

# 19

QUESTION

## WHAT ARE THE INDICATIONS AND OPTIONS FOR GLENOID RESURFACING IN YOUNG PATIENTS WITH GLENOHUMERAL DEGENERATIVE JOINT DISEASE?

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Total shoulder arthroplasty has historically offered the most predictable functional outcomes and pain relief amongst patients with advanced osteoarthritis of the glenohumeral joint.<sup>1</sup> Unfortunately, in the active younger patient with glenohumeral arthritis, glenoid component loosening and polyethylene wear osteolysis are potentially devastating issues over the long term. As a result, alternatives to arthroplasty have been explored in this challenging population. Isolated humeral head resurfacing typically provides inferior results with regard to pain relief and function.<sup>2</sup> In addition, subsequent glenoid cartilage erosion is not uncommon, and may necessitate conversion to total shoulder arthroplasty.<sup>3</sup>

Biologic resurfacing of the glenoid in conjunction with humeral head replacement or glenoid biologic resurfacing alone for isolated glenoid arthritis is another alternative that may be appropriate in the younger population with glenohumeral osteoarthritis.<sup>4</sup> Biologic resurfacing avoids complications associated with prosthetic glenoid resurfacing such as polyethylene wear osteolysis, and glenoid component loosening. A variety of tissue implants have been tried, including both autograft and allograft.<sup>1</sup>

The best candidate is a young adult with severe bipolar (humerus and glenoid) degenerative disease with intolerable pain and compromised activities of daily living. Unipolar disease, or defects contained within either the humeral head or glenoid, may be amenable to focal cartilage restoration type procedures such as microfracture, osteochondral transfer, or autologous chondrocyte implantation. However, many of these techniques remain experimental or “off-label” in the shoulder, and are lacking long-term data. It is important, nonetheless, to define the extent of cartilage damage, so as to not “overtreat”