Systematic Review

Disparities in Timeliness of Endometrial Cancer Care

A Scoping Review

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OBJECTIVE: We use the person-centered Pathway to Treatment framework to assess the scope of evidence on disparities in endometrial cancer stage at diagnosis. This report is intended to facilitate interventions, research, and advocacy that reduce disparities.

DATA SOURCES: We completed a structured search of electronic databases: PubMed, EMBASE, Scopus, Clinical-Trials.gov, and Cochrane Central Register of Controlled Trials databases. Included studies were published between January 2000 and 2023 and addressed marginalized population(s) in the United States with the ability to develop endometrial cancer and addressed variable(s) outlined in the Pathway to Treatment.

METHODS OF STUDY SELECTION: Our database search strategy was designed for sensitivity to identify studies on disparate prolongation of the Pathway to Treatment for endometrial cancer, tallying 2,171. Inclusion criteria were broad, yet only 24 studies addressed this issue. All articles were independently screened by two reviewers.

TABULATION, INTEGRATION, AND RESULTS: Twenty-four studies were included: 10 on symptom appraisal, five on help seeking, five on diagnosis, and 10 on pretreatment intervals. Quality rankings were heterogeneous, between 3 and 9 (median 7.2) per the Newcastle–Ottawa Scale. We identified three qualitative, two participatory, and two intervention studies. Studies on help seeking predominantly inves-

tigate patient-driven delays. When disease factors were controlled for, delays of the pretreatment interval were independently associated with racism toward Black and Hispanic people, less education, lower socioeconomic status, and non-private insurance.

CONCLUSIONS: Evidence gaps on disparities in timeliness of endometrial cancer care reveal emphasis of patient-driven help-seeking delays, reliance on health care–derived databases, underutilization of participatory methods, and a paucity of intervention studies.

SYSTEMATIC REVIEW REGISTRATION: Given that PROSPERO was not accepting systematic scoping review protocols at the time this study began, this study protocol was shared a priori through Open Science Framework on January 13, 2021 (doi: 10.17605/OSF.IO/V2ZXY), and through peer review publication on April 13, 2021 (doi: https://doi.org/10.1186/s13643-021-01649-x).

Endometrial cancer is the most common gynecologic cancer in the United States, with incidence increasing[1,2] as endometrial cancer risk factors, including obesity and older age,[3,4] become more prevalent.[5] Endometrial cancer survival is strongly associated with stage, grade, and histology.[1,4,6–9] Of these, stage is the only modifiable factor, with 5-year mortality for early stage 50% lower than for late-stage disease.[1] Advanced endometrial cancer stage is associated with lower median family income,[10] lower neighborhood socio-economics,[11] and less insurance coverage.[12–15] Disparities in endometrial cancer stage attributable to racism are particularly egregious and well demonstrated[10,16–18] and, if resolved, could reduce the 5-year mortality for Black people by 33%.[8] Aside from Medicaid expansion, reducing endometrial cancer stage in the United States has seen little progress.[13–15]

When an issue requires swift action, literature reviews serve crucial roles. They aim to assist researchers in building on (rather than recapitulating) existent evidence, to reduce time to translation and implementation of evidence-based practices, and to reveal the paradigm of a scientific community such that it can be checked against lived experiences. This systematic scoping review synthesizes the available scientific evidence to facilitate research, evidence translation to interventions, and multisectoral advocacy to reduce disparities in stage of endometrial cancer diagnosis. With the foundation of previous literature reviews of disparities in endometrial cancer diagnosis and outcomes,[19–21] this is the first review to focus specifically on factors associated with advanced stage and to use a systematic scoping methodology to define evidence gaps.

