

# Concurrent granulomatous polyangiitis and squamous cell carcinoma of the lung: a case of balancing treatment

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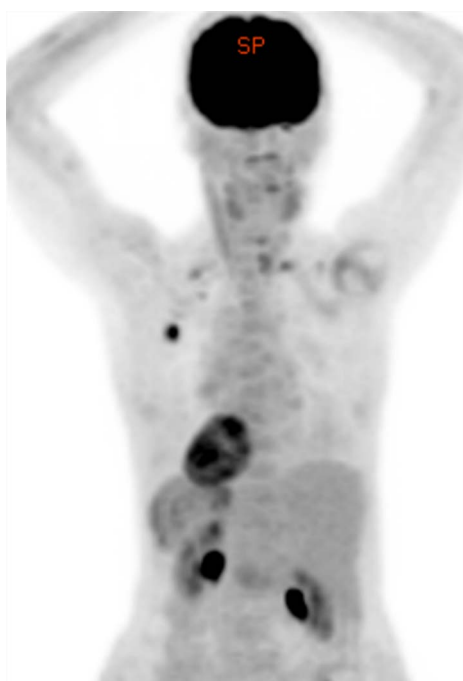
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## DESCRIPTION

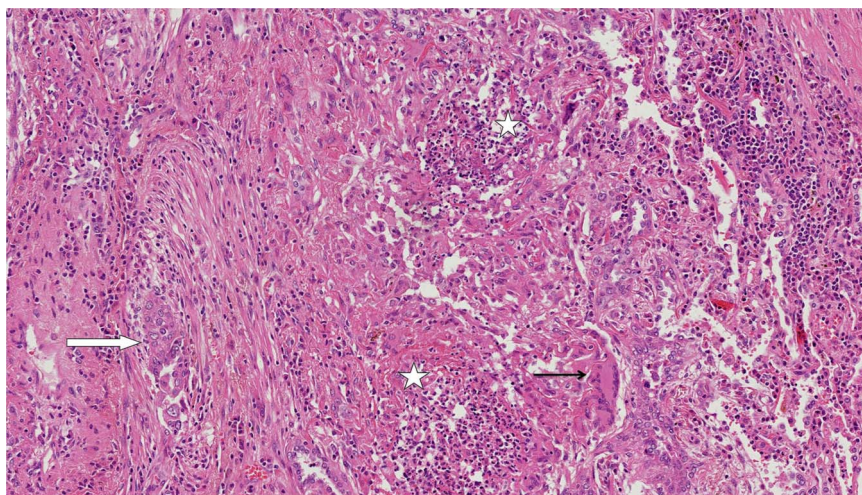
Granulomatous polyangiitis (GPA) is a rare small-vessel vasculitis characterised by lesions in the upper respiratory tract, lungs and kidneys.



**Figure 1** PET scan showing an active lung nodule. PET, positron emission tomography.

Diagnosis of lung lesions can be difficult and misdiagnosis as lung cancer is not uncommon.<sup>1</sup> Aggressive, long-term immunosuppression with drugs such as cyclophosphamide is necessary to prevent lung disease and development of end-stage renal failure.

We describe a case of a 79-year-old woman with a history of previous breast malignancy who presented with a 6-month history of weight loss and cough. She was found to have multiple lung nodules, which, after a period of active monitoring, began to increase in size. A positron emission tomography scan identified one metabolically active nodule in the left upper lobe (figure 1), which was removed by a video-assisted thoracoscopic surgery wedge resection. Histology showed a squamous cell carcinoma as well as necrotising granulomatous vasculitis, suggestive of GPA (figure 2). Shortly after this the patient presented with deteriorating renal function. She had an active urinary sediment and a positive proteinase 3 (PR3) antibody titre of 91 U/mL. A renal biopsy showed necrotising crescentic glomerulonephritis in keeping with an antineutrophil cytoplasmic antibody positive pauci-immune vasculitis: namely, GPA. She was pulsed with methylprednisolone and then maintained with 60 mg prednisolone daily. This posed a therapeutic dilemma as immunosuppression with cyclophosphamide has been associated with recurrence of malignancy.<sup>2</sup> Consequently, seven sessions of plasma exchange were successfully used to reduce her PR3 titre to 5.4 U/mL. Unfortunately, the patient's renal function continued to deteriorate.



**Figure 2** Lung resection showing both GPA (necrosis, stars and giant cell, thin arrow) and invasive island of squamous cell carcinoma (thick arrow). GPA, granulomatous polyangiitis.



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Renal replacement therapy was discussed, but the patient declined.

## Learning points

- ▶ It is important to keep an open mind to rare causes of a lung lesion.
- ▶ Immunosuppression in patients with recent malignancies is complex and requires careful balancing of treatment priorities.

**Contributors** DA prepared the manuscript with help from all the other authors. RR was in charge of the patient's care at the Royal London Hospital. MS analysed and prepared the histology. NL was the consultant in charge of the patient's care.

**Competing interests** None declared.

**Patient consent** Obtained.

**Provenance and peer review** Not commissioned; externally peer reviewed.

## REFERENCES

- 1 Williamson JD, Murphree SS, Wills-Frank L. Atypical squamous cells as a diagnostic pitfall in pulmonary Wegener's granulomatosis. A case report. *Acta Cytol* 2002;46:571–6.
- 2 Travis LB, Gospodarowicz M, Curtis RE, *et al.* Lung cancer following chemotherapy and radiotherapy for Hodgkin's disease. *J Natl Cancer Inst* 2002;94:182–92.

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