PREFERRED PRACTICE PATTERN® GUIDELINES

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PREFERRED PRACTICE PATTERN®

- It is a committee developed by a panel of ophthalmologists with expertise in the guideline topic, a methodologist, and other experts.

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American Society of Retina Specialists
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Central American Retina and Vitreous Society
European Society of Retina Specialists
The Macula Society
National Eye Institute
National Medical Association
Pan-American Retina and Vitreous Society
The Retina Society
Thai Retina Society

AMERICAN ACADEMY OF OPHTHALMOLOGY

PREFERRED PRACTICE PATTERN®

- For each PPP, a detailed literature search of PubMed and the Cochrane Library for articles in the English language is conducted
- The results are reviewed by an expert panel and used to prepare the recommendations, which are then given a rating that shows the **strength of evidence** when sufficient evidence exists.

PREFERRED PRACTICE PATTERN®

- They provide guidance for practice not for the care of a particular individual.
- Preferred Practice Pattern® guidelines are not medical standards to be adhered to in all individual situations.
- They are reviewed annually and valid for 5 years.

AMERICAN ACADEMY™ OF OPHTHALMOLOGY

LEVELS OF EVIDENCE

PREFERRED PRACTICE PATTERN® CLINICAL QUESTIONS

- **PPP Clinical Questions answer the PICTOS questions:**
  - **P**atient.
  - **I**ntervention.
  - **C**omparison.
  - **O**utcome.
  - **T**ime frame.
  - **S**tudy design or setting.

SCOTTISH INTERCOLLEGIATE GUIDELINE NETWORK (SIGN)

I ++	• **High quality meta-analyses, systematic reviews of RCTs** • **RCTs with a very low risk of bias**
I +	• Well-conducted meta-analyses, systematic reviews of RCTs • RCTs with a low risk of bias
I -	• **Meta-analyses, systematic reviews of RCTs** • **RCTs with a high risk of bias**
II ++	• High-quality systematic reviews of case-control or cohort studies • High-quality case-control or cohort studies with a very low risk of confounding or bias and a high probability that the relationship is causal
II +	• **Well-conducted case-control or cohort studies with a low risk of confounding or bias and a moderate probability that the relationship is causal**
II -	• Case-control or cohort studies with a high risk of confounding or bias and a significant risk that the relationship is not causal.
III	• **Case reports and case series.**

GRADING OF RECOMMENDATIONS ASSESSMENT, DEVELOPMENT AND EVALUATION (GRADE)

The body of evidence quality ratings are defined by GRADE as follows:

Good quality (GQ)	• Further research is very unlikely to change our confidence.
Moderate quality (MQ)	• Further research is likely to have an important impact on our confidence in the estimate of the effect.
Insufficient quality (IQ)	• Further research is very likely to have an important impact on our confidence in the estimate of effect • Estimate of effect is very uncertain.

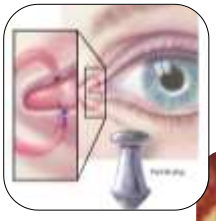
GRADING OF THE IMPORTANCE IN THE CARE PROCESS

Strong recommendation (SR)	• The desirable effects of an intervention **clearly** outweigh the undesirable effects or clearly do not
Discretionary recommendation (DR)	• The trade-offs are less certain – either because of low-quality evidence or because evidence suggests that desirable and undesirable effects are closely balanced

EXAMPLES

Primary Angle Closure (Initial Evaluation and Therapy);

- Perform prophylactic iridotomy in fellow eye if chamber angle is anatomically narrow, as nearly half of fellow eyes can develop AACC within 5 years (II++, GQ, SR)



Dry Eye Syndrome (Management Recommandations):

- For moderate dry eye, punctal plugs. (I++, GQ, SR)

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

- Encourage patients who are currently smoking to quit. (I++, GQ, SR)

PREFERRED PRACTICE PATTERN®

Diabetic Retinopathy

AMERICAN ACADEMY OF OPHTHALMOLOGY
The Eye M.D. Association

HIGHLIGHTS AND RECOMMENDATIONS

Type 1 diabetes should have annual screenings for diabetic retinopathy beginning 5 years after the onset of their disease.
Type 2 diabetes should have a prompt examination at the time of diagnosis and at least yearly examinations thereafter. **II+; Good; Strong**

Patients should be informed of the importance of maintaining good **A1C** levels, serum lipids, and blood pressure to lower the risk of retinopathy developing and/or progressing. **I++; Good; Strong**

Patients with diabetes may use aspirin for other medical indications. **I++; Good; Discretionary**

Gestational diabetes do not require an eye examination. However, diabetic pregnant women should be examined early in the course of the pregnancy. **II+; Good; Strong**

