single dose of radiotherapy to relieve the pain, but because of his deteriorating overall clinical condition and the poor prognosis no further treatment was given.

Bone metastases are frequently seen in patients with malignancies, but metastases distal to the elbow and the knee (acrometastases) are rare, accounting for approximately 0.1% of all cases.<sup>1</sup> Primary tumours most frequently associated with acrometastases are lung carcinomas (accounting for 44% of acrometastases) followed by renal cell and breast carcinomas.<sup>1</sup> Acrometastases are associated with a poor prognosis as they mainly occur in patients with disseminated disease.<sup>2</sup> A high index of suspicion is necessary to avoid missing the diagnosis or mistaking it for a more benign condition. Diagnosis can be difficult as pain, swelling, erythema and limited range of motion of joints can be seen in a lot of other, more common, diseases such as osteomyelitis, gout, septic arthritis or other infectious conditions.

Acrometastases may be the first manifestation of an occult malignancy (10-16%), but within a majority the primary tumour is already known.<sup>3</sup>

Acrometastases are twice as common in the hand than in the foot<sup>4</sup> and are usually unilateral, but involvement of both sides is seen in up to 10% of the patients.<sup>2</sup>

The dominant hand and the distal phalanx, specifically the middle finger (28%) and the thumb (21%), are most commonly affected.<sup>2</sup> Men are almost twice as likely to have acrometastases than women. This can be explained by the higher incidence of lung carcinomas in men. There are no standard treatment protocols for acrometastases, but because of the poor prognosis of these patients, treatment is mostly directed at palliation.

## REFERENCES

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