LEAVITT PARTNERS

CareJourney

ACOS AND AGE-RELATED MACULAR DEGENERATION (AMD):

PRACTICE PATTERNS IMPACT SAVINGS

David Muhlestein, Aneesh Chopra, Chris Lester, Katherine Kitterman

LEAVITT PARTNERS

INTRODUCTION

Accountable care organizations (ACOs) attempt to lower the cost of health care for a defined population while improving the quality of care that population receives. Reducing the total cost of care requires ACOs to implement both payment reform and delivery reform—changing payment models to align incentives for high-value care and shifting treatment to use resources more effectively.

In recent years, only approximately one third of ACOs qualified for bonus payments, while in the past year more ACOs have dropped out of the Medicare Shared Savings Program (MSSP) than have newly joined.[1, 2] ACOs often struggle to find effective ways to reduce health care costs without potentially impacting their beneficiaries' quality of care. Many payment and delivery reforms can take years to yield savings, so ACOs need to find manageable, targeted interventions that can contribute to savings in the shorter term as they progress along the path toward value-based care.

One such opportunity for ACOs lies in switching patients to similarly effective but less-expensive medications for particular conditions. Our analysis of Medicare claims data from 2014 to 2016 indicates that switching to the least expensive drug for one cohort of patients can make a meaningful impact on total ACO cost performance. We found that switching certain patients to the least expensive drug approved to treat age-related macular degeneration (AMD) would have yielded significant savings for ACOs, including 62 times over the three-year period that ACOs would have qualified for a bonus payment but didn't. In 2016, a quarter of ACOs that saved money for Medicare but did not qualify for a bonus payment would have qualified for a bonus payment if they had used the lower-cost drug. Small adjustments such as these could present large opportunities for ACOs to achieve savings without sacrificing quality of care.

BACKGROUND

In the MSSP, ACO savings are calculated against an established benchmark, where bonuses are paid based on having a total population cost below that benchmark.[3] However, there is a minimum savings rate (MSR) that must be met before any bonus payments are paid. The minimum savings rate varies based on the size of the covered population, with larger populations having lower MSRs. In 2018, 159 of 548 participating ACOs saved money relative to their benchmark, but did not meet the MSR to qualify for a bonus payment.[1]

Significant work is being done to help ACOs identify what they need to do to realize savings, in terms of which changes or interventions they should implement in care delivery and administration. One important part of this work consists of identifying the types of patients for which there is an opportunity to lower the total cost of care. One potential population with such an opportunity is that of patients suffering from age-related macular degeneration (AMD).

AMD is a common disease affecting the elderly population in Medicare. Approximately 1.5 percent of the U.S. population over 40 had some form of AMD in 2000, and the prevalence greatly increases with age. More than 15 percent of white women over 80 years of age have AMD. The National Eye Institute estimated that by 2020, almost 3 million Americans will suffer from some form of AMD.[4]

During the time of our study, there were three different drugs on the market to treat AMD: Lucentis, Eylea, and Avastin. Lucentis and Eylea were developed specifically for neovascular AMD, while Avastin is an FDA-approved cancer drug that is often used off-label to treat several eye conditions. Avastin is much less expensive than Eylea ($50 per dose versus $2,000 per dose), but an NIH-funded clinical trial showed that it was equally effective in treating central retinal vein occlusion.[5, 6] However, due to factors such as its compounded nature, Avastin is not always available and may not be the right choice for every patient.

METHODS

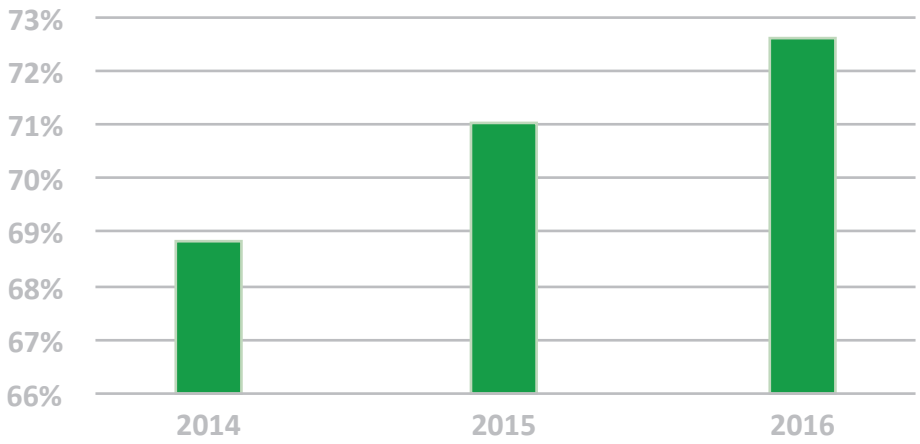
We analyzed Medicare claims data from 2014 to 2016 to determine the impact of using Lucentis or Eylea versus Avastin on overall MSSP ACO performance. We found that in 2016, a quarter of ACOs that saved money for Medicare but did not qualify for a bonus payment would have qualified for a bonus payment if they had used Avastin rather than Lucentis or Eylea to treat patients with AMD.

