43 societies accepted our invitation; 675 of their members answered the 8th Global Trends in Retina Survey.
GLOBAL TRENDS in Retina

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Alay S. Banker, MD, FASRS (Asia/Pacific)
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Adnan Tufail, MBBS, MD, FRCOphth (Europe)
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Gulf Retina Group

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Asia/Pacific

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**Americas**

Argentine Retina and Vitreous Society

Brazilian Retina and Vitreous Society

Canadian Retina Society

Colombian Retina and Vitreous Association

Mexican Retina Association

Pan-American Retina & Vitreous Society (PRVS)

Peruvian Society of Ophthalmology

Salvadoran Retina and Vitreous Association

Central American Retina and Vitreous Society (SCRV)

Uruguayan Association of Ophthalmology
Which anti-VEGF agent do you prefer for reducing persistent IRF or SRF in wet AMD?

<table>
<thead>
<tr>
<th>Region</th>
<th>Choice</th>
<th>Africa/Middle East (n=202)</th>
<th>Asia/Pacific (n=197)</th>
<th>Americas (n=141)</th>
<th>Europe (n=134)</th>
<th>United States (n=747)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Eylea</td>
<td>50.0%</td>
<td>62.4%</td>
<td>66.7%</td>
<td>68.7%</td>
<td>80.1%</td>
</tr>
<tr>
<td></td>
<td>Lucentis</td>
<td>40.1%</td>
<td>16.8%</td>
<td>10.6%</td>
<td>9.7%</td>
<td>4.3%</td>
</tr>
<tr>
<td></td>
<td>Avastin</td>
<td>9.9%</td>
<td>14.2%</td>
<td>17.7%</td>
<td>14.9%</td>
<td>13.4%</td>
</tr>
</tbody>
</table>

Avastin = bevacizumab; Genentech, Inc
Eylea = aflibercept; Regeneron Pharmaceuticals, Inc
Lucentis = ranibizumab; Genentech, Inc
IRF = Intraretinal fluid
SRF = Subretinal fluid
How much recurrent extrafoveal SRF would you tolerate in a recently diagnosed wet-AMD patient on a T&E protocol?

- **Africa/Middle East (n=203)**
  - A: 82.3% (tolerate some SRF; would maintain this treatment interval)
  - B: 11.3% (do not tolerate SRF; would reduce the treatment interval)

- **Asia/Pacific (n=197)**
  - A: 51.3%
  - B: 32.5%

- **Americas (n=141)**
  - A: 51.8%
  - B: 31.2%

- **Europe (n=133)**
  - A: 57.1%
  - B: 31.6%

- **United States (n=747)**
  - A: 51.8%
  - B: 43.5%
How do you manage persistent CNV (AMD) activity after 8 monthly Eylea injections, VA = 20/50?

- **Africa/Middle East** (n=194)
  - A: 20.1%
  - B: 29.4%
  - E: 39.7%

- **Asia/Pacific** (n=197)
  - A: 36.5%
  - B: 20.8%
  - C: 18.3%
  - D: 18.3%

- **Americas** (n=141)
  - A: 46.1%
  - B: 23.4%

- **Europe** (n=132)
  - A: 43.2%
  - C: 18.9%
  - D: 16.7%

- **United States** (n=746)
  - A: 35.4%
  - C: 16.6%
  - D: 18.1%

**Legend**
- A = Switch to Lucentis or Avastin
- B = Use combination therapy, eg, anti-VEGF + photodynamic therapy and/or intravitreal steroid
- C = Switch to Beovu (brolucizumab, Novartis Pharmaceuticals Corporation)
- D = Continue with monthly Eylea
- E = Other

**CNV** = Choroidal neovascularization
**VA** = Visual acuity
In a patient with high-risk PDR and center-involved DME, if you plan to treat the DME with anti-VEGF, do you still recommend PRP?

