nTMS guidance of awake surgery for highly eloquent gliomas

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Navigated transcranial magnetic stimulation (nTMS) allows for preoperative mapping for eloquent gliomas. Besides surgical planning, it also guides intraoperative stimulation mapping. The authors' routine includes preoperative nTMS plus nTMS-based tractography for motor and language to consult patients, plan surgery, craniotomy, and guide cortical and subcortical stimulation.

Here, the authors present this routine in a 48-year-old woman with a glioma of the left middle and superior frontal gyrus reaching the precentral gyrus and superior longitudinal fascicle. Gross-total resection via awake surgery was achieved without deficit.

The nTMS data and nTMS-based tractography augment eloquent glioma management far beyond its current application.

The video can be found here: <https://youtu.be/h4ldgMXL1ys>.

KEYWORDS awake surgery; DCS; language mapping; motor mapping; nTMS; video

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