We used the 100 percent sample of Medicare fee-for service (FFS) via the Centers for Medicare & Medicaid Services (CMS) Virtual Research Data Center (VRDC) data from 2014 to 2016 to assess the utilization of ACOs for Eylea/Lucentis versus Avastin, matched with beneficiary attribution to ACOs. Using this data, we estimated the total percent of AMD claims that used high-cost drugs (Eylea or Lucentis), and the cost impact of switching the drug to Avastin for those high-cost claims. We matched these estimates with ACO-level data on aggregate performance for each performance period to estimate how this change of treatment would have impacted ACOs' total financial performance.

FINDINGS

Over the three years of analysis, more than two-thirds of AMD claims used the high-cost drugs (either Eylea or Lucentis). Nearly 69 percent of claims for AMD treatment used the high-cost drugs for 2014, with just over 71 percent for 2015. That percentage rose to almost three-quarters of AMD claims (72.6 percent) in 2016.

Figure 1. Percentage of AMD Claims That Were High Cost



The rising percentage of AMD claims that used high-cost drugs in recent years indicates an increasing use of drugs other than Avastin to treat AMD. Despite physicians' knowledge about the lower cost of Avastin, its relative use has decreased over time within Medicare ACOs. This represents a significant lost opportunity for savings.

Figure 2. Range of Proportion of AMD That Was High Cost (2014 – 2016)

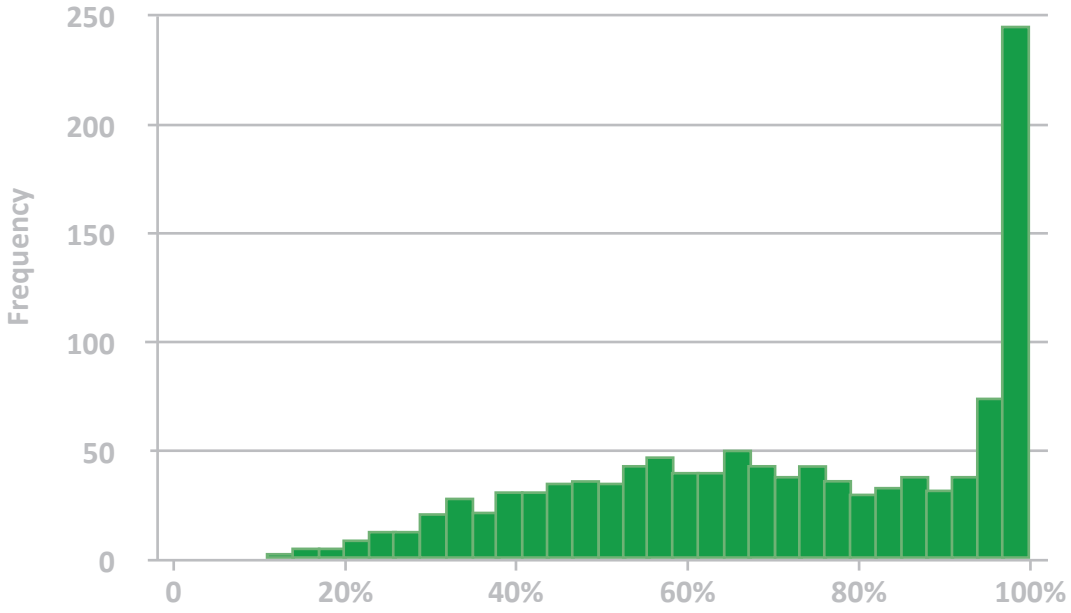
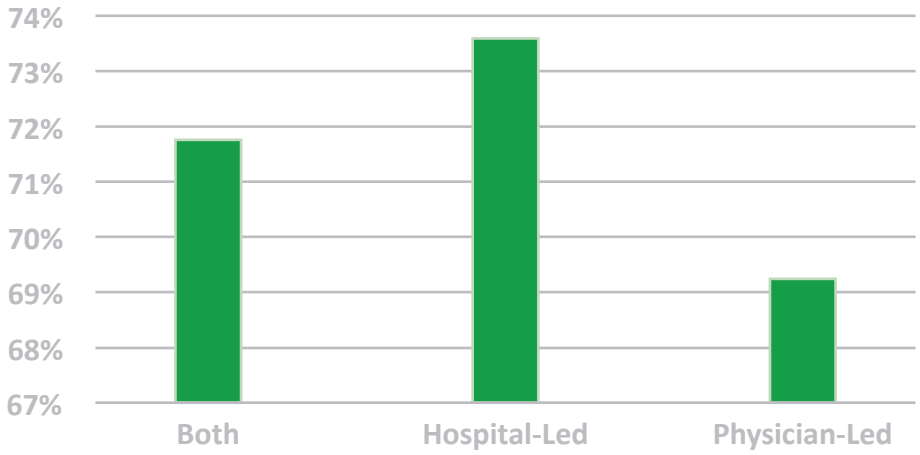


