Introduction/Purpose: The use of MRI poses a significant expense in the ever-increasing cost of healthcare. The American College of Radiology (ACR) recommends obtaining ankle radiographs within 6 months prior to MRI in the assessment of patients with acute or chronic ankle pain. In this retrospective utilization study, we examine the compliance rate of both orthopedic and non-orthopedic providers at two academic centers. We hypothesize that there is an over utilization of resources by non-orthopaedic surgeons.

Methods: We retrospectively reviewed 721 patient charts (4/2015-11/2016) who had an ankle MRI. We analyzed the preceding conservative management and subsequent non-operative or surgical care of the patient, and made note of the ordering physician and whether or not radiographs were obtained prior to ordering an MRI. We also performed an analysis of diagnosis and identified common diagnoses that were associated higher levels of non-compliance to the ACR criteria.

Results: Overall, we determined that 222 of the 259 (85.7%) of the orthopedic providers obtained radiographs prior to MRI while only 271 of 462 (58.7%) non-orthopedic providers followed these criteria (p<0.0001). In total, we found that 493 out of 721 (68.4%) providers ordered ankle radiographs prior to MRI. Among orthopedic providers showing non-compliance with the ACR criteria, the most common patient diagnoses were tendinopathy and not obtaining new radiographs when radiographs were older than 6 months. Among non-orthopedic providers, the most common diagnoses were edema and tendinopathy.

Conclusion: We found that orthopedic providers adhered much more closely to the ACR criteria, and that there is a significant over-utilization of resources by all providers, with an overall inappropriate use percentage of 32.1%. Increasing the compliance rate could prove to be an effective mechanism for decreasing the cost healthcare in the treatment of ankle pain.