

 [Print this Page for Your Records](#) [Close Window](#)

Program#/Poster#: 3365/A183

Abstract Title: **Measurements of Objective Scatter Index (OSI) in LASIK Patients**

Presentation Start/End Time: Tuesday, Apr 29, 2008, 3:00 PM - 4:45 PM

Location: Hall B/C

Reviewing Code: 240 laser refractive surgery - CO

Author Block: *C. Palomino Bautista*¹, *J. Cristobal Bescós*², *D. Carmona González*¹, *A. Castillo Gómez*¹, *M. Del Buey*³, *E. Lanchares Sancho*⁴, *S. Luque*⁵, *J. Pujol*^{6A}, *M. Vilaseca*^{6B}. ¹Hospital Quirón Madrid, Madrid, Spain; ²Hospital Clínico de Zaragoza, Zaragoza, Spain; ³Hospital Clínico Zaragoza, Madrid, Spain; ⁴Universidad de Zaragoza, Zaragoza, Spain; ⁵Visiometrics S.L., Tarrasa, Spain; ^ACentro de Desarrollo de Sensores Instrumentacion y Sistemas, ^BCentro de Desarrollo de Sensores Instrumentación y Sistemas, ⁶Universidad Técnica de Cataluña, Barcelona, Spain.

Keywords: 680 refractive surgery: LASIK, 681 refractive surgery: optical quality,

Purpose: In this study we measure the Objective Scatter Index (OSI) associated to patients treated with LASIK (Laser In Situ Keratomileusis), and compare the values obtained for this parameter, which accounts for intraocular scattering, before and after the surgery.

Methods: We evaluate the intraocular scattering in LASIK patients by means of the Objective Scatter Index (OSI), which is given by the double-pass clinical instrument OQAS (Optical Quality Analysis System, Visiometrics S.L.). The OSI parameter is obtained from the double-pass image, and accounts for the intraocular scattering present in the eye, without the need of any subjective measurement. In general, young eyes have OSI values smaller than 1, meanwhile in precataract patients this index can increase and have values similar to 2. In mature cataract eyes, the OSI parameter is greater than 4.

Specifically in this work, the OSI parameter is used to evaluate the intraocular scattering among a group of 50 patients treated with LASIK at the Hospital Quirón (Madrid, Spain), at two different stages: before the refractive surgery and one month later. All the patients included in the study were myopic and had a subjective refraction smaller than 6 Diopters, as well as a preoperative best spectacle corrected visual acuity (BSCVA) of at least 20/20.

Results: The results obtained show an increase of the intraocular scattering after the LASIK refractive surgery in almost all the treated patients. In averaged terms, the OSI has a mean value of 0.9 at the pre-surgery stage, meanwhile one month after the surgery it is similar to 1.4.

Conclusions: Although the LASIK technique is the most commonly used procedure to correct myopia with quite good results regarding the vision quality obtained, this technique seems to slightly increase the intraocular scattering present in the eye's patients. However, in most of the cases analyzed the patients do not subjectively notice this effect.

Commercial Relationship: **C. Palomino Bautista**, None; **J. Cristobal Bescós**, None; **D. Carmona González**, None; **A. Castillo Gómez**, None; **M. Del Buey**, None; **E. Lanchares Sancho**, None; **S. Luque**, None; **J. Pujol**, None; **M. Vilaseca**, None.

Support: none

©2008, Copyright by the Association for Research in Vision and Ophthalmology, Inc., all rights reserved. Go to www.iovs.org to access the version of record. For permission to reproduce any abstract, contact the ARVO Office at arvo@arvo.org.

OASIS - Online Abstract Submission and Invitation System™ ©1996-2009, Coe-Truman Technologies, Inc.