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**Title:** How frequent are unusual types of ventilatory impairment (mixed and nonspecific)? Analysis of over 10,000 patients data

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**Body:** Objective: To determine the frequency of mixed and nonspecific ventilatory disturbances in the large population of patients with different lung diseases. Material: 24,151 tests (spirometry and pletysmography performed at the same time) in 10,130 subjects (49.98% females), aged 18-87 years, referred for PFT evaluation from National TB & Lung Diseases Institute, Warsaw, Poland. Methods: Predicted FEV<sub>1</sub>, FVC, FEV<sub>1</sub>/VC, TLC and lower limits of normal (LLN) using ECSC 1993 equations were applied. Mutually exclusive types of ventilatory disturbances were defined as follows: obstruction as FEV<sub>1</sub>/VC<LLN with normal TLC, a restrictive pattern as TLC<LLN without obstruction, "mixed" abnormality as TLC<LLN and FEV<sub>1</sub>/VC<LLN and "nonspecific" pattern as VC<LLN with no obstruction and no restriction. Results: "Nonspecific" and "mixed" disturbances were detected in 424 (4.2%) and 229 (2.3%) patients, while obstruction and restriction in 3058 (30.2%) and 2511 (24.8%) respectively (some subjects had different types at different time). Patients presenting mixed pattern were males in majority (74.2%), have lower BMI and presented the most advanced ventilatory impairment (mean FEV<sub>1</sub>%pred. 50.0±10.9) comparing to others and had variety of diagnosis with the most prevalent sarcoidosis and lung fibrosis. Patients with nonspecific pattern were younger with BMI similar to others and were diagnosed also as interstitial lung diseases (sarcoidosis, lung fibrosis, hypersensitivity pneumonitis, connective tissue diseases) in majority. Conclusion: Mixed and nonspecific ventilatory disturbances are rare conditions associated with various interstitial lung diseases.