Comparison of Knee Osteoarthritis Treatment Patterns by Rheumatologists vs. Other Providers in a U.S. Administrative Claims Database

Angela V. Bedenbaugh1, Machaon Bonafede2, Joanne Wu3, Elizabeth H. Marchlewicz4, Vinson C. Lee5, Jeyanesh R.S. Tambiah6

1Samumed LLC, San Diego, CA; 2IBM Watson Health, Cambridge, MA

Background

- Knee osteoarthritis (OA), the most common type of OA, is a leading cause of pain and disability1.
- The diagnosing physician type (rheumatologists [RH] versus general practitioners [GP] or orthopedic specialists [OS]) may impact treatment patterns among newly diagnosed knee OA patients.
- The objective of this study was to compare demographics, clinical characteristics, and treatment patterns of patients with a new knee OA diagnosis made by different medical providers.

Methods

- The IBM MarketScan® Research Databases were used to identify knee OA patients from 2013-2018, the index period.
- Figure 1 outlines inclusion criteria, attrition rates, and patient cohorts.
- Outcomes were assessed from index date to the first of inpatient death, end of continuous enrollment, or end of the study period (variable follow-up).
- Diagnosing physician was defined by the provider type on the first claim with knee OA diagnosis.
- Comorbid burden was calculated using the Deyo-Charlson Comorbidity Index (DCI), an aggregate measure of comorbid status, comorbid burden, and study outcomes.

Results

- 346,888 patients were diagnosed by a physician type of interest (RH, OS, or GP).
- Patients with knee OA often seek treatment sooner (30-day supply) prescriptions than GP- or OS-diagnosed patients.
- RH-diagnosed patients had the highest comorbid burden and received the least number of TKRs, potentially indicating that they were unsuitable candidates for surgery.
- Further research into treatment patterns and characteristics of RH-diagnosed knee OA patients is warranted.

Limitations

- Patients with knee OA often seek over-the-counter pain relief prior to prescription medication; therefore, true medication use is likely to be underreported by claims.
- No prior knee OA diagnosis for ≥24 months pre-index is an assumption of new diagnosis; this assumption may allow for the inclusion of patients with an established knee OA diagnosis.
- As with all claims data, misclassification from diagnostic coding errors may occur, potentially resulting in misclassification of knee OA status, comorbid burden, and study outcomes.

Conclusions

- Patients diagnosed by rheumatologists differed from other patients at baseline, particularly in their sex and comorbidities.
- RH-diagnosed patients received less IA CS or IA HA than OS-diagnosed patients.
- More RH-diagnosed patients received NSAIDS and opioid (≥30-day supply) prescriptions than GP- or OS-diagnosed patients.
- RH-diagnosed patients had the highest comorbid burden and received the least number of TKRs, potentially indicating that they were unsuitable candidates for surgery.
- Further research into treatment patterns and characteristics of RH-diagnosed knee OA patients is warranted.

References


All authors are employees, shareholders, or consultants of Samumed, LLC. Other disclosures are listed in the published abstract.