

Efficiency Of Laser-assisted Cataract Surgery Using A Sterile Versus Non-sterile Single Room Procedure Model 12 Months After Implementation

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Disclosures

- Alcon- Speaker Bureau and Consultant
- Amring Pharma- Consultant
- Bausch & Lomb- Speaker Bureau and Consultant
- Bruder Healthcare- Speaker Bureau and Consultant
- LENSAR- Speaker Bureau and Consultant
- SUN Pharma- Speaker Bureau and Consultant

Introduction

- The volume of cataract surgery is increasing. To meet the growing demands, an efficient operating room (OR) workflow is desirable.
- While the use of femtosecond lasers to perform various steps of cataract surgery is advantageous, their incorporation in the existing surgical workflow presents many challenges in creating an efficient and cost-effective care structure.
- LENSAR's ALLY femtosecond laser system is a novel, compact, dual-modality laser with six fixed Scheimpflug cameras that allow for ultra-fast imaging, automatically capture cataract density and morphology, and recommend the best possible fragmentation pattern.
- In the present time-and-motion study, the workflow efficiency of a single-room, sterile procedure was compared with a single-room, non-sterile model.

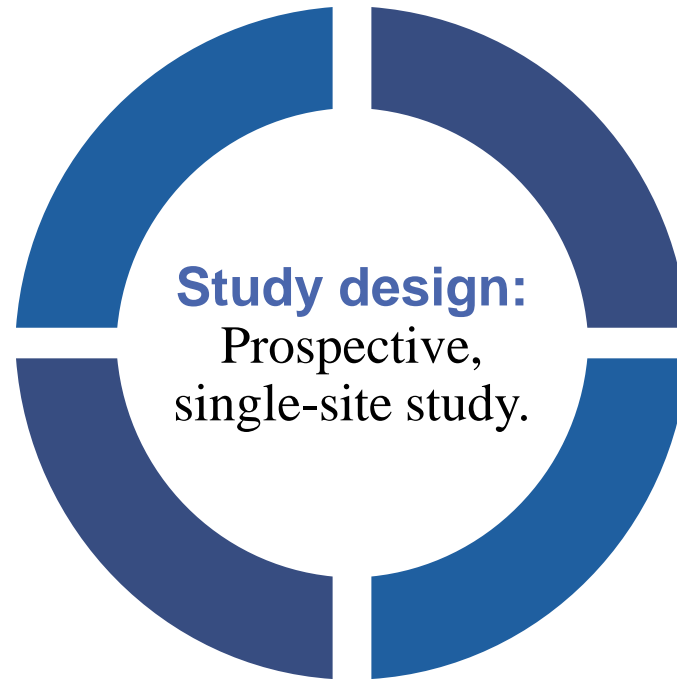
Purpose

To evaluate the efficiency of two different workflow scenarios for laser-assisted cataract surgery: a single room, non-sterile procedure, or a single room model with a sterile procedure, and compare additional efficiencies one year later.

Methods

Study procedure:

23 patients were consecutively enrolled and assigned to non-sterile FLACS using a single room model (LenSx Femtosecond Laser System, Alcon, Ft. Worth, TX) or sterile FLACS using a single room model (ALLY, LENSAR, Orlando, FL) in June-September 2023. An additional 23 subjects were enrolled in June 2024.



Study design:
Prospective,
single-site study.

Outcome Measures:

Procedure parameters were collected by a third-party:

