Figure 1: Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flow diagram

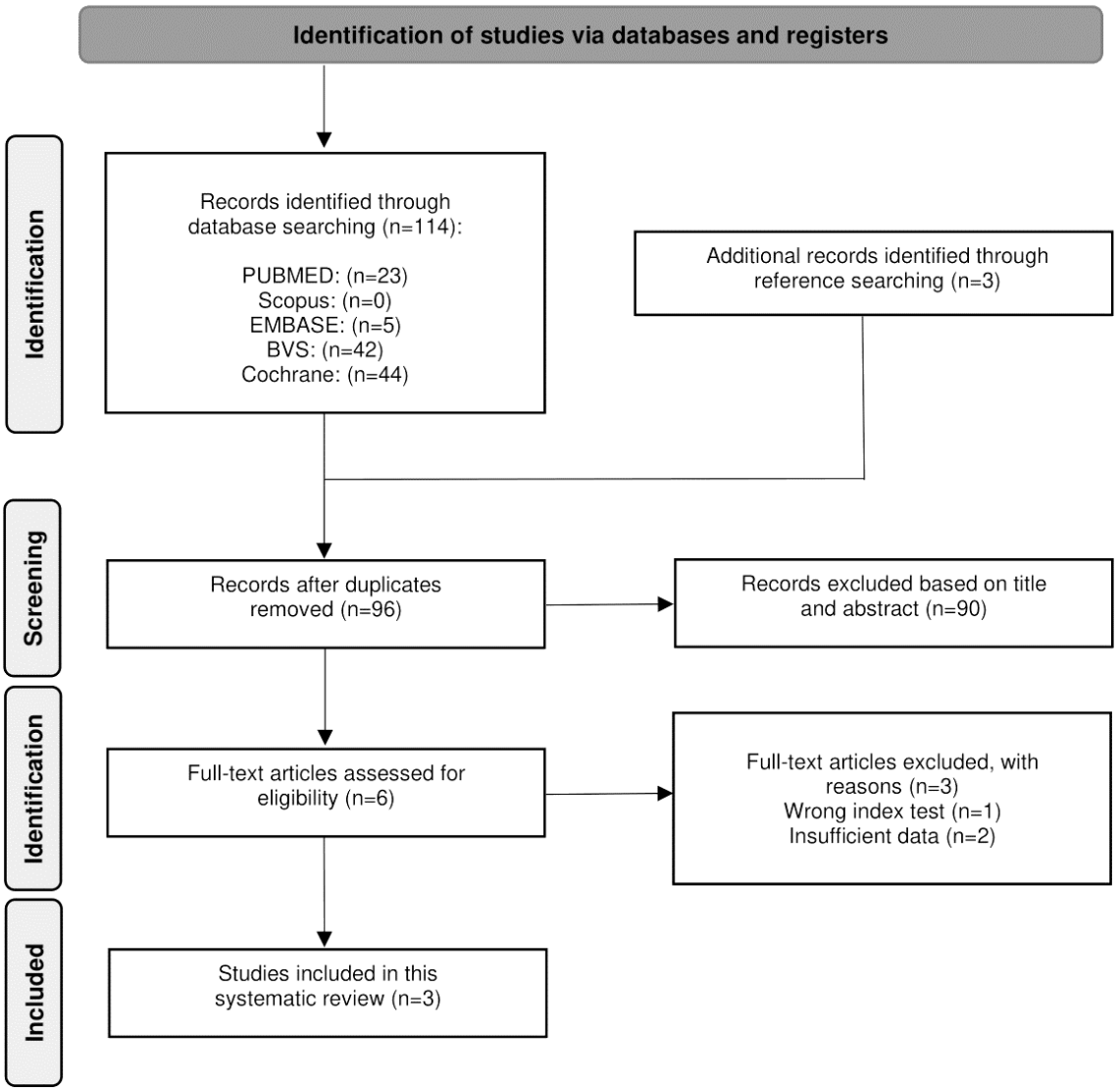

Table 1: Main characteristics of the included studies evaluation of cystic lung disease by paired inspiratory and expiratory CT scans

