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An Analysis of Treatment Patterns in Knee Osteoarthritis in a U.S. Administrative Claims Database

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Background: Knee osteoarthritis (OA) is a prevalent and disabling joint disease with substantial economic burden. This study describes treatment patterns for patients with new knee OA diagnosis.

Methods: A retrospective cohort study was performed using U.S. administrative claims data from 2011-2018 (IBM MarketScan[®]). Inclusion criteria included age ≥ 18 and ≥ 1 claim with ICD-10 diagnosis of knee OA. Index date was the earliest ICD-10 knee OA diagnosis or ICD-9-CM diagnosis for lower-leg OA with > 2 years prior continuous enrollment without these diagnoses. The primary outcome was receipt of knee OA treatments, stratified by diagnosing physician type.

Results: The study included 488,510 new knee OA patients (mean age 60.5 years [SD 12.2]; 60% female). The two most common diagnosing physician types were orthopedic surgeons (OS [48%]) and general practitioners (GP [20%]); however, 32% were other/unknown. Among newly diagnosed knee OA patients, 68.3% received corticosteroids, 53.9% received opioids (one-year mean day supply = 74.7 days), 52.2% received prescription NSAIDs, and 19.5% received hyaluronic acid. OS-diagnosed patients received more medications and had shorter initiation times than GP-diagnosed patients with the greatest difference for hyaluronic acid (1.62 times more; median time to initiation of 63 versus 91 days) and corticosteroids (1.19 times more; median time to initiation of 0 days versus 17 days). 11.7% of patients received a knee-OA-related procedure. 11.4% received total knee replacements, which was 1.55 times more and with shorter median time to procedure (272 versus 346 days) among OS-diagnosed versus GP-diagnosed patients.

Conclusion: This descriptive analysis found that knee OA patients diagnosed by OS received more knee-OA-related procedures and earlier prescriptions than patients diagnosed by GPs. Opioids and NSAIDs were common regardless of diagnosing physician type. Future research should further explore potential drivers of the variations in treatment pathways observed in this study.