

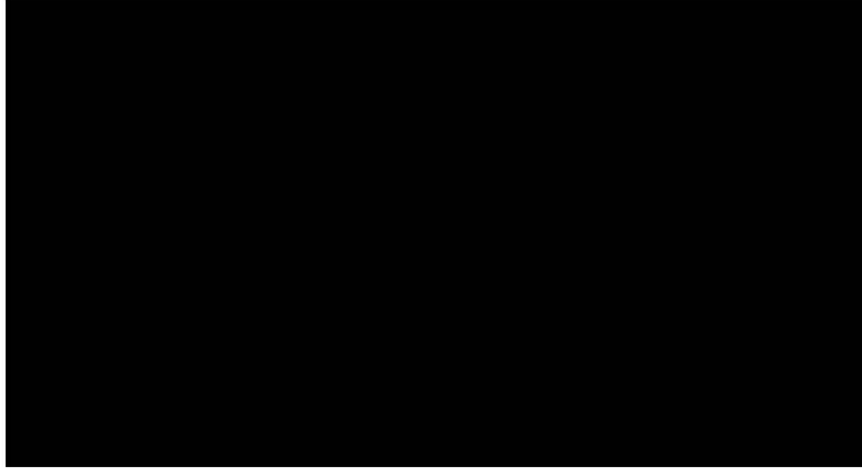
Oliver, Catherine, Amit,  
Source Text Box to every

## **RTH Situation Assessment**

Christine Wong  
Amit Kumar Goyal  
Oliver Bock  
Catherine Becker



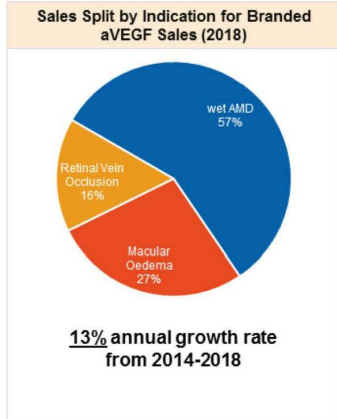
## Executive Summary



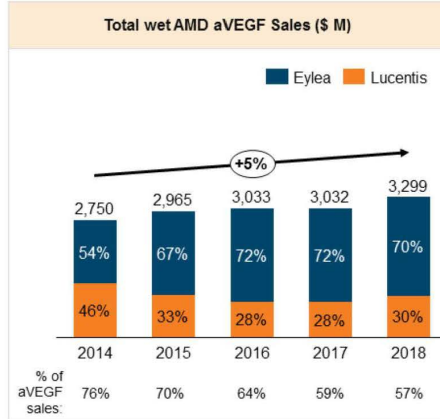
US Ophthalmology



**Wet AMD is 57% of total aVEGF sales (\$6 B), but is growing more slowly than total aVEGF market growth rate**



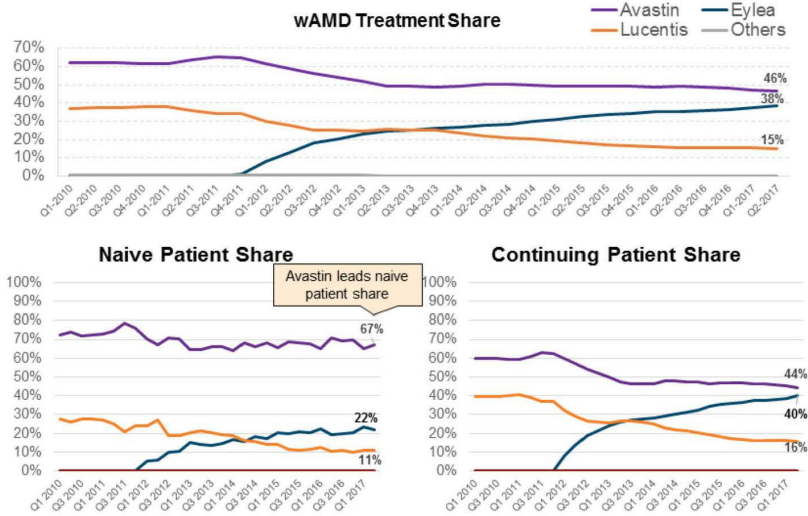
Source: EvaluatePharma



US Ophthalmology



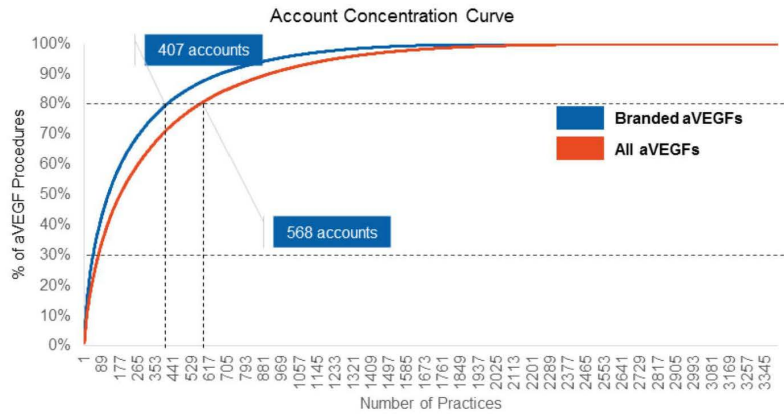
**Avastin leads the market: 46% total treatment share**  
**Avastin maintains dominance in naive patient share, though**  
**Eylea continues to grow**



US Ophthalmology Time period of data: Jan'10 to Jul'17  
 Data Source: IQVIA claims data



# 43 practices account for 30% of all branded aVEGF procedures

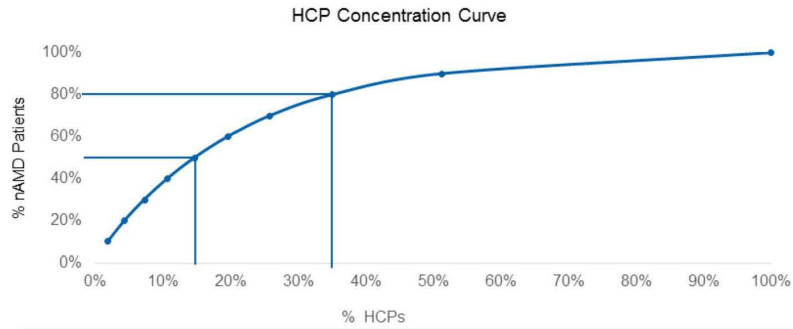


Time period of data: Jan-Dec 2016  
 Data Source: IQVIA claims data + CMS Data, CareSet Affiliations

US Ophthalmology



## HCPs treating nAMD are highly concentrated with 35% treating 80% of all patients



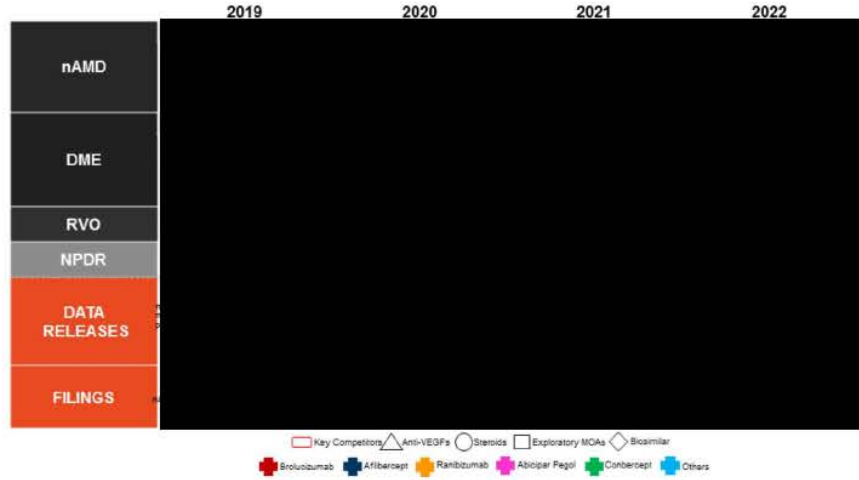
**322 Retinal Specialists (15%) drive 50% of nAMD treatments**  
**759 Retinal Specialists (35%) drive 80%**

Time period of data: Aug'16 to Jul'17  
Data Source: IQVIA claims data, HCP (# AMD patients > 10) N = 2145

US Ophthalmology



# Retina Landscape – Near Term Highlights



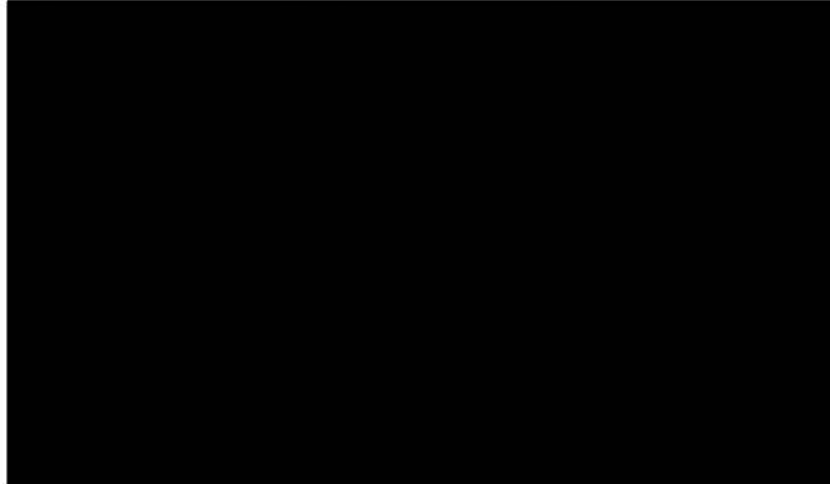
Last Update: Feb19

US Ophthalmology





## **Retina Biosimilar Landscape (Advanced stage products only)**



Last Update: Jan19


US Ophthalmology



### **Notes:**

**\*ONS5010:** The first clinical study for ONS-5010 is being conducted outside of the U.S. and is designed to serve as the first of two adequate and well controlled studies for wet AMD. The U.S. portion of the second study is scheduled to begin in early 2019 upon the submission of an IND application. Oncobiologics' wet AMD clinical program was reviewed at a successful end of Phase II meeting held with the U.S. FDA conducted earlier in 2018. If the program is successful, it will support the Company's plans to submit for regulatory approval in multiple markets in 2020. The Company is developing ONS-5010 as an innovative therapy and not using the biosimilar drug development pathway. Previously, ONS-5010 met the primary and secondary endpoints in a 3-arm single-dose PK Phase I clinical trial. All of the PK endpoints met the bio equivalency criteria of the geometric mean ratios within 90% confidence interval of 80-125% when compared to both U.S. and EU sourced Avastin reference products (<https://oncobiologics.com/programs/novel-therapeutics/>)

**Annually, 200 K new nAMD patients, at high diagnosed and treated rate: 86%**

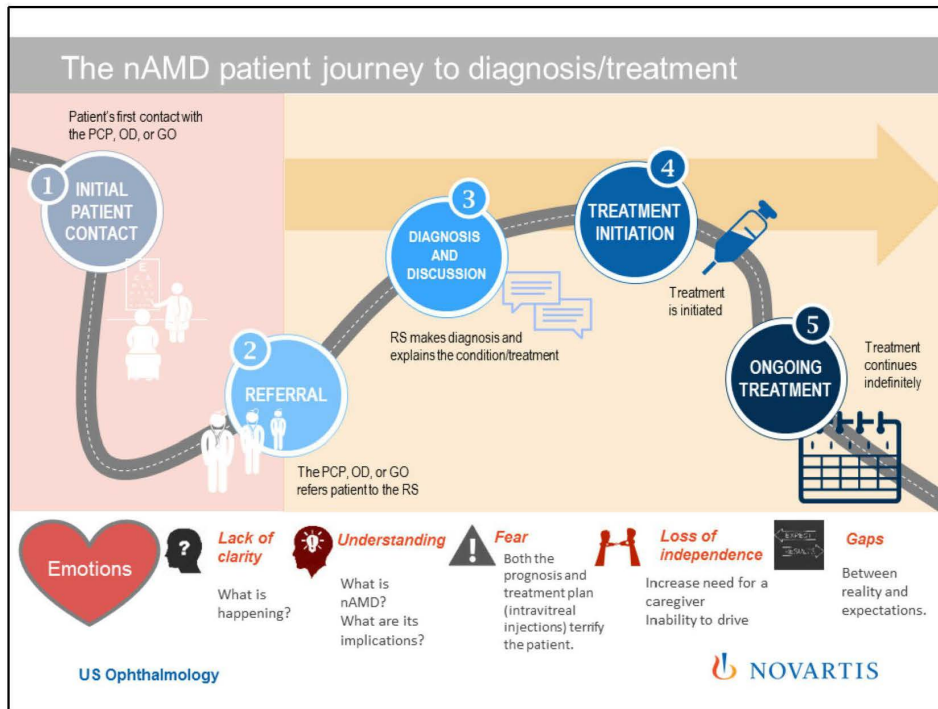
		2019	
<b>Treated Patients</b>	Naive Patients on Treatment	182K	
	Continuing Patients on Treatment	316K	
	TOTAL Patients TOTAL Eyes*	498K 610K	

\* NOTE: 22.6% bilateral eyerate

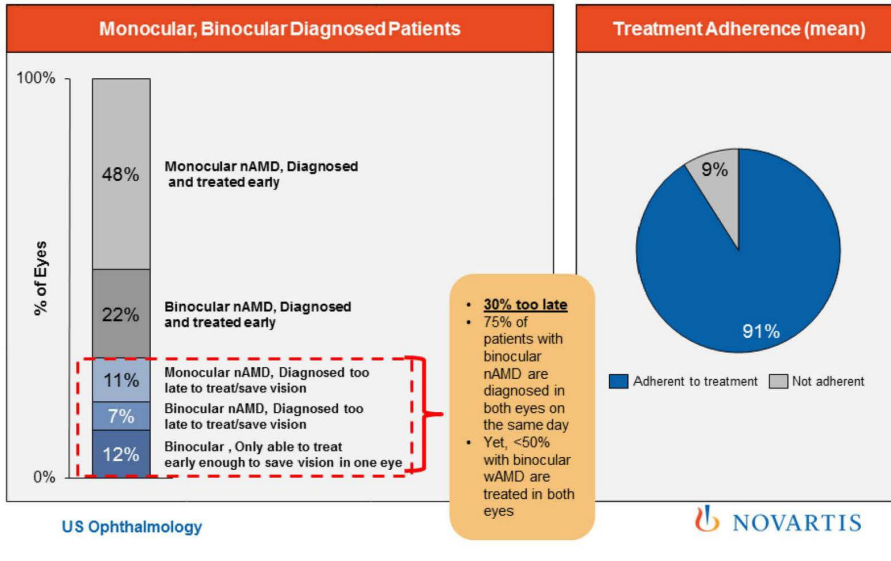
Sources: US Census, Epi Studies, Global Forecast assumptions (Diagnosis and Treatment Rates)

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## Majority of patients are diagnosed with nAMD in both eyes but are only treated early enough to save one eye



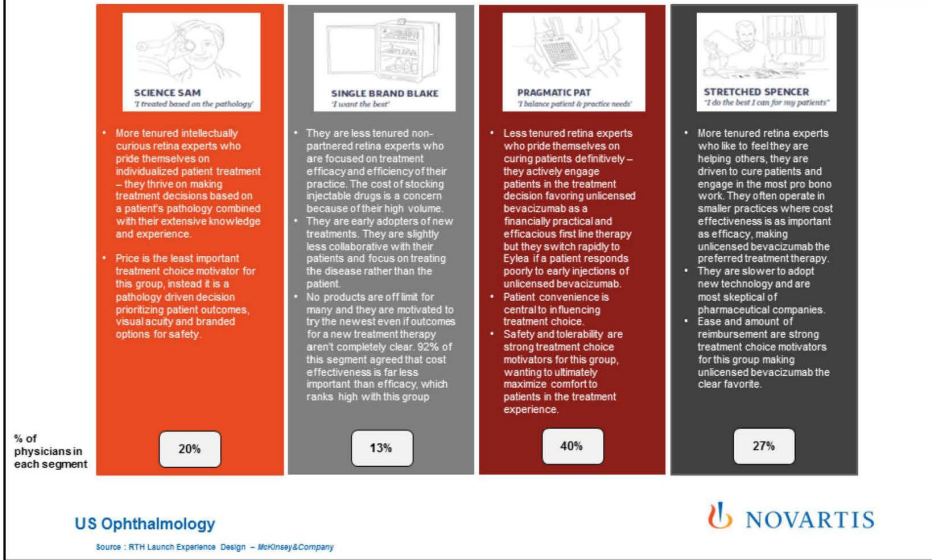


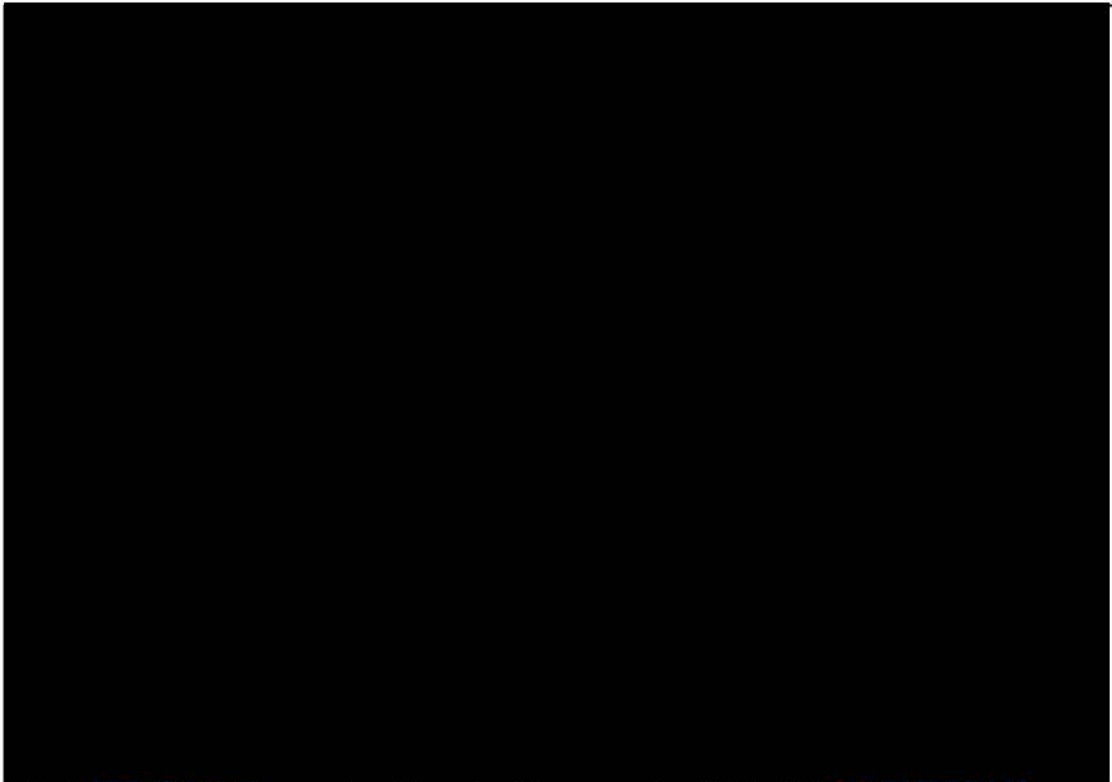
US Ophthalmology

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**Each physician segment type impacts the in-treatment prescription drivers and their preferences**

Font size too small. What the so-what of this page. Keep only the primary points on the page





**Anti-VEGF treatment decision for Neovascular AMD (Wet AMD)?** Please use a seven-point scale, where '1' means "Not at all important" and '7' means "Extremely Important".

