Supplementary Online Content

Lopez-Olivo MA, Maki KG, Choi NJ, et al. Patient adherence to screening for lung cancer in the US: a systematic review and meta-analysis. *JAMA Netw Open.* 2020;3(11):e2025102. doi:10.1001/jamanetworkopen.2020.25102

eTable 1. MEDLINE (Ovid) Search Strategy Run on August 29, 2019

eTable 2. Risk of Bias Within Studies Assessed With the Newcastle-Ottawa Scale

eFigure 1. Lung Cancer Screening Adherence Rates by Follow-up Times (12, 15, 18, 24, and 36 Months)

eFigure 2. Lung Cancer Screening Adherence Rates by Follow-Up Times (Unspecified and Those Provided as Ranges)

eFigure 3. Lung Cancer Screening Adherence Rates by Study Eligibility Criteria

This supplementary material has been provided by the authors to give readers additional information about their work.

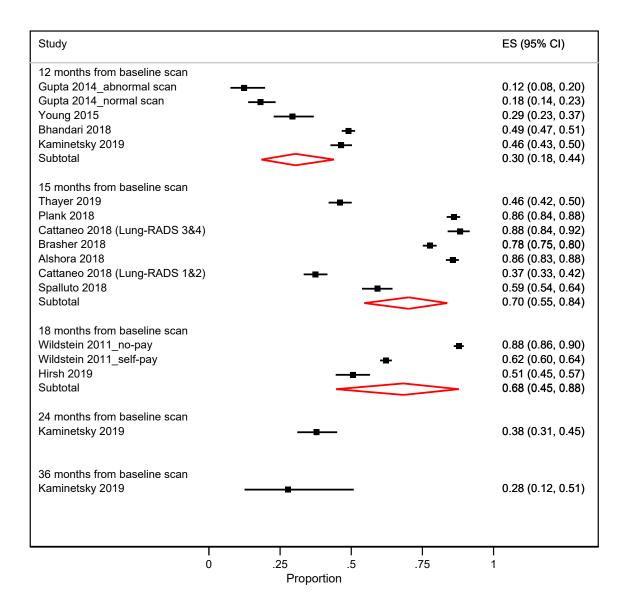
eTable 1. MEDLINE (Ovid) Search Strategy Run on August 29, 2019

Line	Terms used
1	exp LUNG NEOPLASMS/
2	Lung*.ti.
3	or/1-2
4	EARLY DETECTION OF CANCER/
5	MASS SCREENING/
6	or/4-5
7	3 and 6
8	exp LUNG NEOPLASMS/pc
9	exp TOMOGRAPHY, X-RAY COMPUTED/
10	("computed tomograph*" or LDCT or "low dose CT").ti,kf,ab.
11	8 and (9 or 10)
12	((screen* or (early adj3 detect*)) and lung* and (cancer* or neoplas* or
1.2	adenocarcinoma*)).ti,kf,ab.
13	((screen* or (early adj3 detect*)) and (SCLC or NSCLC)).ti,kf,ab.
14	((screen* or (early adj3 detect*)) adj5 lung* adj5 (cancer* or neoplas* or adenocarcinoma* or SCLC or NSCLC)).ab. /freq=2
15	((screen* or (early adj3 detect*)) adj5 (SCLC or NSCLC)).ab. /freq=2
16	or/12-15
17	7 or 11 or 16 [Lung Cancer Screening]
18	exp Patient Compliance/
19	(adher* or complian* or nonadher* or non-adher* or comply* or
	complies or complied or complian* or noncomply* or noncomplie* or
	noncomplian* or non-comply* or non-complie* or non-complian* or
	overadher* or over-adher* or overcomply* or over-comply* or
	overcomplie* or over-complie* or over-complian* or over-
	complian*).ab,ti.
20	((predictor* or determinant* or "associated factor*") adj8 (adher* or
	nonadher* or non-adher* or comply* or complies or complied or
	complian* or noncomply* or noncomplie* or noncomplian* or non-
	comply* or non-complie* or non-complian* or overadher* or over-
	adher* or overcomply* or over-comply* or overcomplie* or over-
	complie* or overcomplian* or over-complian*)).ab,ti.
21	or/18-20 [Compliance]
22	17 and 21
23	limit 22 to (english language and yr="2011 -Current")