Figure 2 illustrates the ACO-level range of the proportion of its AMD claims each year that were for high-cost drugs. Among ACOs, there was significant variation in how often the more expensive drugs were used to treat AMD in a given year, with a range from 11 to 100 percent of AMD claims and a median of 72.5 percent. Over the three-year period, there were 301 instances in which an ACO used the high-cost drugs for at least 95 percent of AMD treatment in a given year. There were 115 instances in which an ACO used the high-cost drugs for at least 99 percent of AMD treatment in a given year.

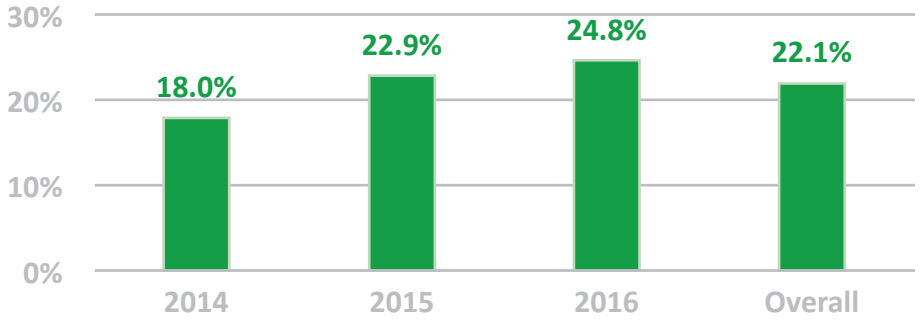
Figure 3. Percentage of AMD Claims That Were High Cost, by ACO Type



As Figure 3 indicates, physician-led ACOs were less likely to use the high-cost drugs than ACOs led by a hospital. Just over 69 percent of AMD claims from physician-led ACOs used high-cost drugs, while 73.6 percent of claims from hospital-led ACOs did so (Chi-squared, p=.0471). Still, both physician-led and hospital-led ACOs were much more likely to use high-cost drugs rather than Avastin to treat AMD, with nearly 72 percent of overall claims using the high-cost drugs. Fewer than one third of AMD claims overall used the lower-cost alternative of Avastin, potentially missing out on substantial savings.

There is also a significant potential impact on ACOs' potential to achieve a bonus if they had switched to Avastin to treat all AMD patients. Figure 4 indicates that approximately one quarter of ACOs that saved relative to their benchmark but did not qualify for a bonus payment in 2016 would have received the bonus if they had just switched the drug used to treat this small population of patients. This was true of 16 ACOs in 2014, 19 ACOs in 2015, and 27 ACOs in 2016.

Figure 4. Percentage of ACOs That Saved Money and Would Have Received Bonus by Switching to Avastin



However, integrated ACOs are much more likely to see savings from this approach than are strictly hospital-led or physician-led ACOs. Our analysis indicates that 31.2 percent of integrated ACOs that saved money but missed out on a bonus would have received the bonus if they had switched to Avastin to treat all AMD patients. That switch would have allowed 19.1 percent of hospital-led ACOs and 17.0 percent of physician-led ACOs to receive bonuses (Chi-squared, p=0.03).

