Epidemiology and Burden of Primary Open-Angle Glaucoma in Germany:

A Cross-Sectional Claims Data Analysis, 2018–2024

EPH254

Tarcyane Barata Garcia[1], Mohammed Dagher[2], Tobias Heidler[1], Marc Pignot[2], Alexander K. Schuster[3], Kun Shi-van Wielink[4]

[1] WIG2 – Scientific Institute for Health Economics and Health System Research, Leipzig, Germany, [2] ZEG – Berlin Center for Epidemiology and Health Research, Berlin, Germany, [3] Department of Ophthalmology, University Medical Center Mainz, Germany, [4] Santen SA, Amsterdam, Netherlands

BACKGROUND

- Primary open-angle glaucoma (POAG) is the most common glaucoma subtype and a leading cause of irreversible blindness worldwide [1,2].
- Burden is rising with population ageing [2] — yet independently replicated, contemporary German claims data with comorbidity profiling remain scarce.
- This analysis aims to address that gap using nationwide, longitudinal statutory health insurance (SHI) claims data (2018–2024).

OBJECTIVE

To quantify the prevalence, incidence, and comorbidity burden of POAG (ICD-10-GM H40.1) in Germany between 2018 and 2024, using a large, real-world SHI claims database.

DATA SOURCE & METHODS

- WIG2 Benchmark database: longitudinal German SHI claims data, ~4.5 million insured individuals.
- Annual & age-sex–standardized prevalence/cumulative incidence extrapolated to the German SHI population.
- Comorbidity burden assessed via the Charlson Comorbidity Index (CCI).

FIGURE 1 · PATIENT SELECTION, 2024 (ILLUSTRATIVE YEAR, 2024)

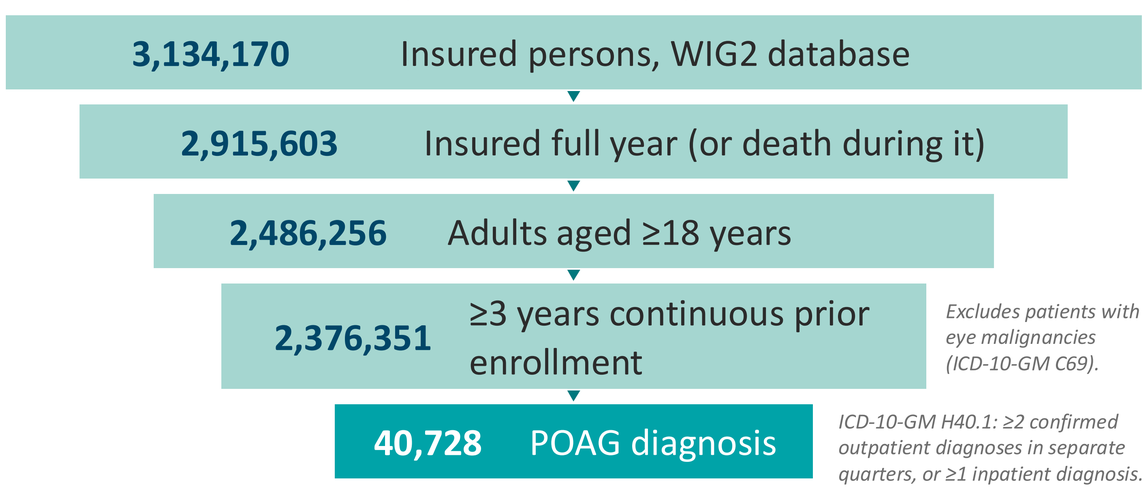


TABLE 1 · Baseline characteristics of prevalent POAG patients

Characteristic	2018 (N=40,861)	2024 (N=40,728)
Mean age, years (SD)	70.8 (11.9)	72.6 (11.8)
Female, %	46.4%	45.8%
Mean CCI (SD)	2.05 (2.28)	2.16 (2.36)

