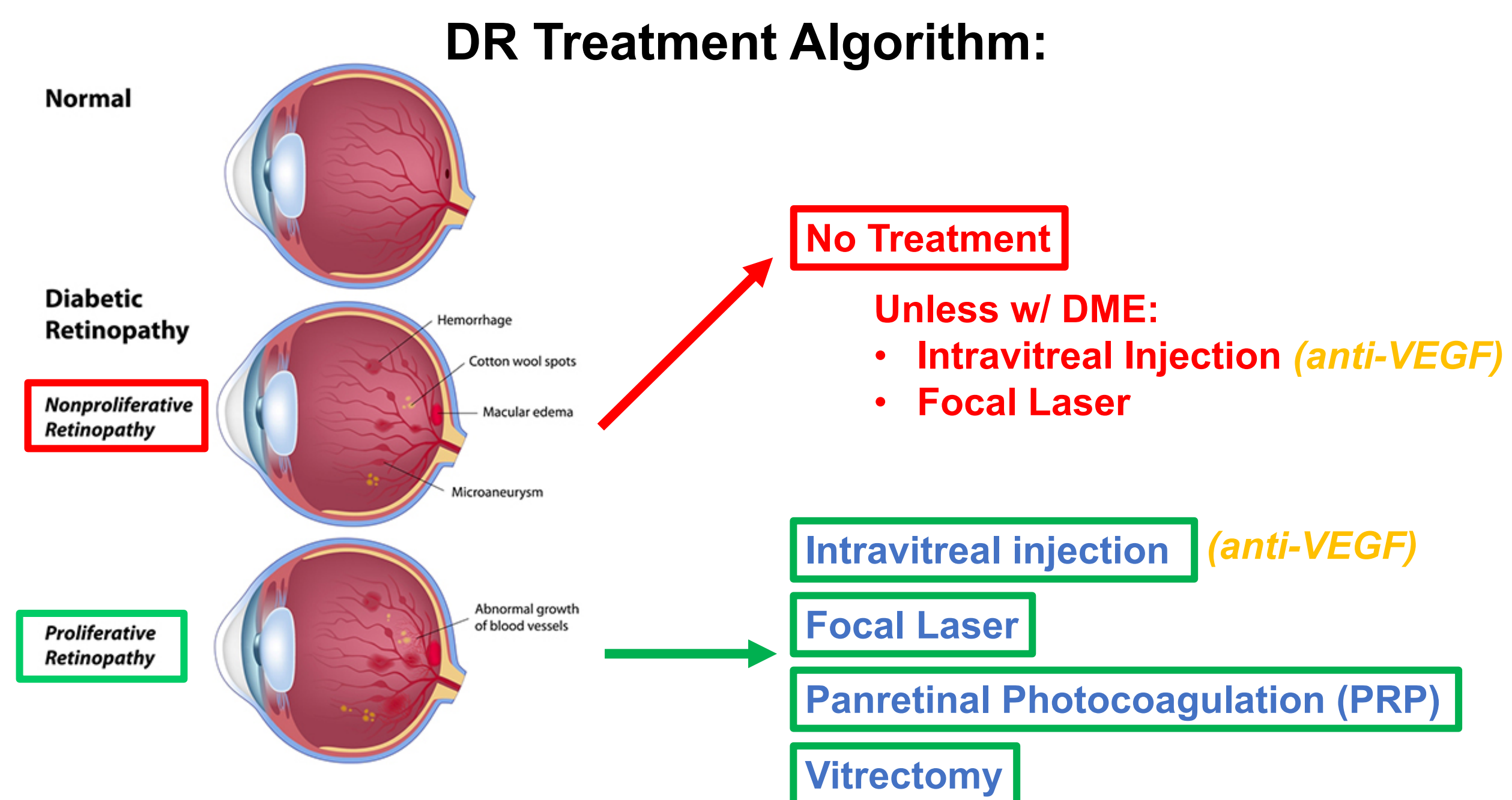


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Background

- Diabetic retinopathy (DR) is among the most common diabetic related complication causing irreversible vision loss that affects 29% of US adults aged ≥ 40 years.
- Within the Medicare population, incidence of DR among Hispanic and African Americans is high.
- Little research shows if disparities exist in the types of treatment they receive.**