# Eylea is considered to outperform others on majority of attributes, OOP costs and reimbursement confidence drive highest Avastin levels

Comparative Product Performance- T2B (rated 81-100)- Total Level

Importance	Attribute	Lucentis	Avastin	Eylea
		2018 (n=78)	2018 (n=78)	2018 (n=78)
83%	Improving visual acuity – mean change in BCVA			
76%	Helps achieve regression of neovascularization			
73%	Is a product I can trust			
73%	Longer duration of efficacy			
73%	Confidence in product quality			
72%	Flattens/thins central subfield thickness			
67%	Positive experience with the product			
67%	Reimbursement confidence			
64%	Resolves IRF/SRF fastest			
64%	Out of pocket costs patient			
63%	Maximizes treat and extend dosing interval			
62%	Injection frequency			
54%	Patient reimbursement support			
35%	Low potential for macular fibrosis/scarring			
28%	Minimal product-related eye pain			
13%	Patient/caregiver support services & education			






Increasing Overall Attribute Importance

Q22. Shown below are Anti-VEGF therapies for the treatment of Neovascular AMD (Wet AMD). We are going to again show you a list of statements that you would like you to evaluate how well (or how poorly) each of these therapies performs.

Using the scale below, please rate each Anti-VEGF therapy for the treatment of Neovascular AMD (Wet AMD) anywhere from **Does Not Perform Well At All** to **Performs Extremely Well** for the statement shown. To do so, click on each treatment and drag it to the rating you would like to give for that Anti-VEGF therapy for the treatment of Neovascular AMD (Wet AMD).



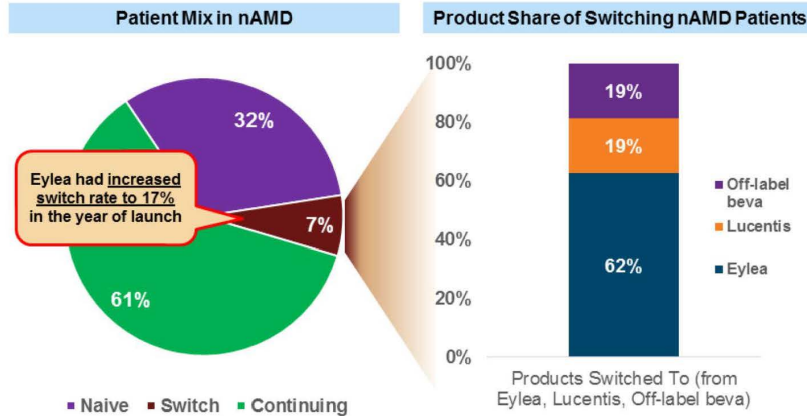
**Physician-perceived strengths and weaknesses of current nAMD treatments are clear, across all segment types**

	 AVASTIN <small>AVASTIN INJECTION</small>	 LUCENTIS <small>RANIBIZUMAB INJECTION</small>	 EYLEA <small>aflibercept injection for intravitreal injection</small>
	<ul style="list-style-type: none"> <li>• Low cost / well <b>reimbursed</b></li> <li>• Similar <b>efficacy</b> to Lucentis</li> <li>• <b>Lower</b> economic <b>risk</b> to practice</li> </ul>	<ul style="list-style-type: none"> <li>• Longer market <b>experience</b></li> <li>• <b>Pre-filled</b> Syringe</li> <li>• Preferred for patients with recent <b>cardiovascular</b> disease</li> <li>• Shelf life</li> <li>• Gives <b>rebates</b> to big users</li> </ul>	<ul style="list-style-type: none"> <li>• Barring <b>financial / insurance</b> concerns, physicians prefer Eylea</li> <li>• Perceived <b>longer duration</b> of action</li> <li>• Reducing side effects</li> <li>• <b>Dosing</b> advantage</li> <li>• Shelf <b>life</b></li> </ul>
	<ul style="list-style-type: none"> <li>• Off label use</li> <li>• Preparation requires compounding pharmacy</li> <li>• Dosing frequency</li> <li>• Short shelf life</li> </ul>	<ul style="list-style-type: none"> <li>• Reimbursement for patients with <b>suboptimal</b> insurance</li> <li>• Lower perceptions of efficacy vs Eylea</li> <li>• Dosing <b>frequency</b></li> </ul>	<ul style="list-style-type: none"> <li>• Reimbursement for patients with <b>suboptimal</b> insurance</li> </ul>

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**In the past 12 months 7% patients had their treatment switched; During Eylea launch year the switch rate had increased to 17%**



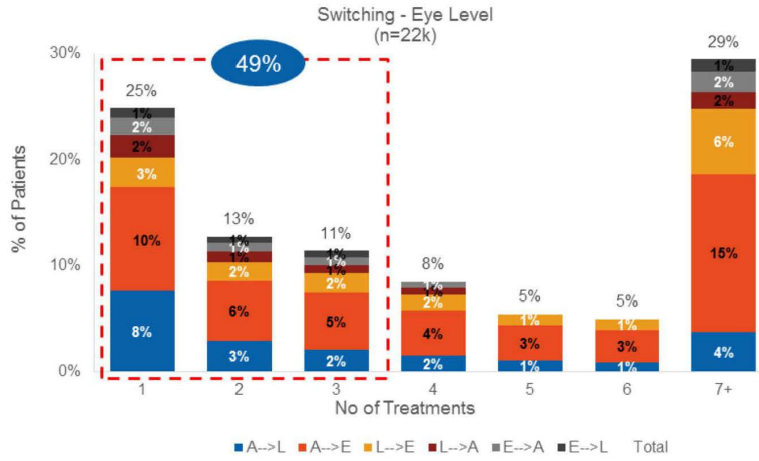
Time period of data: Aug'16 to Jul'17  
Data Source: IQVIA claims data

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AMIT: Is this slide % of patients or % of eyes?

### Switching happens early in treatment when MDs are assessing patients' response

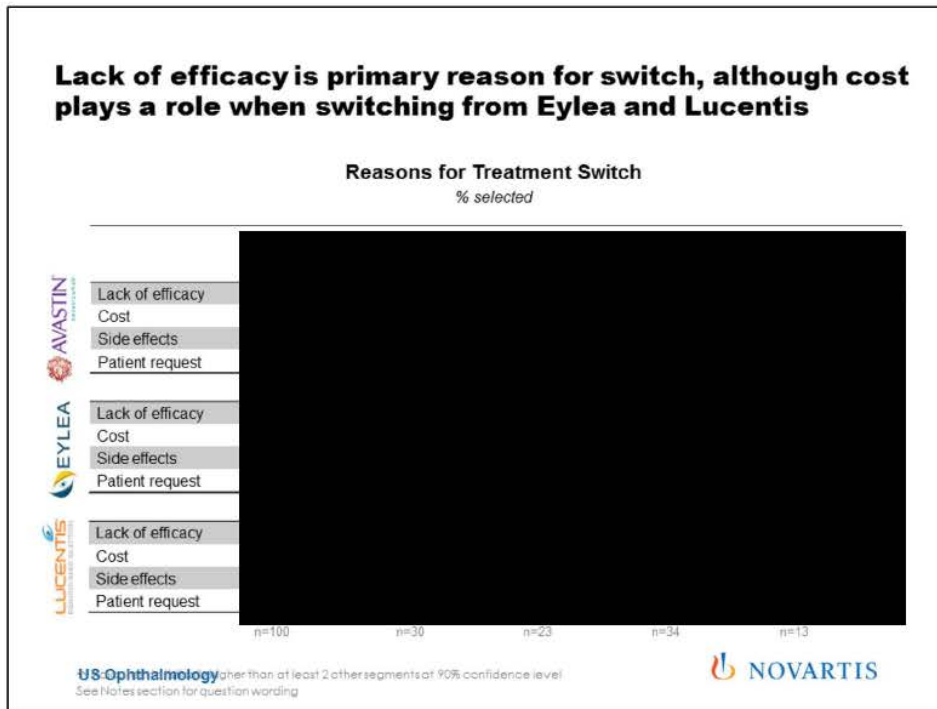


Time period of data: Aug'16 to Jul'17  
Data Source: IQVIA claims data

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**Lack of efficacy is primary reason for switch, although cost plays a role when switching from Eylea and Lucentis**



Q9. Again, please think of your wet AMD patients that you have initiated on each of the following agents, and then switched to a different anti-VEGF agent. On average, what % patients are switched for each of the following reasons?

**Approx. 3 in 4 physicians acknowledge that the treatment is burdensome to patients**

May swap w/ patient adherence report slide  
Highlight important stats

**Treatment Needs Addressed by Current Anti-VEGF-T2B**

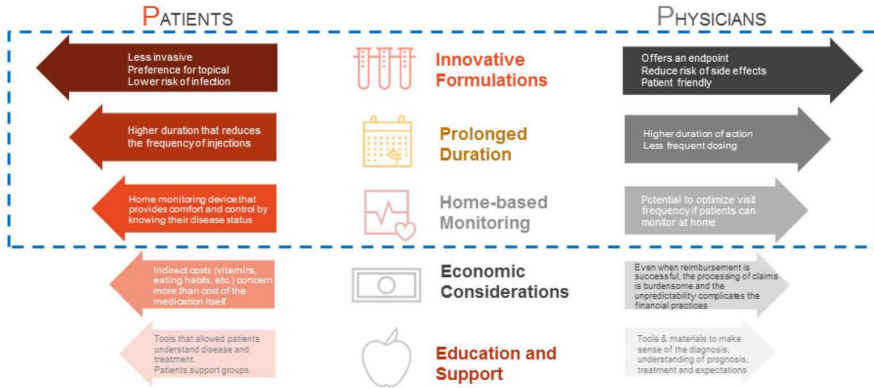
	Total (n=78)	Single Brand Biatac or Science Sam (n=27)	PragmaticPat (n=38)	Stretched Spencer (n=13)
Neovascular AMD (Wet AMD) is a chronic, complex disease driven by multiple pathogenic mechanisms beyond VEGF.				
Treatment with intravitreal injections of Anti-VEGF can be burdensome to Neovascular AMD (Wet AMD) patients				
Despite optimal Anti-VEGF therapy, vision of Neovascular AMD (Wet AMD) patients may decline in the long-term.				
Despite optimal Anti-VEGF therapy, vision of Neovascular AMD (Wet AMD) patients does not often return to normal.				
Patients response to Anti-VEGF therapy is variable in terms of initial gain and maintenance of gain.				
Optimal outcomes with current Anti-VEGF therapies may not be achieved due to requirement for frequent treatment/monitoring				
Under current Anti-VEGF therapies, only a minority of patients regain normal vision.				
Current Anti-VEGF therapies do not modify disease progression.				

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 **NOVARTIS**

**Q26.** We would now like to present you with a series of statements, can you please indicate your **level of agreement** with each of them, using a scale from 1 to 7, where 1 = 'Strongly Disagree' and 7 = 'Strongly Agree'? *Single code per row.*

**Patients and physicians agree that they need Innovative formulations with Prolonged duration and a Home-based monitoring**



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**2 out of 3 physicians believe there is a need for a new nAMD therapy**

Need for New Therapy to Treat nAMD



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Significant differences: **a/b/c**  NOVARTIS

Q24. To what extent do you believe there is a need for a new therapy to treat Neovascular AMD (Wet AMD)? Please use a scale of 1 to 7 where 1 means “no need” and 7 means “major need”.



Q36. And how you would describe your knowledge of these products?



**Dosing and efficacy are identified as key advantages;  
While cost is the main disadvantage, over 1 in 10 do  
not see any disadvantages**

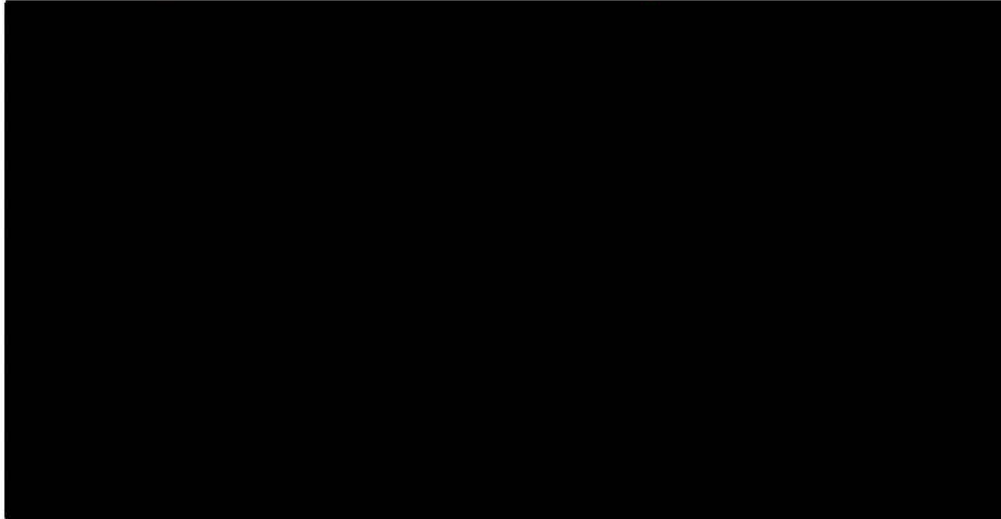
Advantages or disadvantages perception for RTH



Advantages



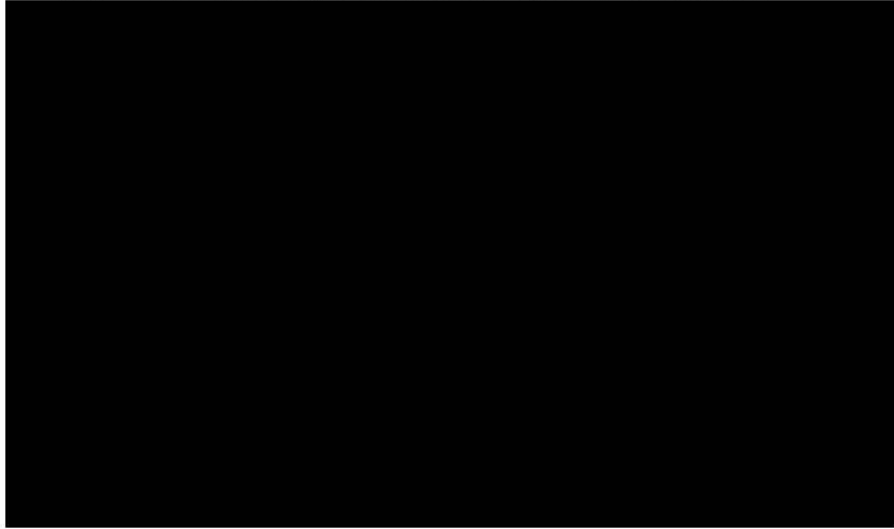
Disadvantages



Q37. What comes to mind when you think of RTH258/Brolucizumab? What are the advantages or disadvantages you perceive for RTH? (Please be specific and include details.)

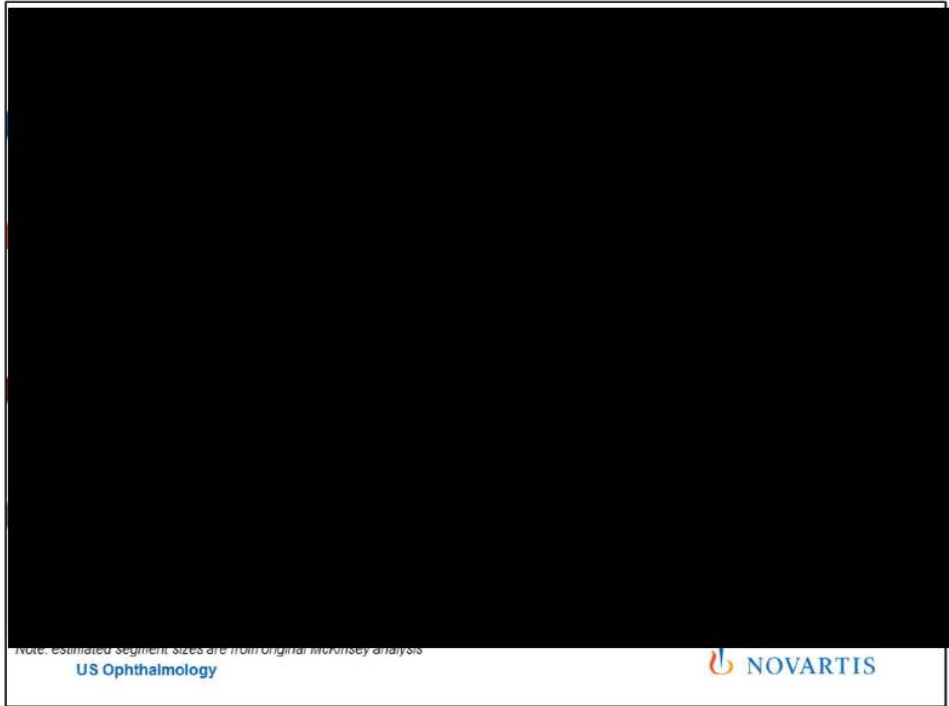
Need Images

## What Retinal Specialists expect with RTH



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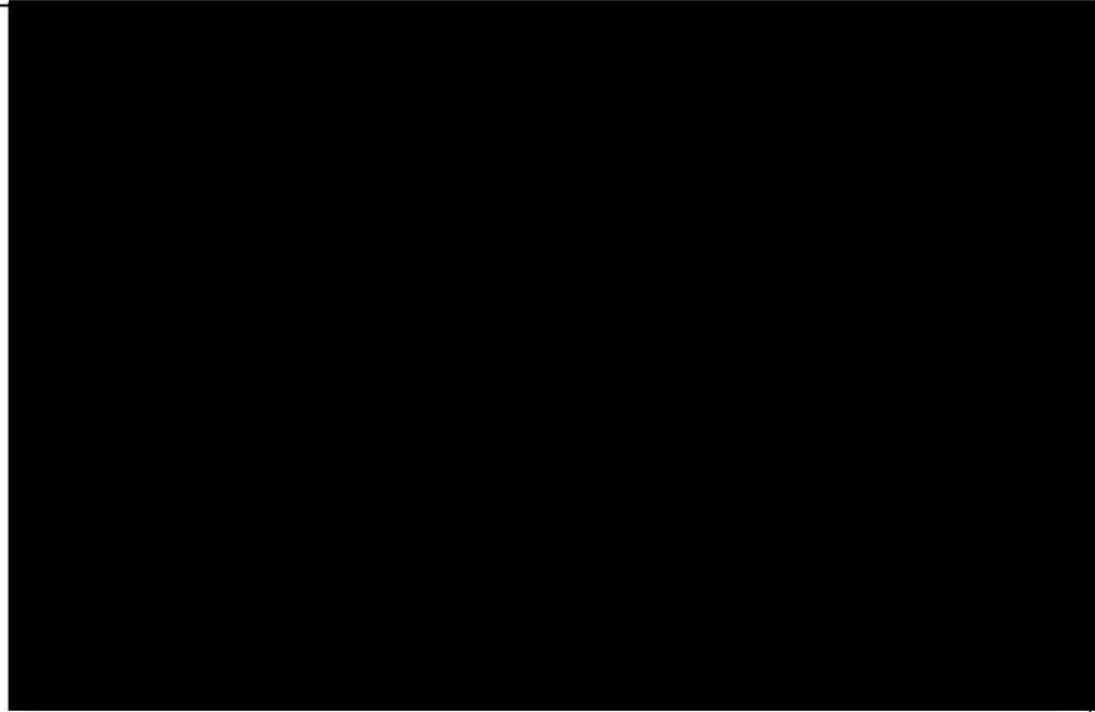
 NOVARTIS



