

Supplemental Material

Pittell H, Ryals CA, Mbah O, Patel K, Pierre A, Ascha MS. Racial and Ethnic Inequities in Endometrial Cancer Survival from 2017 to 2022: Assessing the Influence of Social Determinants of Health. *ISPOR 2024*.

Table 1. Patient characteristics by race/ethnicity

Table 2. Kaplan-Meier median survival estimates by race/ethnicity: overall and by period of diagnosis (months)

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Description of SDOH variables

Table 1. Patient characteristics by race/ethnicity

| | Black N = 559 | Latinx N = 259 | Other/Unknown N = 749 | White N = 2,110 |
|---------------------------------------|------------------|-------------------|--------------------------|--------------------|
| Group stage, No. (%) | | | | |
| I | 77 (14%) | 25 (9.7%) | 97 (13%) | 381 (18%) |
| II | 12 (2.1%) | 9 (3.5%) | 14 (1.9%) | 43 (2.0%) |
| III | 235 (42%) | 128 (49%) | 365 (49%) | 1,084 (51%) |
| IV | 220 (39%) | 81 (31%) | 239 (32%) | 550 (26%) |
| Unknown | 15 (2.7%) | 16 (6.2%) | 34 (4.5%) | 52 (2.5%) |
| Histology, No. (%) | | | | |
| Carcinosarcoma / MMT | 104 (19%) | 26 (10%) | 74 (9.9%) | 171 (8.1%) |
| Clear cell carcinoma | 25 (4.5%) | 16 (6.2%) | 28 (3.7%) | 83 (3.9%) |
| Endometrial cancer, NOS | 47 (8.4%) | 21 (8.1%) | 65 (8.7%) | 193 (9.1%) |
| Endometrioid carcinoma | 159 (28%) | 134 (52%) | 420 (56%) | 1,223 (58%) |
| Serous carcinoma | 224 (40%) | 62 (24%) | 162 (22%) | 440 (21%) |
| Receipt of adjuvant therapy, No. (%) | | | | |
| Receipt of 1L therapy, No. (%) | 329 (59%) | 127 (49%) | 382 (51%) | 1,010 (48%) |
| Receipt of 2L therapy, No. (%) | 178 (32%) | 76 (29%) | 194 (26%) | 563 (27%) |
| Receipt 3L therapy, No. (%) | 85 (15%) | 41 (16%) | 82 (11%) | 274 (13%) |
| Receipt of surgery, No. (%) | | | | |
| No/unknown | 240 (43%) | 90 (35%) | 254 (34%) | 603 (29%) |
| Yes | 319 (57%) | 169 (65%) | 495 (66%) | 1,507 (71%) |
| Receipt of radiation therapy, No. (%) | | | | |
| No/unknown | 384 (69%) | 146 (56%) | 469 (63%) | 1,224 (58%) |
| Yes | 175 (31%) | 113 (44%) | 280 (37%) | 886 (42%) |

| | | | | |
|--|-------------|-------------|-------------|-------------|
| Age at advanced diagnosis, median (IQR) | 67 (62, 72) | 64 (57, 71) | 66 (59, 73) | 68 (61, 74) |
| Age group at advanced diagnosis, No. (%) | | | | |
| 19-49 | 21 (3.8%) | 29 (10.8%) | 70 (9.3%) | 109 (5.2%) |
| 50-64 | 192 (34%) | 109 (42%) | 259 (35%) | 696 (33%) |
| 65-74 | 246 (44%) | 85 (33%) | 267 (36%) | 801 (38%) |
| 75+ | 100 (18%) | 36 (14%) | 153 (20%) | 504 (24%) |
| Census Region, No. (%) | | | | |
| Midwest | 35 (8.8%) | <=12 | 56 (9.2%) | 300 (23%) |
| Northeast | 37 (9.3%) | <=12 | 91 (15%) | 174 (13%) |
| South | 316 (79%) | 59 (49%) | 257 (42%) | 704 (54%) |
| West | 11 (2.8%) | 45 (37%) | 207 (34%) | 129 (9.9%) |
| Unknown | 160 | 138 | 138 | 803 |
| Practice type, No. (%) | | | | |
| Academic | 156 (28%) | 69 (27%) | 98 (13%) | 763 (36%) |
| Community oncology | 403 (72%) | 190 (73%) | 651 (87%) | 1,347 (64%) |
| ECOG Performance Status, No. (%) | | | | |
| 0 | 240 (43%) | 121 (47%) | 312 (42%) | 864 (41%) |
| 1 | 150 (27%) | 58 (22%) | 184 (25%) | 571 (27%) |
| 2+ | 78 (14%) | 19 (7.3%) | 82 (11%) | 202 (9.6%) |
| Unknown | 91 (16%) | 61 (24%) | 171 (23%) | 473 (22%) |
| SES Index, No. (%) | | | | |
| 1 - Lowest SES | 217 (39%) | 87 (34%) | 113 (15%) | 256 (12%) |
| 2 | 122 (22%) | 41 (16%) | 111 (15%) | 333 (16%) |
| 3 | 61 (11%) | 34 (13%) | 135 (18%) | 370 (18%) |

