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CASE OF THE MONTH

Establishing a premium ZEISS PRESBYOND practice:

Consistent outcomes across 200 consecutive eyes

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Why a corneal approach to presbyopia

In clinical practice, presbyopic patients consistently describe frustration with needing to wear glasses for the many tasks that fill a modern day – using a phone, working at a computer, eating, and managing intermediate distances. For patients who do not have a visually significant cataract, it is difficult to justify lens extraction and implantation with a presbyopia-correcting intraocular lens (IOL) considering risks that include reduced contrast sensitivity, dysphotopsia, and the low-incidence but real potential for serious complications associated with intraocular surgery.

As a cornea-based procedure, laser vision correction with ZEISS PRESBYOND Laser Blended Vision offers a less invasive, and effective alternative compared to refractive lens exchange. The PRESBYOND software supports customized binocular LASIK treatment planning, aiming to optimize the depth of field for each eye to deliver functional vision from near to far. It uses the principle of micro-anisometropia and calculates the treatment plan taking into account the preoperative spherical aberration and functional age of each eye. The controlled anisometropic ablation profile has been used for approximately two decades with excellent patient tolerance of the induced anisometropia.[1,2] Compared with published outcomes of presbyopia-correcting intraocular lenses (IOLs), it is generally associated with a lower incidence of dysphotopsia and better preservation of contrast sensitivity and stereoacuity.[3]

The underlying principle and published results drew me to add laser vision correction with ZEISS PRESBYOND to my surgical portfolio, and I review this information with patients when I discuss surgical options to manage presbyopia-related visual needs. Following is the story of how that reasoning became a practice – and a level of consistency that today defines it.

A premium, pioneering practice in São Paulo

When we began building the refractive portfolio at Lumiata Oftalmologia/Galilei Cirurgia, the corneal refractive approach for presbyopic patients was not widely represented in our local practice environment. We introduced laser vision correction with ZEISS PRESBYOND specifically to close that gap, and we paired it with ZEISS SMILE pro to expand our corneal refractive offerings across different patient groups: laser vision correction with ZEISS SMILE pro for the myopic patient still years from presbyopia, laser vision correction with ZEISS PRESBYOND for the phakic presbyope, and premium intraocular options reserved for when a cataract genuinely warrants surgery. That combination – built early and refined over hundreds of procedures – is what made our practice a referral center for refractive surgery in São Paulo.

A premium result, in our view, is not defined by success in a single patient. Rather it means aiming for consistently high-quality outcomes across appropriately selected patients and is supported by standardization. Every candidate for laser vision correction with ZEISS PRESBYOND goes through the same rigorous clinical evaluation, including corneal and topographic screening, PRESBYOND acceptance test (+1.50 D Test), dominance test to determine the distance eye and measurement of the remaining accommodation. The same logic for treatment-planning is applied in all cases, targeting the dominant eye to plano and the non-dominant eye to a defined near target, and all patients are followed with the same postoperative protocol. And critically, I am personally involved at every step: the consultation, the diagnostic workup, the treatment planning, the procedure itself using the ZEISS VISUMAX 800 and ZEISS MEL 90 platforms, and the follow-up visits. That continuity – one surgeon and adherence to one protocol, from first consultation to final follow-up – together with the technology and standardized workflow, may contribute to consistent outcomes across a large case series.

The level of attention given to patients, the consistency of the results, and the fast recovery enjoyed by patients after laser vision correction with ZEISS PRESBYOND support its premium positioning and patient satisfaction that made word-of-mouth referral our leading source of new patients.

Getting started

My own path into laser vision correction with ZEISS PRESBYOND began with structured training – completing the London Vision Clinic Forefront Refractive Course and visiting an established PRESBYOND practice to see the protocol applied firsthand – which gave me a solid grounding in the underlying principles and treatment-planning process before I began treating my own patients. The learning curve of laser vision correction with ZEISS PRESBYOND is best managed by judicious selection of initial cases. When starting, clinics should aim for patients with low/moderate hyperopia or moderate myopia, regular and no more than low astigmatism, no borderline anatomical conditions, and ideally a strong motivation to enhance their active lifestyle by reducing their dependence on glasses. Such selection may help patients appreciate the intended visual benefit. Gaining experience with such cases allows surgeons to build their confidence in the protocol and to expand into a pool of more complex cases.