**Africa/Middle East**
- (n=203)
- 40.4% A
- 57.1% B

**Asia/Pacific**
- (n=197)
- 16.2% B
- 82.2% A

**Americas**
- (n=141)
- 18.4% B
- 76.6% A

**Europe**
- (n=132)
- 22.0% B
- 73.5% A

**United States**
- (n=747)
- 26.0% B
- 69.9% A

**Abbreviations**
- DME = Diabetic macular edema
- PDR = Proliferative diabetic retinopathy
- PRP = Panretinal photocoagulation

**Legend**
- **A** = Yes; I initiate anti-VEGF for DME and plan for concurrent or future PRP
- **B** = Maybe; I treat the DME with anti-VEGF first, and later assess the need for PRP
Does extensive peripheral capillary nonperfusion without NV on FA affect how you manage RVO with macular edema?

**Africa/Middle East**
- (n=201)
- 72.6% B

**Asia/Pacific**
- (n=197)
- 35.5% A
- 37.1% B

**Americas**
- (n=141)
- 44.0% A
- 39.0% B

**Europe**
- (n=132)
- 33.3% A
- 31.1% B

**United States**
- (n=746)
- 42.6% B
- 21.3% C
- 20.6% D

**Legend:**
- A = Yes; I would perform PRP early in the disease course
- B = Yes; I would perform PRP only with recalcitrant edema or NV complications
- C = No; I rarely order FA in patients with RVO
- D = No; however, I still like to get a baseline FA

**Abbreviations:**
- FA = Fluorescein angiography
- NV = Neovascularization
- PRP = Panretinal photocoagulation
- RVO = Retinal vein occlusion
When and where do you refer an acute, symptomatic CRAO with a visible embolus at the ONH?

- **Africa/Middle East**
  - (n=200)
  - 79.0% A
  - 12.5% B

- **Asia/Pacific**
  - (n=196)
  - 60.2% A
  - 23.0% B

- **Americas**
  - (n=141)
  - 58.9% A
  - 18.4% B

- **Europe**
  - (n=132)
  - 57.6% A
  - 25.8% B

- **United States**
  - (n=746)
  - 74.1% A
  - 12.5% B

**Legend**
- **A** = Emergency department with an associated stroke center immediately
- **B** = Any emergency department immediately

**Abbreviations**
- CRAO = Central retinal artery occlusion
- ONH = Optic nerve head
In what % of wet-AMD patients would you use IVT gene therapy that reduced injection need by 80%?

- **Africa/Middle East** (n=203):
  - A: 28.6%
  - B: 33.0%
  - C: 21.7%
  - D: 15.7%

- **Asia/Pacific** (n=196):
  - A: 18.9%
  - B: 31.1%
  - C: 17.9%
  - D: 32.1%

- **Americas** (n=141):
  - A: 14.9%
  - B: 56.7%
  - C: 14.2%
  - D: 14.2%

- **Europe** (n=132):
  - A: 16.7%
  - B: 43.9%
  - C: 18.2%
  - D: 21.2%

- **United States** (n=744):
  - A: 14.1%
  - B: 53.6%
  - C: 19.9%
  - D: 12.3%

**IVT** = Intravitreal

A = 25%-50%
B = 51%-75%
C = 76%-100%
D = Don't know
For a patient with a recent macula-off RD with symptoms for < 1 day, when would you operate?

- **Africa/Middle East** (n=177): 75.1% B
  - 22.2% A
  - 23.3% D
  - 40.3% B

- **Asia/Pacific** (n=176): 40.3% B
  - 22.2% A
  - 23.3% D
  - 52.3% B

- **Americas** (n=121): 46.3% B
  - 29.8% A
  - 23.3% D
  - 52.3% B

- **Europe** (n=107): 52.3% B
  - 22.4% A
  - 18.8% D

- **United States** (n=671): 52.3% B
  - 21.8% C
  - 18.8% D

RD = Retinal detachment

A = Same day
B = Within 1-2 days
C = Within 3-5 days
D = Within 1 week
Which procedures do you perform during vitrectomy for a macula-off RD with 1 mid-peripheral break?

