

# Laser in Glaucoma and Ocular Hypertension (LiGHT) Trial: Six-Year Results of Primary Selective Laser Trabeculoplasty versus Eye Drops for the Treatment of Glaucoma and Ocular Hypertension

Gus Gazzard (1) , Evgenia Konstantakopoulou (2) , David Garway-Heath (3) , Mariam Adeleke (4) , Victoria Vickerstaff (5) , Gareth Ambler (6) , Rachael Hunter (7) , Catey Bunce (8) , Neil Nathwani (3) , Keith Barton (3) ; LiGHT Trial Study Group

1 NIHR Biomedical Research Centre at Moorfields Eye Hospital NHS Foundation Trust, London, United Kingdom; Institute of Ophthalmology, University College London, London, United Kingdom. Electronic address: g.gazzard@nhs.net.

2 NIHR Biomedical Research Centre at Moorfields Eye Hospital NHS Foundation Trust, London, United Kingdom; Institute of Ophthalmology, University College London, London, United Kingdom; Division of Optics and Optometry, University of West Attica, Athens, Greece.

3 NIHR Biomedical Research Centre at Moorfields Eye Hospital NHS Foundation Trust, London, United Kingdom; Institute of Ophthalmology, University College London, London, United Kingdom.

4 Department of Statistical Science, University College London, London, United Kingdom; PRIMENT Clinical Trials Unit, University College London, London, United Kingdom.

5 The Research Department of Primary Care and Population Health, University College London, London, United Kingdom; Marie Curie Palliative Care Research Department, UCL Division of Psychiatry, University College London, London, United Kingdom.

6 Department of Statistical Science, University College London, London, United Kingdom.

7 PRIMENT Clinical Trials Unit, University College London, London, United Kingdom.

8 Research Data and Statistics Unit, Royal Marsden NHS Foundation Trust, London, United Kingdom; London School of Hygiene & Tropical Medicine, London, United Kingdom.

**PURPOSE:** The Laser in Glaucoma and Ocular Hypertension (LiGHT) Trial has shown selective laser trabeculoplasty (SLT) to be clinically and cost-effective as a primary treatment of open-angle glaucoma (OAG) and ocular hypertension (OHT) at 3 years. This article reports health-related quality of life (HRQoL) and clinical effectiveness of initial treatment with SLT compared with intraocular pressure (IOP)-lowering eye drops after 6 years of treatment.

**DESIGN:** Prospective, multicenter randomized controlled trial.

**PARTICIPANTS:** Treatment-naive eyes with OAG or OHT initially treated with SLT or IOP-lowering drops.

**METHODS:** Patients were allocated randomly to initial SLT or eye drops. After the initial 3 years of the trial, patients in the SLT arm were permitted a third SLT if necessary; patients in the drops arm were allowed SLT as a treatment switch or escalation. This study is registered at controlled-trials.com (identifier, ISRCTN32038223).

**MAIN OUTCOME MEASURES:** The primary outcome was HRQoL at 6 years; secondary outcomes were clinical effectiveness and adverse events.

**RESULTS:** Of the 692 patients completing 3 years in the LiGHT Trial, 633 patients (91.5%) entered the extension, and 524 patients completed 6 years in the trial (82.8% of those entering the extension phase) . At 6 years, no significant differences were found for the EuroQol EQ-5D 5 Levels, Glaucoma Utility Index, and Glaucoma Quality of Life-15 ( $P > 0.05$  for all) . The SLT arm showed better Glaucoma Symptom Scale scores than the drops arm ( $83.6 \pm 18.1$  vs.  $81.3 \pm 17.3$ , respectively) . Of eyes in the SLT arm, 69.8% remained at or less than the target IOP without the need for medical or surgical treatment. More eyes in the drops arm exhibited disease progression (26.8% vs. 19.6%, respectively;  $P = 0.006$ ) . Trabeculectomy was required in 32 eyes in the drops arm compared with 13 eyes in the SLT arm ( $P$  **CONCLUSIONS:** Selective laser trabeculoplasty is a safe treatment for OAG and OHT, providing better long-term disease control than initial drop therapy, with reduced need for incisional glaucoma and cataract surgery over 6 years.

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