

# THE IMPACT OF COGNITIVE AND BEHAVIOURAL SEQUELAE IN PATIENTS WITH PRIMARY BRAIN TUMOUR ON FAMILY MEMBERS

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ABSTRACT

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The impact of cognitive and behavioural sequelae in patients with primary brain tumour on family members

Cancer Institute NSW

# THE IMPACT OF COGNITIVE AND BEHAVIOURAL SEQUELAE IN PATIENTS WITH PRIMARY BRAIN TUMOUR ON FAMILY MEMBERS

## Background

Brain tumours (BT) can cause impairments in behavioural disturbance and higher order cognitive functioning (also known as executive dysfunction) but there has been limited investigation into the extent of such problems. The presence of such sequelae have broader consequences, also adversely affecting carers. However, it is not known how many carers face such impairments, nor the impact of such sequelae on their emotional state.

## Methods

A sample of carers (n=34) were derived from a consecutive series of 43 patients with primary BT recruited to a prevalence study investigating post-tumour cognitive and behavioural changes. The patients were being managed at Liverpool or Royal North Shore Hospital. Carers rated the patient's current functioning on the Overt Behaviour Scale (OBS) and their pre- and post-tumour functioning on the Frontal Systems Behaviour Rating Scale (FRSBE). Carers also completed a self-rating measure of their own distress (Depression, Anxiety and Stress Scale). Karnofsky Performance scores for the patient with BT were clinician-rated (31% at 90-100; 34% at 80; 35% at 50-70).

## Results

Based on OBS scores, one quarter of carers encountered problems with initiation (26%) and verbal aggression (24%) in the patient with BT. On the FRSBE, carers identified significant increases in the BT patient's level of Disinhibition (12% pre-tumour vs 28% now) and Executive dysfunction (12% pre-tumour vs 28% now). Interestingly, although increasing levels of carer Depression ( $r = -.57$ ) and Anxiety ( $r = -.50$ ) were significantly correlated to declining Karnofsky Performance scores, only Anxiety correlated to increasing levels of Disinhibition ( $r = .41$ ) and Executive dysfunction ( $r = .44$ ).

## Discussion

Carers reported higher-order cognitive and behavioural changes in patients with BT, and these were associated with self-reported increases in Anxiety. Further research can examine whether teaching carers strategies to manage the cognitive and behavioural changes may assist in reducing their levels of distress.