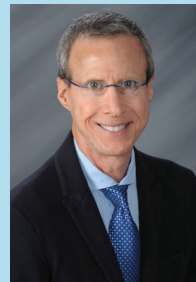


Advanced Cornea Processing for DMEK Hydrodissection “Blister” Technique

Lions World Vision Institute’s no-touch hydrodissection technique for preparing DMEK grafts uses Trypan Blue to simultaneously dissect and stain Descemet’s membrane. Endothelial cells are preserved by limiting tissue manipulation and exposure of endothelium to the stain during preparation.

- **No-Touch Technique**
- **Graft is supported evenly by fluid during dissection**
- **Instant staining isolates exposure of Trypan Blue to DM**
- **Decreases endothelial cell loss**
- **Decreases processing failure rate**

Lions World Vision Institute (LWVI) introduced the Blister technique in 2012. After multiple studies, this unique procedure demonstrated safer and more reliable outcomes for gently dissecting DMEK grafts.^{1,2} Most eye banks continue to use the “Submerged Cornea Using Backwards Away” (SCUBA) method³ because it was the initial approach used by surgeons in the operating room. The advantages of the Blister method align with LWVI’s innovative culture of improving standards and providing the highest quality tissue possible with the objective of improving clinical outcomes.



“Having peeled close to a thousand DMEK donor corneas with the SCUBA technique has given me a unique perspective on the tremendous advantages of the hydrodissection (Blister) technique.

I only use the Blister Method. It’s a game changer!”

— Mark Gorovoy, MD
Gorovoy Eye,
Fort Myers, Florida



LWVI’s certified technicians prepare up to 75 corneas weekly for endothelial keratoplasty.



LIONS
WORLD VISION
INSTITUTE™

So the world can see.

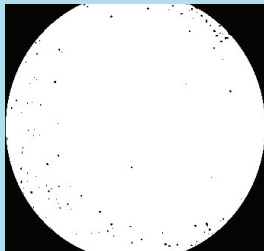
Formerly Lions Eye Institute for Transplant & Research

1410 N 21st Street, Tampa, FL 33605-5313 | 813.289.1200 | LWVI.org

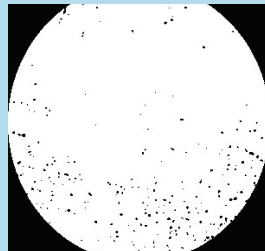
Cell Damage Evaluation after Dissection and Staining

**Blister vs. SCUBA: Ten times
less endothelial cell loss**

Blister = 2.2% cell damage

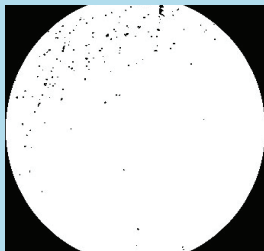


0.4% cell damage
before processing

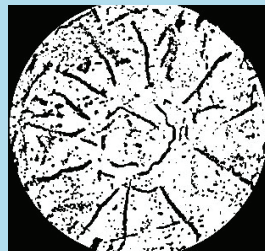


2.6% cell damage
post-processing

SCUBA = 20.1% cell damage



0.6% cell damage
before processing



20.7% cell damage
post-processing

Blister's Hydrodissection Advantages

- No-touch dissection and simultaneous direct staining of Descemet's membrane (DM) limits tissue manipulation and subsequent endothelial cell loss
- Less endothelial cell loss after dissection and staining—2.2% compared to 20.1% when prepared using SCUBA method and staining
- Fluid (Trypan Blue) gently separates the DM from stroma
- No-Touch Technique: no forceps contact with DM or endothelium
- Graft is supported evenly by controlled fluid expansion during dissection
- Limits processing steps and manipulation of the graft—eliminates pulling, stretching and tension on DM causing damage to endothelium
- Isolates exposure of Trypan Blue to DM
- Provides a lasting dark blue stain on DM due to direct exposure
- Decreases processing failure rate and tears
- Increases transplantable graft yield honoring the donated "gift of sight"
- Reduces surgeon stress by eliminating the need for replacement cornea

Register your DMEK specifications to receive DMEK grafts prepared using the Blister technique for your next cases at LWVI.org.

- 1 E. Abdullayev MD, MBA, CEBT; M. Gorovoy MD, N. Sprehe B.S. – "Descemet's Membrane (DM) grafts preparations with liquid "Blister" separation method" – Free paper abstracts, Cornea Society/EBAA Fall Education Symposium, October 14, 2016, Chicago IL, USA.
- 2 P. Szurman, K. Januschowski, A. Rickmann, L. Damm, K. Thomas Boden, N. Opitz – "Novel liquid bubble dissection technique for DMEK lenticule preparation" Graefes Arch Clin Exp Ophthalmol. 2016 Sep; 254(9):1819-23. doi: 10.1007/s00417-016-3377-z. Epub 2016 May 21.
- 3 B. Ostrander, MD, MSE, K. Solley, MSE, C. Diaz, MSE, A. Haileyesus, MSE, Y. Dou, MSE, S. Acharya, MD, PhD, K. Parikh, PhD – "The State of Descemet Membrane Endothelial Keratoplasty Tissue Processing: Current Practices and Challenges" International Journal of Eye Banking, v7 n2 2019 September.



So the world can see.

Formerly Lions Eye Institute for Transplant & Research

1410 N 21st Street, Tampa, FL 33605-5313 | 813.289.1200 | LWVI.org

v.03.31.2023