

# European Respiratory Society Annual Congress 2013

**Abstract Number:** 1697

**Publication Number:** P5115

**Abstract Group:** 1.5. Diffuse Parenchymal Lung Disease

**Keyword 1:** Imaging **Keyword 2:** Interstitial lung disease (connective tissue disease) **Keyword 3:** Pulmonary hypertension

**Title:** Scleroderma lung disease: Detection of pulmonary hypertension using pulmonary function tests is problematic in patients with emphysema

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**Body:** In a large cohort of SSc patients with little or no lung disease, an elevated FVC/DLco ratio of over 1.60 was one of the three variables considered to justify the performance of a right heart study. To determine the prevalence of an increased FVC/DLco ratio above 1.60 in a large consecutive cohort of patients with SScILD, and the frequency with which an elevated FVC/DLco ratio is ascribable to concurrent emphysema. Results: 343 patients with SSc-ILD. Emphysema present in 41/343 cases (12%). Pulmonary Function tests have shown: FEV1: 75.2 +/- 19.4, FVC : 75.9 +/- 21.9, DLco : 51.6 +/- 17.9, FVC/DLco ratio: 1.57 +/- 0.50. After adjustment for the extent of fibrosis on HRCT, the presence of emphysema was associated with a reduction in DLco (decrease of 12.8%; 95% CI 8.1%, 17.5%; p<0.0005) and an increase in the FVC/DLco ratio (increase of 0.60; 95% CI 0.46, 0.74; p<0.0005). In the whole cohort, an FVC/DLco ratio of >1.6 was seen in 119/343 patients and was more prevalent in patients with concurrent emphysema (33/41, 80%) than in the remaining cases (86/302, 28%), p<0.0005. The presence of emphysema (OR 8.4; 95% CI 2.4, 29.4; p<0.001) and the presence of pulmonary hypertension (OR 4.6; 95% CI 2.0, 10.6; p<0.0005) were indeterminate determinants of an FVC/DLco ratio >1.6. The presence of emphysema (RC 0.41; 95% CI 0.19, 0.62; p<0.0005) and the presence of pulmonary hypertension (RC 0.30; 95% CI 0.15, 0.45; p<0.0005) were independent determinants of the FVC/DLco ratio when examined as a continuous variable. The presence of concurrent emphysema is a major confounder when the FVC/DLco ratio is used to identify a high likelihood of underlying PH.