Africa/Middle East

Asia/Pacific

Central & South America

Europe

GLOBAL TRENDS in Retina

Kourous A. Rezaei, MD
Thomas W. Stone, MD
GLOBAL TRENDS in Retina Panelists

J. Fernando Arevalo, MD, FACS
Pan-American Association of Ophthalmology

Ehab El-Rayes, MD, PhD
Arab African Society of Retina Specialists

Mangat Dogra, MD, MBBS, MS
Vitreo Retina Society of India

Akito Hirakata, MD
Japanese Retina and Vitreous Society

Malhar Soni, MD, DO, MS, DNB, FRCS
United Kingdom

Suqin Yu, MD
Chinese Ocular Fundus Society
ASRS invited 25 societies around the world to participate in the first Global Trends in Retina Survey.
Africa/Middle East

Arab African Society of Retina Specialists

Iranian Vitreoretina Society

Israeli Vitreoretinal Society

Lebanese Ophthalmological Society

Saudi Ophthalmological Society

Vitreo Retinal Society of Nigeria
Asia/Pacific

Australian and New Zealand Society of Retina Specialists

Chinese Ocular Fundus Society

Indonesia Ophthalmology Association

Vitreoretinal Interest Group

Japanese Retina and Vitreous Society

Singapore Society of Ophthalmology, Retina Section

Taiwan Retina Society

Vitreo Retina Society of India
Central and South America

Argentine Society of Retina and Vitreous

Brazilian Society of Retina and Vitreous

Colombian Association of Retina and Vitreous

Pan-American Retina and Vitreous Society

Peruvian Society of Ophthalmology

Uruguayan Association of Ophthalmology
Europe

Austrian Ophthalmological Society

British & Eire Association of Vitreoretinal Surgeons

European VitreoRetinal Society

Italian Vitreoretinal Surgery Group

Spanish Society of Retina and Vitreous

Turkish Ophthalmological Society
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José Garcia Arumi, MD, PhD (Europe)
Sebastian Wolf, MD, PhD

International Affairs Committee Staff Liaison

Caroline Bozell, MS
GLOBAL TRENDS in Retina

ASRS PAT Survey Editors

Thomas W. Stone, MD, Editor
Susan Raef, MSMC, Managing Editor

Research Consultant

Mindy Schneiderman, PhD
What initial tests do you perform for a patient with AMD?

Africa/Middle East
(n = 160)

- Only OCT 16%
- Only FA 4%
- FA/OCT/ICG 7%
- FA and OCT 66%

Asia/Pacific
(n = 240)

- Only OCT 20%
- Only FA 0%
- FA/OCT/ICG 38%
- FA and OCT 41%

Central & South America
(n = 153)

- Only OCT 16%
- FA/OCT/ICG 3%
- FA and OCT 80%

Europe
(n = 97)

- Only OCT 22%
- Only FA 1%
- FA/OCT/ICG 9%
- FA and OCT 67%

United States
(n = 227)

- Only OCT 15%
- Only FA 1%
- FA/OCT/ICG 10%
- Other 6%
- FA and OCT 69%
Do you prescribe topical antibiotics for use with intravitreal injections?

<table>
<thead>
<tr>
<th>Region</th>
<th>Yes, only after intravitreal injections</th>
<th>Yes, before and after intravitreal injections</th>
<th>Yes, only in select patients</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa/Middle East</td>
<td>59%</td>
<td>14%</td>
<td>5%</td>
<td>18%</td>
</tr>
<tr>
<td>(n = 159)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asia/Pacific</td>
<td>26%</td>
<td>58%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>(n = 240)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central &amp; South America</td>
<td>38%</td>
<td>39%</td>
<td>5%</td>
<td>13%</td>
</tr>
<tr>
<td>(n = 152)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Europe</td>
<td>42%</td>
<td>33%</td>
<td>5%</td>
<td>18%</td>
</tr>
<tr>
<td>(n = 97)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>89%</td>
<td></td>
<td>5%</td>
<td>1%</td>
</tr>
<tr>
<td>(n = 226)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
What is your first-line anti-VEGF agent for wet AMD?

- **Africa/Middle East**
  - (n = 161)
  - Avastin 81%

- **Asia/Pacific**
  - (n = 240)
  - Lucentis 50%

- **Central & South America**
  - (n = 153)
  - Avastin 63%

- **Europe**
  - (n = 97)
  - Lucentis 68%

- **United States**
  - (n = 544)
  - Avastin 65%
What is your first-line anti-VEGF agent for wet AMD?

Africa/Middle East (n = 161)

- Avastin 81%
- Lucentis 19%
- Eylea 0%
What is your first-line anti-VEGF agent for wet AMD?

Asia/Pacific (n = 240)

- Avastin 21%
- Lyiea 27%
- Lucentis 50%
What is your first-line anti-VEGF agent for wet AMD?

Central & South America (n = 153)

- Avastin 63%
- Lucentis 31%
- Eylea 5%
What is your first-line anti-VEGF agent for wet AMD?

