



CooperVision®  
Specialty EyeCare

Paragon  
CRT®

SPECTRUM  
INTERNATIONAL



**FITTING GUIDE**



## ABOUT PARAGON CRT® CONTACT LENSES

Paragon CRT® (Corneal Refractive Therapy) Contact Lenses are rigid gas permeable contact lenses approved for overnight wear. Paragon Vision Sciences is the only company to manufacture its own lens designs (Paragon CRT® and Paragon CRT Dual Axis®) and lens material (HDS®100). Both the lens designs and the material are FDA-approved for overnight wear.<sup>1</sup>

### FDA-APPROVAL INCLUDES:

<b>MYOPIA</b>	<b>ASTIGMATISM</b>
≤-6.00D	≤1.75D

The approval is for patients of all ages.

## CERTIFICATION

The U.S. Food and Drug Administration (FDA) requires eye care professionals to be trained and certified prior to using and prescribing overnight orthokeratology lenses. Please visit [ParagonVision.com/ecp](https://www.paragonvision.com/ecp) to become certified and receive your unique CRT certification number.

1. FDA Approval Letter, 200

## LENS PREPARATION

Paragon CRT® Contact Lenses are manufactured in individual vials containing gas permeable lens disinfection solution.



**Wash hands thoroughly prior to lens handling.**



**The lens may be rinsed with preservative-free saline solution prior to application.**



**Inspect the lens prior to application. If you have any concern after visual inspection, do not apply the lens.**



**A drop of preservative-free artificial tears can be applied to the back surface of the lens prior to application.**



**Rinse and massage gas permeable lens conditioning solution onto front and back surface of Paragon CRT® lens.**



**NEVER USE TAP WATER.** Tap water poses risk of infection.

# LENS DISINFECTION



Wash hands thoroughly prior to lens handling.



Store lenses in a contact lens case with gas permeable solution of choice when not being used.



Remove Paragon CRT® lens manually or utilize a removal plunger.



Cases and plungers should be cleaned daily and replaced according to manufacturer guidelines.



Follow disinfection solution guidelines, including rubbing the lenses when indicated.



**NEVER USE TAP WATER.** Tap water poses risk of infection.

RECOMMENDED SOLUTIONS FOR CLEANING AND DISINFECTION

UNIQUE PH

BOSTON SIMPLUS

# SELECTING AN INITIAL PARAGON CRT® LENS

## 1. ELECTRONIC LENS CALCULATOR

Visit [ecp.paragonvision.com/practitioner-resources](http://ecp.paragonvision.com/practitioner-resources) to download the initial lens calculator which will calculate the first recommended Paragon CRT® or Paragon CRT Dual Axis® lens for your patient.

### REQUIRED:

- Keratometry values (in mm or Diopters)
  - Manifest refraction sphere (in minus cylinder form)
  - Select lens diameter based patient's HVID.
- HVID-1MM= LENS DIAMETER (ROUNDED TO NEAREST 0.5MM)

## PARAGON CRT® LENS PARAMETERS

	POWER	DIAMETER	BASE CURVE	RZD <sub>1</sub> /RZD <sub>2</sub> <i>max difference 200µm</i>	LZA <sub>1</sub> /LZA <sub>2</sub> <i>max 5° difference</i>
Parameters	-2.00D to +2.00D	9.5 - 12mm	6.5 - 10.5mm	400-800µm	25° to 40°
Adjustments	0.25D	0.5mm	0.1mm	25µm	1°
MATERIALS		TINTS		CENTER THICKNESS	
Paragon HDS®100   Optimum Infinite*		● Green ● Blue ● Red ● Yellow		0.16mm   0.22mm**	

\*Lenses made of Optimum Infinite are only available in Green and Red.

\*\*Paragon CRT Dual Axis® lenses already incorporate increased lens thickness

## 2. PHONE CONSULTATION

For consultative support, call +1 (470) 816-4005 Ext. 810 or email [consultations@spctinternational.com](mailto:consultations@spctinternational.com). Our team of consultants are here to help you customize your patient's first diagnostic lens or troubleshoot if needed.

### REQUIRED:

- Practitioner Certification Number.
- Keratometry values (in mm or Diopters).
- Manifest Refraction.
- Corneal Diameter size (HVID, WTW).
- Topography if available.

