Abstract P277 Figure 1 Cumulative incidence of lung cancer in people with IPF, CTD-PF and matched controls

P277 THE INCIDENCE OF LUNG CANCER IN PEOPLE WITH IDIOPATHIC PULMONARY FIBROSIS AND CONNECTIVE TISSUE DISEASE ASSOCIATED PULMONARY FIBROSIS IN THE UK: A POPULATION BASED STUDY

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Introduction Studies have suggested that lung cancer is more common in people with idiopathic pulmonary fibrosis (IPF). However, there is limited information on the risk of lung cancer in individuals with connective tissue disease associated pulmonary fibrosis (CTD-PF). The aim of this study was to compare the incidence of lung cancer in people with IPF and CTD-PF with that of the general population.

Methods Using electronic primary care records from The Health Improvement Network (THIN), we identified incident cases of IPF and CTD-PF between 2000 and 2011. For every case of IPF or CTD-PF, up to 4 general population controls matched on age, sex and general practice were randomly selected. We conducted a matched cohort analysis to estimate rate ratios for lung cancer in cases of IPF and CTD-PF compared with matched controls, adjusting for smoking habit.

Results Our study population consisted of 3266 incident cases of IPF, 494 cases of CTD-PF and 14,463 matched general population controls. The majority (64.1%) of people with IPF were male, while most (55.3%) of those with CTD-PF were female. Individuals with CTD-PF were also younger at time of diagnosis compared to people

with IPF (mean age at diagnosis 69.0 vs. 74.2 years; $p < 0.001$). The median follow up time for our study population was 3.1 years (Interquartile range [IQR] 1.3 to 5.6). During this time 80 (2.5%) individuals with IPF, 9 (1.8%) with CTD-PF and 149 (1.0%) controls were diagnosed with lung cancer. After adjusting for smoking and the matching factors, the incidence of lung cancer was higher in people with IPF (Rate Ratio [RR] 3.61, 95% Confidence Interval [CI] 2.44 to 5.34) and CTD-PF (RR 2.35, 95% CI 0.78 to 7.09; p value for trend=0.013) compared to the controls (see Figure 1).

Conclusion Individuals with IPF and CTD-PF are at an increased risk of lung cancer, which cannot be fully explained by smoking habit. With the increasing use of new therapies that may prolong the median survival in individuals with lung fibrosis, our findings raise the possibility these patients may represent a suitable population for lung cancer screening.

P278 EXTRA-CORPOREAL MEMBRANE OXYGENATION AND DIFFUSE ALVEOLAR HAEMORRHAGE – A SINGLE CENTRE CASE SERIES AND ANALYSIS OF THE ELSO DATABASE

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Background Diffuse alveolar haemorrhage (DAH) is a potentially fatal complication of the systemic vasculitides and may present directly to the intensivist as a severe acute respiratory distress syndrome (ARDS) with reported mortality of 12- 60%. Whilst a severe respiratory failure (SRF) therapy strategy incorporating extracorporeal membrane oxygenation (ECMO) improves outcomes in ARDS, use of ECMO in DAH is often considered to be relatively contraindicated due to the requirement for systemic anticoagulation.

Methods We present a case series of 4 patients with DAH due to underlying ANCA-associated vasculitides managed by a standardised diagnostic pathway and ARDS treatment algorithm in a single, UK SRF centre, since 2012. We analysed the Extracorporeal Life Support Organisation (ELSO) database and report on the current international experience of DAH and ECMO.

Results The case series is described in Table 1. Median Lung Injury Score was 3.5. All patients received ECMO (median duration 8 days) and all received immunosuppression. One patient received normal heparin protocol to target APTT 1.5–2 whilst two patients had 48 h of ECMO with no heparin followed by targeted sub-therapeutic low dose heparin. ICU survival was 100% and six month survival was also 100%. There were no exacerbations of pulmonary haemorrhage, no new events of extra-pulmonary haemorrhage and no clotting complications.

Abstract P278 Table 1

Gender	Age (years)	Diagnosis	Lung Injury Score	Duration MV before referral (days)	Respiratory support (duration in days)	ECMO complications	Treatment	Predicted ICU mortality (APACHE II)	ICU survival (LOS in days)	6 month survival
3.5										
Male	73	GPA		1	VV-ECMO (8)	Nil	PEX, MEP, HD, CYC	53.3%	Yes (17)	Yes
Male	61	GPA	3.5	3	VV-ECMO (8)	Nil	PEX, MEP, CYC	29.2%	Yes (14)	Yes
Female	21	MPA	TBC	TBC	VV-ECMO (6)	Nil	PEX, MEP, Rtx	TBC	Yes (15)	TBC
Male	46	GPA	3.25	1	VV-ECMO (5)	Nil	PEX, MEP, HD, CYC	35.5%	Yes (21)	Yes

MV, mechanical ventilation; LOS, length of stay; GPA, Granulomatosis and Polyangiitis (Wegener's Granulomatosis); MPA, Microscopic Polyangiitis; PEX, Plasma exchange; MEP, methylprednisolone; HD, Continuous veno-venous haemodialysis; CYC, Cyclophosphamide; Rtx, Rituximab; TBC, to be confirmed.