REFRACTIVE AND THERAPEUTIC GALILEI ColorZ

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Proven technologies and resources



Dual Scheimpflug Tomography

- Pachymetry and elevation data
- 3D anterior chamber analysis
- Ray-traced posterior corneal surface data to detect irregularities and asymmetries in early stages



Placido Topography

- Highly accurate anterior curvature data¹
- Precise detection of anterior surface irregularities, asymmetries and tearfilm quality

The combination of above technologies in a single device allows for a complete analysis of both the anterior and the posterior corneal surface.



1st Purkinje Alignment

- Measurement and map alignment on 1st Purkinje image (≈ visual axis) for improved detection of corneal asymmetries relevant to vision
- Comparing a series of consecutive measurements over time



Iris-based Eye Motion Compensation

- Small to moderate eye motions during the measurement cannot be prevented, especially in elderly patients or children
- The patented iris tracker compensates for eye motion through post-measurement rotational and translational adjustments



Color TopView Image

- A state-of-the-art TopView camera and HD monitor delivering a multi-layer image in vibrant colors and high contrast
- The TopView color image promotes intuitive, advanced diagnostics and will be the link to Ziemer's refractive laser suite.









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Clinical applications



Refractive Screening

The GALILEI ColorZ Platform provides a Fast Refractive Screening Display delivering a comprehensive overview of the cornea. The easy to use starting point for every refractive surgery planning from LASIK to CLEAR. In addition, GALILEI ColorZ incorporates the Santhiago PTA Report[™], a simulation tool to predict the probability of creating an ectasia after LASIK or PRK surgery in eyes with normal preoperative topography.





Corneal Asymmetry Analysis

The GALILEI Color Z Platform offers an extensive data set for the detection of corneal shape abnormalities. Precise posterior corneal curvature and elevation data facilitate the detection of posterior corneal irregularities and signs of corneal asymmetry even in very early stages.²





Planning and follow-up of Keratoplasty

With the GALILEI ColorZ Platform anterior and posterior corneal astigmatism and elevation can be closely controlled, even over time. This can be particularly helpful when planning a selective suture removal or in order to follow-up on Keratoplasty surgery outcomes. High definition corneal pachymetry maps deliver important information about donor tissue cut quality and later visual acuity.







^{1.} Martin R: "Cornea and anterior eye assessment with placido-disc keratoscopy, slit scanning evaluation topography and scheimpflug imaging tomography." Indian J Ophthalmol. 2018;66(3):360-366.

^{2.} Doctor K, Vunnava KP, Shroff R, et al.: "Simplifying and understanding various topographic indices for keratoconus using Scheimpflug based topographers." Indian J Ophthalmol. 2020;68(12):2732-2743.