

## Written evidence submitted by Glaukos (CBP0041)

### About Glaukos

Glaukos Corporation is an ophthalmic medical technology innovator focused on the development and commercialisation of breakthrough products and procedures designed to transform the treatment of glaucoma.

We have pioneered Trabecular Micro By-Pass Glaucoma Surgery, or MIGS, in order to revolutionise the traditional glaucoma treatment and management paradigm. Our mission is to pioneer and lead the global glaucoma market with micro-scale injectable therapies that advance the existing glaucoma standard of care and enrich the lives and treatment alternatives for glaucoma patients worldwide.

### Glaucoma overview

Glaucoma, an eye condition in which problems including fluid build-up damage the optic nerve, is a leading cause of irreversible blindness in the world<sup>1</sup> and surgery for this disease has major health and lifestyle value for patients. Primary open angle glaucoma (POAG), the most common type of glaucoma, affects nearly 5% of people in the UK age 60+, rising to 8% of people (over 220,000) aged 80+.<sup>2,3</sup>

Multimorbid<sup>4</sup> eye defects are common among the elderly. Cataract surgery is the most common NHS elective surgical procedure<sup>5</sup>, with 10-15% of patients with cataracts also suffering from concomitant glaucoma.

### Ophthalmic treatment backlog – impending risk of mass sight loss

NHS Referral to Treatment (RTT) data from June 2021 shows that 829,408 patients were awaiting ophthalmic care, with 229,847 patients already waiting 18+ weeks for treatment,<sup>6</sup> many of whom await glaucoma care. Delays in glaucoma treatment due to postponed appointments pose serious risks to patients' vision, health and overall wellbeing and risk mass sight loss without immediate intervention.

Vision loss and blindness also cause wider economic burdens to the healthcare system including productivity losses of patient and carer; costs of visual aids, equipment, and home modifications; cost of community or nursing home care; costs of co-morbidities and risks from vision loss, such as depression and fractures; and, most importantly, the impact on wellbeing.

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<sup>1</sup> Glaucoma Research Foundation (October 2017). Glaucoma Facts and Stats. Access: <https://www.glaucoma.org/glaucoma/glaucoma-facts-and-stats.php>.

<sup>2</sup> SIGN (March 2015). *Glaucoma referral and safe discharge. A national clinical guidance*. Scottish Intercollegiate Guidelines Network.

<sup>3</sup> ONS (September 2020). Clinical commissioning group mid-2019 population estimates.

<sup>4</sup> Diseases presenting at the same time.

<sup>5</sup> RCO (2018). *Commissioning guide: adult cataract surgery*. Royal College of Ophthalmologists.

<sup>6</sup> NHS (June 2021). Consultant-led Referral to Treatment Waiting Times Data 2020-21. Figure calculated from total patients on incomplete pathways and incomplete pathways with DTA.

## Minimally invasive, combined procedure to efficiently tackle the backlog

Glaucoma surgery alongside cataract surgery offers a key means of addressing the treatment backlog for people living with concomitant glaucoma and cataracts. Treatment for both conditions can be provided in a combined procedure administering glaucoma surgery during cataract surgery, with this minimally invasive trabecular bypass procedure recognised as safe and effective by NICE.<sup>7</sup>

The combined procedure causes minimal trauma to the patient and represents greater efficiency and value to patients and the health system than a traditional approach. The procedure eliminates the need for alternative surgeries<sup>8,9</sup>; reduces follow-up appointments<sup>10</sup>, with only 3 visits in 6 months post-op compared with 7-9 in the same period with trabeculectomy<sup>11</sup>; and reduces medication costs<sup>12</sup>.

A new pathway (cataract + iStent inject) would offer an efficient, safe and effective solution for patients with cataract and glaucoma. Such a pathway could enable both diseases to be treated in one theatre slot, assisting with theatre throughput and avoiding the need for separate admissions, hospital attendance, travel, recovery time and support required.<sup>13</sup>

Offering the combined procedure would improve glaucoma control without relying on the burden of complex medication regimes<sup>14</sup> with poor patient adherence, while providing both a similarly favourable safety profile and similar visual acuity versus phaco surgery alone<sup>15</sup>.

## Financial investment

Investment in the iStent, which treats glaucoma either as a standalone or part of a combined procedure, is based on patient need, without requiring changes to service delivery, and new ICSS should continue to be supported to meet local need for glaucoma care.

Prioritising the combined procedure can provide significant cost savings, having been found to be more cost-effective in the longer term than a traditional approach by reducing overall hospital costs

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<sup>7</sup> National Institute for Health and Care Excellence (February 2017). Trabecular stent bypass microsurgery for open-angle glaucoma. Interventional procedures guidance [IPG575]. Retrieved from <https://www.nice.org.uk/guidance/ipg575>.

<sup>8</sup> Jones, T., Lee, A., Falvey, H., Cantu, M., Barton, K., & Au, L. (September 2018). A UK Cost Analysis of iStent® in Patients with Open-Angle Glaucoma from an NHS Commission Perspective. Poster presentation by Leon Au. ICGS, Montreal.

<sup>9</sup> Ziaei, H. & Au, L. (March 2019). Manchester iStent® Study. 7 year results & cost analysis. Poster, March 2019, World Glaucoma Congress.

<sup>10</sup> Jones et al., September 2018.

<sup>11</sup> Rodriguez-Una, I., Azuara-Blanco, A., & King, A. (2017). Survey of glaucoma surgical preferences and postoperative care in the UK. *Clinical and Experimental Ophthalmology*. 45: 232–240 doi: 10.1111/ceo.12846

<sup>12</sup> Jones et al.

<sup>13</sup> D Nouri-Mahdavi K., Hoffman D., Coleman A.L., et al. (2004). Predictive factors for glaucomatous visual field progression in the Advanced Glaucoma Intervention Study. *Ophthalmology*. 111:1627-1635. doi:10.1016/j.ophtha.2004.02.017.

<sup>14</sup> D Nouri-Mahdavi K., Hoffman D., Coleman A.L., et al., 2004.

<sup>15</sup> Craven R., et al. (August 2012). Cataract surgery with trabecular micro-bypass stent implantation in patients with mild-to-moderate open-angle glaucoma and cataract: Two-year follow-up. *J Cataract Refract Surg - Vol 38*.

through a reduced hospital stay, decreasing staffing costs, and reducing the need for readmission and follow-ups.

Medicines optimisation budgets can also be reduced as fewer topical anti-glaucoma medication drops are required, as the procedure results in a greater reduction in intraocular pressure versus phaco alone.<sup>16</sup>

With a persistent ophthalmic backlog and the risk of mass sight loss, it is imperative that patients with POAG are granted access to these new technologies. Glaucoma is a chronic disease and it is likely that various treatment options, whether solo or in combination, will be necessary to slow down the destruction of optic nerves and, ultimately, to mitigate sight loss and its consequences on patients' quality of life and on the available capacity and resources of the health and care system.

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<sup>16</sup> Fea AM et al. Prospective unmasked randomized evaluation of the iStent inject<sup>®</sup> versus two ocular hypotensive agents in patients with primary open-angle glaucoma. *Clin Ophthalmol*. 2014; 8: 875–882