

Table 11 Impact of resection extent by STAS status
Ordered by outcome and estimated proportion of favorable tumors

1 st author, year (reference)	Years	N ^a	Stage	Mean size	Comments	Proportion of low risk T ^b	% Lobe ^c	% SL ^d	% Nx ^e	MVA # of factors	Confidence in Results	Outcome	Time period	STAS –			STAS +		
														SL	Lobe	Sig by MVA	SL	Lobe	Sig by MVA
LCSS														% 5-year LCSS					
Eguchi 2019 (53)	95-14	422/276	cl	11 ^h	Ad	++	50	50	44	19	H	LCSS	5 yr	96	96	NS	84	92	.02
RFS														% 5-year RFS					
Kagimoto 2021 (185)	07-20	348/261	clA ^k	15/15	Ad Seg	+	63	37	Few	6	L	RFS	5 yr	-	-	-	83	75	NS
Any recurrence														% Any recurrence					
Kagimoto 2021 (185)	07-20	348/261	clA ^k	15/15	Ad Seg	+	63	37	Few	6	L	Any R	-	-	-	-	4	13	<.04
Kadota 2019 (178)	99-13	353/137	cl	-	Ad	++	77	23	-	-	-	Any R	5 yr	2	2	-	52	34	-
Eguchi 2019 (53)	95-14	422/276	cl	11 ^h	Ad	++	50	50	44	19	H	Any R	5 yr	9	6	NS	39	16	<.001
Loco-regional recurrence														% Loco-regional recurrence					
Kagimoto 2021 (185)	07-20	348/261	clA ^k	15/15	Ad Seg	+	63	37	Few	-	-	LR Recur	-	-	-	-	2	8	-
Kadota 2019 (178)	99-13	-/137	cl	-	Ad	++	77	23	-	-	-	LR Recur	5 yr	-	-	-	43	23	-
Distant recurrence														% Distant recurrence					
Kagimoto 2021 (185)	07-20	348/261	clA ^k	15/15	Ad Seg	+	63	37	Few	-	-	D Recur	-	-	-	-	3	13	-
Kadota 2019 (178)	99-13	-/137	cl	-	Ad	++	77	23	-	-	-	D Recur	5 yr	-	-	-	32	19	-

Inclusion criteria (*Tables 10,11*): studies 2000–2021 reporting on STAS relative to resection extent (sublobar vs. lobectomy), ≥50 patients. Bold highlights better outcome (>2-point difference); Light green shading highlights statistically significant difference favoring lobectomy (lighter shade = univariable; darker = multivariable); pink highlights statistically significant adjusted difference favoring sublobar resection.

^a, reported by cohorts: lobe/sublobar; ^b, qualitative estimate from reported proportions of AIS/MIA, low CTR tumors, elective limited resection, institutional policy and patient population, clinical trial participation (JCOG 0802); ^c, invasive tumor size; ^d, P=0.057; ^e, comparing high STAS to no STAS cohorts; ^f, many of the STAS+ patients were compromised patients who underwent wedge resections and suffered unrelated deaths; ^g, for entire study (may not be accurate for the subset); ^h, invasive tumor size, also used for M/T calculation; ⁱ, raw incidence of events during the study period (in brackets because not an actuarial rate); ^j, total for entire study cohort; ^k, assessed by invasive tumor size.

Ad, adenocarcinoma; Any R, any recurrence; CTR, consolidation/total tumor ratio of size on CT (lung windows); D Recur, distant recurrence; HR, hazard ratio; LCSS, lung cancer specific survival; Lobe, lobectomy; LR Recur, locoregional recurrence (in same or adjacent lobe or in intrathoracic nodes); MVA, multivariable analysis; NS, not significant (P>0.05); Nx, no nodes assessed; RFS, recurrence-free survival; Seg, segmentectomy; SL, sublobar resection; Squam, squamous carcinoma; Sig by MVA, statistically significant by multivariable analysis; STAS +/-, spread through air spaces present/absent; T, tumor; yr, year.