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You have submitted the following paper to 2023 ASCRS ASOA Annual Meeting.

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**Title:**

Sustained 7-Year Glaucoma Control after Second-Generation Trabecular Micro-Bypass with or without Cataract Surgery

**Submitter's E-mail Address:**

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**Category:**

GLAUCOMA

**Topic:**

Minimally Invasive Glaucoma Surgery (MIGS)

**Interested in chairing a panel?**

Yes

**Category to chair:**

Glaucoma

**Agreements:**

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I understand if my submission is accepted that I am required to register for the ASCRS Annual Meeting.

**Keywords:**

MIGS, iStent inject and long-term

**Purpose:**

Given Germany's early adoption of 2nd-generation trabecular micro-bypass (iStent inject), German datasets provide some of the longest-term outcomes in the world to-date. The current study evaluated 7-year (7Y) effectiveness & safety of iStent inject implantation w/ or w/o cataract surgery (Combined/Comb or Standalone/SA subgroups, respectively).

**Methods:**

This prospective, non-randomized, unmasked, longitudinal study included 125 consecutive iStent inject cases of a single surgeon at a large German academic hospital. Patients had considerable preoperative (preop) disease burden, with mean intraocular pressure (IOP) of 23.5 mmHg, 85% of eyes on  $\geq 2$  medications (meds), and 38% of eyes with prior glaucoma surgery. IOP, meds, adverse events, and secondary surgeries were assessed through 7Y in All Eyes and in Comb (n=81) and SA (n=44) subgroups. The completion of both types of procedures by the same surgeon in the same setting enables validation of long-term stent performance independent from cataract extraction.

**Results:**

Preop mean IOP in All Eyes was  $23.5 \pm 6.2$  mmHg on  $2.68 \pm 1.02$  mean meds, reducing to  $14.1 \pm 1.4$  mmHg on  $1.09 \pm 0.66$  meds at 7Y (40% and 59% reductions, respectively; both  $p < 0.001$ ). 15% of eyes were on 0-1 med preop, and this rose to 77% at 7Y postop. In Comb eyes, mean IOP decreased by 38% (22.6 to 13.9 mmHg,  $p < 0.001$ ) and meds by 58% (2.52 to 1.06,  $p < 0.001$ ). In SA eyes, mean IOP reduced by 43% (25.3 to 14.3 mmHg,  $p < 0.001$ ) and meds by 62% (2.98 to 1.13,  $p < 0.001$ ). At last follow-up, 100% of eyes had the same or lower IOP vs preop, and 100% maintained or reduced meds vs preop. There were no intraoperative complications and no filtration surgeries over 7 years of follow-up.

**Conclusion:**

iStent inject implantation with or without phacoemulsification produced significant and durable 7-year reductions in IOP (~10-mmHg reduction) and meds (~2-med reduction) in this prospective cohort of patients with relatively high preoperative disease burden. Comb and SA cases had similarly favorable effectiveness and safety.

## Authors

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## Disclosures

Fritz Hengerer, MD, PhD (Presenting Author): Disclosure Complete

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