Note: Estimated segment sizes are from original McKinsey analysis

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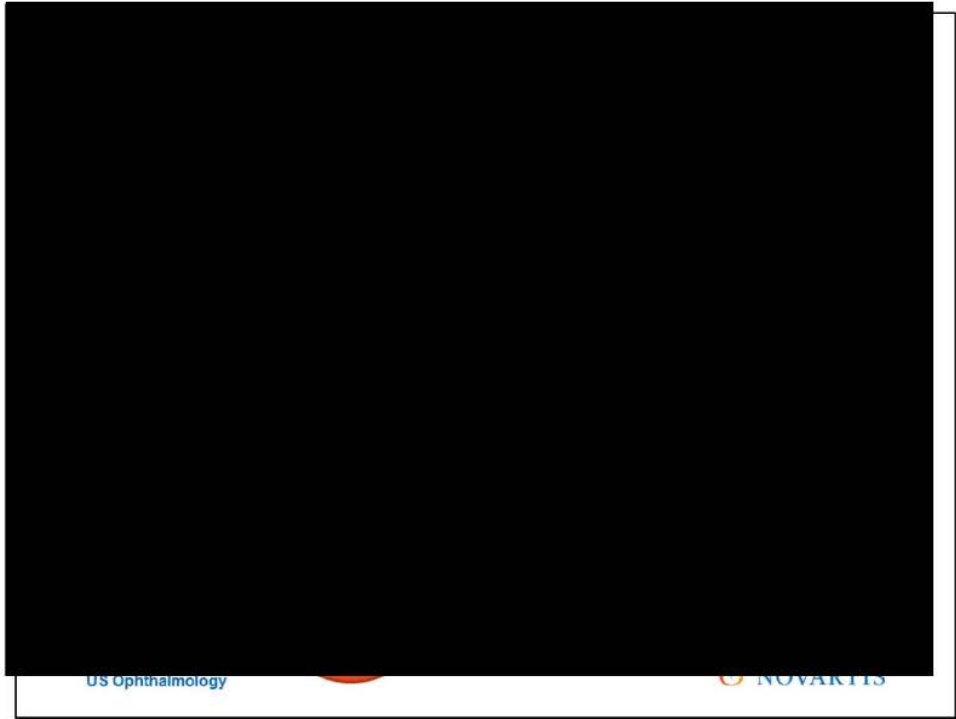


Q38. Based on what you know / the information you have been shown, how likely are you to use RTH 258 / Brolocizumab as a treatment for Neovascular AMD (Wet AMD)? *Single code per row*



**Q42.** Should RTH258/Brolucizumab become available in the market, assuming positive clinical results and assuming that there will be no access challenges, how likely would you be to use this product to each type of Wet AMD patients? Please select all that apply.

**Q43.** And should RTH258/Brolucizumab become available in the market, assuming positive clinical results and assuming that there will be no additional access challenges when compared to other branded, on-label anti-VEGFs, what proportion of each of your Neovascular AMD (Wet AMD) patients would you treat with this product? Please specify your answer per each of the following types of Wet AMD patients.

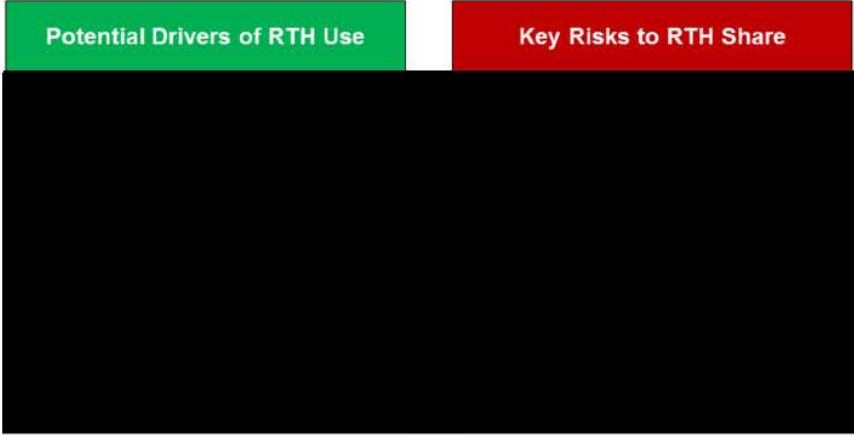




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**While physicians see many drivers for RTH use, a few key risks to RTH share are present**



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32





## Key Insights

Patient &  
Disease

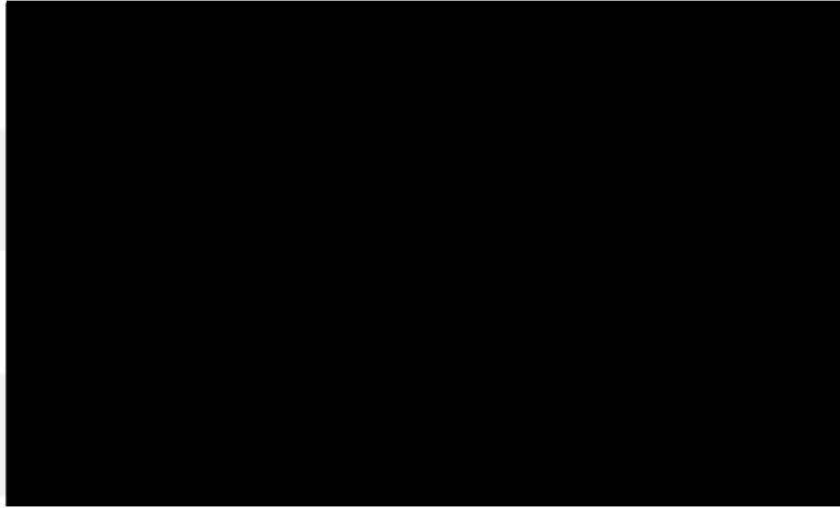
Current  
Product  
Usage

Opportunity  
for RTH

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## Outstanding Questions to Explore



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**Thank you**





## **Supporting Material**

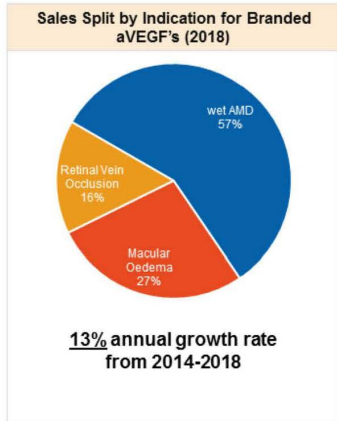




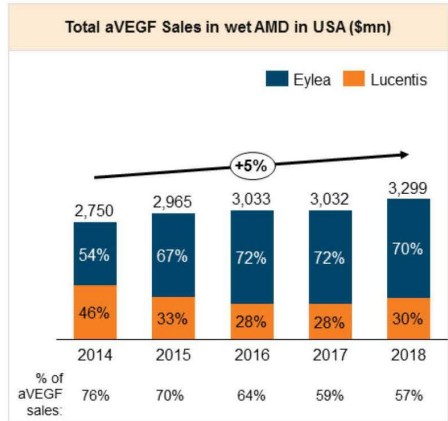
# Market Overview



**Wet AMD comprises majority (57%) of total aVEGF sales, but is growing less rapidly than total aVEGF market**



Source: EvaluatePharma



% of aVEGF sales:

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# US nAMD patient population is highly penetrated

86% is diagnosed & treated; annually, 200K new patients

		2019
Incidence	AMD Incidence Rate	0.18%
	Diagnosis & Treatment Rates	86%
Treated Patients	Naive Patients on Treatment	182K
	Continuing Patients on Treatment	316K
	TOTAL Patients TOTAL Eyes*	498K 610K

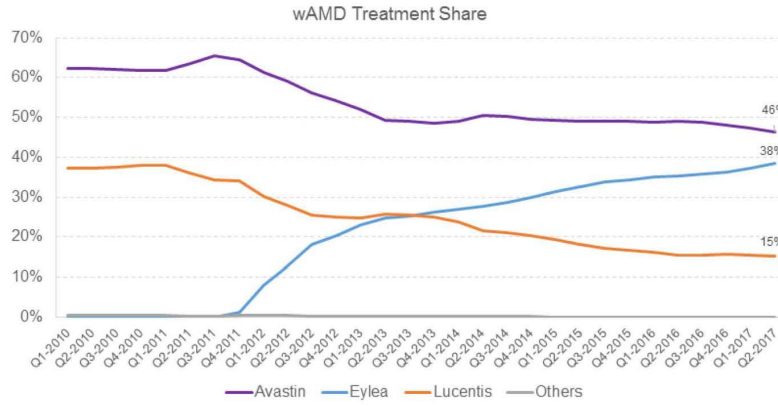
\* NOTE: 22.6% bilateral eye rate

Sources: US Census, Epi Studies, Global Forecast assumptions (Diagnosis and Treatment Rates)

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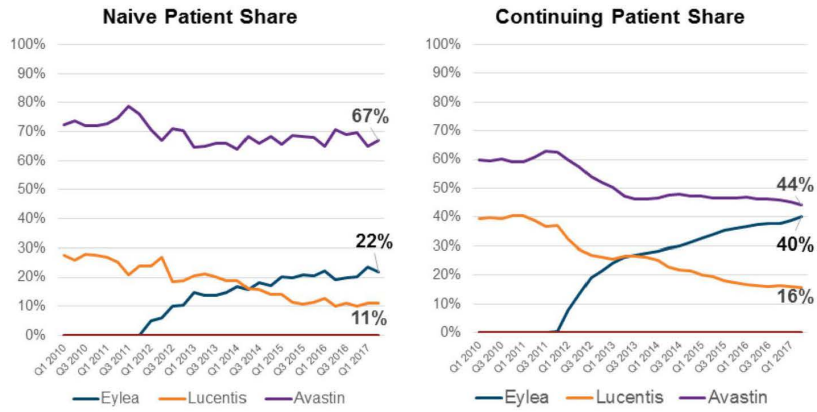


## Avastin leads the market with 46% share while Eylea continues to grow





**Patient share mix differs with naive market leader off-label beva at 67% but 44% for continuing**

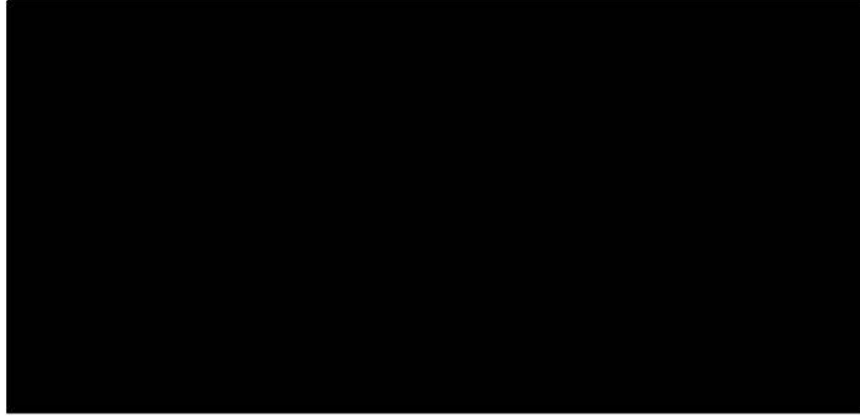


Data Source: IQVIA claims data

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**Avastin is prescribed as an initial treatment by a majority**

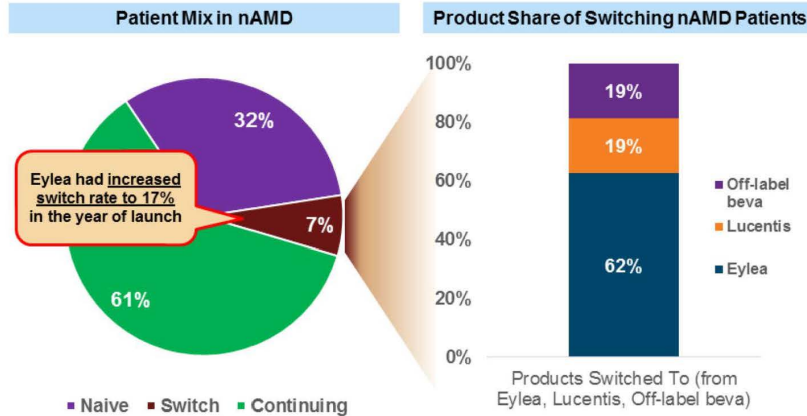


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S11. In what order do you typically prescribe / escalate therapy in wet AMD patients (1 for first-line, up to 4 for 4<sup>th</sup> line)?

**In the past 12 months 7% patients had their treatment switched; During Eylea launch year the switch rate had increased to 17%**



Time period of data: Aug'16 to Jul'17  
Data Source: IQVIA claims data

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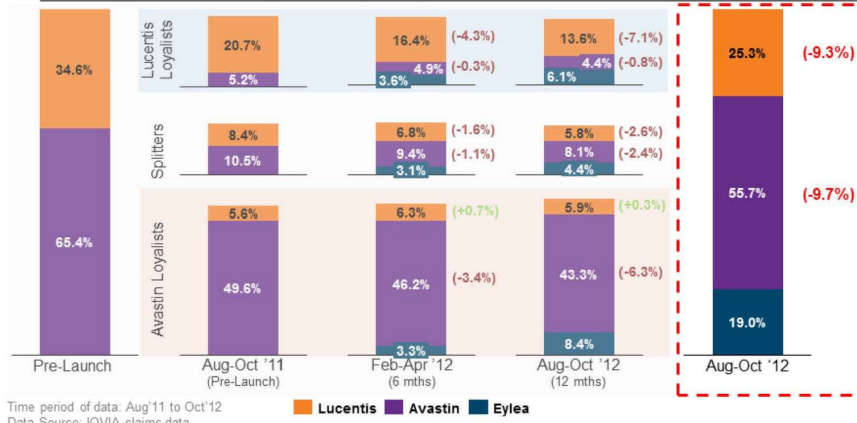




Q7. Now please think about your wet AMD patients that you have initiated on initiated on \_\_\_\_\_ and then switched to a different anti-VEGF agent. For those patients, what percent were switched to the following medications on average?

**While initially Eylea took more share from Lucentis, at end of Y1 it had taken more share from Beva**

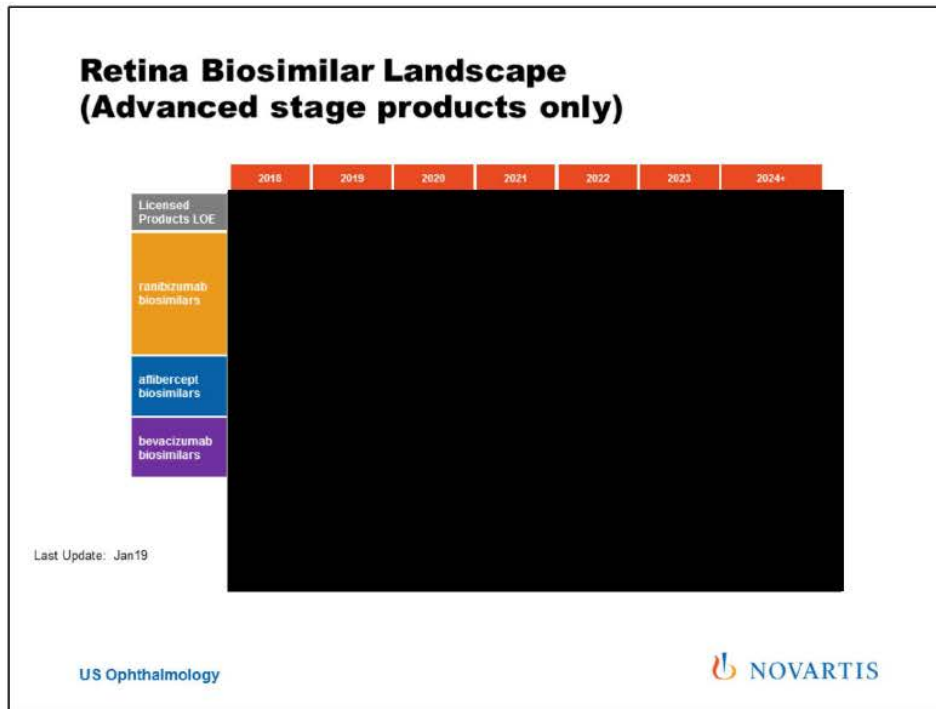
wAMD Product Shares pre- and post-Eylea launch



