

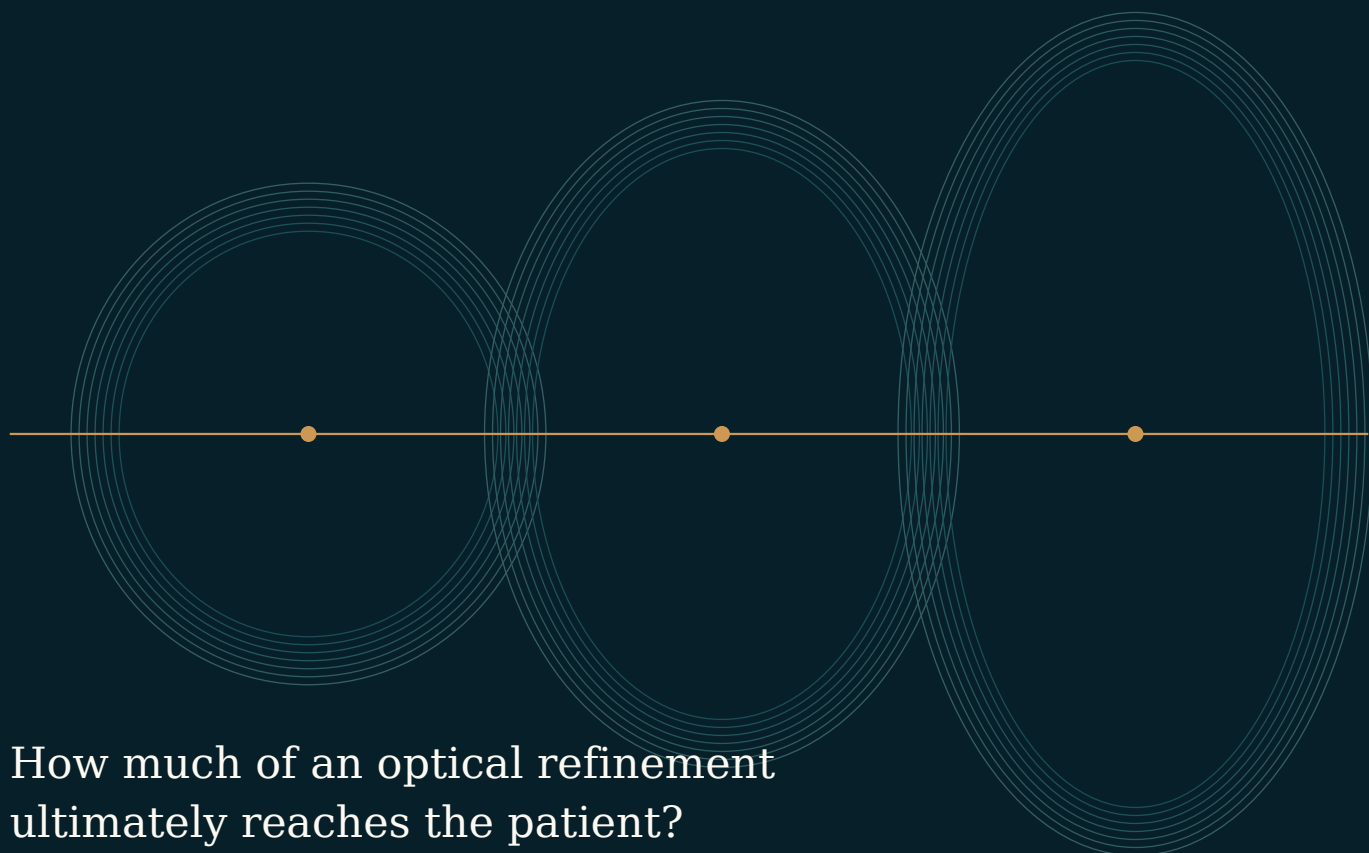
EVIDENCE REVIEW - ISSUE 03

CLAREON

PANOPTIX PRO

Refining an Established Trifocal

Optical efficiency, clinical translation and the evidence behind the next-generation PanOptix platform



How much of an optical refinement
ultimately reaches the patient?

