



# Characterization of Underrepresented Populations in Modern Era Radiation Therapy Clinical Trials

**Emily H. Bero**

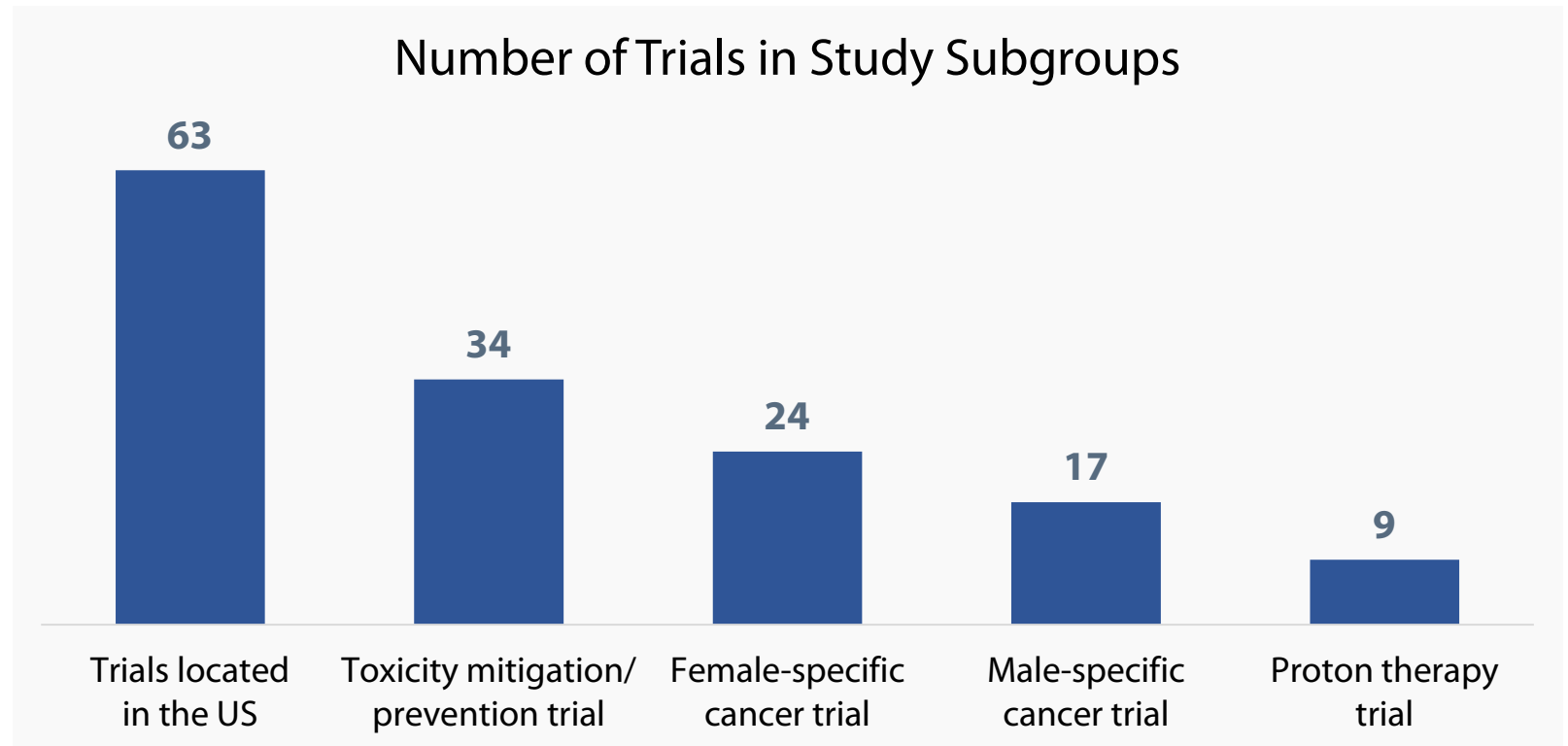
*Medical College of Wisconsin*

# Disclosure

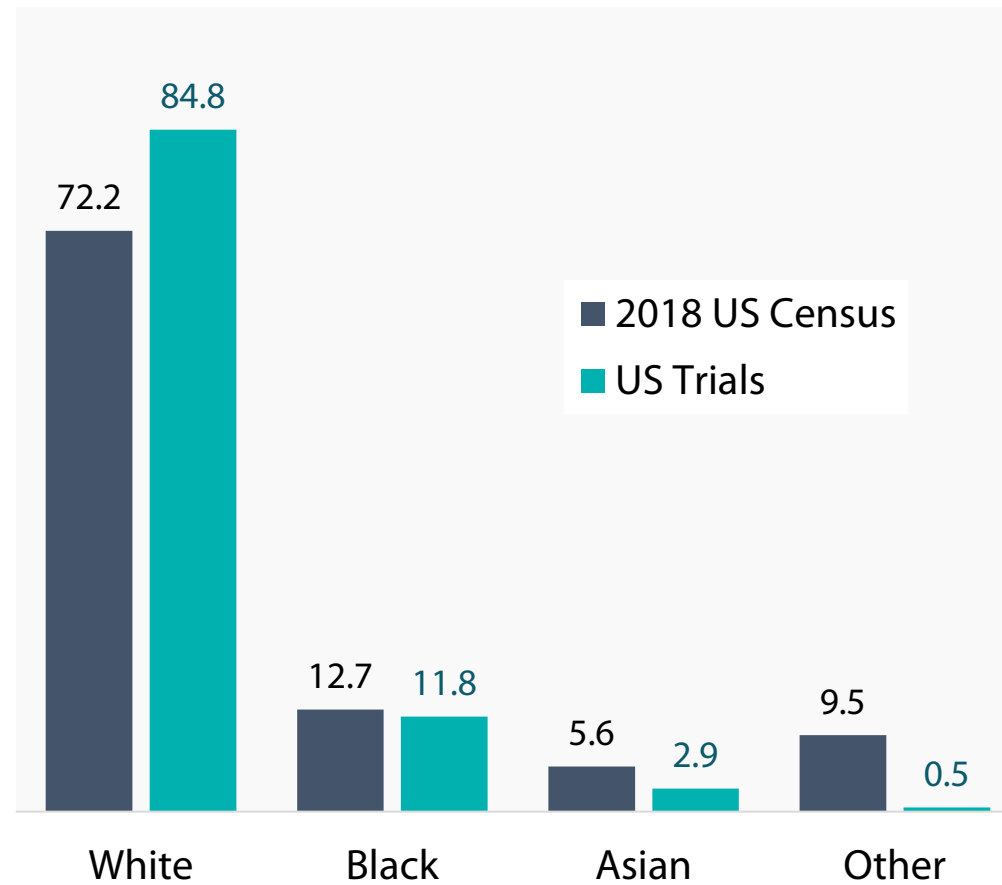
- I have no conflicts of interest to disclose.
- E. H. Bero<sup>1</sup>, L. Rein<sup>2</sup>, A. Banerjee<sup>2</sup>, M. W. Straza Jr<sup>3</sup>, C. A. F. Lawton<sup>3</sup>, C. J. Schultz<sup>3</sup>, B. A. Erickson<sup>3</sup>, M. L. Siker<sup>3</sup>, and W. A. Hall<sup>3</sup>; <sup>1</sup>*Medical College of Wisconsin, Milwaukee, WI*, <sup>2</sup>*Medical College of Wisconsin Department of Biostatistics, Milwaukee, WI*, <sup>3</sup>*Department of Radiation Oncology, Medical College of Wisconsin, Milwaukee, WI*

# Method

- Review >1,200 studies on [clinicaltrials.gov](https://clinicaltrials.gov) (1996-2019)
  - 122 met inclusion criteria and were compared to 2018 US census for racial composition



