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Comparing standard myopic LASIK to contralateral eye LASIK customised with a novel software already EU approved

Submission date
03/05/2023

Recruitment status
No longer recruiting

Registration date
14/09/2023

Overall study status
Completed

Last Edited
02/10/2026

Condition category
Eye Diseases

[_] Prospectively registered
[X] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol

Background and study aims
LASIK is a type of eye surgery that can fix nearsightedness. It has been used a lot in the past and is considered safe and effective. This study is trying to see if a new way of doing the surgery, called automated ray-tracing optimization, is as safe and effective as another way called Custom Q excimer profile ablation.

Who can participate?
Adults undergoing femtosecond laser-assisted LASIK in the LaserVision Ambulatory Eye Surgery Unit.

What does the study involve?
In this study, 25 people will have LASIK surgery done with the help of a femtosecond laser. The surgery will be done on both eyes of each person, but one eye will be treated with a new technique called raytracing customization, and the other eye will be treated with a technique called asphericity-adjusted (custom) excimer profile ablation. The patients will be carefully watched to see how well the different treatments work and to make sure they are safe.

What are the possible benefits and risks of participating?
Participants will correct their refractive error. The known risks for refractive surgery apply, such as infection, dry eyes, glare, halos or need for additional correction at a later date.

Where is this study run from?
It is run by the LaserVision Ambulatory Eye Surgery Unit in Greece

When is the study starting and how long is it expected to run for?
April 2023 to December 2023

Who is funding the study?
Alcon LLC (USA)

Who is the main contact?
Anastasios John Kanellopoulos
ajkmd@mac.com

Contact information

Type(s)
Principal investigator

Contact name
Dr Anastasios John Kanellopoulos

ORCID ID
https://orcid.org/0000-0003-3595-3517

Contact details
Tsocha 17
Athens
Greece
11521
+30 (210) 74 72 777
info@laservision.gr

Additional identifiers

Protocol serial number
LV002

Study information

Scientific Title
Contralateral Eye myopic LASIK customization comparison Custom Q vs Ray Tracing (Wavelight Plus)

Acronym
CustomVsRay

Study objectives
Visual performance can be superior in Ray-tracing compared to custom Q

Ethics approval required
Ethics approval required

Ethics approval(s)
Approved 15/03/2023, LaserVision Ethics Committee (Tsocha 17, Athina, 115 21, Greece; +30 2107472777; info@laservision.gr), ref: 49/4/213

Primary study design
Observational

Study design
Observational cohort study

Study type(s)
Treatment

Health condition(s) or problem(s) studied
Treatment of myopic refractive error with LASIK

Interventions
For each patient undergoing LASIK treatment correction, one eye is randomly assigned to be treated with raytracing customization and the other with asphericity adjusted (custom Q) excimer profile ablation, both CE-approved options on the same device (EX500 excimer laser). This study will evaluate the visual function outcomes.

Randomisation of the treatment allocation will be made by flipping a coin. Both eyes will be evaluated pre-operatively for both modalities and treatment allocation will be made at the time of surgery. All measurements, procedures and post care are estimated to take 3-6 months.

Intervention Type
Procedure/Surgery

Primary outcome(s)
1. Pre- and post- operation mean refractive error is measured with an autorefractor
2. Topographic astigmatism is measured using keratometry at Pre- and Post- operation

Key secondary outcome(s)
Visual Acuity is measured using the Snellen chart at Pre- and Post- operation

Completion date
31/12/2023

Eligibility

Key inclusion criteria
Adults undergoing refractive error laser correction with no other corneal/ocular pathology (ie. Keratoconus, Pterygium) other than refractive error

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Adult

Sex
All

Total final enrolment
20

Key exclusion criteria
Corneal/ocular pathology other than refractive error

Date of first enrolment
15/04/2023

Date of final enrolment
01/10/2023

Locations

Countries of recruitment
Greece

Study participating centre
LaserVision Ambulatory Eye Surgery Unit
Tsocha 17
Athens
Greece
11521

Sponsor information

Organisation
LaserVision

ROR
https://ror.org/02xm4cz36

Funder(s)

Funder type
Industry

Funder Name
Alcon

Alternative Name(s)

Funding Body Type
Government organisation

Funding Body Subtype
For-profit companies (industry)

Location
United States of America

Results and Publications

Individual participant data (IPD) sharing plan
The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request
ajkmd@mac.com, Anastasios John Kanellopoulos

IPD sharing plan summary
Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article		22/02/2024	02/10/2026	Yes	No
Protocol file		28/08/2023	29/08/2023	No	No