One of my most recent cases was a 47-year-old woman whose profession and favorite pastime necessitated sharp vision from near to far – she was a professional photographer and an active tennis player. The patient had low hyperopic astigmatism: dominant right eye +1.50 –1.00 × 75 (SE +1.00 D), non-dominant left eye +1.25 –1.00 × 85 (SE +0.75 D). Corrected distance visual acuity was 20/20 OU. She had no borderline ophthalmic findings or comorbidities. Following our standard protocol, the dominant eye was targeted for plano and the non-dominant eye for a near anisometropia of –1.50 D. Optical zone was 7.00 mm and treatment was centered on the corneal vertex. Six-month postoperative refraction was plano –0.25 × 120 (SE –0.13 D) OD and –1.50 D OS, binocular uncorrected distance vision was 20/16 and binocular uncorrected near vision was N4 (J1). The patient was highly satisfied and enjoyed complete spectacle-independent vision for both her professional and recreational activities.

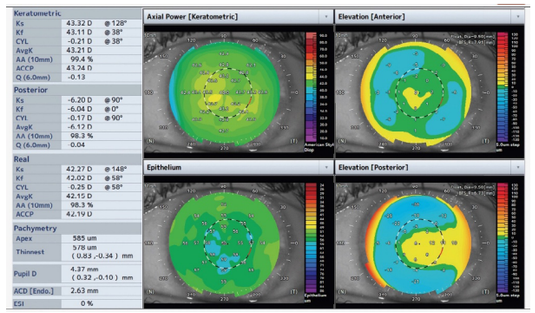

Image 1: Pre-operative topography near eye (non-dominant eye)

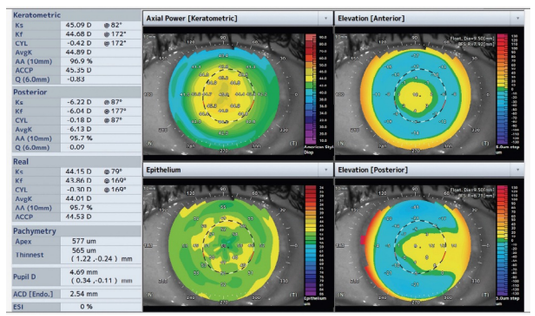

Image 2: Post-operative topography near eye (non-dominant eye), consistent with conventional LASIK topographies.

Consistency at scale: Outcomes in 200 consecutive eyes

What stands out in my experience in laser vision correction with PRESBYOND is not the ability to achieve excellent results in single selected cases, but rather that the predictability, efficacy, safety, and patient satisfaction outcomes are maintained at the population level. The proof is in the numbers.

We analyzed 200 consecutive eyes of 100 patients that received laser vision correction with ZEISS PRESBYOND between 04/18/2025 and 12/07/2025. All procedures were done by following the same protocol, using a customized nomogram refined through our case experience, and using the ZEISS VISUMAX 800 femtosecond laser and ZEISS MEL 90 excimer laser. The patients had a mean age of 53.7 years (range 41–67), 44% were female, and mean preoperative SE of +0.85 D (range –6.50 to +4.12 D). Final outcome analysis was performed at the 6-month postoperative visit.

Predictability: Achieved SE was ±0.50 D of target in 91% of eyes and ±1.00 D in 99%.
Efficacy: Binocular UDVA was ≥20/20 in 96% of patients (assessed against a 20/20 threshold; a formal 20/16 analysis was not performed); 100% of patients had binocular UDVA ≥20/25 and binocular UNVA ≥N6 (logMAR ≤0.20).
Safety: No eye lost ≥2 lines CDVA.
Patient satisfaction: 98% of patients were spectacle independent and overall satisfaction was >90%.

The consistency of outcomes in this series may be associated with a single surgeon applying a standardized protocol, procedure after procedure. In our experience, consistency does not happen by accident – it is closely tied to standardized workflows applied without exception.

Conclusion

What we set out to establish in São Paulo was a comprehensive, effective and high-quality approach to managing presbyopia – one surgeon, one standardized protocol, and a portfolio spanning laser vision correction with ZEISS PRESBYOND and premium IOLs that meets every patient at different stages of life and with different visual needs.

The consistently excellent results achieved in the 200-eye series support laser vision correction with ZEISS PRESBYOND as a compelling option. They are also the foundation of the trust we ask our patients to place in us and the basis on which we have built a reputation as a center of excellence in refractive surgery in this city.

Scan the QR code to learn more about how consistent outcomes with ZEISS PRESBYOND have supported Dr. Gabriel Castro's practice.

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