

Do patients with brain metastases selected for whole brain radiotherapy have worse baseline quality of life (QOL) as compared to those for radiosurgery or neurosurgery (with or without whole brain radiotherapy)?

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Objective

- Examine the baseline QOL in patients treated with whole brain radiotherapy (WBRT) alone versus stereotactic radiosurgery (SRS) or surgery with or without WBRT

Methods

- Newly diagnosed brain metastases patients were approached at time of consultation
 - Patients with four or less brain metastases were assessed for SRS; others assessed for WBRT
- Patients completed the Functional Assessment of Cancer Therapy-Brain (FACT-Br) in conjunction with the FACT-G prior to treatment

Results

- 37 patients were treated with WBRT alone, and 83 with SRS or surgery with or without WBRT
- Patients receiving WBRT alone reported worse on the item "I feel ill" (GP6)
- SRS or surgery with or without WBRT patients reported greater levels of support (GS3)
- Less WBRT alone patients lacked worry of death (GE5)
- Patients who were treated with SRS or surgery with or without WBRT patients had less difficulty expressing their thoughts (Br9)

FACT-Br items	WBRT alone					SRS or surgery with or without WBRT					p-value
	Not at all	A little	Somewhat	Quite a bit	Very much	Not at all	A little	Somewhat	Quite a bit	Very much	
GP6	24 (65%)	6 (16%)	1 (3%)	0 (0%)	6 (16%)	54 (65%)	4 (5%)	12 (14%)	10 (12%)	3 (4%)	0.0011
GS3	3 (8%)	1 (3%)	0 (0%)	7 (19%)	26 (70%)	0 (0%)	3 (4%)	2 (3%)	7 (9%)	64 (84%)	0.0408
GE5	14 (38%)	0 (0%)	13 (35%)	3 (8%)	7 (19%)	35 (43%)	19 (23%)	13 (16%)	10 (12%)	4 (5%)	0.0002
Br9	15 (41%)	7 (19%)	9 (24%)	2 (5%)	4 (11%)	53 (64%)	8 (10%)	17 (20%)	4 (5%)	1 (1%)	0.0343

- SRS or surgery with or without WBRT had higher scores (better QOL) with respect to functional well-being, FACT-G total score, BrC subscale score, FACT-Br total score, and FACT-BR trial outcome index (TOI)

FACT-Br summary scores	Total (n=120)	SRS or surgery with or without WBRT (n=83)	WBRT alone (n=37)	p-value
Functional Well-Being				0.0397
Mean	18.70	19.60	16.90	
SD	6.05	5.65	6.57	
Median	20.00	20.00	17.00	
FACT-G Total Score				0.0345
Mean	80.50	82.30	76.20	
SD	16.22	16.13	15.84	
Median	84.80	85.30	79.00	
BrC Subscale Score				0.0142
Mean	58.80	60.30	55.40	
SD	11.29	11.74	9.50	
Median	59.10	61.20	55.00	
FACT-Br Total Score				0.0186
Mean	139.30	142.70	131.70	
SD	25.68	25.89	23.82	
Median	142.30	149.20	138.00	
FACT-Br TOI				0.0147
Mean	98.10	100.90	91.70	
SD	21.71	21.52	21.03	
Median	101.70	103.00	97.00	

Conclusions

- WBRT alone patients reported statistically different baseline QOL as compared to patients who went on to have SRS or neurosurgery (with or without WBRT)