

Matthew Hirabayashi MD

Parkhurst NuVision

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EMPLOYMENT & EDUCATION	INSTITUTION	
Vision Correction & Cataract Surgeon	<i>Parkhurst NuVision, San Antonio, TX</i>	2025-Present
Refractive Surgery Fellowship	<i>Parkhurst NuVision, San Antonio, TX</i>	2024-2025
Ophthalmology Residency, <i>Chief Resident</i>	<i>University of Missouri, Columbia, MO</i>	2020-2024
M.D.	<i>University of Missouri, Columbia, MO</i>	2016-2020
B.S. Biology <i>Summa Cum Laude with Honors</i>	<i>Saint Louis University, St. Louis, MO</i>	2012-2016
CERTIFICATIONS, LICENSES		
WaveLight™ EX500, Countoura (ALCON)		2024
EVO ICL, Stella (STAAR Surgical)		2024
VISUMAX, SMILE, LASIK Flaps (ZEISS)		2024
ALLY Adaptive Cataract Treatment System (LENSAR)		2024
CATALYS Precision Laser System (Johnson & Johnson)		2024
ORA SYSTEM Intraoperative Aberrometer (Alcon)		2024
Physician/Surgeon Texas (U8999)		2024-Present
Business Foundations, <i>Wharton Online (University of Pennsylvania)</i>		2022
Certificated Flight Instructor-Instrument (4359991CFII) – Airplane Single Engine Land		2021-Present
Commercial Pilot License, Instrument Rating (4359991) – Airplane Single Engine Land		2021-Present
USMLE Step 3: 251		2020
USMLE Step 2 CS: Pass		2019
USMLE Step 2 CK: 261		2019
USMLE Step 1: 259		2018
HONORS & AWARDS		
Young Ophthalmology Leaders Award, <i>AECOS and Cedars Aspens</i>		2024
Best of Poster Session 2024, <i>ASCRS</i>		2024
Chairman’s Award for Outstanding OKAP Score 2023, <i>University of Missouri</i>		2023
1 st Runner Up Research Presentation, Residents & Alumni Weekend, <i>University of Missouri</i>		2023
Top Five Abstract and Social Media Award, <i>Young MD Connect Live 2023</i>		2023
Chairman’s Award for Outstanding OKAP Score 2022, <i>University of Missouri</i>		2022
John Aure Buesseler Award for Excellence in Ophthalmology, <i>University of Missouri</i>		2020
Health Sciences Research Day Poster Award, <i>University of Missouri</i>		2019
MedZou Distinguished Volunteer Award, <i>University of Missouri</i>		2019
Research Council Small Grant Award, <i>Missouri Orthopaedic Institute</i>		2017
ILEX Grant Recipient, <i>Saint Louis University</i>		2016
Senior Legacy and Undergraduate Teaching Award, <i>Saint Louis University</i>		2016
Presidential Scholar, <i>Saint Louis University</i>		2012-2016
HONORARY & PROFESSIONAL SOCIETIES		
Alpha Omega Alpha Honor Medical Society		2024-Present
American Society of Cataract and Refractive Surgery (ASCRS)		2023-Present
National Association of Flight Instructors		2021-Present
American Academy of Ophthalmology		2020-Present
Alpha Sigma Nu Jesuit Honor Society		2013-Present

HONORARY & PROFESSIONAL SOCIETIES *cont.*

Presidential Scholarship Society, *Saint Louis University*2012-Present

RESEARCH & SCHOLARSHIP

Peer-Reviewed Publications:

