

Quantification of contrast-enhanced ultrasound parametric maps with a radiomics-based analysis

Volumetric contrast-enhanced ultrasound is a new approach to collect 3D imaging data of a contrast signal. So far, analysis of 3D contrast ultrasound has relied on averaging a set of voxels embedded in an ROI or a VOI. Methods to extract time-intensity curves at each image plane pixel have also been developed for 2D contrast-enhanced ultrasound. We have developed methods to automatically extract time-intensity signal at each voxel in an image and to subsequently generate parametric maps based on specific parameters extracted mathematically from time-intensity curves.

Applications

- **Constructing 3D Parameteric Maps and quantfying them using radiomics approaches**

Advantages

- **Quantification is more repeatbale/robust**
- Correlated to gold-standard histology
- Detects subtle treatment response
- Captures hetergeneity

Innovators

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