reduced survival on univariable analysis. Both of these associations remained significant on multivariable analysis correcting for demographic variables, disease severity (as each of: CPI, FVC, and DLCO), and treatment. The association of both measures of decline with early mortality were also maintained when, in separate models, PASP ≥ 40 mm Hg on echocardiography, and BAL lymphocytosis thresholds of 20%, 30% and 40%, were included in addition to demographic variables, disease severity, and treatment.

Conclusions A marginal worsening in FVC of $\geq 5\%$ and in DLCO of $\geq 10\%$ at one year are predictive of markedly reduced survival in fHP.

P146 PREDICTORS OF ADVERSE OUTCOME IN SARCOIDOSIS COMPLICATED BY PULMONARY ASPERGILLOSIS

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Introduction Aspergillosis complicating pulmonary sarcoidosis is associated with high mortality. The specific prognostic impact of fibrocavitary sarcoid disease, however, remains poorly understood. A better understanding of the factors that determine adverse outcomes in such patients may improve the management of both the underlying sarcoid disease and associated secondary fungal infection.

Methods Cases of pulmonary sarcoidosis with elevated *Aspergillus* IgG (>40 mgA/L) presenting between January 2009 and March 2021 were retrospectively identified. Controls (sarcoidosis with normal *Aspergillus* IgG titre) were case-matched by baseline%-predicted gas transfer factor (TLco; $\pm 5\%$ variance). Computed tomography (CT), baseline lung function and survival data were analysed.

Results Among 180 cases (high *Asp* IgG) and 229 controls (normal *Asp* IgG), no inter-group difference was evident in the median age at presentation [48 (IQR 40–58) vs 50 (IQR 42–59)] or gender (proportion female: 45.5% vs 51.1%). Amongst the cases, 81/180 (45%) had fibrocavitary changes, compared with 14/229 (6.1%) of the controls ($P<0.001$). Radiologically-evident aspergilloma was present in 79% (64/81) of the cases with fibrocavitary sarcoidosis. These cases also had poorer lung function compared to non-fibrocavitary disease: mean%-predicted forced vital capacity/FVC 71.3% vs

91.4% ($P<0.0001$), and in the controls: 69.9% vs 89.1% ($P<0.01$). A similar trend was observed in%-predicted TLco amongst the fibrocavitary cases: 45.8% vs 64.2% non-fibrocavitary ($P<0.0001$) and in the fibrocavitary controls: 39.7% vs 61.8% non-fibrocavitary ($P<0.0001$). Comparing only those with fibrocavitation, neither the%-predicted FVC (71.3% vs 69.9% predicted; $P=0.82$) nor%-predicted TLco (45.7% and 39.7% predicted; $P=0.17$) differed between cases and controls. Evidence of fibrocavitary destruction was associated with higher overall mortality (37% vs 9.1% in the non-fibrocavitary subgroup; <0.0001) and longest median survival (graph).

Conclusions Fibrocavitary sarcoidosis is associated with worse lung function and poorer median survival. In this group, elevated *Aspergillus* IgG highlights a greater incidence of aspergilloma.

Implications Fibrotic transformation of pulmonary sarcoidosis heightens symptom burden, predisposes to chronic *Aspergillus* infection and is prognostically important particularly when there is supervening fibrocavitary lung destruction. Sensitive stratification of such patients for long-term outcome may help identify particular individuals for earlier and more focused therapeutic intervention.

P147 LONG-TERM PULMONARY FUNCTION AND MORTALITY OUTCOMES IN IDIOPATHIC PULMONARY FIBROSIS PATIENTS TREATED WITH ANTIFIBROTICS

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Background Idiopathic Pulmonary Fibrosis (IPF) is a progressive scarring lung disease. The antifibrotics pirfenidone and nintedanib are approved for IPF patients with a forced vital capacity% predicted (FVC%) between 50–80%, and either drug may be prescribed in the first instance. Both drugs reduce mortality risk, and disease progression as assessed by FVC% and transfer factor for carbon monoxide% predicted (TLco%) over 12-months. The effectiveness of antifibrotics beyond 12-months is less established, furthermore there is limited real world data comparing pulmonary function and mortality between both drugs.

Aims To assess the effectiveness of antifibrotics on FVC% and TLco% over 24-months. To identify if the current clinical rationale of offering either antifibrotic from the outset is appropriate through investigating FVC%, TLco% and mortality outcomes in IPF patients receiving pirfenidone or nintedanib.

Methods We carried out a retrospective analysis of IPF patients with an FVC% between 50–80% who commenced antifibrotic treatment between May 2012 and October 2019 at Royal Papworth Hospital (Cambridge, UK). Separate random coefficient regression models were used to assess FVC% and TLco% at 0, 6, 12, 18 and 24-months. A Cox proportional hazards model was used to assess hazard ratio (HR) and 95% confidence interval (CI) for all-cause mortality in antifibrotic treated patients.

Results 194 patients were identified from our dataset. FVC% remained stable between 0 and 12-months ($p=0.330$) but declined between 12 and 24-months ($p<0.001$). TLco% decreased between 0 and 12-months ($p=0.003$) and between 12 and 24-months ($p<0.001$). Over 24-months, FVC% was

Comparison of survival curves by log-rank, p value = <0.0001

Abstract P145 Figure 1 Survival proportions