# DIAMETER

## ABOUT

- The diameter provides centration of a Paragon CRT® lens
- Measured in millimeters (mm), 0.5mm steps
- Adjusted based on patient's HVID

HVID-1MM= LENS DIAMETER (ROUNDED TO NEAREST 0.5MM)

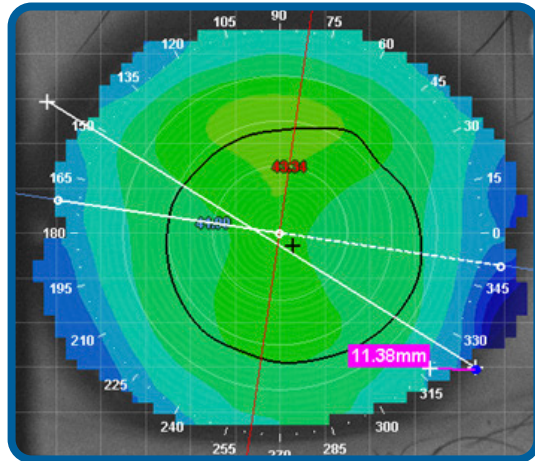
## ADJUSTMENT

Insufficient coverage

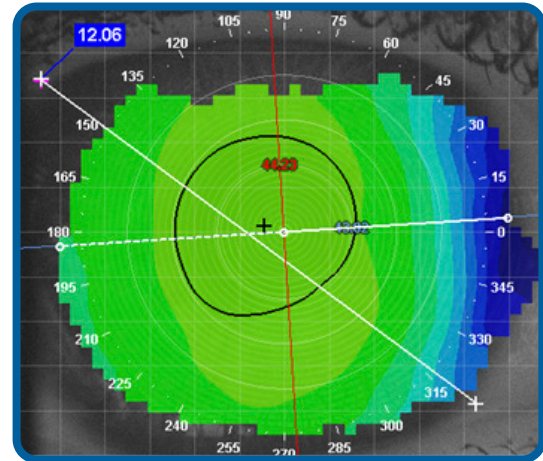
Increase diameter (Ex: 10.5mm to 11.0mm)

Excessive coverage

Decrease diameter (Ex: 11.0mm to 10.5mm)



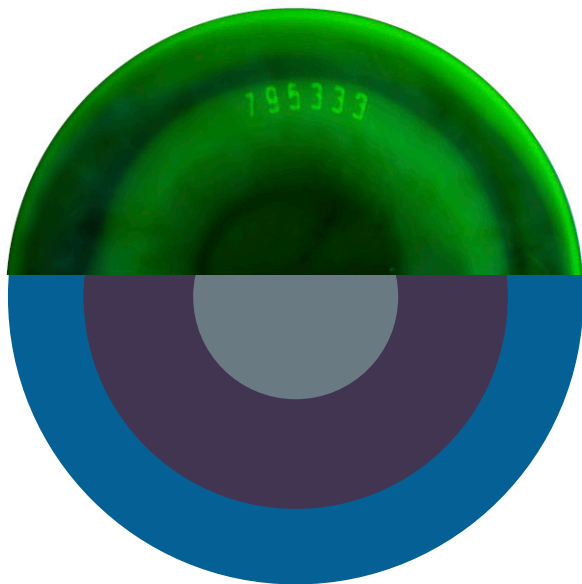
Example: 11.38mm - 1mm = 10.38mm  
Recommend diameter → 10.50mm



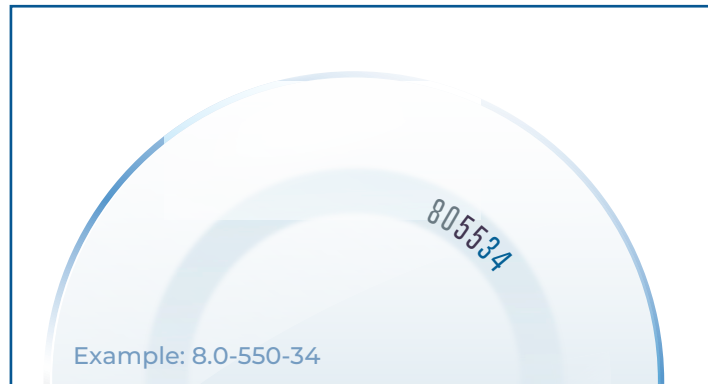
Example: 12.06mm - 1mm = 11.06mm  
Recommend diameter → 11.00mm

# PARAGON CRT® LENS DESIGN

- BASE CURVE OPTIC ZONE (BC)
- RETURN ZONE (RZD)
- LANDING ZONE (LZA)



*Paragon CRT® Contact Lens parameters are laser marked inside the RZD of the lens for easy identification.*



RZD is rounded to the nearest two digits | Example: 525 (53), 550 (55), 575 (58)



# BASE CURVE (BC)

## ABOUT

- The base curve provides the mold for the orthokeratology treatment for myopia correction
- Measured in millimeters of radius (mm), adjusted in 0.1mm increments.
- Adjusted only when the Refraction Over Lens (ROL) is not at target: **+0.50D to +1.00D**.