We conceptualize reducing endometrial cancer disease stage in terms of timeliness of diagnosis and treatment after disease onset. The Walter et al[22] Pathway to Treatment model, which elaborates on the Andersen et al[23] Model of Total Patient Delay, provides a framework to identify sources of delay in cancer care. The Pathway to Treatment Model is divided into four intervals:

- Appraisal interval: time from detection of bodily change(s) to perceiving reason to discuss symptoms with health care professional
- Help-seeking interval: time from symptom onset to the first consultation with a care professional
- Diagnostic interval: time from the first consultation to diagnosis
- Pretreatment interval: time from diagnosis to start of treatment

We hypothesized that we would find studies addressing all four intervals and a paucity of patient-centered research, participatory methods, and interventions. In keeping with the admonition of a critical race theory critique of medical scholarship on endometrial cancer disparities,[19] this review's population–concept–context framework[24] was designed to capture factors on the person, health care, and societal levels that mediate inequitable outcomes rather than reifying race as a biological reality. We assumed intersectionality of marginalized identities and experiences in creating interdependent systems of discrimination,[25] so we centered racism while also seeking evidence on several other dimensions of discrimination. Given the social, political, and chronologic contexts that shape health outcomes, the review is limited to the United States and to studies published in 2000 or later.

Systematic scoping reviews adhere to guidelines adapted from traditional systematic reviews for a reproducible methodology of identifying evidence gaps in a field of research. We developed the protocol a priori using the PRISMA Extension for Scoping Reviews published in 2018 (Preferred Reporting Items for Scoping Reviews).[26] Details on methods can be found in the study protocol, published and registered separately.[27] The objective of this study was to identify evidence gaps on disparities in timeliness of the Pathway to Treatment of endometrial cancer to facilitate multisectoral interventions, research, and advocacy that reduce disparities in stage of endometrial cancer diagnosis.

SOURCES

The primary source of literature was a structured search of electronic databases: PubMed, EMBASE, Scopus, ClinicalTrials.gov, and Cochrane Central

Register of Controlled Trials databases (Appendix 1: Search Strategy, available online at http://links.lww.com/AOG/D333). A search of Google Scholar constituted a secondary source of material. We did not consider gray literature or literature reviews without meta-analysis.

STUDY SELECTION

After duplicates were removed, our initial search returned 2,171 records. Two reviewers independently screened all titles and abstracts for eligibility and then the full text of all eligible articles for inclusion. Our selection protocol was designed to include all studies that assessed 1) marginalized population(s) in the United States with the ability to develop endometrial cancer and 2) variables outlined in the Walter et al[22] Pathway to Treatment Model as they pertain to endometrial cancer. Studies that measured factors relevant to the endometrial cancer Pathway to Treatment in a population belonging predominantly to a marginalized group were not excluded because of the lack of a comparator group.[28–30] One study of all-White participants[31] was included because it was designed to serve as a comparator group for another study of all-Black participants.[32] Despite our permissive inclusion criteria, 2,043 of 2,171 records were not relevant, reflecting the intended sensitivity of the database search strategy and breadth of variables outlined in the Pathway to Treatment.[22] Four authors were contacted for additional data, of whom one responded but with data that did not pertain to the Pathway to Treatment; thus, all four were excluded. The search and screening processes were updated before publication. The PRISMA flow diagram details the study selection process.[33] (Fig. 1).

RESULTS

All studies were observational: 10 were retrospective cohorts, 11 were cross-sectional, and three were qualitative in design. Ten studies pertained to the appraisal interval, five to the help-seeking interval, five to the diagnostic interval, and 10 to the pretreatment interval (Appendix 2, available online at http://links.lww.com/AOG/D333). Results were not conducive to sensitivity testing or meta-analysis because of heterogeneity of outcomes.

Newcastle–Ottawa Scale bias and quality scores ranged from 3 to 9 (9 as maximum score) with a mean of 7.2. Critical Appraisal Skills Program for qualitative studies ranged from 9 to 10 (10 as maximum score). Four studies used overlapping National Cancer Database years.[13,34–36] The literature scope reveals bias toward greater representation of the diagnostic

and help-seeking intervals and representing hospitals in urban centers. We did not identify funding biases or conflicts of interest.

