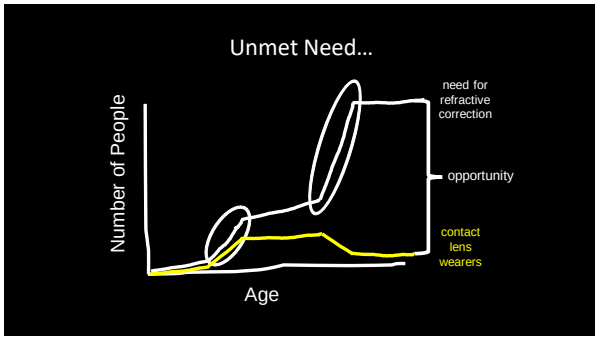
Disclosure

- Unfortunately, Mile Brujic has no financial or proprietary interest in any of the products that are mentioned
- I have received honoraria in the past 2 years for speaking, writing, participating in an advisory capacity or research from: ABB Optical, Akorn, Alcon Laboratories, Allergan, Art Optical, Avellino, Bausch + Lomb Health, Contamac, CooperVision, Euclid, Eyevance, Johnson & Johnson Vision Care, Luneau, Lenstech, Oculus, Optovue, Sight Sciences, Sun Pharma, Tangible Science, TelScreen, TruForm Optics, Valley Contax, Visionary Optics, VMax Vision, Walman Optical, Weave, Zeiss and Zea Vision
- Owner of:
  - Premier Vision Group
  - Optometric Insights
  - Brujic Consulting

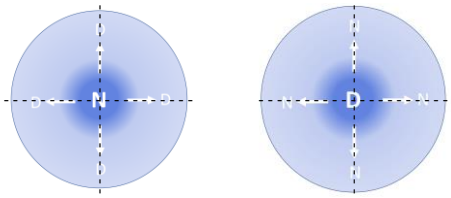


Multifocal Contact Lenses

-Daily Disposables
- -Dailies Total 1, Dailies ACP
- -Biotrue
- -MyDay, Clarity
- -Acuvue 1 Day Moist, Oasys Max

-Frequent Replacement
- -Air Optix
- -Ultra
- -Biofinity
- -Oasys

Multifocal Lens Design

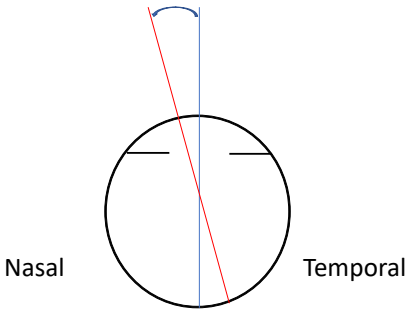


In Office Availability

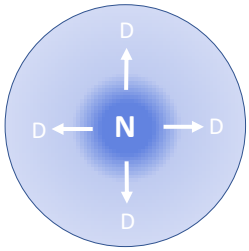
-Near center-distance periphery design
-Silicone Hydrogel – Samfilcon A
-46% water
-Sphere: +4.00 to -6.00 in 0.25D steps
-Cyl: -0.75, -1.25, -1.75, -2.25
-Axes: 10 to 180 in 10° Steps
-Low Add (up to +1.50 add)
-High Add (greater than +1.50 add)

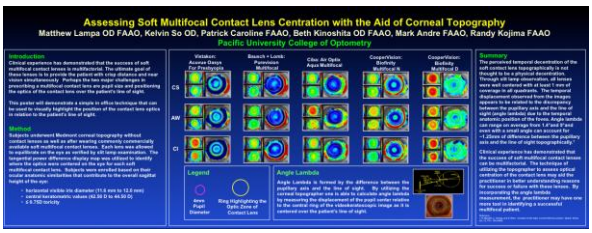
Toric Multifocal

D lens and N lens
-10.00 to -6.50; 0.50 steps
-6.00 to +6.00; 0.25 steps
+6.50 to +10.00; 0.50 steps
Cylinder Powers: -0.75 to -5.75; 0.50 steps
in 5° increments
Add Powers: +1.00, +1.50, +2.00, +2.50



