

The Value and Cost-effectiveness of Interventions for Subfoveal, Neovascular, Age-related Macular Degeneration (ARMD)

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PURPOSE

To assess the value of interventions utilized for the treatment of subfoveal, neovascular, age-related macular degeneration (ARMD) employing evidencebased data from clinical trials integrated with value-based medicine utility data and cost-utility (costeffectiveness) analysis principles.

METHODS

Value-based medicine analysis: Visual acuity data from clinical trials are converted to value-based form using patient utility analysis values. Value itself is assessed by objectively measuring the improvement an intervention confers in length of life and/or quality of life, typically the latter with ophthalmic interventions. All benefits of the various treatments are incorporated, as are all of the adverse effects associated with each treatment. Outcomes are measured in the percent improvement in quality of life (value) conferred by an intervention, as well as the number of quality-adjusted life-years gained. Costs at the time of the meeting will be integrated with the confer

RESULTS

For classic, subfoveal, neovascular ARMD, laser photocoagulation from Macular Photocoagulation Study data confers a 3.1% improvement in patient value. Intravitreal pegaptanib (Macugen) therapy confers a 5.8% improvement in value. Photodynamic therapy with verteporfin (Visudyne) confers an 8.1% value improvement. Photodynamic therapy with intravitreal triamcinolone confers an 11.2% value gain, while intravitreal ranibizumab (Lucentis) injections, as per the ANCHOR Study, confer an 17.7% improvement in patient value. The value conferred by ranibizumab approaches that conferred by cataract surgery in the first eye (value gain of 20.8%). The differences among the value conferred by the difference modalities are significant ($p < .001$). Up-to-date data for the treatment of occult and minimally classic subfoveal ARMD will also be presented in conjunction with cost data.

CONCLUSION

Value-based medicine quantifies the value conferred by all healthcare interventions, including present and future interventions for neovascular ARMD. These values can be directly compared using the same outcomes to allow the clinician to provide the therapy that delivers the greatest value to patients.

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