Data produced through blinded duplicate extraction processes were analyzed independently by all authors to decrease the likelihood of ignoring explanations for the observed results. Figure 2 provides a summary of key findings across the Pathway to Treatment. Appendix 2 (http://links.lww.com/AOG/D333) summarizes key findings, with additional data for the appraisal, help-seeking, diagnostic, and help-seeking intervals in Appendices 3–6 (available online at http://links.lww.com/AOG/D333). Heterogeneity of results, rather than study quality, limited qualitative synthesis.

Factors relevant to the endometrial cancer appraisal interval, symptom appraisal, and self-management were described by 10 studies that included 2,733 quantitative observations, 15 qualitative observations from interviews, and 32 qualitative observations from focus groups (Appendix 3, http://links.lww.com/AOG/D333). The evidence scope of the appraisal interval focused on the effect of health literacy and past experiences on appraising endometrial cancer symptoms. Sociodemographics compared in these studies included race, ethnicity, body mass index (BMI, calculated as weight in kilograms divided by height in meters squared), education, income, and insurance. Shared themes across these studies included the perception of gynecologic cancer as an important health concern and the desire to access reliable information, including from health care professionals.[28,32,37] Four studies included participants with endometrial cancer.[31,37]

Study populations both with and without endometrial cancer were highly aware that endometrial cancer symptoms include abnormal or postmenopausal bleeding (72.7–95.4%)[29,32,38]–health literacy that could facilitate perceiving the need to discuss symptoms with a health care professional. The Doll et al[31] qualitative studies of the retrospective prediagnostic experiences of women with endometrial cancer found that difficulty defining abnormal menopause symptoms (partly because of past personal and familial gynecologic health experiences) presented barriers to symptom appraisal for Black women,[37] whereas White women reported having more information about menopause but also experienced longer time to become concerned after personal history of irregular bleeding.

Awareness of obesity as a risk factor for endometrial cancer ranged from 38% to 44.4% in studies of endometrial cancer survivors[30,39] and from 20.7% to
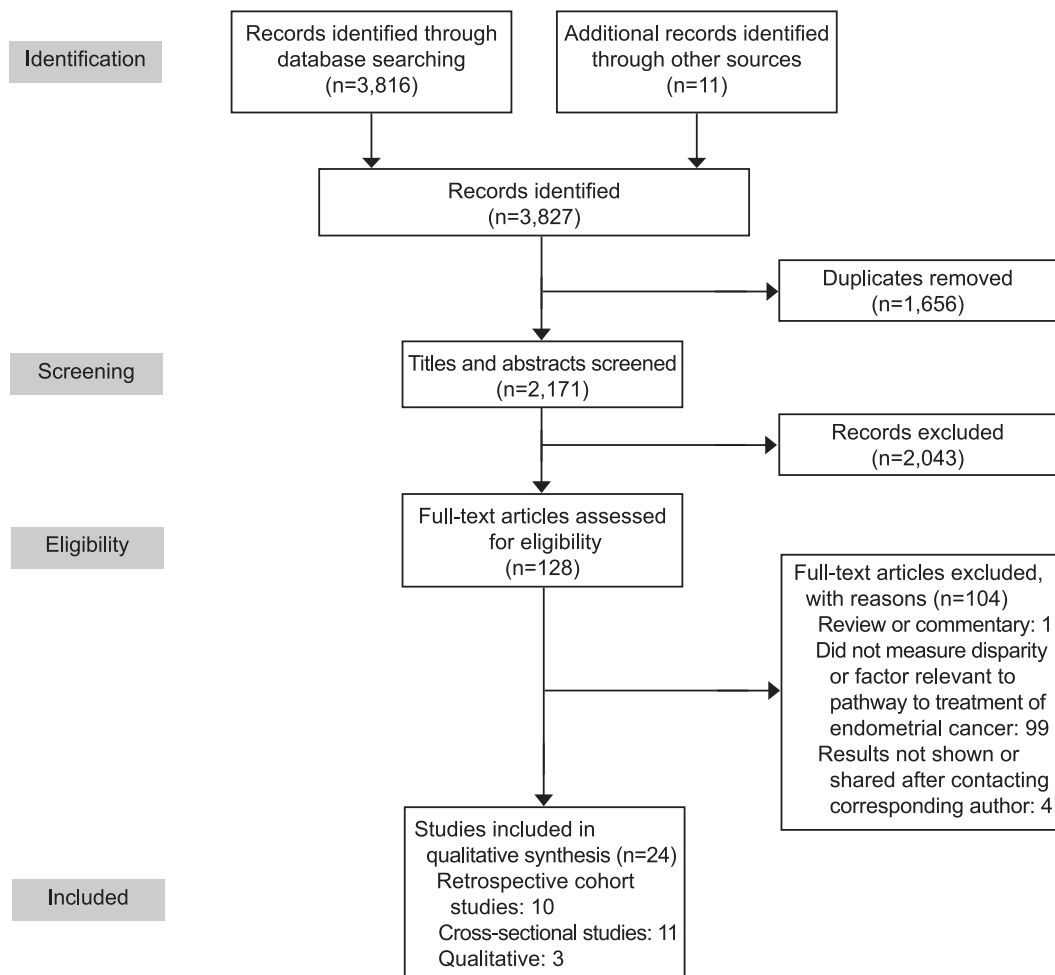
Fig. 1. Flow diagram of references selected for study inclusion based on the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-analyses) method.

