

## Commentary

### CATT Trial Results Can Support Use of Lucentis or Avastin



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#### How will CATT results influence your choice of anti-VEGF agent?

Interestingly, users of either Avastin or Lucentis can interpret portions of this trial to support the continuation of what they are currently using. There is no question that the visual acuity outcome is equivalent between the 2 drugs at 1 year.

For those of us who were out on a limb in the early Avastin era, it is encouraging to find there is no significant difference in the rate of death, myocardial infarction, or stroke between patients receiving either drug—although this study is not designed to find differences in uncommon events.

Avastin users are empowered as their drug achieves the same visual results at a fraction of the cost of Lucentis. On the other hand, Lucentis users will point out that Lucentis clearly had a superior drying effect seen at the first month and throughout the trial—20 microns thinner at month 1 and 32 microns thinner at 1 year.

Although the Avastin PRN and Lucentis PRN groups were statistically equivalent, the Avastin PRN group received more injections (7.7 vs. 6.9 for Lucentis PRN), and unlike the Lucentis PRN group, it still did not achieve the noninferiority grade compared to monthly dosing of either agent. This may be splitting hairs, but it could be interpreted as another example of the anatomic superiority of Lucentis, which although not visually significant at year 1, will be interesting to follow into the second year.

Finally, there was the surprise finding of an increased incidence of serious adverse events in the Avastin vs. Lucentis groups. Most of the events required hospitalization, but they were distributed across many organ systems not typically felt to be related to anti-VEGF drugs—for instance, they are not typical side-effects of systemic

Avastin used to treat cancer. Hence, it is difficult to interpret the events' significance, but follow-up into the second year and attention to the side-effect profile in similar comparative studies under way in Europe will be important.

**“There is no question that the visual acuity outcome is equivalent between the 2 drugs at 1 year ... The elephant in the room is the cost difference.”**

Theoretically, Lucentis has an advantage due to its shorter systemic half-life, but it will require larger studies to evaluate, and at present this advantage is theoretical and yet to be proven. So the Lucentis user can point to the anatomic superiority and uncertain safety difference as justification to continue using Lucentis.

The elephant in the room is the cost difference. What is the value of Lucentis' perceived advantages over the low-cost, effective alternative?

In my practice where I use both agents, I expect to have much longer discussions with patients in the coming months over which drug to use. But it is great to have a wealth of information with which to better make this decision.

#### How will CATT results affect your dosing regimen?

I was a bit surprised how well the PRN arms did relative to monthly dosing. Given the number of patients who were not completely dry on OCT reading center evaluation, I think this result would have been even better with SD OCTs and careful evaluation for fluid.

I am a bit worried that the small, but statistically significant growth in lesion size in the PRN patients could affect vision in future years. There is a hint of the PRN visual acuity curves beginning to diverge from the

monthly groups after 36 weeks. Personally, I will continue to use a treat-and-extend protocol, which I view as intermediate between the PRN and monthly groups.

**Do you think the results of CATT will ultimately change reimbursement, cost, or availability of either drug?**

Given the visual acuity equivalence, I expect there to be a stronger push to use Avastin within HMOs and even many PPOs. However, I doubt there will be a national Medicare change.

**“Personally, I will continue to use a treat-and-extend protocol, which I view as intermediate between the PRN and monthly groups.”**

**Any other insights or comments about the trial?**

I congratulate Dan Martin and his team who worked tirelessly to make this trial possible. This includes help from the ASRS and AAO as well, who were involved in the political battle to allow this trial to take place. ■

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