## EXAMPLE

BC 8.8 and Refraction Over Lens: Plano.

An additional 1.00D of treatment is needed to reach ROL target of +1.00D

New BC: 9.0mm.

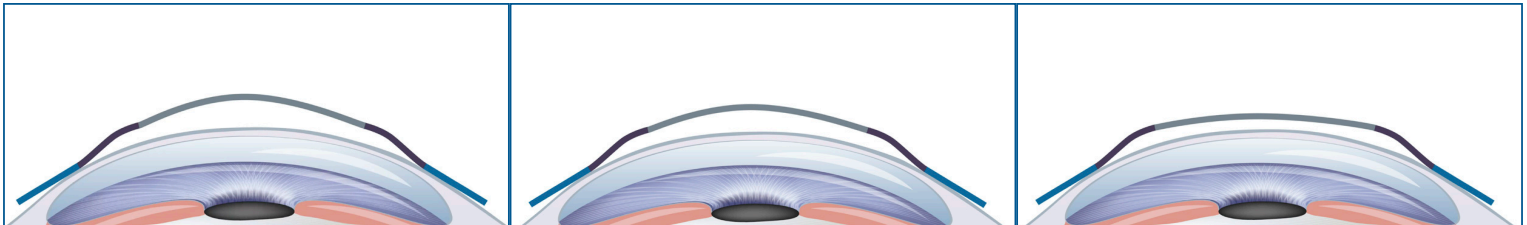
## ADJUSTMENT

ROL is more myopic than +0.50D

Flatten BC (Ex: 8.9mm to 9.0mm)

ROL is more hyperopic than +1.00D

Steepen BC (Ex: 8.9mm to 8.8mm)





# RETURN ZONE DEPTH (RZD)

## ABOUT

- The Return Zone Depth provides the sagittal depth of a Paragon CRT® lens.
- Measured in microns of sagittal depth ( $\mu\text{m}$ ), adjusted in  $25\mu\text{m}$  increments.
- Adjust Return Zone Depth to manage overall sagittal lens depth. The ideal sagittal depth will provide good centration and the uniform landing of the lens on the cornea.

## EXAMPLE

- ↑ RZD from 575 to 600 raises the lens  $25\mu\text{m}$  from the cornea
- ↓ RZD from 575 to 550 lowers the lens  $25\mu\text{m}$  to the cornea

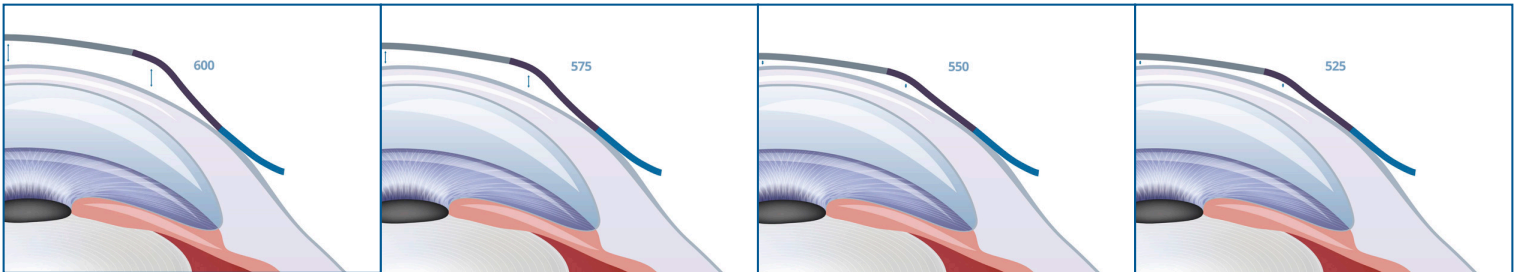
## ADJUSTMENT

If sagittal depth is excessive

Decrease RZD (Ex:  $575\mu\text{m}$  to  $550\mu\text{m}$ )

If sagittal depth is inadequate

Increase RZD (Ex:  $550\mu\text{m}$  to  $575\mu\text{m}$ )



# LANDING ZONE ANGLE (LZA)

## ABOUT

- The Landing Zone Angle provides the amount of edge lift.
- Measured in degrees ( $^{\circ}$ ), adjusted in  $1^{\circ}$  increments.
- LZA contributes to the overall sagittal depth of the Paragon CRT<sup>®</sup> lens. For every  $1^{\circ}$  change, there is a  $15\mu\text{m}$  change in sagittal depth.