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47.9% in studies without endometrial cancer survivors.[28,40,41] Multiple studies used univariate analysis and observed that participant BMI, education, income, insurance, race, ethnicity, comorbidity, and age were not significantly associated with awareness of obesity as a risk factor for endometrial cancer.[28,39–41] Awareness that age and menopause are risk factors for endometrial cancer was low, ranging from 7.4% (2.9/39)[32] to 53.7% (268/499).[38] Multiple study populations struggled to differentiate risk factors for endometrial cancer compared with cervical cancer.[29,38,39] Access to care among those willing to seek care was not described.

Knowledge of screening options for individuals with genetic predispositions to endometrial cancer was low in multiple studies, ranging from 29.2% in a population recruited from an organization that serves Hispanic people (n=39)[32] to 48.2% in a population recruited through multimodal community outreach (n=499).[38] Neither study population included people with endometrial cancer. Awareness that cervical cancer screening does not assess risk for endometrial cancer was higher, 74.6% (of 499) in one study[38] and "most" participants of a qualitative study of 17 focus groups.[29]

Two interventions were studied to improve health literacy regarding gynecologic cancer symptoms, risk factors, and screening.[32,38] Both reported significant improvements in knowledge scores from before to after the education session, although neither was tested for real-life application.

No studies estimated the length of the appraisal interval, obfuscating the magnitude of effect that could be achieved by focusing interventions on this interval, and where, how, and for whom delays are the worst. No quantitative studies were adequately powered for

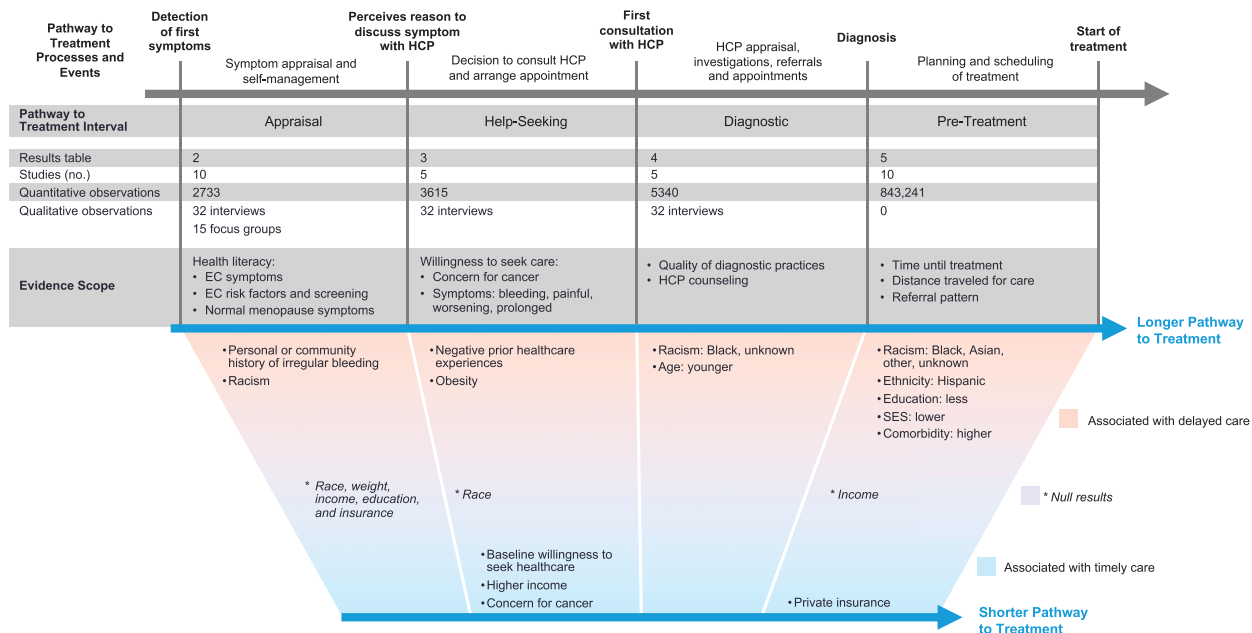**Fig. 2.** Evidence scope across the pathway to treatment. HCP, health care professional; EC, endometrial cancer; SES, socioeconomic status.