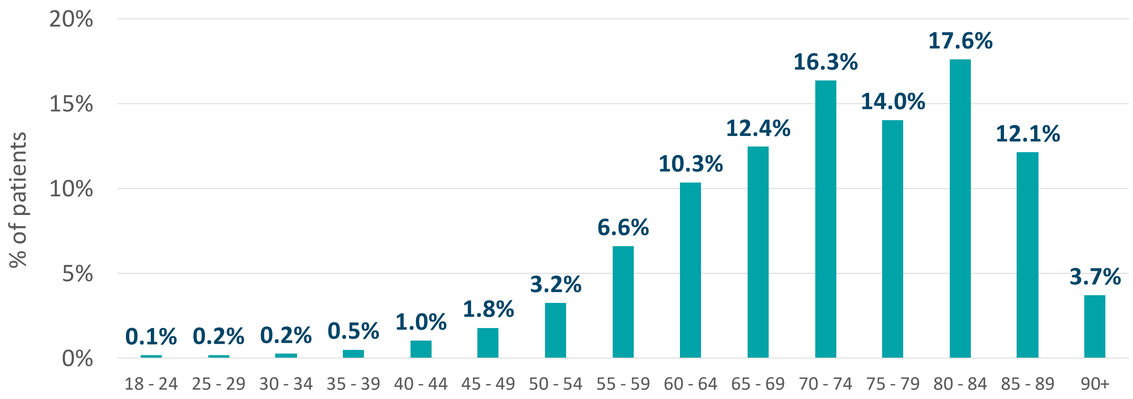


FIGURE 2 · Age distribution of prevalent POAG patients, 2024

LIMITATIONS

- Diagnosis dates are only known to the calendar quarter, not the exact day, under German outpatient billing rules.
- Claims data lack clinical severity markers (e.g., visual field loss, intraocular pressure).
- The 2020–2021 COVID-19 pandemic likely disrupted routine eye-care visits and diagnosis coding.

CONCLUSION

- POAG prevalence in Germany has remained stable at ~1.6–1.7% throughout 2018–2024, with only a transient, pandemic-associated disruption in observed incidence.
- Frequent cardiovascular and pulmonary comorbidities among POAG patients highlight the need for coordinated, multidisciplinary treatment selection.
- These contemporary, nationwide claims-based estimates describe the epidemiology and comorbidity burden of POAG and may inform healthcare planning in Germany.

RESULTS AT A GLANCE

1.0–1.1M
prevalent POAG cases in the German SHI population (extrapolated)

1.64–1.72%
stable age- & sex-standardized prevalence, 2018–2024

~71 yrs
mean age at diagnosis · 46% female

CCI ≈ 2.1
mean Charlson Comorbidity Index among POAG patients

40,079–41,355 POAG patients were identified annually in the WIG2 database (2018–2024), extrapolating to roughly 1.0–1.1 million prevalent cases nationwide using age- and sex-specific prevalence weighted by the German SHI population.

POAG-PREVALENCE IN GERMANY

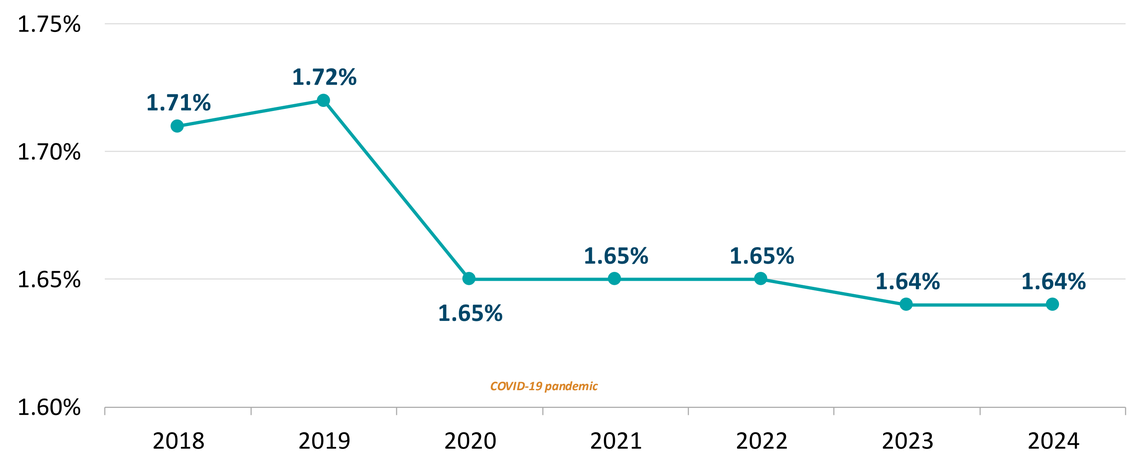


FIGURE 3 · Age-and-sex–standardized prevalence (SHI-weighted) held steady at 1.6–1.7% of the adult population throughout the study period.