eTable 2. Risk of Bias Within Studies Assessed With the Newcastle-Ottawa Scale

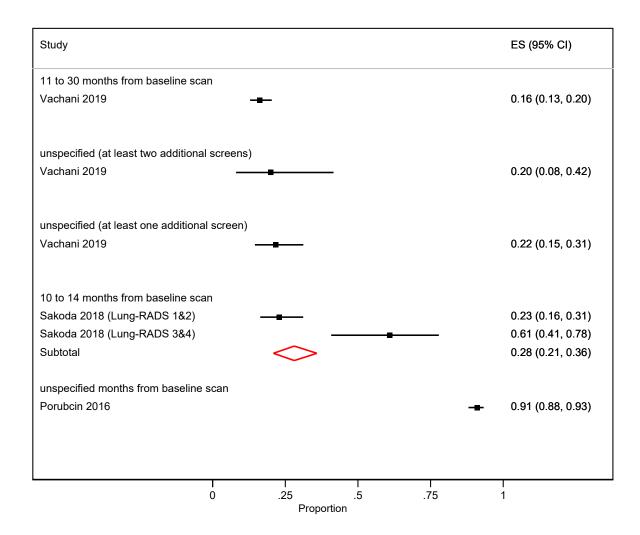
Study	Risk of Bias Assessment								
		Selec	ction		Comparability	(Outcor	ne	Overall
	Exposed	Unexposed	Exposure	Outcome		Assessment	Follow-Up	Attrition	score
Alshora 2018	*		*	*	*	*			5
Bhandari 2018			*	*		*	*		5
Brasher 2018	*		*	*	*	*			6
Cattaneo 2018	*		*	*	* *	*			5
Gupta 2014	*		*		*	*			3
Hirsh 2019	*		*		*	*			3
Kaminetsky 2019	*								1
Plank 2018	*		*	*		*	*		5
Porubcin 2016	*		*			*			3
Sakoda 2018				*		*			2
Spalluto 2018	*		*	*	*	*			4
Thayer 2019					*				2
Vachani 2019			*	*	*	*			4
Wildstein 2011_self-pay			*		*	*			3
Young 2015	*		*	*	*	*	*		6

eFigure 1. Lung Cancer Screening Adherence Rates by Follow-up Times (12, 15, 18, 24, and 36 Months)



This figure shows the adherence rates reported per study according to the follow-up time. The first line in the study column indicates the subgroup. The adherence rates were sorted from lowest to highest. The black boxes represent the adherence rate reported per study after initial lung cancer screening (second screening regardless of the timepoint used). The black lines represent the 95% confidence interval. The red diamonds represent the pooled adherence rate for the subgroup and the width of the diamond respresent the 95% confidence interval.

eFigure 2. Lung Cancer Screening Adherence Rates by Follow-Up Times (Unspecified and Those Provided as Ranges)



This figure shows the adherence rates reported per study for those studies not providing the follow-up time (when was the subsequent screening done) or reporting their follow-up time in rages (screening done in different times). The first line in the study column indicates the subgroup. The adherence rates were sorted from lowest to highest. The black boxes represent the adherence rate reported per study after initial lung cancer screening (second screening regardless of the timepoint used). The black lines represent the 95% confidence interval. The red diamonds represent the pooled adherence rate for the subgroup and the width of the diamond respresent the 95% confidence interval.