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multivariate analysis. No studies assessed appraisal of nonendometrioid endometrial cancer symptoms.

Factors relevant to the endometrial cancer help-seeking interval, seeking care for symptoms, were described by five studies that included 3,615 quantitative observations and 32 qualitative observations from interviews (Appendix 4, http://links.lww.com/AOG/D333). The evidence scope included willingness to seek care for endometrial cancer symptoms in populations with[31,37] and without endometrial cancer,[32,42] with a focus on disparities by race and income. Only two studies included populations with endometrial cancer.

Willingness to seek care for symptoms associated with gynecologic cancer in study populations without endometrial cancer or endometrial cancer symptoms ranged from 5.3%[32] to more than 50%.[42] A larger study (n=2,991) found that income, but not (self-identified) race, significantly predicted willingness to seek care, after adjustment for concern about cancer, age, gynecologic cancer, and willingness to seek care for other conditions.[42] In multivariate analysis, race was not associated with willingness to seek care for vaginal bleeding in menopausal respondents, and Black respondents reported more intention to seek care than White respondents for several gynecologic cancer symptoms.[42] This study also reported that higher income was associated with willingness to seek care, but income differences by race were not described.

The studies that included endometrial cancer survivors reported that the decision to seek medical care often occurred after a personally set threshold for symptom duration or severity[37] and may be prolonged for overweight women who have experienced body shaming from health care professionals.[31] Similarly, a survey of self-identified women who had not had endometrial cancer reported symptom duration and unpleasantness (pain) as a significant motivator for seeking help.[42] These studies found that concern for cancer was associated with perceiving a reason to discuss symptoms with a health care professional, connecting endometrial cancer symptom knowledge with the transition from the appraisal to help-seeking interval.

Although one study assessed the association between income and willingness to seek care for endometrial cancer symptoms[42] and qualitative studies describe how past experiences of discrimination and racism at the hands of health care professionals can discourage help seeking,[31,37] the help-seeking interval has not been adequately addressed by studies on health care access, such as the effect of insurance, transportation, rurality, immigration status, English proficiency, housing stability, and incarceration.

The quantitative evidence reviewed was untested for associations with endometrial cancer outcomes, weakening findings to the degree that recognizing the need to seek medical attention on a survey would

translate to real-world endometrial cancer symptom appraisal and help seeking. Finally, as with the appraisal interval, no studies estimated the length of the help-seeking interval or prevalence of delays.

Factors relevant to the endometrial cancer diagnostic interval, health care professional appraisal and the diagnostic process, were described by 4 studies that included 5,340 quantitative observations and 32 qualitative observations from interviews (Appendix 5, http://links.lww.com/AOG/D333). Evidence was created largely by retrospective cohorts of endometrial cancer cases pulled from health care databases. The evidence scope included evaluation quality and health care professional communication. Sociodemographics compared in these studies included race and age.

