



Authors' Reply to Salamanca: "Systematic Review of Economic Evaluations in Primary Open Angle Glaucoma: Decision Analytic Modeling Insights"

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Dear Editor,

We appreciate the comments of Dr. Salamanca [1] on our manuscript *Systematic Review of Economic Evaluations in Primary Open-Angle Glaucoma: Decision Analytic Modeling Insights* [2]. We agree that, given the importance of this disease, well-informed decision making should consider all available evidence.

In our manuscript, we aimed to remain impartial when drawing conclusions about the cost effectiveness of an intervention, instead describing the findings of other authors in their evaluations. We are convinced that findings of such evaluations rely substantially on the context of the assessment and its underlying settings and assumptions.

We provide here a further explanation of the findings about selective laser trabeculoplasty in long-term cost-effectiveness evaluations of primary open-angle glaucoma (POAG) to complement both our article and your comments.

- In 2012, Stein et al. [3] studied the cost effectiveness of laser trabeculoplasty, prostaglandin analogs, and "observation only" in newly diagnosed mild open-angle glaucoma in the USA. Both laser trabeculoplasty and prostaglandin analogs demonstrated cost effectiveness versus observation only. When considering actual medication adherence, authors also found laser trabeculoplasty to be more cost effective than prostaglandin analogs.

- Ordóñez et al. [4] adopted a Colombian payer perspective to study the cost effectiveness of several drug combinations alone, when applied with a micro-bypass stent (iStent), or when applied jointly with laser selective trabeculoplasty. Compared with drug combinations alone, both the iStent and laser selective trabeculoplasty were estimated to be dominant in a lifetime horizon, with increased effectiveness (quality-adjusted life-years) and lower costs. Among dominant alternatives, iStent was estimated to be more effective and less costly, making it a preferred option over laser selective trabeculoplasty in this context.
- An additional paper that we retrieved but omitted from the "laser trabeculoplasty" section [2] was that by Paleta Guedes et al. [5]. These authors studied the cost effectiveness of POAG interventions by glaucoma stage from the Brazilian public payor perspective. In patients with early POAG, laser trabeculoplasty and medication were estimated to be cost effective versus "observation only." In an evaluation of medication and laser trabeculoplasty, medication proved to be more effective but also costlier. In patients with moderate POAG, both medical and surgery interventions had greater effectiveness and higher costs than laser trabeculoplasty. Interventions studied in patients with advanced POAG did not include laser trabeculoplasty.

In light of this limited number of evaluations, evidence on the long-term cost effectiveness of laser trabeculoplasty must best be seen in the context of the comparison, the country setting, and the characteristics of patients at baseline, as you well highlighted. Therefore, according to literature evaluations, laser trabeculoplasty can be cost effective against some POAG interventions but not all of them and not in all cases.

We reviewed the novel outcomes of the LiGHT study by Gazzard et al. [6] you kindly brought to our attention. We

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welcome this new source of evidence of the efficacy, safety, and cost effectiveness of selective laser trabeculoplasty, and we are certain it will provide robust arguments for physicians and decision makers as to their preferred first-line treatment for ocular hypertension and POAG.

It is worth noting that our exclusion criteria prohibited within-trial economic evaluations as only decision-analytic models were of interest to us. Our choice was driven by our desire to (1) guide further research into the state of the art in modeling approaches for POAG and (2) overcome CT limitations concerning limited time horizons and the number of included comparisons. Moreover, we believe this choice aligns better with the *PharmacoEconomics Open* readership, which is not to say that we are disregarding the importance of other types of evaluations.

Finally, we hope that our search algorithm (provided as an appendix to our original manuscript [2]) can support efforts to replicate our search as new evidence arises. We will certainly be monitoring it.

Compliance with Ethical Standards

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Conflict of interests J. Bartelt-Hofer and S. Flessa have no conflicts of interest that are directly relevant to the content of this article.

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