



Plenary Lecture-MD

PL01

CEST Imaging in Brain

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This lecture will focus on CEST imaging in the brain with special focus on brain tumor diagnosis, differential diagnosis, and evaluation of treatment related effects.

Some basic CEST imaging concepts will be mentioned for the background. Benefits and drawbacks or issues with the technique will be addressed.

CEST imaging techniques that will be discussed are predominately amid proton transfer weighted (APT_w) imaging for the grading of brain tumors, differentiation between glioma and brain metastasis, for evaluation of treatment related effects like pseudo-progression versus true tumor progression and effects among others. Current knowledge and ongoing research will be presented. Also, the Gluco-CEST technique for imaging brain tumors will be briefly presented with some illustrations. Potential other diseases of the brain that might benefit from CEST imaging will be mentioned.

The areas discussed will be illustrated with some cases from our and other research groups, when possible.

Keywords: CEST imaging, APT_w imaging, Gluco-CEST, Brain, Brain tumors