

# SLT role in Awake Craniotomy

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*Does my bum look big in scrubs!?*



# What we did

- SLT / Neuropsychology project (2013) – Explored the role of SLT and Neuropsychology in patients with Low Grade Gliomas
- Explored/Developed Awake Craniotomy Pathway
- Supported 3/4 pre-intra-post operatively
- Networking / UK Forum (protocol used is in line with other major sites involved in awake craniotomy)



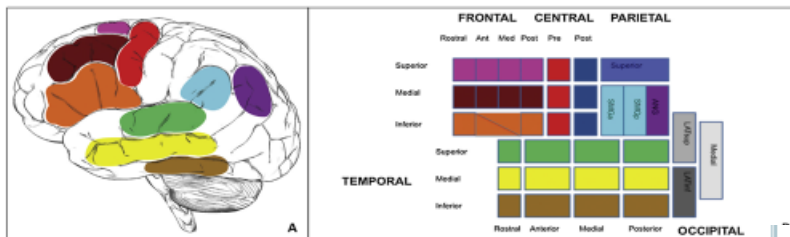
# Why we did it



- Awake Craniotomy: Technique of choice for certain Neurosurgical procedures, including excision of lesions from eloquent cortical areas and procedures for epilepsy and movement disorders
- Safe, well tolerated procedure, careful patient selection is the key to success
- Define SLT Role within pathway:
  - Pre/Post op assessment (identifying appropriate patients for the procedure i.e. difficult using those with cognitive changes)
  - Intra op cortical mapping/continuous monitoring
  - Better patient outcomes as more accurate assessment during resection (historically only automatic speech used)
  - Additional support for patient/relatives
  - Signpost rehab/ongoing support mechanisms

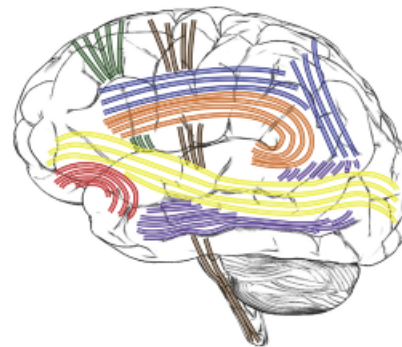
# How we did it

## Cortical Regions



Frontal Regions	Function (s)	Intra-operative tasks from DuLIP
Inferior frontal gyrus	Articulatory processing /syntax/ (writing)	Verbal DDK, repetition, verb generation, action naming
Posterior midfrontal gyrus	Action naming/(writing)	Action Naming
Supplementary motor area (posterior superior frontal gyrus)	Language Initiation	Sentence completion (closed and broad context), fluency
Precentral gyrus	Motor network	Repetition, Verbal DDK

## Subcortical Pathways



Subcortical pathways	Function(s)	Intraoperative language tasks from DuLIP
Subcallosal fascicle	Initiation of speech	Fluency, sentence completion
Superior longitudinal fascicle (arcuate fascicle)	Articulatory processing/ Phonology	Verbal diadochokinesis, repetition/ phonological odd word out
Inferior fronto-occipital fascicle	Semantics, reading, judgment	Semantic association, semantic odd word/picture out, semantic judgment

# What were the outcomes?



- Mr Goetz (Neurosurgeon) emailed a few comments....
  - “I felt that your pre-assessment and intra-operative testing were essential to this case and have contributed to his good outcome.”
  - “There is a strong case to argue SLT involvement for all awakes as you know, and I am sure Naomi Goodwin (anaesthetist) would agree.”
  - “I mentioned this to the WHSCC commissioner who visited today, as one of the resource gaps for the LGGC service. I have provided your names so she may be in touch. We will continue to discuss this internally.”
- Explore potential to create a Neuro-Oncology post at UHW to support with Awake Craniotomy procedures and support MDT management (Neuro-oncology Peer Review 2016)
- Ongoing changes to LGG procedures in Cardiff and Vale i.e. new consultant neuro-surgeons with new ideas, use of fluorescent dye to more accurately localize tumours.
- This is only the beginning and our work to date has provided just a snapshot of the potential within neuro-oncology.