Is the bare spot a consistent landmark for shoulder arthroscopy? A study of 20 embalmed glenoids with 3-dimensional computed tomographic reconstruction

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PURPOSE
Our aim was to test a published methodology for arthroscopically quantifying glenoid bone loss for its dependability in a cadaver-based anatomic study with 3-dimensional (3-D) computed tomographic (CT) reconstructions of 20 embalmed glenoids.

METHODS
Manual macroscopic measurements were made in a standardized fashion. In addition, we marked the center of the visible bare spot in 20 embalmed glenoids with a titanium pin. The shoulder joints were carefully selected for intact rotator cuff, missing capsule-labral deficiency, and absence of severe cartilage degeneration. 3-D reconstructed CT scans were evaluated for consistency of the bare spot.

RESULTS
The mean distance from the bare spot to the anterior margin measured manually was 10.9 mm (CT-based, 13.9 mm), to the posterior margin 13.7 mm (CT-based, 16.4 mm), and to the inferior margin 9.7 mm (CT-based, 15.1 mm). Distances were significantly different.

CONCLUSIONS
The bare spot did not prove its consistency in 20 carefully selected specimens. Therefore, we conclude that this methodology is not a reliable way to intraoperatively determine bony glenoid deficiency.

CLINICAL RELEVANCE
We recommend preoperative bilateral CT scans for evaluation of bony glenoid deficiency for exact quantification of the bone loss.

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