

Mean Scatterer Spacing For Human Liver Tissue Characterization Using Backscattered Ultrasound Signals

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Abstract : We studied the periodicity of in vitro healthy and pathological liver tissue using the backscattered ultrasound signals. Lot of signal processing methods are used to mean scatterer spacing (MSS) as a parameter of tissue characterization, we cite: Spectral Auto-Correlation (SAC), Spectral Correlation of the autoregressive model (AR-SAC) and others. We used the Discrete Wavelet Technique (DWT) to MSS estimate, in comparison, the DWT with Fourier Transform together (DWT with FT) can provide a very effective tool to extract the MSS from such structure and characterize the tissue

Keywords : Periodicity, Liver tissue, Mean scatterer spacing, Backscattered Ultrasound Signals