- **Europe (n = 97)**
  - Avastin 23%
  - Lucentis 68%
  - Eylea 9%
What is your first-line anti-VEGF agent for wet AMD?

United States (n =544)

- Avastin 65%
- Lucentis 18%
- Eylea 17%
What is your anti-VEGF treatment strategy for wet AMD?

<table>
<thead>
<tr>
<th>Region</th>
<th>Treatment Strategy</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa/Middle East</td>
<td>Treat and extend</td>
<td>51%</td>
</tr>
<tr>
<td>(n = 159)</td>
<td>PRN</td>
<td>42%</td>
</tr>
<tr>
<td>Asia/Pacific</td>
<td>Treat and extend</td>
<td>45%</td>
</tr>
<tr>
<td>(n = 240)</td>
<td>PRN</td>
<td>44%</td>
</tr>
<tr>
<td>Central &amp; South America</td>
<td>Treat and extend</td>
<td>48%</td>
</tr>
<tr>
<td>(n = 153)</td>
<td>PRN</td>
<td>48%</td>
</tr>
<tr>
<td>Europe</td>
<td>Treat and extend</td>
<td>44%</td>
</tr>
<tr>
<td>(n = 97)</td>
<td>PRN</td>
<td>53%</td>
</tr>
<tr>
<td>United States</td>
<td>Treat and extend</td>
<td>78%</td>
</tr>
<tr>
<td>(n = 544)</td>
<td>PRN</td>
<td>16%</td>
</tr>
</tbody>
</table>
What is your first-line therapy for a new phakic diabetic patient with Va = 20/50 (reduced vision) and DME?

- **Africa/Middle East (n = 157)**
  - Avastin: 61%
  - Lucentis: 34%
  - Focal laser: 25%
  - Avastin: 21%

- **Asia/Pacific (n = 238)**
  - Lucentis: 34%
  - Focal laser: 25%
  - Avastin: 21%

- **Central & South America (n = 153)**
  - Avastin: 44%

- **Europe (n = 96)**
  - Lucentis: 51%

- **United States (n = 543)**
  - Avastin: 54%
What is your first-line therapy for a new phakic diabetic patient with Va = 20/50 (reduced vision) and DME?

<table>
<thead>
<tr>
<th>Region</th>
<th>Therapy</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa/Middle East (n = 159)</td>
<td>Avastin</td>
<td>61%</td>
</tr>
<tr>
<td></td>
<td>Lucentis</td>
<td>6%</td>
</tr>
<tr>
<td></td>
<td>Lylea</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Focal laser</td>
<td>23%</td>
</tr>
<tr>
<td></td>
<td>Intravitreal steroid</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>Macular surgery</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>8%</td>
</tr>
</tbody>
</table>
What is your first-line therapy for a new phakic diabetic patient with Va = 20/50 (reduced vision) and DME?

Asia/Pacific (n = 238)

- Avastin 21%
- Lucentis 34%
- Eylea 1%
- Focal laser 25%
- Intravitreal steroid 3%
- Macular surgery 2%
- Other 14%
What is your first-line therapy for a new phakic diabetic patient with Va = 20/50 (reduced vision) and DME?

Central & South America (n = 153)

- Avastin 44%
- Lucentis 24%
- Eylea 1%
- Focal laser 17%
- Intravitreal steroid 3%
- Macular surgery 1%
- Other 10%
What is your first-line therapy for a new phakic diabetic patient with Va = 20/50 (reduced vision) and DME?

- Europe (n = 96)
  - Lucentis 51%
  - Avastin 13%
  - Eylea 1%
  - Focal laser 15%
  - Intravitreal steroid 2%
  - Macular surgery 2%
  - Other 16%
What is your first-line therapy for a new phakic diabetic patient with \( V_a = 20/50 \) (reduced vision) and DME?

United States
(n = 543)

- Avastin 54%
- Lucentis 29%
- Eylea 0%
- Focal laser 13%
- Intravitreal steroid 0%
- Macular surgery 0%
- Other 4%
How would you treat a 60-year-old patient with a new non-ischemic CRVO with macular edema, Va = 20/80 (reduced vision)?

- **Africa/Middle East** (n = 158)
  - Avastin 79%

- **Asia/Pacific** (n = 239)
  - Lucentis 39%

- **Central & South America** (n = 151)
  - Avastin 54%

- **Europe** (n = 95)
  - Ozurdex 42%

- **United States** (n = 542)
  - Avastin 64%
How would you treat a 60-year-old patient with a new non-ischemic CRVO with macular edema, Va = 20/80 (reduced vision)?

Africa/Middle East (n = 158)

- Avastin 79%
- Lucentis 10%
- Eylea 3%
- Ozurdex 2%
- Triamcinolone 2%
- Grid macular laser 0%
- Other 3%
How would you treat a 60-year-old patient with a new non-ischemic CRVO with macular edema, Va = 20/80 (reduced vision)?

Asia/Pacific (n = 239)

- Avastin 31%
- Lucentis 39%
- Eylea 14%
- Ozurdex 2%
- Triamcinolone 5%
- Grid macular laser 3%
- Other 6%
How would you treat a 60-year-old patient with a new non-ischemic CRVO with macular edema, Va = 20/80 (reduced vision)?

