Good morning, members of the committee. I am honored to be here to speak with you. You are making a critically important decision that will affect the health and safety of the citizens of Vermont. Thank you for considering all aspects of the issue and for taking the time to hear what I have to say.

My name is Jennifer Lindsey, and I serve as the Residency Program Director for Ophthalmology and Vice Chair for Education at Mass Eye and Ear. I am a practicing comprehensive ophthalmologist and clinical and surgical teacher for Harvard medical students and residents. I have been an educator and practicing clinician for over 20 years and have served on the faculty of Baylor College of Medicine, where I trained, at Vanderbilt, where I was Residency Program Director for 6 years, and now at Mass Eye and Ear. As program director, I am responsible for the training, supervision, and ultimate certification of the next generation of eye surgeons.

I want to begin by stating clearly that I have immense respect for our optometric colleagues. They are vital partners in primary eye care, and our healthcare system functions best when we work together. However, I am here today to express grave concerns regarding S.64, a bill that would expand the scope of practice of Vermont optometrists to include eye surgery, and to clear up some misinformation that you may have heard regarding ophthalmology education and training. Surgery, whether performed with a scalpel or a laser, requires a level of clinical judgment and hands-on experience that is fundamentally different from primary eye care.

As a Program Director and comprehensive ophthalmologist, I am intimately familiar with the high standards of ophthalmology training. The path to becoming an ophthalmologist is rigorous. After four years of medical school, we complete a minimum of four additional years of intensive surgical residency.

We have heard our optometry colleagues question the value of medical school for eye care. You heard recently from Delaney Curran, an ophthalmology resident, about medical training. I'd like to add more detail here. Dr. Feis in her testimony stated that only a few hours are devoted to ophthalmology in medical school. This is a misrepresentation. Most medical schools devote the first year and a half to lectures, conferences, case-based learning, "book learning". It is true that most medical schools require a few hours of ophthalmology during this time. It may be the case that some of this is taught by Optometrists in Arizona. I assure you that this is not the standard elsewhere and that expert ophthalmologists are the primary faculty providing this teaching at the vast majority of medical schools.

Beyond the classroom, much more time is devoted to ophthalmology during the clinical years. As you know, students go into many different careers after medical school, from primary care to brain surgery. In addition to required core clinical experiences like internal medicine, psychiatry, and general surgery, students have a great deal of flexibility with elective rotations where they explore specialties of interest to them. Many students elect to take 2 weeks of ophthalmology during their general surgery block. Those with continued interest in the specialty will often do 2 to 4 months of additional clinical rotations where they are working with expert faculty, learning to perform the eye exam, coming up with a list of possible diagnoses, determining what tests are needed to narrow down that list, and formulating a plan for how

the patient should be treated. Faculty ophthalmologists guide them through this process to hone their skills.
Residency programs in Ophthalmology receive about 600-700 applications each year for 3 to 9 residency positions. I can tell you that an applicant who had not completed these 2-4 months of additional ophthalmology electives would not even be considered for a position in our program. Some students even take an additional year of training to pursue research in ophthalmology to better understand the field.

I'd also like to provide more detail about residency training. Residents receive 5-10 hours per week of lectures and conferences. In addition, they have multiple simulation sessions where they learn the fundamentals of eye procedures and surgery in a controlled environment under the expert guidance of trained eye surgeons. After demonstrating skill on the simulator and in the wet lab, they are allowed to move on to performing parts of procedures on patients – again under the direct supervision of expert faculty surgeons. When they master a step of the procedure, they are allowed to progress to the next step. This graduated autonomy is fundamental to ophthalmology surgical training and assures patient safety during the learning process. During our 4 years of hands-on surgical training, we don't just learn how to "do" a procedure; we learn the complex anatomy of the eye, how to manage complications, and when **not** to operate.

By the time an ophthalmologist is allowed to practice independently, they have spent thousands of hours in direct, supervised patient care. This is not a gap that can be bridged by a weekend course or a few classroom sessions.

