

Sociodemographic and Clinical Characteristics of Latanoprostene bunod Initiators among Medicare Fee-for-Service Patients with Open Angle Glaucoma and Ocular Hypertension

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BACKGROUND

- Latanoprostene bunod (LBN) is a topical prostaglandin analog approved for lowering intraocular pressure (IOP) among patients with open-angle glaucoma (OAG) or ocular hypertension (OHT)
- While its dual mechanism of action offers a unique approach to IOP reduction, its positioning within glaucoma treatment algorithms, particularly as an initial therapy, remains unclear.

Objective: This study aimed to identify demographic and clinical characteristics of OAG/OHT patients that initiate therapy with LBN

METHODS

STUDY DESIGN: observational, retrospective analysis of de-identified closed claims data and registry among individuals diagnosed with OAG/OHT

DATA SOURCE: Medicare Fee-for-Service (FFS) Parts A/B/D claims and IRIS Registry data from Jan. 1, 2021 - Dec. 31, 2023

PATIENT SELECTION:

- Patients had at least one diagnosis or treatment of OAG/OHT and IRIS-recorded IOP (8–40 mmHg) within a 30-day window between Jan. 1–Dec. 31, 2022. Index date was defined as the earliest OAG/OHT diagnosis, treatment, or IOP assessment within this window.
- Patients were continuously-enrolled for 12-months before and after index date.
- Patients had at least one additional IOP during the 12-month pre-index period.
- Patients did not have any pre-index OAG/OHT medications or procedures.

VARIABLES

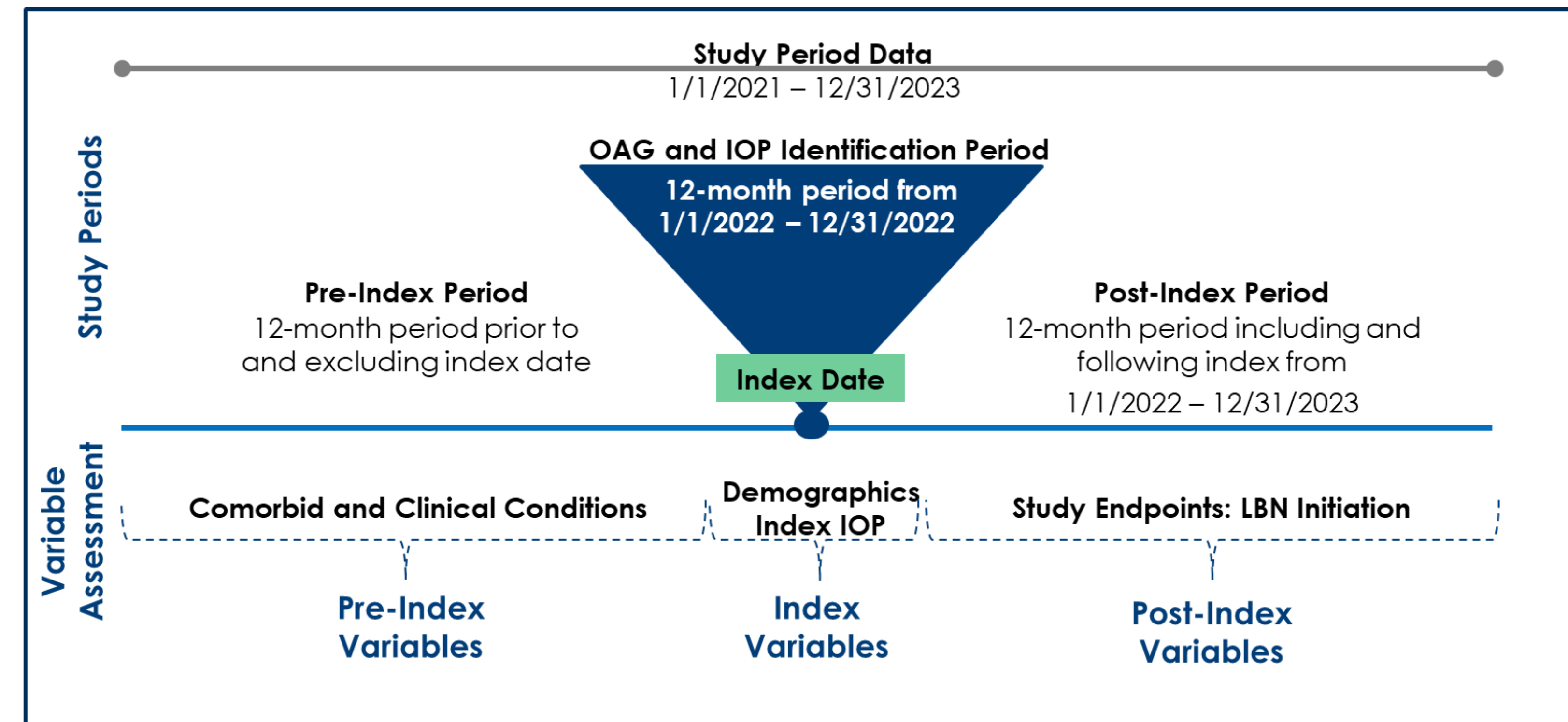
- LBN initiation was identified with a fill during the post-index period. Non-initiators were identified if they had no OAG/OHT fills or procedures during the post-index period.
- Demographics were identified at index.
- Index IOP and glaucoma stage were identified in the 30-day indexing window. Incidence was defined as the absence of a pre-index diagnosis of OAG/OHT.
- Baseline clinical characteristics were identified during the pre-index period.

