

Neuro-Ophthalmology Service

The Neuro-Ophthalmology Service at the UPMC Vision Institute is a specialized team devoted to diagnosing and managing visual problems that stem from the nervous system. As the only source for neuro-ophthalmic care in the

Pittsburgh and tri-state region, the Division—led by Division Chief Gabrielle Bonhomme, MD—provides expert evaluation of neurological conditions that affect vision, such as brain tumors, multiple sclerosis, stroke, and disorders that disrupt the communication between the eye and brain, including optic neuritis, cranial nerve palsies, elevated spinal fluid pressure, and vascular issues. Patients benefit from the team's collaborative approach, advanced diagnostics, and strong commitment to multidisciplinary care.

COLLABORATIVE CARE AND SPECIALIZED SERVICES IN NEURO-OPHTHALMOLOGY

Dr. Bonhomme works hand in hand with the Skull Base Neurosurgery team at UPMC to diagnose and monitor patients dealing with brain and orbital tumors that affect vision. She also teams up with neuroimmunologists to help patients with

demyelinating disorders like multiple sclerosis, and collaborates with rheumatologists at the UPMC Vasculitis Center for inflammatory conditions such as giant cell arteritis. When it comes to cancer-related vision problems, the Division maintains a close partnership with the neuro-oncologists at the Hillman Cancer Center.

Dr. Bonhomme has a strong interest in tumors of the sella and skull base, conditions involving increased intracranial pressure, and vision issues linked to neuro-oncologic disorders. Since her training at the University of Pennsylvania, she has been focused on advanced neuroimaging techniques and has published on technologies like HDFT. Her research experience includes working with neurosurgeons in the Pituitary Center of Excellence on skull base tumors, and she is currently part of a multi-center study with neuroimmunology colleagues to explore early treatment for optic neuritis. She is also involved



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in the Gensight research trial, which is looking at new treatments for LHON, a hereditary cause of blindness. Beyond her clinical and research work, Dr. Bonhomme is passionate about education; she has trained many medical students, interns, and residents, and leads the Clinical Neuro-Ophthalmology Fellowship at UPMC.

George Park, DO,

brings expertise in a wide range of neuro-ophthalmologic conditions, including optic neuritis, multiple sclerosis, idiopathic intracranial hypertension, and other causes of vision loss from optic nerve and brain problems. He is especially interested in double vision and abnormal eye movements, such as those seen in myasthenia gravis. Dr. Park also collaborates with colleagues on research into new technologies for diagnosing nystagmus and other involuntary eye movements caused by neurological disorders.



Peter Mortensen,

MD, offers a fresh perspective and extensive clinical experience in treating optic neuropathy, neurological disorders, and MOGAD. He is working on gene therapy trials with Gensight and Dr. José-Alain Sahel to treat Leber Hereditary Optic Neuropathy, a condition that causes vision loss. Dr. Mortensen also plays an active role in teaching, helping to train medical students, residents, and fellows at the University of Pittsburgh.



Islam Zaydan, MD,

is a board-certified neurologist and neuroimmunologist with a special focus on stroke, multiple sclerosis, NMOSD, MOGAD, and other demyelinating conditions.



One unique aspect of the Neuro-Ophthalmology Service is a weekly parallel clinic led by Emily DePew, OD, FAAO, a subspecialty-trained optometrist. She offers evaluations for therapeutic options like prisms and specialty lenses alongside Dr. Bonhomme's diagnostic exams. This clinic gives patients access to personalized care and life-changing treatments that can dramatically improve their vision and overall quality of life.

RESEARCH HIGHLIGHTS AND ACADEMIC LEADERSHIP

The Neuro-Ophthalmology Division participates actively in advancing scientific understanding through a broad spectrum of research. Faculty and trainees contribute to clinical studies, translational science, and the development of new imaging and diagnostic tools, all directed toward improving patient care and expanding the field.

Ongoing research addresses topics such as the genetic factors behind optic nerve disorders, emerging therapies for autoimmune vision conditions, and innovative strategies for neurovisual rehabilitation. Findings from these efforts are regularly published in reputable academic journals, underscoring the Division's role in moving medicine forward. ■