Use of the EORTC QLQ-BN20 and the FACT-Br for the Assessment of Quality of Life in Brain Tumours Patients: A Systematic Review of Prospective Clinical Studies

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Objective

- The European Organization for Research and Treatment of Cancer (EORTC) QLQ-BN20 brain and the Functional Assessment of Cancer Therapy - Brain (FACT-Br) modules are used to evaluate the functional capacity, symptoms, and health-related quality of life (HRQoL) in brain tumor patients.
- This systematic review evaluates the use of the FACT-Br and EORTC QLQ-BN20 in prospective clinical studies on brain tumor patients in the past twelve years (2013-present)

Methods

- Embase, MEDLINE, and Cochrane Central Register of Controlled Trials were searched from 2013 to 2024. An additional hand search from study references was performed to identify relevant articles (n=2).Only prospective interventional trials were included.

Results

Study Overview

- Thirty-two prospective studies (n=3676) were included; most were single-arm designs (87.5%) with increased publication since 2020. Studies were primarily based in Europe and North America, with mixed tumour types commonly assessed.

QoL Tools

- FACT-Br (53.1%) and QLQ-BN20 (46.9%) were the main instruments. FACT-Br was used alone in 11 studies, while QLQ-BN20 was always paired with QLQ-C30 or C15-PAL. QoL was the primary endpoint in 21 studies (66%).

Interventions & Outcomes

- RT was the most common intervention (47%), followed by combination therapies and emerging treatments like TTFields and exercise. Exercise improved FACT-Br scores.

Neurocognition & Compliance

- Neurocognitive testing (44%) often revealed deficits missed by PROMs. Compliance was limited (avg. 50% follow-up), with dropout linked to progression, fatigue, and cognitive decline. Some studies used proxies or simplified PROMs to address this.

Conclusion

- The EORTC QLQ-BN20 and FACT-Br were successfully implemented in prospective studies for the assessment of QoL in brain tumour patients. Future updates of the tools should consider validating them in patient proxies to improve the compliance and completion rates.

Fig 1. Prisma Diagram