## EXAMPLE

Steepening LZA from  $33^{\circ}$  to  $34^{\circ}$  will decrease Edge Lift and increase the sagittal depth of the lens by  $15\mu\text{m}$ .

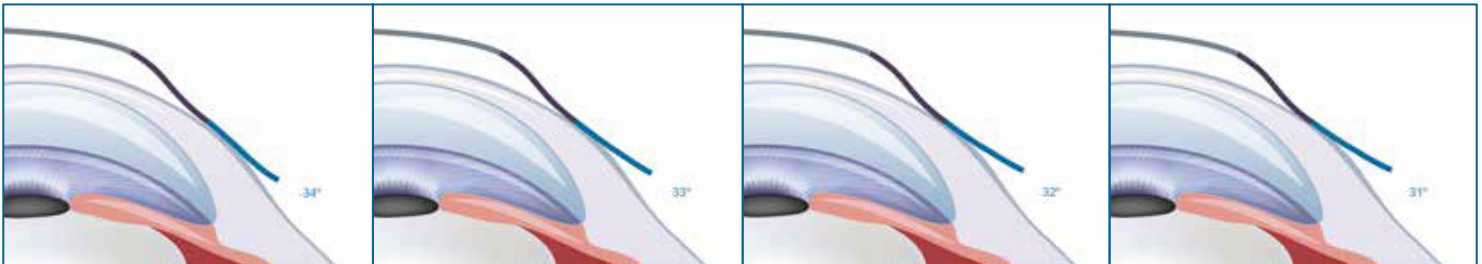
## ADJUSTMENT

Edge lift > 1.0mm

Steepen LZA (Ex:  $32^{\circ}$  to  $33^{\circ}$ )

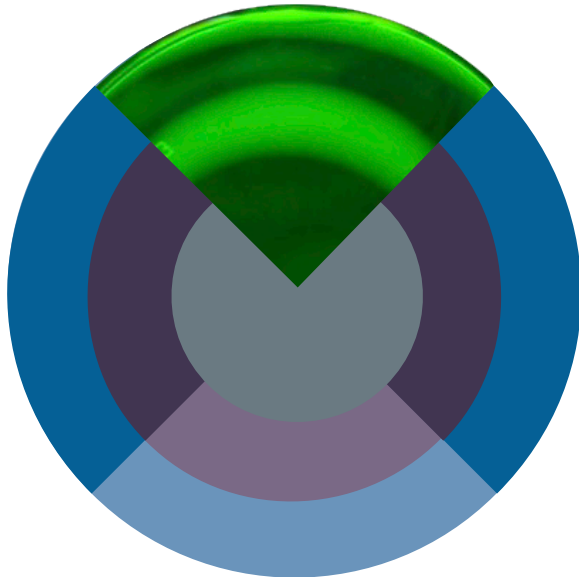
Edge lift < 0.5mm

Flatten LZA (Ex:  $32^{\circ}$  to  $31^{\circ}$ )



# PARAGON CRT DUAL AXIS® LENS DESIGN

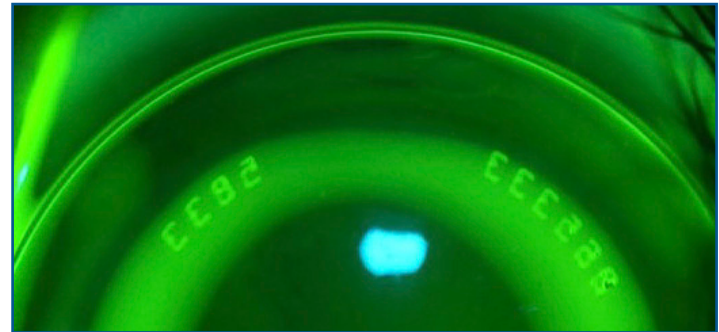
- BASE CURVE OPTIC ZONE
- RZD<sub>1</sub>    ● LZA<sub>1</sub>
- RZD<sub>2</sub>    ● LZA<sub>2</sub>