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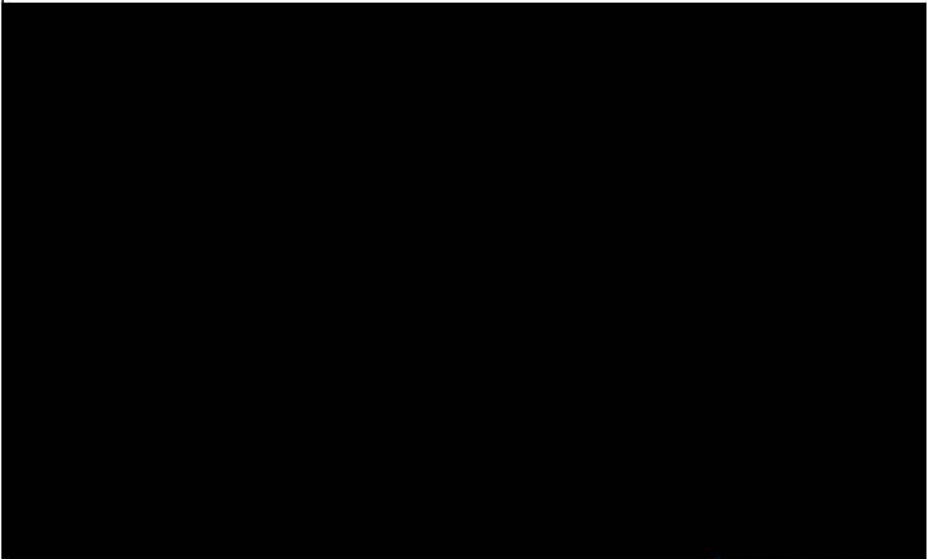
Lucentis share >60% - Lucentis Loyalist  
 Avastin share > 60% - Avastin Loyalist  
 Others - Splitters



**Notes:**

**\*ONS5010:** The first clinical study for ONS-5010 is being conducted outside of the U.S. and is designed to serve as the first of two adequate and well controlled studies for wet AMD. The U.S. portion of the second study is scheduled to begin in early 2019 upon the submission of an IND application. Oncobiologics' wet AMD clinical program was reviewed at a successful end of Phase II meeting held with the U.S. FDA conducted earlier in 2018. If the program is successful, it will support the Company's plans to submit for regulatory approval in multiple markets in 2020. The Company is developing ONS-5010 as an innovative therapy and not using the biosimilar drug development pathway. Previously, ONS-5010 met the primary and secondary endpoints in a 3-arm single-dose PK Phase I clinical trial. All of the PK endpoints met the bio equivalency criteria of the geometric mean ratios within 90% confidence interval of 80-125% when compared to both U.S. and EU sourced Avastin reference products (<https://oncobiologics.com/programs/novel-therapeutics/>)

**Retina Biosimilar Landscape – Key Highlights**



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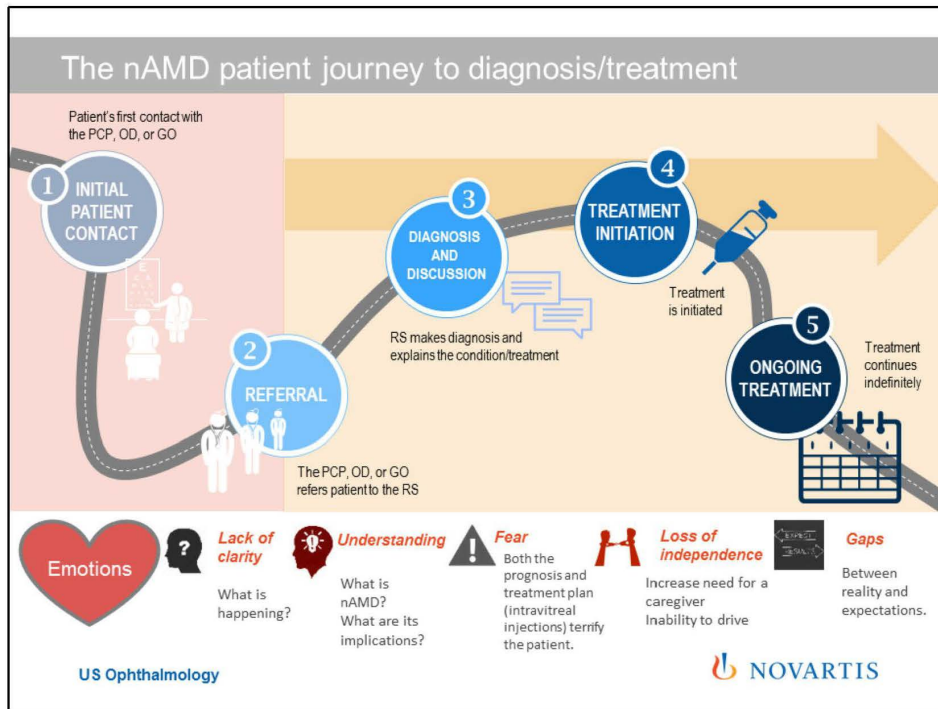




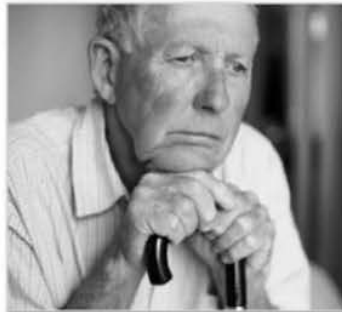
# Patient Journey







**Patients **fear progression** as it means a loss of independence**



Have trouble driving  
Have trouble reading  
Have trouble reading on screens  
Have to modify / limit household chores / responsibilities  
Have to modify / limit work activities / responsibilities  
Am no longer able to work / have had to leave my job  
Am not able to enjoy hobbies / fun activities

Source : nAMD / DME Segmentation – Quintiles

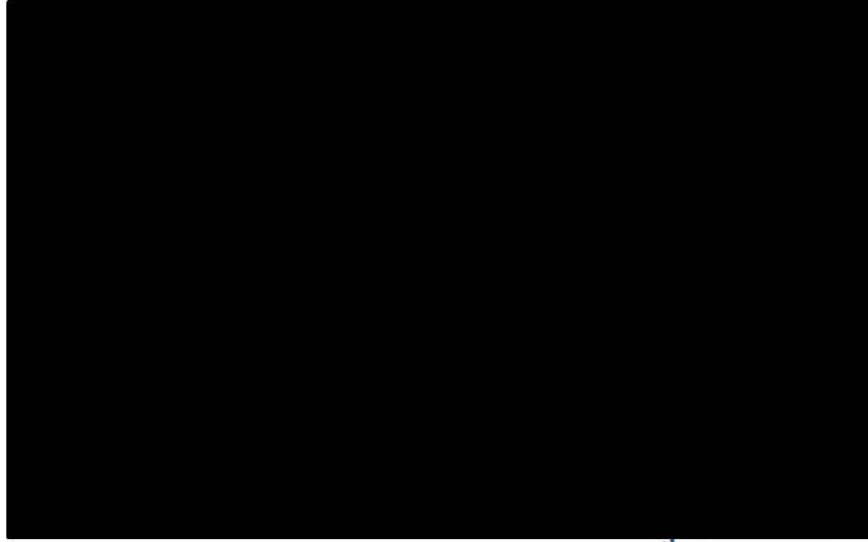
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*nAMD / DME Segmentation – Quintiles / nAMD Patients = 72*

Q: Agreement with the statement : scale from 1 “Completely disagree” to 7 “Completely agree”

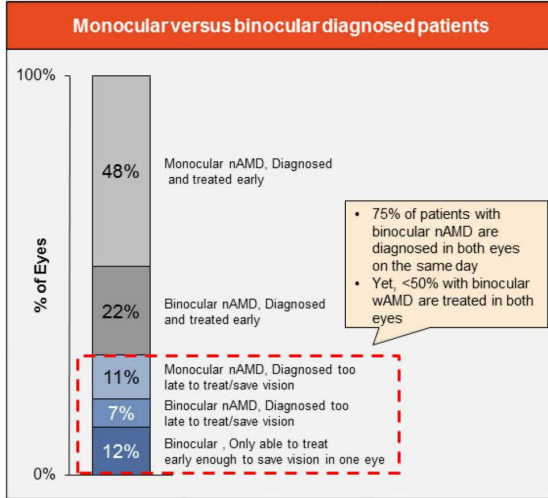
## Key Patient Insights



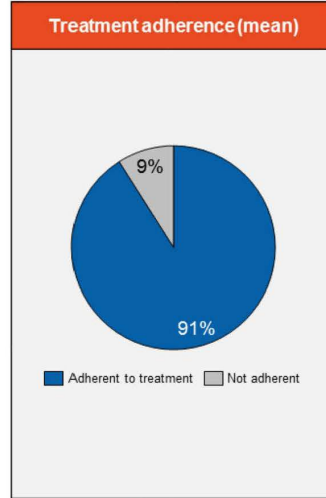
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**Majority of patients are diagnosed with nAMD in both eyes, and are typically only able to be treated early enough to save one eye**



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# **Physician Perceptions and Behaviors**





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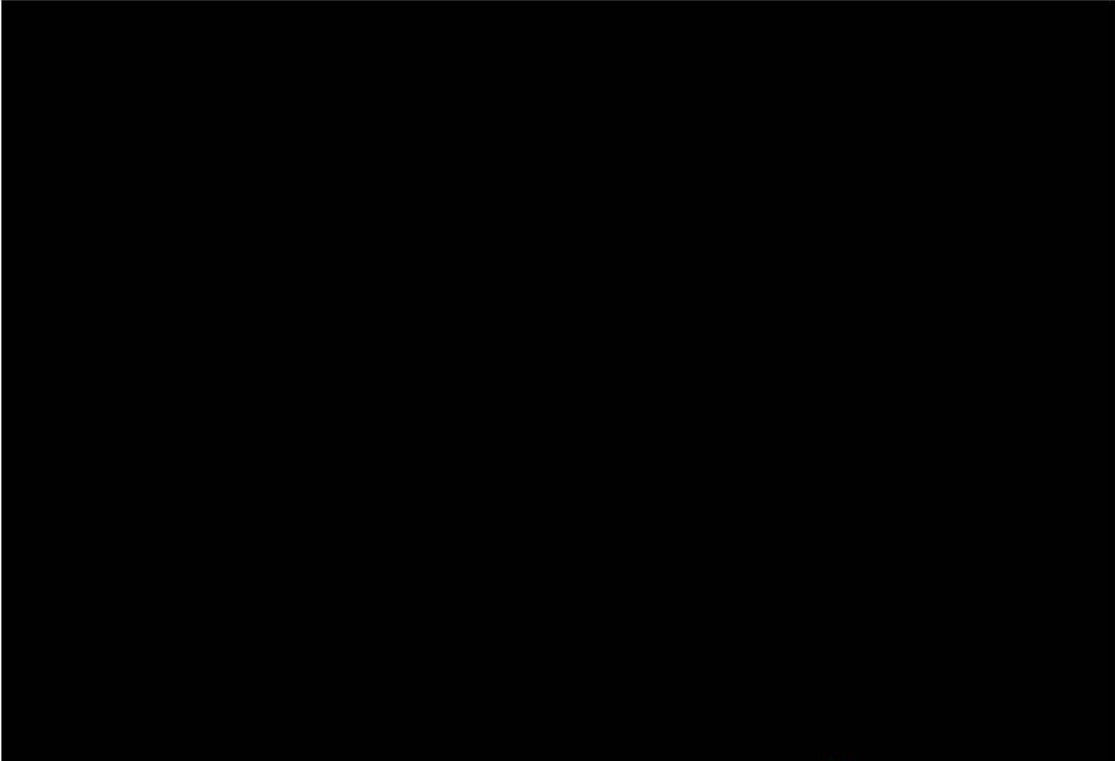








Q12. How satisfied are you with the current treatment options for your wet AMD patients?



Q20. In your opinion, how important are the following factors in driving your **Anti-VEGF treatment decision** for Neovascular AMD (Wet AMD)? Please use a seven-point scale, where '1' means "Not at all important" and '7' means "Extremely Important".

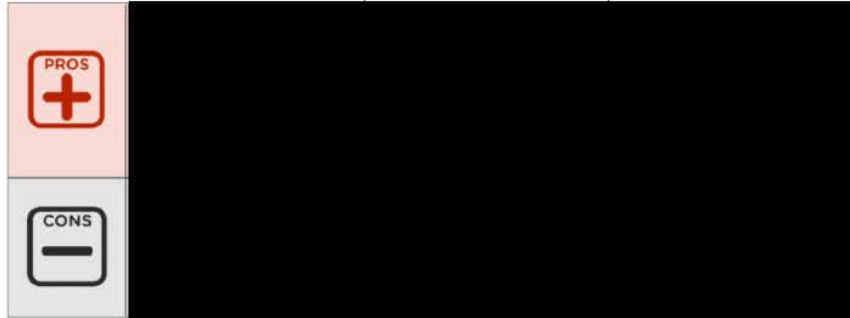
NOTE: Question used to classify segments in typing tool  
↑ indicates statistically higher than at least 2 other segments at 90% confidence level.  
See Notes section for question wording.

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S13. Please select the statement that most closely reflects your approach to prescribing treatments to your AMD patients.

**Physician-perceived strengths and weaknesses of current nAMD treatments are clear, across all segment types**



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# Eylea is considered to outperform others on majority of attributes, OOP costs and reimbursement confidence drive highest Avastin levels

Comparative Product Performance- T2B (rated 81-100)- Total Level

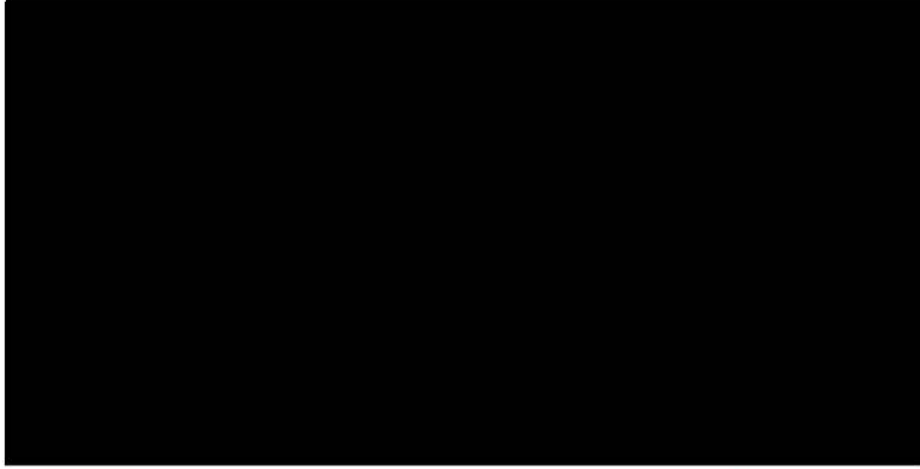
Importance	Attribute	Lucentis	Avastin	Eylea
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83%	Improving visual acuity – mean change in BCVA			
76%	Helps achieve regression of neovascularization			
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73%	Longer duration of efficacy			
73%	Confidence in product quality			
72%	Flattens/thins central subfield thickness			
67%	Positive experience with the product			
67%	Reimbursement confidence			
64%	Resolves IRF/SRF fastest			
64%	Out of pocket costs patient			
63%	Maximizes treat and extend dosing interval			
62%	Injection frequency			
54%	Patient reimbursement support			
35%	Low potential for macular fibrosis/scarring			
28%	Minimal product-related eye pain			
13%	Patient/caregiver support services & education			

Increasing Overall Attribute Importance

Q22. Shown below are Anti-VEGF therapies for the treatment of Neovascular AMD (Wet AMD). We are going to again show you a list of these therapies and you would like you to evaluate how well (or how poorly) each therapy performs for the statement shown.

Using the scale below, please rate each Anti-VEGF therapy for the treatment of Neovascular AMD (Wet AMD) anywhere from **Does Not Perform Well At All** to **Performs Extremely Well** for the statement shown. To do so, click on each treatment and drag it to the rating you would like to give for that Anti-VEGF therapy for the treatment of Neovascular AMD (Wet AMD).

## The role of fluid in treatment decisions



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Q17. For **each** anti-VEGF agent below, please indicate how much you agree or disagree with each of the following statements.



Q18. For each statement below related to wet AMD, please indicate how much you agree or disagree.







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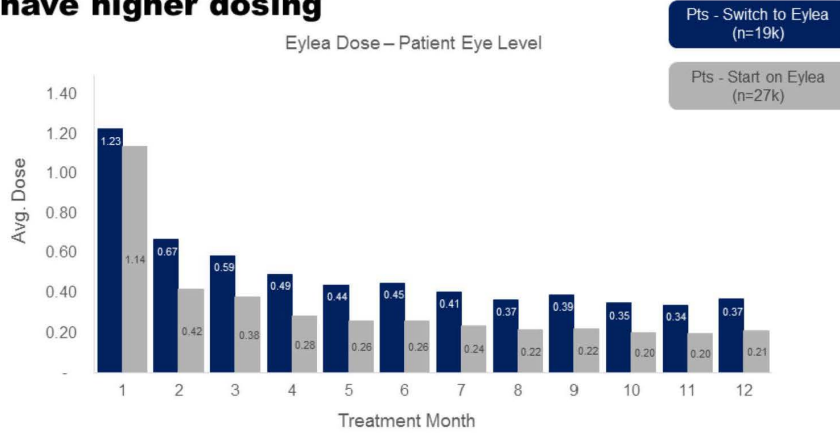


Q4. Once patients are past the loading phase, what would you estimate is the average treatment interval you currently see in your practice? Please answer for each anti-VEGF agent listed below.

Q5. In what % of your wet AMD patients who are treated with each of the following anti-VEGF agents are you able to use a 'treat and extend protocol (*interval between treatments extended as long as macula remains dry*)'?

