

# Racial and Ethnic Inequities in Endometrial Cancer Survival from 2017 to 2022: Assessing the Influence of Social Determinants of Health

Poster Code: HPR9

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## Background

- The rising rates in endometrial cancer are concerning in the wake of the COVID-19 pandemic, which has worsened many racial/ethnic inequities in healthcare access. [1,2]
- We examined endometrial cancer survival in recent years, focusing on differences before and after the pandemic by race/ethnicity, and the influence of social determinants of health (SDOH).

## Methods

- **Data Source:** The US nationwide Flatiron Health EHR-derived de-identified database, comprising patient-level structured and unstructured data, [3,4] originating from ~280 cancer clinics (~800 sites of care).
- **Study Population:** Patients diagnosed with advanced endometrial cancer from January 2017 to December 2022.
- **Key Variables:**
  - **Real-world overall survival:** Patients were followed from advanced diagnosis through death or their last EHR-documented activity (follow-up through October 2023).
  - **Race/ethnicity:** EHR-documented race and ethnicity were categorized into mutually exclusive groups: Latinx, Black, White, and Other/Not documented (includes all other racial groups due to small sample size).
  - **SDOH factors:** practice type (community/academic), geography (rural/urban), residence in a medically underserved area, and area-level factors from the American Community Survey (e.g., household income, vehicle ownership, English proficiency).
- **Statistical Methods:** Survival was assessed using Kaplan-Meier methods and Cox proportional-hazards. We estimated separate models in the pre- (2017-2019) and post-COVID (2020-2022) periods that sequentially adjusted for race/ethnicity, age, clinical factors (histology, group stage, treatment history), and SDOH factors.

## Results

- Cohort: 3,677 patients (7.0% Latinx, 15.2% Black, 57.4% White, 20.4% Other/Unknown).
- Compared to White patients, a higher share of Black patients had more advanced and more aggressive disease (Stage IV: 39% vs. 26%; Serous carcinoma: 40% vs. 21%). See Supplemental Material for more details on patient characteristics.
- Pre- and post-COVID, Black patients had lower median survival than White patients (Table 1) and an increased hazard of death (Figure 1).
- The Black-White differences in survival were largely explained by clinical and SDOH factors (Figure 1).
  - Pre-COVID: Clinical and SDOH factors partially explained racial inequities (HR of 1.70 in age-adjusted model versus HR of 1.31 in age, clinical, and SDOH-adjusted model).
  - Post-COVID: Clinical factors alone and in combination with SDOH factors fully accounted for racial inequities (HR of 1.63 in age-adjusted model versus HR of 1.12 in age and clinical-adjusted model and HR of 0.99 in age, clinical, and SDOH-adjusted model)
- Inequities were not observed between Latinx and White patients in crude or adjusted models.

# Black-White inequities in endometrial cancer survival have persisted post-COVID and are driven by both clinical factors and social determinants of health



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**Acknowledgments:** Darren Johnson, PhD (Flatiron Health, Inc.) provided editorial support, and Madeline Morenberg (Flatiron Health, Inc.) provided design support. Data first presented at ISPOR 2024 in Atlanta, GA on May 6, 2024.

**Disclosures:** This study was sponsored by Flatiron Health, Inc.—an independent member of the Roche Group. During the study period, HP, CAR, OM, KP, AP, MSA, reported employment with Flatiron Health, Inc. and stock ownership in Roche. MSA reports current employment at Canopy Care.

Please direct additional inquiries to the Flatiron Health Equity Research Lab: [health.equity@flatiron.com](mailto:health.equity@flatiron.com)

