

# Message From the Department of Ophthalmology Leadership

Even as we were reimagining New York Eye and Ear Infirmary of Mount Sinai (NYEE) for a new era—advancing programs and initiatives that strengthen our traditional pillars of patient care, education, research, and innovation—the institution didn't skip a beat over the past year.

More than ever, our focus is on ensuring the safety of the care we deliver and enhancing the experience of not just our patients, but our physicians and staff as well. To that end, we have implemented a comprehensive Quality, Safety, and Experience initiative, encompassing both our downtown and uptown campuses. This new leadership structure will focus on making us even better in three core areas—quality, safety, and experience—which are imperatives for NYEE in the twenty-first century.

Another way we've enhanced patient experience is through our Low Vision Clinic, which, as described in more detail in this report, recently named its first full-time director to expand a rehabilitative service that is vital to, but often sorely lacking within, the community. The clinic's goal is to help patients preserve their remaining vision and remain as independent as possible through an expanding range of traditional and exciting new aids and devices, and by linking them with experienced organizations in the city for mobility and functional training.

No asset is more important to our technology platform than continued development of our robotic assistant for complex ophthalmic surgery, and here we took a significant step by forming a scientific collaboration with ZEISS Medical, a global technology leader in the field of optics. That partnership will accelerate the pace of microsurgical robotics innovation at NYEE as we prepare the first robotic module—for retinal microsurgical intervention—for clinical trials.

Artificial intelligence (AI) is an increasingly important platform for our scientists. Drawing on a rich library of image data sets, they continue to uncover new ways to detect and treat diseases like glaucoma and macular degeneration, with major population health

implications. One of our research teams, for example, has pushed the boundaries of glaucoma discovery by decomposing the visual field into its component parts to establish patterns that could predict an individual's chances of acquiring primary open-angle glaucoma (POAG) later on. From a trove of national cohort data, we have identified 14 different patterns associated with various degrees of risk, with people of African heritage shown to have the greatest risk of POAG. This breakthrough work emphasizes the need for widespread screening among this population to detect glaucoma before it reaches one of the advanced patterns our research has established.

We're particularly proud, too, of the work of our acclaimed scientist Alon Harris, MS, PhD, Professor of Ophthalmology and Vice Chair of International Research and Academic Affairs, Icahn School of Medicine at Mount Sinai, to understand the role that ethnicity plays as a major contributor to the pathophysiology of glaucoma, the leading cause of irreversible blindness in people of African descent. Dr. Harris and his team are now building on that research by integrating artificial intelligence and mathematical modeling with clinical data to determine how race, along with other factors, can increase the risk of glaucoma.

Finally, our unflinching attention to education through ongoing improvements to the country's largest academic training program continues to be integral to our brand of excellence. As highlighted in this report, resident trainees are constantly exposed to learning opportunities through a multiplicity of health care sites, patient populations, and pathologies across New York City that few other medical centers in the country can offer.

That determination across our institution to push the limits of what's possible is not only enhancing the level of care we're now able to provide, but is also raising the bar ever higher for what we're fully committed to deliver to patients, communities, and populations as we write the next chapter in the 200-year history of NYEE.



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