Figure 5. Percent of ACOs That Saved Money and Would Have Received Bonus by Switching to Avastin

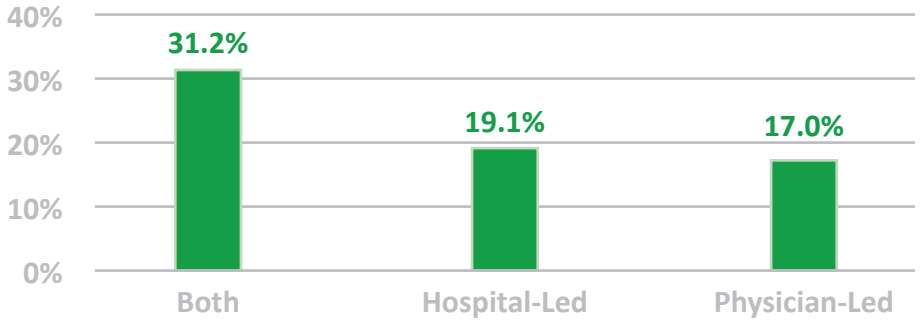
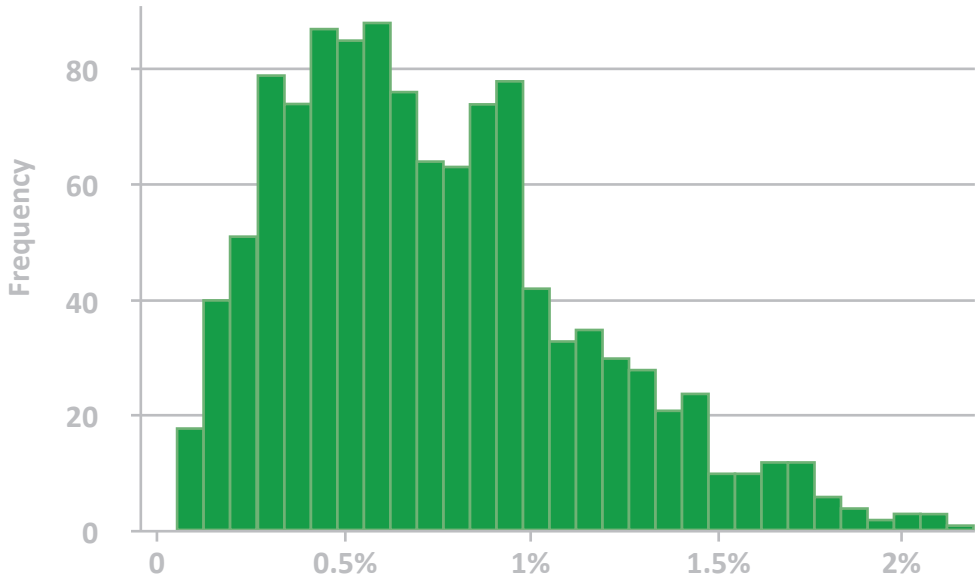


Figure 6 demonstrates the range of potential savings at the individual ACO level from switching to Avastin for all AMD patients. This switch would yield a median savings increase of 0.67 percent, ranging from a negligible impact to over a 2 percent increase in total savings.

Figure 6. Range of Potential Savings (2014 – 2016)

