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International Council of Ophthalmology/
International Federation of Ophthalmological Societies

ICO International Clinical Guidelines

Age-related Macular Degeneration (Management Recommendations)

(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)

Treatment Recommendations and Follow-up Plans for Age-related Macular Degeneration

Recommended Treatment	**Diagnoses Eligible for Treatment**	**Follow-up Recommendations**
Observation with no medical or surgical therapies **(A:I)**	No clinical signs of AMD (AREDS category 1) Early AMD (AREDS category 2) Advanced AMD with bilateral subfoveal geographic atrophy or disciform scars	As recommended in the Comprehensive Adult Medical Eye Evaluation PPP **(A:III)** Return exam at 6 to 24 months if asymptomatic or prompt exam for new symptoms suggestive of CVN **(A:III)** No fundus photos or fluorescein angiography unless symptomatic **(A:I)**
Antioxidant vitamin and mineral supplements as recommended in the	Intermediate AMD (AREDS category 3) Advanced AMD in one eye (AREDS category 4)	Monitoring of monocular near vision (reading/Amsler grid) **(A:III)**

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AREDS reports **(A:I)**		Return exam at 6 to 24 months if asymptomatic or prompt exam for new symptoms suggestive of CVN **(A:III)** Fundus photography as appropriate Fluorescein angiography if there is evidence of edema or other signs and symptoms of CVN
Thermal laser photocoagulation surgery as recommended in the MPS reports **(A:I)**	Extrafoveal classic CNV, new or recurrent Juxtafoveal classic CNV May be considered for new or recurrent subfoveal CNV if the lesion is less than 2 MPS disc areas and the vision is 20/125 or worse, especially if PDT is contraindicated or not available May be considered for juxtapapillary CVN	Return exam with fluorescein angiography approximately 2 to 4 weeks after treatment, and then at 4 to 6 weeks and thereafter depending on the clinical and angiographic findings **(A:III)** Retreatments as indicated Monitoring of monocular near vision (reading/Amsler grid) **(A:III)**
PDT with verteporfin as recommended in the TAP and VIP reports **(A:I)**	Subfoveal CNV, new or recurrent, where the classic component is >50% of the lesion and the entire lesion is $\leq$5400 microns in greatest linear diameter Occult CNV may be considered for PDT with vision <20/50 or if the CVN is <4 MPS disc areas in size when the vision is >20/50	Return exam approximately every 3 months until stable, with retreatments as indicated **(A:III)** Fluorescein angiography or other imaging as indicated Monitoring of monocular near vision (reading/Amsler grid) **(A:III)**

Pegaptanib sodium intravitreal injection as recommended in pegaptanib sodium literature **(A:I)**	Subfoveal CNV, new or recurrent, for predominantly classic lesions ≤12 MPS disc area in size Minimally classic, or occult with no classic lesions where the entire lesion is ≤12 disc areas in size, subretinal hemorrhage associated with CVN comprises ≤50% of lesion, and/or there is lipid present, and/or the patient has lost 15 or more letters of visual acuity during the previous 12 weeks	Patients should be instructed to report any symptoms suggestive of endophthalmitis without delay, including eye pain or increased discomfort, worsening eye redness, blurred or decreased vision, increased sensitivity to light, or increased number of floaters **(A:III)** Return exam with retreatments every 6 weeks as indicated **(A:III)** Monitoring of monocular near vision (reading/Amsler grid) **(A:III)**
Ranibizumab intravitreal injection 0.5 mg as recommended in ranibizumab literature **(A:I)**	Subfoveal CNV	Patients should be instructed to report any symptoms suggestive of endophthalmitis without delay, including eye pain or increased discomfort, worsening eye redness, blurred or decreased vision, increased sensitivity to light, or increased number of floaters **(A:III)** Return exam with retreatments every 4 weeks as indicated **(A:III)** Monitoring of monocular near vision (reading/Amsler grid) **(A:III)**
Bevacizumab intravitreal injection as described in published reports **(A:III)**	Subfoveal CNV	Patients should be instructed to report any symptoms suggestive of endophthalmitis without delay, including eye pain or increased discomfort, worsening

The ophthalmologist should provide appropriate informed consent with respect to the off-label status **(A:III)**		eye redness, blurred or decreased vision, increased sensitivity to light, or increased number of floaters **(A:III)** Return exam with retreatments every 4 to 8 weeks as indicated **(A:III)** Monitoring of monocular near vision (reading/Amsler grid) **(A:III)**

NOTE: If patients treated with thermal laser photocoagulation surgery, verteporfin PDT, or intravitreal injections notice visual loss or change prior to the next scheduled visit, return evaluation that may include angiography is recommended. **(A:III)**

AMD = Age-related Macular Degeneration; AREDS = Age-related Eye Disease Study; CNV = choroidal neovascularization; MPS = Macular Photocoagulation Study; PDT = photodynamic therapy; TAP = Treatment of Age-related Macular Degeneration with Photodynamic Therapy; VIP = Verteporfin in Photodynamic Therapy

* Adapted from the American Academy of Ophthalmology Summary Benchmarks, November 2006 (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.

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**.)