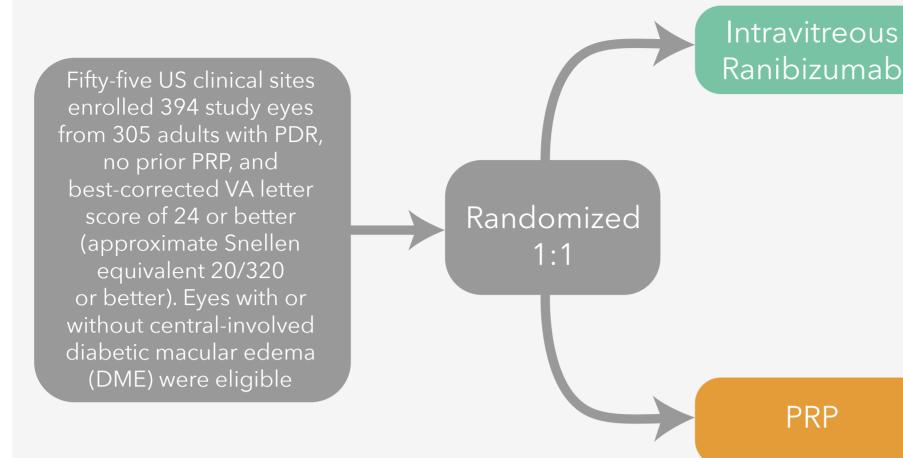
Five-Year Outcomes of Panretinal Photocoagulation vs Intravitreous Ranibizumab for Proliferative Diabetic Retinopathy: A Randomized Clinical Trial

Gross JG, Glassman AR, Liu D, et al. *JAMA Ophthalmol*. 2018;136(10):1138-1148. doi:10.1001/jamaophthalmol.2018.3255

In this paper, the researchers evaluated the efficacy and safety of 0.5-mg intravitreous ranibizumab vs panretinal photocoagulation (PRP) over 5 years for proliferative diabetic retinopathy (PDR).



This was a multicenter randomized clinical trial



Received a baseline injection and monthly injections through week 24. Beginning at 24 weeks, injections continued if neovascularization improved or worsened. If an eye met protocol-specified failure or futility criteria, PRP was permitted. Visits every 4 weeks during year1 and every 4 to 16 weeks thereafter depending on treatment course. The study was amended on January 12, 2015, after all participants were enrolled to allow for assessment visits every 16 weeks in both groups and continued study injections and visits every 4 to 16 weeks through 5 years.

Treated at baseline with either full PRP or PRP completed over several sittings. Additional PRP was performed if the size or amount of neovascularization increased during follow-up.

5 Years

Years

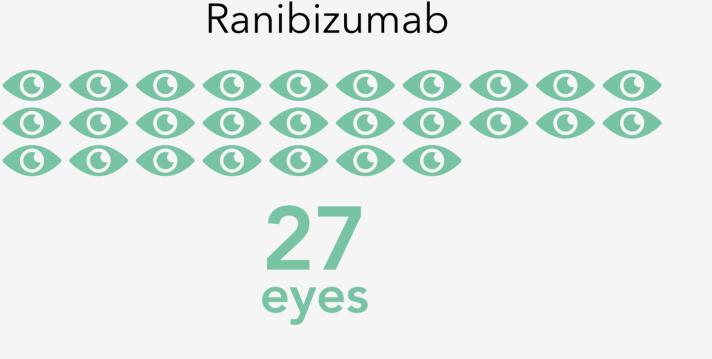
Frequency of ranibizumab was based on a protocol-specified retreatment algorithm. Diabetic macular edema could be managed with ranibizumab in either group.

The 5-year visit was completed by 184 of 277 participants (66% excluding deaths).



The ranibizumab group had lower rates of developing vision-impairing diabetic macular edema

Number of eyes that developed vision-imparing DME



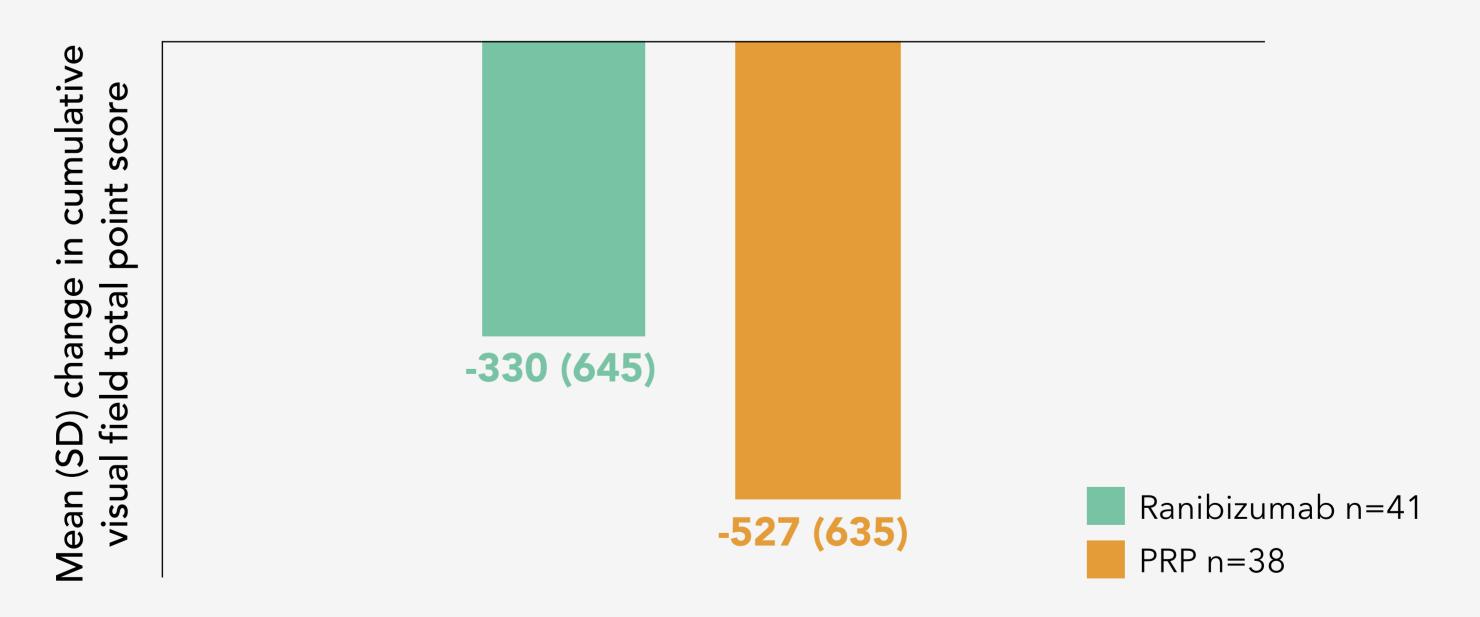


Cumulative probabilities: 22% vs 38%; HR, 0.4 (95%CI, 0.3-0.7). Severe vision loss or serious PDR complications were uncommon with PRP or ranibizumab.



PRP had a larger, statistically significant visual field loss than ranibizumab

Change in cumulative visual field total point score from baseline at 5 Years



Adjusted mean difference, 208dB (95% CI, 9-408); P=.04



Conclusions

Although loss to follow-up was relatively high, visual acuity in most study eyes that completed follow-up was very good at 5 years and was similar in both groups. These findings support either ranibizumab or panretinal photocoagulation as viable treatments for proliferative diabetic retinopathy. Patient-specific factors, including anticipated visit compliance, cost, and frequency of visits, should be considered when choosing a treatment for patients with proliferative diabetic retinopathy.