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Authors' Reply

We thank Mathews et al. for their thoughtful comments and additional information on the usefulness of diagnostic injection. Mathews et al. audited their practice to see whether positive responses from diagnostic injections were associated with intra-articular pathologic findings. Their results, we believe, support the results presented by Kivlan et al.,¹ as well as those presented by Martin et al.² In the study by Martin et al.² it was found that 41% (20 of 49) of those with a labral tear on an MRI arthrogram did not achieve greater than 50% relief with intra-articular injection. Kivlan et al.¹ noted that 15% (11 of 72) had evidence of intra-

articular pathologic conditions during surgery but did not have greater than 50% relief with intra-articular injection. Mathews et al. noted similar results in that 11% (7 of 62) had pathologic intra-articular hip conditions as observed during surgical examination but did not respond to diagnostic injection. The next logical question would relate to the outcome of these 7 individuals. In our clinical practice, we find surgical outcome directly relates to percent relief with diagnostic intra-articular injection. The information presented by Mathews et al., Kivlan et al.,¹ and Martin et al.² support the belief that pathologic findings identified with imaging or during arthroscopic surgery may not be the primary source of the patient's symptoms. Research studies are needed to see how well diagnostic injection predicts outcome after arthroscopic hip surgery in those with nonarthritic intra-articular hip pain.

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Regarding "Surgical Dislocation of the Hip Versus Arthroscopic Treatment of Femoroacetabular Impingement: A Prospective Matched-Pair Study With Average 2-Year Follow-up"

To the Editor:

We read with interest the article entitled "Surgical Dislocation of the Hip Versus Arthroscopic Treatment of Femoroacetabular Impingement: A Prospective Matched-Pair Study With Average 2-Year Follow-up."¹ This is a very interesting topic that has evolved significantly in

recent years, and we appreciate the question posed by the authors. There are several points of interest that deserve mention. First, despite the fact that all patients were reportedly offered either surgical hip dislocation (SHD) or arthroscopy, in the end, 10 SHDs were included without a noted denominator, and only 20 of 684 of the arthroscopic cases were included in the final cohort and analysis. Although the authors attempted to match the groups, it would be more valid to include a large proportion of both groups rather than a large proportion of one small group and a very small proportion of another very large group. It is not clear that the 20 of 684 hip arthroscopies are representative of the entire arthroscopic cohort. Second, there is a significant, yet poorly defined, learning curve for both open and arthroscopic hip preservation procedures, and it is possible that the authors were more proficient at arthroscopic FAI correction compared with SHD, as suggested by the numbers presented. We believe that this issue would introduce significant bias. The analogy would be a surgeon who is well accomplished in open hip preservation, with limited experience in arthroscopy, comparing his open cohort with his arthroscopic cohort. In addition, systematic reviews with larger numbers to date have shown no clearly superior approach with regard to open versus arthroscopic hip procedures for FAI.²⁻⁶ Third, concepts and practice in hip preservation surgery have evolved, and many surgeons who traditionally used open hip preservation procedures have incorporated hip arthroscopy into their practice. As a result, the indications for these procedures have changed for many surgeons, with an increasing number of FAI corrective procedures being performed arthroscopically and SHD often reserved for more complex hip deformities such as circumferential or posteriorly based impingement deformities and extra-articular trochanter-pelvic impingement, now considered 2 pathologically dissimilar groups. Therefore, this question comparing open with arthroscopic surgery without specifying morphologic type may be of more historical significance moving forward. Of interest, the hips that were included in the current study had relatively mild deformities (alpha angle in the 50s), and we are interested in the authors' clinical indications for SHD in these patients. In the end, a larger study with the majority of the procedures performed by qualified surgeons with similar levels of experience in each surgical approach under investigation would be necessary to better answer this question.

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Authors' Reply

We want to thank Larson et al. for their very astute comments, with which we agree on nearly every point. We are pleased that this research has stirred productive academic dialogue. This is indeed an interesting topic that has evolved significantly in the past few years, and we hope that our responses may contribute to a continued conversation and lead to further study.