Abstract P149 Figure 1 Annual prevalence (%) (A) and annual incidence rate per 100 person-years (B) of left ventricular heart failure (HF) in patients with IPF between 2010–2019. Vertical bars for each estimate represent 95% confidence intervals.

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P150

SUITABILITY OF NON-IPF ILD PATIENTS FOR ANTI-FIBROTIC THERAPY – A RETROSPECTIVE COHORT STUDY

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Introduction This retrospective cohort study was conducted within a district general hospital in Scotland by a 4th year medical student and a supervising consultant respiratory physician.

Aim The primary aim of the study was to determine the number of patients with chronic fibrosing non-IPF ILDs, who could benefit from anti-fibrotic therapy by making comparisons with INBUILD and SENSICIS trials.

Background Currently, NICE recommends the use of anti-fibrotic agents (Pirfenidone & Nintedanib) only in IPF. However, the recent INBUILD and SENSICIS trials showed benefits

of using Nintedanib in non-IPF ILDs, a separate study showed similar results with Pirfenidone.

Method An anonymised database of ILD patients was analysed and IPF patients were excluded. The following criteria for disease progression was used, based on the screening model for INBUILD trial:

1. A relative decline of 10% or more in% predicted FVC
2. A relative decline of 5–10% in% predicted FVC ± worsening of symptoms or fibrotic changes
3. Worsening of symptoms and fibrotic changes

Results 92 patients included in the study, 36 (39%) met the criteria for disease progression as outlined above. NSIP and HSP were the most common diagnosis (27 & 19 respectively).

Discussion The mean FVC decline was lower than the 187.8ml in the INBUILD trial, possibly because UIP (an aggressive phenotype) was prevalent in INBUILD patients. The highest decline noted was 15%–25% in patients <65 years old, which is linked with a higher risk of death according to a follow up study, with implications on quality of life and financial burden on the NHS.

Conclusion 39% of the studied non-IPF ILD patients could potentially benefit from anti-fibrotic therapy, with slower disease progression and improved quality of life.

Recommendations Consider the use of anti-fibrotic drugs in non-IPF ILDs, specially where the relative FVC decline is rapid and above 10%.

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P151

ASSESSMENT OF ALVEOLAR-CAPILLARY MEMBRANE PERMEABILITY USING AEROSOL SCINTIGRAPHY IN DIFFUSE CUTANEOUS SYSTEMIC SCLEROSIS – A CROSS SECTIONAL STUDY

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Background To date, the major diagnostic modalities for ILD in patients with diffuse systemic sclerosis (dcSSc) are limited

Abstract P150 Table 1

Total Patients	123
Patients included	92
Gender	
Male (n)	59
Mean age (years)	69.7
Females (n)	33
Mean age (years)	66.9
Deaths	22
Patients with disease progression	36
Relative FVC decline ≥ 10%	10
Mean FVC decline (ml)	57.16

to PFTs and HRCT thorax which plays a role after anatomical changes appear in the interstitium. The basic underlying pathology being inflammation in the alveolar epithelium, aerosol scintigraphy assesses the rate of clearance at this level, thereby helping with early diagnosis.

Aims

1. To assess the alveolar capillary permeability in dcSSc patients using Tc 99m DTPA aerosol scintigraphy.
2. To identify the association of DTPA clearance rates with spirometry, HRCT, six-minute walk distance (6MWD), modified rodnan skin score (mRSS), nail fold capillaroscopy (NFC), serum KL-6, SP-D, CA 15-3 and Saint George's Respiratory Questionnaire (SGRQ).

Methodology A cross-sectional study was done between December 2018 and December 2020 at a tertiary care hospital in South India after institutional ethics committee clearance. Cases of dcSSc satisfying the ACR/EULAR 2013 criteria were recruited into the study after obtaining consent. They underwent aerosol scintigraphy, HRCT thorax, spirometry, mRSS, NFC, 6MWT, SGRQ and serum testing for KL-6, SP-D and CA 15-3.

