

2009 Research Days Abstract Form – Department of Ophthalmology – UNIFESP/EPM

2. SCIENTIFIC SECTION PREFERENCE (REQUIRED):

Review the Scientific Section Descriptions. Select and enter the two-letter Code for the one (1) Section best suited to review your abstract.

3. PRESENTATION PREFERENCE (REQUIRED) Check one:

- Paper
- Poster
- FAST Paper

4. The signature of the First (Presenting) Author (REQUIRED) acting as the authorized agent for all authors, hereby certifies that any research reported was conducted in compliance with the Declaration of Helsinki and the 'UNIFESP Ethical Committee'

Scientific Section Descriptions (two-letter code):

- (BE) OCULAR BIOENGINEERING
- (CO) CORNEA AND EXTERNAL DISEASE
- (CA) CATARACT
- (EF) ELECTROPHYSIOLOGY
- (EP) EPIDEMIOLOGY
- (EX) EXPERIMENTAL SURGERY
- (GL) GLAUCOMA
- (LA) LABORATORY
- (LS) LACRIMAL SYSTEM
- (LV) LOW VISION
- (NO) NEURO-OPHTHALMOLOGY
- (OR) ORBIT
- (PL) OCULAR PLASTIC SURGERY
- (PH) PHARMACOLOGY
- (RE) RETINA AND VITREOUS
- (RS) REFRACTIVE SURGERY
- (RX) REFRACTION-CONTACT LENSES
- (ST) STRABISMUS
- (TR) TRAUMA
- (TU) TUMORS AND PATHOLOGY
- (UV) UVEITIS
- (US) OCULAR ULTRASOUND

**Deadline: Oct 12, 2009**

FORMAT: Abstract should contain:

- Title**
- Author, Co-authors (maximum 6),**
- Purpose, Methods, Results,**
- Conclusion.**

Poster guidelines:  
ARVO Abstract Book (1.10 x 1.70m)

102. FIRST (PRESENTING) AUTHOR (REQUIRED):

Must be the author listed first in abstract body.

- ( ) R1      ( ) R2      ( ) R3      ( ) PIBIC
- ( ) PG0    ( ) PG1    ( x) Fellow    ( ) Technician

Last Name: de Camargo

First Name: André

Middle: Soares

Service (Sector): Glaucoma (GL)

CEP Number: 1438/05

5. ABSTRACT (REQUIRED):

**Comparison of Automated and Manual Stratus OCT Disk Margin Determination**

André S. de Camargo; Carolina K. Maciel; Lia M. G. Pereira; Paulo A. A. Mello; Ivan M. Tavares.

**Purpose:** To analyze the influence in the optic disk measurements of the automatically determined edge of the optic nerve head (ONH) and the manually corrected one in cases where the Optical Coherence Tomography did not identify the disc limits correctly.

**Methods:** Eighty-nine eyes of 89 consecutive patients, either normal or glaucomatous, submitted to the Fast Optic Disc Stratus OCT (Carl Zeiss Meditec, Dublin, CA, USA; software 4.0) test were selected. 47 eyes in which either the manual assignment was not necessary or the signal strength was below six were excluded. OCT ONH scans are composed of six radial scans in a spokelike pattern centered on the disc and with each radial scan spaced 30 degrees from one to another. After image acquisition and processing, one expert examiner manually corrected the determination of the edge of the ONH, identified as the end of the retinal pigment epithelium/choriocapillaris layer. Disk Area, Cup Area, Rim Area and Cup/Disc Area Ratio results were compared before and after the optic disk margin manually corrected determination. Student's t-test was performed to evaluate the differences, and  $P < 0.05$  was considered statistically significant.

**Results:** Forty-two eyes of 42 people, either normal or glaucomatous, were analyzed. No statistically significant difference ( $P > 0.3$ ) was found when analyzing the following parameters results obtained with automated and manual determination (mean  $\pm$  SD): Disk Area ( $2.51 \pm 0.54 \text{ mm}^2$ ;  $2.45 \pm 0.64 \text{ mm}^2$ ), Cup Area ( $1.19 \pm 0.6 \text{ mm}^2$ ;  $1.20 \pm 0.60 \text{ mm}^2$ ) and Cup/Disc Area Ratio ( $0.46 \pm 0.18 \text{ mm}^2$ ;  $0.46 \pm 0.19 \text{ mm}^2$ ). The Rim Area results were significantly different ( $P = 0.03$ ) before ( $1.32 \pm 0.40 \text{ mm}^2$ ) and after ( $1.25 \pm 0.38 \text{ mm}^2$ ) the manual correction.

**Conclusion:** The Stratus OCT Optic Nerve Head Report results were little influenced when optic disk limits were manually determined. Therefore the standard automated Stratus OCT disk margin assignment is adequate, and manual edition is not necessary.