## Supplementary

Table S1 Detailed search strategy according to database (14 June 2022)

PubMed search strategy (562 hits)

Years/issue searched: inception to 2022

Search date: 14 June 2022

(ground glass opaci\*) AND (adenocarcinoma) AND (patholog\* OR histopathog\*) Filters: English

Embase search strategy (963 hits)

#1. 'ground glass opacity' OR 'ground glass' OR 'ground glass opacities'

#2. 'adenocarcinoma' OR 'pulmonary adenocarcinoma'

#3. 'pathology' OR 'pathologic' OR 'histopathology' OR 'histologic' OR 'histopathologic'

#4. #1 AND #2 AND #3 AND [english]/lim

Scopus search strategy (663 hits)

Years/issue searched: inception to 2021

Search date: 14 June 2022

((ground glass opaci\*) AND (adenocarcinoma) AND (patholog\* OR histopathog\*) AND (LIMIT-TO (LANGUAGE, "English"))

Author		Countral	Study period	I Study design	Number of - Participants	Eligibility Criteria						
	Year	Country/ region				Size	CT slice thickness	Synchronous lesions	Demographic factor	Pathologic criteria	Period of persistency	
Zhu	2022	China	2018–2019	Retrospective	653	pGGN <30 mm	Less than 1.5 mm					
Sun	2022	China	2007–2015	Retrospective	69	pGGN ≥30 mm			At least 5 years of follow-up			
Fu	2021	China	2011–2015	Retrospective	432			Solitary	No history of malignancy			
Wang	2021	China	2013–2015	Retrospective	273				At least 5 years of follow-up	IA only included		
Sun	2020	China	2012–2015	Retrospective	102		1 mm			IA only included		
_i	2020	China	2015–2019	Retrospective	90		1 mm			AAH excluded		
Chen	2019	Taiwan	2015–2019	Retrospective	59	pGGN ≤20 mm		Solitary	No history of malignancy			
Lee	2019	Korea	2012–2016	Retrospective	44	pGGN <20 mm						
Mao	2019	China	2010–2012	Retrospective	109				No history of malignancy	IA only included		
Wang	2019	China	2016–2017	Retrospective	91				Age between 18 to 44 years, no history of malignancy			
/e	2018	China	2008–2014	Retrospective	534	pGGN ≤30 mm	1 mm			AAH excluded		
Moon	2018	Korea	2010–2017	Retrospective	106							
Li	2018	China	2013–2016	Retrospective	167			Solitary				
Sawada	2009	Japan	2000–2005	Retrospective	63	pGGN ≤30 mm	1 mm from 2001 and 2 mm before					
Yamaguchi	2015	Japan	2006–2012	Retrospective	47	pGGN ≤20 mm	1 mm					
chinose	2014	Japan	2008–2010	Retrospective	114	pGGN ≤20 mm	1 mm slice thickness					
_im	2013	Korea	2003–2008	Retrospective	46	pGGN >10 mm			At least 3 years of follow-up		persistent	
Cho	2013	Korea	2004–2009	Retrospective	46	pGGN ≤30 mm			At least 2 years of follow-up			
Eguchi	2014	Japan	1998–2013	Retrospective	33		1.25 mm		At least 2 years of follow-up			
_iang	2015	China	2010–2014	Retrospective	74	5 mm ≤ pGGN ≤30 mm					Persistent	
Kakinuma	2016	Japan	2009–2011	Multicenter prospective	35	pGGN ≤30 mm	Less than 1.25 mm				At least 3 months of persistenc	
ournel	2017	France	2008–2014	Retrospective	27	pGGN ≤30 mm		Less than five				
Zha	2016	China	2008–2014	Retrospective	553	pGGN ≤30 mm			No history of malignancy			
Kitami	2016	Japan	2001–2014	Retrospective	78	pGGN ≤30 mm					At least 3 months o persistency	

AAH, Atypical adenomatous hyperplasia; CT, computed tomography; IA, invasive adenocarcinoma; pGGN, pure ground glass nodule.

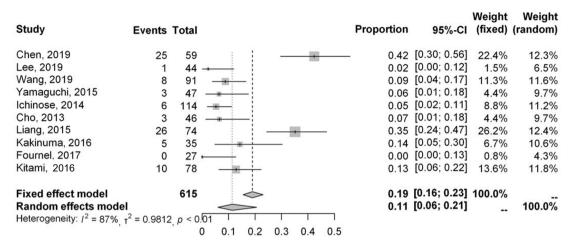


Figure S1 Forest plot of meta-analysis to estimate the proportion of atypical adenomatous hyperplasia among resected pure ground glass pulmonary lesions.