**Eylea dosing decreases over time for both new and switched patients; switched patient have higher dosing**

Eylea Dose – Patient Eye Level

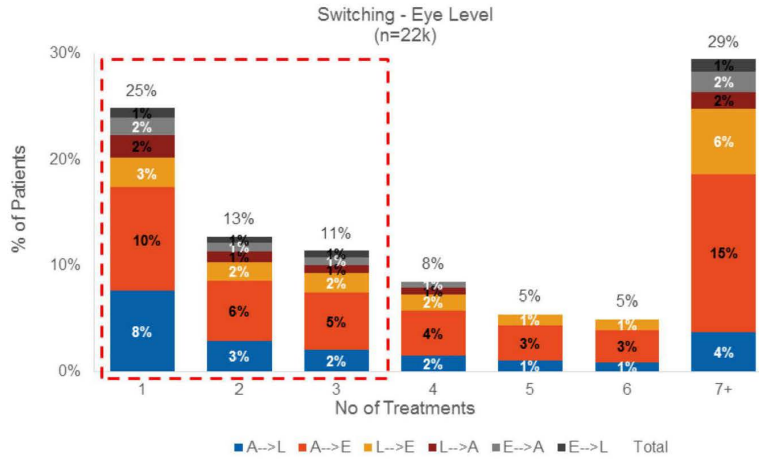


Time period of data: 2015 cohort of New and Switched patients  
 Data Source: IQVIA claims data

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**~50% of switching happens early in treatment when MDs are assessing patients' response**



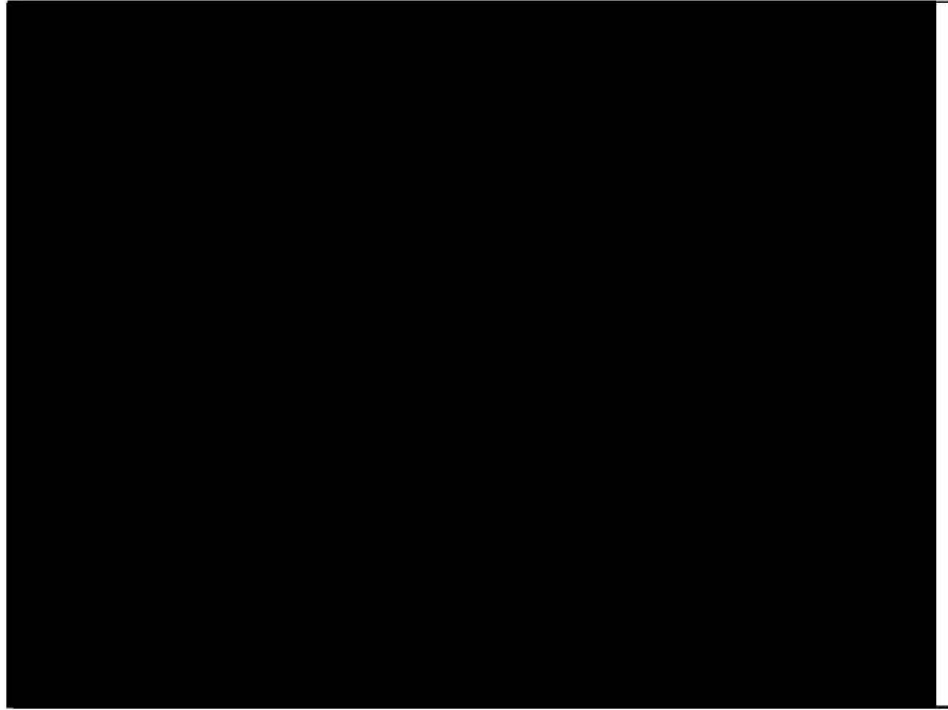
Time period of data: Aug'16 to Jul'17  
Data Source: IQVIA claims data

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Q9. Again, please think of your wet AMD patients that you have initiated on each of the following agents, and then switched to a different anti-VEGF agent. On average, what % patients are switched for each of the following reasons?



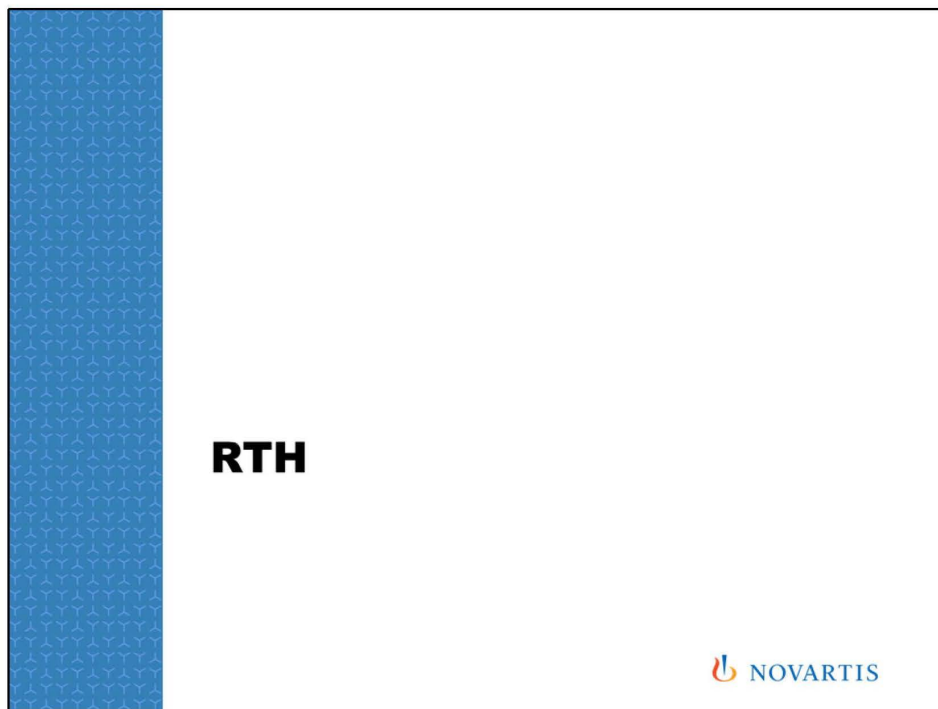
Q7. Now please think about your wet AMD patients that you have initiated on initiated on \_\_\_\_\_ and then switched to a different anti-VEGF agent. For those patients, what percent were switched to the following medications on average?

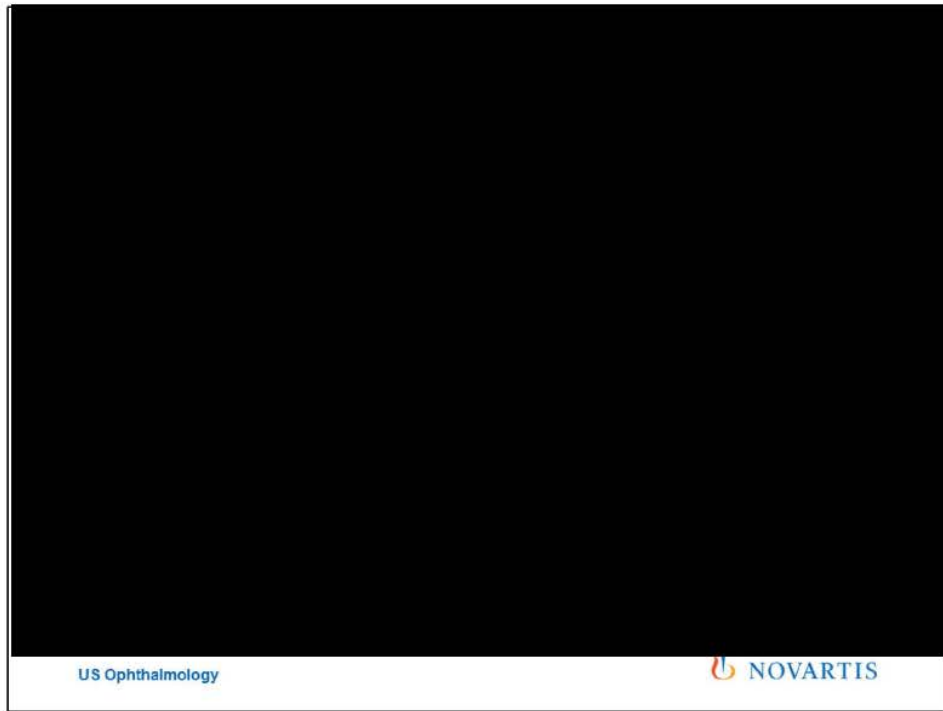


Q6. On average, for what % of your wet AMD patients who are initiated on each of the following anti-VEGF agents, have you switched agents?

Q8. Please continue to think about your wet AMD patients for whom you have switched agents. What would you estimate is the average treatment time before switching agents? Please provide the average number of weeks following the loading phase.



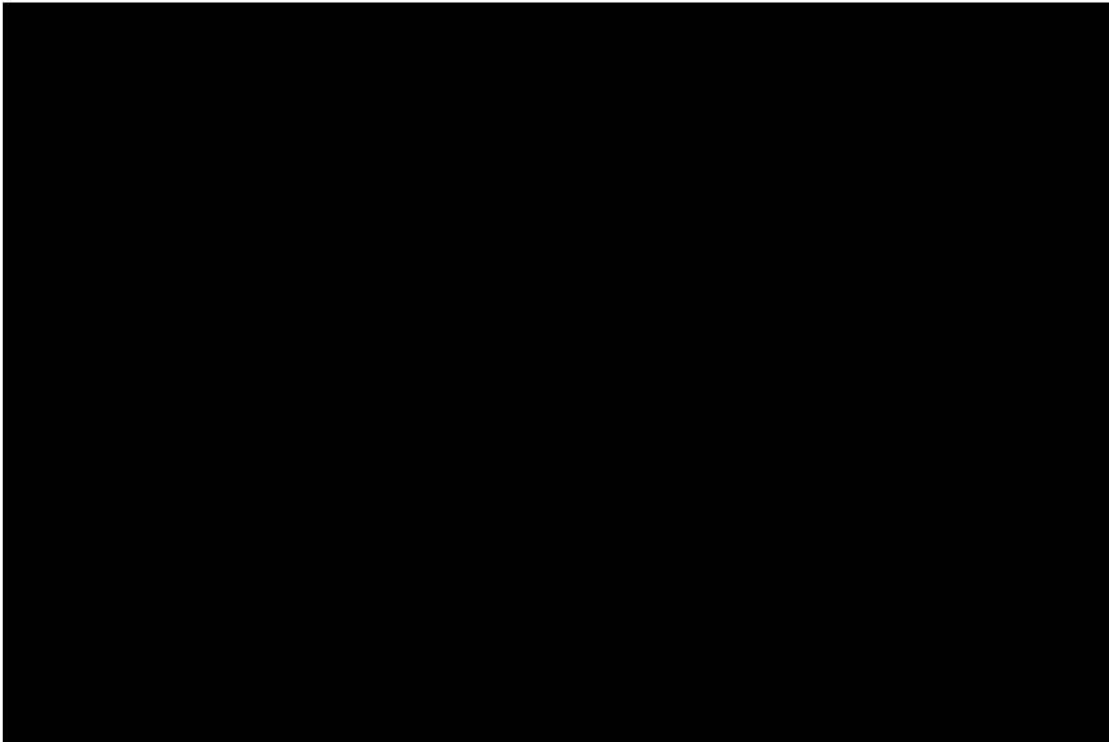




Q36. And how you would describe your knowledge of these products?



Q57. What comes to mind when you think of RTH36/Brodutinab? What are the advantages or disadvantages you perceive for RTH? (Please be specific and include details.)



Q38. Based on what you know / the information you have been shown, how likely are you to use RTH 258 / Brolocizumab as a treatment for Neovascular AMD (Wet AMD)? *Single code per row*

**Q50:** How likely would you be to treat your nAMD patients with Product X in each line of therapy? (1=Extremely unlikely to consider using Product X, 7=Extremely likely to consider using Product X)

Note: SB=Science Sam/Single Brand Blake, PP=Pragmatic Pat SS= Stretched Spencer; Source: Putnam Quant Research (Jul-Aug '18)

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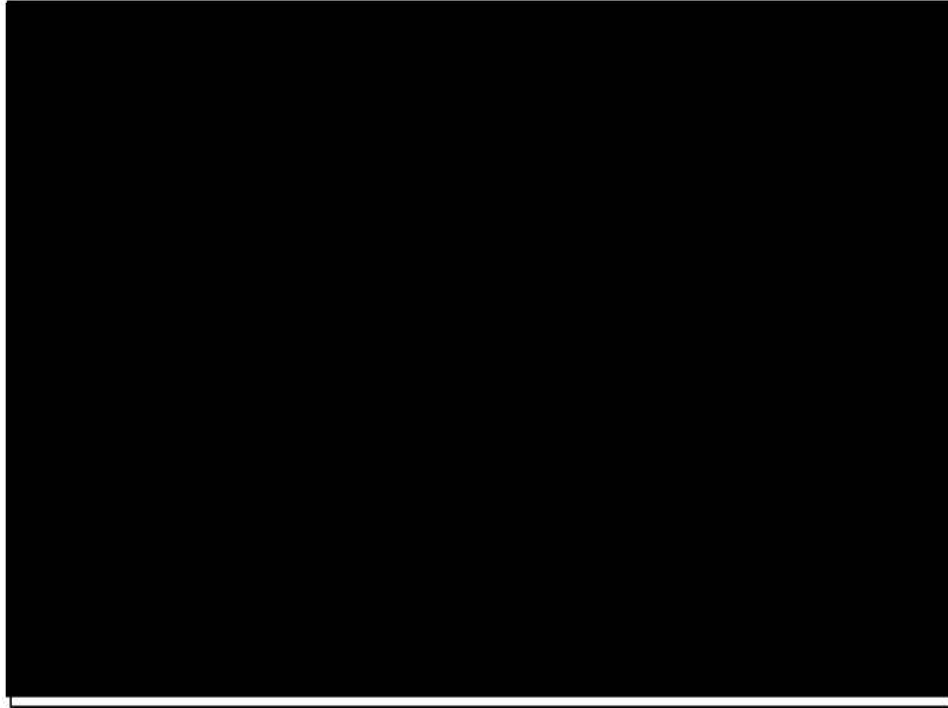
95% CI

 **NOVARTIS**



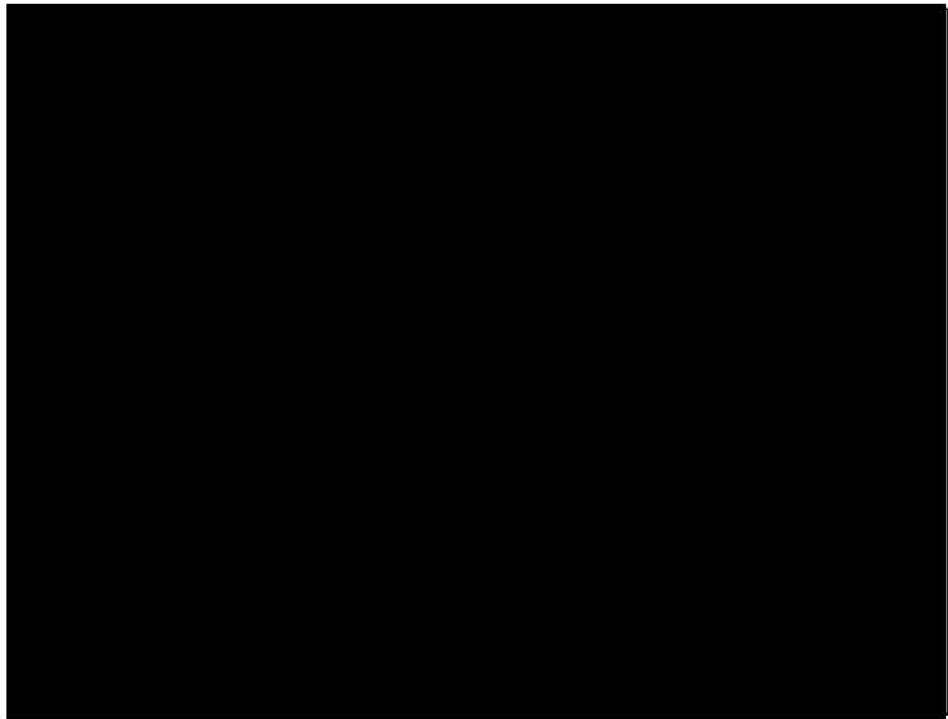
**Q42.** Should RTH258/Brolucizumab become available in the market, assuming positive clinical results and assuming that there will be no access challenges, how likely would you be to use this product to each type of Wet AMD patients? Please select all that apply.

**Q43.** And should RTH258/Brolucizumab become available in the market, assuming positive clinical results and assuming that there will be no additional access challenges when compared to other branded, on-label anti-VEGFs, what proportion of each of your Neovascular AMD (Wet AMD) patients would you treat with this product? Please specify your answer per each of the following types of Wet AMD patients.





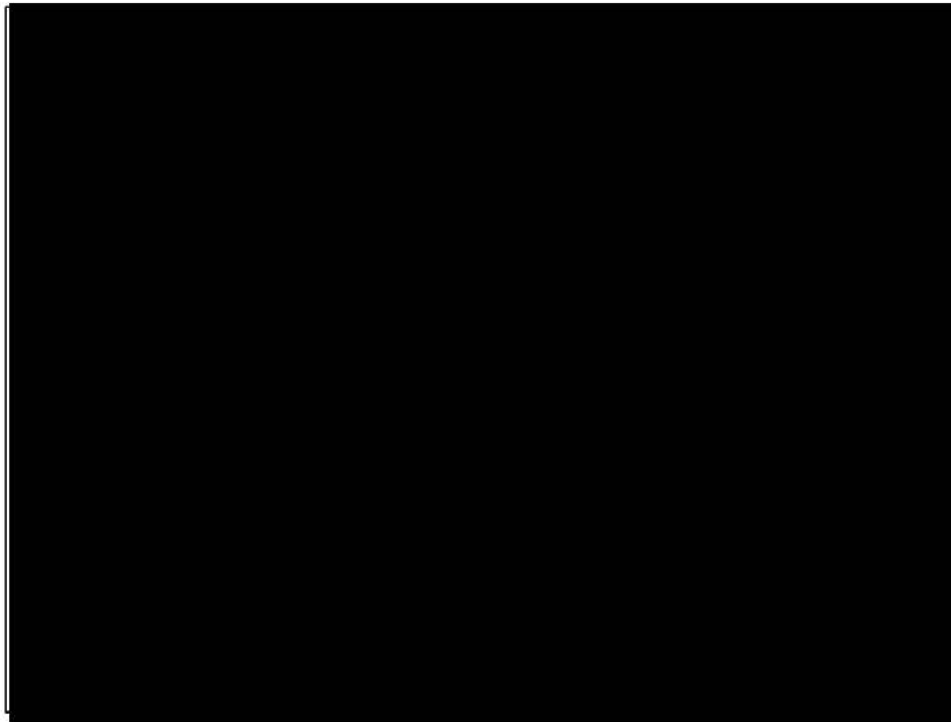




# Catherine's Appendix







nAMD ATU US – 2017 / Retinal Specialist=61

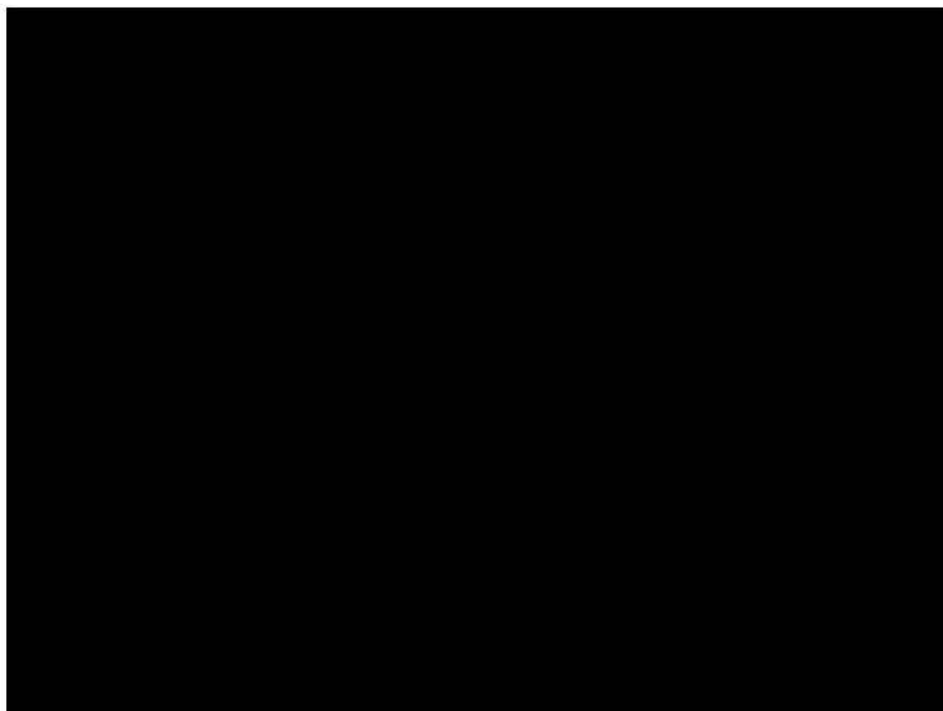
Q1b. Of the [S4 patients] suffering from Neovascular AMD (Wet AMD) that you have personally seen in the past 3 months, how many fell into each of the following categories the last time you saw them?