Percent Savings

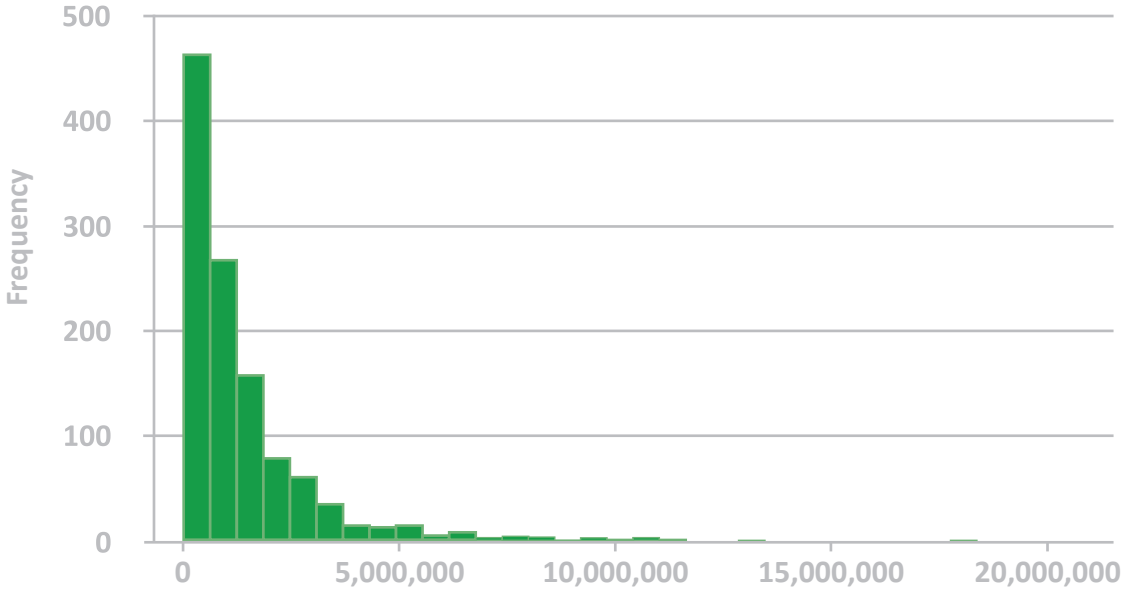


Modeled savings as a proportion of total benchmark

In terms of dollars, as shown in Figure 7, the savings individual ACOs stood to gain from switching to Avastin during these years ranged from $20,000 to $18.4 million, with a median savings of $816,000 in a given year. In absolute terms, there is significant potential monetary savings for ACOs from making a relatively simple change.

Figure 7. Range of Potential Savings (2014 – 2016)

Total Savings

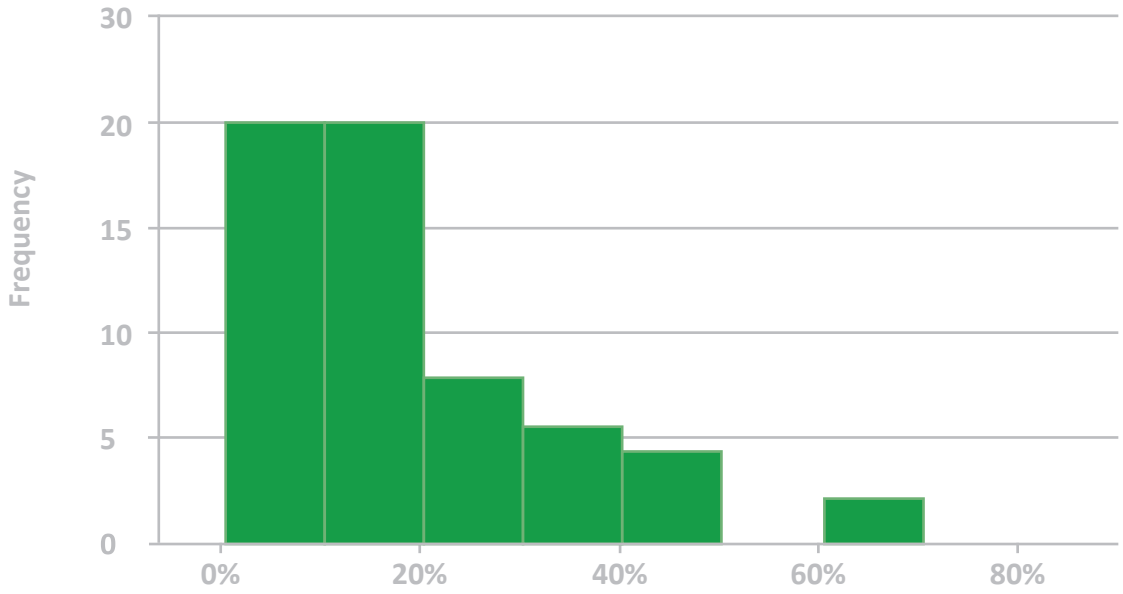


Savings from a 100% switch from Lucentis/Eylea to Avastin.

Figure 8 illustrates the range across ACOs of the proportion of high-cost AMD claims each ACO would need to switch to the lower-cost treatment in order to see savings. From 2014 to 2016, 55 different ACOs could have seen bonus payments—seven of those for two different years—by simply switching to a lower-cost drug for AMD treatment.

