GLOBAL TRENDS in Retina
Shah GK, Stone TW, eds.

Africa/Middle East

Asia/Pacific

Central & South America

Europe
38 societies accepted our invitation; 1158 of their members answered the 2017 Global Trends in Retina Survey.
GLOBAL TRENDS in Retina

International Affairs Committee

Gaurav K. Shah, MD, Chair
J. Fernando Arevalo, MD, FACS
José Garcia Arumi, MD, PhD
Alay S. Banker, MD
Ehab N. El-Rayes, MD, PhD
Stanislao Rizzo, MD
GLOBAL TRENDS in Retina

International Liaison Leaders

J. Fernando Arevalo, MD, FACS (Americas)
Alay S. Banker, MD (Asia/Pacific)
Ehab N. El-Rayes, MD, PhD (Africa/Middle East)
José Garcia Arumi, MD, PhD (Europe)
Africa/Middle East

Arab African Society of Retina Specialists (AASRS)

Emirates Society of Ophthalmology

Gulf Retina Group

Iranian Vitreoretinal Society

Israel Vitreoretinal Society

The Jordan Vitreoretinal Society

Oman Ophthalmic Society

Saudi Ophthalmological Society

Vitreoretinal Society of Nigeria
Asia/Pacific

Australian and New Zealand Society of Retinal Specialists

Indonesia Ophthalmology Association, Vitreoretinal Interest Group

Japanese Retina and Vitreous Society

The Korean Retina Society

Singapore Society of Ophthalmology, Retina Section

Taiwan Retina Society

The Thai Retina Society

Vitreo Retina Society of India
Europe

Austrian Ophthalmological Society

British and Eire Association of Vitreoretinal Surgeons (BEAVRS)

Dutch Society of Vitreoretinal Surgery

Dutch Medical Retina Society

European Vitreoretinal Society

French Society of Retina Specialists

Greek Vitreo-Retinal Society (GVRS)

Italian Vitreoretinal Surgery Society

Kiev Society of Ophthalmology

Rosengren Club—Swedish Vitreoretinal Society

Spanish Retina and Vitreous Society (SERV)

Turkish Ophthalmological Society
Central & South America

Argentine Retina and Vitreous Society

Brazilian Retina and Vitreous 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
How would you treat a new wet-AMD patient?

- **Africa/Middle East** (n = 219)
  - Avastin: 56.5%
  - Eylea: 6.8%
  - Lucentis: 29.3%

- **Asia/Pacific** (n = 305)
  - Avastin: 23.2%
  - Eylea: 42.3%
  - Lucentis: 31.1%

- **Central & South America** (n = 379)
  - Avastin: 23.7%
  - Eylea: 46.7%
  - Lucentis: 28.1%

- **Europe** (n = 249)
  - Avastin: 24.1%
  - Eylea: 46.1%
  - Lucentis: 27.6%

- **United States** (n = 755)
  - Avastin: 67.7%
  - Eylea: 19.5%
  - Lucentis: 11.4%

**Notes:**
- **Avastin** = bevacizumab, Genentech, Inc, South San Francisco, CA
- **Eylea** = aflibercept, Regeneron Pharmaceuticals Inc, Tarrytown, NY
- **Lucentis** = ranibizumab, Genentech, Inc
How would you treat your own wet AMD with subfoveal CNV if you had to pay out of pocket?

Africa/Middle East (n = 219)
- 37.5% Avastin
- 42.2% Eylea
- 12.0% Lucentis

Asia/Pacific (n = 304)
- 24.0% Avastin
- 45.5% Eylea
- 26.0% Lucentis

Central & South America (n = 381)
- 25.6% Avastin
- 53.5% Eylea
- 19.1% Lucentis

Europe (n = 249)
- 43.6% Avastin
- 34.1% Eylea
- 15.9% Lucentis

United States (n = 756)
- 66.1% Avastin
- 25.3% Eylea
- 7.0% Lucentis

CNV = choroidal neovascularization
What is your initial therapy for a patient who has CRVO with macular edema, VA = 20/70?