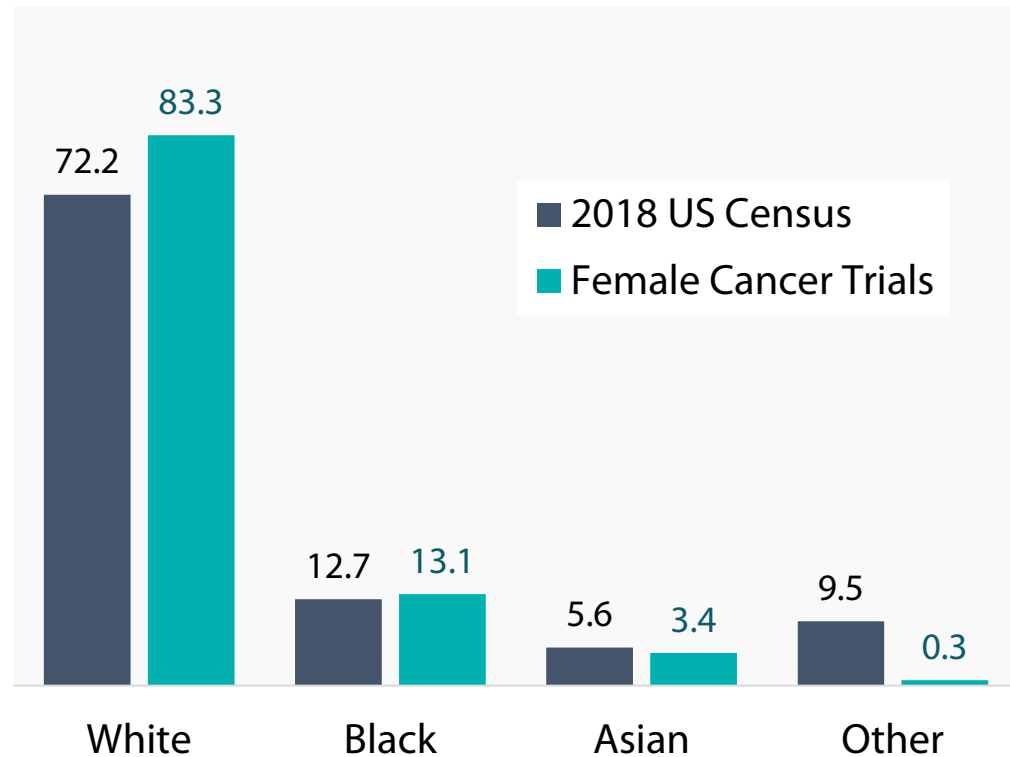
# Racial Composition of US Census vs. RT Trials



**p < 0.001**

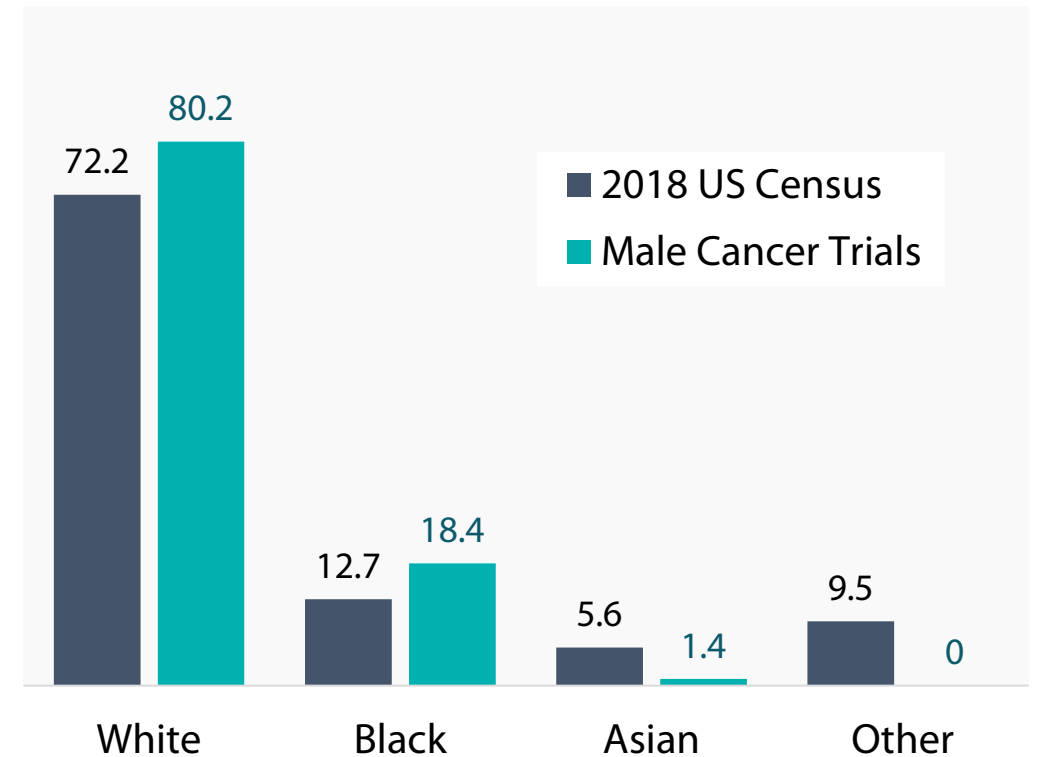
# US Census vs. Gender-specific Cancer Trials