Study author	Year	Region	n	Men	Age	Study design	Intervention	Mean smoking history*
Hochhegger, B et al	2022	USA	72	43 (59.7%)	46 (49-76)	Retrospective	Paired inspiratory and expiratory HRCT	16
Lee, K.-N. et al	2000	Korea	54	37 (68.5%)	48 (24-76)	Retrospective	Paired inspiratory and expiratory HRCT	-
Worthy, S. A et al	1998	Canada	23	12 (52.1%)	60 (28-80)	Retrospective	Paired inspiratory and expiratory HRCT	-

n: sample size; HRCT: high radiation computed tomography

*quantification in pack-years

data in n (%), mean (min – max)

Table 2: CT characteristics in the assessment of cystic lung disease

Study author	Position	Maneuver	Level (I)	level (E)	Window width (HU)	Window level (HU)	Adequate effort (%)	No. of radiologists	Histopathological analysis
Hochhegger, B et al	supine position	full I/E	NR	NR	1000-1500	-700 to -600	4	2	Yes
Lee, K.-N. et al	supine position	full I/E	10 mm intervals*	5 selected levels	1000-1500	-700 to -600	4	2	Yes
Worthy, S. A et al	supine position	full I/E	10 mm intervals*	5 selected levels	1000-1500	-700	5	NR	NR

I/E: inspiratory and expiratory; I: inspiration; E: expiration; HU: Hounsfield units, NR: Not Reported

*10 mm intervals from lung apices to the bases

Table 3: Comparing Inspiratory and Expiratory CT Scans for the Diagnosis of Cystic Lung Disease

Study author	Year	Region	n	mean diameter decrease (%)	lesion number (total)	Diagnose	Size of Cysts			Inner thoracic diameter
							Inspiration	Expiration	δ (%)*	
Hochhegger, B et al	2022	USA	72	19,4	216	PLCH (n = 23)	13.3 (4.7)	5.2 (2.5)	60.9	9.8 (3.9)
						Honeycombing (n = 22)	8.2 (1.2)	4.3 (1.3)	47.5	7.5 (2.8)
						Paraseptal emphysema (n = 27)	19.0 (2.3)	18.0 (2.1)	5.2	6.2 (2.6)
Lee, K.-N. et al	2000	Korea	54	30,6	270	PLCH (n = 3)	5.9 (2.0)	4.0 (2.0)	38.0	15.3 (4.2)
						Honeycombing (n = 9)	11.0 (4.5)	7.1 (4.5)	41.8	7.2 (1.4)
						Paraseptal emphysema (n = 16)	23.1 (11.5)	19.2 (10.1)	19.5	4.3 (0.2)
						Centrilobular emphysema (n = 9)	15.8 (4.2)	11.9 (4.2)	21.3	5.3 (1.1)
						Lymphangiomyomatosis (n = 4)	4.9 (1.8)	2.8 (1.3)	45.8	8.7 (2.5)
						Cystic Bronchiectasis (n = 13)	13.4 (4.0)	8.7 (2.9)	39.8	5.7 (1.2)
Worthy, S. A et al	1998	Canada	23	largest cysts: 4.6 (5.3) (observer 1) 6.2 (6.2) (observer 2) smallest cysts: 1.4 (2.4) (observer 1) 0.8 (1.3) (observer 2)	27	Honeycombing (n = 11)	No specific values were presented for each cyst or patient.			
						Lymphangiomyomatosis (n = 2)				
						Bronchiectasis (n = 6)				
						cystic adenomatoid malformation (n = 1)				
						bullae (n = 7)				

n: sample size; PLCH: Pulmonary Langerhans Cell Histiocytosis

*Percentage of respiratory changes