| | | | | |
|-------------------------------------|-----------|-----------|-----------|------------|
| 4 | 59 (11%) | 36 (14%) | 149 (20%) | 472 (22%) |
| 5 - Highest SES | 47 (8.4%) | 23 (8.9%) | 164 (22%) | 514 (24%) |
| Unknown | 53 (9.5%) | 38 (15%) | 77 (10%) | 165 (7.8%) |
| Year of advanced diagnosis, No. (%) | | | | |
| 2017 | 102 (18%) | 46 (18%) | 107 (14%) | 418 (20%) |
| 2018 | 91 (16%) | 43 (17%) | 122 (16%) | 406 (19%) |
| 2019 | 111 (20%) | 46 (18%) | 138 (18%) | 375 (18%) |
| 2020 | 94 (17%) | 49 (19%) | 152 (20%) | 318 (15%) |
| 2021 | 91 (16%) | 44 (17%) | 118 (16%) | 318 (15%) |
| 2022 | 70 (13%) | 31 (12%) | 112 (15%) | 275 (13%) |

IQR, interquartile range; No., number.

Table 2. Kaplan-Meier median survival estimates by race/ethnicity: overall and by period of diagnosis (months)

| Race/Ethnicity | Overall, median (IQR) | Pre-COVID, median (IQR) | Post-COVID, median (IQR) |
|-----------------------|------------------------------|--------------------------------|---------------------------------|
| Latinx | 73 (67, NR) | 73 (46, NR) | NR (NR, NR) |
| Black | 26 (22, 31) | 26 (22, 34) | 24 (21, 33) |
| White | 50 (44, 61) | 53 (45, 73) | 43 (39, NR) |
| Other/Unknown | 54 (43, NR) | 57 (44, NR) | NR (35, NR) |

IQR, interquartile range; NR, not reached.

Table 3. Unadjusted hazard ratios of mortality by race/ethnicity

| | HR | 95% CI | P-value |
|-----------------------|-----------|---------------|----------------|
| Race/Ethnicity | | | |
| White | Ref | – | – |
| Latinx | 0.74 | 0.59, 0.93 | 0.010 |
| Black | 1.60 | 1.41, 1.83 | <0.001 |
| Other/Unknown | 1.02 | 0.88, 1.16 | 0.8 |

CI, confidence interval; HR, hazard ratio.