eFigure 3. Lung Cancer Screening Adherence Rates by Study Eligibility Criteria

Wildstein	Study ID (Last name, year)	No. of people adhering	Sample size		ES (95% CI)	% Weight
(Lung-RADS 182)	Included patients <55 an	d >80				
Wildstein 1296 2083	Cattaneo 2018	191	511	-	0.37 (0.33, 0.42)	5.32
Cattance 2018	Wildstein	1296	2083	•	0.62 (0.60, 0.64)	5.35
Subtotal 0.64 (0.40, 0.85) 15.9 Included patients <55 years Young 2015 46 157	Cattaneo 2018	234	265	=	0.88 (0.84, 0.92)	5.28
Young 2015 46 157 ■ 0.29 (0.23, 0.37) 5.23 Spalluto 2018 189 319 0.59 (0.54, 0.64) 5.30 Alshora 2018 772 901 ■ 0.86 (0.83, 0.88) 5.34 Subtotal 0.59 (0.27, 0.88) 15.8 Wildstein 2011 _ nor-pay 1146 1304 ■ 0.88 (0.86, 0.90) 5.35 USPSTF age criteria Gupta 2014 _ abnormal scan 2019 61 375 ■ 0.16 (0.13, 0.20) 5.31 Gupta 2014 _ normal scan 2019 61 375 ■ 0.18 (0.14, 0.23) 5.28 Gupta 2014 _ normal scan 2019 308 663 ■ 0.46 (0.43, 0.50) 5.33 Hirsh 2019 131 259 ■ 0.51 (0.45, 0.57) 5.28 Brasher 2018 870 1120 ■ 0.78 (0.75, 0.80) 5.35 Porubcin 2016 424 466 ■ 0.91 (0.88, 0.93) 5.32 Subtotal 0.45 (0.22, 0.69) 37.0 0.46 (0.42, 0.50) 5.33 Bhandari 2018 860 1755 ■ 0.49 (0.47, 0.51) 5.35	Subtotal			\Leftrightarrow	0.64 (0.40, 0.85)	15.96
Spalluto 2018 189 319 0.59 (0.54, 0.64) 5.30 Alshora 2018 772 901 0.86 (0.83, 0.88) 5.34 Subtotal 0.59 (0.27, 0.88) 15.8 Included patients >80 years Wildstein 0.88 (0.86, 0.90) 5.35 USPSTF age criteria Gupta 14 113 0.12 (0.08, 0.20) 5.18 Z014_abnormal scan Vachani 2019 61 375 0.16 (0.13, 0.20) 5.31 Gupta 2014_normal scan Kaminetsky 2019 308 663 0.46 (0.43, 0.50) 5.33 Hirsh 2019 131 259 0.51 (0.45, 0.57) 5.28 Brasher 2018 870 1120 0.78 (0.75, 0.80) 5.35 Porubcin 2016 424 466 0.91 (0.88, 0.93) 5.32 Subtotal 0.45 (0.22, 0.69) 37.0 Unspecified 0.45 (0.22, 0.69) 37.0 Sakoda 2018 (1.10 graph 2018) 264 573 0.46 (0.42, 0.50) 5.33 Bhandari 2018 860 1755 0.49 (0.47, 0.51) 5.35 Sakoda 2018 (1.10 graph 2018) 14 23 0.61 (0.41, 0.78) <t< td=""><td>Included patients <55 ye</td><td>ars</td><td></td><td></td><td></td><td></td></t<>	Included patients <55 ye	ars				
Alshora 2018 772 901	Young 2015	46	157	■-	0.29 (0.23, 0.37)	5.23
Alshora 2018 772 901	Spalluto 2018	189	319	-	0.59 (0.54, 0.64)	5.30
Subtotal 0.59 (0.27, 0.88) 15.8 Included patients >80 years Wildstein 2011_no-pay 1146 1304 0.88 (0.86, 0.90) 5.35 USPSTF age criteria Gupta 2014_abnormal scan Vachani 2019 61 375 0.16 (0.13, 0.20) 5.18 2014_normal scan 44 243 0.18 (0.14, 0.23) 5.28 2014_normal scan 44 243 0.18 (0.14, 0.23) 5.28 145 0.16 (0.43, 0.50) 5.33 146 0.46 (0.43, 0.50) 5.34 158 158 158 158 158 158 158 15	Alshora 2018	772	901			5.34
