

## Appendix 1

### Additional Methodological Detail

#### Health States:

These levels of BCVA were  $\geq 20/25$ ,  $20/32$ - $20/40$ ,  $20/50$ - $20/63$ ,  $20/80$ - $20/100$ ,  $20/125$ - $20/160$ , and blindness which was defined as  $\leq 20/200$  as measured using the standard ETDRS vision chart (**Figure 1** in the manuscript). In the analysis, we incorporated the baseline distribution of levels of BCVA due to CSDME as captured in a recent DRCRnet randomized controlled trial comparing these four interventions.<sup>26,27</sup> The proportion of patients in each group at baseline from this trial were 0%, 38%, 33%, 17%, 8%, and 4%, respectively.

#### *Costs of visits and diagnostic testing*

All patients incurred the cost of an initial office visit, OCT, and IVFA. Persons in the L and the L+T groups had four follow-up visits and annual OCT tests for the first 2 years. Those in the L+R and the DL+R groups had 12 office visits and annual OCT in the first 2 years. After year 2, each group underwent 3.5 examinations and OCT tests annually. Those who experienced CVA, AMI, or died had no more eye visits or diagnostic testing performed.

#### *Intervention Costs*

Whenever patients underwent FALP, they accrued the physician and facility fee costs for photocoagulation along with costs for an OCT and IVFA. The number of FALP procedures performed on each group was obtained from DRCRnet trial data.<sup>26,27</sup> The L, L+R, DL+R, and L+T groups received 2.6, 2.2, 0.43, and 2.3 FALPs, respectively. Each time a patient received an intravitreal injection of ranibizumab, bevacizumab, or corticosteroids, she accrued the physician and facility fee costs for an intravitreal injection of the medication, along with the costs of antibiotics and an OCT. The number of triamcinolone and ranibizumab injections per year

were obtained from DRCRnet trial data.<sup>26,27</sup> The L+R, DL+R, and L+T groups underwent 8, 9, and 3 injections, respectively. Because of ongoing debates about the lower cost and similar effectiveness of bevacizumab for treatment of CSDME, in sensitivity analysis, we replaced the costs for ranibizumab with those of bevacizumab assuming similar numbers of injections.

#### *Costs of managing side effects*

The proportion of patients who experienced side effects associated with each of the four interventions was obtained from DRCRnet trial data.<sup>26,27</sup> The costs of cataract surgery, glaucoma surgery, retinal detachment repair, management of endophthalmitis and vitreous hemorrhage were obtained from the 2011 Average Medicare Fee Schedule for services.<sup>29</sup> For those who developed glaucoma as a side effect but did not require surgery, they were treated with generic timolol (average wholesale price \$39.99 per bottle x 12 bottles per year).<sup>30</sup>

#### *Cost of Low Vision and Blindness from CSDME*

To capture the costs associated with need for low vision aids and blindness, we relied upon findings of a study by Frick and colleagues who captured the increase in total health expenditures associated with blindness was \$2157.<sup>32</sup> Although there are additional costs of low vision such as lost productivity, we did not incorporate indirect costs into the Markov model because they are variable and difficult to measure.