Table 4 Quality of life after SBRT or ablation

Ordered by QOL tool, study size

1st author, year (reference)	Study type	Accrual years	n	% Survey completion	QOL tool	% PS ≥2	% Inop	1 mo							3 mo							6 mo							12 mo							24 mo						
								Global	Emotional	Cognitive	Social	Role	Physical	Thor Pain [a]	Dyspnea [a]	Global	Emotional	Cognitive	Social	Role	Physical	Thor pain [a]	Dyspnea [a]	Global	Emotional	Cognitive	Social	Role	Physical	Thor pain [a]	Dyspnea [a]	Global	Emotional	Cognitive	Social	Role	Physical	Thor pain [a]	Dyspnea [a]	Global	Emotional	Cognitive	Social	Role	Physical	Thor pain [a]	Dyspnea [a]
SBRT																																											
Schwartz [b] 19 (74)	Prosp	98-14	28	-	SF36 VR12	-	-																							= *			↓ *										
Lagerwaard (34)	Retro [e]	03-08	382	76-39	C30	36	86									=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	↓	↓	=	=
Widder 2011 (75)	Retro [e]	02-09	202	96-71	C30, LC13	43	100	=					=		↑	=					=	=	↑	=					=		↑	=				=		↑						
Singh 2019 (26,76)	RCT	09-15	98	-	C30, LC13	-	100									=	=	=	=	=	=	=	=	=	=	=	=	↓	=	=	=														
Nestle [f] 2020 (20)	Prosp	11-14	92	87-46	C30, LC13	24	-	=	↑	=	=	↑	=	=	=	=	↑	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	↓	=	↑	=	↑	=	=	↓	=	↑↑
Nugent 2020 (77)	Prosp	14-16	74	95-73	C30, LC13	-	-	=	=	=	↑	=	=	=	↓									=	=	=	=	=	=	↑	=	=	=	=	↑	=	=	↓						
Jain [g] 2013 (36)	RCT	10-12	54	95	C30, LC13	-	-	=				=	=	=	↑	=				↓	=	=	=																					
Jeppesen 18 (78)	Prosp	15-16	51	95-72	EQ5D	41	49	=	=			=	=	=		=	=			=	=	=		=	=			=	=	↑		=	=			=								
Rutkowski 17 (79)	Prosp	13-15	51	83	C30, LC13	-	100									↑	↑	=	↑	=	↑	=	↓																					
Mathieu 2015 (80)	Prosp	10-13	45	89-83	C30, LC13	-	84									=	=	↑	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	↓	↓	=	=	=	=	↑	=	=	↓	=	↓	=	↑
Alberts 2019 (81)	Prosp	03-08	41	-	C30 LC13	12	-										=	=	=	=	=	=	=		=	=	=	↓	↓	↑	=		=	=	=	↓	=	↑	↑					
Ubels [h] 15 (82,83)	Prosp	06-08	39	100-90	C30, LC13	-	85	=	=	=	↑	=	=	↑	=	=	↑	=	=	=	=	↑	=	=	↑	=	=	=	=	↑	↑	=	=	=	=	=	=	=	↑↑			↓	=		=
Videtic 2013 (84)	Prosp	08-09	21	-	FACTL	10	86	=	=		=	=	=		↑	=	=		=	=	=		↑	=	=		=	=	=		↑	=	=		=	=	=							
Ablation																																											
Chen 2017 (85)	Prosp	12-16	74	-	SF-12	-	100																							= *			= *							= *			= *		
Lencioni 2008 (86)	Prosp	01-05	22	-	SF 36	-	100																							= *			= *												
Palussière 18 (87)	Prosp	-	32	-	C30	0	100	=	↓	↓↓	=	=	↓	=	=																														

Inclusion criteria: QOL studies 2000–21 reporting on ≥20 patients per cohort. Studies without a baseline assessment or using QOL tools without a clinical significance benchmark are excluded. Bold highlights statistically significant difference *vs.* baseline (pre-treatment); Red font highlights potential weaknesses, e.g., assessment completion rate <75%, accrual before 2000, <50 patients. Results are reported relative to baseline (pre-SBRT or ablation).

QOL assessment color code:

↑↑↑	>20 points* better	2× clinically meaningful improvement
↑↑	10-20 points* better	Clinically meaningful improvement
↑	5-<10 points* better	Somewhat better
=	Same (0-<5 points*)	Similar to baseline (i.e. pre-treatment)
↓	5-<10 points* worse	Somewhat worse
↓↓	10-20 points* worse	Clinically meaningful worsening
↓↓↓	>20 points* worse	2× clinically meaningful worsening

* for normalized QOL scales a 10-point difference is usually accepted as clinically meaningful (C-30, LC-13, EQ5D, SF-36, PROMIS; other scales adapted to correspond)

Mapping of SF36: General health = global; role emotional = emotional; mental health = cognitive; social functioning = social; role physical = role; physical functioning = physical; bodily pain = thoracic pain;
15D: Total = global; Depression/distress = emotional; mental functioning = cognitive; usual activities = role; Mobility = physical; discomfort = pain; breathing = dyspnea
PROMIS: Anxiety/depression/emotional support = emotional; informational support = cognitive; social roles = social; physical function = physical; pain intensity/interference = pain
EQ5D: Health index = global; anxiety/depression = emotional; usual activities = role; mobility = physical;

[a], for symptoms ↑ indicates worse state (increased pain/dyspnea), ↓ indicates improvement; [b], SEER-MIHOS sample (annual Medicare Outcomes Survey); [c], mental component summary score; [d], physical component summary score; [e], prospectively collected database; [f], included 56% NSCLC, 44% pulmonary metastases from an extrathoracic cancer; [g], 11% metastases from extrathoracic primary cancers; [h], 2 months assessment instead of 1, 4 months instead of 3.

Inop, inoperable; Prosp, prospective; PS, performance status; QOL, quality-of-life; RCT, randomized controlled trial; Retro, retrospective; Thor, thoracic.