



# NEUROSCIENCE CONFERENCE SERIES



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## “Cognitive deficits and recovery for patients with brain tumours”

Survival rates for brain tumours have improved over the last few decades, although this has come at the cost of increased occurrence of a loss of function as patients with more severe disease receive more effective treatments. In this context, small changes to clinical management protocols can lead to disproportionate improvements in onco-functional balance; that is, the balance between mortality and morbidity.

Previous efforts to embed functional imaging in neurosurgical planning have universally leveraged the localist perspective of the brain. It is now clear that in fact large-scale brain networks are engaged in cognitive functions such as attention and executive function, and are at risk from tumour resections.

Over the last five years, we have leveraged contemporary neuroimaging analyses to align brain tumour incidence with well-established principles of brain changes in neurological and psychiatric disorders. Using longitudinal patient data, we have identified perturbations to large-scale networks due to tumours, the functional role of tumours in these networks, and the changes induced by their surgical removal. Most importantly, we have demonstrated that predicting long-term cognitive outcomes is a realistic goal. It would not be an overstatement to say that this application of neuroimaging represents its most favourable prospect to make a positive contribution to the quality of life of patients with such an aggressive disease.

Day: **Friday 21 Oct. 2022**

Time: **11:30**

Place: **Sala d'Actes (Pav. de Govern)  
Campus Bellvitge**

Hosted by Dr. Ruth De Diego

Join Zoom Meeting

<https://ub-edu.zoom.us/j/92756568572>

Meeting ID: 927 5656 8572



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