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What is the differential diagnosis in this young man presenting with recurrent haemoptysis?

A 35-year-old man, lifetime non-smoker and no known medical conditions presented repeatedly to the emergency centre with coughing, streaky haemoptysis and right-sided wheezing. There was no improvement after several courses of antibiotics and he was referred for further work up. Flexible bronchoscopy and endobronchoal biopsy were performed**.** Histology was consistent with a carcinoid tumour.

Neuroendocrine tumours (NETs) are neoplasms that are characterized by neuroendocrine differentiation and often, indolent clinical behaviour.[1] NETs can arise at a number of sites throughout the body including the GIT (most common), lung (next most common), thymus and ovary.[2] Typical carcinoids are well-differentiated, low-grade, slow-growing and seldom metastasize to extra-thoracic structures.[1] The majority of tumours arise from proximal airways and many are symptomatic from an obstructing tumour mass, and bleeding due to hypervascularity(Fig. 2). Patients may have cough, wheeze, haemoptysis, chest pain and recurrent pneumonia in the same pulmonary segment as in this case. The chest x-ray (Fig. 1) as in this case may show rounded opacities that range from 2 - 5 cm in diameter. Airway obstruction is often present, as shown in this case with involvement of the bronchus intermedius (Fig. 2). Biopsy and histochemistry is the gold standard diagnostic tool as demonstrated in Fig. 3 which shows strong positive chromogranin A and synaptophysin in tumour cells. Management is by surgical resection of the tumour.

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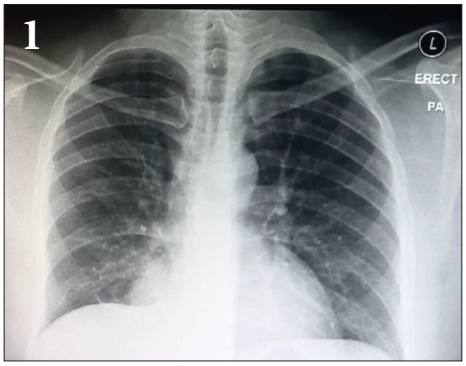

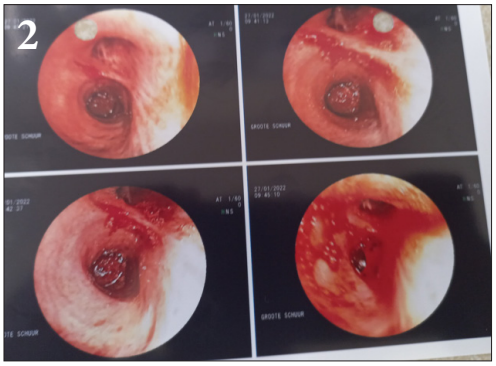

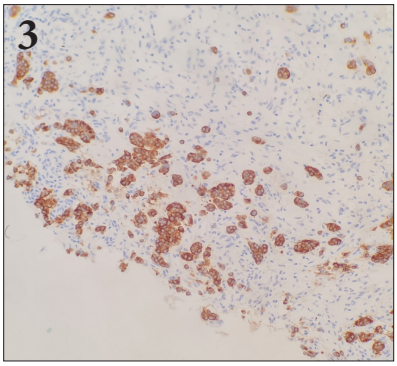

Fig. 1. Posteroanterior chest X-ray on presentation | *Fig. 2. Flexible bronchoscopic view from above the carina.* | *Fig. 3. Histologic photomicrograph of the xx.*