Table 2 Long-term surgical outcomes in older patients
Ordered by stage, degree of confidence that results reflect the effect of the treatment, age

The "Adjustment for confounding" columns (Demogr F, CoMorbid, Hi stage, Time Span, Q settings, Q surgery, Fav Tumor) are color-coded cells (no text values) and are left blank below.

1st author, year (reference)	Source	Yrs	n	Lobe vs.	Stage [a]	Age	Statistical methods	# adj for / Subsets	Confid RE Tmt effect	OS W	OS Seg	OS Lobe	OS HR	LCSS W	LCSS Seg	LCSS Lobe	LCSS HR
Stiles 2019 (35)	SEER	07-12	206	SL	pIA1,2 [b]	≥65	PM	12/2	VH		**64**	60	.84	78		**91**	1.10
Zhang 2016 (36)	SEER	98-12	6,276	Seg	cIA1,2	≥70	PA, PQ, PM	8/3	H	-	-	-	1.13	-	-	-	1.21
Wisnivesky 2010 (37)	SEER	98-02	1,165	SL	cIA1,2	≥65	PA, PQ, PM	12/1	M		-	-	1.09		-	-	1.39
Salazar 2021 (38)	SEER	05-15	4,016	W	cIA1,2	≥67 [c]	MV	12	M	53 [d]	-	**71** [d]	1.68	75 [d]	-	**86** [d]	1.84
Stiles 2019 (35)	SEER	07-12	2,248	W [e]	pIA1,2	≥65	PM	12/2	L	49		**62**	1.48	82		**93**	2.05
Veluswamy [f] 15 (39)	SEER	98-10	2,008	SL	cIA1,2	≥65	PA	10/3	L		60	**66**	1.21		70	**81**	1.66
Veluswamy [g] 15 (39)	SEER	98-10	1,139	SL	cIA1,2	≥65	PA	10/3	L		50	**56**	1.21		71	**78**	1.41
Kates 2011 (40)	SEER	88-05	664	SL	cIA1	≥70	PA, PQ	6/1	L		-	-	.99		-	-	1.44
Moon 2018 (41)	SEER	00-14	422 [h]	Seg	cIA1,2	≥75	MV, PM, IW	11/1	L		-	-	1.17	-	-	-	.94
Razi 2016 (42)	SEER	98-07	1,170 [h]	Seg	cIA1,2	≥75	MV	7/1	L		46 [d]	**52** [d]	-		62 [d]	**66** [d]	1.01
Razi 2016 (42)	SEER	98-07	1,530 [h]	W	cIA1,2	≥75	MV	7/1	L	43 [d]	-	**52** [d]	-	59 [d]	-	**66** [d]	1.02
Zhang 2016 (36)	SEER	98-12	12,324	Seg	cIA	≥70	PA, PQ, PM	8/3	H	-	-	-	1.28	-	-	-	1.33
Zhang 2016 (36)	SEER	98-12	6,851	Seg	cIA	≥75	PA, PQ, PM	8/3	H	-	-	-	1.24	-	-	-	1.31
Wisnivesky 10 (37)	SEER	98-02	2,259	SL	cIA	≥65	PA, PQ, PM	12/1	M		-	-	1.26		-	-	1.25
Veluswamy [f] 15 (39)	SEER	98-10	3,384	SL	cIA	≥65	PA	10/3	L		-	-	1.31		-	-	1.90
Veluswamy [g] 15 (39)	SEER	98-10	2,085	SL	cIA	≥65	PA	10/3	L		-	-	1.16		-	-	1.62
Razi 2016 (42)	SEER	98-07	1,170	Seg	cIA	≥75	MV	7	L		44 [d]	**50** [d]	1.04		59 [d]	**65** [d]	-
Razi 2016 (42)	SEER	98-07	1,530	W	cIA	≥75	MV	7/1	L	39 [d]	-	**50** [d]	1.31	53 [d]	-	**65** [d]	-
Zhang 2021 (43)	SEER	04-15	3,504 [i]	SL	cIA	≥70	MV, PM	10/3	VL		-	-	-		79	81	1.12
Wang 2020 (44)	SEER	98-16	6,197 [h]	W	cIA	70–75	MV	7	VL	51 [d]	59 [d]	**60** [d]	1.32 [j]	59 [d]	62 [d]	**70** [d]	1.23 [j]
Wang 2020 (44)	SEER	98-16	6,197 [h]	W	cIA	>75	MV	7	VL	43 [d]	47 [d]	**51** [d]	1.29 [j]	46 [d]	47 [d]	59 [d]	1.11 [j]
Shirvani 2014 (12)	SEER	03-09	9,093	SL	cI-IIA	≥65	MV, PM	19/4	VH		[65] [k]	**[71]** [k]	1.36	[78] [k]		**[85]** [k]	1.46
Billmeier 2011 (13)	CanCORS	03-05	679	W [e]	I-IIIA [l]	≥65	PA	14	M	49 [d]	-	**57** [d]	1.35	-	-	-	-
Tsutani 2018 (18)	Japan ×1	07-15	205	SL	I-IIA	≥75	MV, PA, PM	10	M		**77**	72	.97	-	-	-
Okami 2009 (26)	Japan Reg	1999	367	SL	cI-IIA	≥80	MV	9	M		**60** [d]	54 [d]	1.13	-	-	-
Shirvani 2012 (45)	SEER-MC	01-07	7,809	SL	cI-IIA	≥65	MV, PM	10/1	L		[63] [d,k]	**[73]** [d,k]	.95	[77] [d,k]		**[85]** [d,k]	1.07
Stiles 2019 (46)	SEER	07-12	1,362 [i]	SL	cIB-IIA	≥65	MV, PM	15/2	L		37	**47**	1.27		73	**84**	1.57
Fiorelli 2016 (19)	Italy ×8	06-12	239	SL	cI-IIA	≥75	MV, PM	6	L		41	**58**	1.43		62	**69**	1.67
Mery 2005 (47)	SEER	92-97	14,555	SL	cI,II	65–74	MV	4	VL		41 [d]	**50** [d]	1.26	-	-	-
Mery 2005 (47)	SEER	92-97	14,555	SL	cI,II	≥75	MV	4	VL		33 [d]	**36** [d]	.94	-	-	-
Wedge vs. segment										**Wedge vs. Seg**				**Wedge vs. Seg**			
Smith 2013 (48)	SEER	98-06	3,525 [h]	W v Seg	cIA	≥70	PA, PQ, PM	7/2	M	-	-		1.18	-	-		1.37
Zhang 2021 (43)	SEER	04-15	3,504 [i]	W v Seg	cIA	≥70	MV, PM	10/3	VL	-	-		-	79	**83**		1.21

