

Table S1: Demographics and Clinical Characteristics of the Two Analyzed Cohorts

	All Subjects N = 37	Cohort For 3D Reconstruction N = 18	Cohort For 2D Analysis N = 19
Gender (F/M)	21/16	12/6	9/10
Age (years)	66 (12)	68 (14)	64 (15)
BMI	27 (6)	26 (4)	28 (5)
Smokers (N)	30	16	14
Smoking Exposure (packs-year)	40 (45)	40 (37)	45 (56)
FEV ₁ /FVC (%)	68 (12)	65 (7)	73 (11)
FEV ₁ (%pred)	77 (20)	71 (18)	85 (19)
FVC (%pred)	85 (20)	85 (23)	84 (16)
TLC (%pred)	94 (17)	88 (22)	95 (12)
DLCO (%pred)	74 (18)	65 (13)	77 (16)
PaO ₂ (mmHg)	83 (12)	83 (6)	78 (14)
COPD (N, %)	21 (57%)	13 (72%)	8 (42%)

*Represented as medians and interquartile Range

Table S2: Histologic Measures of the Two Analyzed Cohorts

	All Subjects N = 37	Cohort For 3D Reconstruction N = 18	Cohort For 2D Analysis N = 19
Estimated proportion of lung structures			
Alveolar space (%)	81 (8.8)	83 (6.1)	80 (11)
Alveolar septa (%)	14 (6.8)	14 (5.6)	14 (6.1)
Vessels (%)	4.2 (2.8)	4.1 (1.4)	4.4 (4.2)
Bronchi (%)	0.5 (0.7)	0.5 (0.7)	0.0(0.7)
Cross-sectional area of vessels <500 µm diameter (% total area)			
	6.3 (2.2)	6.3 (1.7)	6.1 (3.1)
Morphometry of pulmonary muscular arteries			
External diameter (µm)	277 (96.0)	266 (93.7)	278 (97.5)
Lumen (% vessel area)	41 (16)	41 (9)	41 (18)
Intima (% vessel area)	30 (11)	31 (12)	28 (10)
Muscularis (% vessel area)	24 (7)	25 (6)	23 (9)

*Represented as medians and interquartile Range