Multifocal Lens Design

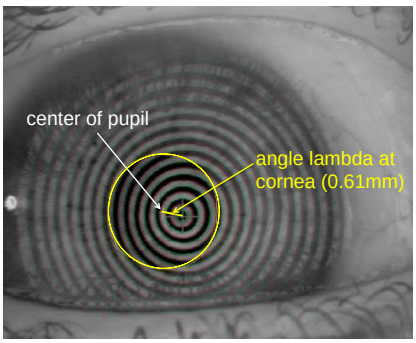


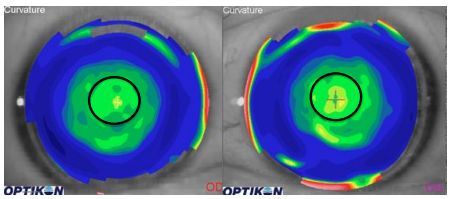


Assessing Soft Multifocal Contact Lens Centration with the Aid of Corneal Topography

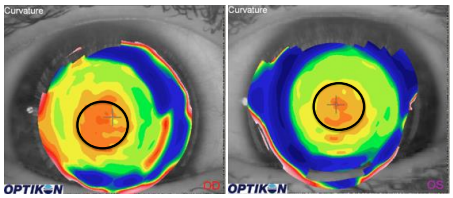
Matthew Lampa OD FAAO, Kelvin So OD, Patrick Caroline FAAO, Beth Kinoshita OD FAAO, Mark Andre FAAO, Randy Kojima FAAO

Pacific University College of Optometry

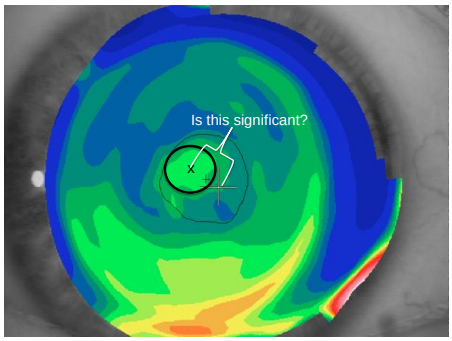




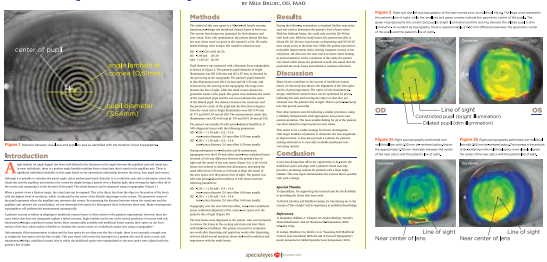
The Multifocal Success!



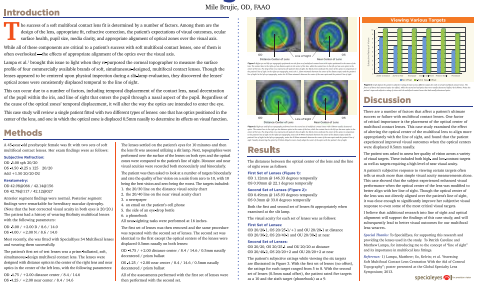
The "OK" Multifocal Experience!



How Important Is Optical Placement in Multifocal Lenses?



Effects of Line of Sight on Patients' Vision



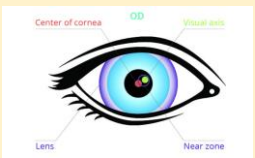
OptiSync Technology

- Available in the SpecialEyes 54 Multifocal
- Offset of multifocal optics nasally