Results Of the total participants (n=58), the mean DTPA clearance rate ($T_{1/2}$) was found to be 49.6 ± 25.7 minutes. ROC analysis determined 59.5 minutes as the cut off for

detecting the presence of ILD (sensitivity 81.2%, specificity 66.7% compared to HRCT). The combination of $T_{1/2}$, KL-6 and CA 15-3 had a higher sensitivity (89.6%) and specificity (76.9%) in detecting ILD early. Clearance $T_{1/2}$ correlated positively with Warrick CT score, 6MWD and negatively with FVC, mRSS and serum CA 15-3.

P152

PNEUMOCYSTIS JIROVECI PNEUMONIA PROPHYLAXIS IN PATIENTS TREATED WITH MYCOPHENOLATE MOFETIL FOR INTERSTITIAL LUNG DISEASE

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Background Incidence of *Pneumocystis jirovecii* Pneumonia (PJP) among immunosuppressed individuals who are HIV-negative is rising in the UK.¹ There is a lack of evidence for whether patients with interstitial lung disease (ILD) treated with mycophenolate mofetil (MMF) benefit from PJP prophylaxis. This may increase variability in clinical practice between centres or clinicians. If PJP prophylaxis isn't supported by the evidence, this may represent unnecessary use of antibiotics.

Aims To identify whether ILD patients treated with MMF were less likely to develop PJP or require antibiotics for lower respiratory tract infection (LRTI) while on PJP prophylaxis.

Methods We performed a retrospective audit of patients at The Newcastle upon Tyne Hospitals NHS Foundation Trust who were treated with MMF for ILD. We recorded the proportion of patients given prophylaxis, the agents used, and the incidence of PJP and LRTI requiring antibiotics (including GP records) in this cohort.

Results Data was collected on 105 patients who were currently prescribed MMF or had been in the past 5 years. 75/105 (71.4%) were female and the median age was 68 years old. Median treatment length with MMF was 21 months. The majority of patients were diagnosed with chronic hypersensitivity pneumonitis (57.1%) or connective tissue disease-related ILD (16.2%). 36/105 (34.3%) were prescribed prophylaxis with co-trimoxazole, azithromycin or dapsone throughout the period studied, while 6/105 (5.7%) were prescribed prophylaxis for some but not all of the time that MMF was prescribed.

No patients in the cohort developed PJP while prescribed MMF regardless of prophylaxis use. Significantly more patients (18/42 [42.9%]) received antibiotics for LRTI while prescribed PJP prophylaxis compared to those not concurrently prescribed prophylaxis (14/69 [20.3%], $p = 0.011$, χ^2 test).

Conclusion Results from this cohort suggest that PJP infection in patients prescribed MMF for ILD is relatively uncommon regardless of prophylaxis use. There may be an increase in the incidence of LRTIs with PJP prophylaxis, although further study is required to determine this and the value of PJP prophylaxis in this patient group.

REFERENCE

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Abstract P151 Table 1 Diagnostic value of DTPA clearance half-life, serum biomarkers and their combination in SSC-ILD

DTPA clearance half time	
Mean DTPA clearance rate ($T_{1/2}$) (mins)	48.11±23.99
AUC (95% CI)	0.646 (0.455 – 0.837)
Cut off value (mins)	49.625
Sensitivity (%)	68.6
Specificity (%)	60
Serum biomarker	
Serum KL-6, ng/ml [median (IQR) (range)]	0.19 (0.534) (0.029 - 4.123)
Serum SP-D, ng/ml [median (IQR) (range)]	2.24 (39.125) (0.1 - 683.728)
Serum CA 15-3, U/ml [median (IQR) (range)]	187.87(226.12) (16.22–757.67)
Serum KL-6	
AUC (95% CI)	0.798 (0.686 – 0.910)
Cut off value, ng/ml	0.1875
Sensitivity, %	62.5
Specificity, %	92.3
Serum SP-D	
AUC (95% CI)	0.76 (0.631 – 0.898)
Cut off value, ng/ml	155.61
Sensitivity, %	66.7
Specificity, %	76.92
Serum CA 15-3	
AUC (95% CI)	0.764 (0.633 – 0.896)
Cut off value, U/ml	122.61
Sensitivity, %	79.2
Specificity, %	61.5
ROC model	
$T_{1/2}$, serum KL-6 and CA 15-3	
AUC (95% CI)	0.899
Sensitivity, %	89.6
Specificity, %	76.9
P value	0.00
Likelihood ratio	3.88