

Practice Development Series

Multifocal Contact Lenses

Q&A with Thomas Quinn, OD, MS, FAAO

An interview with Craig W. Norman, FCLSA



Craig Norman

Dr. Tom Quinn, thank you for getting together with me to answer a few followup questions from the many attendees of the June 13, 2019 Practice Development Educational Series webinar sponsored by ABB Optical.

To begin with, "How often ever do you consider monovision as an initial fit for the presbyopic patient?"

Dr. Quinn

Due to the compelling evidence that finds multifocals preferred over monovision in approximately 7 out of 10 patients, I rarely start with monovision.

However, if I have a patient successfully wearing distance OU toric soft contact lenses move into presbyopia, I might start with monovision. This is done due to the simplicity of the approach and the hassles associated with fitting custom toric soft multifocals.

New toric soft multifocals are now being introduced that should make fitting this modality much easier, reducing the likelihood that I would start with monovision in these cases.

Craig Norman

You mentioned that astigmatism is a major decision driver when selecting a lens option for the presbyope. Can you expand on why that's the case?

Dr. Quinn

Multifocal optics are complex. Blur associated with uncorrected astigmatism layered over multifocal optics can be so disturbing it leads to failure. Astigmatism of 0.75 D needs to be corrected for multifocal optics to perform well.

Craig Norman

Do you consider multifocal optics for your scleral lens wearers? Do you have any tips when choosing a design for these patients?

Dr. Quinn

I will consider multifocal optics for scleral lens wearers who are able to achieve reasonably good (20/30 or better) distance acuity in single vision sclerals.

If higher order aberrations or scarring limits best corrected vision with single vision optics, it will make it challenging to provide the desired near vision.

As with any multifocal lens with simultaneous vision optics (the design of all currently available scleral lenses), the lower the add, the greater chance of success.

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There are quite a few design options available in multifocal scleral lenses. I recommend you start by working with the lab you have had success with when fitting single vision scleral lenses.

Craig Norman

Corneal GP designs remain excellent alternative for some presbyopes. When do you consider these?

Dr. Quinn

The best candidates for corneal GP multifocals are patients who are successfully wearing single vision corneal GPs.

However, another very attractive group is those are motivated for contact lenses and have high visual demands, especially if they have corneal astigmatism because the GP lens will also correct astigmatism.

Those with particularly high visual demands, I start with a translating GP multifocal design.

Craig Norman

Do you have any tips for prescribing a translating GP bifocal, for instance in where the segment height (or heights) should be placed?

Dr. Quinn

Many hesitate to fit translating corneal GP designs because they don't know where to start with placement of the segment height.

If the lower lid is tangent to the lower limbus, place the seg line 1 mm below the geometrical center of the lens.

For example, a lens with overall diameter of 10.0 mm has its geometrical center at 5 mm. Place the seg line 1 mm below this, or at 4 mm. If the lower lid is above the lower limbus, lower the seg line by the amount it covers the lower limbus.

If the lower lid is below the lower limbus, a translating design is probably not a good option.

Craig Norman

Lens movement is a necessity with translating bifocals to provide alternating vision. How much vertical movement is necessary?

Dr. Quinn

It is difficult to come up with a number for vertical movement to get a translating lens to deliver the desired vision.

I often use a direct ophthalmoscope and look at the seg line as it moves into the pupil as the patient looks down with their eyes, holding their head in the straight-ahead position. I've found that if about half of the pupil is in the add portion of the lens, vision performance will be good.

The ultimate test is to give the patient something to read, instruct them to keep their chin in straight ahead position, then move the reading material down, following it with their eyes, and ask them to report when the near vision clears. If they report it is clear while holding the reading material at a comfortable angle, you are good to go!

Craig Norman

Often today simultaneous vision designs are used. How can you be sure that the near optics are positioned correctly for an individual's line of sight?

Dr. Quinn

Start by simply observing the centration of the lens on the corneal surface.