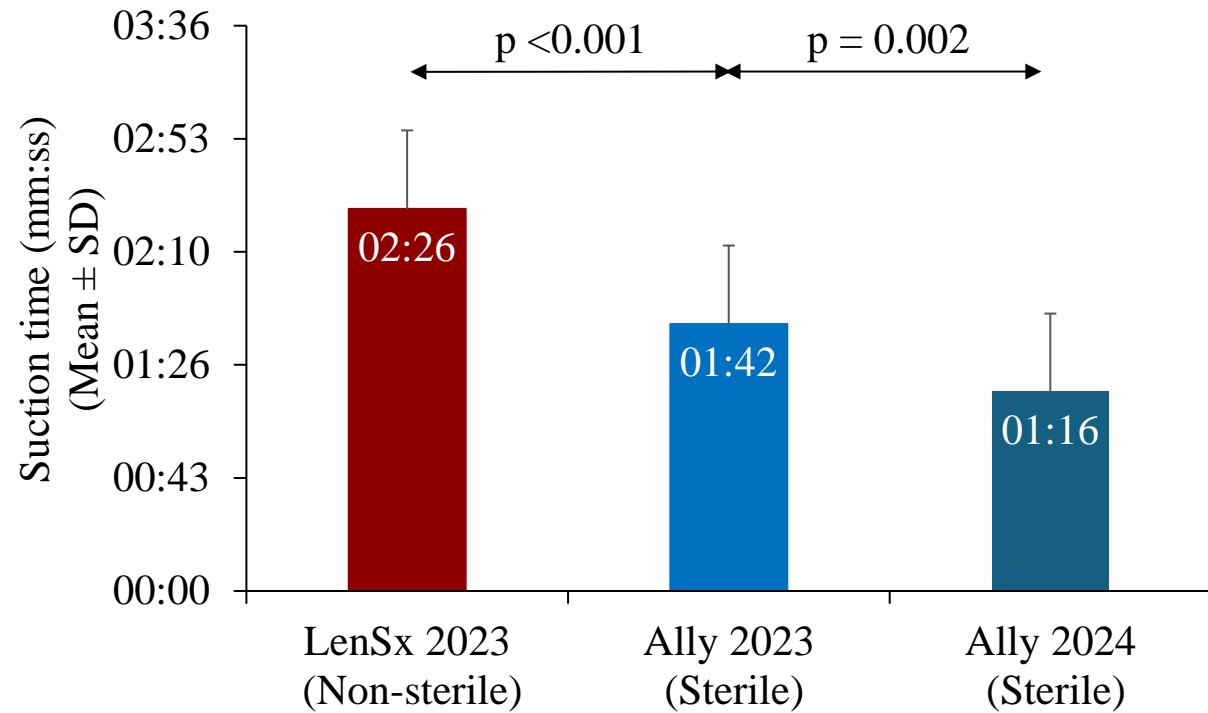
- suction time;
- docking attempts;
- surgeon femto time;
- transition time from the end of femtosecond to the start of phacoemulsification;
- surgeon phaco time;
- surgeon total case time;
- patient total case time.

RESULTS

SUCTION TIME

(Total time patient docked for femto procedure):

