

# ASSESSING THE CHARACTERISTICS AND MANAGEMENT OF KNEE OSTEOARTHRITIS PATIENTS WITH HYPERTENSION BY CLINICIAN SPECIALITY

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## BACKGROUND

- The pathogenesis of knee osteoarthritis (OA) is complex and current treatment is still focused primarily around pain relief.
- Patients with OA frequently have other comorbidities, including hypertension, which eludes to other considerations needed when deciding appropriate treatment management.

## OBJECTIVE

To elucidate key differences between comorbid hypertension OA patients vs non comorbid patients to determine potential areas of treatment consideration.

## METHOD: DATA SOURCE

- Data were collected from the Ipsos Osteoarthritis Therapy Monitor, a cross-sectional, online survey conducted between May – July 2020.
- A sample of 260 US physicians, including rheumatologists (rheums), orthopedic surgeons (orthos), primary care physicians with a focus in sports medicine (SM PCPs), and pain specialists, provided data on a sample of 796 de-identified knee OA patients they personally manage.
- Participating physicians had been practicing in their specialty between 3-50 years and saw a minimum of 35 knee OA patients a month.
- Descriptive statistics were used to analyse the results.

## METHOD: MEASURES

- Demographics
- Physician Perceptual Questionnaire
- Patient chart: Patient comorbidities, age, weight, smoking status, under controlled status, disease severity, current treatment, candidate for total knee replacement surgery, Visual Analogue Scale for Pain (VAS) score, radiographic evidence of bone erosion

## RESULTS

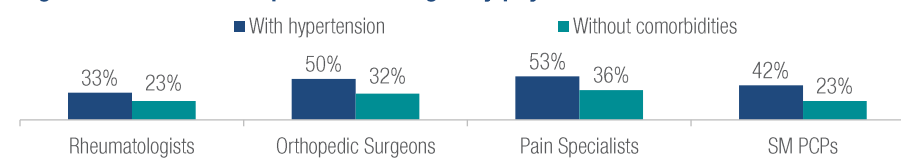
### Patient sample and demographics

- A total of 260 physicians were recruited, reporting on 796 knee OA patients collectively; 559 were reported to experience hypertension, whilst 237 were reported to not experience any comorbidities (Table 1).
- Reported patients with hypertension were significantly older (mean 67 vs 59 years old, respectively;  $p \leq 0.01$ ) and weighed more (mean 82kg vs 77kg, respectively;  $p \leq 0.01$ ) than patients without comorbidities; they were also significantly more likely to be previous smokers compared to those without comorbidities (23% vs 8%, respectively;  $p \leq 0.01$ ).
- With regards to perceived current knee OA severity, both orthos and SM PCPs reported a significantly higher proportion of hypertension patients that were deemed 'severe' (based on physician opinion) vs patients without comorbidities (orthos: 50% vs 32%, respectively; SM PCPs: 42% vs 23%, respectively;  $p \leq 0.01$ ) (Fig 1).

Table 1. Physician and patient sample size

	Rheumatologists	Orthopedic Surgeons	Pain Specialists	SM PCPs
Physicians	55	111	55	56
Patients reported	275	555	265	280

Figure 1. % of knee OA patients managed by physicians deemed 'severe'

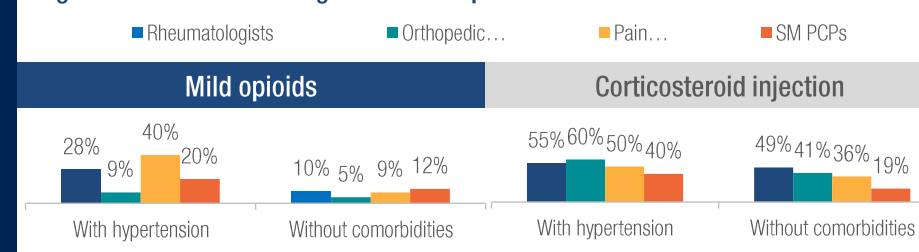


Source: Ipsos Osteoarthritis Therapy Monitor (May – July 2020, 260 physicians in US reporting on 796 knee OA patients (total), data collected online. Participating physicians were primary treaters and saw a minimum number of patients per wave.) Data are © Ipsos 2021, all rights reserved.

### Treatment Usage and consideration of TKR surgery in knee OA patients

- Sampled rheums and pain specialists reported a greater prominence of mild opioid usage amongst their patients with hypertension compared to those without comorbidities (rheums: 28% vs 10%, respectively ( $p \leq 0.05$ ); pain specialists: 40% vs 9%, respectively; ( $p \leq 0.01$ )) (Fig 2).
- Sampled orthos and SM PCPs on the other hand state significantly greater use of corticosteroid injections amongst their reported patients with hypertension vs those without comorbidities (orthos: 60% vs 41%, respectively; SM PCPs: 40% vs 19%, respectively;  $p \leq 0.01$ ) (Fig 2).
- With regards to patients being considered candidates for total knee replacement (TKR) surgery, patients with hypertension deriving from sampled orthos and SM PCPs are significantly more likely to be considered for surgery compared to those without comorbidities (orthos: 59% vs 32%, respectively; SM PCPs: 37% vs 19%, respectively;  $p \leq 0.01$ ). Conversely, patients with hypertension deriving from sampled rheums are significantly less likely to be considered for TKR compared to their patients without comorbidities (41% vs 18%, respectively;  $p \leq 0.05$ ).

Figure 2. % treatment usage in knee OA patients



Source: Ipsos Osteoarthritis Therapy Monitor (May – July 2020, 260 physicians in US reporting on 796 knee OA patients (total), data collected online. Participating physicians were primary treaters and saw a minimum number of patients per wave.) Data are © Ipsos 2021, all rights reserved.

### VAS score and radiographic progression in sampled patients

- Focusing on additional clinical factors in the overall reported patient group, those reported with hypertension had a significantly higher mean Visual Analogue Scale for Pain (VAS) score than patients without comorbidities (6.6 vs 5.9, respectively;  $p \leq 0.01$ ).
- When considering evidence of radiographic progression from imaging, a significantly higher proportion of patients with hypertension demonstrate radiographic evidence of bone erosion compared to those without comorbidities (69% vs 56%, respectively;  $p \leq 0.01$ ).

## CONCLUSIONS

- From the sample surveyed, knee OA patients who also experience hypertension may require a more specific and holistic treatment approach that takes into account their CV status and their managing physician specialty.
- Our data suggests the greater level of pain and bone erosion in knee OA patients with hypertension may offer guidance to treaters when considering treatment options. Further investigation using comparator cohort is warranted.

## LIMITATIONS

The study was limited to the data collected. There may be other relevant physician/site variables which could contribute to the results seen.

## REFERENCES

- Ipsos Osteoarthritis Therapy Monitor (260 sampled physicians reporting on 796 knee OA patients in the US, May – July 2020)
- Hochberg, M., 2021. New paradigms in the management of osteoarthritis patients with hypertension. *Osteoarthritis and Cartilage*, [Online]. 18, 51-52. Available at: [https://www.oarsijournal.com/article/S1063-4584\(10\)00091-9/pdf](https://www.oarsijournal.com/article/S1063-4584(10)00091-9/pdf) [Accessed 1 April 2021].

## DISCLOSURES

Authors were employees of Ipsos at the time of submission. There are no conflicts of interest to declare for any of the listed authors.