Wildstein 2011_no-pay 1146 1304 ■ 0.88 (0.86, 0.90) 5.35 USPSTF age criteria Gupta 2014_abnormal scan Vachani 2019 61 375 ■ 0.12 (0.08, 0.20) 5.18 0.16 (0.13, 0.20) 5.31 Gupta 2014_abnormal scan Vachani 2019 61 375 ■ 0.16 (0.13, 0.20) 5.31 Gupta 2014_normal scan Vachani 2019 308 663 ■ 0.46 (0.43, 0.50) 5.33 Hirsh 2019 131 259 ■ 0.51 (0.45, 0.57) 5.28 Brasher 2018 870 1120 ■ 0.78 (0.75, 0.80) 5.35 Porubcin 2016 424 466 ■ 0.91 (0.88, 0.93) 5.32 Subtotal Unspecified Sakoda 2018 (Lung-RADS 182) Thayer 2019 264 573 ■ 0.46 (0.42, 0.50) 5.33 ■ 0.46 (0.42, 0.50) 5.33 ■ 0.49 (0.47, 0.51) 5.35 Sakoda 2018 (Lung-RADS 384) (Lung-RADS 384) Plank 2018 710 825 ■ 0.86 (0.84, 0.88) 5.34	Subtotal			\Leftrightarrow		15.87
USPSTF age criteria Gupta Gupta Vachani 2019 G1	Included patients >80 ye	ars				
Gupta 2014_abnormal scan Vachani 2019 14 113 ■ 0.12 (0.08, 0.20) 5.18 2014_abnormal scan Vachani 2019 61 375 ■ 0.16 (0.13, 0.20) 5.31 Gupta 2014_normal scan Kaminetsky 2019 44 243 ■ 0.18 (0.14, 0.23) 5.28 Hirsh 2019 131 259 ■ 0.51 (0.45, 0.57) 5.28 Brasher 2018 870 1120 ■ 0.78 (0.75, 0.80) 5.35 Porubcin 2016 424 466 ■ 0.91 (0.88, 0.93) 5.32 Subtotal 0.45 (0.22, 0.69) 37.0 Unspecified Sakoda 2018 (Lung-RADS 1&2) 0.46 (0.42, 0.50) 5.33 Bhandari 2018 860 1755 ■ 0.49 (0.47, 0.51) 5.35 Sakoda 2018 (Lung-RADS 3&4) (Lung-RADS 3&4) (Plank 2018 14 23 ■ 0.61 (0.41, 0.78) 4.58 Plank 2018 710 825 ■ 0.86 (0.84, 0.88) 5.34	Wildstein 2011_no-pay	1146	1304	•	0.88 (0.86, 0.90)	5.35
Vachāni 2019 61 375 ■ 0.16 (0.13, 0.20) 5.31 Gupta 2014_normal scan 44 243 ■ 0.18 (0.14, 0.23) 5.28 Kaminetsky 2019 308 663 ■ 0.46 (0.43, 0.50) 5.33 Hirsh 2019 131 259 ■ 0.51 (0.45, 0.57) 5.28 Brasher 2018 870 1120 ■ 0.78 (0.75, 0.80) 5.35 Porubcin 2016 424 466 ■ 0.91 (0.88, 0.93) 5.32 Subtotal 0.45 (0.22, 0.69) 37.0 Unspecified Sakoda 2018 (Lung-RADS 182) 28 122 ■ 0.23 (0.16, 0.31) 5.19 Hayer 2019 264 573 ■ 0.46 (0.42, 0.50) 5.33 Bhandari 2018 860 1755 ■ 0.49 (0.47, 0.51) 5.35 Sakoda 2018 (Lung-RADS 384) 14 23 ■ 0.61 (0.41, 0.78) 4.58 Clung-RADS 2018 710 825 ■ 0.86 (0.84, 0.88) 5.34	USPSTF age criteria					
Vachani 2019 61 375 ■ 0.16 (0.13, 0.20) 5.31 Gupta 2014_normal scan Kaminetsky 2019 308 663 ■ 0.46 (0.43, 0.50) 5.33 Hirsh 2019 131 259 ■ 0.51 (0.45, 0.57) 5.28 Brasher 2018 870 1120 ■ 0.78 (0.75, 0.80) 5.35 Porubcin 2016 424 466 ■ 0.91 (0.88, 0.93) 5.32 Subtotal 0.45 (0.22, 0.69) 37.0 Unspecified Sakoda 2018 (Lung-RADS 182) Thayer 2019 264 573 ■ 0.23 (0.16, 0.31) 5.19 (0.46 (0.42, 0.50) 5.33 ■ 0.49 (0.47, 0.51) 5.35 Sakoda 2018 (0.47, 0.51) 5.35 ■ 0.61 (0.41, 0.78) 4.58 (0.84, 0.88) 5.34 □ 0.86 (0.84, 0.88) 5.34	Gupta	14	113		0.12 (0.08, 0.20)	5.18