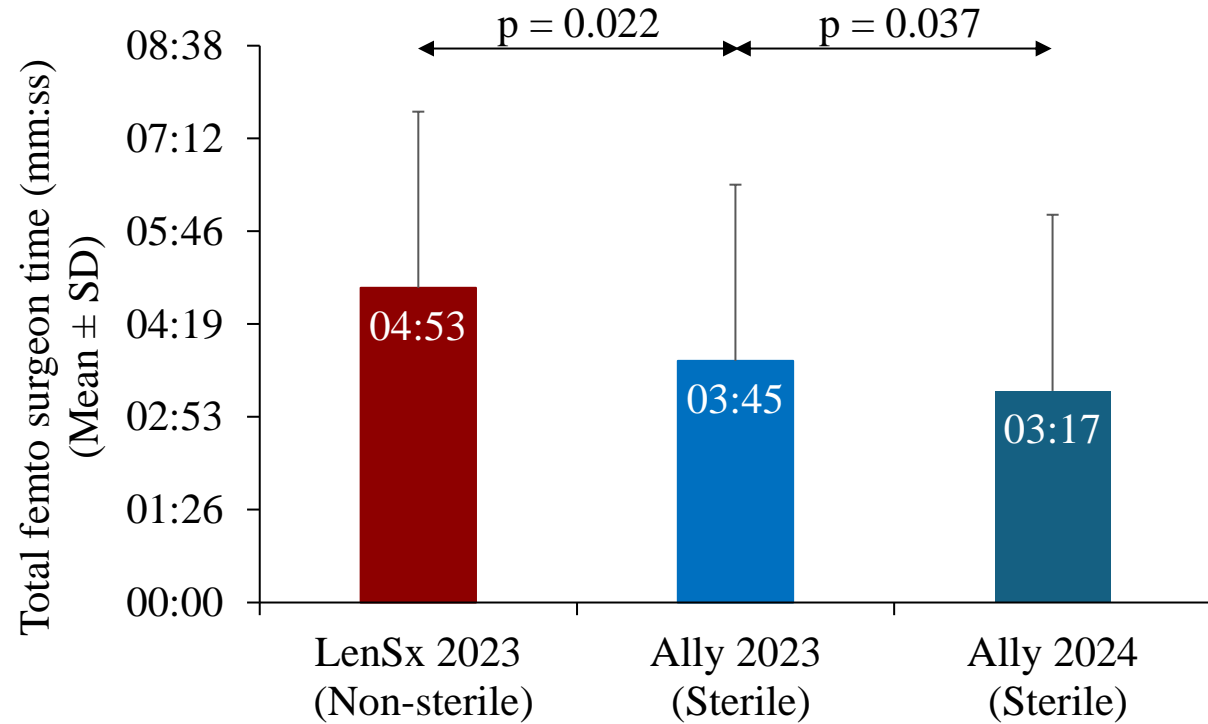
- Suction time was significantly lower in the ALLY group compared to the LenSx group.
- One year later, suction time with **ALLY improved significantly** compared to the previous year.



RESULTS

TOTAL FEMTO SURGEON TIME
(Surgeon enters OR to the completion of femto procedure):

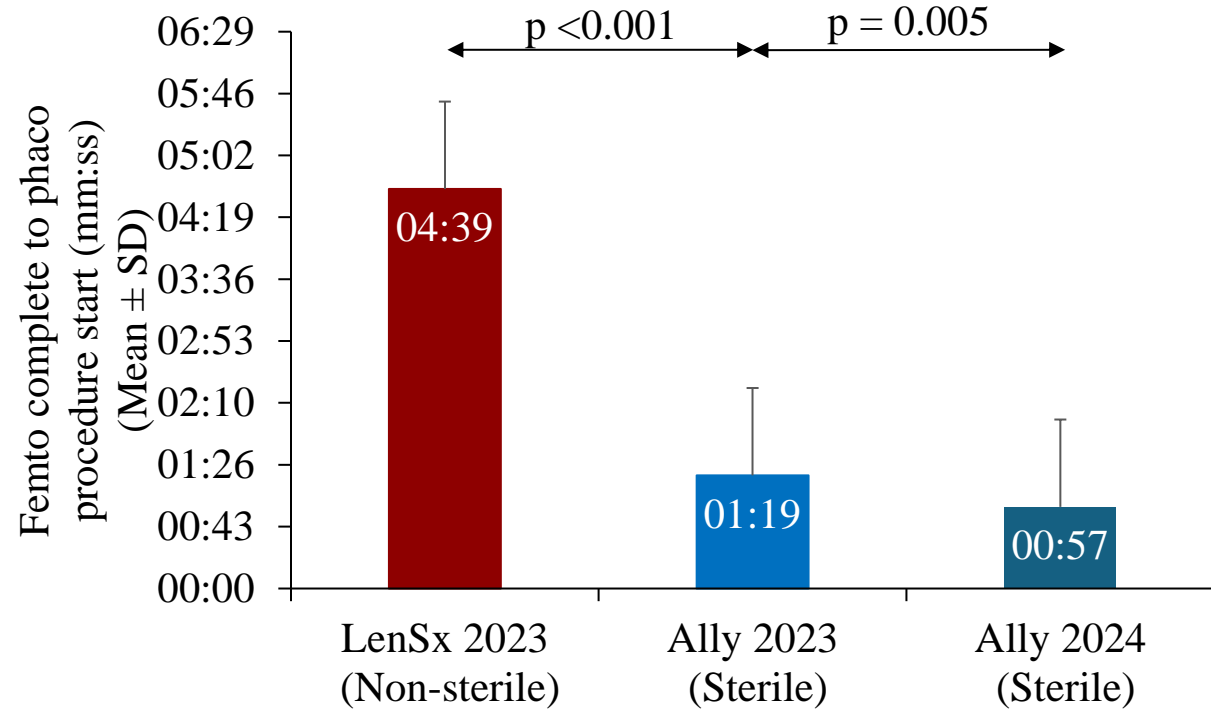
- With the ALLY laser, the surgeon completed femtosecond laser part of the surgery 1:36 minutes earlier than with LenSx laser.
- Over time, the surgeons took **significantly shorter time than the previous year using the ALLY laser.**



