

## **COMPARISON OF CENTRAL CORNEAL THICKNESS MEASUREMENTS BY AL-SCAN®, SPECULAR MICROSCOPE, PENTACAM®**

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Purpose : To investigate clinical availability of AL-Scan® by comparing central corneal thickness measurements obtained with AL-Scan® (Nidek, GAMAGORI, Japan), Specular microscope, Pentacam® Method: From March 2013 to October 2013, one hundred-three patients(206 eyes) who visited our hospital for refractive surgery without other ocular disease or past ocular surgery or trauma history were tested using AL-Scan®, specular microscope, Pentacam®. And each data was retrospectively evaluated. Result: Central corneal thickness measurements with AL scan® ranged from 517 to 581  $\mu\text{m}$ (mean  $549.00 \pm 32.12 \mu\text{m}$ ). The measurements obtained with specular microscope ranged from 514 to 579  $\mu\text{m}$ (mean  $546.60 \pm 32.78 \mu\text{m}$ ) and with pentacam® ranged from 513 to 575  $\mu\text{m}$ (mean  $543.96 \pm 31.18 \mu\text{m}$ ). Central corneal thickness measurements showed a good correlation and no significant differences. Bland-Altman plots showed high degree of agreement among AL-Scan®, specular microscope, Pentacam®. Conclusio : Central corneal thickness measured by three devices showed no significant differences and had a good correlation. The three devices can be used interchangeably considering clinical differences. So it is better to consider the features and advantages of each devices in determining the measuring device. Financial Disclosure: No