



Effective Health Care

Comparative Effectiveness of Interventions for the Prevention and Treatment of Age-Related Macular Degeneration Nomination Summary Document

Results of Topic Selection Process & Next Steps

- The topic, *Age-related Macular Degeneration* (AMD), was found to be addressed by a 2015 guideline from the American Academy of Ophthalmology (AAO) titled *Age-related Macular Degeneration Preferred Practice Pattern Guideline*. Given that the existing guideline covers this nomination, no further activity will be undertaken on this topic.
 - American Academy of Ophthalmology. Age-Related Macular Degeneration Preferred Practice Pattern Guideline. January 2015. <http://one.aao.org/preferred-practice-pattern/age-related-macular-degeneration-ppp-2015>.
- In addition to the AAO guideline, there were seven Cochrane reviews published on AMD and other recent systematic reviews that examine available treatments and the comparative effectiveness of treatments for AMD.

Topic Description

Nominator(s): Three separate individuals

Nomination Summary: The nominators are interested in understanding the comparative effectiveness of treatments for neovascular age-related macular degeneration (AMD), also known as wet AMD. One of the nominators indicates that clinicians and patients could benefit from comparative effectiveness data due to the high cost of AMD treatments.

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Population(s): Elderly patients with age-related macular degeneration

Intervention(s): Available treatments including laser photocoagulation, photodynamic therapy, brachytherapy, external beam radiotherapy, intravitreal anti-vascular endothelial growth factor (VEGF) inhibitor therapy, systemic VEGF inhibitor therapy, intravitreal corticosteroid therapy

Comparator(s): Placebo, other of these treatments, combination of treatments

Outcome(s): Quality of sight, blindness, best-corrected visual acuity (BCVA), adverse events from treatments, quality of life, side effects of treatment such as retinal detachment, cataract, glaucoma, endophthalmitis, severe skin burns, visual loss, hemorrhaging and thrombosis

Key Questions from Nominator: What is the comparative effectiveness of interventions for AMD, including neovascular AMD, or wet AMD?

Considerations

- Age-related macular degeneration (AMD) is a progressive and chronic disease of the eye and a leading cause of vision loss among people age 50 and older. It causes damage to the macula, a small spot near the center of the retina and the part of the eye needed for sharp, central vision. AMD can lead to vision loss in one or both eyes, and can take varying courses of progression. Treatment for AMD depends on stage of the disease. No treatment exists for early AMD, and many people do not show symptoms or loss of vision. As for prevention, AMD occurs less often in people who exercise, avoid smoking, and eat nutritious foods. Treatment for intermediate to advanced AMD includes antioxidant, vitamin and mineral supplementation. Wet AMD treatments include anti-vascular endothelial growth factor treatment (anti-VEGF) treatment, photodynamic therapy, and laser surgery.
- At the time of the nomination, there was uncertainty about the recommended treatment for AMD. Trials comparing the safety and effectiveness of two anti-VEGF drugs, ranibizumab (Lucentis) and bevacizumab (Avastin), had not yet concluded.
- The American Academy of Ophthalmology (AAO) published a guideline in January 2015 on AMD. The guideline was informed by a systematic review of evidence from PubMed and the Cochrane databases published through June 2013. GRADE was used to rate the strength of evidence. The guideline discussed different treatment modalities depending on the stage of AMD progression.