Q2b. What are the reasons why patients are not receiving any anti-VEGF treatment? Retinal Specialist=61

Q2c. You previously mentioned that some of your patients refused an anti-VEGF treatment. Can you please specify reason why for their decision? Retinal Specialist=41

McKinsey study / Patients =232

Q: Attitudes regarding nAMD

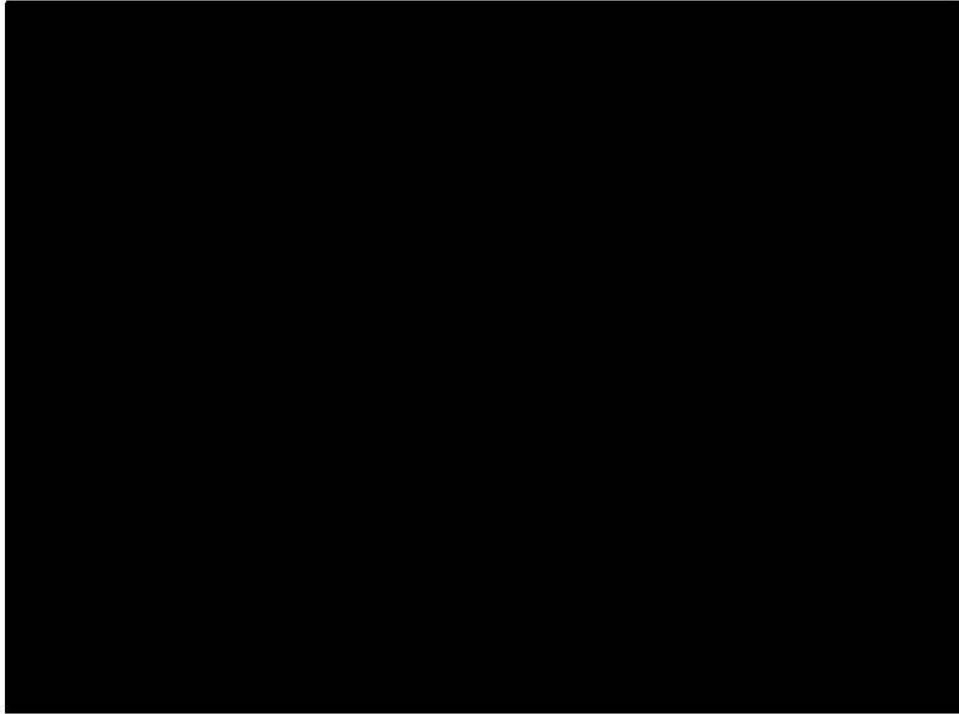


McKinsey study / Patients =232

Q: Attitudes regarding nAMD

Q: Source of information : Where do you get all the information about AMD treatments (by proportion)?





nAMD ATU US – 2017 / Retinal Specialist=61

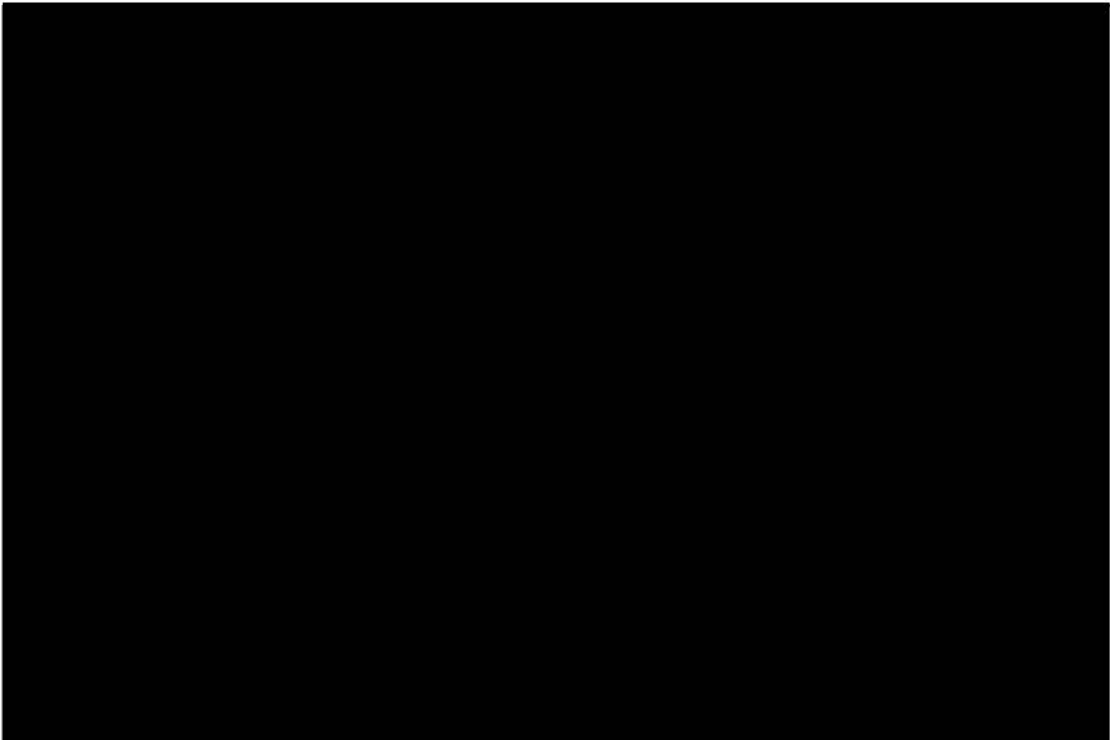
Q1b. Of the [S4 patients] suffering from Neovascular AMD (Wet AMD) that you have personally seen in the past 3 months, how many fell into each of the following categories the last time you saw them?

Q2b. What are the reasons why patients are not receiving any anti-VEGF treatment? Retinal Specialist=61

Q2c. You previously mentioned that some of your patients refused an anti-VEGF treatment. Can you please specify reason why for their decision? Retinal Specialist=41

McKinsey study / Patients =232

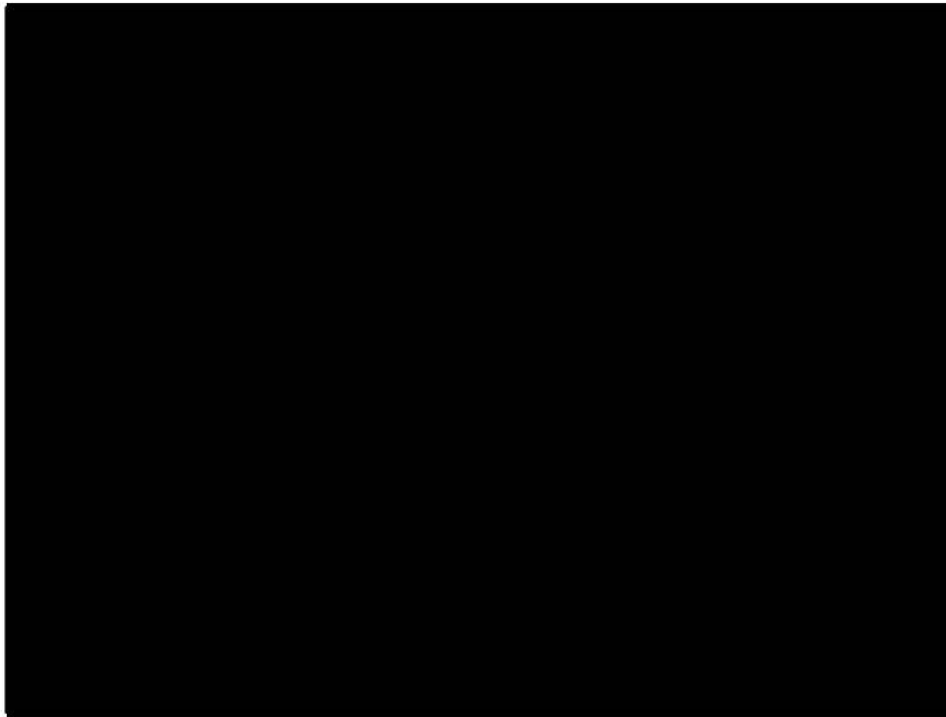
Q: Attitudes regarding nAMD



**Q17a.** Thinking now about treatment adherence for nAMD; Of the patients suffering from Neovascular AMD (Wet AMD) that you have treated in the last 3 months, what percentage of them who have responded to the treatment are not adherent? **Range[0-100]**

**Q17.** And now of the of patients who are not adherent , what percentage would fall into the following categories?









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*Note: these are qualitative, comparative scores based on a number of variables for each measure listed*





Q7. Thinking about all your Neovascular AMD (Wet AMD) **maintenance patients** treated with [~~PIPE ACCORDINGLY. IF Q4.2>0.~~], U.S. Ophthalmology Significant differences, P<0.05  **NOVARTIS**

~~Ranibizumab/Lucentis, IF Q5.2>0; unlicensed Bevacizumab/Avastin, IF Q6.2>0; Aflibercept/Eylea]~~ in the last 3 months, what percentage are using the following dosing regimens – after the initial loading doses?

Q8. Thinking about all your Neovascular AMD (Wet AMD) **maintenance patients** treated with unlicensed **Bevacizumab/Avastin** in the last 3 months, what percentage are using the following dosing regimens – after the initial loading doses?

Q9. Thinking about all your Neovascular AMD (Wet AMD) **maintenance patients** treated with **Aflibercept/Eylea** in the last 3 months, what percentage are using the following dosing regimens – after the initial loading doses?



S11. In what order do you typically prescribe / escalate therapy in wet AMD patients (1 for first-line, up to 4 for 4<sup>th</sup> line)?



S11. In what order do you typically prescribe / escalate therapy in wet AMD patients (1 for first-line, up to 4 for 4<sup>th</sup> line)?



Q14. Using the scale below, how would you rate your **overall opinion** of each of the following medications specifically for the treatment of **wet AMD**?



Q13. Please indicate how important each of the items below is in your selection of an anti-VEGF treatment for wet AMD. Please review the full list and then select and rank order your **top 5 items** in terms of importance in selecting an anti-VEGF for wet AMD.

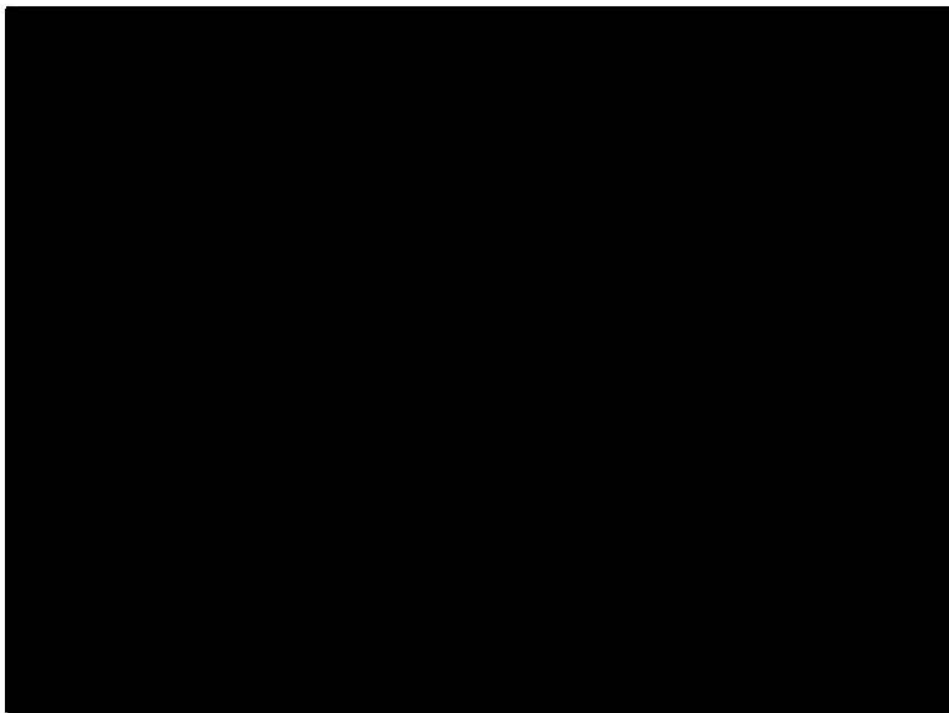




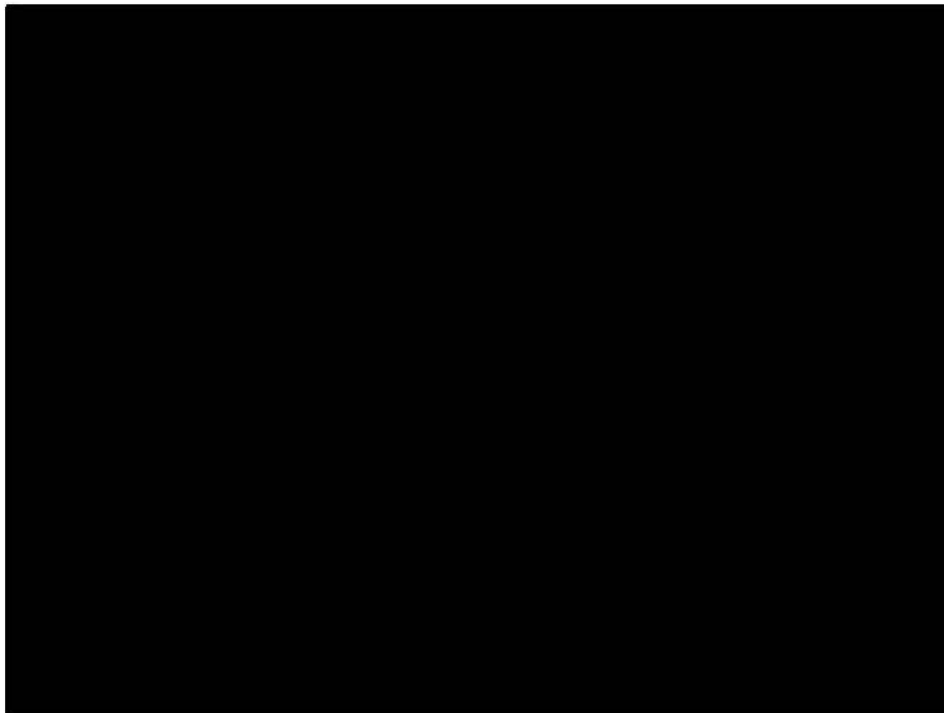
Q12. How satisfied are you with the current treatment options for your wet AMD patients?



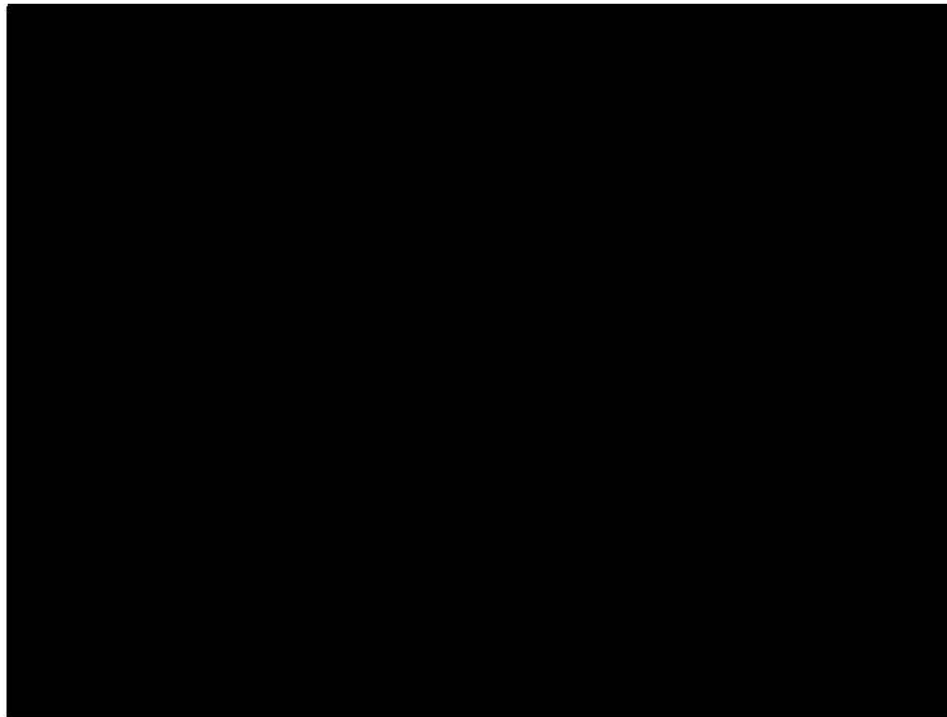
Q13. Please indicate how important each of the items below is in your selection of an anti-VEGF treatment for wet AMD. Please review the full list and then select and rank order your **top 5 items** in terms of importance in selecting an anti-VEGF for wet AMD.



Q15. For **each** anti-VEGF agent below, please indicate how much you agree or disagree with each of the following statements.



Q15. For **each** anti-VEGF agent below, please indicate how much you agree or disagree with each of the following statements.



Q26. For each statement below, please select the medication or medication(s) for which you believe the statement is most true. You must select at least one medication for which you think the statement is most true, and you may select up to three choices if you believe the statement applies to all three medications. Even if you are unsure, please provide your best guess. Select at least one and up to three items for each row.