*Paragon CRT Dual Axis® laser markings are 90° apart.*



*When applied to the patient's cornea, a CRT Dual Axis® lens will rotate such that the steep meridian of the lens aligns with the cornea's steep meridian.*

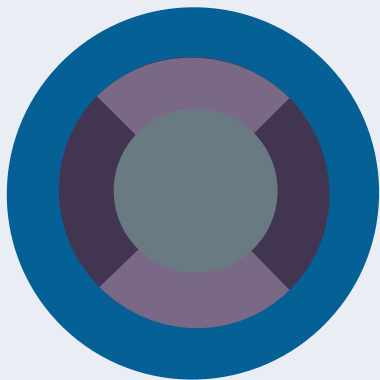


# FEATURES OF A PARAGON CRT DUAL AXIS® LENS

Dual depth return zones

**RZD<sub>1</sub> / RZD<sub>2</sub>**

Enhances uniform landing  
on a toric cornea



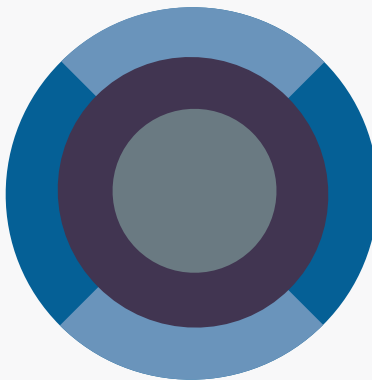
EXAMPLE:

8.5-500/550-33

Dual landing zones

**LZA<sub>1</sub> / LZA<sub>2</sub>**

Enhances edge lift on a  
toric peripheral cornea



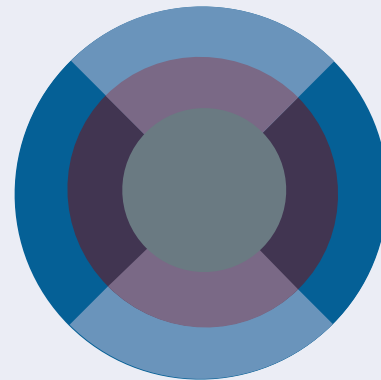
EXAMPLE:

8.5-500-33/34

Dual return and  
landing zones

**RZD<sub>1</sub> / RZD<sub>2</sub> LZA<sub>1</sub> / LZA<sub>2</sub>**

Enhances overall  
centration and treatment



EXAMPLE:

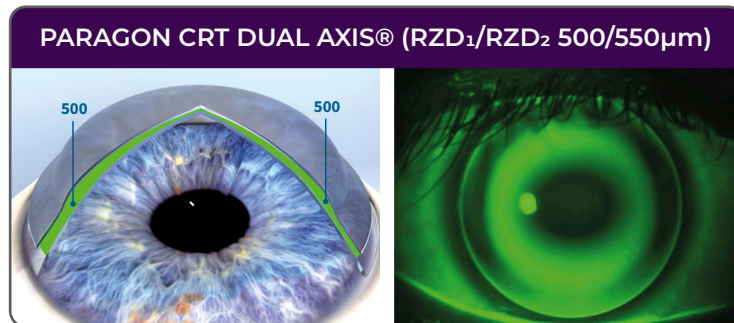
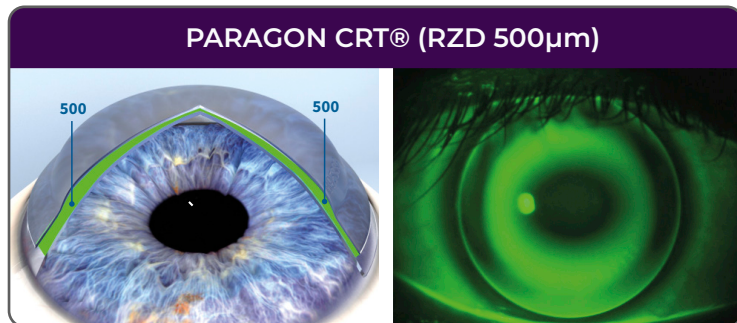
8.5-500/550-33/34

## CRT DUAL AXIS® RETURN ZONE DEPTH (RZD<sub>1</sub>/RZD<sub>2</sub>)

When the mid-peripheral cornea exhibits toricity upon fluorescein evaluation, a dual depth Return Zone is recommended.

