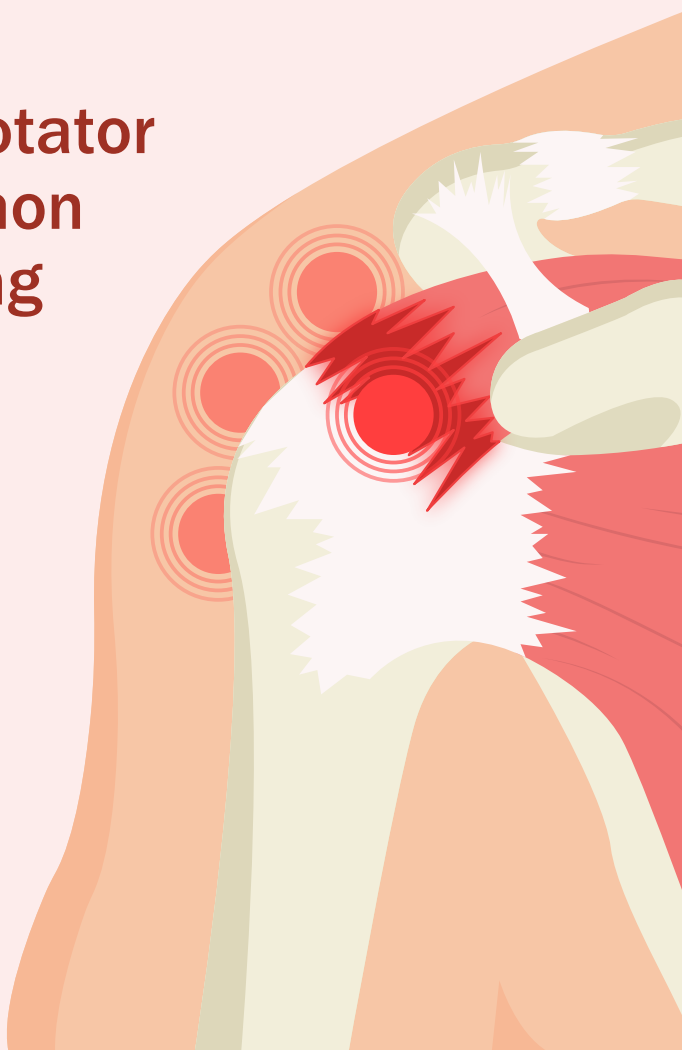


New 3-Dimensional Analytical Strategy for Predicting Fatty Infiltration in the Supraspinatus

Fatty infiltration (FI) of the rotator cuff (RC) muscles is a common risk factor for retear following RC repair

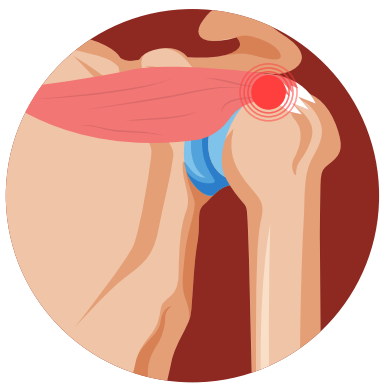
However, comprehensive 3-dimensional FI evaluation requires labor-intensive segmentation and time-consuming post-processing



Retrospective study to determine the possibility of predicting the overall FI from localized sectional accumulation unit (SAU) FIs



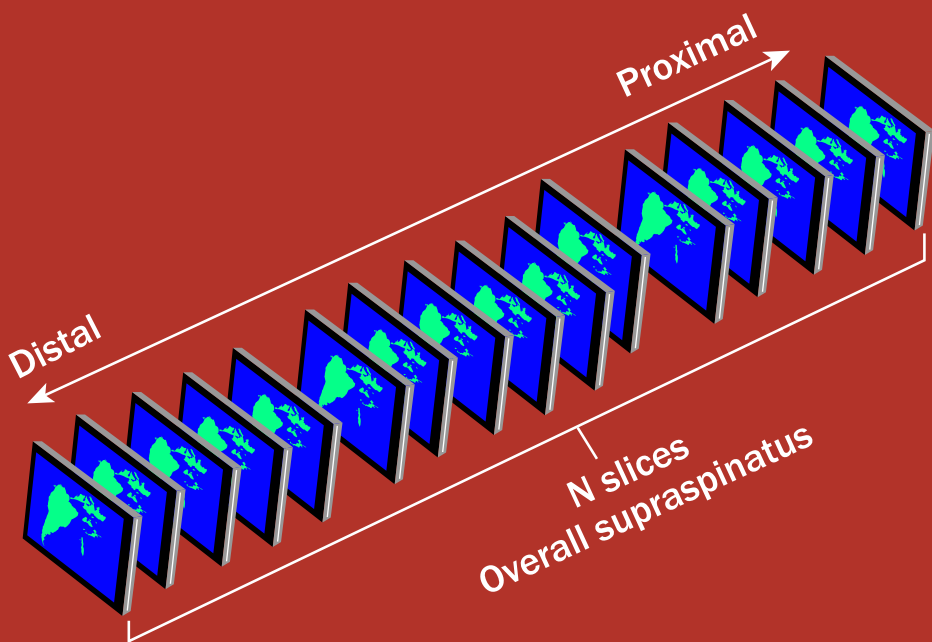
N = 46 patients



Atraumatic small-to-massive RC tears



6-point Dixon MRI slices of the overall supraspinatus



Localized SAU-FIs for N/3, N/6, and N/12 SAUs:

- Comparable distributions throughout the normalized distal-proximal long axis of the supraspinatus
- Substantial correspondence with the overall FI

SAU-FIs in the middle third (2/3, 3/6 and 4/6, and 5/12 to 7/12)



Highest correlations



Best agreements between predicted and measured FI



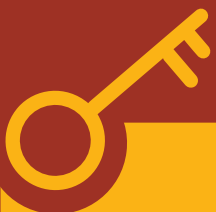
Strongest predictors to estimate the overall supraspinatus FI



2/3, 3/6 and 4/6, and 5/12 to 7/12 SAUs



Appropriate surrogates for estimating the overall FI of the supraspinatus



Assessment of specific localized SAUs could optimize and expedite the prediction of overall FI of RC muscles

The 3-Dimensional Fatty Infiltration in the Overall Supraspinatus Can Be Predicted by Localized Sectional Accumulation Units. A Cross-Sectional Study in Patients with Atraumatic Small-to-Massive Rotator Cuff Tears
Xu et al. (2023) | DOI: 10.2106/JBJS.22.00767

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