

Table 3 Recurrence outcomes after SBRT vs. surgery

Ordered patient type, degree of confidence that results reflect the effect of the treatment, stage

1 st author year (reference)	Study characteristics					Confid RE Tmt effect	f/u (mo) Surg/SBRT	Matched overall recurrence %		Matched locoregional recurrence %		Adjusted RFS/DFS SBRT vs. Surg		Adjusted LR-FFR SBRT vs. Surg		Adjusted FFR SBRT vs. Surg	
	Source	Yrs	n	Stage ^a	Surg			SBRT	Surg	SBRT	Surg	HR	P	HR	P	HR	P
Good risk																	
Chang 2021 (43)	US x1	15-17	160 ^b	cIA	Lobe ^c	M	60	18	8	13 ^{d,e}	3 ^{d,e}	1.38	NS	-	-	-	-
Sebastian 2020 (44)	US x1	08-18	217 ^b	cl-IIA	Lobe	M	27/22	26	14	28 ^{d,e}	19 ^{d,e}	2.34	<.001	2.42 ^d	<.03 ^d	-	-
Hamaji 2015 (47)	Japan x1	03-09	82 ^b	cl-IIA	Lobe ^c	M	54/41	-	-	-	-	3.13	.0002	3.03 ^d	NS ^d	-	-
Dong 2020 (48)	China x1	12-16	104 ^b	cl-IIA	Lobe ^c	M	44	-	-	10	4	>1 ^f	NS	-	NS	-	-
Verstegen 2013 (51)	Dutch x6	-	128 ^b	cl-IIA	Lobe ^c	L	16/30	-	-	8	13	-	-	.27	.04	.25	NS
Cornwell 2018 (52)	VA x1	09-14	74 ^b	cl-IIA	Lobe	L	30/30	41	8	21	3	>1 ^f	.0002	>1 ^{a,f}	NS ^d	>1 ^f	<.004
Dong 2020 (60)	China x1	12-16	80 ^b	cl-IIA	SL	L	49	-	-	18	8	-	NS	-	NS	-	-
Yuan 2021 (61)	China x1	12-15	98 ^b	cl-IIA	SL	L	37/32	29	39	4	18	-	NS	-	-	-	-
Dong 2019 (53)	China x1	12-17	132 ^b	cl-IIIA	Lobe + SL	L	48/31	-	-	10	5	-	-	>1 ^f	NS	-	-
Lin 2019 (50)	China x1	11-16	90 ^b	cl-IIA	Lobe	VL	31/25	20 ^g	13 ^g	11 ^d	2 ^d	>1 ^f	NS	-	-	-	-
Albano 2018 (55)	US x1	08-12	132 ^b	cl-IIA	Lobe	VL	-	22	14	-	-	-	-	-	-	>1 ^f	NS
Van den Berg ^h (54)	Dutch x1	07-10	340	cl-IIA	Lobe ^{i,j}	VL	61/61	29 ^g	22 ^g	15 ^g	8 ^g	-	-	2.51	.03	-	-
Mokhles 2015 (56)	Dutch x1	03-12	96 ^b	cl-IIA	Lobe	VL	54/30	-	-	-	-	-	-	>1 ^f	NS	1	NS
Kastelijn 2015 (57)	Dutch x1	08-11	228	cl-IIIA	Lobe ^j	VL	42/32	47 ^g	35 ^g	13 ^g	11 ^g	1.56	NS	2.11	NS	-	-
Older patients																	
Tamura 2019 (68)	Japan x2	03-13	156 ^b	cl-IIA	SL	M	43/41	-	-	-	-	>1 ^f	<.04	-	-	-	-
Dong 2019 (69)	China x1	12-16	70 ^b	cl-IIIA	Lobe + SL	M	50/36	-	-	16	20	-	-	-	NS	-	NS
Wang 2016 (70)	China x1	02-10	70 ^b	cl-IIA	Lobe + SL	L	59	73 ^g	49 ^g	-	-	>1 ^f	<.02	>1 ^f	<.02	-	-
Poor risk																	
Matsu 2014 (71)	Japan x1	03-09	106 ^b	cl-IIA	SL	L	80/64	-	-	14 ^{d,e}	9 ^{d,e}	-	-	>1 ^{d,f}	NS ^d	>1 ^f	NS
Varlotto 2013 (72)	US x5	98-08	317	I-IIA ^k	Lobe + W	VL	30/19	26 ^g	23 ^g	11 ^g	13 ^g	-	-	>1 ^f	NS	>1 ^f	NS

Inclusion criteria: studies reporting LR-FFR, overall FFR or RFS/DFS with multivariable or propensity adjustment of SBRT vs. surgery, 2000–21, with >50 pts per arm; The HR reference is surgery (HR >1 indicates worse outcome compared with surgery). Bold highlights better outcome (>2-point difference); Light green highlights statistically significant differences favoring surgery; Pink highlights statistically significant differences favoring SBRT; Red font highlights follow-up <24 months in at least one arm.

^a, 8th edition stage classification; ^b, propensity matched pairs (total); ^c, all VATS; ^d, regional (mediastinal, nodes) excluding local; ^e, 5 year rate; ^f, direction of trend is clear but explicit HR not reported; ^g, unmatched cohort; ^h, 78% of SBRT cases had no histologic confirmation of cancer; ⁱ, <20% sublobar; ^j, included 10–20% pneumonectomy and bilobectomy; ^k, “best stage,” i.e., mixture of clinical (nonsurgical patients) and pathologic stage (surgical patients).

Conf RE tmt effect, confidence that results reflect the effect of the treatment (SBRT or surgery) vs. confounding factors; FFR, freedom from recurrence (only recurrence counts as an event); f/u, follow up duration (months); HR, hazard ratio; L, low confidence; Lobe, lobectomy; LR-FFR, freedom from locoregional recurrence (only locoregional recurrence counts as an event); M, moderate confidence; NS, not statistically significant; RFS/DFS, recurrence free survival or disease free survival; Surg, surgical resection; SL, sublobar resection (segmentectomy or wedge); VA, US Veterans Health Administration system Database; VL, very low confidence; W, wedge; Yrs, years (of patient accrual).