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Service (sector) Refraction and Contact lenses N° CEP

**Anterior Coherence Tomography to assess corneal thickness and ICR in the patients with keratoconus.**

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**Purpose:** To study the corneal thickness in eyes with intrastromal corneal ring segments (ICRS) in patients with keratoconus by Anterior Coherence Optical (AC OCT).

**Setting:** Doheny Eye Institute, Los Angeles, USA

**Methods:** Three eyes with ICRS were included in the study. The follow-up in all eyes was with 1 day, 1 week and 1 month. Corneal thickness was evaluated using 1310 nm wavelength optical coherence tomography (OCT). The equipment has a fixation target that can be focused and defocused with negative lenses to stimulate natural accommodation. The same observer measured the corneas in different positions to assess the corneal thickness and ICR in eight different meridians. All measurements were done under the same conditions.

**Results:** Intacs were successfully implanted in all eyes. The AC OCT showed have great precision to assess the ICR in intrastromal corneal. In all eyes was possible observer the corneal thickness between ICRs and different corneal positions in each different meridian.

**CONCLUSIONS:** The AC OCT is a user-friendly instrument for evaluating the anterior segment and examining the corneal thickness in patients submitted the ICRs to keratoconus.