RLES AI® ICL PLANNING REPORT

COMPLEX CASE: ICL PLAN IN HIGH MYOPIA WITH A FLAT CORNEA — DEMO

REFRACTIVE LASER EYE SURGERY – ARTIFICIAL INTELLIGENCE ASSISTED

DEMO REPORT — FICTITIOUS PATIENT

This document is a demonstration output of the RLES AI® report engine. The patient and all measurements are FICTITIOUS; they belong to no real person. Not for clinical use; no medical decision may rely on it. Real reports are produced by the same engine from the surgeon's uploaded examinations.

1 · THE CASE — TISSUE SUFFICIENT, OPTICS NOT

DEMO PATIENT B (fictitious) · 24 · OD −11.50 −1.00 ×175 (SE −12.00) · K1 41.0 / K2 42.1 · CCT 540 µm · OS −10.75 −0.75 ×5 (SE −11.13) · K1 41.2 · CCT 544 µm · 12-month stability DOCUMENTED IN BOTH EYES. The laser tissue budget passes comfortably; but on a flat 41.0 D cornea the maximum treatable myopia is (41.0−36)/0.8 = 6.25 D — a −12.00 D correction would push the postop cornea below the 36 D floor (Rule 9). This patient is not rejected: Rule 10 opens the phakic-ICL route and the report goes all the way to a SURGICAL PLAN.

2 · CANDIDACY — WITH THE ACD TRAP RESOLVED

Criterion	Value	Threshold	Status
ACD (from epithelium, IOLMaster)	3.55 mm	converted	→
ACD FROM ENDOTHELIUM (OD 3.55−0.54 · OS 3.59−0.54)	3.01 · 3.05 mm	≥ 3.0 (FDA) · ≥ 2.8 (international)	✓
SE / cylinder OD·OS	−12.00/1.00 · −11.13/0.75 D	−0.5…−20.0 / ≤6.0 (EVO)	✓ ✓
ECD OD · OS	2650 · 2580 /mm²	> 2000 (confirm vs age-indexed DFU minimum)	✓
Age	24	21 – 60	✓

3 · CORNEAL SCREENS — THE FULL SET RUNS BEFORE ICL TOO

Screen	OD	OS	Result
BAD-D · ART	1.0 · 402	1.1 · 396	normal — the ectasia screen runs before ICL too
IVA · I-S	0.21 · 0.7	0.22 · 0.8	normal
Rule 13 warpage (9 indicators)	0/9	0/9	CLEAR — lenses stopped 4 days prior; two concordant scans ✓
Rule 16 ORA (Alpins)	0.28 @ 98	0.25 @ 107	GREEN — toric alignment vector-verified
Tear film · dry eye · medication	0/6	normal	OSDI 6 · TBUT 12 · Schirmer 14; medication/systemic query clear

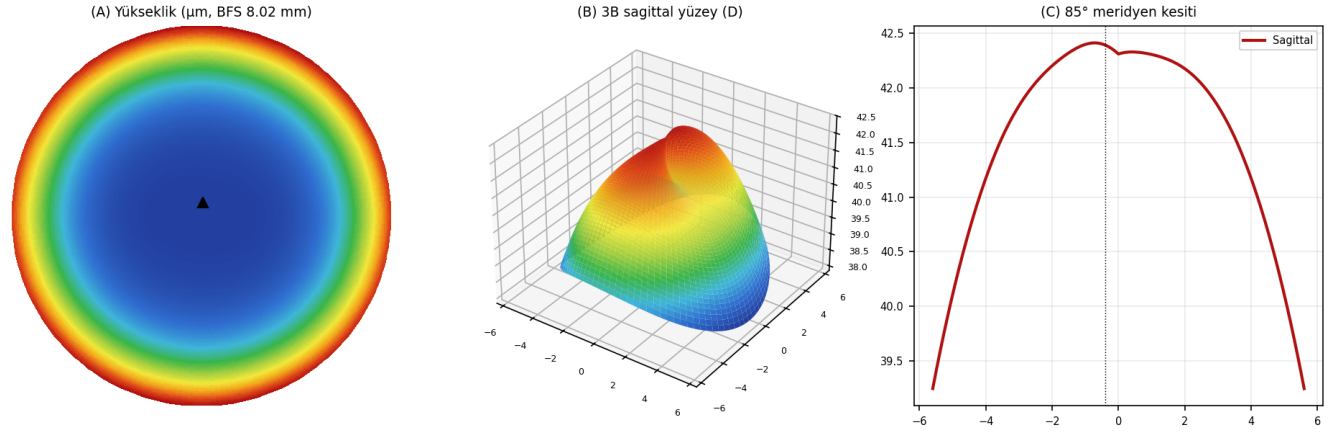

Figure 1 — OD surface reconstruction, NO irregularity (Rule 13: negative findings are proven too): a flat-prolate cornea, regular 1.20 D bow-tie. Concordance: apex ≈42.3 ↔ device Kmax 42.4 D. The −12.00 D of myopia lives in AXIAL length (AL 27.9 mm), not this cornea — visual proof the ICL is the right address. 1 D ≈ 10 µm.

