Case Study: How fMRI Adds Value in the OR

As part of the neuro-oncology team at Aurora Neurosciences Innovation Institute (ANII), the neuroradiologists support preoperative functional MRI (fMRI) brain mapping and Diffusion Tensor Imaging (DTI), a form of trajectory planning that uses the diffusion of water molecules to generate contrast in MRI images. They also consult and assist with complex procedures using MRI, CT, PET, and other modalities.

Jonathan E. Jennings, MD, section chief of neuroradiology for Aurora Health Care Medical Group, and a neuroradiologist with ANII, serves as the crew’s fMRI expert. He uses this modality to map where tumors or other problems are located in a patient’s brain. fMRI is time consuming, he says, taking up to a few hours to acquire and process due to the need for multiple runs, but helps improve outcomes for the patient.

“Despite the time involved in doing fMRI, we can still turn the case around quickly,” he says. “We can do the fMRI scan in the morning and hold clinic in the afternoon. We are responsive to the patients with urgent care needs. This technology is designed to create a bridge between the neuroradiologist and the neurosurgeon. It makes us more efficient in the long run.”

Learn more about how neuroradiologists and neurosurgeons are collaborating at the ANII in this Imaging 3.0 case study.

Join the Discussion

Want to join the discussion about how neuroradiologists and neurosurgeons can collaborate through fMRI? Let us know your thoughts on Twitter at #imaging3.