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THE CENTRAL QUESTION

What actually changed?

Optical efficiency refined. Core trifocal strategy preserved.

MANUFACTURER-REPORTED OPTICAL VALUES [1]

88% → 94%

LIGHT UTILIZATION

12% → 6%

REPORTED SCATTER

PANOPTIX → PANOPTIX PRO

OPTICAL REFINEMENT

Bench [2]

Far-intermediate continuity supported

Clinical [3,4]

Corrected distance performance preserved

Patient benefit

Incremental magnitude remains uncertain

THE QUESTION THAT MATTERS

Does improved optical efficiency translate into a clinically meaningful patient benefit?

Optical percentages are not patient outcomes. Trials support BCDVA noninferiority; they do not establish less dysphotopsia. Legacy evidence cannot prove Pro's incremental benefit. [1-4,6-18]

ENLIGHTEN TO ENLIGHTEN NXT

Refining how light is used

The same focal strategy, with a modified diffractive profile. [1,2,14]

PANOPTIX / ENLIGHTEN

Quadrifocal-derived architecture → three useful focal regions

**PROFILE REFINEMENT**

Localized diffractive changes; nominal focal structure retained

**PANOPTIX PRO / ENLIGHTEN NXT**

Updated optical energy management

Manufacturer [1]

Utilization ↑ / reported scatter ↓

External bench [2]

Far-intermediate optical continuity ↑

MECHANISTIC CAUTION

BENCH IMPROVEMENT ≠ CLINICAL SUPERIORITY

EVIDENCE NOTES

Alcon cites REF-25218, REF-08546 and REF-25221. Full integration protocol, angular range and test conditions were unavailable. Reported utilization and complementary “scatter light” fractions cannot be equated with clinical straylight, halo intensity, material scatter or contrast sensitivity. No focal-energy split is inferred. [1,16]

EXTERNAL ACADEMIC LABORATORY / PEER-REVIEWED

Evolution, not reinvention

Direct PanOptix versus PanOptix Pro metrology. Jeong et al., 2026. [2]

3 + 3 lenses +20.0 D / model eye / +0.27 µm corneal SA

DOMAIN	WHAT CHANGED	WHAT REMAINED
Step contour	Localized diffractive-profile changes	Broadly similar architecture
Image formation	Clearer far-intermediate F image; brighter central PSF core	Broadly similar focal behaviour
Through-focus MTF	Modestly higher far peak; shallower post-peak dip	Nominal add / focal structure
Aberration profile	No substantial redesign	Spherical aberration; comparable step amplitudes

SCIENTIFIC MEANING

Optical refinement within the established focal concept.

EVIDENCE NOTES

Full manuscript appraised: ISO-compliant Mach-Zehnder metrology; one power, PSF/halo simulations 2/model. Differences clearest at 3.0/4.5 mm; clinical significance unestablished; 88%/94% not independently validated. Authors reported no financial/proprietary interests; supported by the National Research Foundation of Korea (government/MSIT). [2]

LEGACY PANOPTIX / NOT PRO INCREMENTAL EVIDENCE

The platform already works

Four clinically relevant conclusions from the established evidence base.

91.6%

COMPLETE SPECTACLE INDEPENDENCE

Pooled estimate; 95% credible interval
86.8-95.9%. [7]

0 to -3.0 D

FULL-RANGE VISION

Mean binocular defocus VA ≤ 0.1 logMAR
at 3-6 months. [8]

High

PATIENT SATISFACTION

Well documented across cohorts;
symptoms may coexist. [9,11,15,18]

A trade-off

DYSPHOTOPSIA

Any symptom is more common than
severe or very bothersome symptoms. [6]

EVIDENCE BOUNDARY

PLATFORM EVIDENCE $\neq$ PRO-SPECIFIC BENEFIT

EVIDENCE NOTES

Independence: 13 studies / 513 patients; heterogeneous methods, including congress evidence. Defocus: six prospective studies / 557 enrolled, 547 bilateral; group mean, not an individual guarantee. Both syntheses Alcon-funded. Legacy randomized comparisons [12,13,15] and Clareon/AcrySof material studies [9-11,14] cannot isolate Pro's optical effect.