RESULTS

FEMTO COMPLETE TO PHACO PROCEDURE START
(Docking release to the first touch of the eye by the surgeon for phacoemulsification):

- The mean time from femto completion to start of phacoemulsification in the ALLY group was significantly lower than the LenSx group.
- After one year of using ALLY, it **improved further significantly.**

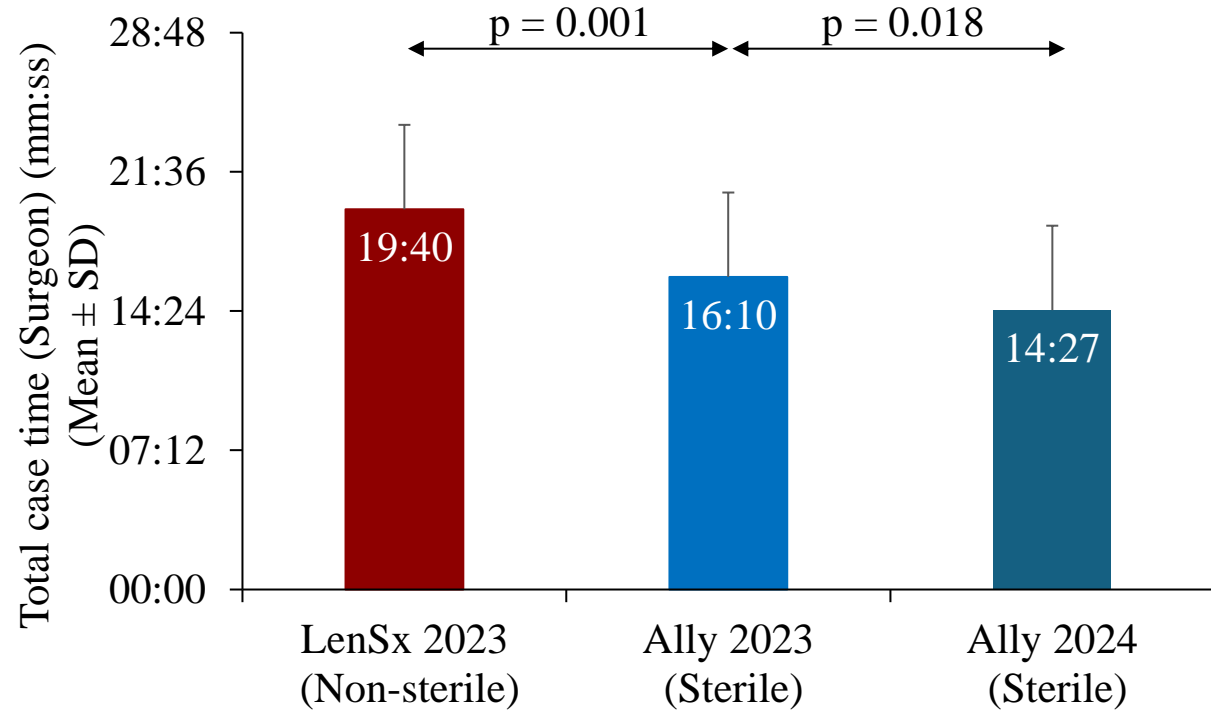


RESULTS

TOTAL CASE TIME SURGEON PERSPECTIVE

(Surgeon in OR for femto to surgeon out of OR following phaco):

- With the ALLY laser, the surgeon saved **3:30 minutes** per case performing surgery.
- In the succeeding year, the surgeon **further saved 1:43 minutes** per case with ALLY.