I am also responsible for making sure that my residency program is compliant with the standards of our accrediting body, the ACGME (Accreditation Council for Graduate Medical Education). There is often a misunderstanding regarding the ACGME minimum surgical requirements. You may hear numbers cited as proof of readiness, but it is critical to understand what those numbers actually mean.

- Requirements are not Competence. These minimums are simply a "floor" and are evaluated in aggregate to ensure a residency program provides enough volume for a diverse education. Taken together, the minimum requirements represent hundreds of procedures over the course of residency training. Our residents often graduate with more than 700 procedures in total.
- Reaching a minimum number does not grant a resident the right to perform surgery. Competence is determined by a committee of expert faculty surgeons led by the program director. The clinical competency committee, or CCC, includes faculty surgeons who have been in practice and teaching for years, many of whom have completed 1-2 additional years of fellowship training in such areas as cornea, retina, pediatrics, and glaucoma surgery.
- During 4 years of residency, residents rotate through many subspecialties as well as multiple blocks of comprehensive ophthalmology. At the end of each block, expert faculty complete a rigorous, detailed written evaluation where they rate multiple aspects of the resident's performance from patient exams to procedures,

communication and professionalism, to name a few. All of these evaluations, as well as verbal feedback from key faculty, detailed evaluations of individual surgical procedures, and results of rigorous annual in-service exams, are diligently reviewed by the CCC members every 6 months and more often as needed to determine if a resident is meeting expectations and is ready to move on to the next step of training.
- Mastering safe and effective eye surgery requires extensive practice under close supervision. We review hundreds of procedures performed by each resident. We look for technical precision and, more importantly, surgical judgment. We do not sign off on a surgeon until we are certain they can safely handle a patient's vision.

Claims have been made that the Accreditation Council for Optometric Education (ACOE) ensures graduates are ready for these procedures. I ask you to consider the logic of that claim: **How can a student be trained to perform a procedure that is illegal in the very state where their school is located?**
In the vast majority of states where optometry schools exist, these surgeries are not permitted. Consequently, "training" often consists of:

- **Short Courses:** Sometimes as little as 32 hours of instruction.
- **Simulations:** Using plastic model eyes or "virtual" lasers.
- **Lack of Human Experience:** Many graduates have never performed these procedures on a living, breathing human being under the guidance of a surgeon.

A simulated eye does not bleed, it does not move, and it does not have complications. You cannot learn surgery in a classroom; you learn it at the bedside and in the operating room. What do students do then, in states where patient safety standards are upheld and surgery is outside of the scope of optometry? Dr Feis told you that these students have the option to travel to one of the 3 states where optometry schools are based that allow these procedures. It is clear that these 3 states would not have the capacity to train every optometry student from 25 schools in the country. At most, they may provide a select few students with hands-on experience on a few patients. This in no way sufficiently prepares someone to perform safe eye surgery.

The eye is a beautiful, complex, delicate organ that provides us with our most precious sense, sight. I liken it to the heart, another complex and delicate organ that provides us with life itself. Would you want your heart surgery performed by someone who had not been to medical school? Who had only practiced surgery on model hearts that don't bleed, or at best had done 4 or 5 surgeries on live patients? I think not. Your eyes and the eyes of all Vermonters are just as valuable and deserve safe surgery by a trained medical doctor.

There is No Such Thing as "Minor" Eye Surgery. The term "laser surgery" sounds clean and simple, but a laser is a powerful surgical tool. If a laser is fired just a fraction of a millimeter off-target, it can cause permanent blind spots, hemorrhages, or cataracts. Performing a laser surgery when it is not indicated can cause inflammation of the eye, worsening of disease, and delay in accurate diagnosis and proper care. Similarly, incisional surgery on the eyelid involves

delicate structures that protect the globe of the eye. One mistake can lead to chronic pain, infection, or loss of sight.

The citizens of Vermont deserve to know that when a surgeon approaches their eyes, that individual has the full weight of medical and surgical residency training behind them.

We all want to increase access to care, but we must not do so by lowering the standard of safety. There is no substitute for the years of medical and surgical training required to safely operate on the human eye. I urge you to vote against this bill and keep surgical eye care in the hands of those specifically trained to provide it.

Thank you.