## References

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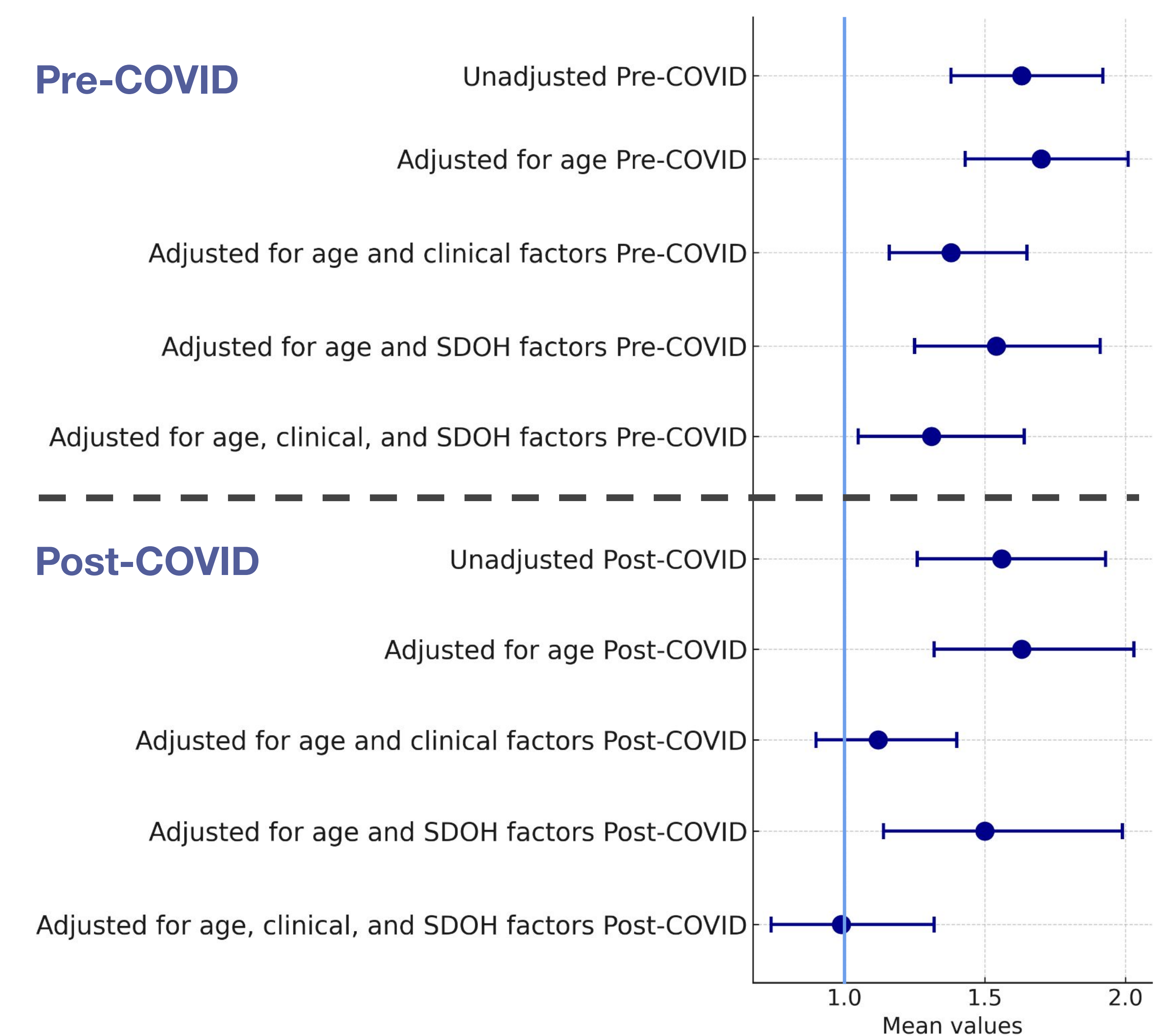
**Abbreviations:** EHR, electronic health record ; HR, hazard ratio; SDOH, social determinants of health

**Table 1: Median survival estimates by race/ethnicity (months from advanced diagnosis)**

Race/Ethnicity	Pre-COVID	Post-COVID	Overall
Latinx	73 (46, —)	— (—, —)	73 (67, —)
Black	26 (22, 34)	24 (21, 33)	26 (22, 31)
White	53 (45, 73)	43 (39, —)	50 (44, 61)

Notes: Parentheses indicate 95% confidence intervals. Dashes indicate median survival or confidence interval bounds were not reached.

**Figure 1: Hazard ratios of mortality for Black patients compared to White patients (reference group)**



Notes: Points denote hazard ratios and error bars denote confidence intervals.

## Conclusions

- Identifying and addressing the drivers of later and more aggressive disease in Black patients with endometrial cancer is needed to reduce inequities and improve patient outcomes.
- Future interventions should prioritize a holistic approach, integrating targeted healthcare strategies with broader social and policy changes, to effectively address the underlying clinical and SDOH factors contributing to racial inequities in endometrial cancer survival rates.