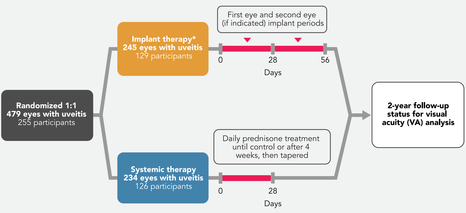
Randomized Comparison of Systemic Anti-inflammatory Therapy Versus Fluocinolone Acetonide Implant for Intermediate, Posterior and Panuveitis: *The Multicenter Uveitis Steroid Treatment Trial*

The Multicenter Uveitis Steroid Treatment (MUST) Trial Research Group, Kempen JH, Altaweel MM, et al. *Ophthalmology. 2011;118(10):1916-1926.* doi:10.1016/j.ophtha.2011.07.027

Uveitis (intraocular inflammation) is an important cause of visual impairment. Intermediate, posterior, and panuveitis are the forms most likely to cause vision loss. Systemic corticosteroids (supplemented by corticosteroid-sparing immunosuppresive drugs when indicated) have been the mainstay of treatment for chronic, vision-threatening cases of uveitis. Relative effectiveness and risks of alternative treatments, such as a surgically-placed intravitreal acetonide implant, require further characterization. This trial compares the relative effectiveness of systemic corticosteroids plus immunosuppression when indicated (systemic therapy) versus fluocinolone acetonide implant (implant therapy) for non-infectious intermediate, posterior or panuveitis (uveitis).

The Multicenter Uveitis Steroid Treatment (MUST) Trial is a randomized, partially masked, 23-center parallel treatment comparative effectiveness superiority trial to evaluate changes from baseline over 24 months.



Treatment-outcome associations were analyzed by assigned treatment for all eyes with uveitis.
*Implant-assigned participants with bilateral uveitis were assigned to have each eye that warranted study treatment implanted.

Primary outcome

Change in best-corrected visual acuity from baseline

Secondary outcome

Patient-reported quality of life (QoL)

Ophthalmologist-graded uveitis activity

Local and systemic complications of uveitis or therapy

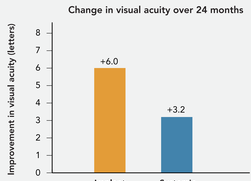
Masked

Reading Center graders and glaucoma specialists assessing ocular complications were masked.

Unmasked

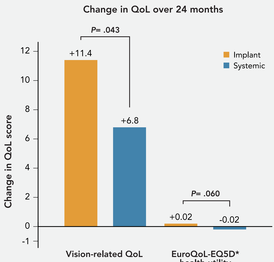
Participants, ophthalmologists, and coordinators were unmasked.

Best-corrected visual acuity improved in both treatment groups over 24 months, with no statistically significant difference between the groups.



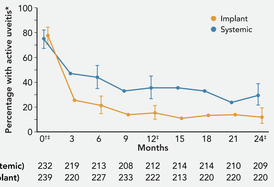
The implant and systemic therapy groups respectively had +6.0 vs. +3.2 letters' improvement in visual acuity (*P*= .16, 95% confidence interval on difference in improvement between groups: −1.2 to +6.7 letters, positive values favoring implant)

At 24 months, implant therapy was associated with small improvements in vision-related and general quality of life compared with systemic therapy.



*EuroQol-5D is a standardized measure of health-related quality of life developed by the EuroQoL group.

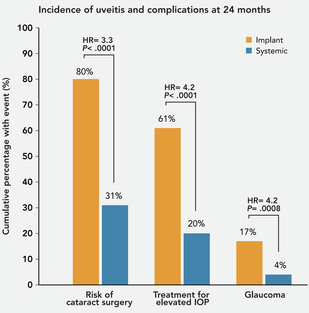
Implant therapy achieves inflammatory control faster and more often than systemic therapy.



# of Eyes (Systemic)	232	219	213	208	212	214	214	210	209
# of Eyes (Implant)	239	220	227	233	222	213	220	220	220

*Calculated from the subset of eyes with uveitis at enrollment
†At enrollment, the difference in the proportion with activity was 2% (*P*= .6197)
‡The bootstrap was used to estimate 95% confidence intervals at enrollment, 6 months, 1 year, and 2 years

Ocular complications were more common in the implant group.



HR = hazard ratio; IOP = intraocular pressure

Patients assigned to **systemic** therapy had more prescription-requiring infections than patients assigned to implant therapy (0.60 vs 0.36/person-year, *P*= .034), without notable long-term consequences.

Systemic adverse outcomes otherwise were unusual in both groups, with minimal di fferences between groups.

Conclusions

In each treatment group, mean visual acuity improved over 24 months, with neither approach superior to a degree detectable with the study's power.