Title: Therapeutic surgical resection of primary pulmonary artery sarcoma

Body: Introduction: Primary pulmonary artery (PA) sarcoma is an atypical and rare malignancy. The disease is often extensive and aggressive surgical resection is an infrequent intervention. Case report: A 53 year old non-smoker female presented with recurring massive haemoptysis and dyspnoea. The CT pulmonary angiogram showed large filling defects in the main pulmonary arterial trunks extending to the segmental branches bilaterally, more prominent on the left. The left pulmonary artery had an unusual distortion with an expansile mass that had increased FDG avidity on Positron Emession Tomography (PET) imaging.

Repeated bronchial artery embolisations provided temporary control of her recurring massive haemoptysis. The clinical suspicion of PA sarcoma was eventually confirmed on CT guided core biopsy after two separate failed attempts of endobronchial ultrasound guided biopsy (EBUS) of the left PA mass. Although her disease was extensive, she underwent a left pneumonectomy, debulking of right PA tumour and right endarterectomy at 2 months following her initial presentation. Discussion: The indication for surgical resection was to alleviate the recurring symptoms of massive haemoptysis. It also provided histological specimen for definitive diagnosis. Conclusion: Extensive disease of primary (PA) sarcoma may be amenable to therapeutic surgical resections.