- Hirabayashi M, Viridi G, Nasser T, Abramson A, Parkhurst G. VAULT-OCT: Vault Accuracy Using Deep Learning Technology for Predicting ICL Postoperative Vault with Anterior Segment Optical Coherence Tomography. *Journal of Cataract & Refractive Surgery*. Accepted July 2025.
 - Hirabayashi M, Viridi G, Abramson A, Nasser T, Vanrachack A, Parkhurst G. Clinical Outcomes of Implantable Collamer Lenses for the Treatment of Myopia in Eyes with Anterior Chamber Depth (<3.0 mm) at a Single Center in the United States. *Clinical Ophthalmology*. 2024. doi.org/10.2147/OPTH.S528267
 - Wattanasirakul P, **Hirabayashi M**, Yousuf R, Elkeeb A. *Cureus*. February 2025. A Retrospective Chart Review: The Presence of Anterior Hyaloid Separation Sign in Posterior Vitreous Detachment. *Cureus*. doi.org/10.7759/cureus.78342
 - Nasser T, **Hirabayashi M**, Viridi G, Abramson A, Parkhurst, G. VAULT: Vault Accuracy Using deep Learning Technology – A Novel Image-Based AI Model for Predicting Implantable Collamer Lens Postoperative Vault. *Journal of Cataract & Refractive Surgery*. April 2024. doi.org/10.1097/j.jcrs.0000000000001386
 - **Hirabayashi M**, Mellencamp E, Duong S, Simoncic J, Homan C, King J, An J. Effect of Selective Laser Trabeculoplasty on the Fellow Eye. *Journal of Current Ophthalmology Practice*. January 2024; 17(4):175-177. doi.org/10.5005/jp-journals-10078-1420
 - **Hirabayashi M**, Barnett B. Solving STODS—Surgical Temporary Ocular Discomfort Syndrome. *Diagnostics*. 2023; 13(5):837. doi.org/10.3390/diagnostics13050837
 - **Hirabayashi M**, Gharabagi A, Hesemann N, Johnson S, Webel A, Petroski G, Davis G. Spherical aberration of cataractous eyes and its relationship with age, ocular biometry, and various IOL platforms. *Journal of Refractive Surgery*. 2023; 39(2), 89–94. doi.org/10.3928/1081597X-20221207-01
 - Hooshmand S, Voss J, **Hirabayashi M**, McDaniel L, An J. Outcomes of initial and repeat micro-pulse transscleral cyclophotocoagulation in adult glaucoma patients. *Therapeutic Advances in Ophthalmology*. 2022;14:251584142110644. doi: 10.1177/25158414211064433
 - Pratte E, Cho J, Landreneau R, **Hirabayashi M**, An J. Predictive Factors of Outcomes in Kahook Dual Blade Excisional Goniotomy Combined with Phacoemulsification. *Journal of Current Glaucoma Practice*. 2022; 16(1):47-52. doi: 10.5005/jp-journals-10078-1313
 - Xu H, Thomas M, Lee D, **Hirabayashi M**, An J. Response to netarsudil in goniotomy-treated eyes and goniotomy-naïve eyes: a pilot study. *Graefes*. 2022;260(9):3001-3007. doi: 10.1007/s00417-022-05609-6
 - **Hirabayashi M**. Wing Separation and Mid-Air Breakup Analysis in Light Training Aircraft. *Aviation*. 2021;25(4):278-282. doi: 10.3846/aviation.2021.15953.
 - Cho J, Hogan D, Salim M, Pratte E, King J, Bylund R, **Hirabayashi M**, An J. Comparison of Outcomes for Laser Trabeculoplasty after Kahook Dual Blade Goniotomy Versus in Goniotomy-Naïve Eyes. *Ophthalmology and Therapy*. 2021;10(4):905-912. doi: 10.1007/s40123-021-00378-7
 - King J, Lee D, Thomsen S, **Hirabayashi M**, An J. Relationship Between Selective Laser Trabeculoplasty and Excisional Goniotomy Combine with Phacoemulsification. *Canadian Journal of Ophthalmology*. 2021;57(2):112-117. doi: 10.1016/j.jcjo.2021.02.040.
 - **Hirabayashi M**, Viridi G, King J, Lee D, Nguyen V, An J. Effect of Excisional Goniotomy with the Kahook Dual Blade (KDB) on Surgically Induced Astigmatism. *Clinical Ophthalmology*. 2020;14:4297-4303. doi: 10.2147/OPTH.S279073
 - Pratte E, Landrenau J, **Hirabayashi M**, An J. Comparison of 12-Month Outcomes of Kahook Dual Blade Excisional Goniotomy Performed by Attending versus Resident Surgeons. *Journal of Academic Ophthalmology*. 2020; 12(02): e181-e187. doi: 10.1055/s-0040-1717055
 - **Hirabayashi M**, Ponnusamy V, An J. Predictive Factors for Outcomes of Selective Laser Trabeculoplasty. *Scientific Reports*. 2020;10(1):9428. doi: 10.1038/s41598-020-66473-0
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RESEARCH & SCHOLARSHIP *cont.*