CRVO = central retinal vein occlusion
How would you initially treat a 72-year-old patient with BRVO, macular edema, VA = 20/60?

<table>
<thead>
<tr>
<th>Region</th>
<th>Treatment</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa/Middle East</td>
<td>Avastin</td>
<td>69.2%</td>
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<tr>
<td>(n = 219)</td>
<td>Eylea</td>
<td>8.3%</td>
</tr>
<tr>
<td></td>
<td>Lucentis</td>
<td>14.6%</td>
</tr>
<tr>
<td>Asia/Pacific</td>
<td>Avastin</td>
<td>39.7%</td>
</tr>
<tr>
<td>(n = 304)</td>
<td>Eylea</td>
<td>19.9%</td>
</tr>
<tr>
<td></td>
<td>Lucentis</td>
<td>29.8%</td>
</tr>
<tr>
<td>Central &amp; South America</td>
<td>Avastin</td>
<td>27.6%</td>
</tr>
<tr>
<td>(n = 378)</td>
<td>Eylea</td>
<td>30.2%</td>
</tr>
<tr>
<td></td>
<td>Lucentis</td>
<td>27.9%</td>
</tr>
<tr>
<td>Europe</td>
<td>Avastin</td>
<td>26.7%</td>
</tr>
<tr>
<td>(n = 248)</td>
<td>Eylea</td>
<td>26.0%</td>
</tr>
<tr>
<td></td>
<td>Lucentis</td>
<td>23.8%</td>
</tr>
<tr>
<td>United States</td>
<td>Avastin</td>
<td>70.2%</td>
</tr>
<tr>
<td>(n = 755)</td>
<td>Eylea</td>
<td>16.2%</td>
</tr>
<tr>
<td></td>
<td>Lucentis</td>
<td>11.9%</td>
</tr>
</tbody>
</table>

BRVO = branch retinal vein occlusion
How do you treat RVO with significant macular edema after inadequate response to 3 anti-VEGF injections?

**Africa/Middle East**
- 34.4% Switch to dexamethasone immediately
- 13.5% Switch to triamcinolone immediately
- 41.7% Switch to another anti-VEGF

**Asia/Pacific**
- 34.2% Switch to dexamethasone immediately
- 20.2% Switch to triamcinolone immediately
- 28.8% Switch to another anti-VEGF

**Central & South America**
- 56.5% Switch to dexamethasone immediately
- 10.1% Switch to triamcinolone immediately
- 25.0% Switch to another anti-VEGF

**Europe**
- 47.5% Switch to dexamethasone immediately
- 10.4% Switch to triamcinolone immediately
- 27.3% Switch to another anti-VEGF

**United States**
- 18.4% Switch to dexamethasone immediately
- 11.3% Switch to triamcinolone immediately
- 57.7% Switch to another anti-VEGF

*RVO = retinal vein occlusion*
How would you manage a type 1 diabetic patient with high-risk PDR, no DME, and VA = 20/20?

- **Africa/Middle East**
  - (n = 219)
  - Complete PRP treatment in ≥ 2 sessions: 57.0%
    - Anti-VEGF + complete PRP treatment in ≥ 2 sessions: 26.2%
- **Asia/Pacific**
  - (n = 304)
  - Complete PRP treatment in ≥ 2 sessions: 59.3%
    - Anti-VEGF + complete PRP treatment in ≥ 2 sessions: 27.7%
- **Central & South America**
  - (n = 379)
  - Complete PRP treatment in ≥ 2 sessions: 46.7%
    - Anti-VEGF + complete PRP treatment in ≥ 2 sessions: 37.8%
- **Europe**
  - (n = 248)
  - Complete PRP treatment in ≥ 2 sessions: 57.1%
    - Anti-VEGF + complete PRP treatment in ≥ 2 sessions: 24.7%
- **United States**
  - (n = 755)
  - Complete PRP treatment in ≥ 2 sessions: 43.2%
    - Anti-VEGF + complete PRP treatment in ≥ 2 sessions: 25.7%
After how many anti-VEGF injections do you consider incorporating steroid therapy?

