Screening for Primary Open-Angle Glaucoma

The US Preventive Services Task Force (USPSTF) has recently published recommendations on screening for primary open-angle glaucoma in adults.

What Is Glaucoma?

Glaucoma is an eye disease that leads to damage of the optic nerve, the main nerve of the eye, and is often associated with high pressure inside the eye (elevated intraocular pressure). Over time, glaucoma can lead to vision loss and irreversible blindness. Open-angle glaucoma is the most common type of glaucoma, accounting for more than 90% of glaucoma cases.

Open-angle glaucoma in the early stages usually does not cause any visual symptoms. As it progresses, it can cause loss of vision at the edges (“tunnel vision”) and then loss of central vision. Treatment of glaucoma may include eye drops, laser therapy, and surgery.

What Tests Are Used to Screen for Open-Angle Glaucoma?

Several tests that are not typically performed in the primary care setting can be used in combination to screen for open-angle glaucoma:

- **Tonometry** to measure intraocular pressure
- **Ophthalmoscopy** with dilated eye examination to examine the optic nerve
- **Perimetry** to test the visual field (for tunnel vision)
- **Gonioscopy** to measure the angle in the eye where the iris meets the cornea
- **Pachymetry** to measure the thickness of the cornea
- **Imaging tests** such as optical coherence testing and optic disc photography to view the part of the optic nerve that enters the retina

What Is the Patient Population Under Consideration for Screening for Open-Angle Glaucoma?

This recommendation applies to adults aged 40 years or older who do not have signs or symptoms of open-angle glaucoma and who present to a primary care physician.

What Are the Potential Benefits and Harms of Screening for Open-Angle Glaucoma?

Given that open-angle glaucoma usually does not cause symptoms in the early stages, the goal of screening is earlier detection and treatment. However, while treatment of open-angle glaucoma improves intraocular pressure, it is not known whether screening and treatment improves health outcomes such as reducing visual impairment or improving vision-related function and quality of life.

Because not all persons who are diagnosed with and treated for open-angle glaucoma progress to visual impairment, possible harm of screening tests includes unnecessary treatment. Possible harms caused by treatment of glaucoma include formation of cataracts resulting from surgery, topical medications, or both.

How Strong Is the Recommendation to Screen for Open-Angle Glaucoma?

Based on limited current evidence, the USPSTF concludes that the evidence is insufficient to assess the balance of benefits and harms of screening for primary open-angle glaucoma in adults (uncertain whether benefits outweigh harms).

For More Information

US Preventive Services Task Force


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