

Table 4 Recurrence outcomes in generally healthy patients

Ordered by resection extent, degree of confidence that results reflect the effect of the treatment, stage

1 st author, year (reference)	Study characteristics					Confid RE Tmt effect	Duration of f/u (mo)	Unmatched overall recurrence %		Unmatched locoregional recurrence %		Adjusted RFS/DFS Seg/W vs. Lobe		Adjusted FFR Seg/W vs. Lobe	
	Source	Yrs	n	Lobe vs.:	Stage ^a			Seg/W	Lobe	Seg/W	Lobe	HR	P	HR	P
Lesser resection vs. lobectomy															
Dolan 2021 (57)	US ×1	10-16	1,086	W	cl	VH	51	24 ^b	11 ^b	13 ^b	5 ^b	1.4	NS	-	-
Eguchi 2019 (53)	US ×1	95-14	698 ^c	SL	cl	H	-	18 ^b	9 ^b	10	2	-	-	2.33	<.001
Koike ^d 2016 (39)	Japan ×1	98-09	174	Seg	clA1,2	L	78	23 ^b	20 ^b	10 ^b	6 ^b	1.5	NS	-	-
Chan 2021 (45)	US ×1	03-16	180 ^c	Seg	clA3	L	60	24	23	12	9	1.23	NS	1.05	NS
Landreneau 2014 (46)	US ×1	-	624 ^c	Seg ^e	cl-IIA	L	65	20	17	6	5	-	-	1.11	NS
Subramanian 2018 (60)	NCDB ^f	06-07	325 ^c	W ^g	clA	L	>60	-	-	-	-	-	-	1.39	<.05
Huang 2020 (76)	China ×1	06-16	238 ^c	SL	pIA ^h	L	65	-	-	-	-	.85	NS	-	-
Yamashita 2012 (43)	Japan ×1	03-11	214	Seg ^e	clA1,2	VL	30	8	6	4	3	1.12	NS	-	-
Kamigaichi 2020 (77)	Japan ×3	10-16	230 ^c	Seg ^e	clA1,2 ⁱ	VL	37	5	11	5	7	<1	NS	<1	NS
El-Sherif 2006 (78)	US ×1	90-03	784 ^c	SL	cl-IIA	VL	31	29	28	7 ^j	4 ^j	1.2	NS	-	-
Wedge resection vs. segmentectomy								W	Seg	W	Seg	W vs. Seg		W vs. Seg	
Tsutani ^{k,l} 2021 (79)	Japan ×3	10-15	457	Seg vs. W	clA	H	48	13 ^b	7 ^b	-	-	-	-	2.13	.02
Altorki ^k 2016 (80)	US ×1	00-14	289	Seg vs. W	clA	M	34	19	20	11	9	1.05	NS	-	-
Koike 2013 (64)	Japan ×1	98-09	328	Seg vs. W	clA	M	58	-	-	34	6	-	-	5.79	<.001

Inclusion criteria: studies reporting RFS, DFS or FFR with multivariable or propensity adjustment of segmentectomy or wedge resection vs. lobectomy, 2000–21, with ≥50 patients per arm in generally healthy patients with generally solid tumors. The HR reference is lobectomy, i.e., HR >1 reflects worse outcome compared with lobectomy. Bold highlights better outcome (>2-point difference); Light green shading highlights statistically significant differences (lighter shade = univariable; darker = multivariable); Red font highlights accrual occurring primarily before 2000.

^a, 8th edition stage classification (reported stage is translated into current 8th edition nomenclature for the sake of uniformity and contemporary application); ^b, matched cohort; ^c, propensity matched pairs (total); ^d, all solid tumors (GGN excluded); ^e, 30–50% were “lobe-like” segments (lingula-sparing left upper lobectomy, lingulectomy or basilar quadri-segmentectomy); ^f, American College of Surgeons special study (involving enhanced chart abstraction of clinical factors); ^g, predominantly wedge (≥80%); ^h, solid tumor size, ~25% predominantly ground glass but excluded AIS & MIA; ⁱ, solid tumor size, CTR ≥0.8, PET SUV ≥2.5; ^j, local only (adjacent lung parenchyma); ^k, excluded AIS, MIA; ^l, ~50% had minor GG component.

AIS, adenocarcinoma in situ; Conf RE tmt effect, Confidence that results reflect the effect of the treatment (lobectomy or SL resection) vs. confounding factors; DFS, disease free survival; FFR, freedom from recurrence (only recurrence counts as an event); f/u, follow up duration (months); HR, hazard ratio; L, low confidence; Lobe, lobectomy; M, moderate confidence; MIA, minimally invasive adenocarcinoma; NCDB, US national cancer database; NS, not statistically significant; RFS, recurrence free survival; Seg, segmentectomy; SL, sublobar resection (segmentectomy or wedge); W, wedge; VH, very high confidence; VL, very low confidence; Yrs, years (of patient accrual).