

IOL Calculation Worksheet for Post refractive Surgery Patients

Patient name _____ RIGHT EYE/LEFT EYE

DATA NEEDED

Pre Refr. Surg K K1 _____ K2 _____ Pre. Refr. Surg. Avg. K _____
 Pre Refr. Surg. Refraction _____ Spherical Equiv. _____
 Post Refr. Surg Refraction 4-6 Mo. _____ Spherical Equiv. _____
 Pre Refr. Surg. Spher. Equiv. _____ - Post Refr. Surg Pher. Equiv. _____ = _____ Surgical
 Refractive Change
 Central K on current post refr. surg. Topography _____
 Post Refr. Surg. Eff. Corneal Power (Eyesys Holliday Summary, 3mm average on other
 topography units) _____
 Manual Keratometry Post Refr. Surg. K1 _____ K2 _____ Post Refr. Surg. Avg. K _____
 Axial Length IOL Master/ A-Scan _____

CALCULATION METHODS

Clinical History Method (myopic RK, PRK, Lasik)

Pre Refr. Surg. Avg. K _____ - Surgical refractive change _____ = _____ (Corrected K).
 To obtain corrected IOL power use Corrected K calculated as above and Axial Length from A
 scan/ IOL Master in IOL Formula of choice

Feiz- Mannus (myopic RK, PRK, Lasik)

Run IOL Formula of choice with Pre Refr. Surg. K1 _____ and K2 _____ and Axial Length
 from A scan/IOL Master _____
 Pick desired IOL Power _____ (with predicted post op refr. of _____)
 Calculate – Above desired IOL power _____ + (Surgical refractive change _____ divided by
 0.7 = _____) = _____ Corrected IOL Power

Modified CVK (Computerized Videokeratography) (RK, myopic or hyperopic PRK/Lasik)

RK – use Post Refr. Surg. Eff. Corneal Power (EyeSys), 3mm average on other topography units
 Lasik/PRK – **Myopic Refractive Surg.** Calculate 15% of Surgical Refractive Change =
 _____ Surgical Refractive Change x .15 = _____ K reduction amount
 Reduce Eff. Corneal Power/3mm average _____ by K reduction amount _____ =
 _____ Corrected K

Lasik/PRK – **Hyperopic Refractive Surg.** Adjust Eff. Corneal Power (Eyesys) or Zeiss Atlas Sim
 K as listed. Amount hyperpic correction Eff. Corneal Power Atlas Sim K

+1	-0.12	0.05
+2	0.04	0.48
+3	0.21	0.91
+4	0.37	1.34
+5	0.53	1.77

Calculate IOL using desired formula with corrected K and Axial length per IOL Master/Ascan

Modified Maloney

Place cursor of topography machine on direct center of corneal image = _____ Central Power
 Central Power _____ x 1.11 - 6.10 = _____ Corrected K
 Use corrected K and Axial length from IOL Master/A scan with desired formula to calculate IOL

Aramberri Double K method (RK, myopic/hyperopic PRK, Lasik)

Use SRK-T formula with Post refr. surg. K_____. Select IOL Power_____ (with estimated post op refraction of _____) Use table below to obtain power adjustment for final IOL selection_____ (this table assumes a Pre Refr. Surg. K of 43D and use of an Alcon SA60 AT)

NOMOGRAM FOR EYES WITH MYOPIC REFRACTIVE SURGERY AND SRK -T FORMULA

Use this nomogram to ADD TO the selected IOL power to obtain the final IOL selection

Myopic Refr.	Axial length					
Surg. Correction	20	22	24	26	28	30
-2	0.7	0.7	0.7	0.6	0.5	0.3
-3	1.0	1.0	1.1	1.0	0.8	0.6
-4	1.3	1.4	1.4	1.3	1.1	0.8
-5	1.7	1.7	1.8	1.6	1.4	1.1
-6	2.0	2.0	2.1	2.0	1.7	1.4
-7	2.3	2.4	2.5	2.3	2.0	1.7
-8	2.6	2.7	2.8	2.6	2.3	2.0
-9	2.9	3.0	3.2	3.0	2.7	2.3
-10	3.2	3.3	3.5	3.3	3.0	2.6

NOMOGRAM FOR EYES WITH HYPEROPIC REFRACTIVE SURGERY AND SRK-T FORMULA

Use this nomogram to SUBTRACT FROM the selected IOL power to obtain the final IOL selection

Hyperopic refr.	Axial length					
Surg. Correction	20	22	24	26	28	30
+2	0.7	0.7	0.7	0.6	0.4	0.0
+3	1.1	1.1	1.1	0.9	0.5	0.0
+4	1.4	1.4	1.5	1.2	--	--
+5	1.8	1.8	1.9	1.7	--	--
+6	2.2	2.2	2.5	--	--	--

Manual Keratometry Adjustment Method (Myopic Lasik)

Post. Refr. Surg. Manual Avg. K_____, subtract 1 diopter =adjusted K_____ Use adjusted K, Binkhorst formula, and target refraction of -0.75 to -1.00 to calc. IOL power

No History Method (myopic lasik)

This method uses the Shammas post-lasik formula. It requires no pre refr. surg. data

Calculate Kc (corrected mean corneal power). Post refr.surg. ave. K_____ x 1.14 = _____ - 6.8 = _____corrected mean corneal power (Kc)

Calculate estimated postop. ant. chamber depth (C-value in formula) using the A-constant of the specific IOL 0.5835 x Aconst_____ = _____ - 64.40= _____(value for C in formula)

L = axial length

R= desired refraction at the corneal plane

$$IOL = \frac{1336}{L \text{ _____} - 0.1(L \text{ _____} - 23) - (C \text{ _____} + 0.05)} - \frac{1}{\frac{1.0125}{Kc \text{ _____} + R \text{ _____}} - \frac{C}{1336} + 0.05}$$

FINAL IOL POWER /LENS MODEL SELECTED