

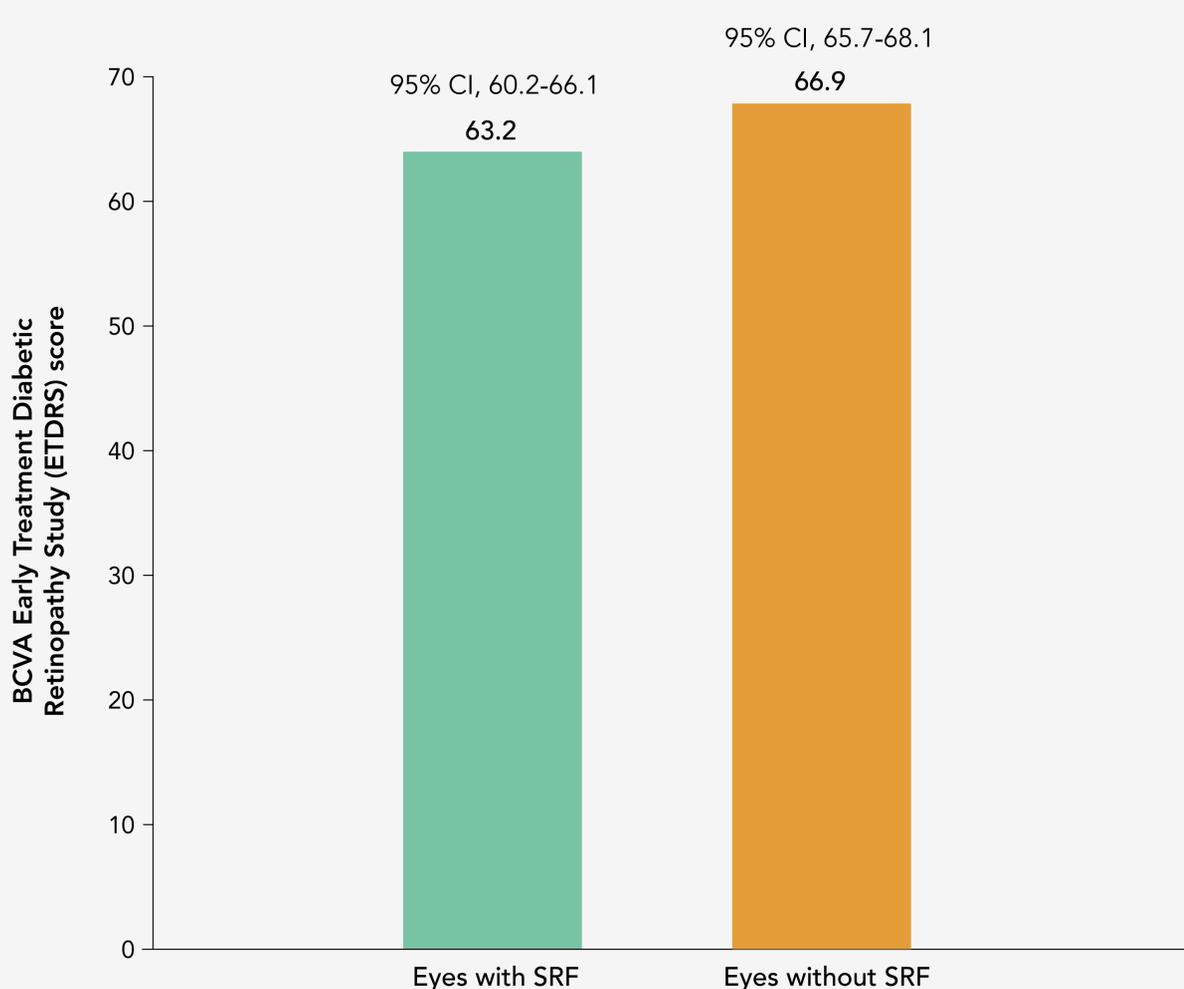
# Quantification of Fluid Resolution and Visual Acuity Gain in Patients With Diabetic Macular Edema Using Deep Learning: A Post Hoc Analysis of a Randomized Clinical Trial

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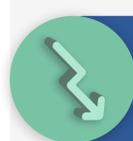
This post hoc analysis of a randomized clinical trial, the Diabetic Retinopathy Clinical Research Network (protocol T), examined the volumetric change of intraretinal fluid (IRF) and subretinal fluid (SRF) in diabetic macular edema (DME) during anti-vascular endothelial growth factor treatment using deep learning algorithms. Anonymized spectral-domain optical coherence tomography (SD-OCT) volume images and clinical information from a selected subset of protocol T participants, assessed every 4 weeks for a period of 1 year, were included in the analysis. Performance of time-domain OCT imaging or baseline low image quality of SD-OCT images were exclusion criteria.



