

# Operating Room Efficiency Using a New Surgical Guidance Solution with Novel Ocular Registration-Guided Graphic Overlay for Toric IOL Alignment



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## **Purpose:**

To compare the time efficiency of the preparation for and performance of toric IOL alignment using the novel surgical guidance solution called Cassini Guidance System, with an integrated ocular registration-guided graphic overlay system for intraoperative toric IOL alignment compared with the conventional method using preoperative corneal ink manual marking.

## **Methods:**

This comparative study included up to 50 cataractous eyes that underwent toric IOL implantation to correct pre-existing corneal astigmatism at the time of cataract surgery. For toric IOL alignment, either the ocular registration-guided overlay system or corneal ink manual marking was used. In the eyes with ocular registration-guided alignment, the time spent in the OR to register unique anatomical landmarks of the entire eye and to match with the preoperative reference image was recorded. In the eyes with corneal ink manual marking, the

time spent marking the horizontal axis with ink preoperatively and the intended axis of implantation intraoperatively was recorded.

**Results:**

In the group with corneal ink manual marking, the surgeon spent an average of 6 minutes and 42 seconds marking the horizontal and intended axes of implantation with ink. In the group with ocular registration-guided alignment, the surgeon spent an average 1 minute and 5 seconds to register unique anatomical landmarks of the entire eye, and their matching with the preoperative reference image. This translates into savings of 5 minutes 37 seconds per case.

**Conclusion:**

The use of a novel surgical guidance solution with an ocular registration-guided graphic overlay for toric IOL alignment significantly improved operation room time efficiency saving on average of 5 minutes and 37 seconds per case.