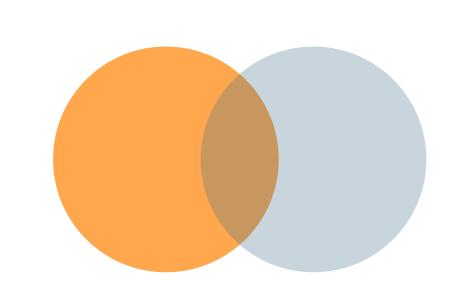
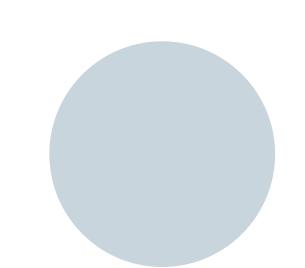


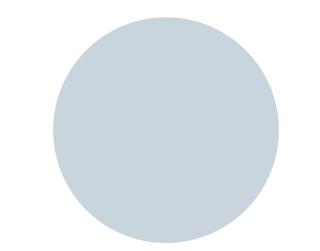
Clinical Trial Emulation of the CATT Using Data from the IRIS® Registry (Intelligent Research In Sight) Using Exact Matching and Inverse Probability Weighting

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Purpose

Neovascular age-related macular degeneration (nAMD) is a progressive and degenerative condition that occurs when abnormal blood vessels cause retinal damage

nAMD is treatable with anti-VEGF which can slow or stop progression.

Bevacizumab and ranibizumab are two common treatment agents.

The Comparison of AMD Treatment Trials (CATT) studied anti-VEGF treatment patterns and outcomes.

To evaluate differences in treatment arms from CATT and two real-world control arms receiving anti-VEGF as needed (prn), two matching methodologies were explored.

Methods

Non-imaging CATT criteria ascertainable from RWD were applied to American Academy of Ophthalmology IRIS® Registry (Intelligent Research in Sight) patients from 1/1/2015 to 12/31/2019.

Treatment-naive eyes injected prn with either bevacizumab or ranibizumab for one year were matched to CATT patients through exact matching (age, sex, baseline visual acuity [VA]) and inverse propensity weighting (IPW).

Baseline characteristics, treatment, and VA outcomes from RWD control cohorts were compared to CATT treatment arms.

Analyses were performed using AWS EMR Studio.

Results

Exact matching had 261 and 281 eligible eyes for ranibizumab and bevacizumab while IPW yielded 427 and 771 eyes for ranibizumab and bevacizumab, respectively.

Compared to CATT cohorts, RWD injection estimates were consistently lower. There were 3.29 fewer ranibizumab injections using both methods and 4.95 and 4.69 fewer bevacizumab injections using IPW and exact matching, respectively, compared to CATT (Fig 1).

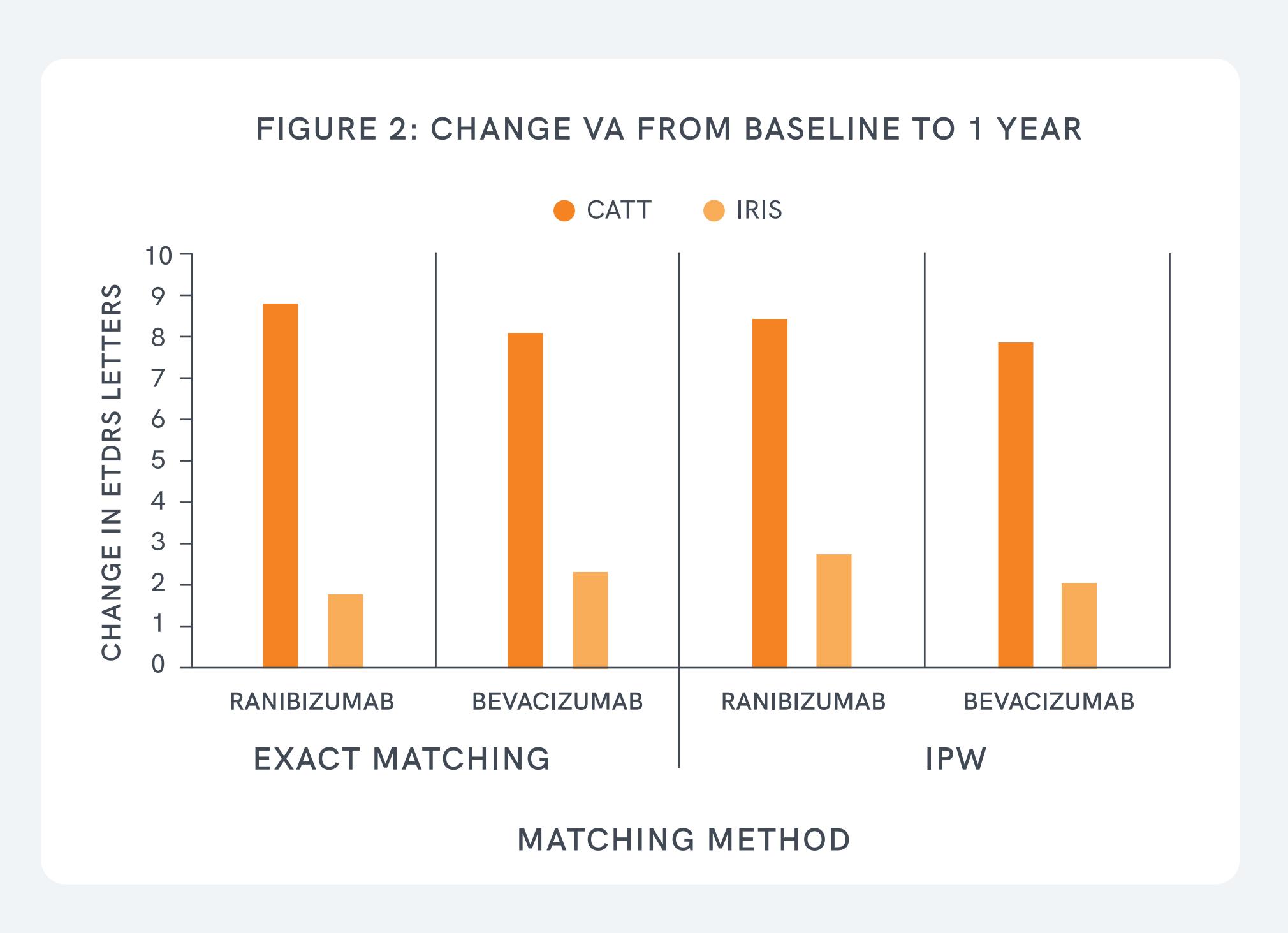
IPW and exact matching also yielded gains in VA in the ranibizumab RWD cohort (5.67 and 6.99 letters, respectively) and the bevacizumab RWD cohort (5.88 and 5.75 letters, respectively) as compared to the trial (Fig 2).

Conclusions

The approach taken to adjust for differences across trial and RWD cohorts may impact findings.

Exact matching and IPW yielded consistent clinical interpretations demonstrating that results were not sensitive to the methodology selected despite changes in the analyzed cohort size thus increasing confidence in the results observed.

FIGURE 1: DIFFERENCE IN INJECTION VOLUMES BETWEEN CATT STUDY AND IRIS RWD COHORTS Ranibizumab Bevacizumab 67:6 67:7 10:00



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