

Cube from General Electric

Cube* 2.0 replaces several 2D slice acquisitions with one single 3D volume scan. Sub-millimeter isotropic Cube volume data can be easily reformatted into any plane—without gaps, and with the same resolution as the native plane. The new self-calibrating, parallel-imaging engine ARC helps to speed up the sequence while minimizing artifacts. And you'll appreciate the high tissue contrast.

Neuro MRI. Cube 2.0 acquires contiguous, sub-millimeter isotropic 3D data that can be easily reformatted into any plane, thus replacing multiple 2D scans. SNR-rich ultra-thin slices help you visualize even small and subtle lesions without partial-volume averaging effect. Cube is enabled for T1, T2, T2 FLAIR, and PD contrasts.

Ninety-one patients were imaged with 3D Cube and conventional 2D FSE on a 3.0-T magnetic resonance scanner. Two neuroradiologists independently assessed images for anatomical delineation (infundibulum, optic apparatus, and cavernous sinus), degree of artifact, and confidence in lesion definition or exclusion using a 5-point scale. In addition, the readers were asked to rank overall preference.

Readers A and B found 3D Cube to be better or equal to 2D FSE in 84% and 86% of the cases. Three-dimensional Cube provided significantly better images than 2D FSE with respect to delineation of the infundibulum ($P < 0.0001$), cavernous sinus ($P < 0.0001$), optic apparatus ($P = 0.002$ for reader A and $P = 0.265$ for reader B), and fewer artifacts at the sellar floor ($P < 0.0001$). Three-dimensional Cube provided greater lesion conspicuity or confidence in lesion exclusion ($P < 0.0001$).

Three-dimensional Cube from General Electric provides superior quality with thinner slices as well as diminished artifact and can replace conventional 2D FSE sequences for routine evaluations of the [sellar region](#) and [parasellar region](#) ¹⁾.

¹⁾

Lien RJ, Corcuera-Solano I, Pawha PS, Naidich TP, Tanenbaum LN. Three-Tesla imaging of the pituitary and parasellar region: T1-weighted 3-dimensional fast spin echo cube outperforms conventional 2-dimensional magnetic resonance imaging. J Comput Assist Tomogr. 2015 May-Jun;39(3):329-33. doi: 10.1097/RCT.0000000000000214. PubMed PMID: 25978591.

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