https://specialeyesqc.com/optisync-technology.php

Scleral Lens with off center near optics

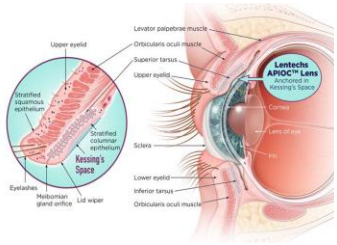
- Available in the Zenlens multifocal



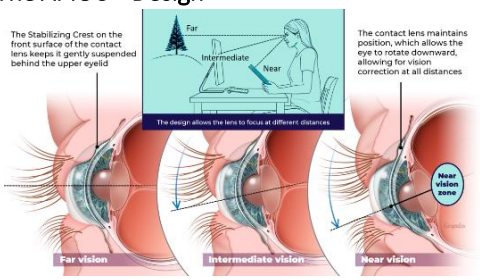
http://www.aldenoptical.com/products/soft-specialty/zen-multifocal/zen-multifocal/

APIOC™ Leverages Lid Anatomy

- Recent advances in material, engineering knowledge, and manufacturing techniques allow for suspension of soft lenses
- Uses the lid wiper as the inspiration for the unique design feature: The Stabilizing Crest™
- Balance Zones help ensure rotational stability and centration
- The unique features and optical zone allow for discrete vision correction at ntermediate and



The APIOC™ Design



Theravision

New Delivery Mechanisms

- myeyeris.com
- Advanced doctor locator
- Hioxifilcon A (59% water); 8.5/14.3/-9.00 to +2.25

New Contact Lens Technology

Infuse

- Scientists at B+L looked at the DEWS 2 report to provide guidance on the design of the lens
- Poloxamine 1107 and poloxamer 181 in lens retain lens moisture
- Erythritol and glycerin present in the lens (helps maintain ocular surface homeostasis under hyperosmotic stress)
- Potassium is critical electrolyte for ocular homeostasis

New Contact Lens Technology

New Solutions

Myopia Progression Management

U.S. FOOD & DRUG

FDA NEWS RELEASE

FDA approves first contact lens indicated to slow the progression of nearsightedness in children

For Immediate Release: November 15, 2019

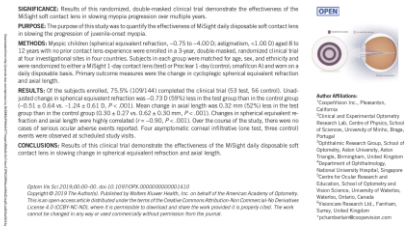
The U.S. Food and Drug Administration today approved the first contact lens indicated to slow the progression of myopia (nearsightedness) in children between the ages of 8 and 12 years old at the initiation of treatment. The MiSight contact lens is a single use, disposable, soft contact lens that is discarded at the end of each day, and is not intended to be worn overnight.

"Today's approval is the first FDA-approved product to slow the progression of myopia in children, which ultimately could mean a reduced risk of developing other eye problems," said Malvina Eydelman, M.D., director of the Office of Ophthalmic, Anesthesia, Respiratory, ENT and Dental Devices in the FDA's Center for Devices and Radiological

MiSight

- First FDA approved contact lens that slows myopic progression in children ages 8-12
  - Approved on November 18, 2019
- Launch in US March 2020

A 3-Year Randomized Clinical Trial of MiSight Lenses for Myopia Control



Paul Chamberlain, BSc,[1,*] Sofia C. Peixoto-de-Matos, MSc,[2] Nicola S. Logan, PhD,[3] Cheryl Ngo, MBBS, MMed,[4] Deborah Jones, BSc, FAAO,[5] and Graeme Young, PhD, FAAO[6]

OPEN

SIGNIFICANCE: Results of this randomized, double-masked clinical trial demonstrate the effectiveness of the MiSight soft contact lens in slowing myopia progression over multiple years.

PURPOSE: The purpose of this study was to quantify the effectiveness of MiSight daily disposable soft contact lens in slowing the progression of juvenile-onset myopia.

METHODS: Myopic children (spherical equivalent refraction, −0.75 to −4.00 D; astigmatism, ≤1.00 D) aged 8 to 12 years with no prior contact lens experience were enrolled in a 3-year, double-masked, randomized clinical trial at four investigational sites in four countries. Subjects in each group were matched for age, sex, and ethnicity and were randomized to either a MiSight 1-day contact lens (test) or Proclear 1-day (control; omafilcon A) and worn on a daily disposable basis. Primary outcome measures were the change in cycloplegic spherical equivalent refraction and axial length.

