

**Supplementary Table.****Participant Characteristics of the Entire Underlying Study Population**

	Analytical Population	Excluded
Eyes, n (%)	270	214
Triple DMEK, n (%)	195 (72)	152 (71)
Women, n (%)	163 (60)	139 (65)
<b>Characteristics before surgery</b>		
Age, years	69 (62-77)	68 (62-76)
Best-corrected visual acuity, ETDRS letters <sup>a</sup>	75 (68-80)	76 (70-82)
Straylight, logS <sup>a</sup>	1.37 (1.26-1.53)	1.37 (1.19-1.51)
Visible edema on slit-lamp exam, n (%) <sup>b</sup>	85 (37)	59 (38)
Predicted corneal edema resolution, $\mu\text{m}$ <sup>b</sup>	75 (60-91)	77 (52-91)
- Central corneal thickness, $\mu\text{m}$	612 (576-646)	608 (565-638)
- Anterior corneal backscatter, SU	1781 (1541-2037)	1736 (1519-2112)
- Posterior corneal backscatter, SU	1130 (949-1330)	1120 (921-1330)
- Parallel isopachs, n (%)	66 (28)	34 (27)
- Posterior corneal elevation, $\mu\text{m}$	17 (2-28)	18 (3-28)
<b>Characteristics of surgery</b>		
Trephine and graft size, n (%)		
- 7.0-mm	1 (0)	0 (0)
- 7.5-mm	10 (4)	13 (6)
- 8.0-mm	259 (96)	201 (94)
Corneal abrasion, n (%)	9 (3)	12 (6)
Eye pressure directly after surgery, mmHg	22 (17-28)	22 (18-30)
Intervention to lower eye pressure, n (%)	9 (3)	5 (2)
<b>Outcomes of surgery</b>		
Postoperative day after DMEK for		
- 1 <sup>st</sup> AS OCT	3 (3-4)	3 (3-4)
- 2 <sup>nd</sup> AS OCT	15 (13-18)	14 (13-15)
Graft detachment		
- Area at 1 <sup>st</sup> AS OCT, in %	31 (21-45)	24 (18-38)
- Area at 2 <sup>nd</sup> AS OCT, in %	15 (5-33)	6 (2-28)
- Volume at 1 <sup>st</sup> AS OCT, $\mu\text{l}$	0.39 (0.22-0.64)	0.36 (0.17-0.64)
- Volume at 2 <sup>nd</sup> AS OCT, $\mu\text{l}$	0.25 (0.07-0.71)	0.10 (0.02-0.55)
Rebubbling, n (%)	46 (17)	27 (13)
Rebubbling, days after surgery	15 (11-18)	14 (13-22)

Continuous variables are presented as median (interquartile range) and categorical variables are presented as count (percentage). Percentages may not total 100 due to rounding. 221 of 491 eyes of the underlying studies were not included because of phakic DMEK (3 eyes, data not shown), intraoperative complications (4 eyes, data not shown), and no Anterior Segment OCT at the first or at the second visit (total of 214 eyes).

<sup>a</sup> Best-corrected visual acuity was assessed using Electronic Treatment Diabetic Retinopathy Study (ETDRS) charts (458 eyes). Disability glare was assessed using a straylight meter (370 eyes).

<sup>b</sup> Disease severity was assessed using slit-lamp exam (387 eyes),<sup>20</sup> and tomographically a validated model of edema resolution after DMEK based on corneal thickness, standardized corneal backscatter expressed in scatter units (SU), regularity of lines of equal corneal thickness (isopachs), and maximum posterior corneal elevation (368 eyes).<sup>23</sup>