Hirsh 2019 131 259		61	375		0.16 (0.13, 0.20)	5.31
Hirsh 2019 131 259	Gupta	44	243		0.18 (0.14, 0.23)	5.28
Brasher 2018 870 1120	Kaminetsky 2019	308	663	-	0.46 (0.43, 0.50)	5.33
Porubcin 2016 424 466	Hirsh 2019	131	259	-	0.51 (0.45, 0.57)	5.28
Subtotal 0.45 (0.22, 0.69) 37.0 Unspecified Sakoda 2018 28 122	Brasher 2018	870	1120	•	0.78 (0.75, 0.80)	5.35
Unspecified Sakoda 2018 (Lung-RADS 1&2) Thayer 2019 Bhandari 2018 Sakoda 2018 (Lung-RADS 1&2) 10.23 (0.16, 0.31) 10.46 (0.42, 0.50) 10.33 10.46 (0.42, 0.50) 10.33 10.49 (0.47, 0.51) 10.35 Sakoda 2018 (Lung-RADS 3&4) Plank 2018 710 825 10.86 (0.84, 0.88) 10.35 10.36 (0.84, 0.88) 10.37 10.38	Porubcin 2016	424	466		0.91 (0.88, 0.93)	5.32
Sakoda 2018 (Lung-RADS 182) Thayer 2019 264 573	Subtotal		<	\Leftrightarrow	0.45 (0.22, 0.69)	37.04
Thayer 2019 264 573	Unspecified					
Thayer 2019 264 573	Sakoda 2018	28	122	-	0.23 (0.16, 0.31)	5.19
Sakoda 2018 14 23 0.61 (0.41, 0.78) 4.58 (Lung-RADS 3&4) 710 825 0.86 (0.84, 0.88) 5.34	Thayer 2019	264	573	-	0.46 (0.42, 0.50)	5.33
(Lung-RADS 3&4) Plank 2018 710 825 ■ 0.86 (0.84, 0.88) 5.34	Bhandari 2018	860	1755		0.49 (0.47, 0.51)	5.35
Plank 2018 710 825	Sakoda 2018	14	23		0.61 (0.41, 0.78)	4.58
Subtotal 0.54 (0.32, 0.75) 25.70	Plank 2018	710	825	•	0.86 (0.84, 0.88)	5.34
	Subtotal			\Leftrightarrow	0.54 (0.32, 0.75)	25.78
Overall 0.55 (0.44, 0.66) 100.	Overall			*	0.55 (0.44, 0.66)	100.00

This figure shows the adherence rates reported per study their eligibility criteria. The first line in the study column indicates the subgroup (e.g., studies in which participants were between 55 and 80 years old, studies in which participants younger than 55 were included, etc.). The second and third columns indicate the counts (number of people adhering/number of sample size). The

fourth column indicates the adherence rates, which were sorted from lowest to highest. The fifth column indicates the weight of the study (contribution to the overall adherence rate). The black boxes represent the adherence rates reported per study after initial lung cancer screening (second screening regardless of the time point used). The horizontal black lines represent the 95% confidence interval. The red diamonds represent the pooled adherence rate for the subgroup and the width of the diamond represent the 95% confidence interval. The last solid red diamond represent the overall (pooled) adherence rate combining all studies (independently of the subgroup). The dotted vertical line indicates the overall adherence rate.