RESULTS: Of the subjects enrolled, 75.5% (109/144) completed the clinical trial (53 test, 56 control). Unadjusted change in spherical equivalent refraction was −0.73 D (59%) less in the test group than in the control group (−0.51 ± 0.64 vs. −1.24 ± 0.61 D, $P < .001$). Mean change in axial length was 0.32 mm (52%) less in the test group than in the control group (0.30 ± 0.27 vs. 0.62 ± 0.30 mm, $P < .001$). Changes in spherical equivalent refraction and axial length were highly correlated ($r = -0.90$, $P < .001$). Over the course of the study, there were no cases of serious ocular adverse events reported. Four asymptomatic corneal infiltrative (one test, three control) events were observed at scheduled study visits.

CONCLUSIONS: Results of this clinical trial demonstrate the effectiveness of the MiSight daily disposable soft contact lens in slowing change in spherical equivalent refraction and axial length.

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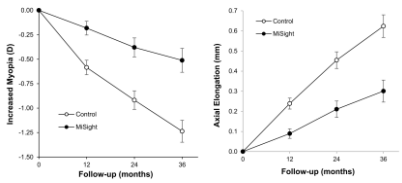
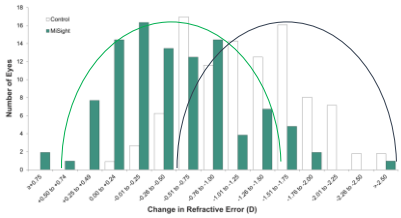
[3]Department of Ophthalmology, National University Hospital, Singapore
[4]Centre for Ocular Research and Education, School of Optometry and Vision Science, University of Waterloo, Waterloo, Ontario, Canada
[5]Vistacare Research Ltd., Farnham, Surrey, United Kingdom
[*]pchamberlain@coopervision.com

Optom Vis Sci 2019;00:00–00. doi:10.1097/OPX.0000000000001410

Misight Data

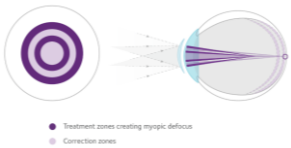


Misight Data

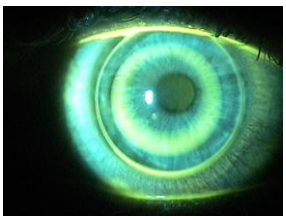


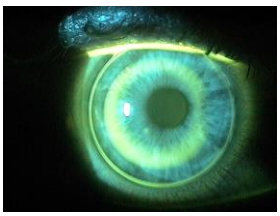
Parameters

- Daily wear, daily disposable lens
- Material: Omafilcon A
- 8.7mm base curve, 14.2mm diameter
- ActivControl Technology
  - Central correction area of 3.36mm
  - Concentric zones of alternating distance and near powers