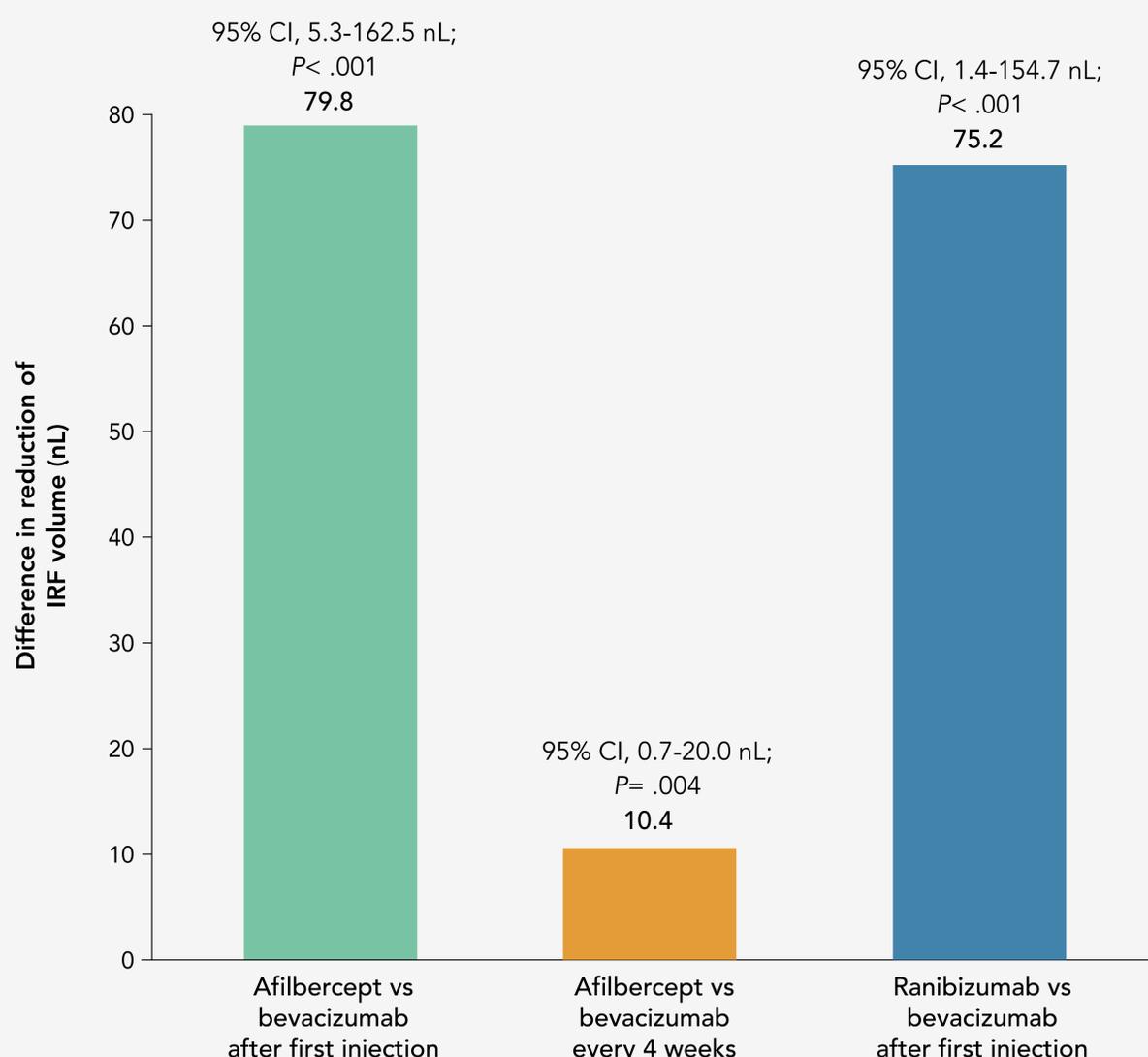
The presence of SRF at baseline was associated with a worse baseline in best-corrected visual acuity (BCVA) ETDRS score and a greater gain in ETDRS score in eyes with SRF vs eyes without SRF.



CI = confidence interval.



Aflibercept was associated with a greater reduction of IRF volume compared with bevacizumab after the first injection and every 4 weeks thereafter.



## Conclusions

In this post hoc analysis of a randomized clinical trial in which intraretinal and subretinal fluid were quantified using a fully automated algorithm, aflibercept and ranibizumab were associated with a greater reduction of intraretinal fluid than bevacizumab. No difference among anti-vascular endothelial growth factor agents was observed regarding reduction of subretinal fluid.