Study	Events	Total		Proportion	95%-CI	Weight (fixed)	Weight (random)
Sun, 2022	8	69	II	0.12	[0.05; 0.22]	1.8%	5.3%
Fu, 2021	118	432		0.27	[0.23; 0.32]	22.0%	6.7%
Li, 2020	20	90		0.22	[0.14; 0.32]	4.0%	6.1%
Chen, 2019	32	59	· · · · · ·	0.54	[0.41; 0.67]	3.8%	6.0%
Lee, 2019	18	44		0.41	[0.26; 0.57]	2.7%	5.7%
Wang, 2019	16	91		0.18	[0.10; 0.27]	3.4%	5.9%
Moon, 2018	37	106		0.35	[0.26; 0.45]	6.2%	6.3%
Yamaguchi, 2015	29	47		- 0.62	[0.46; 0.75]	2.9%	5.8%
Ichinose, 2014	70	114		0.61	[0.52; 0.70]	6.9%	6.4%
Lim, 2013	19	46		0.41	[0.27; 0.57]	2.9%	5.8%
Cho, 2013	23	46		0.50	[0.35; 0.65]	3.0%	5.8%
Eguchi, 2014	5	33		0.15	[0.05; 0.32]	1.1%	4.6%
Liang, 2015	30	74		0.41	[0.29; 0.53]	4.6%	6.2%
Kakinuma, 2016	21	35		- 0.60	[0.42; 0.76]	2.2%	5.5%
Fournel, 2017	8	27		0.30	[0.14; 0.50]	1.4%	5.0%
Zha, 2016	137	553	-	0.25	[0.21; 0.29]	26.5%	6.7%
Kitami, 2016	30	78		0.38	[0.28; 0.50]	4.7%	6.2%
Fixed effect model Random effects mode Heterogeneity: / <sup>2</sup> = 89%,	-	<b>1944</b> , p < 0.	₁ 1 0.2 0.3 0.4 0.5 0.6 0.7		[0.31; 0.35] [0.28; 0.44]	100.0% 	100.0%

Figure S2 Forest plot of meta-analysis to estimate the proportion of adenocarcinoma in situ among resected pure ground glass pulmonary lesions.

Study	Events T	ſotal		Proportion	95%-CI	Weight (fixed)	Weight (random)
Sun, 2022	5	69	1	0.07	[0.02; 0.16]	1.3%	5.8%
Fu, 2021	213	432		0.49	[0.44; 0.54]	30.1%	7.2%
Li, 2020	22	90	_	0.24	[0.16; 0.35]	4.6%	6.8%
Chen, 2019	2	59		0.03	[0.00; 0.12]	0.5%	4.5%
Lee, 2019	15	44		0.34	[0.20; 0.50]	2.8%	6.5%
Wang, 2019	42	91		0.46	[0.36; 0.57]	6.3%	6.9%
Moon, 2018	60	106		0.57	[0.47; 0.66]	7.3%	7.0%
Yamaguchi, 2015	4	47		0.09	[0.02; 0.20]	1.0%	5.5%
Ichinose, 2014	16	114 —		0.14	[0.08; 0.22]	3.8%	6.7%
Lim, 2013	9	46	1	0.20	[0.09; 0.34]	2.0%	6.2%
Cho, 2013	2	46 —		0.04	[0.01; 0.15]	0.5%	4.5%
Eguchi, 2014	15	33 —	•	0.45	[0.28; 0.64]	2.3%	6.4%
Kakinuma, 2016	9	35		0.26	[0.12; 0.43]	1.9%	6.2%
Fournel, 2017	8	27		0.30	[0.14; 0.50]	1.6%	6.0%
Zha, 2016	146	553 +		0.26	[0.23; 0.30]	30.0%	7.2%
Kitami, 2016	19	78	÷	0.24	[0.15; 0.35]	4.0%	6.7%
Fixed effect model Random effects mode Heterogeneity: / <sup>2</sup> = 91%,	I	1870 p < 0.01 0.2 0.3	0.4 0.5 0.6		[0.32; 0.37] [0.16; 0.34]	100.0% 	100.0%

Figure S3 Forest plot of meta-analysis to estimate the proportion of minimally invasive adenocarcinoma among resected pure ground glass pulmonary lesions.