

**Cornea Image Analysis Reading Center (CIARC)  
Publications List – December 2023**

1. Lass JH, Reinhart WJ, Bruner WE, Kachmer ML, Lomeo MD, Morgan KM, Glavan I, and Sanders DR: Comparison of corneal storage in K-Sol and Chondroitin Sulfate Corneal Storage Medium in human corneal transplantation. *Ophthalmology* 96:688-697, 1989.
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12. Price MO, Bidros M, Gorovoy M, Price FW, Jr., Benetz BA, Menegay HJ, Debanne SM, Lass JH: Effect of incision width on graft survival and endothelial cell loss after DSAEK. *Cornea* 29:523-27, 2010.
13. Benetz B, Yee R., Bidros, M, and Lass J: Specular Microscopy. In: *Cornea: Fundamentals, Diagnosis, Management*. Edited by Krachmer JH, Mannis JJ, and Holland, EJ. 3rd edition. Mosby. Chapter 14. 2011, pp. 177-203.
14. Schachar RA, Raber S, Thomas K, Benetz BA, Szcotka-Flynn L, Zhang M, Howell S, Lass JH: Sub-clinical increased anterior stromal reflectivity with topical taprenepag isopropyl. *Cornea* 32:306-12, 2013
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16. Sayegh RR, Lass JH. Predicting long-term graft survival after keratoplasty. Expert Review of Ophthalmology. <http://www.tandfonline.com/doi/abs/10.1080/17469899.2016.1226802>.
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18. Sayegh R, Benetz B, and Lass JH: Specular Microscopy. In: *Cornea: Fundamentals, Diagnosis, Management*. Edited by Mannis MJ and Holland EJ. 4<sup>th</sup> edition. 2016. Elsevier, Chapter 14 pp. 160-179.
19. Gray K, Benetz BA, Stoeger C, Lass J: Current and New Technologies in Corneal Donor Tissue Evaluation: Comparative Image Atlas. *Cornea*. 37(6)S1-36, 2018 supplement to June 2018 edition
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26. Joseph N, Kolluru C, Benetz BA, Menegay HJ, Lass JH, Wilson D. Quantitative and qualitative evaluation of deep learning automatic segmentations of corneal endothelial cell images of reduced image quality obtained following corneal transplant. *J Medical Imaging* 7:014503, 2020 <http://doi.org/10.1117/1.JMI.7.1.014503>
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28. Mundorf T, Mah F, Sheng H, Heah T. Effects of netarsudil on the corneal endothelium: 3-month findings from a Phase 3 trial. *Ophthalmology Glaucoma* online April 22, 2020. 3:421-5, 2020. (*Cornea Image Analysis Reading Center acknowledged as the reading center for this study*)
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32. Huang H, Benetz BA, Clover JM, Titus M, O'Brien RC, Menegay HJ, Lass JH. Comparison of donor corneal endothelial cell density determined by eye banks and by a central image analysis reading center using the same image analysis method. *Cornea* 41:664-668, 2022
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37. Price MO, Kanapka L, Kollman C, Lass JH, Price FW, Jr. Descemet membrane endothelial keratoplasty: ten-year endothelial cell loss compared with Descemet stripping endothelial keratoplasty and penetrating keratoplasty. *Cornea* 2023 Dec. 20. Doi: 10.1097/ICO.0000000000003446. Online ahead of print. PMID: 38128100

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NEI-sponsored Specular Microscopy Ancillary Study (SMAS) of the Cornea Donor Study (CDS)  
manuscripts with CIARC

1. Lass JH, Gal RL, Ruedy KJ, et al. An evaluation of image quality and accuracy of eye bank measurement of donor cornea endothelial cell density in the Specular Microscopy Ancillary Study. *Ophthalmology* 112(3):431-40, 2005.
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7. Lass JH, Beck RW, Benetz BA, Dontchev M, Gal RL, Holland EJ, Kollman C, Mannis MJ, Price, Jr., F, Raber I, Stark W, Stulting RD, Sugar A for the Cornea Donor Study: Baseline factors related to endothelial cell loss following penetrating keratoplasty. *Arch Ophthalmol* 129:1149-1154, 2011.
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Investigator Group. Factors Predictive of Corneal Graft Survival in the Cornea Donor Study. JAMA Ophthalmology 2014; Published online October 16, 2014. doi:10.1001/jamaophthalmol.2014.3923. 133:246-54, 2015

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NEI-sponsored Cornea Preservation Time Study manuscripts with CIARC

