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In Reply: Postacute Cognitive Rehabilitation for Adult Brain Tumor Patients.

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Post-Acute Cognitive Rehabilitation for Adult Brain Tumor Patients: Response to Lavrador et al

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We would like to thank Lavrador et al for their thoughtful response to Weyer Jamora et al 2021. We were excited to see a shared interest for enhancing rehabilitative services for brain tumor populations. It was particularly interesting to read about their integration of prehabilitation, for the goal of improving a patient's functional capacity prior to surgery to potentially offset postsurgical declines and enhance outcomes.

We agree that providing rehabilitation prior to surgical intervention holds promise to help brain tumor patients and their caregivers adapt earlier to the challenges they face during the disease trajectory. The multidisciplinary needs of brain tumor populations, along with their improving survival, argue for more of a chronic disease management approach which includes rehabilitation prior to surgery.[1] Crucial prehabilitation elements include 1) identifying and treating functional impairments that can be improved prior to surgery; 2) assessing and addressing patient/caregiver knowledge and resource gaps to improve self-management skills; and 3) enhancing communication between in- and out-patient teams for continuity of care to improve patient quality of life and reduce caregiver distress. This latter point is particularly aligned with the integrated *transhabilitation* model described by Lavrador et al. Further, best practices in prehabilitation screening highlight the importance of orienting assessments and interventions to address treatable risk factors for poor post-surgical adjustment and functioning.[2] This includes addressing emotional distress, substance misuse, physical strength, nutrition, psychosocial stressors, cognitive impairments, existential meaning and purpose, and other comorbidities. Prehabilitation concepts may also be applied across the brain tumor disease trajectory given the high risk of recurrence and possible need for more than one surgery.

Lavrador et al's unique approach to brain tumor care highlights the opportunities and gaps in our understanding for providing a chronic disease model of care in this population. We agree the presurgical phase is a key teachable moment whereby individuals can be highly motivated to make behavioral changes[2] and thus more open to learning key symptom-management skills for improving their functional status to offset the postsurgical decline. From a cognitive perspective, the UCSF cognitive rehabilitation model discussed in Weyer Jamora et al 2021, includes patients and caregivers in treatment sessions to jointly enhance mastery and application of learned compensatory strategy skills to daily life. It would be interesting to investigate the potential attenuation of postsurgical cognitive decline based on application of cognitive prehabilitation care models in brain tumor populations. Additionally, future research could focus on assessing feasibility and efficacy of crucial elements of prehabilitation treatment models to enhance quality of life of brain tumor patients and their caregivers. This important research could help us to better define the relative importance of treatment timing and inform how to efficiently pace supportive care services at each phase of the disease to balance optimizing quality of life with practical application constraints.

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