



# Binovision™: Enhancing Outcomes After Cataract Surgery Through Transprk and Aspheric IOL Implantation

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## Opinion

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## Opinion

Cataract surgery has further developed – from a life-changing procedure to a precision-based opportunity. Refractive optimization is in focus worldwide.

## Keywords

Cataract Surgery; Binovision; Progreident Glaucoma

## Abbreviations

TransPRK: Transepithelial Photorefractive Keratectomy; IOLs: Intraocular Lenses.

Intraocular lens design offers better, almost ideal optical quality but many patients are looking for more, precise vision without glasses, independent of their age and without side effects of multifocal lenses.

They don't just want to see. They want to experience extremely good vision at all distances together with best contrast sensitivity and a colourful world.

This evolving expectation is what inspired me, to develop the Binovision™ concept — a registered treatment philosophy that integrates binocular optimization, neuroadaptation and non-invasive enhancement after cataract surgery.

Binovision™ is not a product, nor a technique. It is a paradigm, that considers each eye's role in the broader binocular system. I developed Binovision after implanting the Light Adjustable Lens and increasing their asphericity, using a Light Delivery Device years ago.

It's about more than 20/20 — it's about personalized performance.

A cornerstone of the new Binovision concept now is the use of TransPRK (Transepithelial Photorefractive Keratectomy). We use it as a refinement tool, a few weeks after implantation aspheric Intraocular lenses.

Unlike LASIK or SMILE, TransPRK works entirely at the corneal surface, making it especially suitable for pseudophakic eyes:

- No flap, no incision and so no suction and minimal risks in post-cataract surgery eyes.
- Highly predictable results for fine-tuning of small refractive errors (spherical or astigmatic) and so suitable for Presbyopia correction as well.
- Zero mechanical interaction with the IOL or capsular bag.
- Well-tolerated with minimalising of dry eye syndrome.
- Quick recovery and high patient satisfaction.

In my clinic at Paulig Eye & Health Berlin, I have treated more than 200 patients with TransPRK after aspheric IOL implantation as part of Binovision™.

I do not offer it in cases of macular degeneration, amblyopia or progreident glaucoma with limited field of vision.

Binovision™ truly shines, if patients today are looking for spectacle independence, including near vision, yet are hesitant — or financially unable — to ask for multifocal lenses.



Multifocal lenses can introduce halos, glare or/and loss of contrast sensitivity. They also compromise quality for range, not acceptable to many of my patients.

**Instead, Binovision™ uses a personalized micro-monovision TransPRK strategy, where:**

- The dominant eye is optimized for distance.
- The non-dominant eye is gently adjusted to enhance near or/and intermediate vision.

We offer it customized postoperatively, once the patient has neuroadapted to their IOLs and the healing process is complete.

So patients get the functional benefit of presbyopia correction, while retaining the optical clarity and contrast of monofocal aspheric lenses. And most importantly — it's done in a staged, low-risk, reversible way.

**Patients treated with the Binovision™ approach report:**

- Excellent binocular balance and depth perception.
- Enhanced contrast, particularly in low light.
- Comfort in reading, digital tasks and night driving.

- Significant reduction in spectacle dependence.

The TransPRK enhancement is typically performed 3 months after IOL surgery, ensuring full stability and accurate measurement. It's also possible to offer TransPRK years after cataract surgery as a fine tuning procedure.

Visual outcomes have been predictable, safe and impactful.

Cataract surgery is no longer the end of a visual journey — it is the beginning of a customized visual strategy.

**Binovision™ represents an evolution in how we think about post-surgical refractive care:**

- Not just restoring vision, but refining it.
- Not just implanting lenses, but creating vision harmony.
- Not just addressing optics, but enhancing experience.

In a time where precision matters more than ever, the combination of aspheric IOLs and TransPRK within the Binovision™ framework is one of the safest, smartest and most satisfying solutions we can offer for vision without glasses.