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## Pulmonary puzzle

### ANSWER

From the question on page 682

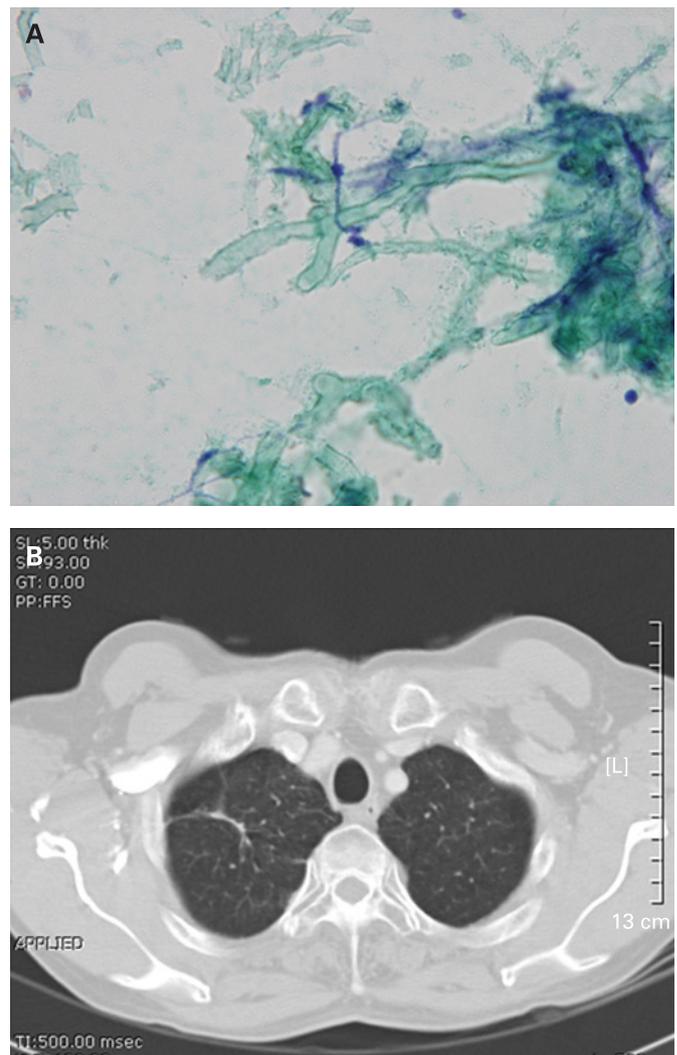
Considering the remarkable response to chemotherapy, the new lung nodule did not seem to be a metastatic lesion of the primary lung cancer. Percutaneous needle aspiration showed abundant aspergillus fungal hyphae on specimens. Taking the clinical course into account, a final diagnosis of chronic necrotising pulmonary aspergillosis was made (fig 1A). After treatment with voriconazole for 6 months, only the fibrotic scar remained and the medication was discontinued (fig 1B). Complete response of the lung cancer was obtained with further chemoradiotherapy and has been sustained for almost 2 years to date.

Aspergillus is a ubiquitous saprophytic fungus which causes a variety of human illnesses ranging from allergic reactions to aggressive forms invading the lung, brain and other organs.<sup>1</sup> Invasive aspergillosis has become an important infectious complication in patients with cancer, with a high fatality rate as a result of severe neutropenia.<sup>2</sup> It is also noteworthy that lung cancer seems to be more frequently associated with secondary aspergillosis than was previously thought.<sup>3</sup> In the early 1980s Geftner *et al* and Binder *et al* described a new category of lung disease caused by aspergillus in patients with underlying structural lung disease or mild immunosuppression including diabetes mellitus, alcoholism, chronic liver disease and corticosteroid use.<sup>4,5</sup> In our case, altered host immunity caused by chemotherapy might have triggered colonisation by the fungus on the fibrotic area to grow into the lung parenchyma. To our knowledge, this is the first case of chronic necrotising pulmonary aspergillosis developing during chemotherapy for a solid tumour.

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**Figure 1** (A) Histological examination of aspirated specimens showing aspergillus fungal hyphae (Papanicolaou stain,  $\times 400$ ). (B) CT scan obtained 6 months after antifungal treatment showing complete resolution of the nodule with residual parenchymal scar formation.