- When the landing of the lens is not uniform, or there appears to be NaFl leaking between the Return Zone and Landing Zone, a dual RZD is required.
- Consider utilizing a dual depth Return Zone (RZD<sub>1</sub>/RZD<sub>2</sub>) by keeping the current RZD as RZD<sub>1</sub> and adding 50µm to create RZD<sub>2</sub>.

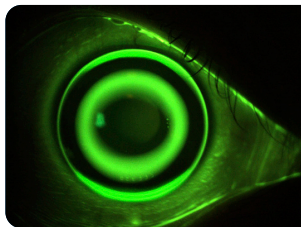
Example: 8.6-550-33 change to 8.6-550/600-33



# CRT DUAL AXIS® LANDING ZONE ANGLE (LZA<sub>1</sub>/LZA<sub>2</sub>)

When the peripheral cornea exhibits toricity upon fluorescein evaluation, a Dual Axis Landing Zone Angle is recommended.

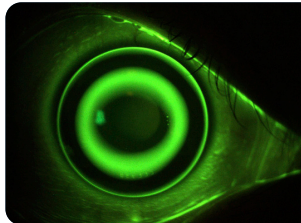
- Increased lens edge thickness in the steep meridian allows the lens edge to land uniformly on an even surface.
- When edge lift is not uniform or appears to be adequate in one meridian but too thin in another meridian a dual Landing Zone is needed.
- Consider utilizing a dual Landing Zone (LZA<sub>1</sub>/LZA<sub>2</sub>) by keeping the current LZA and steepen LZA<sub>2</sub> if edge lift is too excessive.



## EXAMPLE: LZA 32°

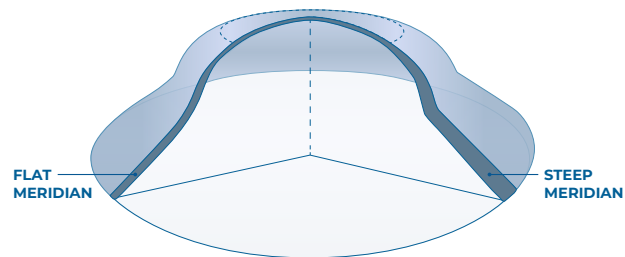
- Excessive edge lift superior and inferior
- Adequate edge lift nasal and temporal.

*A dual LZA is needed for this toric cornea.*



## EXAMPLE: LZA 32°/33°

*A dual LZA now provides adequate edge lift 360°*



# FOLLOW UP

1 DAY

1 WEEK

1 MONTH

3 MONTHS

## EXAM WITH LENSES ON EYE

- Check visual acuity
- Perform Refraction Over Lens (ROL)
- Perform slit lamp examination to evaluate centration and fluorescein pattern
  - Bull's eye pattern, lens centered on cornea
  - If bubbles attempt re-insertion with artificial tears to see if consistent
  - 3-4mm treatment zone
  - Uniform lens landing
  - 0.5-1mm uniform edge lift
- Reinforce proper application and removal technique

## EXAM WITH LENSES REMOVED

- Check visual acuity
- Perform auto-refraction and subjective refraction
- Assess corneal health
- Topography (if available)

# DIAGNOSTIC LENS EVALUATION



## WHAT TO EXPECT AT A 1-DAY FOLLOW UP EXAMINATION

- Optimal centration
- ROL is in range (+0.50 to +1.00)
- Slit lamp examination is unremarkable
- Treatment is 50-70% of target correction as measured by auto-refraction



## WHEN TO CHANGE A PARAGON CRT® CONTACT LENS

*Make a change to a dispensed lens when findings include:*

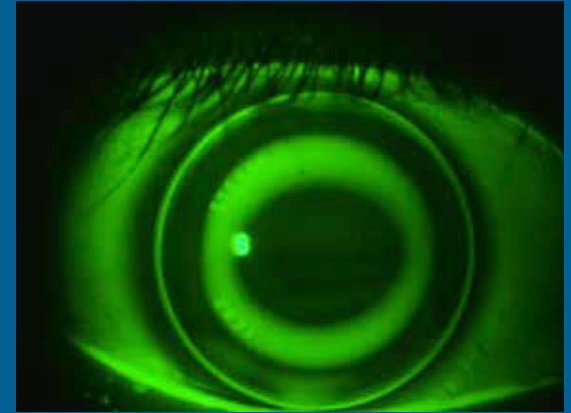
### At 1-Day Follow Up

- Moderate to severe corneal epithelial defects
- Insufficient edge lift resulting in lens binding
- No clearance or tear film resulting in lens binding
- ROL is not at target

