



What You Should Know About Ophthalmic Imaging and a Comprehensive Exam



This is the fourth in the Canadian Association of Optometrists (CAO) vision health education series launched in May 2022. The series provides regular insights into important services that optometrists provide as part of comprehensive and follow-up (recall) eye examinations that are not always fully reimbursed by group vision care plans today.

The important message you should take away from this series is that structural and functional changes in the eye can be detected through specialized testing, including ophthalmic imaging, well before the patient experiences any symptoms. These tests often work in conjunction to assist in the diagnosis and management of serious eye conditions.

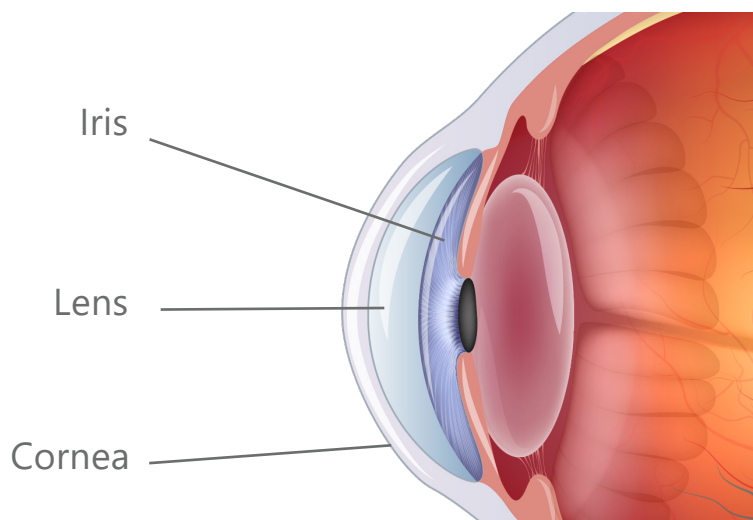
The use of specialized testing is critical in mitigating vision loss and avoiding higher medium- and long-term costs to plans in prescription drugs, assistive devices and in some cases long-term

disability. While provincial plans typically provide reasonable coverage once a diagnosis is made, there is a gap in public coverage for tests that can lead to early diagnosis and intervention. With the information contained in this series, plan sponsors, advisors and insurers can consider how to amend their plans to fill the gaps that exist between private and public coverage.

There are nine ophthalmic imaging tests, including Optical Coherence Tomography (OCT) which we addressed in our last blog. The OCT is commonly used by optometrists to diagnose and monitor glaucoma and many other retinal diseases, like age-related macular degeneration (AMD) and diabetic macular edema. In this blog, we explore the important role of Slit Lamp Photography, Gonioscopic Imaging, and Heidelberg Retinal Tomography, which are the three other most common imaging tests.

What Is Slit Lamp Anterior Segment Photography?

Slit Lamp Anterior Segment Photography uses magnifications, angles and illumination for accurate examination and documentation of the frontal structures of the eye, including the iris, lens, cornea, eyelids, white of the eye and clear fluid.



Conditions affecting these frontal structures (such as corneal abrasions, iris melanoma, and dry eye disease) can be accurately documented using Slit Lamp Photography. In a group benefit setting, an optometrist is most likely to be looking for progression or changes in the frontal structure of the eye.

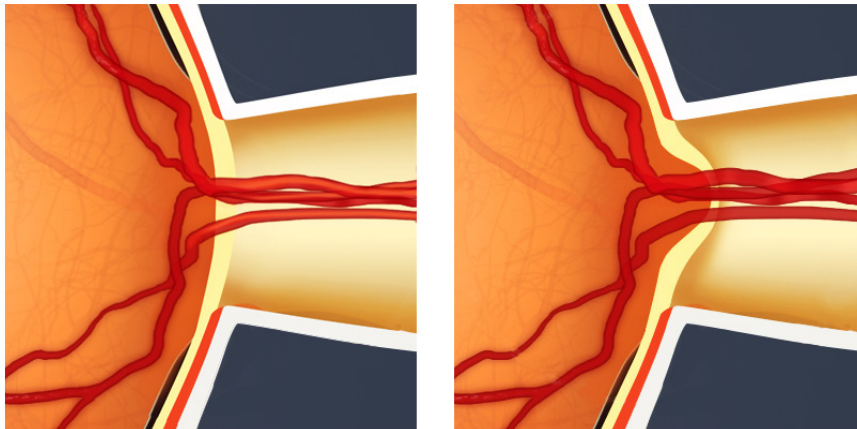
Gonioscopic Imaging

This is used in conjunction with a slit lamp or operating microscope to gain a view of the angles between the eye's cornea and iris. This allows for the examination of the fluid drainage system of the eye, which is important in the diagnosis of diseases such as open or closed-angle glaucoma,

as well as being helpful in detecting other diseases and conditions, including iris cysts and tumours.

Heidelberg Retinal Tomography (HRT)

This is used for the diagnosis and management of glaucoma in conjunction with an OCT scan. In HRT, a laser takes photographs of the optic nerve through deeper and deeper layers, and the retina around it, to form a 3D image of the entire optic nerve until the desired depth is reached.



(Left) Healthy optic nerve, (Right) Damaged optic nerve with “cupping”

The typical optic nerve damage that occurs in glaucoma, known as “cupping”, occurs as the cells making up the nerve die and leave a cup shape in the optic nerve head. Optometrists will look for not only the “cup” in the optic nerve, but also how deep and how wide it is.

The HRT image can be used to evaluate the area of the optic disc, the volume of the cup, and the area of the rim around the cup. Over several visits, scans are layered, and changes are measured. In a group benefit setting, coverage should be provided for several visits for HRT imaging.

Even those in their working years should be considered for these tests

Since eye disease is common in those under 60, coverage for ophthalmic imaging tests under group plans is an important element of vision care benefits. Approximately 76,000 Canadians under 60 have vision loss due to glaucoma alone, and only half of the approximately 730,000 with glaucoma are diagnosed.¹

The Canadian Association of Optometrists (CAO) recommends that plan sponsors, insurers, and group benefit advisors review group vision care plans to ensure coverage for ophthalmic imaging tests and other diagnostic tools in this series are eligible for reimbursement, particularly during the initial testing and monitoring phase. Doing so will ensure that plan members and their

dependents have access to the services of an optometrist to mitigate the impact of serious eye diseases like glaucoma and other health conditions that can affect vision.

CAO represents more than 80% of optometrists across Canada who are committed to the vision health of all Canadians. If you require any assistance, have any questions, or would like to consult with the CAO on how to examine your vision care plan for gaps in care and help modernize it, please do not hesitate to reach out to us at info@opto.ca.

References

1. Deloitte Access Economics. (2021, May). *The cost of vision loss and blindness in Canada*. Canadian Council of the Blind. Available from: <https://www.fightingblindness.ca/wp-content/uploads/2021/12/Deloitte-Cost-of-vision-loss-and-blindness-in-Canada-report-May-2021.pdf>