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## **Radiologic Insight into Rotator Cuff Tears and their Surgical Management**

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Rotator cuff tears are a common orthopedic condition that can cause significant pain and disability, with prevalence increasing with age. Accurate diagnosis using various imaging modalities is crucial for guiding effective treatment strategies, often involving surgical intervention. Key imaging techniques include ultrasonography, magnetic resonance imaging, and magnetic resonance arthrography, each offering distinct advantages in visualizing the shoulder's complex anatomy and pathology. Surgical repair of rotator cuff tears is frequently performed, especially for chronic tears or those unresponsive to conservative management. The choice of treatment depends on multiple factors, including the patient's symptoms, age, and the tear's size and location. Standard tendon repair techniques combined with anterior acromioplasty typically provide consistent and lasting pain relief, along with improved range of motion. For massive rotator cuff tears, alternative procedures such as superior capsular reconstruction (SCR) or tendon transfers may be considered. In older patients with chronic, massive tears and pseudoparalysis, reverse total shoulder arthroplasty offers predictable and often excellent outcomes. Postoperative MRI plays a vital role in assessing the healing process and detecting retears or complications following rotator cuff repair. Initially, the repaired tendon may appear heterogeneous on imaging, but this appearance usually normalizes over time. A thorough understanding of radiologic anatomy, surgical techniques, and normal postoperative imaging findings enhances the accuracy of radiologic evaluation and ultimately improves patient management.

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