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To the Editor

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We would like to thank Dr. Nossent for his interest in our work. Our research focus was primarily on understanding whether inflammatory (i.e., synovitis, effusion) or mechanical (i.e., bone marrow lesions) features found in osteoarthritis (OA) were associated with sensitization. The main concern raised by Dr. Nossent is that 38% of the study subjects' knees had radiographic OA, while 60% had synovitis on MRI. It is well-recognized that radiography is an insensitive tool for characterizing OA, with structural lesions apparent on MRI of knees without radiographically apparent OA.¹ As such, it is reasonable to expect that knees would exhibit lesions on MRI prior to radiographic changes being evident. Further, there is evidence to suggest that synovial activation, which is manifested clinically as effusion and synovitis on MRI, plays an important role in the onset of knee OA.² Several pathologic features of the joint, including synovitis and bone marrow lesions, cannot be visualized on radiograph. Nonetheless, we agree with Dr. Nossent that the Hoffa's fat pad synovitis may not necessarily be related to OA. Indeed, we acknowledged in the paper that this MRI finding "is a sensitive but nonspecific marker of synovial inflammation and cannot be distinguished from other entities such as mechanical impingement of the fat pad or hypervascularity for other reasons..."³

Dr. Nossent also inquired about difference in effects related to presence of radiographic OA. We and others have previously published that the severity of radiographic OA does not appear to be associated with sensitization;^{4,5} thus we would not expect the results to meaningfully differ based on radiographic knee OA status. To address Dr. Nossent's question, we performed stratified analyses and found the results to be largely the same. For example, the presence of synovitis was associated with lower pressure pain threshold at baseline for both those with and without radiographic knee OA, with the adjusted beta values being -0.49 and -0.50, respectively. Thus, we did not find substantial effect measure modification by radiographic knee OA status. Nevertheless, we agree with Dr. Nossent that the effect of synovitis on sensitization is not necessarily confined to OA, but may be relevant to other conditions in which synovitis is present.

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