PANOPTIX PRO-SPECIFIC EVIDENCE

What has reached the clinic?

Preserved distance performance is better supported than incremental benefit.

POSTED RANDOMIZED CONTRALATERAL RESULTS / ALCON [3,4]

MONTH-2 BCDVA	PRO	PANOPTIX	DIFFERENCE*
A / 83 pairs	0.032	0.023	+0.009
B / 68 pairs	-0.016	0.010	-0.026

Both met the registered noninferiority criterion.

EVIDENCE	WHAT IT TELLS US
Registry results [3,4]	Corrected distance performance preserved; no posted QoV benefit established
Peer-reviewed [5]	Pro vs Odyssey: early distance/near outcomes broadly similar; intermediate VA not tested

CONGRESS / EARLY [23,24]

Clinical, bench and virtual-implantation work identified.
Full datasets not appraised; no numerical inference.

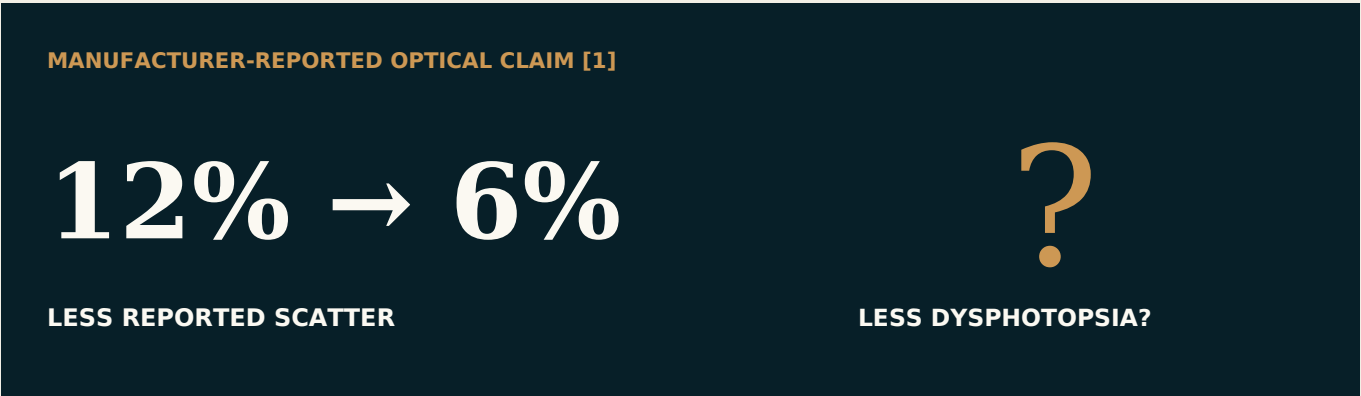
FULL-RANGE / QUALITY-OF-VISION ADVANTAGE: NOT YET ESTABLISHED

EVIDENCE NOTES

BCDVA: best-corrected distance VA. *Pro minus PanOptix, logMAR; lower is better. A/B enrolled 87/71. One-sided 95.1% upper limits: 0.0232/-0.0055; margin 0.10. Small mean differences vary in direction; B favours Pro, but the registered test is noninferiority. Posted results are not peer-reviewed. BCDVA cannot establish contrast, mesopic or dysphotopsia benefit.

THE TRANSLATION GAP

Less scatter. Less dysphotopsia?



50% less reported scatter ≠ 50% fewer halos.

LEGACY PANOPTIX / POOLED PATIENT REPORTS [6]

SYMPTOM	ANY	SEVERE	VERY BOTHERSOME
Halos	43.9%	5.4%	1.4%
Glare	33.6%	2.9%	0.8%
Starbursts	30.4%	3.4%	2.6%

Clinical test still needed: masked symptom assessment plus mesopic contrast, with and without glare. [19]

EVIDENCE NOTES

Scatter: manufacturer-defined optical fraction; exact protocol incompletely public. Legacy meta-analysis: Alcon-funded, 11 studies / 580 patients, 1-12 months. Columns use different study subsets, not nested proportions from one cohort; any-symptom I² 95-97%. Severity ≠ bothersomeness. Pro's patient-perceived benefit remains unquantified. [1,3-6,16]