## Female Cancer Trials



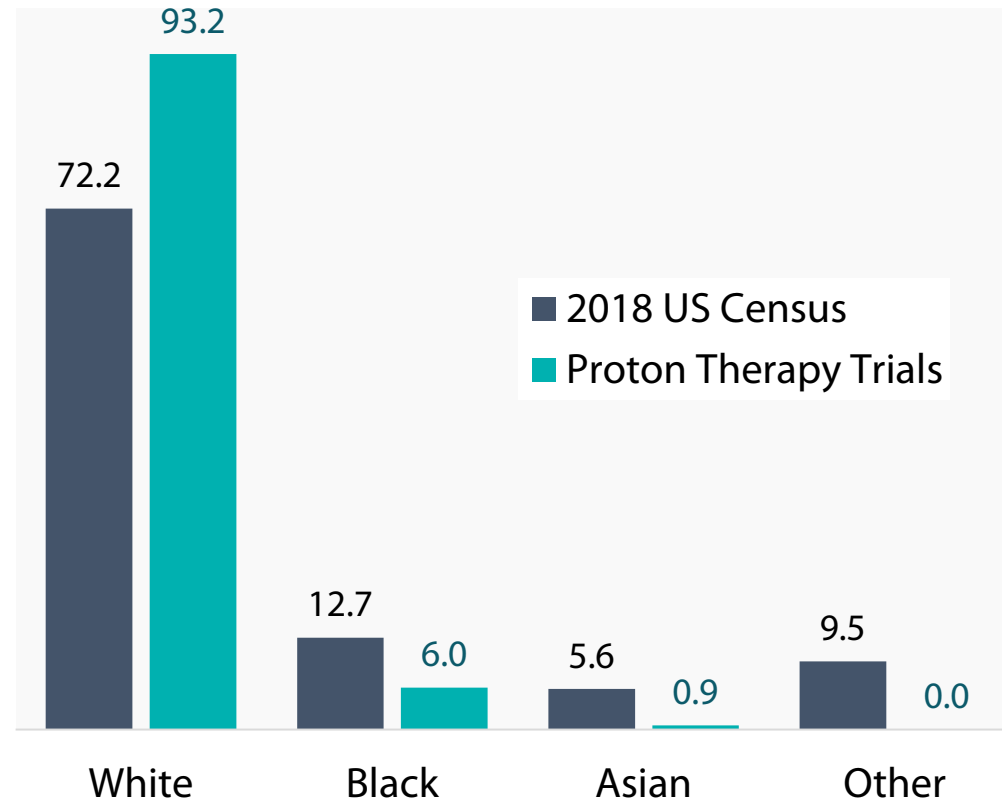
**p < 0.001**

## Male Cancer Trials



**p < 0.001**

# US Census vs. Proton Therapy Trials



**p < 0.001**

# Conclusion

- We have demonstrated that every group analyzed had a significant variance in clinical trial race population when compared to the US census composition.
- Black patient participation was below that expected from the US census in every subgroup analyzed, with the exception of the US female-specific cancer trials and US male-specific cancer trials. However, the comparison fails to consider differences in incidence between different racial populations which may account for the higher participation.
- When considering all trials, Asian and other excluded populations had the largest magnitudes of difference from the US census. All differences were statistically significant, and were most pronounced in trials evaluating proton therapy.
- This highlights that not only is there inequitable participation on clinical trials, but specific trials using modalities (such as proton therapy) appear to be differentially susceptible to these inequitable distributions.

# Discussion

- While investigating the etiology behind the disparity in enrollment were beyond the scope of the current study, **structural racism, systemic bias and related barriers consistently limit inclusion** of patients from underrepresented minority groups in clinical trials.
- Findings point to a **need for oncologists designing clinical trials and institutions implementing trials to increase inclusion of excluded groups.** Efforts to overcome enrollment disparities in radiation therapy trials are important and worthy of continued investigation.