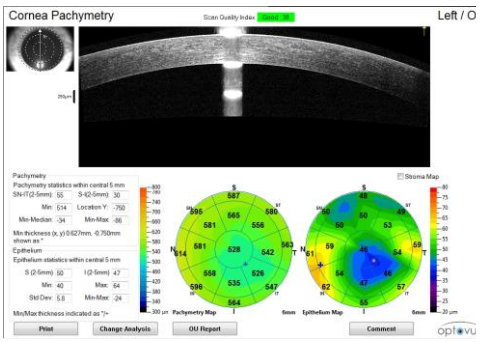


Orthokeratology





Ortho K



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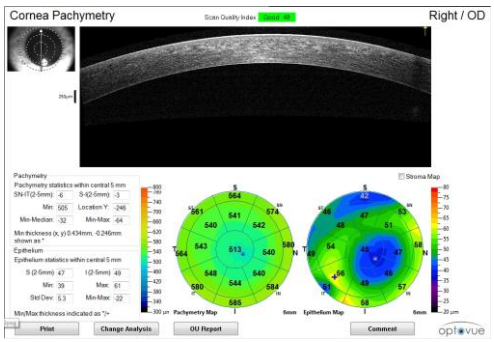
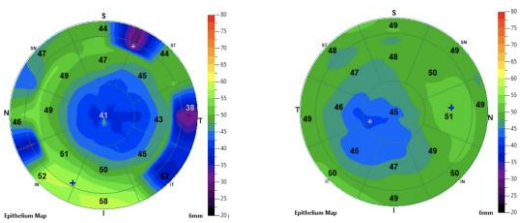
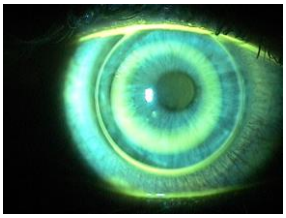
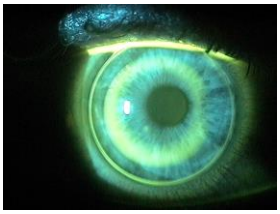