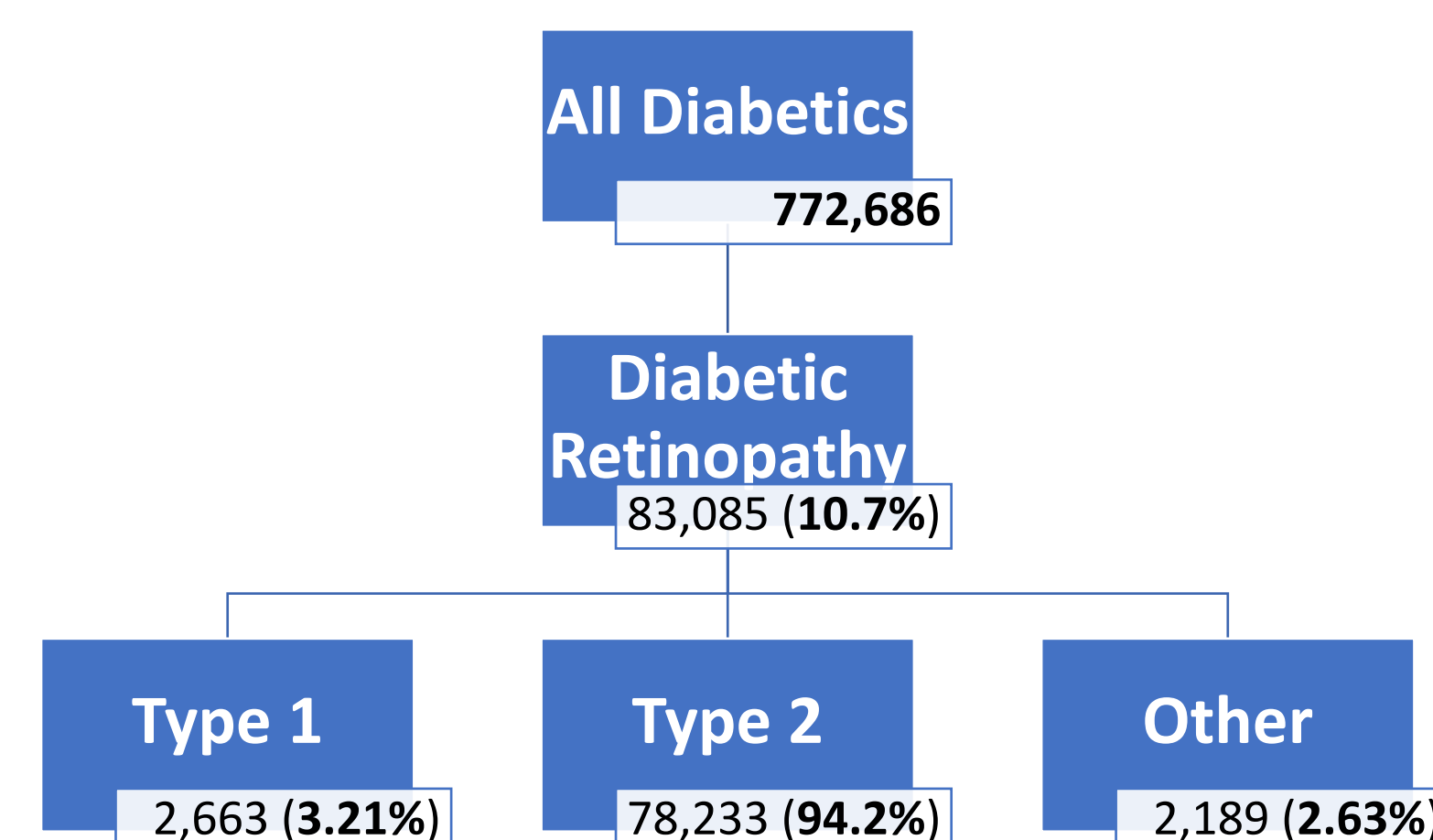
Study Specific Aims:

- To describe the racial/ethnic differences of DR treatment in Medicare DR patients in CA.

Methods & Data Analysis

- Design:** Cross-sectional, retrospective database analysis using Medicare Part-B carriers claims
- Identified all diabetics by ICD-10-CM codes (E08, E09, E10, E11, E13)
- Type 1 and type 2 diabetics with retinopathy (E10.3, E11.3 respectively)
- Inclusion criteria:** those who resided in CA in 2017, age ≥ 65 years, enrolled in Medicare part A & part B, and had at least 1 part B claim in 2017
- Predictor variables:** Patients' race
- Outcome variables:** Current Procedural Terminology (CPT) codes
 - Intravitreal injection (67028)
 - Focal laser (67210)
 - Panretinal photocoagulation (67228)
 - Vitrectomy (67036)
- Confounding variables:** Age and gender
- Multivariable logistic regression models** were used to determine the association between demographics and DR treatment by including all demographic variables and the effect estimates were expressed as odds ratios with 95% confidence intervals.