- **Hirabayashi M**, Smith D, An A. Biostatistics 101: Perspectives on Statistics in Ophthalmology. *JOJ Ophthalmol.* 2019;7(5): 555724. <https://doi.org/10.19080/JOJO.2019.07.555724>.
- Lee D, King J, Thomsen S, **Hirabayashi M**, An J. Comparison Of Surgical Outcomes Between Excisional Goniotomy Using The Kahook Dual Blade And iStent Trabecular Micro-Bypass Stent In Combination With Phacoemulsification. *Clinical Ophthalmology.* 2019;13:2097-2102. doi: 10.2147/opth.s224109
- **Hirabayashi M**, McDaniel L, An J. Reversal of Toric Intraocular Lens-corrected Corneal Astigmatism after Kahook Dual Blade Goniotomy. *Journal of Current Glaucoma Practice.* 2019;13(1):42-44. doi: 10.5005/jp-journals-10078-1243
- **Hirabayashi M**, Rosenlof T, An J. Comparison of Outcome Predictors for MicroPulse Laser Trabeculoplasty and Selective Laser Trabeculoplasty. *Clinical Ophthalmology.* 2019;13:1001-1009. doi: 10.2147/opth.s205977
- **Hirabayashi M**, King J, Lee D, An J. Outcome of Phacoemulsification Combined with Excisional Goniotomy using the Kahook Dual Blade in Severe Glaucoma Patients at 6 months. *Clinical Ophthalmology.* 2019;13:715-721. doi: 10.2147/opth.s196105

Non-Peer Reviewed Publications:

- **Hirabayashi M**, Parkhurst G. Low Myopes Get New Options. *Ophthalmology Management.* August 2024.
- **Hirabayashi M**, An J. One Size Does Not Fit All. *The Ophthalmologist.* March 2023.
- **Hirabayashi M**. The Laws of Learning, Teaching, and Life. *NAFI Mentor Magazine.* March/April 2023.
- **Hirabayashi M**, Viridi G, Davis G, Heseman N. Toric Tolerance: 1° for 3%? *The Ophthalmology Business Minute.* December 2022.
- **Hirabayashi M**, Viridi G, Johnson S. The Path of Broken Ground: A timeline of technological developments in ophthalmology. *The Ophthalmologist.* December 2022.
- Barnett B, **Hirabayashi M**. The Art of Focusing Light: Refractive Surgery Fellowships. *The Ophthalmology Business Minute.* December 2022
- **Hirabayashi M** and An J. Laser Trabeculoplasty in the Treatment of Open-angle Glaucoma. *Glaucoma Physician.* December 2021.
- Dailey E, Thomsen S, Davis G, Davis R, **Hirabayashi M**, and Ponnusamy V. The Curious Case of Cysts and Sight. *EyeNet Magazine.* January 2019.