If the centration looks "pretty good" and vision at distance and near are good, you are all set. If centration appears good, but vision is not good, it may be because the add is not properly aligned with the visual axis.

One way to measure this when employing a design with multifocal optics on the front surface of the lens is to capture a topographic image both without and with the contact lens in place.

Compare the visual axis position found without the contact lens in place to the location of the center of the add found in the image with the contact lens in place.

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For more details regarding this technique, go here:
<https://www.clspectrum.com/issues/2013/november-2013/applications-of-corneal-topography-beyond-corneal>

Craig Norman

You mentioned a paper by Pointer comparing "sighting" vs "sensory" dominance. Can you discuss this? Also, the study done in your office regarding Blur Tolerance.

Dr. Quinn

Pointer (•Pointer J, J of Optom, (2012) 5, 52-55) assessed eye dominance by two methods.

One method was to ask patients to, with both eyes open, line up a object with a hole in a card (sighting method). The eye the subject used to make this alignment was deemed the dominant eye. With the other method (sensory method) he placed a +1.50 in front of one eye, then the other, while both eyes were open.

He then asked subjects which was more disturbing to their vision, when he held the lens in front of the right or left eye. The eye that was more bothered was deemed the dominant eye. The remarkable thing found here was that the two methods only agreed with each other 50% of the time!

This finding suggested to me that the two techniques did not measure the same thing. This suspicion is supported by findings by several researchers that found very little correlation between sighting dominance and success with monovision contact lenses. (Shor et al, 1987; Erickson and McGill, 1992).

It has been suggested that sensory dominance may be a better measure (Robboy et al, 1990).

It simply makes more sense to me to employ sensory dominance. We often need to "over plus" one eye to get the near vision we need. Which eye will tolerate the added plus better? The sensory dominance test tells us.

This can be taken a step further by slowly introducing plus in front of one eye, then the other (under binocular conditions), and determining how much plus is required to elicit a blur response (The Blur Tolerance Test). If the amount of plus accepted in front of one eye is much greater than what is accepted in front of the eye, it is important that the more accepting eye be chosen as the near biased eye.

If the amount of plus it takes to elicit a blur response is about the same between the two eyes, it may not matter which eye is given the added plus power.

Craig Norman

How do you test the presbyope's vision in your office to mimic their daily tasks and environment?

Dr. Quinn

After the initial pair of lenses are applied to the patient's eyes, they are escorted out of the examining room and invited to look outside, pick up a magazine, etc. After at least ten minutes, the patient is taken to an examining room, which has the overhead light on.

I start the conversation by asking "How is your vision?" This open question approach allows the patient to get right to the area of challenge, if indeed one exists. I then invite them to pull out their cell phone and look at their text messages.

If they can read their messages comfortably, which they generally can, they get excited that they can perform a task they do repeatedly through the day. I will then ask them to look at the distance acuity chart, which is always pre-set to the 20/40 line. It is important not to have the entire chart displayed because the patient will naturally try to read the bottom line.

If they can't read the bottom line, they may get discouraged, but in fact may perform fine in a real-world environment. Most people will be able to read 20/40, at which time we advance to 20/30, then 20/25, and if doing well, on to 20/20.

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Each line read successfully gives the patient confidence that their multifocal lenses will be successful.

Craig Norman

Can you share with us your three revelations which you communicate to patients about presbyopic vision?

Dr. Quinn

If you feel you've done all you can do to maximize visual performance with multifocal lenses, but the patient remains unsatisfied, share the following "revelations" as needed, in the order listed below:

- "The goal is to meet most of your needs most of the time"

If they remain unsatisfied, say:

- "You may need to give up a little bit of crispness for freedom"

If they continue to be unhappy, say:

- "This is as good as it gets"

I have been surprised at the number of times patients respond to this final revelation with, "Oh, okay. That's fine."

Craig Norman

Thank you, Dr. Tom Quinn. Your recent webinar was terrific, your insight into presbyopia has tremendous clinical relevance and you've made this Q&A session extremely interesting as well.