For the ACOs that would have received a bonus payment if they had used Avastin, (those 62 different times), each ACO would have needed to move a median of 15 percent of its non-Avastin patients to Avastin (ranging from 0.4 percent to 71 percent) in order to receive a bonus payment. That means that modest changes for a small population of patients can have significant impacts on the total cost of care. In one year, one ACO missed qualifying for savings by less than $9,000. The ACO would have received a $900,000 bonus if only 6 of their 239 AMD patients had been switched to Avastin.

Figure 8. Range of Proportion of High Cost AMD Needed to Switch to See Savings



According to our estimates, the total savings for the Medicare MSSP program would have been $680 million in 2016 if all non-Avastin use had been switched to Avastin for treating AMD.

DISCUSSION

Although not every patient should switch to Avastin for AMD treatment, it is likely that many patients could be effectively treated at a much lower cost. For ACOs, the net savings this switch generates could mean the difference between missing out on shared savings or qualifying for them in any given year. This change in care delivery would not be difficult for ACOs to implement because it could be accomplished by working with relatively few physicians, so it represents low-hanging fruit for ACOs' efforts to achieve cost savings while maintaining high-quality patient care. While this analysis focuses on the impact of a switch to Avastin on ACOs' financial performance, the switch could impact the whole Medicare program in a substantive way.

Of course, not every patient can or should switch to Avastin for treating their AMD. Avastin is compounded for injection into the eye, which introduces additional risk for patients. Additionally, regulations surrounding compounding in the U.S. health care system can make Avastin less available or less desirable than other drugs in some places, where providers have to order it on a patient-specific basis. This regulation can also raise the price providers pay for the drug to the point that it exceeds the payment they receive for it from Medicare.

Still, several methods remain open to policymakers to incentivize a more efficient and effective use of resources in AMD treatment. If Avastin could be produced for use in the eye in the first place, the safety and regulatory issues raised by

compounding would be largely mitigated. Also, slightly increasing the Medicare reimbursement price for Avastin could result in large cost savings to the system if it made a few additional physicians and patients more likely to switch to this drug. As ACOs continue to search for targeted interventions for cost savings, and as policymakers continue to design incentives for effective and efficient care, the opportunity presented by Avastin merits further exploration.

POLICY IMPLICATIONS

Policymakers and health care leaders could encourage Avastin use for applicable patients in several ways. First, policymakers could make claims-based reporting of the use of Avastin vs. other drugs available through Medicare. Second, they could require physicians to proactively tell patients the difference in drug costs when discussing treatment options, as well as the impact of each applicable drug on their out-of-pocket costs. This increased price transparency could help both patients and providers weigh their options and incentivize them to use health care resources more efficiently and effectively in the pursuit of better health outcomes.

REFERENCES

1. Medicare ACO Results for 2018: More Downside Risk Adoption, More Savings, and All ACO Types Now Averaging Savings | Health Affairs [Internet]. [cited 2020 Mar 16]. Available from: https://www.healthaffairs.org/do/10.1377/hblog20191024.65681/full/
2. Spread of ACOs And Value-Based Payment Models In 2019: Gauging the Impact of Pathways to Success | Health Affairs [Internet]. [cited 2020 Mar 16]. Available from: https://www.healthaffairs.org/do/10.1377/hblog20191020.962600/full/
3. Savings Reported By CMS Do Not Measure True ACO Savings | Health Affairs [Internet]. [cited 2020 Mar 16]. Available from: https://www.healthaffairs.org/do/10.1377/hblog20170619.060649/full/
4. Eye Health Data and Statistics | National Eye Institute [Internet]. [cited 2020 Mar 16]. Available from: https://www.nei.nih.gov/learn-about-eye-health/resources-for-health-educators/eye-health-data-and-statistics
5. Publishing HH. By the way, doctor: Is Avastin for macular degeneration a good choice? [Internet]. Harvard Health. [cited 2020 Mar 16]. Available from: https://www.health.harvard.edu/newsletter_article/is-avastin-for-macular-degeneration-a-good-choice
6. Avastin as effective as Eylea for treating central retinal vein occlusion [Internet]. National Institutes of Health (NIH). 2017 [cited 2020 Mar 16]. Available from: https://www.nih.gov/news-events/news-releases/avastin-effective-eylea-treating-central-retinal-vein-occlusion