At this time, laser photocoagulation remains the preferred treatment for non-center-involving diabetic macular edema. **I++; Good; Strong**

TABLE 1 Diabetic Retinopathy Disease Severity Scale and International Clinical Diabetic Retinopathy Disease Severity Scale

Disease Severity Level	Findings Observable upon Dilated Ophthalmoscopy
No apparent retinopathy	No abnormalities
Mild NPDR (see Glossary)	Microaneurysms only
Moderate NPDR (see Glossary)	More than just microaneurysms but less than severe NPDR
Severe NPDR	
U.S. Definition	Any of the following (4-2-1 rule) and no signs of proliferative retinopathy: • Severe intraretinal hemorrhages and microaneurysms in each of **four** quadrants • Definite venous beading in **two** or more quadrants • Moderate IRMA in **one** or more quadrants
International Definition	Any of the following and no signs of proliferative retinopathy: • More than 20 intraretinal hemorrhages in each of **four** quadrants • Definite venous beading in **two** or more quadrants • Prominent IRMA in **one** or more quadrants
PDR	One or both of the following: • Neovascularization • Vitreous/preretinal hemorrhage

RECOMMENDATIONS

TABLE 3 Recommended Eye Examinations For Patients with Diabetes Mellitus and No Diabetic Retinopathy

Diabetes Type	Recommended Initial Evaluation	Recommended Follow-up*
Type 1	5 years after diagnosis[79]	Yearly[79]
Type 2	At time of diagnosis[33, 92]	Yearly[33, 92]
Pregnancy† (Type 1 or Type 2)	Soon after conception and early in the first trimester[93-98]	• No retinopathy to mild or moderate NPDR: every 3–12 months[93-98] • Severe NPDR or worse: every 1–3 months[93-98]

TABLE 6 MANAGEMENT RECOMMENDATIONS FOR PATIENTS WITH DIABETES

Severity of Retinopathy	Presence of Macular Edema	Follow-up (Months)	Panretinal Photocoagulation (Scatter) Laser	Focal and/or Grid Laser*	Intravitreal Anti-VEGF Therapy
Normal or minimal NPDR	No	12	No	No	No
Mild NPDR	No	12	No	No	No
	ME	4-6	No	No	No
	CSME†	1*	No	Sometimes	Sometimes
Moderate NPDR	No	12‡	No	No	No
	ME	3-6	No	No	No
	CSME†	1*	No	Sometimes	Sometimes
Severe NPDR					
Non-high-risk PDR					
High-risk PDR					

High-Risk PDR

The presence of any three of the following four features characterizes DRS high-risk PDR:

- Neovascularization (at any location)
- Neovascularization at the optic disc
- Severe neovascularization:
  - New vessels within one disc diameter of the optic nerve head that are larger than one-quarter to one-third disc area in size
  - New vessels elsewhere that are at least one-half disc area in size
- Vitreous or preretinal hemorrhage

The initial physical examination should include slit-lamp biomicroscopy: **III; Good; Strong**

The initial physical examination should include intraocular pressure: **III; Good; Strong**

The initial physical examination should include gonioscopy before dilation, when indicated: **III; Good; Strong**

POSSIBLE APPLICATION IN EGYPT

CARE PROCESS

It is recommended that an HbAlc of 7.0% or lower is the target for glycemic control in most patients while in selected patients, there may be some benefit to setting a target of 6.5%: **I++; Good; Strong**

CARE PROCESS

Aspirin appears to be neither helpful nor harmful in the management of di retinopathy: **I++; Good; Discretionary**

Focal, grid laser and anti-VEGF treatment sometimes recommended for patients mild and moderate NPDR and CSME: **I++; Good; Strong.**

Anti-VEGF therapy is the treatment of choice for macular edema with or without focal laser treatment: **I++; Good; Strong.**

PRP treatment recommended for patients with DR starting from sever NPDR wi without DME and should not be delayed: **I++; Good; Strong.**

PROTOCOL S

CARE PROCESS

Many retina specialists prefer a less intense laser treatment, greater spacing, directly targeting microaneurysms, and avoiding foveal vasculature within at least 500 µm c center of the macula: **I++; Good; Discretionary**

PRP SHOULD NOT be recommended for eyes with mild or moderate NPDR, pro that follow-up [CAN] be maintained: **I++; Good; Strong**

The risk of severe visual loss among patients with high-risk PDR is reduced substan by treatment using PRP as described in the DRS and ETDRS: **I++; Good; Strong**

Previously untreated PDR patients who have vitreous opacities and active neovascular fibrovascular proliferation should be considered to PPV: **I++; Good; Strong**

SUMMARY

- Preferred Practice Pattern® is the highest level in the evidence pyramid.
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- Preferred Practice Pattern® guidelines are not medical standards to be adhered to in all individual situations.