# Measuring Fluid Frequency



## Frequency in Measuring Fluid Types for Established Wet AMD Patients

(5-point scale: 5= Always - at every exam; 1= Never - at no exams) (n=43)\*



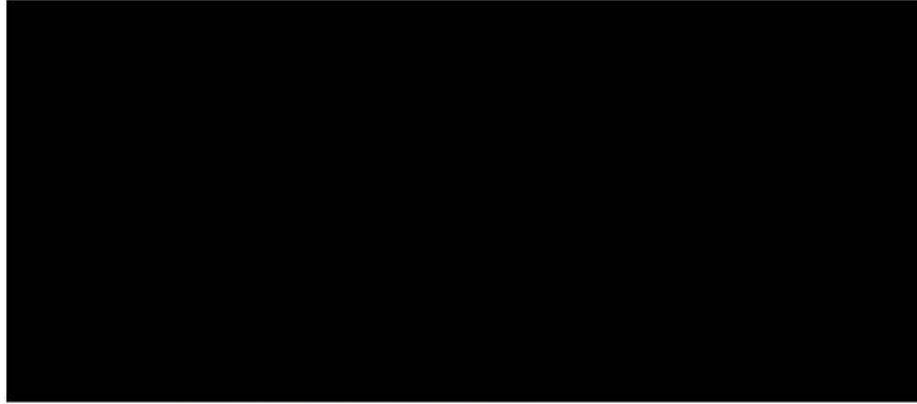
\*Number of wet AMD patients who answered each of the following questions during the study (n=43)

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## Measuring Fluid



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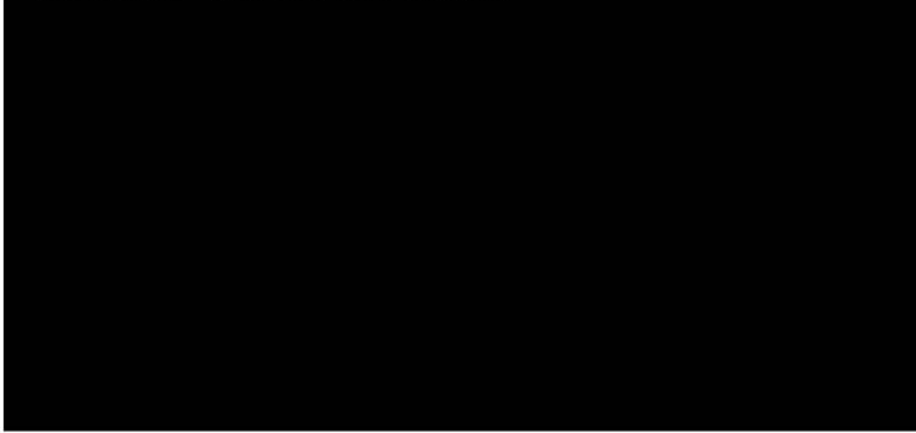
• Support Office: 1-800-455-2629

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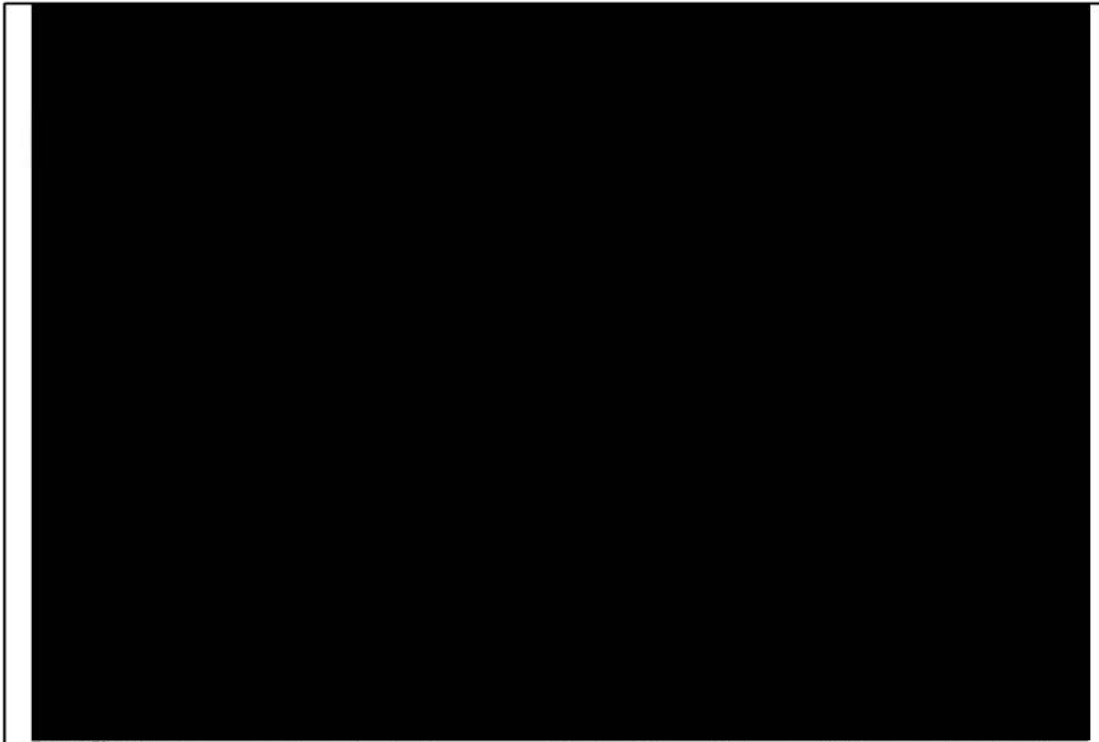
## Actions Taken for Fluid



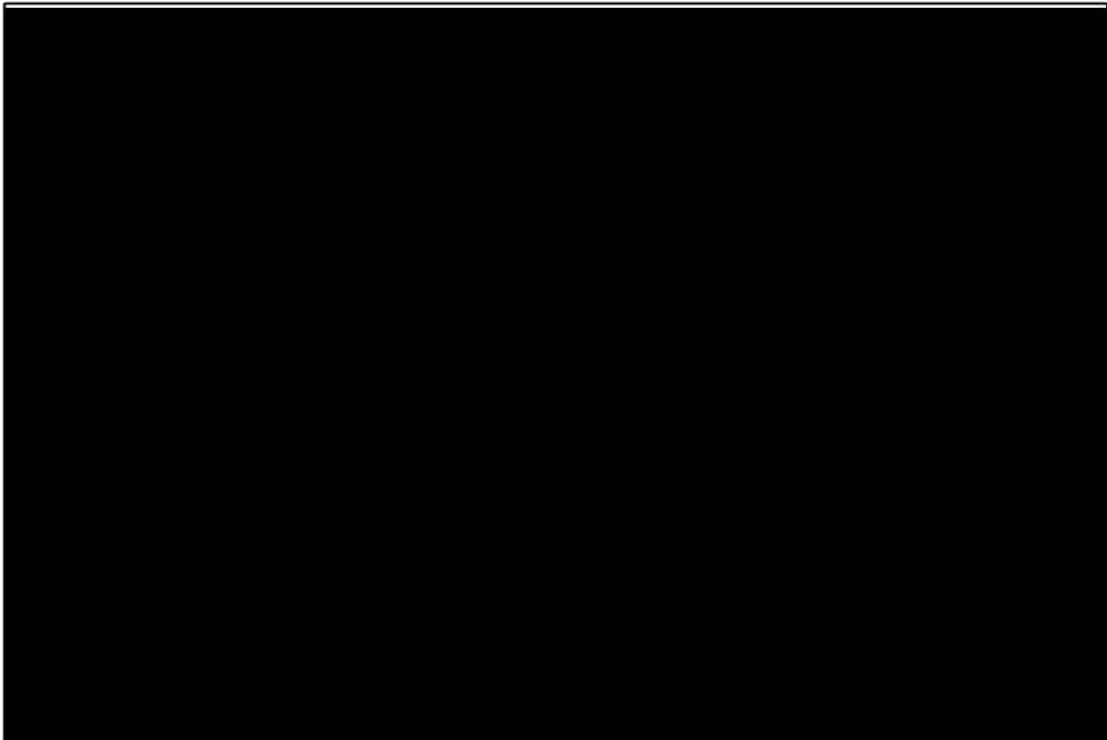
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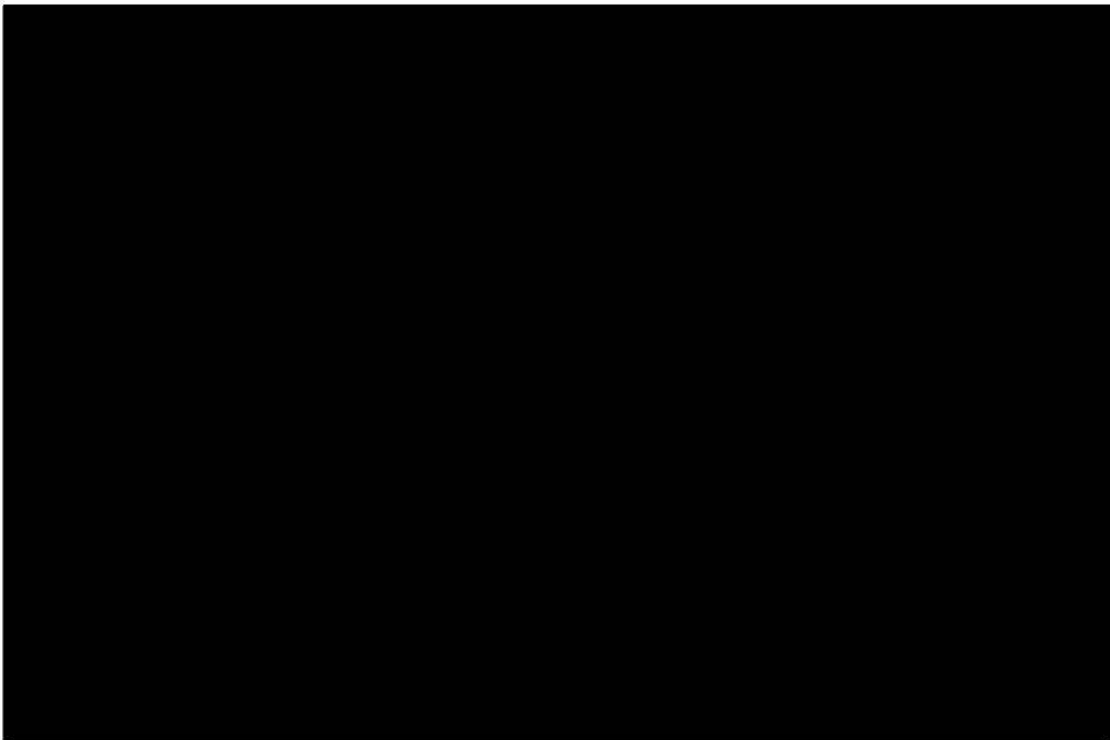




**Q2\_1.** What comes to mind when you think of **Ranibizumab/Lucentis** for the treatment of **Neovascular AMD (Wet AMD)**? What are the advantages or disadvantages of using **Ranibizumab/Lucentis** for **Neovascular AMD (Wet AMD)**? (Please be specific and include details.)



**Q2\_2.** What comes to mind when you think of **Bevacizumab/Avastin** for the treatment of **Neovascular AMD (Wet AMD)**? What are the advantages or disadvantages of using **Bevacizumab/Avastin** for **Neovascular AMD (Wet AMD)**? (Please be specific and include details.)



Case 1:21-cv-00078  
U.S. District Court  
**Q2-3.** What comes to mind when you think of **Aflibercept/Eylea** for the treatment of **Neovascular AMD (Wet AMD)**? What are the advantages or disadvantages of using **Aflibercept/Eylea** for **Neovascular AMD (Wet AMD)**? (Please be specific and include details.)



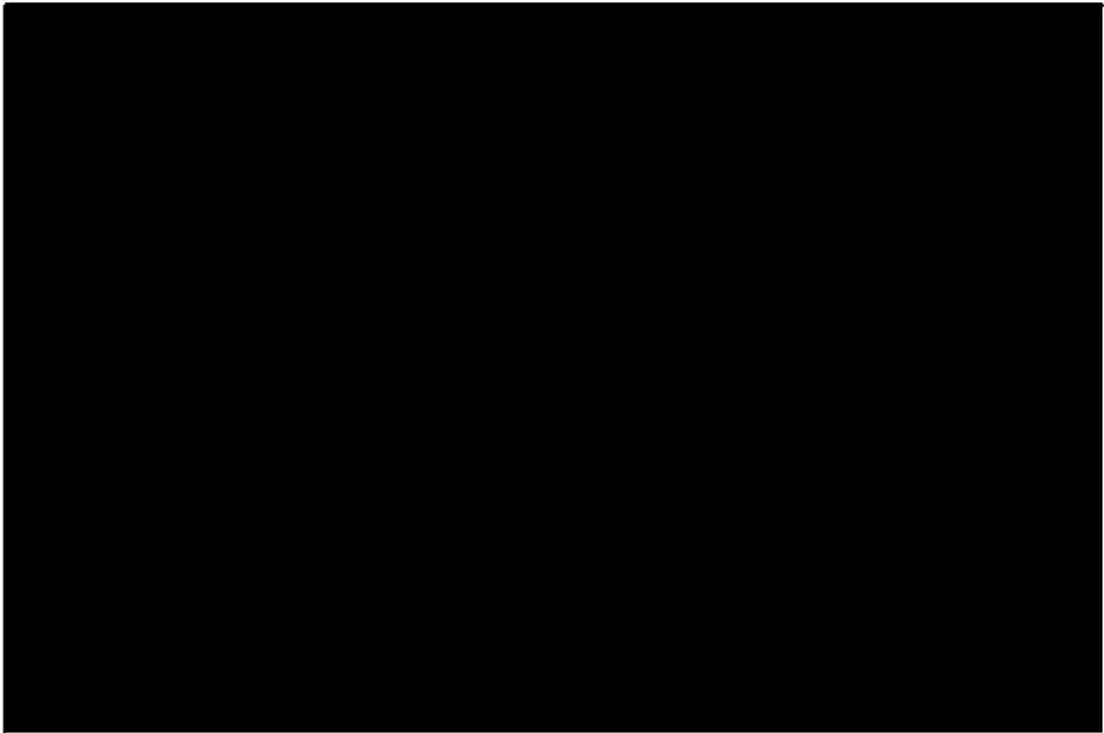
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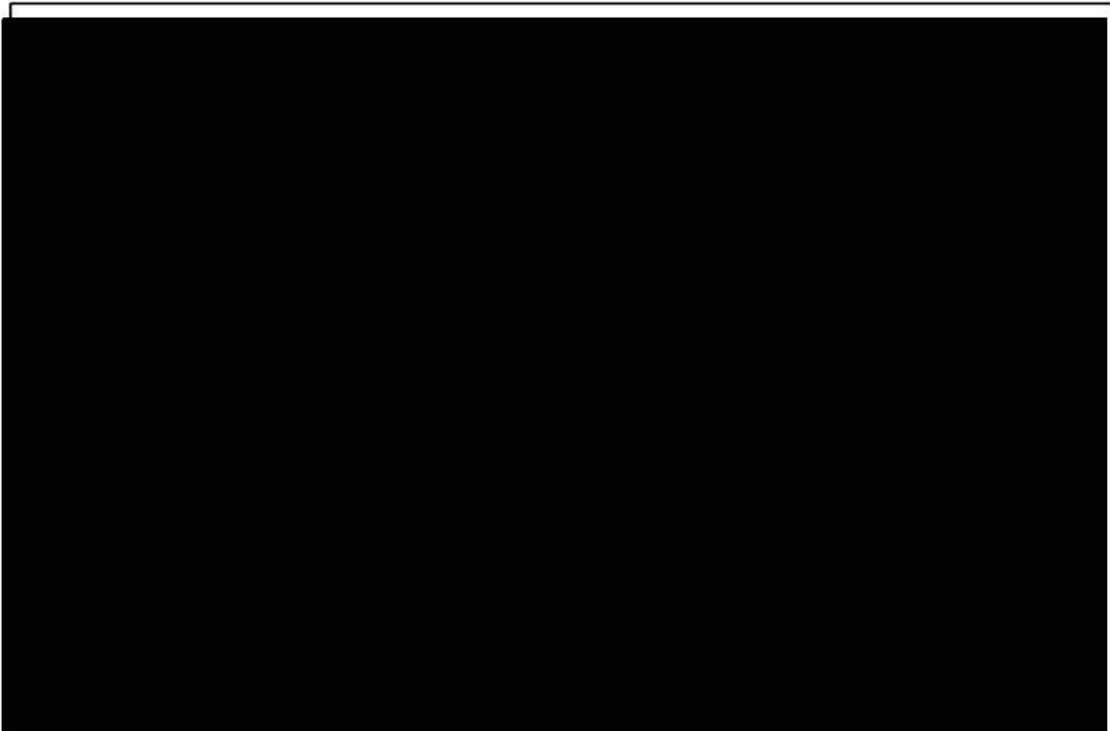


McKinsey study / Retinal Specialist =98

Q: Agreement with attributes in a scale from 1 “Completely disagree” to 8  
“Completely agree”



Case n=78  
**Q21.** Overall, how satisfied are you with each of the following Anti-VEGF therapies for the treatment of Neovascular AMD (Wet AMD)? Please use a seven-point scale, where '1' means "Extremely Dissatisfied" and '7' means "Extremely Satisfied".



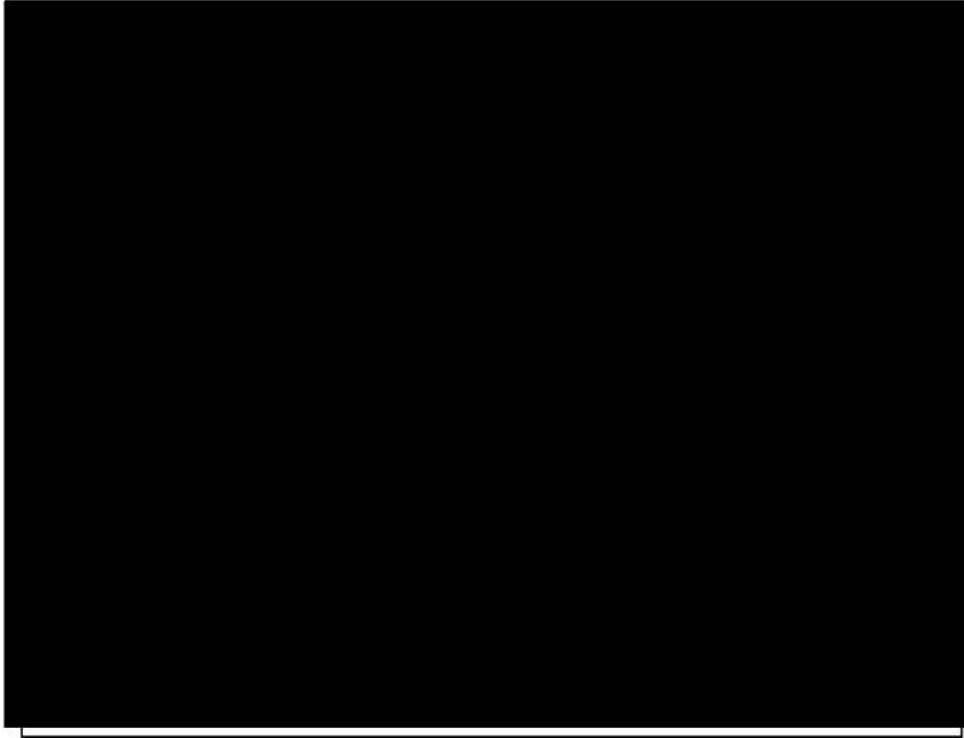
**Q3.** Of the [insert number from S9] patients suffering from **Neovascular AMD (Wet AMD)** that you have personally seen in the past 3 months, what percentage are currently receiving each of the following therapies?