1. Lass JH, Szczotka-Flynn LB, Ayala A, Benetz BA, Gal RL, Aldave AJ, Corrigan M, Dunn S, Kollman C, McCall T, Pramanik S, Rosenwasser G, Ross K, Terry M, Verdier DD, Beck R for the Cornea Preservation Time Study Group: Cornea Preservation Time Study: Methods and impact on the cornea donor pool in the United States. Cornea 34:601-08, 2015
2. Lass JH, Benetz BA, Verdier DD, Szczotka-Flynn LB, Ayala AR, Liang W, Aldave AJ, Dunn SP, Ross KW, Mian SI, Patel SV, Rosenwasser GO, Terry MA, Kollman C, Gal RL, Beck R. Corneal endothelial cell loss 3 years after successful Descemet's Stripping Automated Endothelial Keratoplasty in the Cornea Preservation Time Study. JAMA Ophthalmology 135:1394-1400, 2017.
3. Stulting RD, Lass JH, Terry MA, Benetz BA, Cohen N, Ayala, AR, Maguire MG, Croasdale C, Daoud Y, Dunn SP, Goins KM, Gupta PC, Macsai MS, Mian SI, Pramanik S, Rose-Nussbaumer J, Song JC, Walter WJ, Sugar, A, Verdier DD, Szczotka-Flynn LB on behalf of the Cornea Preservation Time Study Group. Factors associated with graft rejection in the Cornea Preservation Time Study. Am J Ophthalmol 196:197-207,2018. PMID 30308200
4. Lass JH, Benetz BA, Patel SV, Szczotka-Flynn LB, O'Brien R, Ayala AR, Maguire MG, Daoud Y, Greiner MA, Hannush S, Lee WB, Mauger TF, Menegay HJ, Mifflin M, Raizman M, Rose-Nussbaumer J, Schultze R, Schmidt GA, Sugar A, Terry MA, Verdier DD on behalf of the Cornea Preservation Time Study Group. Donor, Recipient, and Operative Factors Influencing Endothelial Cell Loss in the Cornea Preservation Time Study. JAMA Ophthalmology 2018 Oct 26. doi: 10.1001/jamaophthalmol.2018.5669. 137:185-193, 2019 PMID 30422157
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6. Benetz BA, Stoeger CG, Patel SV, O'Brien R, Szczotka-Flynn LB, Ayala AR, Maguire MG, Menegay HJ, Bedard P, Clover J, Gupta PC, McCoy K, Song JC, Lass JH on behalf of the Cornea Preservation Time Study. Comparison of donor cornea endothelial cell density determined by eye banks and by a centralized reading center in the Cornea Preservation Time Study. *Cornea*. Published online January 16, 2019. doi: 10.1097/ICO.0000000000001846. 38:426-32, 2019 PMID 30664048
7. Patel SV, Lass JH, Benetz BA, Szczotka-Flynn LB, Cohen N, Ayala AR, Maguire MG, Drury DC, Dunn SP, Jeng BH, Jones MF, Menegay HJ, Oliva MS, Rosenwasser G OD, Seedor JA, Terry MA, Verdier DD on behalf of the Cornea Preservation Time Study. Post-operative endothelial cell density is associated with late endothelial graft failure after Descemet stripping automated endothelial keratoplasty. *Ophthalmology* Published online February 18, 2019 doi: 10.1016/j.ophtha.2019.02.011 126:1076-83, 2019 PMID 30790587 NIHMS 1521981
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9. Ross KW, Stoeger CG, Rosenwasser G OD, O'Brien RC, Szczotka-Flynn LB, Ayala AR, Maguire MG, Benetz BA, Dahl P, Drury DC, Dunn SP, Farazdaghi, SM, Hoover CK, Macsai MS, Mian SI, Nordlund ML, Penta JG, Soper MC, Terry MA, Verdier DD, Williams DV, Lass JH on behalf of the Cornea Preservation Time Study. The association of donor, recipient, and eye bank observations with operative complications in the Cornea Preservation Time Study. *Cornea* 38:1069-76, 2019 PMID: 31180926
10. Lass JH, Bailey R, Szczotka-Flynn LB, Benetz BA, Soper M, Titus M, Kollman C, Beck R on behalf of the Cornea Preservation Time Study Group. Comparison of graft outcomes reusing original intermediate term cold storage solution for entire corneal donor storage period with exchanged fresh storage solution following donor preparation in the Cornea Preservation Time Study. *Cornea*. 41:1539-44, 2022. PMID 36036663

Chapters and Reviews

1. Benetz B, Yee R., Bidros, M, and Lass J: Specular Microscopy. In: *Cornea: Fundamentals, Diagnosis, Management*. Edited by Krachmer JH, Mannis MJ, and Holland, EJ. 3rd edition. Chapter 14. Mosby. 2011. pp. 177-203.
2. Sayegh R, Benetz B, and Lass J: Specular Microscopy. In: *Cornea: Fundamentals, Diagnosis, Management*. Edited by Mannis MJ and Holland, EJ. 4th edition. Elsevier Chapter 14. 2016. pp. 160-179.
3. Gray K, Benetz BA, Stoeger C, Lass J: Current and New Technologies in Corneal Donor Tissue Evaluation: Comparative Image Atlas. *Cornea*. 37(6)S1-36, 2018 supplement to June 2018 edition PMID 29724201, 29734202, 29734203, 29734204, 29734205, 29734206
4. Price MO, Lass JH, Price FW, Jr.: Clinical factors for early and late endothelial

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cell loss after corneal transplantation. 2018. Edited by Perez V, Hamrah P, and Yamaguchi T. Current Ophthalmology Reports. Springer Nature. Philadelphia, PA <https://doi.org/10.1007/s40135-018-0179-y>.

5. Lass JH, Omar AF, Benetz BA: Endothelial cell loss after keratoplasty. The Corneal Endothelium. Winter report of the French Ophthalmology Society. Edited by Thuret G. 2020 Elsevier/Masson.
6. Benetz BA, and Lass JH: Specular Microscopy. In: Cornea: Fundamentals, Diagnosis, Management. Edited by Mannis MJ and Holland, EJ. 5th edition. 2021 Elsevier. London. Chapter 13 p. 130-151.