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International Council of Ophthalmology /
International Federation of Ophthalmological Societies

ICO International Clinical Guidelines

Age-Related Macular Degeneration (Initial and Follow-up Evaluation)

(Ratings: A: Most important, B: Moderately important, C: Relevant but not critical
Strength of Evidence: I: Strong, II: Substantial but lacks some of I, III: consensus of expert opinion in absence of evidence for I & II)

Initial Exam History (Key elements)

- Symptoms (metamorphopsia, decreased vision) **(A:II)**
- Medications and nutritional supplements **(B:III)**
- Ocular history **(B:II)**
- Systemic history (any hypersensitivity reactions) **(B:II)**
- Family history, especially family history of AMD **(B:II)**
- Social history, especially smoking **(B:II)**

Initial Physical Exam (Key elements)

- Visual acuity **(A:III)**
- Stereo biomicroscopic examination of the macula **(A:I)**

Ancillary Tests

Intravenous fundus fluorescein angiography in the clinical setting of AMD is indicated: **(A:I)**

- when patient complains of new metamorphopsia
- when patient has unexplained blurred vision
- when clinical exam reveals elevation of the RPE or retina, subretinal blood, hard exudates or subretinal fibrosis

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- to detect the presence of and determine the extent, type, size, and location of CVN and to calculate the percentage of the lesion composed of or consisting of classic CNV
- to guide treatment (laser photocoagulation surgery or verteporfin PDT)
- to detect persistent or recurrent CNV following treatment
- to assist in determining the cause of visual loss that is not explained by clinical exam

Each angiographic facility must have a care plan or an emergency plan and a protocol to minimize the risk and manage any complications. **(A:III)**

Follow-up Exam History

- Visual symptoms, including decreased vision and metamorphopsia **(A:II)**
- Changes in medications and nutritional supplements **(B:III)**
- Interval ocular history **(B:III)**
- Interval systemic history **(B:III)**
- Changes in social history, especially smoking **(B:II)**

Follow-up Physical Exam

- Visual acuity **(A:III)**
- Stereo biomicroscopic examination of the fundus **(A:III)**

Surgical and Postoperative Care for Patients Receiving Thermal Laser Surgery, Photodynamic Therapy (PDT), or Intravitreal Injections

- Discuss risks, benefits and complications with the patient and obtain informed consent **(A:III)**
- For thermal laser surgery and PDT, treat within 1 week after fluorescein angiography **(A:I)**
- Examine at 2 to 4 weeks after initial thermal laser surgery to confirm that CVN has been obliterated and perform fluorescein angiography **(A:I)**
- Examine at 4 to 6 weeks after thermal laser surgery and perform fluorescein angiography, and thereafter, depending on clinical findings and judgment **(A:I)**
- Examine and perform fluorescein angiography at least every 3 months for up to 2 years after verteporfin PDT **(A:I)**
- Examine with retreatments as indicated every 4 to 8 weeks after intravitreal injections (see table) **(A:III)**

Patient Education

- Educate patients about the prognosis and potential value of treatment as appropriate for their ocular and functional status. **(A:III)**

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- Encourage patients with early AMD to have regular dilated eye exams for early detection of intermediate AMD. **(A:III)**
- Educate patients with intermediate AMD about methods of detecting new symptoms of CVN and about the need for prompt notification to an ophthalmologist. **(A:III)**
- Instruct patients with unilateral disease to monitor their vision in their fellow eye and to return periodically even in absence of symptoms, but promptly after onset of new or significant visual symptoms. **(A:III)**
- For patients with CVN for whom treatment may be indicated, counsel as follows: **(A:III)** treatment will reduce, but not eliminate the risk of severe visual loss; thermal laser surgery will produce permanent scotomas and explain anticipated effect of scotoma on central visual function; verteporfin PDT and pegaptanib sodium treatment will reduce risk of moderate and severe visual loss, but most patients will still lose some vision over 2 years, and improvement in visual acuity is unusual; there is a high risk of CNV persistence or recurrence after thermal laser surgery that could require additional laser surgery, and this risk is greatest in the first year; and multiple fluorescein angiograms are necessary for appropriate follow-up.
- Refer patients with reduced visual function for vision rehabilitation (see www.aao.org/smartsight) and social services. **(A:III)**

* Adapted from the [American Academy of Ophthalmology Summary Benchmarks for Preferred Practice Patterns™ \(PPPs\)](http://www.aao.org) (www.aao.org)

(For more ICO International Clinical Guidelines, see www.icoph.org/guide)

Preface to the Guidelines:

International Clinical Guidelines are prepared and distributed by the International Council of Ophthalmology on behalf of the International Federation of Ophthalmological Societies.

These Guidelines are to serve a supportive and educational role for ophthalmologists worldwide. These guidelines are intended to improve the quality of eye care for patients. They have been adapted in many cases from similar documents (Benchmarks of Care) created by the American Academy of Ophthalmology based on their Preferred Practice Patterns.

While it is tempting to equate these to Standards, it is impossible and inappropriate to do so. The multiple circumstances of geography, equipment availability, patient variation and practice settings preclude a single standard.

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Guidelines on the other hand are a clear statement of expectations. These include comments of the preferred level of performance assuming conditions that allow the use of optimum equipment, pharmaceuticals and/or surgical circumstances.

Thus, a basic expectation is created and if the situation is optimum, the optimum facets of diagnosis, treatment and follow up may be employed. Excellent, appropriate and successful care can also be provided where optimum conditions do not exist.

Simply following the Guidelines does not guarantee a successful outcome. It is understood that, given the uniqueness of a patient and his or her particular circumstance, physician judgment must be employed. This can result in a modification in application of a guideline in individual situations.

Medical experience has been relied upon in the preparation of these guidelines, and they are whenever possible, evidence-based. This means these Guidelines are based on the latest available scientific information. The ICO is committed to provide updates of these guidelines on a regular basis (approximately every two to three years).

(Also see the Introduction to the ICO International Clinical Guidelines at www.icoph.org/guide/guideintro.html and the list of other Guidelines at www.icoph.org/guide/guidelist.html.)