Anterior Segment OCT for Orthokeratology



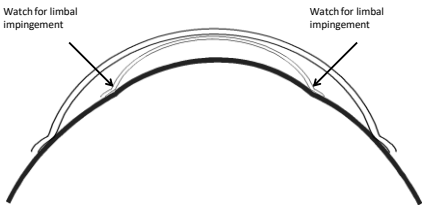
Orthokeratology

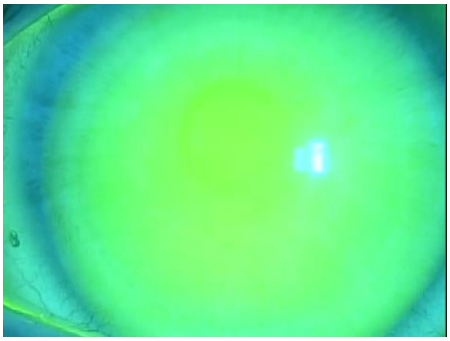


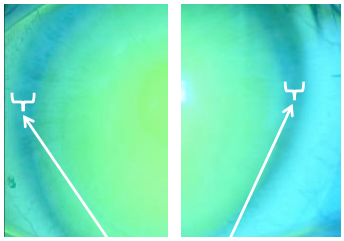


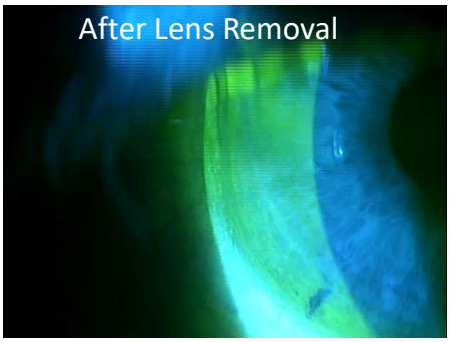
Pupil size

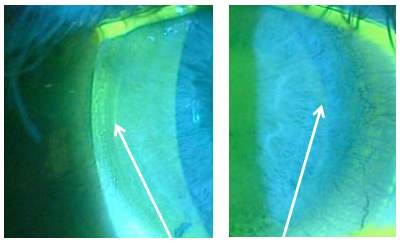
Limbal Impingement

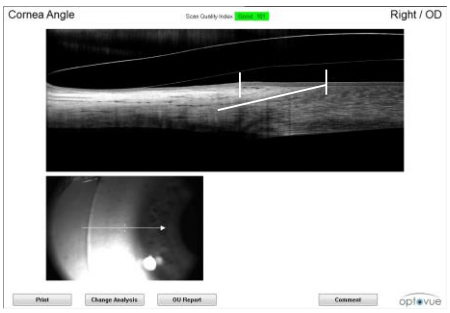




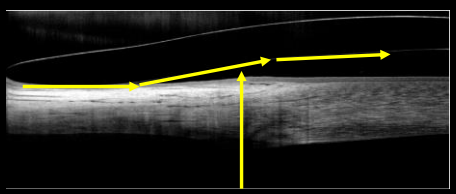






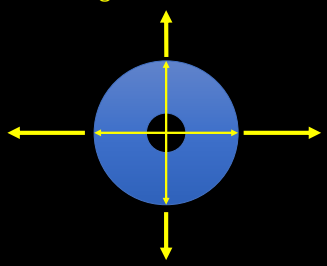


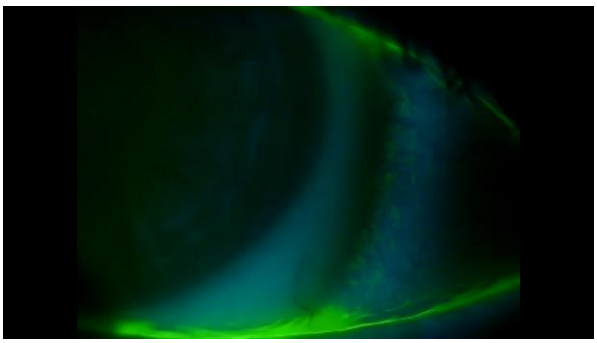
Scleral Lens Advancement

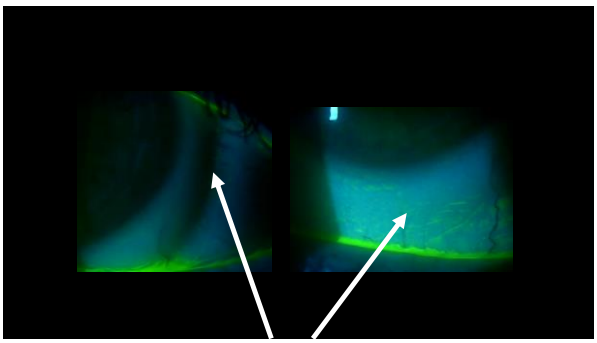


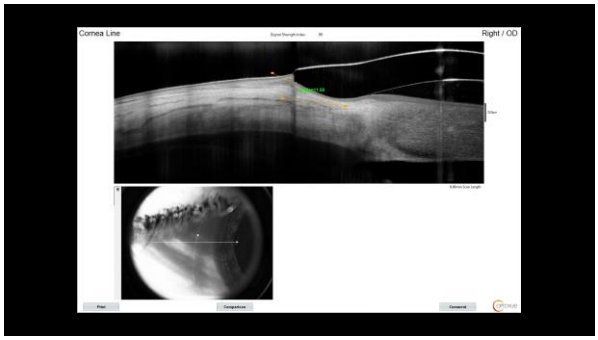
Assures limbal clearance