<table>
<thead>
<tr>
<th>Region</th>
<th>2-3</th>
<th>4-5</th>
<th>6-9</th>
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</thead>
<tbody>
<tr>
<td>Africa/Middle East (n = 219)</td>
<td>20.6%</td>
<td>47.0%</td>
<td>14.8%</td>
</tr>
<tr>
<td>Asia/Pacific (n = 304)</td>
<td>39.1%</td>
<td>30.8%</td>
<td>12.3%</td>
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<tr>
<td>Central &amp; South America (n = 378)</td>
<td>25.3%</td>
<td>44.0%</td>
<td>15.2%</td>
</tr>
<tr>
<td>Europe (n = 248)</td>
<td>25.1%</td>
<td>34.2%</td>
<td>25.1%</td>
</tr>
<tr>
<td>United States (n = 755)</td>
<td>14.0%</td>
<td>37.5%</td>
<td>27.7%</td>
</tr>
</tbody>
</table>
Do you have access to OCT angiography?

Africa/Middle East (n=219)
- 24.6% Yes, I have access to OCTA and find it useful in clinical practice
- 37.2% No, I do not have access to OCTA, but plan to soon

Asia/Pacific (n=269)
- 36.7% Yes, I have access to OCTA and find it useful in clinical practice
- 41.0% No, I do not have access to OCTA, but plan to soon

Central & South America (n=378)
- 37.6% Yes, I have access to OCTA and find it useful in clinical practice
- 41.1% No, I do not have access to OCTA, but plan to soon

Europe (n=248)
- 48.0% Yes, I have access to OCTA and find it useful in clinical practice
- 35.0% No, I do not have access to OCTA, but plan to soon

United States (n=749)
- 19.1% Yes, I have access to OCTA and find it useful in clinical practice
- 23.1% No, I do not have access to OCTA, but plan to soon
What is your *usual* recommendation for a pseudophakic superior RD, macula-on, -3.00 myope, single tear?

<table>
<thead>
<tr>
<th>Region</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa/Middle East</td>
<td>58.7%</td>
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<tr>
<td>(n = 218)</td>
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<tr>
<td>Asia/Pacific</td>
<td>59.1%</td>
</tr>
<tr>
<td>(n = 269)</td>
<td></td>
</tr>
<tr>
<td>Central &amp; South America</td>
<td>62.1%</td>
</tr>
<tr>
<td>(n = 320)</td>
<td></td>
</tr>
<tr>
<td>Europe</td>
<td>66.8%</td>
</tr>
<tr>
<td>(n = 195)</td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>65.3%</td>
</tr>
<tr>
<td>(n = 677)</td>
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</tbody>
</table>
In what percentage of your retinal detachment cases do you place a scleral buckle?

- **Africa/Middle East (n = 218)**
  - 27.5% 1%-10%
  - 36.2% 21%-40%

- **Asia/Pacific (n = 269)**
  - 30.0% 1%-10%
  - 35.4% 11%-20%

- **Central & South America (n = 320)**
  - 31.4% 1%-10%
  - 24.8% 11%-20%

- **Europe (n = 195)**
  - 42.7% 11%-20%
  - 19.1% 21%-40%

- **United States (n = 677)**
  - 34.4% 1%-10%
  - 29.1% 11%-20%
Do you manage pre-op patients on newer anticoagulants differently than those on traditional ones?

