**Fig 1 sup.**

1. Intraoperative pre-resection T1-weighted images with gadolinium of a right non enhancing frontal lesion
2. Intraoperative pre-resection FLAIR-weighted images of a right frontal lesion
3. Intraoperative resection control T1-weighted images with gadolinium
4. Intraoperative resection control FLAIR-weighted images demonstrating no residual lesion
5. Diagnostic pre-resection FLAIR-weighted images of a right frontal lesion
6. Diagnostic several weeks post resection T1-weighted images with gadolinium

**Fig 2 sup.**

a. Intra operative pre-resection T1-weighted images with gadolinium of a left parietal enhancing lesion

b. Intraoperative resection control T1-weighted images with gadolinium demonstrating complete resection of the enhancing portion of the lesion

**Fig 3 sup.**

1. Intraoperative pre-resection FLAIR-weighted images of a left frontal lesion
2. Intraoperative resection control FLAIR-weighted images demonstrating residual lesion adjacent to speech areas
3. further resection of a residual lesion based on FLAIR-weighted images
4. Intraoperative third resection control FLAIR-weighted images demonstrating further resection to achieve subtotal resection adjacent to eloquent speech centers