Inclusion criteria: studies using multivariate or propensity adjustment to compare segmentectomy or wedge resection *vs.* lobectomy, 2000–21, >50 pts per arm, focused specifically on older patients; The HR reference is lobectomy (or segmentectomy in the wedge *vs.* segmentectomy section), i.e., HR >1 reflects worse outcome compared with Lobectomy. Bold highlights better outcome (>2-point difference); Light green shading highlights statistically significant difference (lighter shade = univariable; darker = multivariable); Red font highlights potential weakness, e.g., accrual occurring primarily before 2000.

[a], 8th edition stage (reported stage is translated into current 8th edition nomenclature for the sake of uniformity and contemporary application); [b], patients with ≥9 nodes examined; [c], good-risk patients (life expectancy >5 years) ; [d], unadjusted results; [e], predominantly wedge; [f], adenocarcinoma; [g], squamous carcinoma; [h], for entire study, not this specific cohort; [i], matched pairs (total); [j], wedge *vs.* lobectomy; [k], 3-yr OS (in brackets because not comparable to other entries in this column); [l], T1-4, N0,1 (no N2 tumors included); 80% were stage I-IIA.

CanCORS, Cancer Care Outcomes Research and Surveillance consortium; HR, hazard ratio; ILD, interstitial lung disease; LCSS, lung cancer specific survival; Lobe, lobectomy; NS, not statistically significant; OS, overall survival; Reg, registry; SEER, Surveillance, Epidemiology, and End Results database; Seg, segmentectomy; SL, sublobar resection (segmentectomy or wedge); VATS, video assisted thoracic surgery; W, wedge; Yrs, years (of patient accrual).

Legend for adjustment for confounding: Demogr F, demographic factors (age, sex, socioeconomic); CoMorbid, comorbidities; Hi stage, occult stage inaccuracy due to differences in extent of assessment; Time span, adjustment for changes during the study period or differential use of the interventions; Q settings, discrepancy in the facilities or settings performing the interventions; Q treatmt, quality of the treatment (e.g., margin distance, adjuvant therapy); Fav tumor, selection of less aggressive tumors for an intervention; Statistical methods, methods used to adjust for confounding; Subset, additional subset or sensitivity analyses; # adj for, number of factors adjusted for; Conf RE tmt effect, Confidence that results reflect the effect of the treatment *vs.* confounding factors. MV, multivariable model (e.g., Cox regression); PA, propensity score adjustment; PM, propensity matching; PQ, analysis of propensity score quintiles.

Color code:	Categories of confounding	Addressed	Neutral (likely little effect)	Limited concern	Moderate concern	High concern	Clearly confounded
	Confidence RE treatment effect	VH-very high	H-high	M-moderate	L-low	VL-very low confidence	