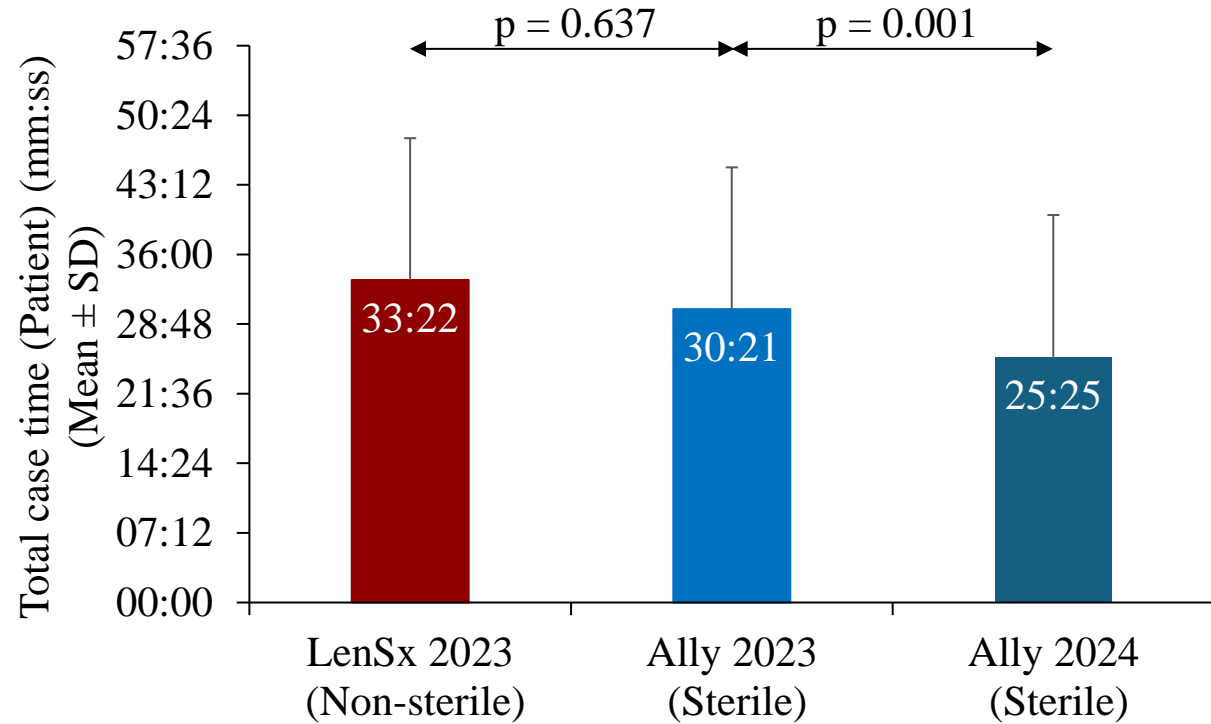


RESULTS

TOTAL CASE TIME PATIENT PERSPECTIVE

(Patient in to OR to patient out of OR):

- Patients undergoing surgery with the ALLY laser spent significantly less time in the OR (while undergoing both femto and phaco) than those with the Lensx laser.
- In the succeeding year, this time with ALLY further decreased significantly.



Conclusion

- In the present study, cataract surgery performed with the ALLY femtosecond laser was fast and efficient.
- When compared to the non-sterile model (LenSx), the ALLY adaptive cataract treatment system (ALLY 2024) in a sterile environment saved:
 - ~5:13 minutes of the surgeon's time per case and;
 - ~8 minutes of the patient's time in the OR.
 - This may enable the surgeon to perform more surgeries within a given time frame.
- With the ALLY femtosecond laser, the femto procedure can be performed efficiently within the phaco operating room (OR), thereby eliminating the need to transfer the patient from the femtosecond laser to the phaco OR.



THANK YOU