



IACLE Distance Learning Program (DLP)

Phase 2 Assignment 5:

Course content covered:

B4. Fitting Spherical Soft Contact Lenses

B5. Correcting Astigmatism with Contact Lenses

From the New IACLE Contact Lens Course (New ICLC)



ASSIGNMENT 5

Read the questions carefully and record your answers on the answer sheet template

1. **A patient has a spectacle refraction of -11.00 DSph at a vertex distance of 14 mm. He is fitted with a trial CL with a back vertex power (BVP) of -5.00 D, and the over-refraction is -6.00 D. What BVP should be ordered for the final CL?**
 - a. -9.50 D
 - b. -10.00 D
 - c. -10.50 D
 - d. -11.50 D

2. **The light blue tint in many SCLs is intended to:**
 - a. Reduce the glare when outdoors
 - b. Protect the covered eye from UV radiation
 - c. Enhance the visibility of the CL in a storage case
 - d. It is an innate property of some SCL materials

3. **Upon increasing the total diameter (TD) of a SCL, its overall sagittal height increases, which results in:**
 - a. The centre-of-gravity shifting away from the eye
 - b. The centre-of-gravity shifting towards the eye
 - c. Little effect on the centre-of-gravity
 - d. The CL fit is loosened

4. **A SCL wearer reports that their vision is quite good in the primary position. However, it blurs immediately following a blink and then reverts to the previously good quality. What is the MOST likely cause of these fluctuations in vision?**
 - a. CL TD is too large
 - b. The CL fit is too flat
 - c. The CL does not move enough with the blink
 - d. The CL fit is too steep

5. **During an after-care examination, you notice that your patient's right CL is displaced inferiorly by 1.0 mm, and the left CL is displaced nasally by 0.5 mm. Using the Cartesian co-ordinates system, which description of the CL positions is correct?**
 - a. R: X = 0.00 Y = -1.00 ; L: X = -0.50 Y = 0.00
 - b. R: X = $+1.00$ Y = 0.00; L: X = $+0.50$ Y = 0.00
 - c. R: X = -1.00 Y = 0.00; L: X = -0.50 Y = 0.00
 - d. R: X = 0.00 Y = $+1.00$; L: X = 0.00 Y = -0.50



- 6. A patient has keratometry readings of 7.50 mm along 85° (45.00 D) and 7.80 mm along 175° (43.25 D). What back optic zone radius (BOZR) would be MOST suitable when fitting a SCL to this eye?**
- 8.10 mm
 - 8.50 mm
 - 8.90 mm
 - 9.30 mm
- 7. A patient wears a soft trial CL with a back optic zone radius (BOZR) of 8.60 mm and total diameter (TD) of 13.50 mm. The CL fit is satisfactory, but you decide to fit a larger CL with a TD 14.00 mm. What BOZR would you need to order for the new CL, in order to keep the same CL-cornea relationship?**
- 8.40 mm
 - 8.60 mm
 - 8.90 mm
 - 9.20 mm
- 8. Which of the following is NOT characteristic of a good SCL fit?**
- Improved vision immediately after a blink
 - Post blink movement of 0.75 mm
 - Complete corneal coverage
 - Front surface keratometry showing clear and regular mire reflections
- 9. Which SCL manufacturing technique produces the MOST flexible SCLs?**
- Lathe cutting
 - Cast molding
 - Molding with a lathed back surface
 - Spin casting
- 10. A patient has horizontal visible iris diameter (HVID) of 11.5 mm. Which of the following CL TDs would be MOST suitable when fitting this patient with SCLs?**
- 9.50 mm
 - 11.00 mm
 - 13.50 mm
 - 15.00 mm
- 11. The most reliable and valid test to assess fitting of SCL is:**
- Lower-lid push-up test
 - Completeness of corneal converge
 - Adequate movement on blinking
 - CL lag on horizontal eye movement



- 12. During a lower-lid push-up test, a SCL is difficult to displace, and then somewhat sluggish to recentre. Which of the following is the MOST accurate description of the CL's tightness?**
- 10%
 - 20%
 - 50%
 - 80%
- 13. In altering SCL behaviour on the eye, which of the following statements is NOT true?**
- Reducing the TD will loosen the CL fit
 - Increasing the BOZR of the CL will decrease its sagittal height
 - Reducing the BOZR will tighten the CL fit
 - Increasing the TD will decrease the sagittal height
- 14. Which of the following is NOT characteristic of a SCL fit that is too tight?**
- Conjunctival indentation
 - CL edge curling / wrinkling
 - No movement upon blinking
 - Vision clears immediately after a blink
- 15. Upon insertion of SCLs, the eyes turn red. However, after wearing the CLs for some time the redness decreases and, eventually, disappears. The most likely explanation for this is:**
- The CL is contaminated
 - The pH of the solution is significantly different from the pH of the tears
 - The wearer is allergic to one or more components of the CL care products used
 - The CL material and the CL care products used are incompatible
- 16. Subjective refraction of the eye is -1.25 DCyl X 105. What type of astigmatism is this?**
- With-the-rule astigmatism
 - Against-the-rule astigmatism
 - Oblique astigmatism
 - Abnormal astigmatism
- 17. What is the lenticular astigmatism in an eye with a subjective refraction of $-5.00 / -3.00 \times 180^\circ$ and keratometry readings $44.00 @ 180^\circ / 46.00 @ 90^\circ$?**
- -1.00 DC x 90°
 - -1.00 DC x 180°
 - -2.00 DC x 90°
 - -5.00 DC x 180°