International Poster Presentations:

- **Hirabayashi M**, King J, Lee D, An J. Outcome of Phacoemulsification with Kahook Dual Blade Goniotomy in Severe Glaucoma at 6 months. Poster Presented at: 8th World Glaucoma Congress; April, 2019; Melbourne, Victoria.
- **Hirabayashi M**, King J, Lee D, Thomsen S, An J. Comparison of ab-interno 360-degree Trabeculotomy and ab-interno Trabeculectomy using Dual Blade. Presented at: 8th World Glaucoma Congress; April, 2019; Melbourne, Victoria.
- **Hirabayashi M**, Rosenlof T, An J. Comparison of Outcome Predictors for MLT and SLT. Presented at: 8th World Glaucoma Congress; April, 2019; Melbourne, Victoria.

National Poster Presentations:

- **Hirabayashi M**, Viridi G, Johnson S, Davis G, Relationship between Corneal Aberrations and Prediction Error of the Barrett II IOL Formula. Presented at: ASCRS 2024; March 2024; Boston, MA.
 - **Hirabayashi M**, Gharabagi A, Hesemann N, Johnson S, Webel A, Petroski G, Davis G. Spherical aberration of cataractous eyes and its relationship with age, ocular biometry, and various IOL platforms. Presented at: Young MD Connect Live; March 2023; Austin, TX.
 - **Hirabayashi M**, Ponnusamy V, An J. Predictive Factors for Outcomes of Selective Laser Trabeculoplasty. Presented at: 2019 American Glaucoma Society Meeting; April, 2019; San Francisco, CA.
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RESEARCH & SCHOLARSHIP *cont.*

Books:

- **Hirabayashi M**, Nasser T, Parkhurst G. *Vision Correction: Introduction to Modern Refractive Surgery*. KDP; 2025. ISBN: 979-8305423129
- **Hirabayashi M**. *Focusing Light: The Science of Photography*. KDP; 2024. ISBN: 979-8877583610.
- McLaughlin D, Gharabagi A, Viridi G, Miller A, **Hirabayashi M**. *The Eye Guide: Matching in Ophthalmology*. KDP; 2023. ISBN: 979-8392161324
- **Hirabayashi M**. *The Eye Guide: The Eye Exam*. KDP; 2023. ISBN: 979-8369938799.
- **Hirabayashi M**. *The Eye Guide: Cataract Surgery*. KDP; 2022. ISBN: 979-8365363342.
- **Hirabayashi M**. *The Eye Guide: Anatomy and Optics*. KDP; 2022. ISBN: 979-8364789389.

Book Chapters:

- **Hirabayashi M**, Johnson S. 2023. "Chapter 23: Cataract Surgery in the Hypotonous Eye." In *Cataract Surgery in the Glaucoma Patient*, by Johnson S. Springer Science+Business Media. doi: 10.1007/978-0-387-09408-3_23

Peer Reviewer:

- Journal of Glaucoma

Presentations, Lectures, and Speaking Engagements:

- EVO ICL in Pigment Dispersion Glaucoma Patient, *AECOS Summer Symposium*, 2025
- ICLs with Low Myopia and Sizing Pearls, *Telling it Like it Is*, 2025
- Why I Chose EVO ICL, *STAAR Surgeon Summit*, 2024
- The Future of AI ICL Sizing is OCT Not UBM, *STAAR Surgeon Summit*, 2024
- VAULT: Vault Accuracy Using deep Learning Technology, *The Outliers*, 2024
- Beyond the White Coat: Entrepreneurship in Ophthalmology, *Young MD Connect Live*, 2023
- Cataract Surgery: Deep Dive into the Basics, *Retina Academy*, 2022
- Introduction to Cataract Surgery for Interns and First Years, *Sponsored by Bausch + Lomb*, 2022
- Ophthalmology Interest Group Lecture Series, *University of Missouri School of Medicine*, 2020-2024

MEDIA & PRESS MENTIONS

Next-Generation Online IOL Resources, <i>Cataract & Refractive Surgery Today</i>	2023
Filling the App in Knowledge, <i>Young MD Connect (YMDC)</i>	2023
Bridging the App, <i>The Ophthalmologist</i>	2022
IOL Reference App Allows Surgeons to Search for FDA-Approved IOLs, <i>Ophthalmology Breaking News</i>	2022
New App Allows Surgeons to Search for FDA Approved IOLs, <i>eyewire</i>	2022
Virtual Resources for Aspiring Ophthalmologists, <i>MillennialEYE</i>	2022