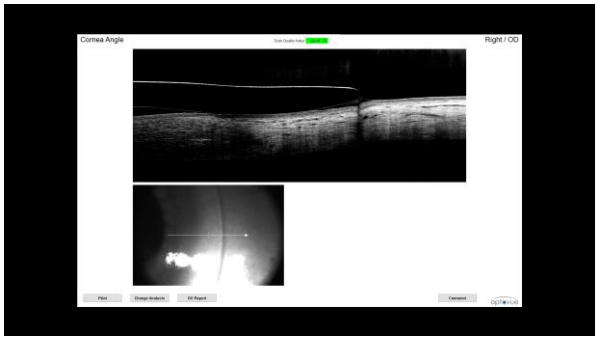
The Challenge

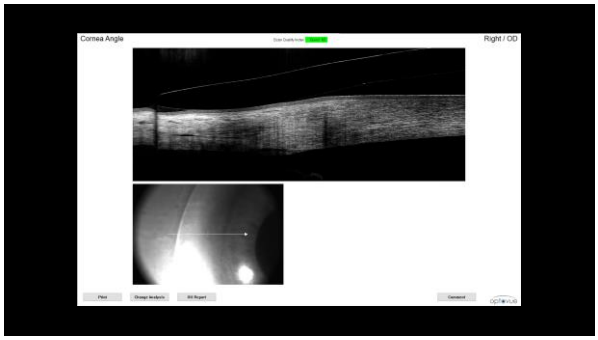


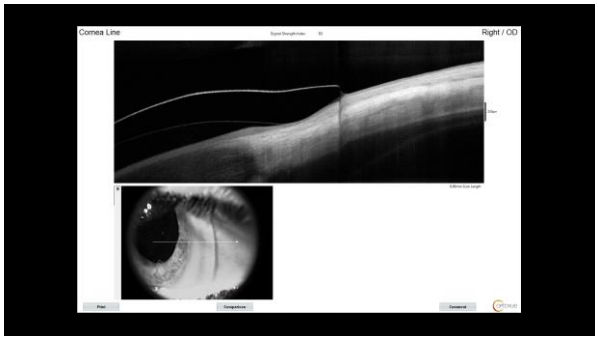


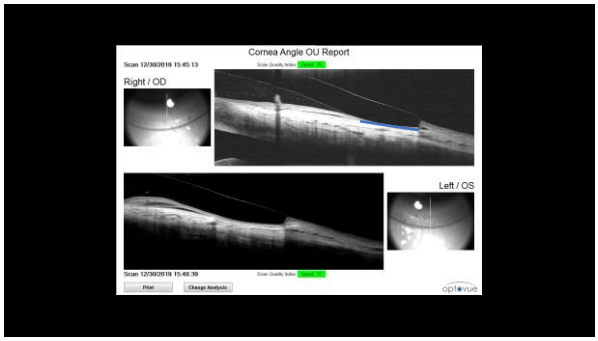


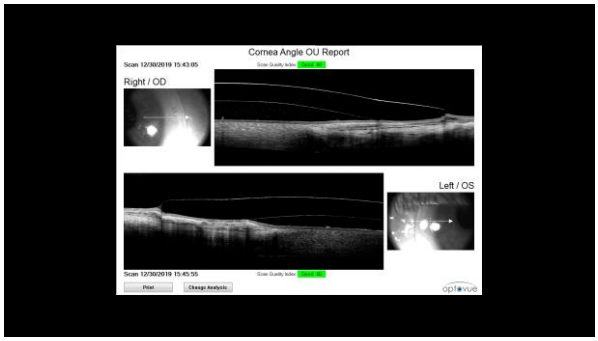

Cornea Line
Right / OD

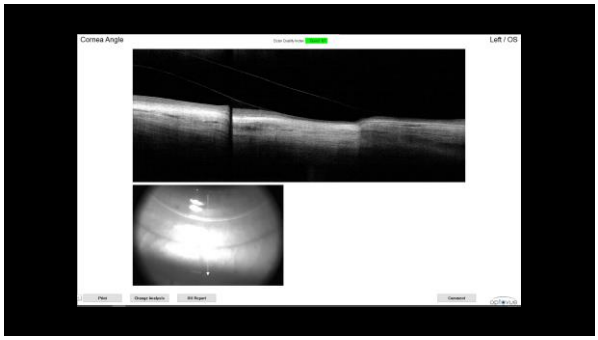

Cornea Angle
Right / OD

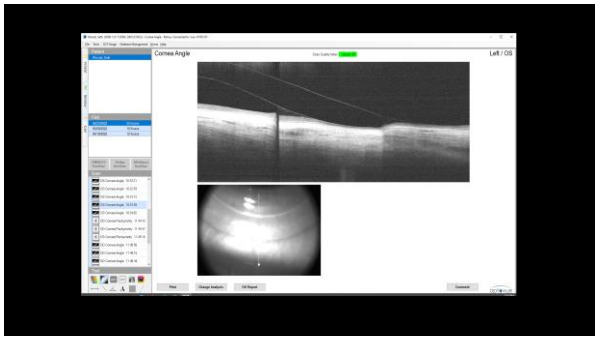

Cornea Angle
Right / OD

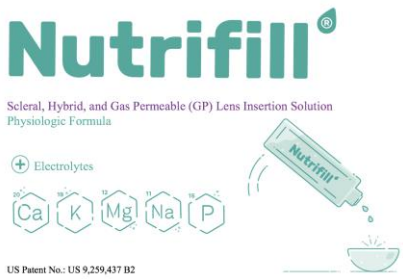

Cornea Line
Right / OD


Cornea Angle OU Report
Right / OD
Left / OS


Cornea Angle OU Report
Right / OD
Left / OS







Evaluation of Contact Lens Saline Solutions with Scleral GP Contact Lens Wearers Experiencing Fogging