Table 4. Adjusted hazard ratios from stratified models by diagnosis period

| | (1) Unadjusted | | (2) Adjusted for age | | (3) Adjusted for age and clinical factors | | (4) Adjusted for age and SDOH factors | | (5) Adjusted for age clinical, SDOH factors | |
|----------------------------|-------------------|------------|-------------------------|------------|--|------------|--|------------|--|------------|
| | HR | 95% CI | HR | 95% CI | HR | 95% CI | HR | 95% CI | HR | 95% CI |
| Panel 1. Pre-COVID Models | | | | | | | | | | |
| Latinx | 0.80 | 0.60, 1.07 | 0.88 | 0.66, 1.18 | 0.78 | 0.58, 1.05 | 0.85 | 0.62, 1.17 | 0.75 | 0.54, 1.05 |
| Black | 1.63 | 1.38, 1.92 | 1.70 | 1.43, 2.01 | 1.38 | 1.16, 1.65 | 1.54 | 1.25, 1.91 | 1.31 | 1.05, 1.64 |
| Other/Unknown | 1.01 | 0.84, 1.21 | 1.08 | 0.90, 1.30 | 0.98 | 0.81, 1.17 | 1.02 | 0.84, 1.23 | 0.91 | 0.75, 1.11 |
| White | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref |
| Panel 2. Post-COVID Models | | | | | | | | | | |
| Latinx | 0.64 | 0.43, 0.94 | 0.72 | 0.49, 1.07 | 0.64 | 0.43, 0.94 | 0.67 | 0.44, 1.03 | 0.58 | 0.38, 0.89 |
| Black | 1.56 | 1.26, 1.93 | 1.63 | 1.32, 2.03 | 1.12 | 0.90, 1.40 | 1.50 | 1.14, 1.99 | 0.99 | 0.74, 1.32 |
| Other/Unknown | 1.01 | 0.82, 1.25 | 1.03 | 0.83, 1.28 | 0.93 | 0.75, 1.16 | 1.02 | 0.81, 1.27 | 0.91 | 0.73, 1.15 |
| White | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref |

CI, confidence interval; HR, hazard ratio.

Table 5. Adjusted hazard ratios from interactive models (race/ethnicity x COVID-period)

| | (1) Unadjusted | | (2) Adjusted for age | | (3) Adjusted for age and clinical factors | | (4) Adjusted for age and SDOH factors | | (5) Adjusted for age clinical, and SDOH factors | |
|------------------------------|-------------------|------------|-------------------------|------------|---|------------|---|------------|--|------------|
| | HR | 95% CI | HR | 95% CI | HR | 95% CI | HR | 95% CI | HR | 95% CI |
| Race/Ethnicity x Period | | | | | | | | | | |
| Black: Post-COVID | 1.63 | 1.33, 1.99 | 1.68 | 1.37, 2.06 | 1.23 | 1.00, 1.52 | 1.51 | 1.21, 1.90 | 1.12 | 0.89, 1.42 |
| Black: Pre-COVID | 1.63 | 1.38, 1.93 | 1.70 | 1.44, 2.01 | 1.41 | 1.19, 1.68 | 1.56 | 1.28, 1.91 | 1.32 | 1.07, 1.61 |
| Latinx: Post-COVID | 0.68 | 0.46, 0.99 | 0.75 | 0.51, 1.09 | 0.68 | 0.46, 0.99 | 0.70 | 0.47, 1.04 | 0.63 | 0.43, 0.94 |
| Latinx: Pre-COVID | 0.80 | 0.60, 1.07 | 0.88 | 0.66, 1.18 | 0.82 | 0.61, 1.11 | 0.84 | 0.62, 1.15 | 0.80 | 0.58, 1.09 |
| Other/Unknown: Post-COVID | 1.06 | 0.86, 1.29 | 1.06 | 0.86, 1.29 | 1.03 | 0.84, 1.26 | 1.02 | 0.83, 1.26 | 0.99 | 0.80, 1.22 |
| Other/Unknown: Pre-COVID | 1.01 | 0.85, 1.21 | 1.09 | 0.91, 1.30 | 0.98 | 0.81, 1.17 | 1.04 | 0.86, 1.25 | 0.94 | 0.78, 1.14 |
| White: Post-COVID | 1.05 | 0.91, 1.21 | 1.03 | 0.89, 1.19 | 1.08 | 0.93, 1.25 | 1.04 | 0.89, 1.20 | 1.08 | 0.93, 1.26 |
| White: Pre-COVID | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref |

CI, confidence interval; HR, hazard ratio.

Description of SDOH variables

EHR-Derived SDOH variables

- Practice type (academic, community oncology)
- Rural/Urban
- Medically underserved area

ACS-Derived SDOH variables (from 2015-2019, 5-year, block-level estimates, using most-recent patient address)

- Yost Index (quintile)
- Predominant race/ethnicity
- Median household income
- Limited English proficiency
- Percent foreign born
- Percent of households without vehicle
- Overcrowding