STATISTICAL ANALYSIS:

- Chi-square testing and student's t-test were used to identify significant differences between groups.

STUDY DESIGN

Figure 1. Study Design



PATIENT SELECTION AND DEMOGRAPHICS

PATIENT CHARACTERISTICS

- 304 patients initiated therapy with LBN during the post-index period. 120,460 patients did not initiate any therapy (Figure 2)
- Most patients were female and white. There was a higher proportion of non-white patients among LBN initiators than non-initiators (24.3% vs. 14.6%, $p < 0.0001$) (Figure 3)
- Mean age among LBN initiators was 78 years and 77 years among non-initiators.
- A higher proportion of LBN initiators than non-initiators were dually eligible for Medicaid (14.1% vs. 5.8%, $p < 0.0001$)

Figure 2. Patient Selection and Attrition

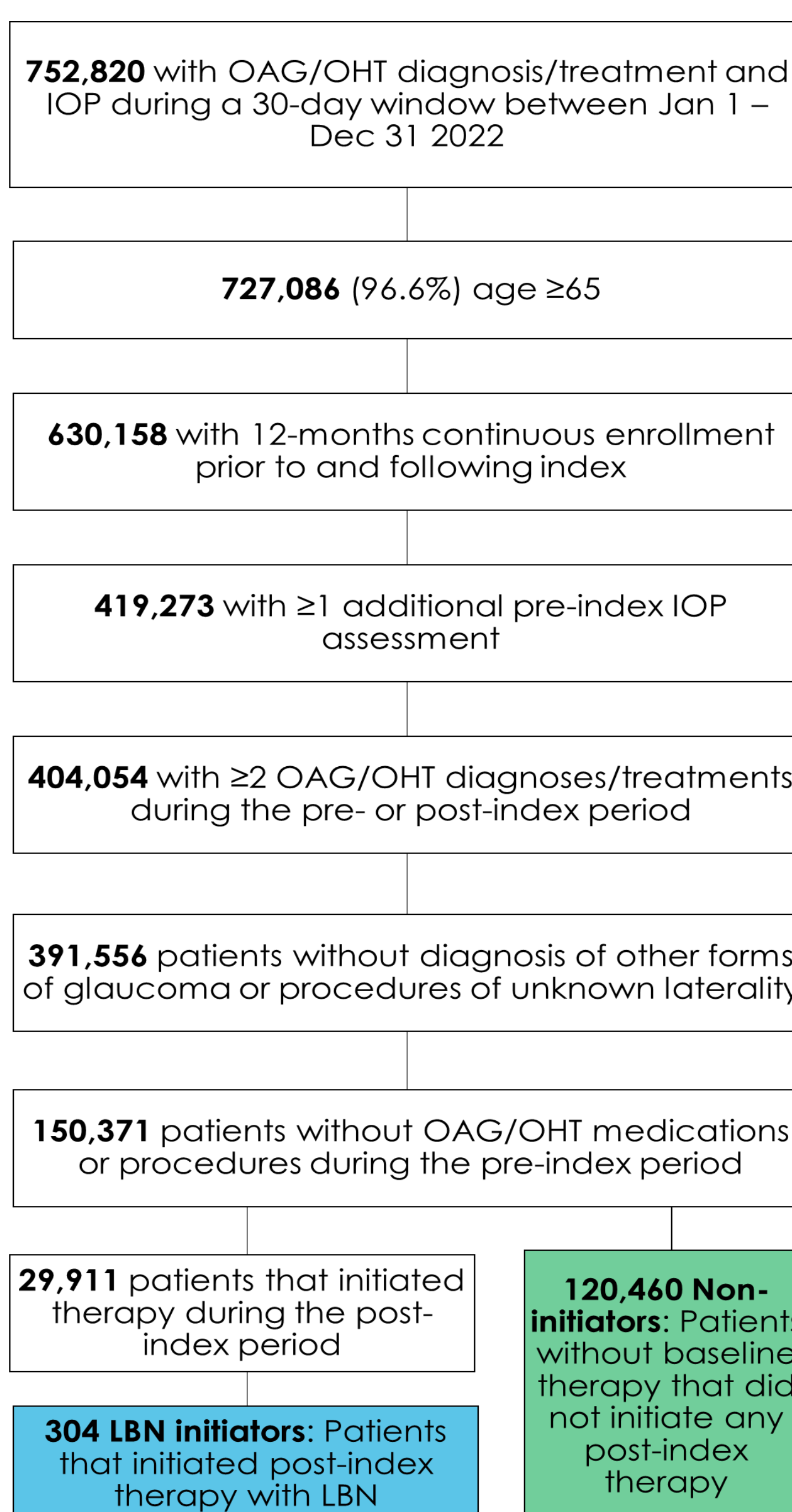
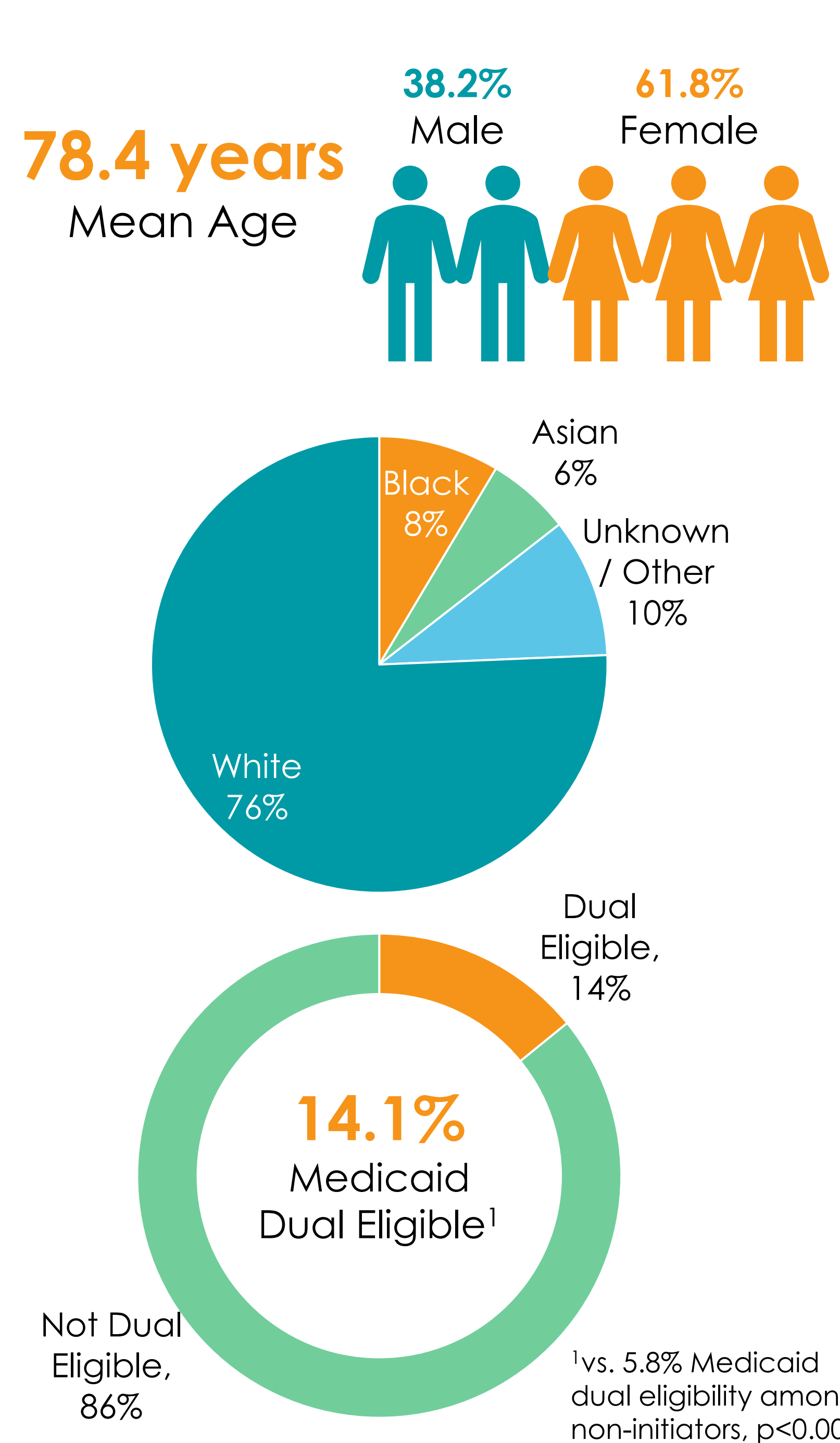