REKONSTRÜKSİYON DİPNOTU

Bu görsel, cihaz çıktısındaki sayısal değerlerden türetilmiş bir rekonstrüksiyondur; ham cihaz çıktısı değildir. 1 D ≈ 10 µm.

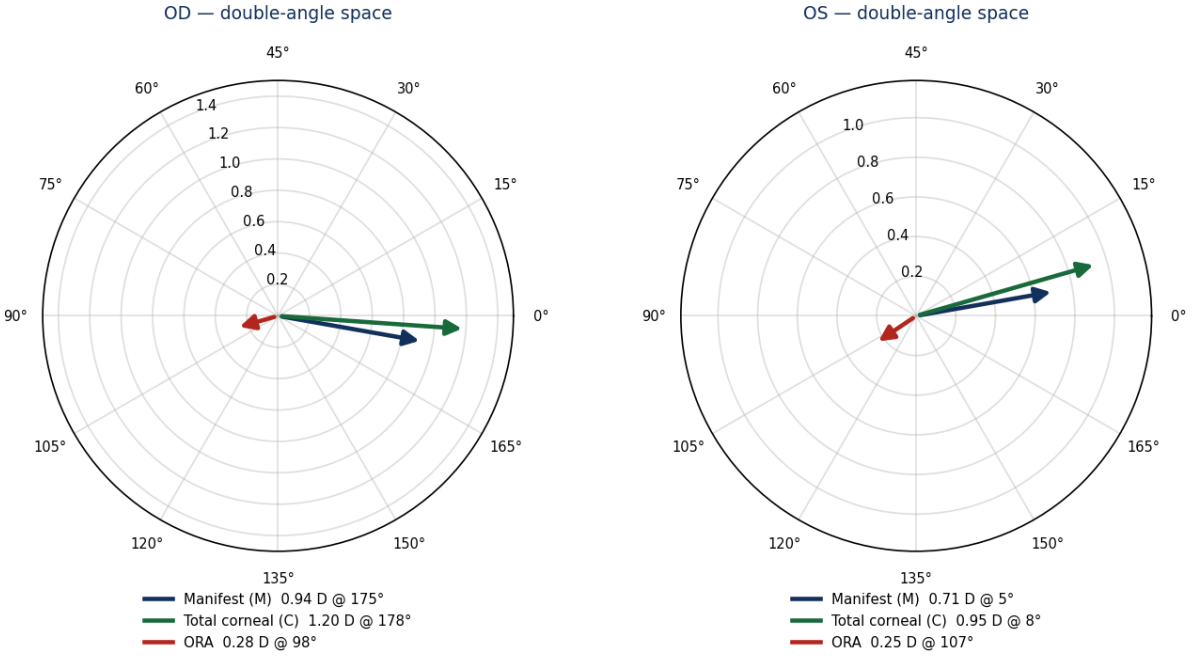

Figure 2 — Rule 16 Alpins diagrams, both eyes: ORA short (0.28/0.25) → the cylinder is corneal; toric ICL axis alignment can safely follow the corneal axis.

4 · GLAUCOMA SCREEN & REFERRAL

Finding	Result	Effect on the plan
ACA	28° — AMBER	gonioscopy PRIMARY + baseline assessment; does not block surgery — it enters the FOLLOW-UP PLAN
PDS (G8: 3 findings)	negative	asked; EVO FDA 3-yr (629 eyes): zero pigment dispersion

Finding	Result	Effect on the plan
G2 additional factors	0/7	seven factors queried — none

5 · SURGICAL PLAN & FOLLOW-UP SCHEDULE (BOTH EYES)

Item	Plan
Lens route	STAAR EVO toric ICL — model/power/size chosen by the surgeon in OCOS (RLES neither calculates nor writes a brand line)
Verified input set	manifest (vertex 12.00) · Ks · endothelial ACD 3.01 · W2W · ECD — ready to copy into OCOS
Target	plano; toric alignment to be marked at surgery
PI requirement	EVO carries a central port — no separate iridotomy planned (surgeon's discretion reserved)
Follow-up	day 1 IOP + vault · week 1 · month 1 vault · ANGLE at every visit (baseline ACA 28°) · ANNUAL ECD

GLAUCOMA REFERRAL SUMMARY

· ACA 28° — AMBER → baseline gonioscopy + periodic angle follow-up (the ICL measurably narrows the angle).
RLES AI does not diagnose glaucoma; this summary is for the surgeon's referral.

CONCLUSION — AN EYE UNSUITED TO LASER IS TREATABLE, WITH A PLAN

The patient excluded by the optical ceiling is surgery-ready with an ICL plan that passes every candidacy criterion. Final lens choice and decision belong to the surgeon (Rule 11).

SURGEON'S SIGNATURE & AI VERIFICATION

This report is clinical decision support; the plan is finalised by surgeon approval. Signature: _____ Date: _____