

Ken Kitayama, MD, PhD
Heed Retreat Personal Statement

I am a Postgraduate-Year IV (PGY4) ophthalmology resident and incoming glaucoma fellow at the UCLA Stein Eye Institute, pursuing a career as an academic glaucoma specialist focused on elucidating modifiable drivers of disease progression and surgical outcomes. My long-term goal is to lead an independent research program that integrates population-based epidemiology with clinically grounded questions to reduce preventable vision loss, particularly among underserved populations.

My research has focused on understanding how socioeconomic and environmental factors shape glaucoma outcomes. My current research investigates air pollution as a modifiable risk factor for glaucoma progression and incisional surgical failure. Leveraging large-scale Medicare datasets, I have applied survival modeling and multi-pollutant frameworks to evaluate the impact of oxidative pollutants on ophthalmic outcomes. This work has led to national presentations and ongoing manuscript submissions, and reflects my broader goal of identifying actionable risk factors that extend beyond traditional clinical variables. Methodologically, I have developed a strong foundation in classic and modern epidemiologic techniques, and I am increasingly focused on advancing toward questions that are both mechanistically informed and clinically actionable.

Clinically, my training across diverse care settings in Los Angeles has reinforced my commitment to caring for patients who face disproportionate barriers to eye care. Many of the patients I have worked with navigate intersecting challenges related to socioeconomic status, language barriers, and environmental exposures, all of which are factors not often captured within clinical frameworks yet profoundly influence disease trajectory. These experiences have solidified my commitment to a career that bridges high-quality glaucoma care with research aimed at addressing upstream determinants of vision loss.

During fellowship, I plan to expand my research in three key directions. First, I aim to refine exposure modeling strategies and incorporate time-varying analyses to better characterize the dynamic relationship between environmental risk factors and glaucoma outcomes. Second, I plan to identify clinically meaningful exposure thresholds that may inform risk stratification, surgical planning, and patient counseling. Third, I will further develop expertise in advanced causal inference methods, including marginal structural models and artificial intelligence-driven mediation analysis, to strengthen the validity and translational relevance of my work. These efforts will position me to pursue career development funding and to establish an independent, externally funded research program.

Long term, I envision a career that integrates academic research with a strong clinical presence in settings that serve underserved populations. My goal is to generate evidence

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that informs both clinical decision-making and broader public health strategies, ultimately advancing a more comprehensive and equitable approach to glaucoma care.

The Heed Resident Retreat represents a critical opportunity to engage with leaders in academic ophthalmology at a formative stage in my career. I am particularly interested in mentorship on developing a focused and fundable research trajectory, navigating the transition to independence, and building a sustainable career that integrates clinical excellence with impactful research. I would be honored to participate in this program as I prepare for the next phase of my training.