COMMUNITY SERVICE

Taking it to the Streets San Antonio	2025-Present
MedZou Ophthalmology Resident Volunteer, <i>University of Missouri</i>	2022-2024
Command Pilot, <i>Angel Flight</i>	2021-2024
STEM Mentor, <i>Wings of Hope</i>	2021-2024
Presidential Scholarship Interviewer, <i>Saint Louis University</i>	2020-2024
MedZou Student Volunteer, <i>University of Missouri</i>	2016-2020
Medical School Charity Band (Vocals, Guitar), <i>University of Missouri</i>	2017-2020
Senior Teacher Educator Partnership (STEP) Volunteer, <i>University of Missouri</i>	2016-2017
Labre Ministry with the Homeless Volunteer, <i>Saint Louis University</i>	2015-2016
Guitar Teacher, <i>Doorways Housing St. Louis</i>	2016

LEADERSHIP & PROFESSIONAL SERVICE

Founder, President Abaco Arts LLC – Media, Graphic Design, Consulting	2025-Present
Co-Founder of Refractive Foundations (RefractiveFoundations.com), WCRSVS	2024-Present
• RefractiveFoundations.com	
Chief Resident, <i>University of Missouri</i>	2023-2024
RSA Resident Webinar Committee, <i>Refractive Surgery Alliance Society</i>	2023-2024
Editor of Technology and Innovation, <i>Ophthalmology Business Minute</i>	2023-Present
Bimini AI LLC Co-Founder – AI, Technology, and Innovation in Ophthalmology	2022-Present
• BiminiAI.com	
• IOL Reference iOS Application in the Apple App Store and IOLReferene.com	

LEADERSHIP & PROFESSIONAL SERVICE *cont.*

EyeFlyMD LLC Ophthalmology, Surgery, and Matching Educational Resource Founder	2020-Present
• EyeFlyMD.com	
• X.com, Instagram, Youtube @EyeFlyMD	
Medical Student Research Coordinator, <i>University of Missouri</i>	2020-2024
Ophthalmology Interest Group Resident Representative, <i>University of Missouri</i>	2020-2023
Dean-Appointed Curriculum Innovation Committee, <i>University of Missouri</i>	2017-2020
Curriculum Board Representative, <i>University of Missouri</i>	2016-2020
MedZou Medical Student Education Chair, <i>University of Missouri</i>	2016-2017
SLU String Orchestra, Concertmaster, <i>Saint Louis University</i>	2012-2016

ADDITIONAL EDUCATION & CERTIFICATION

Introduction to Marketing, <i>Wharton Online (University of Pennsylvania)</i>	2022
Introduction to Financial Accounting, <i>Wharton Online (University of Pennsylvania)</i>	2022
Managing Social and Human Capital, <i>Wharton Online (University of Pennsylvania)</i>	2022
Introduction to Corporate Finance, <i>Wharton Online (University of Pennsylvania)</i>	2022
Introduction to Operations Management, <i>Wharton Online (University of Pennsylvania)</i>	2022

INTERESTS AND HOBBIES

Aviation

- Aviation Education and Resource/Content Creator
- EyeFlyCFI.com and youtube.com/@EyeFlyMD

Seascape and Wildlife Photography & Graphic Design

- Portfolio: FocusingLight.com
- Proficiency with Adobe Creative Cloud Suite
- (Lightroom, Photoshop, Premiere Pro, After Effects, and Illustrator)
 - **Original Music:**

Jazz Guitar and String Quartet Arranging

- www.youtube.com/@CuriosityandCats

Sailing/Boatbuilding/Scuba Diving

Wing Chun Kung Fu

Learning Spanish (currently B1 based on the Instituto Cervantes Placement Exam)