

# Quality of life with Brain Symptom and Impact questionnaire in patients with brain metastases

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## Objective

- Examine baseline QOL (as measured by the Brain Symptom and Impact Questionnaire (BASIQ) and patient characteristics, among patients who underwent whole brain radiotherapy (WBRT) alone versus stereotactic radiosurgery (SRS) or neurosurgery with or without WBRT

## Methods

- Patients referred for treatment of brain metastases to the Odette Cancer Centre were approached
- Baseline BASIQ results were obtained before patients were treated with WBRT, neurosurgery, or SRS
- Demographic information including age, gender, primary cancer site, years from primary cancer to brain metastases, Karnofsky Performance Status (KPS) score, and Eastern Cooperative Oncology Group Performance Status (ECOG PS) score were collected

## Conclusions

- Those treated with WBRT alone had worse QOL, which is consistent with published randomized trials
- BASIQ scale is an effective alternative to brain modules with EORTC and FACT

## Results

- 172 patients accrued, with 76 treated by WBRT alone (Group A) and 96 treated by SRS or neurosurgery with or without WBRT (Group B)
- Group B had better performance scores
  - Group B had higher KPS scores, and lower ECOG PS scores
- Group A patients had more number of brain metastases

Characteristic	Group B	Group A	p-value
Age			0.0362
Median [range]	66 [24-90]	61 [26-89]	
KPS			0.0158
Median [range]	90 [50-100]	80 [40-100]	
ECOG			0.0073
0	46 (51%)	22 (36%)	
1	41 (54%)	26 (43%)	
2	4 (4%)	11 (18%)	
3	0 (0%)	2 (3%)	
Number of brain metastases			0.0212
1	38 (41%)	23 (30%)	
2	2 (2%)	3 (4%)	
3	26 (28%)	12 (16%)	
>3	27 (29%)	38 (50%)	

BASIQ Item	Mean Score			p-value
	Total (n=172)	Group B	Group A	
Headache	3.36	2.30	4.68	0.0001
Dizziness	3.09	1.85	4.68	<0.0001
Nausea	2.88	1.70	4.40	<0.0001
Numbness	3.12	1.98	4.59	<0.0001
Fatigue	5.22	4.58	6.03	0.0050
Physical strength	4.42	3.52	5.57	0.0003
Balance	3.41	2.08	5.11	<0.0001
Vision	3.06	1.83	4.63	<0.0001
Memory	3.91	2.68	5.48	<0.0001
Putting ideas into words	3.22	2.09	4.67	<0.0001
Staying focused	3.16	1.93	4.75	<0.0001
Following a story	3.07	1.81	4.64	<0.0001
Reading	3.03	1.67	4.69	<0.0001
Walking	3.85	2.58	5.47	<0.0001
Housework	4.16	2.98	5.61	<0.0001
Bathing	3.10	1.67	4.84	<0.0001
Getting dressed	2.95	1.64	4.64	<0.0001
Symptom Summary Score	38.2	27.9	51.4	<0.0001
Function Summary Score	26.0	15.9	38.9	<0.0001

- Group A had significantly higher mean symptom scores pertaining to headache, dizziness, nausea, numbness, fatigue, physical strength, balance, vision and memory
- Group B had lower mean function scores across all eight items – putting ideas into words, staying focused, following a story, reading, walking, housework, bathing, getting dressed
- Group A had higher mean symptom and function summary scores