- **Africa/Middle East**
  - Total: 218
  - 38.4% No—I try to stop all anticoagulants with the cardiologist
  - 30.8% No—I stop anticoagulation in certain cases, regardless

- **Asia/Pacific**
  - Total: 268
  - 48.4% No—I try to stop all anticoagulants with the cardiologist
  - 22.3% No, I usually don’t stop anticoagulation of any type
  - 19.1% No—I stop anticoagulation in certain cases, regardless

- **Central & South America**
  - Total: 320
  - 55.8% No—I try to stop all anticoagulants with the cardiologist
  - 14.5% No, I usually don’t stop anticoagulation of any type

- **Europe**
  - Total: 195
  - 43.8% No—I try to stop all anticoagulants with the cardiologist
  - 20.2% No, I usually don’t stop anticoagulation of any type
  - 20.8% No—I stop anticoagulation in certain cases, regardless

- **United States**
  - Total: 676
  - 22.8% No—I try to stop all anticoagulants with the cardiologist
  - 43.0% No, I usually don’t stop anticoagulation of any type
  - 27.2% No—I stop anticoagulation in certain cases, regardless
For what percentage of cases do you peel ILM during a routine vitrectomy for ERM (no cyst or hole)?

<table>
<thead>
<tr>
<th>Region</th>
<th>Percentage</th>
<th>Range</th>
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<tbody>
<tr>
<td>Africa/Middle East</td>
<td>32.7%</td>
<td>26%-50%</td>
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<tr>
<td>(n = 218)</td>
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<tr>
<td>Asia/Pacific</td>
<td>51.5%</td>
<td>76%-100%</td>
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<td>(n = 268)</td>
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<td></td>
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<tr>
<td>Central &amp; South America</td>
<td>53.4%</td>
<td>76%-100%</td>
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<tr>
<td>(n = 320)</td>
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<tr>
<td>Europe</td>
<td>60.1%</td>
<td>76%-100%</td>
</tr>
<tr>
<td>(n = 195)</td>
<td></td>
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<tr>
<td>United States</td>
<td>61.9%</td>
<td>76%-100%</td>
</tr>
<tr>
<td>(n = 675)</td>
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</table>

ERM = epiretinal membrane
ILM = internal limiting membrane
Which adjuvant do you prefer as an aid in ERM and/or ILM peeling?

- **Africa/Middle East** (n = 218)
  - 82.3% Brilliant Blue G

- **Asia/Pacific** (n = 268)
  - 52.5% Brilliant Blue G

- **Central & South America** (n = 320)
  - 83.7% Brilliant Blue G

- **Europe** (n = 195)
  - 60.1% Brilliant Blue G

- **United States** (n = 675)
  - 69.0% Indocyanine Green (ICG)
What percentage of the vitrectomies you have performed over the past 12 months were 27 gauge?

- **Africa/Middle East** (n = 218)
  - 55.6% 0%
  - 39.4% 1%-4%

- **Asia/Pacific** (n = 268)
  - 75.4% 0%
  - 19.1% 1%-4%

- **Central & South America** (n = 320)
  - 71.1% 0%
  - 21.0% 1%-4%

- **Europe** (n = 195)
  - 64.6% 0%
  - 21.9% 1%-4%

- **United States** (n = 676)
  - 69.2% 0%
  - 21.9% 1%-4%
What is your experience with—or assessment of—intraoperative OCT?

<table>
<thead>
<tr>
<th>Region</th>
<th>Have not used it; think it is or will be helpful</th>
<th>Have not used it; do not think it helpful, but probably will be as technology develops</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa/Middle East</td>
<td>39.4%</td>
<td>41.9%</td>
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<tr>
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<td>Asia/Pacific</td>
<td>45.9%</td>
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<td>(n = 302)</td>
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<td>51.8%</td>
<td>25.9%</td>
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<tr>
<td>(n = 320)</td>
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<td>30.2%</td>
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<tr>
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<td>United States</td>
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<td>25.4%</td>
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<tr>
<td>(n = 676)</td>
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</table>
Thank You