

## **Commercial Insurance Coverage Criteria for Autologous Chondrocyte Implantation Poorly Reflect Current Research**

Jacob Kotlier, Amir Fathi, Eric Lin, Avinash S Iyer, Sahil Sham Telang, Ioanna Bolia, Aamir Ahmad, Frank Petrigliano, Joseph Nairne Liu

**INTRODUCTION:** Autologous chondrocyte implantation (ACI) is an increasingly popular modality for the surgical treatment of articular cartilage defects. Most patients rely on insurance payers to cover this costly procedure; however, many payers employ restrictive criteria in their coverage policies, which make it difficult for patients and physicians to get authorization for these procedures. The aim of this study is to both quantify and qualify the way insurance companies justify their coverage policies for ACI and determine whether these policies align with recent research on the subject.

**METHODS:** The top 11 national commercial health insurance payers for ACI were identified. Coverage policy documents were recovered for eight payers. These documents were examined and type of reference as well as level of evidence (LOE) were recorded for each applicable reference. Specific coverage criteria for each individual payer were then extracted and assessed for similarities among commercial payers. Finally, all references cited by each payer were examined to determine whether they mentioned the specific payer criteria.

**RESULTS:** This study found that the majority of cited references were primary journal articles (93, 59.2%) and that only 32 (20.3%) references were level I or level II evidence. This study also found significant homogeneity among payer coverage criteria. Cited sources inconsistently mentioned specific payer coverage criteria. In addition, payer criteria tended to be poorly supported by current evidence on ACI.

**DISCUSSION AND CONCLUSION:** This study demonstrates that commercial insurance payers' coverage policies for ACI poorly cite references, cite a majority of references with low level of evidence and cite references which infrequently mention their specific coverage criteria. In addition, payer coverage policies have a high degree of homogeneity and many of their specific criteria are poorly supported by current research on ACI. It is thus possible that there are many patients that might benefit from ACI that would be denied insurance coverage without proper justification.