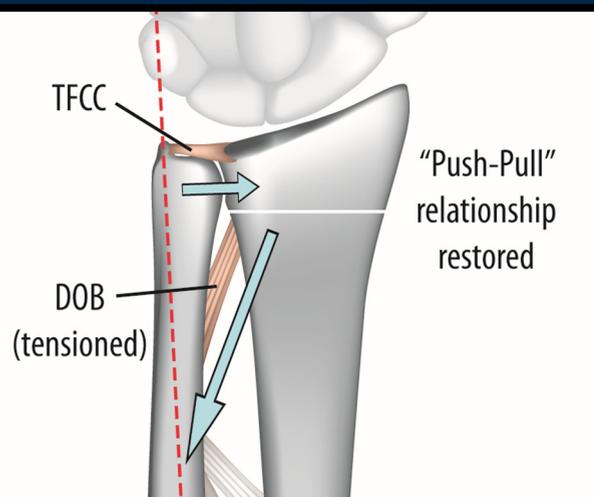
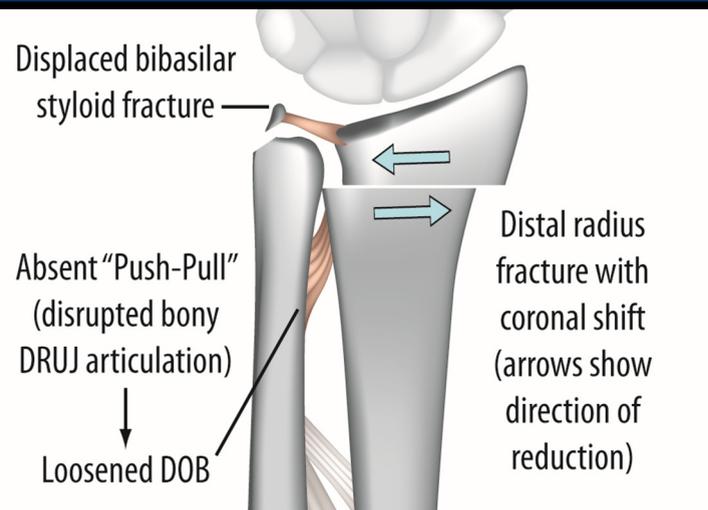


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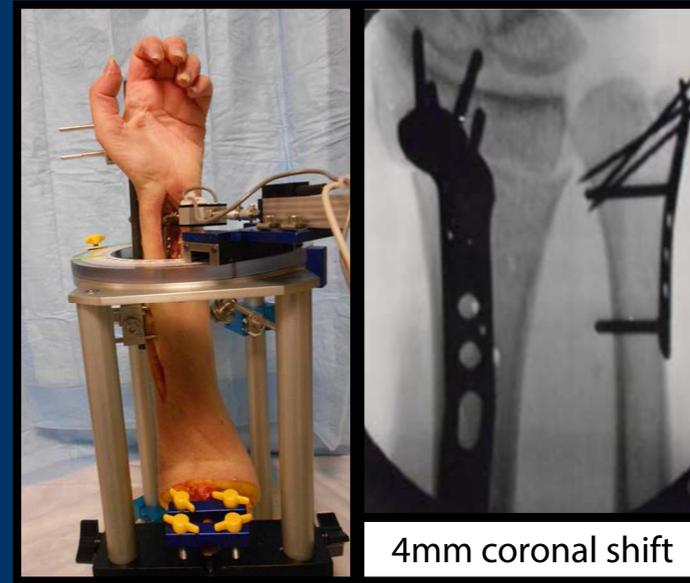
## Objectives

- Newly discovered distal oblique bundle (DOB) of the interosseous membrane (IOM) present in 40% of specimens<sup>1,2</sup>
- Our objective was to investigate the contribution of the DOB to DRUJ stability after a distal radius fracture



## Methods

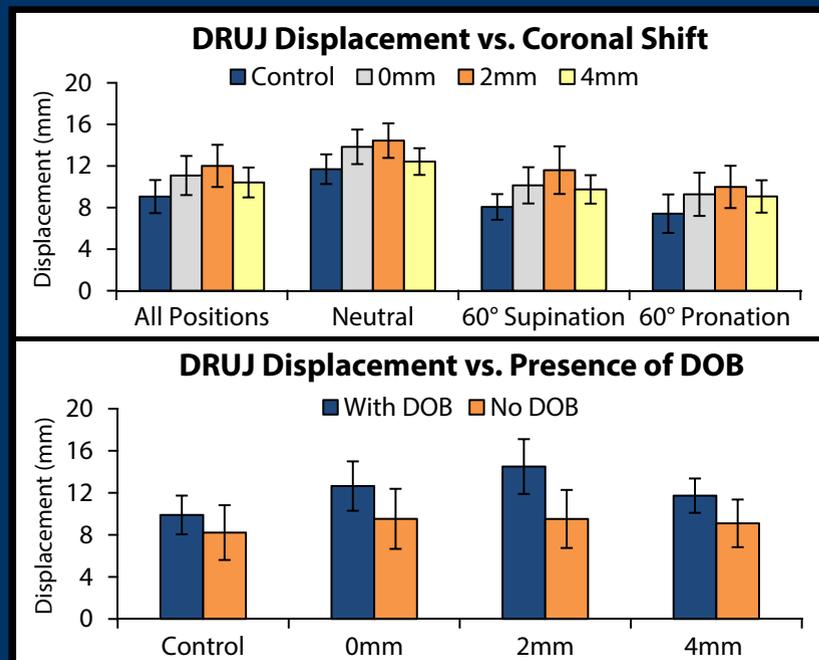
- 10 fresh-frozen above-elbow specimens
- Transverse distal radius osteotomy at base of sigmoid notch + oblique osteotomy through base of ulnar styloid
- Distal radius plate modified to create shifts of 0, 2, and 4mm in coronal plane
- Specimen attached to exact replica of the testing apparatus by Arimitsu, et al.<sup>3</sup>
- 20N translational force in both directions in neutral, 60° of pronation + supination
- Post-testing dissection to evaluate for distinct DOB (thickness >0.5mm)



## Conclusions

- A 2mm “coronal shift” adversely impacts DRUJ stability in the setting of ulnar styloid fracture
- This effect is more pronounced in specimens with a distinct DOB
- Reduction of shift is a critical factor in stabilization of DRUJ and may be particularly important in the 40-50% of patients with a DOB
- Coronal shift should be considered alongside other traditional reduction criteria

## Results



- All specimens (n=10): DRUJ volar-dorsal displacement was significantly affected by **presence of DOB (p<0.001)** and forearm rotation (p<0.001) but not coronal shift
- Specimens with DOB (n=5): DRUJ displacement significantly increased with **2mm coronal shift (p=0.015)** and forearm rotation (p<0.001)
- Specimens without DOB (n=5): No significant differences

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