

Functional and Anatomical Outcomes after Brilliant Blue G vs. Indocyanine Green-Assisted ILM Peeling in Macular Hole Surgery: A Meta-analysis

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Background

- ILM peeling is a key step in macular hole surgery.
- Vital dyes such as Brilliant Blue G and Indocyanine Green are used to aid visualization.
- Debate persists regarding their comparative impact on retinal safety and postoperative visual outcomes...

Methods

- Databases:** PubMed, Embase, Cochrane Library, Scopus
- Timeframe:** Inception to September 2025
- Analysis:** Random-effects models reporting mean differences (MD) with 95% confidence intervals (CI)Heterogeneity: Assessed using I^2 and χ^2 statistics
- Software:** RevMan 5.4.

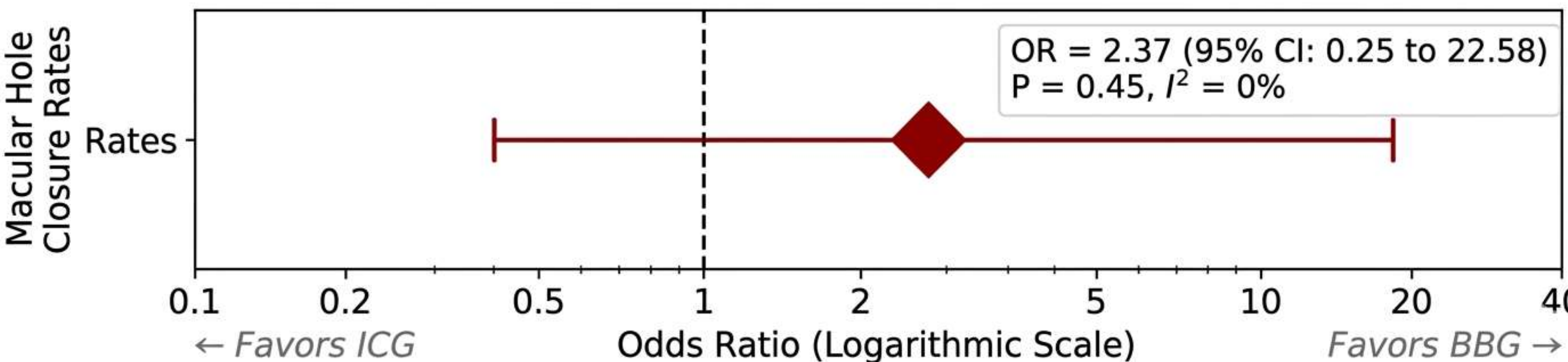
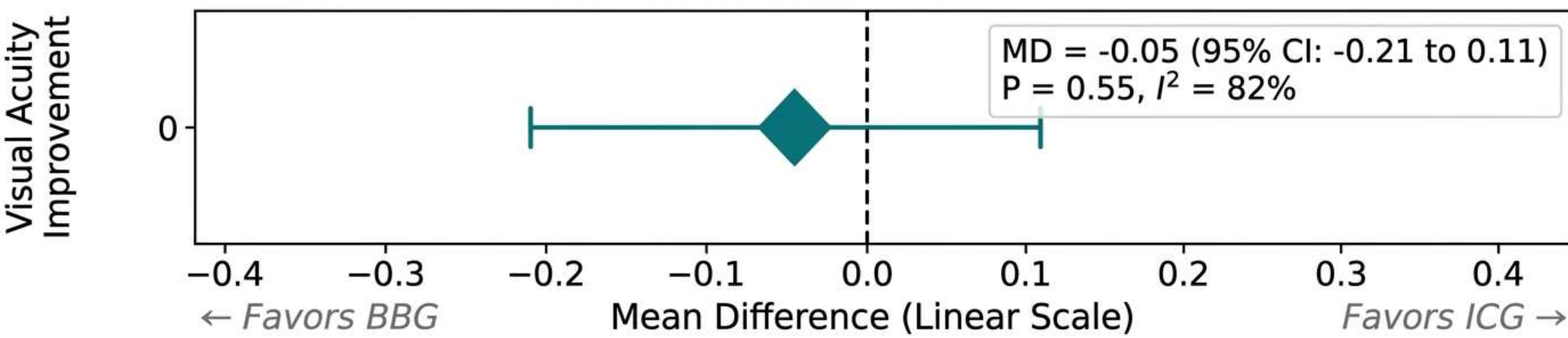
Results

Table: Outcomes of BBG vs never IG

Outcome	MD	95% CI	P Value
VA Improvement	↓ -0.05	-0.21 to 0.11	0.55
MH Closure	↑ 2.37	0.25 to 22.58	0.45

VA: Visual Acuity; MH: Macular Hole; BBG: Brilliant Blue G; IG: Indocyanine Green; MD: Mean Difference, CI: Confidence Interval

Functional and Anatomical Outcomes: BBG vs. ICG



Conclusion

- Brilliant Blue G and Indocyanine Green yield comparable functional and anatomical outcomes following ILM peeling in macular hole surgery.
- No significant differences were observed in postoperative visual acuity improvement or macular hole closure rates between the two dyes.
- These findings suggest that either agent can be effectively used to facilitate ILM peeling, though further high-quality studies are warranted to clarify long-term visual and anatomical results.

References