Figure 3. LBN Initiator Demographics



CLINICAL CHARACTERISTICS

- Patients that initiated LBN had significantly higher mean IOP at baseline than treatment-naïve patients who did not initiate therapy (Figure 4)
- A higher proportion of LBN initiators had elevated IOP (>21 mmHg) at index than patients that did not initiate LBN. However, a substantial proportion of LBN initiators did not have elevated IOP (74.3%) (Figure 5)

Figure 4. Mean IOP at Index between LBN Initiators and Non-Initiators

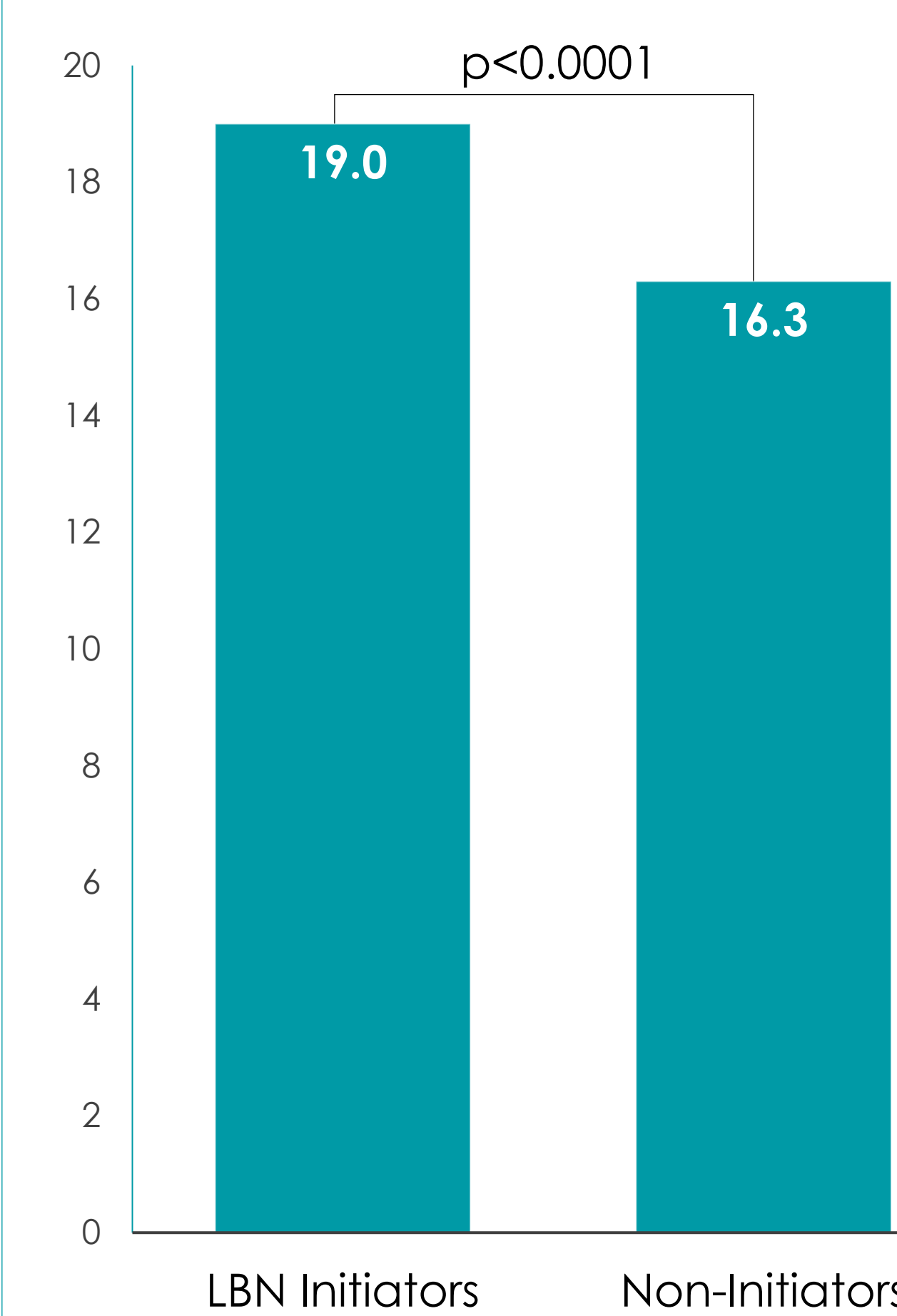
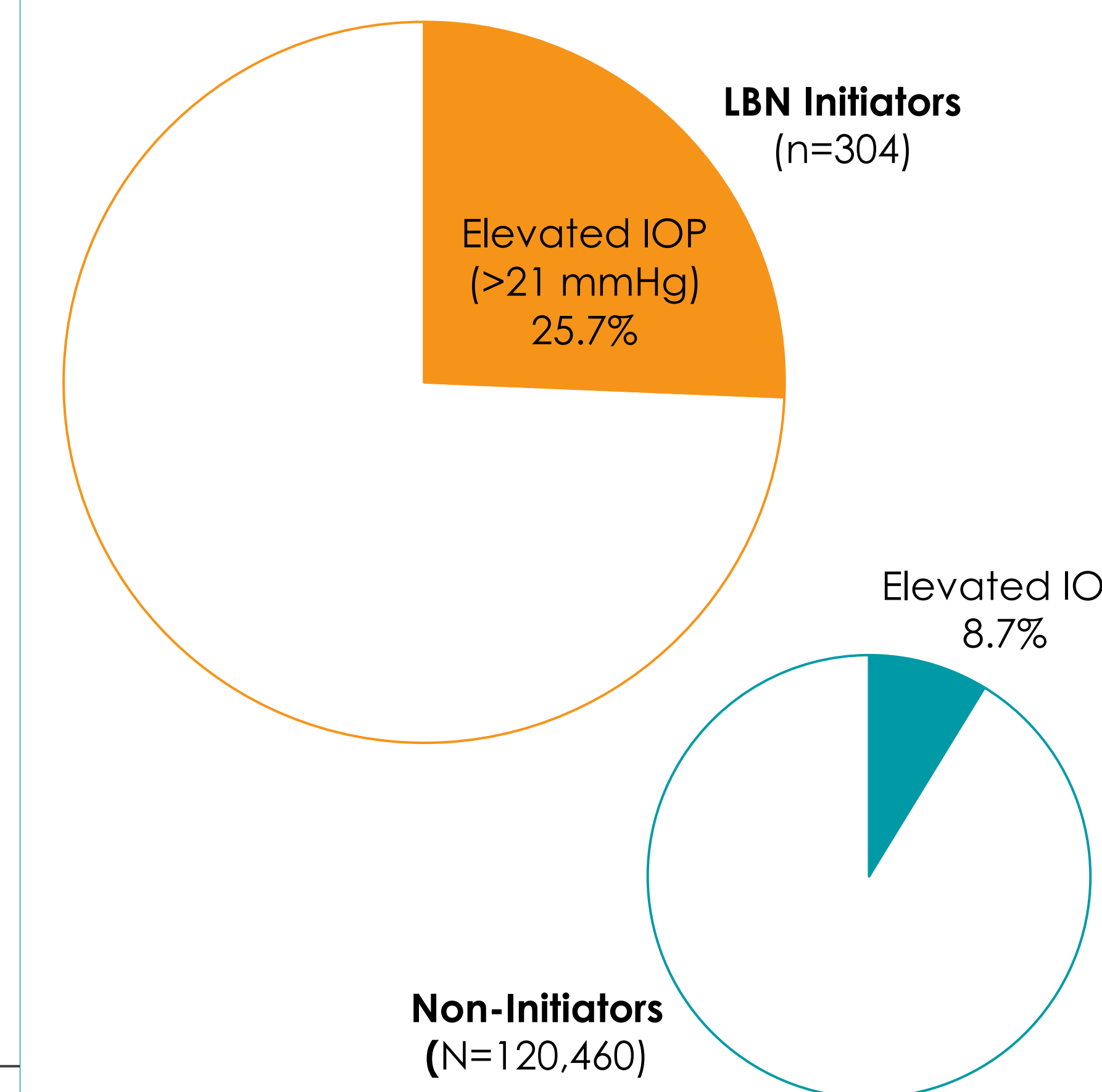


