2. SCIENTIFIC SECTION PREFERENCE (REQUIRED):

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Scientific Section Descriptions (two-letter code):

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FORMAT:
Abstract should contain:
Title
Author, Co-authors (maximum 6), Purpose, Methods, Results, Conclusion.

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

29. FIRST (PRESENTING) AUTHOR (REQUIRED):
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Last Name: BRASIL
First Name: MARIA VITORIA
Middle: OLIVEIRA MOURA

Service (Sector):   GLAUCOMA

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5. ABSTRACT (REQUIRED):

COMPARISON OF SPECTRAL DOMAIN AND TIME DOMAIN OCT IN MEASURING RETINAL NERVE FIBER LAYER THICKNESS

Brasil MV, Brasil OF, Smith SD, Mello PA

Purpose: To evaluate the agreement between spectral-domain (Cirrus) and time-domain (Stratus) optical coherence tomography (OCT) retinal nerve fiber layer (RNFL) measurements.

Methods: Participants were imaged by a single trained operator using Stratus OCT and Cirrus HD-OCT at the same visit. Only scans scored better than 6 were included in the study. The RNFL thickness was measured by the Stratus OCT with the fast RNFL scan mode and by Cirrus HD-OCT using the optic disc cube mode. Data was analyzed using paired t test. Agreement between the OCTs was calculated using Bland-Altman method.

Results: Eighty-nine eyes of 49 patients were examined. Average RNFL thickness was not significantly different between the 2 machines (Stratus, 89.70 ± 14.48 μm; Cirrus, 88.41 ± 12.14 μm; $p=0.12$). Quadrant measurements and clock hour measurements were more variable. There was statistically significant difference for the superior quadrant measurements (Stratus 114.25 μm; Cirrus 105.51 μm; $p=0.002$). Bland-Altman plots showed good agreement between instruments, with better agreement for average RNFL thickness.

Conclusion: Agreement between the 2 OCT instruments is good. Nevertheless, Stratus OCT provides thicker RNFL measurements than Cirrus HD-OCT. Measurements with these instruments should not be considered interchangeable.

Keywords: Optical Coherence Tomography (OCT), Glaucoma.