### At 1-Week Follow Up

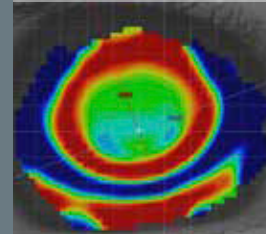
- > 0.5mm of decentration on topography
- Uneven treatment seen on post-treatment topography
- Undercorrection

## PROPER FIT OF A CRT DUAL AXIS® LENS

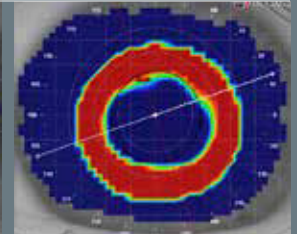


## IDEAL TOPOGRAPHY OUTCOMES

1 Day

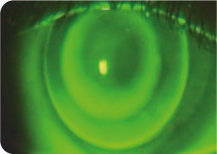
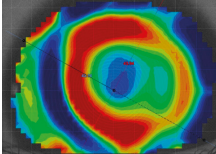
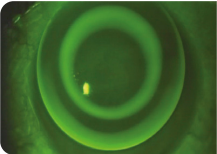
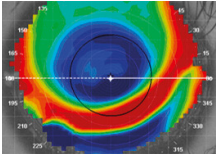
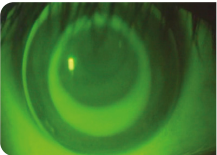
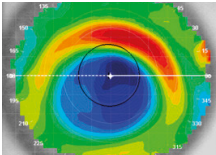
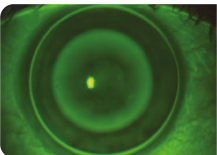
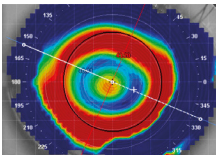

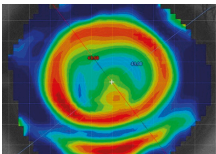


1 Week

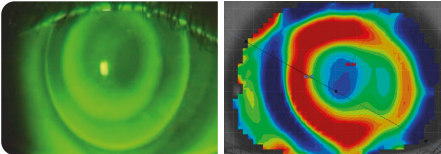
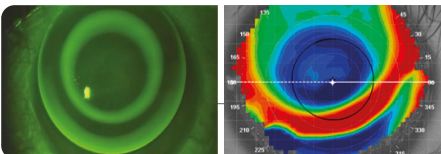
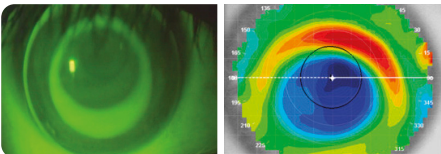
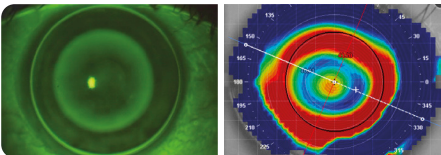
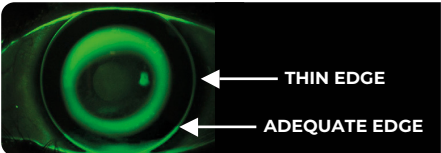




# PARAGON CRT® TROUBLESHOOTING

		<b>LATERAL DECENTRATION</b>	<b>ADJUSTMENT</b>	<b>EXAMPLE</b>
		FIRST	Increase Diameter	10.5mm to 11.0mm
		SECOND	Increase RZD	8.6- <b>550</b> -33 to 8.6- <b>575</b> -33
		<b>SUPERIOR DECENTRATION</b>	<b>ADJUSTMENT</b>	<b>EXAMPLE</b>
		SMALL TREATMENT ZONE	Utilize CRT Dual Axis®	8.6- <b>550</b> -33 to 8.6- <b>550/600</b> -33
		LARGE TREATMENT ZONE	Increase RZD	8.6- <b>550</b> -33 to 8.6- <b>575</b> -33
		<b>INFERIOR DECENTRATION</b>	<b>ADJUSTMENT</b>	<b>EXAMPLE</b>
		TIGHT EDGE LIFT	Increase Diameter + Flatten LZA	8.6-525- <b>33-10.5</b> to 8.6-525- <b>32-11.0</b>
		0.5-1.0 MM EDGE LIFT	Increase diameter	10.5mm to 11.0mm
		<b>CENTRAL ISLAND</b>	<b>ADJUSTMENT</b>	<b>EXAMPLE</b>
		FIRST	Flatten LZA	8.6-550- <b>34</b> to 8.6-550- <b>33</b>
		SECOND	Decrease RZD	8.6- <b>525</b> -33 to 8.6- <b>500</b> -33
		<b>ASYMMETRICAL PERIPHERAL ALIGNMENT</b>		
		FIRST	Utilize Paragon CRT Dual Axis® RZD <sub>1</sub> /RZD <sub>2</sub>	8.6- <b>550</b> -33 to 8.6- <b>550/600</b> -33