- 36 subjects enrolled from three clinical sites (12 patients/site):
- Dr. Jeff Sonsino (Nashville, TN)
- Dr. Stephanie Woo (Lake Havasu, AZ)
- Dr. Mile Brujic (Bowling Green, OH)

Evaluation of Contact Lens Saline Solutions with Scleral GP Contact Lens Wearers Experiencing Fogging

- Existing scleral lens wearers
- Three visit study
- Patient randomized to either test product or control at visit #1
- Utliize for 2 weeks and is then seen for visit #2
- Patient utilizes other product for 2 weeks
- Patient is seen for visit #3

Evaluation of Contact Lens Saline Solutions with Scleral GP Contact Lens Wearers Experiencing Fogging

- TEST PRODUCT:
  - Sodium chloride, calcium chloride dehydrate, potassium chloride, sodium phosphate dibasic and magnesium chloride hexahydrate in purified water
- CONTROL PRODUCT 1:
  - 0.9% sodium chloride
- CONTROL PRODUCT 2:
  - Boric acid, sodium borate, and sodium chloride in purified water

Evaluation of Contact Lens Saline Solutions with Scleral GP Contact Lens Wearers Experiencing Fogging

- Age range (21 to 77 years old)
- Comfort scores were equal among the test and control products
- Number of hours worn (Test product12.5 hrs, control12.7 hrs; no difference)
- Number of hours of perceived comfort (test product 11.1 hrs, control product 11.3 hrs; no difference)
- Number of times contact lens was removed during day (no difference)
- Measured Visual Acuity (no difference)

	Test Product		Control #1		Control #2	
	N	Mean	N	Mean	N	Mean
Fogging	36	50%	16	50%	18	61%
MidDay_Cleaning	36	39%	17	41%	18	50%
Lens_Awareness	36	53%	17	71%	18	39%
Wetability	36	19%	18	28%	18	22%
SurfaceDeposit	36	22%	18	17%	18	11%
Centration	36	6%	18	0%	18	6%
Movement	36	8%	18	0%	18	11%

Evaluation of Contact Lens Saline Solutions with Scleral GP Contact Lens Wearers Experiencing Fogging

- Further questions:
- What is the objective hyperemic scores?
- What is the objective fogging of the post lens tear film resevoir?
- What is the effects on epithelial thickness after exposure to various formulations?

Scleral Lens Insertion

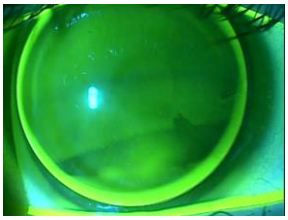
Scleral Lens Insertion

https://www.seegreenlight.com/

Scleral Lens Insertion

https://augmentedvisionlabs.com/

GP Lenses




Tangible Hydra-PEG

- Polymer encapsulates lens
- Improves wettability
- Increases surface water retention
- Increases lubricity
- Reduces deposits

Tangible Hydra-PEG

Without Tangible Hydra-PEG

With Tangible Hydra-PEG

Lens Cleaning Regimen

Compatible Multi-Purpose Solutions

Compatible Peroxide Solutions

Tangible Hydra-PEG

- Cannot use abrasive cleaners
- Cannot use water to rinse lenses
- Tangible Boost
  - Will re-build the tangible coating on the lens

OPTIMUM INFINITE

New high oxygen permeable material
Tisifilcon A
180 Dk

Thank You

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