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### Title

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Abstract #4540

# Ultrashort Echo Time, MRI porosity index, and suppression ratio correlate with the cortical bone microstructural and mechanical properties

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## Synopsis

**Keywords:** Bone, BoneThe cortical bone porous microstructure can be evaluated using ultrashort echo time (UTE) MRI. UTE-MRI-based evaluation of bone has been underutilized partly due to the high cost and time demands of MRI in general. The porosity index (PI) and the suppression ratio (SR) are two rapid UTE-based bone evaluation techniques (~ 5 mins scan time each), which can potentially reduce the time demand and cost in future clinical studies. We have investigated the relationship of PI and SR measures with human cortical bone microstructural and mechanical properties. PI and SR showed significant correlations with microstructural and mechanical properties.

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Presentation Video

## Keywords

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