Figure 5. Frequency of Elevated IOP at Index between LBN Initiators and Non-Initiators ($p < 0.0001$)



- Most LBN initiators had mild (32.0%) or moderate (24.1%) severity OAG at index. Unspecified/indeterminate OAG was documented in 28.5% of initiators (Figure 6)
- Most patients that didn't initiate therapy during the post-index had unspecified or indeterminate glaucoma severity
- 23% of LBN initiators were newly diagnosed with OAG (i.e., did not have any pre-index diagnoses), compared to 13.8% of non-initiators ($p < 0.0001$) (Figure 7)

Figure 6. Glaucoma Stage during Indexing Window

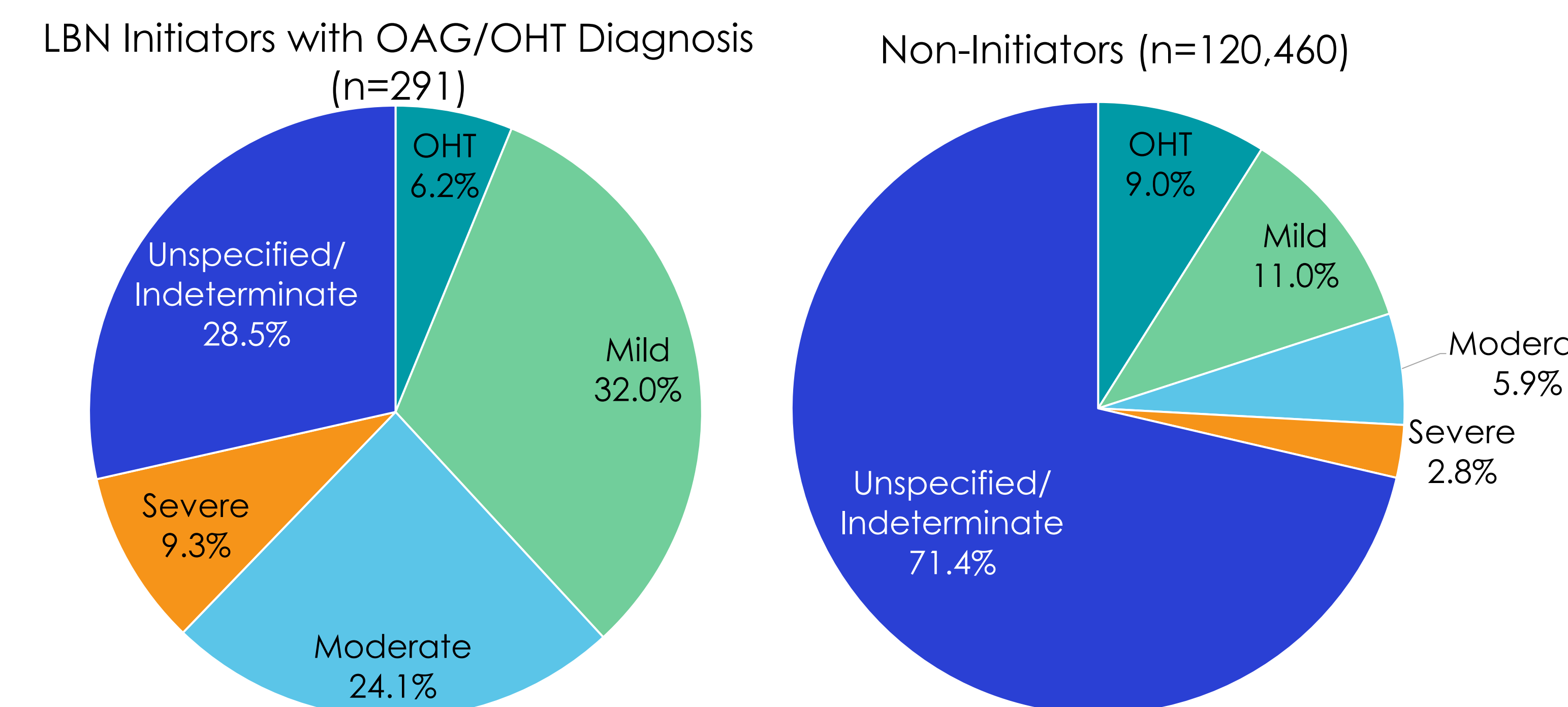
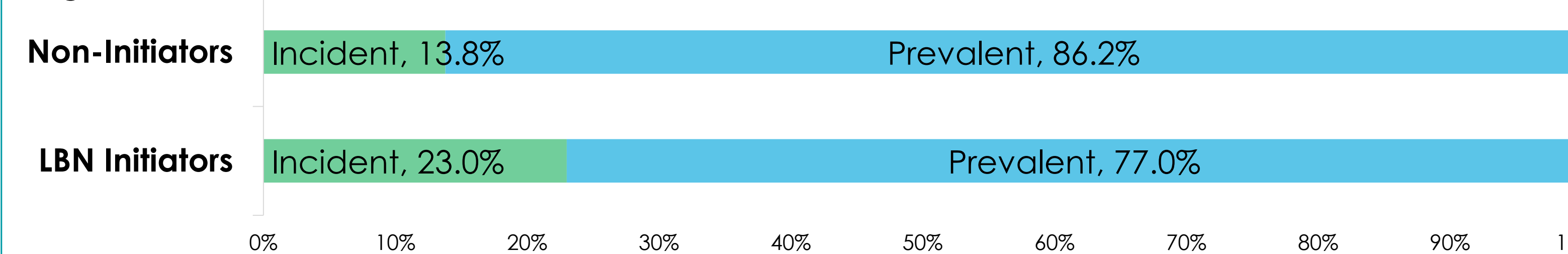


Figure 7. OAG/OHT Incidence Status at Index



CONCLUSION

- In this large real-world population, LBN was utilized across a range of OAG severity stages and most observed among patients with index IOP ≤ 21 mmHg
- This utilization pattern supports the consideration of LBN as an early therapeutic option for patients requiring effective IOP management, including those with normotensive glaucoma.

Elevated IOP

- LBN initiators were more likely to have an elevated IOP at baseline and be newly diagnosed with mild or moderate OAG
- Conversely, non-initiators were more likely to have non-incident OAG/OHT and non-elevated IOP

Dual-eligibles

- Patients that initiated LBN therapy were more likely than non-initiators to be dually eligible for Medicaid, indicating that lack of comprehensive insurance coverage may be a barrier to OAG/OHT therapy initiation

Gap in treatment

- A substantial proportion of Medicare FFS enrollees with OAG/OHT do not initiate prescription or procedural therapy for their condition
- Most of these non-initiators have unspecified and/or indeterminate OAG/OHT, indicating a potential gap in glaucoma diagnosis and management among the Medicare FFS population

LIMITATIONS

Administrative claims data are generated for billing and reimbursement purposes. As such, there are chances that some of the data captured including medical conditions and outcomes were not documented correctly. This could have led to patient misclassification either due to miscoding or misdiagnosis. Medication usage for this study was based on filled outpatient prescriptions; patients were assumed to take the medications as prescribed, though that cannot be confirmed.

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