Central & South America (n = 151)

- Avastin 54%
- Lucentis 26%
- Eylea 5%
- Ozurdex 5%
- Triamcinolone 2%
- Grid macular laser 1%
- Other 7%
How would you treat a 60-year-old patient with a new non-ischemic CRVO with macular edema, Va = 20/80 (reduced vision)?

Europe (n = 95)

- Avastin 13%
- Lucentis 28%
- Eylea 5%
- Ozurdex 42%
- Triamcinolone 3%
- Grid macular laser 2%
- Other 7%
How would you treat a 60-year-old patient with a new non-ischemic CRVO with macular edema, Va = 20/80 (reduced vision)?

**United States (n = 542)**
- Avastin 64%
- Lucentis 21%
- Eylea 11%
- Ozurdex 1%
- Triamcinolone 1%
- Grid macular laser 0%
- Other 2%
Do you reuse disposable instruments during surgery?

- **Africa/Middle East (n = 140)**: 59%
- **Asia/Pacific (n = 200)**: 60%
- **Central & South America (n = 131)**: 73%
- **Europe (n = 88)**: 53%
- **United States (n = 203)**: 23%
What is the most common procedure you perform for phakic retinal detachment without PVR?

- **Africa/Middle East (n = 138)**
  - Scleral buckle: 55%
  - Vitrectomy: 29%

- **Asia/Pacific (n = 199)**
  - Scleral buckle: 39%
  - Vitrectomy: 38%

- **Central & South America (n = 129)**
  - Scleral buckle: 45%
  - Vitrectomy: 28%

- **Europe (n = 89)**
  - Scleral buckle: 46%
  - Vitrectomy: 39%

- **United States (n = 204)**
  - Scleral buckle: 23%
  - Vitrectomy: 48%
What is the most common procedure you perform for *pseudophakic* retinal detachment without PVR?

- **Africa/Middle East**
  - (n = 140)
  - Vitrectomy 72%
  - Scleral buckle 13%

- **Asia/Pacific**
  - (n = 200)
  - Vitrectomy 78%
  - Vitrectomy & scleral buckle 13%

- **Central & South America**
  - (n = 128)
  - Vitrectomy 46%
  - Vitrectomy & scleral buckle 44%

- **Europe**
  - (n = 89)
  - Vitrectomy 79%
  - Vitrectomy & scleral buckle 13%

- **United States**
  - (n = 204)
  - Vitrectomy 78%
  - Vitrectomy & scleral buckle 13%
During vitrectomy, do you use a chandelier light?

- Africa/Middle East (n = 135): 3%
- Asia/Pacific (n = 197): 6%
- Central & South America (n = 128): 9%
- Europe (n = 86): 5%
- United States (n = 490): 21%
During vitrectomy, do you use a lighted laser probe?

- Africa/Middle East (n = 135): 7%
- Asia/Pacific (n = 197): 7%
- Central & South America (n = 128): 9%
- Europe (n = 86): 6%
- United States (n = 490): 41%
During vitrectomy surgery, do you use valved trocars?

- **Yes**
  - Africa/Middle East (n = 135) 40%
  - Asia/Pacific (n = 197) 18%
  - Central & South America (n = 128) 27%
  - Europe (n = 96) 21%
  - United States (n = 490) 69%
In what percentage of cases do you peel ILM during a routine vitrectomy for macular hole?

- **Africa/Middle East** (n = 137): 78%
- **Asia/Pacific** (n = 198): 91%
- **Central & South America** (n = 128): 72%
- **Europe** (n = 89): 89%
- **United States** (n = 502): 88%
What is your preferred method of ILM staining?

- **Africa/Middle East** (n = 140):
  - None: 3%
  - Triamcinolone: 5%
  - ICG: 6%
  - Trypan blue: 13%
  - Brilliant blue: 67%

- **Asia/Pacific** (n = 200):
  - None: 2%
  - Triamcinolone: 10%
  - ICG: 19%
  - Trypan blue: 7%
  - Brilliant blue: 58%

- **Central & South America** (n = 128):
  - None: 5%
  - Triamcinolone: 11%
  - ICG: 0%
  - Trypan blue: 3%
  - Brilliant blue: 80%

- **Europe** (n = 89):
  - None: 1%
  - Triamcinolone: 2%
  - ICG: 7%
  - Trypan blue: 13%
  - Brilliant blue: 66%

- **United States** (n = 204):
  - None: 6%
  - Triamcinolone: 12%
  - Brilliant blue: 11%
  - Trypan blue: 1%
  - ICG: 70%
Which gauge vitrectomy surgery do you usually perform?

- **Africa/Middle East** (n = 139)
  - 23 gauge 68%

- **Asia/Pacific** (n = 199)
  - 23 gauge 49%

- **Central & South America** (n = 129)
  - 23 gauge 80%

- **Europe** (n = 89)
  - 23 gauge 75%

- **United States** (n = 203)
  - 25 gauge 52%
  - 23 gauge 44%