**Q4.** Of the patients suffering from Neovascular AMD (Wet AMD) that you have treated with **Ranibizumab/Lucentis** in the last 3 months, what percentage fell in each of the following categories the last time you saw them?

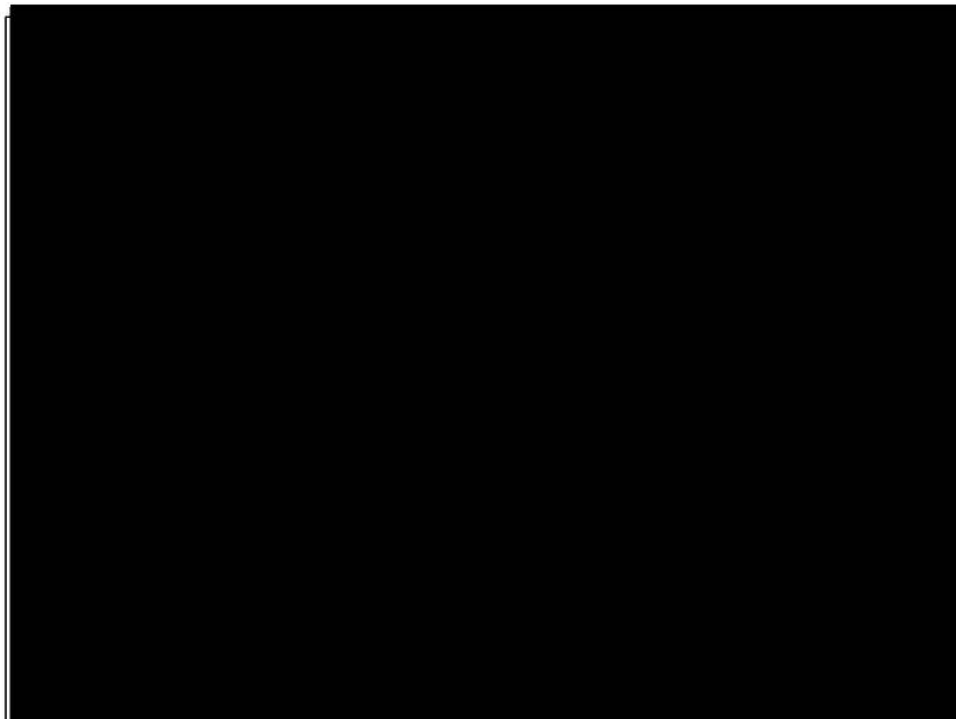
**Q5.** Of the patients suffering from Neovascular AMD (Wet AMD) that you have treated with **unlicensed Bevacizumab/Avastin** in the last 3 months, what percentage fell in each of the following categories the last time you saw them?

**Q6.** Of the patients suffering from Neovascular AMD (Wet AMD) that you have treated with **Aflibercept/Eylea** in the last 3 months, what percentage fell in each of the following categories the last time you saw them?

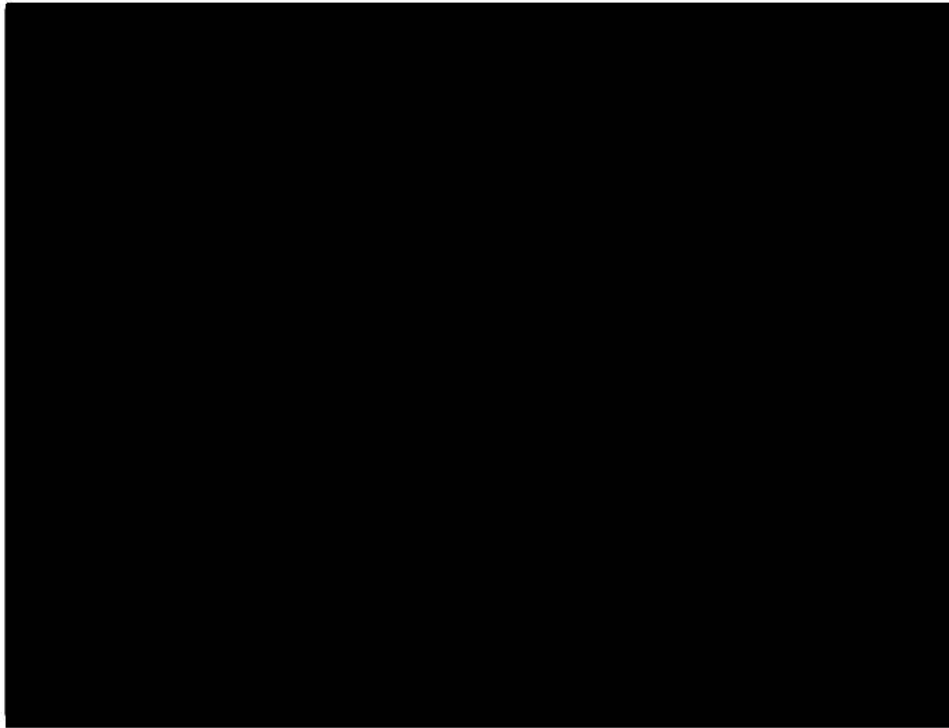




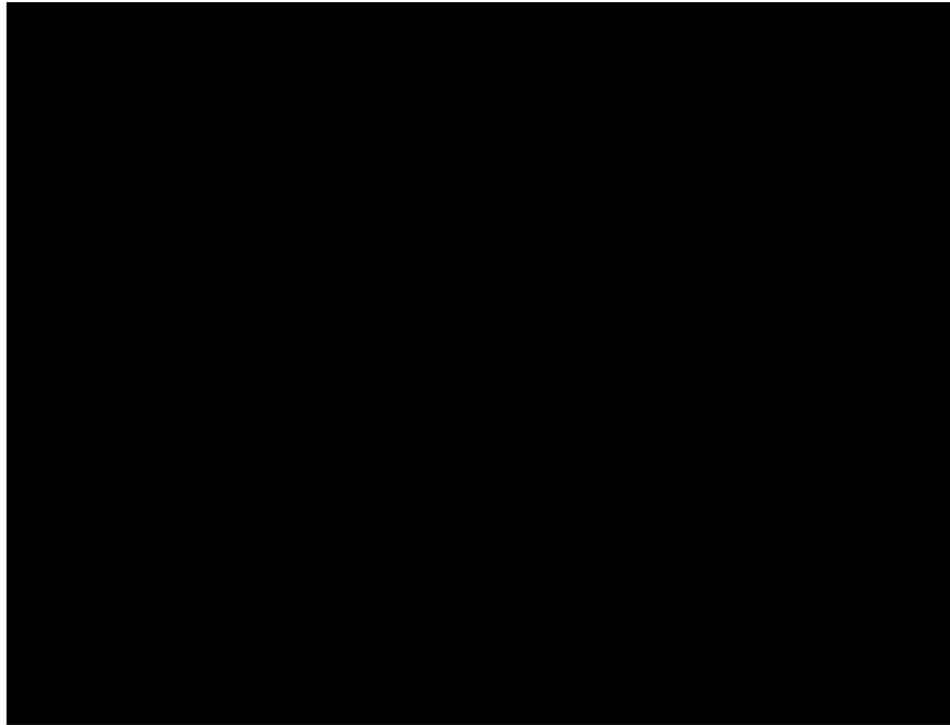
**Q26.** We would now like to present you with a series of statements, can you please indicate your **level of agreement** with each of them, using a scale from 1 to 7, where 1 = 'Strongly Disagree' and 7 = 'Strongly Agree'? *Single code per row.*



Q24. To what extent do you believe there is a need for a new therapy to treat Neovascular AMD (Wet AMD)? Please use a scale of 1 to 7 where 1 means “no need” and 7 means “major need”.



Q36. And how you would describe your knowledge of these products?



Q36. And how you would describe your knowledge of these products?

EXECUTIVE SUMMARY

## Conclusions & Implications

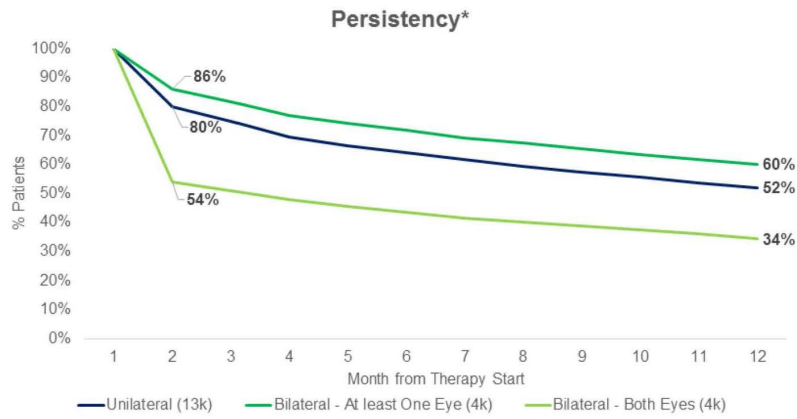




## **Amit's Appendix**



## Bilateral patients, getting treated in at least one eye, exhibit highest persistency

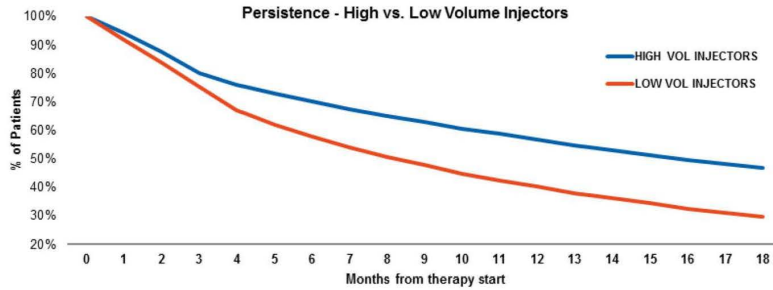


Time period of data: Jan'14 to Jul'17, Data Source: IQVIA claims data  
\*Persistency – patients who start their treatment on Eylea and continue on any anti VEGF treatment thereafter with gap period <=12 months between successive treatments

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## Patients treated by high decile writers are more persistent in their treatment



High/Low Vol. Injectors	% Writers (n=3.7k)	% Patients (n=79k)	Persistence at Year 1
High Volume Injectors	12%	57%	57%
Low Volume Injectors	88%	43%	40%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>52%</b>

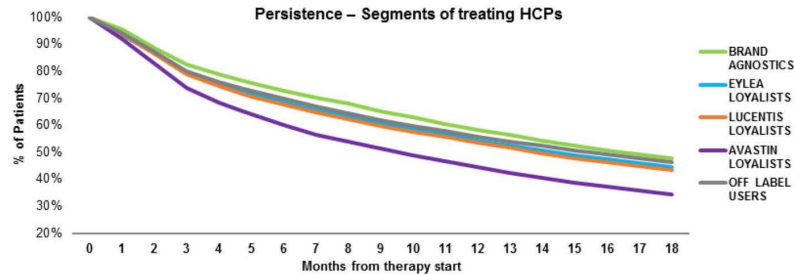
High writers – Decile 5 to 10  
 Low writers – Decile 1 to 4  
 Data Source: IQVIA Claims (Jan '13 to Jul '17)

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## Patients treated by Avastin loyalists have the lowest persistence



Writer Segments	% Writers (n=2k)	% Patients (n=72k)	Persistence at Year 1
High Comm. Brand Agnostics	6%	6%	58%
Eylea Loyalists	19%	19%	54%
Lucentis Loyalists	20%	21%	54%
Avastin Loyalists	25%	22%	44%
Off Label Users	30%	33%	56%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>53%</b>

Data Source: IQVIA Claims (Jan '13 to Jul '17) (2014 Cohort)

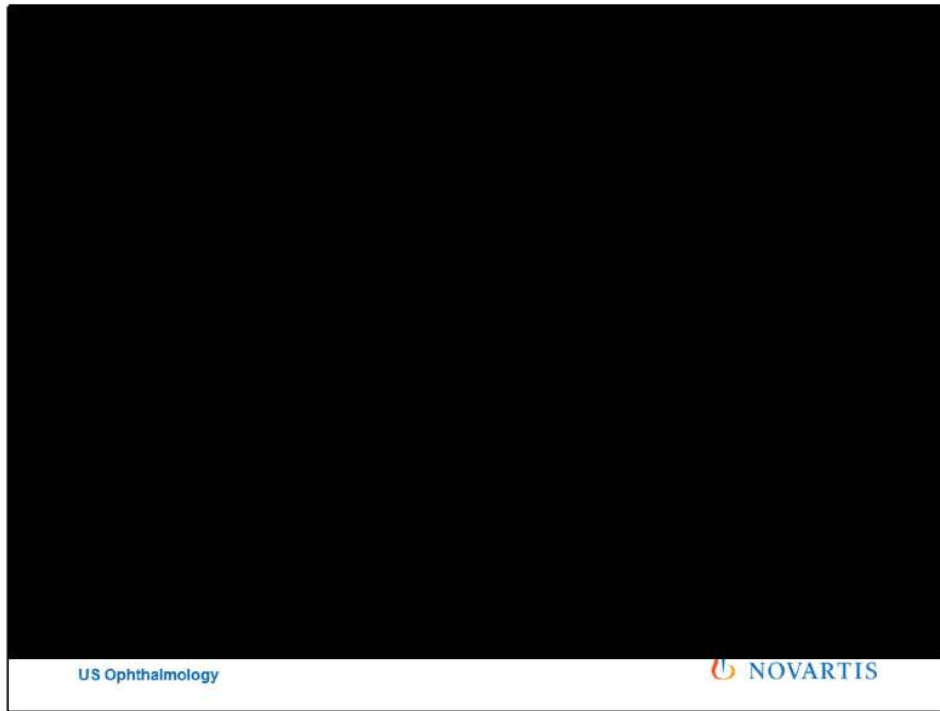
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New patients with 2 or more anti VEGF injections were included in this analysis  
 Note: 12 month look forward period was considered for patient persistency  
 Data Source: IQVIA Claims (Jan '13 to Jul '17) (2014 Cohort)

**Thank you**





No Visit = LTFU, Continued Visit = stop therapy and Continued Treatment = restart



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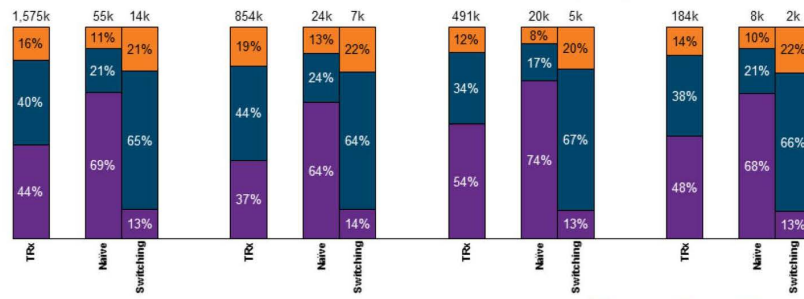
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## Medicare FFS channel yields the best branded performance

- Avastin is currently the first line treatment of choice across all payment channels; Eylea is the branded leader among switching patients
- Among new-to-brand patients, almost two thirds are naive patients, indicating lack of switching behavior in the wet-AMD space
- Branded naive share is highest in the Medicare FFS channel, presenting the greatest opportunity for RTH258

### Wet-AMD TPx and NBPx Share by Channel and Line of Therapy (July 2017 – June 2018)



Source: IQVIA LAAD dataset July 2017 – June 2018; U.S. Market Access Strategy Consulting  
 TPx (total procedure) volume is calculated on the eye level; Products include Avastin, Lucentis and Eylea

Lucentis Eylea Avastin

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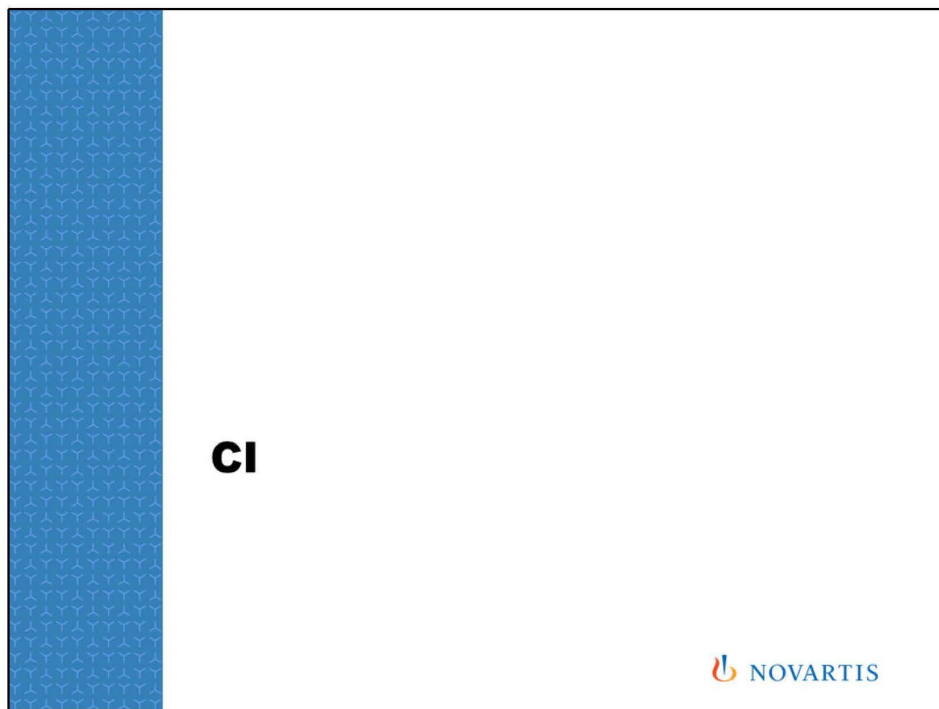
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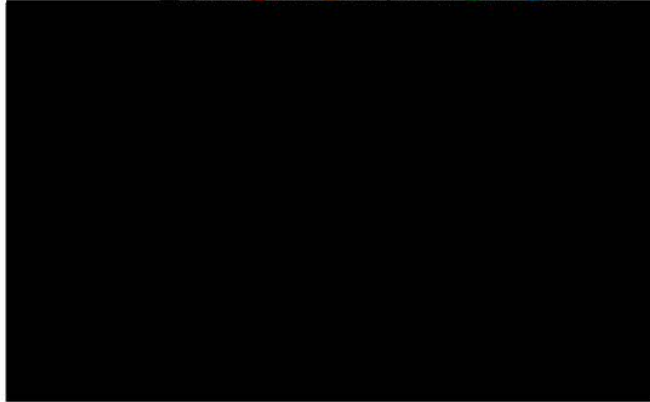
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## Retina Landscape Estimated Approval Timeline

Key Competitors    Anti-VEGFs    PDGFs (single/combination)    Steroids    Experimental MOAs



Last Update: Feb19

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