POAG-INCIDENCE IN GERMANY

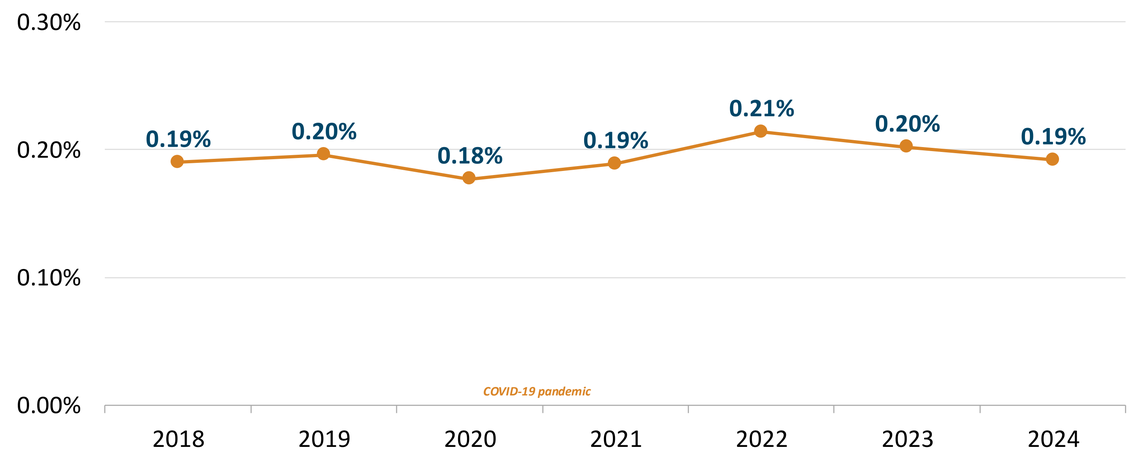


FIGURE 4 · Age-and-sex–standardized incidence declined during the pandemic (2020: 0.177% vs. 0.190% in 2018), rebounded above pre-pandemic levels in 2022 (0.214%), then gradually normalized by 2024 (0.192%).

SUBSTANTIAL COMORBIDITY BURDEN

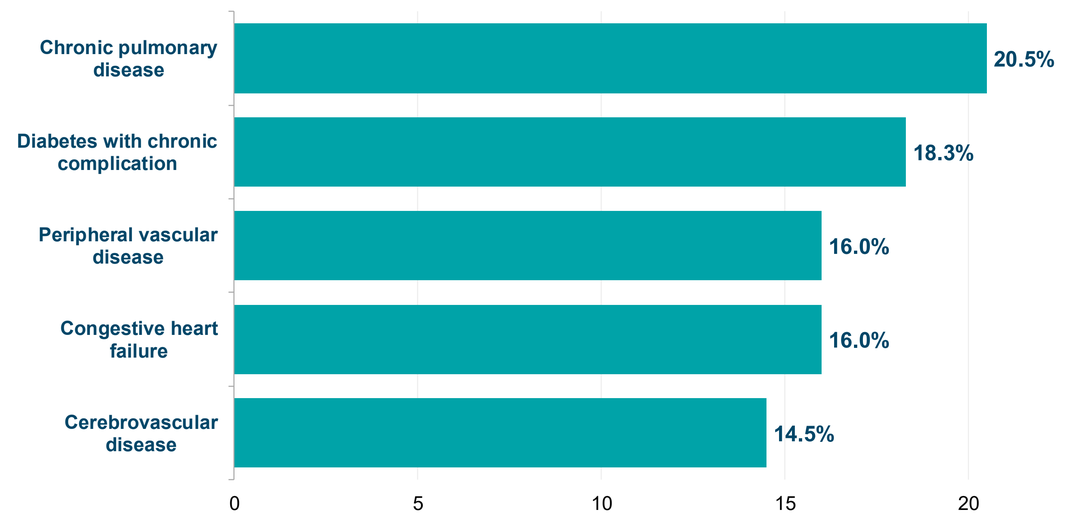


FIGURE 5 · Chronic pulmonary disease, diabetes with chronic complications, and cardiovascular conditions were the most frequent comorbidities among POAG patients — underscoring the need for coordinated, multidisciplinary care.

REFERENCES

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Presenting author: T. Heidler (WIG2 GmbH), tobias.heidler@wig2.de

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