DIRECT COMPARISON / NO OVERALL RANKING

PanOptix Pro and Odyssey

Different diffractive strategies. Early comparative clinical evidence. [1,2,5]

PanOptix Pro	Refined trifocal architecture
Odyssey	Diffractive echelette design; broad visual range

ALOMAR ET AL. / PEER-REVIEWED / AUTHORS REPORT NO EXTERNAL FUNDING [5]

65 vs 65

Matched eyes / one month
Retrospective / four surgeons / one centre

logMAR	ODYSSEY vs PRO	STATISTICAL TEST
UDVA	0.10 vs 0.13	p=0.29
CDVA	-0.001 vs 0.039	p=0.034

CDVA difference ≈ 0.04 logMAR ≈ 2 chart letters.
Clinical relevance uncertain.

Not measured	Intermediate VA / contrast sensitivity / validated PROs
Cannot conclude	Equivalence or a clinically meaningful overall winner

EVIDENCE NOTES

Near/binocular VA: no significant difference; not proof of equivalence. Symptoms: binary chart documentation, possible underreporting. Incomplete endpoint data and unadjusted multiple comparisons. Other paired-eye Odyssey [17] and Vivity [18] comparisons used legacy PanOptix; neither proves Pro or Pro/Vivity outcomes.

THE ISSUE IN ONE PAGE

What can we conclude?

ESTABLISHED

Legacy PanOptix: broad visual range.
High spectacle independence; known dysphotopsia trade-off. [6-15]

SUPPORTED

Pro: genuine optical refinement / far-intermediate continuity. [2]
Corrected distance acuity: registered noninferiority met. [3,4]

EMERGING

Early Pro distance/near clinical outcomes are encouraging. [5]
Direct contemporary comparisons remain limited.

NOT YET ESTABLISHED

Meaningful dysphotopsia or contrast-sensitivity advantage.
Magnitude of benefit over PanOptix; superiority over alternatives.

EVIDENCE IN PROGRESS [19-22]

320

Planned randomized participants / three strategies
Bilateral PanOptix • Bilateral Pro • Pro + Vivity

3-month targets: defocus • mesopic vision • contrast $\pm$ glare
QUVID • IOLSAT [19]

NCT06922084: registry currently lists recruiting; no results posted as of the evidence cutoff. Other studies: Pro/Vivity n=346 [20]; postmarket n=110 [21]; prior myopic refractive surgery n=40 [22]. Estimated completion $\neq$ available evidence.

EVIDENCE HIERARCHY AND REVIEW METHOD

How to read the evidence

Evidence cutoff: 19 September 2026. Structured narrative review.

EVIDENCE TYPE	BEST USE	INTERPRETIVE LIMIT
Comparative clinical	Randomized / masked / relevant prespecified endpoint	Observational comparisons can retain confounding
Synthesis / cohorts	Platform performance and consistency	Overlap, mixed instruments and sponsorship matter
Bench / simulation	Mechanism and controlled optical comparison	PSF / MTF / simulated perception ≠ implanted-patient outcomes
Registry / congress	Posted results, protocols and early signals	Registry ≠ journal peer review; protocol ≠ result; notice ≠ efficacy

24 RETAINED SOURCES / RELEVANT EVIDENCE PRESERVED

Search: PubMed-indexed records via Europe PMC; journal and institutional sources; ClinicalTrials.gov; manufacturer/congress searches.

Scope: Pro and legacy names; metrology; comparisons; defocus; contrast/mesopic vision; dysphotopsia; patient reports.

Full text: metrology, direct Pro comparison and key legacy syntheses/cohorts. Proprietary bench reports and full congress datasets unavailable. “Not established” ≠ no benefit. Structured narrative review, not a systematic review.

EDITORIAL INDEPENDENCE

This Evidence Review was independently conceived, researched and produced. No manufacturer reviewed or approved the manuscript before publication.

CONFLICT OF INTEREST The author declares no conflicts of interest relevant to this publication.

FUNDING No external funding was received for the preparation or publication of this Evidence Review.

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