Africa/Middle East (n=177)
- A: 85.3%
- B: 11.9%

Asia/Pacific (n=175)
- A: 61.7%
- B: 33.1%
- C: 19.4%

Americas (n=121)
- A: 61.2%
- B: 36.4%

Europe (n=107)
- A: 55.1%
- B: 36.4%

United States (n=672)
- A: 49.7%
- B: 38.4%
- C: 11.9%

A = PFCL up to posterior edge of the break; FAX; drain SRF through the break
B = FAX; drain SRF through the break
C = Posterior retinotomy; drain SRF through the retinotomy

FAX = Fluid-air exchange
PFCL = Perfluorocarbon liquid
RD = Retinal detachment
SRF = Subretinal fluid
What type of IOL would you place in a 35-year-old aphakic patient with no capsular support?

- Africa/Middle East (n=178): 57.9% B, 12.9% C, 25.8% D
- Asia/Pacific (n=176): 38.6% B, 34.7% C, 24.4% D
- Americas (n=121): 41.3% B, 34.7% C, 15.7% D
- Europe (n=107): 25.2% B, 26.2% C, 23.4% D
- United States (n=673): 31.5% B, 36.4% C, 20.2% A

A = Anterior-chamber IOL
B = Sutureless scleral fixation of a 3-piece IOL
C = Sutured scleral fixation
D = Iris-claw IOL

IOL = Intraocular lens
What percentage of your vitrectomies are performed primarily to remove debilitating vitreous opacities?

- **Africa/Middle East** (n=178)
  - 29.2%: 1%-5%
  - 64.0%: 0%

- **Asia/Pacific** (n=176)
  - 28.4%: 0%
  - 44.3%: 1%-5%

- **Americas** (n=121)
  - 33.9%: 0%
  - 50.4%: 1%-5%

- **Europe** (n=107)
  - 27.1%: 0%
  - 57.9%: 1%-5%

- **United States** (n=674)
  - 15.6%: 0%
  - 65.4%: 1%-5%
How do you treat patients with very severe NPDR without DME?

- **Africa/Middle East**
  - (n=200)
  - 31.5% A
  - 39.0% B
- **Asia/Pacific**
  - (n=194)
  - 17.0% C
  - 55.7% A
- **Americas**
  - (n=140)
  - 26.4% C
  - 37.1% A
- **Europe**
  - (n=131)
  - 15.3% C
  - 62.6% A
- **United States**
  - (n=747)
  - 24.9% C
  - 60.5% A

**A** = Closely monitor retinopathy and encourage systemic glycemic control
**B** = Consider anti-VEGF in some patients with good sugar control and compliance
**C** = Consider anti-VEGF in some patients with poor sugar control and/or other risk factors

**DME** = Diabetic macular edema
**NPDR** = Nonproliferative diabetic retinopathy
Do you believe patients with wet AMD are being undertreated?

- Africa/Middle East: 60.9% (B) (n=202)
- Asia/Pacific: 66.2% (A) (n=195)
- Americas: 69.3% (A) (n=140)
- Europe: 62.9% (A) (n=132)
- United States: 66.4% (A) (n=744)

A = Yes; real-world data shows worse VA, fewer injections than clinical trials
B = No; given our current therapies, we are giving maximum tolerated therapy
Despite most pivotal anti-VEGF trials studying monthly dosing, why do you favor a T&E or PRN approach?

- **Africa/Middle East** (n=203):
  - 72.4% A
  - 12.3% B
- **Asia/Pacific** (n=194):
  - 36.1% A
  - 35.1% B
- **Americas** (n=141):
  - 29.8% A
  - 41.1% B
- **Europe** (n=132):
  - 32.6% A
  - 21.2% C
- **United States** (n=743):
  - 56.9% A
  - 23.0% C

**Codes:**
- **A** = My patients cannot (or do not want to) maintain a frequent, fixed treatment regimen
- **B** = The cost to the health care system is not sustainable
- **C** = It has become standard of care

**PRN** = Pro re nata (as needed)
**T&E** = Treat and extend
How often do you perform pneumatic retinopexy?

- Africa/Middle East (n=176): 61.4% A, 34.7% B
- Asia/Pacific (n=175): 35.4% A, 53.7% B
- Americas (n=121): 43.8% A, 51.2% B
- Europe (n=107): 52.3% A, 37.4% B
- United States (n=673): 23.3% C, 58.1% B

Legend:
A = Never
B = < once per month
C = 1-3 times per month