- 18. What will be the soft toric CL prescription for a spectacle correction of -6.00 DSph / -2.75 DCyl X 30**
- -5.50 DSph/ -2.75 DCyl X 30
 - -5.00 DSph/ -2.75 DCyl X 30
 - -6.00 DSph/ -1.75 DCyl X 30
 - -5.50 DSph/ -2.25 DCyl X 30
- 19. CL orientation and stabilization with prism ballast toric SCLs is achieved primarily through:**
- Alignment of the CL edge with the lower lid margin
 - Base- in and base-out prisms
 - Prism-induced thickness differences
 - Gravitational forces
- 20. A toric SCL with a BVP of -2.25 / -2.50 x 45 has its least thickness in which meridian?**
- 45° meridian
 - 90° meridian
 - 135° meridian
 - 180° meridian
- 21. Which of the following spectacle prescriptions is MOST likely to result in a successful toric SCL fit?**
- $+0.75$ / -1.75 x 180
 - -1.25 / -1.25 x 15
 - -4.50 / -2.00 x 45
 - -4.75 / -2.00 x 90
- 22. A patient's left eye has a spectacle prescription of -5.75 D and keratometry readings of 7.85 @ 170 (43.00 D) and 7.42 @ 80 (45.50 D). This eye would be best corrected with a:**
- Double slab-off toric SCL
 - Spherical RGP CL
 - Back surface toric RGP CL
 - Thin spherical SCL
- 23. An eye with spectacle refraction $+1.75$ / -1.25 x 45 and keratometry readings of 7.71 mm @ 45 (43.75 D) and 7.50 mm @ 135 (45.00 D) would be BEST corrected with a:**
- Spherical SCL
 - Spherical RGP CL
 - Toric SCL
 - Back surface toric RGP CL



- 24. A patient's right eye has keratometry readings of 8.23 mm @ 5 (41.00 D) and 7.85 mm @ 95 (43.00 D) and a spectacle refraction of $-1.75 / -0.50 \times 05$. What residual astigmatism would you expect if this patient were fitted with a spherical RGP CL?**
- 1.50 D Cyl x 05
 - 2.50 D Cyl x 05
 - 1.50 D Cyl x 95
 - 2.50 D Cyl x 95
- 25. A patient's right eye has ocular astigmatism at axis 15. A trial C placed on the eye rotates 10° clockwise. What cylinder axis should be ordered for the final CL?**
- 10
 - 15
 - 25
 - 175
- 26. A patient's right eye has a spectacle prescription of $-3.50 / -2.00 \times 160$ and keratometry readings of 8.33 mm @ 160 (40.50 D) and 7.94 mm @ 70 (42.50 D). What type of RGP CL design would be MOST suitable for this eye?**
- Spherical
 - Back surface toric
 - Front surface toric
 - Bitoric
- 27. The reference marks on toric SCLs are used to assess which of the following:**
- Cylinder axis
 - Cylinder power meridian
 - CL orientation *in situ*
 - Effectiveness of the stabilization method used
- 28. A patient's left eye has a spectacle refraction of $-3.50 / -1.50 \times 170$. A toric SCL placed on this eye rotates 15 degrees anticlockwise. What cylinder axis should be ordered for the final CL?**
- 5
 - 15
 - 155
 - 175



- 29. A well-centred toric SCL gives full corneal coverage, shows little movement, and is slow to reorient when mislocated deliberately. Without changing the CL's TD, which of the following actions would be MOST appropriate?**
- Decrease the CL thickness
 - Change the axis of the CL's cylinder
 - Increase the CL's BOZR
 - Increase the CL thickness
- 30. A patient's left eye has a spectacle prescription of $-4.75 / -4.00 \times 90$ and keratometry readings of 7.80 mm @ 90 (43.25 D) and 7.42 mm @ 180 (45.50 D). What type of RGP CL design would be MOST suitable for this eye?**
- Back surface toric
 - Bitoric
 - Modified reverse geometry
 - Front surface toric