# PARAGON CRT DUAL AXIS® TROUBLESHOOTING

	<b>LATERAL DECENTRATION</b>	<b>ADJUSTMENT</b>	<b>EXAMPLE</b>
	FIRST	Increase Diameter	10.5mm to 11.0mm
	SECOND	Increase RZD <sub>2</sub>	8.6-500/ <b>550</b> -33 to 8.6-500/ <b>575</b> -33
	<b>SUPERIOR DECENTRATION</b>	<b>ADJUSTMENT</b>	<b>EXAMPLE</b>
	SMALL TREATMENT ZONE	Increase RZD <sub>2</sub>	8.6-550/ <b>575</b> -33 to 8.6-550/ <b>600</b> -33
	LARGE TREATMENT ZONE	Increase RZD <sub>1</sub> /RZD <sub>2</sub>	8.6- <b>550</b> / <b>575</b> -33 to 8.6- <b>575</b> / <b>600</b> -33
	<b>INFERIOR DECENTRATION</b>	<b>ADJUSTMENT</b>	<b>EXAMPLE</b>
	TIGHT EDGE LIFT	Increase Diameter + Flatten LZA	8.6-525/ <b>575</b> - <b>33-10.5</b> to 8.6-525/ <b>575</b> - <b>32-11.0</b>
	0.5-1.0 MM EDGE LIFT	Increase diameter	10.5mm to 11.0mm
	<b>CENTRAL ISLAND</b>	<b>ADJUSTMENT</b>	<b>EXAMPLE</b>
	TIGHT EDGE LIFT	Flatten LZA	8.6-550/ <b>600</b> - <b>34</b> to 8.6-550/ <b>600</b> - <b>33</b>
	0.5-1.0 MM EDGE LIFT	Decrease RZD <sub>1</sub>	8.6- <b>500</b> / <b>550</b> -33 to 8.6- <b>475</b> / <b>550</b> -33
 <p>← THIN EDGE</p> <p>← ADEQUATE EDGE</p>	<b>ASYMMETRICAL EDGE LIFT</b>		
	FIRST	Utilize Paragon CRT Dual Axis® LZA <sub>1</sub> /LZA <sub>2</sub>	8.6-550- <b>33</b> to 8.6-550- <b>32/33</b>

# TIPS FOR EFFECTIVE CONSULTATION

## TIPS FOR EFFECTIVE CONSULTATION

### NEW PATIENT

- Keratometry values
- Refraction
- HVID
- Baseline Topography (Axial/Power Map)

### EXISTING PATIENT

- Current Issue (Decentration, Staining, Undertreatment)
- Refraction over lenses (+0.50 to +1.00 optimal)
- Subjective Refraction
- Fluorescein Pattern (Photos if available)
- Topography (Tangential / Instantaneous Maps )
- HVID/Corneal Diameter Size

**Phone: +1 (470) 208-7030**

**E-mail: [sales@spctinternational.com](mailto:sales@spctinternational.com)**



A close-up photograph of a woman with brown hair tied back, smiling as a dentist uses a microscope to examine her teeth. The dentist's hands and the microscope are visible in the foreground, slightly out of focus. A blue banner with white text is overlaid at the top of the image.

## BECOME PARAGON CRT CERTIFIED

**[VISIT : PARAGONVISION.COM/GETCERTIFIED](https://www.paragonvision.com/getcertified)**

Certification for Paragon CRT® is not only an FDA requirement, but is an essential part of Our investment in your education and training. Certification ensures that you are on the right path to delivering optimum treatment outcomes to your patients.

We wish you the best of luck as you take these first steps towards expanding your practice.



CooperVision®  
Specialty EyeCare

Paragon  
CRT®

S P E C T R U M  
I N T E R N A T I O N A L

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