Results



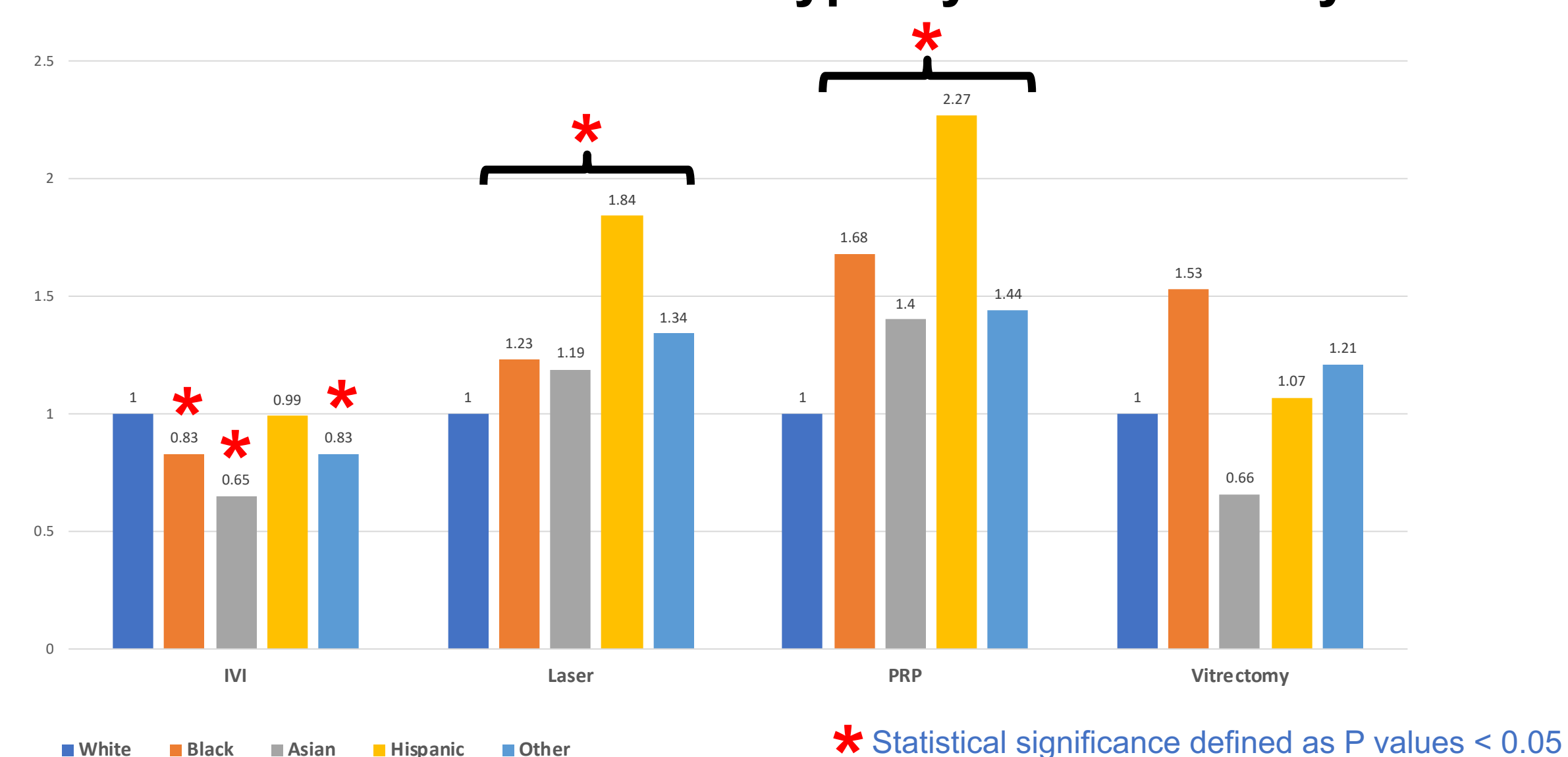
DR demographics: (n=83,085):

	Frequency	n (%)
Age (years)		
65-69	22,266	26.80%
70-74	21,352	25.70%
75-79	17,342	20.90%
80-84	12,037	14.50%
85-89	6,830	8.20%
≥90	3,258	3.92%
Sex		
Male	38,156	45.90%
Female	44,929	54.10%
Race/ethnicity		
White	30,629	36.90%
Black	4,847	5.83%
Asian	15,755	19%
Hispanic	28,424	34.20%
Other	3,430	4.13%

Frequency of DR treatment:

	Frequency	n (%)
Intravitreal Injection:	12,443	15.00%
Bevacizumab (Avastin™)	8,635	10.40%
Aflibercept (Eylea™)	2,382	2.87%
Ranibizumab (Lucentis™)	1,426	1.72%
Focal Laser	2,771	3.34%
PRP	2,818	3.39%
Vitrectomy	197	0.24%

Odds ratio for treatment type by race/ethnicity



Discussion & Conclusion

- Racial disparities may persist in treatment modalities.
- Non-white Medicare beneficiaries receive fewer eye examinations as reported in the literature, but also receive more laser therapy suggesting advanced DR burden.

Questions:

- Does race/ethnicity affect the type of treatment a patient receives? **Yes.**
- Does race/ethnicity confer a higher risk of surgical vitrectomies? **Probably.**

Limitations

- Sample size for surgical vitrectomy were limited in order to obtain statistical significance.
- Cannot discern the combinatorial treatment plan that any individual received in the database.
- Cannot control for demographic comorbidities.

Future Directions

- Analyze additional demographic disparities (**gender, age, SES**) that exist in DR treatment.
- Demographic analysis of *anti-VEGF* agents: **Avastin** (least expensive) vs. **non-Avastin IVI** (most expensive)

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