A national retrospective cohort (n=4,891) demonstrated that Black people had a significantly lower odds of receiving a guideline-concordant evaluation for endometrial cancer than White people (adjusted odds ratio [aOR] 0.63, 95% CI 0.51–0.77), which was significantly associated with advanced stage (aOR 1.8, 95% CI 1.4–2.2 for Black people specifically).[43] Overall documentation of bleeding status was 52%,[43] similar to a study of 305 encounters for abnormal uterine bleeding (9% postmenopausal) across four Veterans Affairs hospitals that reported documentation of current bleeding status in 54% of encounters.[44] The proportion of Black participants was similar in these two studies, but the Veterans Affairs population was not analyzed for differences by race.[44] Interviews with endometrial cancer survivors revealed a theme of frustration that health care professionals offered vague and evasive explanations for recommending endometrial cancer testing[37] and false reassurances based on inadequate evaluations.[31]

Evidence gaps surrounding the finding that Black people are less likely to have bleeding patterns documented or diagnostic procedures ordered include trends by geography, practice setting, health care professional specialty or training, imaging availability, insurance status, and endometrial cancer histologic type. Additional gaps include rates of (and reasons for) loss to follow-up, professionals not recognizing endometrial cancer risk, and professionals not offering diagnostic procedures. Investigating a connection between diagnostic or counseling practices and timelines of the diagnostic interval would further support a causal relationship between these factors and stage at diagnosis.

In instances in which postmenopausal bleeding has not prompted a reason to seek medical care, health care encounters can lead to endometrial cancer diagnosis if the health care professional notes bleeding or other incidental findings. The effect of having regular contact with a primary health care professional was not studied.

Factors relevant to the endometrial cancer pretreatment interval, the time between diagnosis and treatment, were described by 10 studies of the pretreatment interval that included a total of 843,241 quantitative observations (Appendix 6, Tables 6.1–6.3, http://links.lww.com/AOG/D333). These were not 843,241 unique observations; four studies sampled overlapping National Cancer Database years.[13,34–36] The evidence scope focused on time until treatment, distance traveled for care, and referral pattern. Sociodemographics compared in these studies included race, ethnicity, insurance status, income, and socioeconomic status. Evidence was created largely by retrospective cohorts of endometrial cancer cases pulled from health care databases. Each study defined delays differently, inhibiting meta-analysis and results comparisons.[13,34,35,45,46]

Insurance status was independently associated with endometrial cancer pretreatment interval delays after adjustment for endometrial cancer histology, race, education, and income. The risk of longer median time from diagnosis to surgery was 10–20% higher if the individual had no insurance, followed by about 10–15% higher for those with government insurance, compared with individuals with private insurance (which had a median 25-day wait).[34] Delays were defined differently in other studies, with the likelihood of waiting more than 6 weeks for surgery 40% higher for individuals with Medicaid insurance or no insurance than for those with other insurances,[35] and the likelihood of waiting more than 30 days for surgery was nonsignificantly higher in states without Medicaid expansion.[13] These trends persisted for time to nonsurgical treatment.[13,45,46] Longer pretreatment interval was also associated with greater medical comorbidity,[34] lower educational attainment,[34,35] and living in a neighborhood with low socioeconomic status (aOR 1.93, 95% CI 1.61–2.31).[46]

Race was significantly associated with pretreatment delays: Median wait time for surgery was 3–5 days longer for Black people (adjusted incident rate ratio 1.13 for type 1 endometrial cancer, 1.11 for type 2 endometrial cancer) compared with White people, controlling for insurance and other factors.[34] This study reported that those with race other than Black or White also had a longer pretreatment interval than White people.[34] The likelihood of waiting more than 6 weeks for surgery was 30–40% greater for non-Hispanic Black, 20–40% greater for Hispanic, and marginally greater for Asian people (compared with

White people, all comparisons statistically significant).[35] The likelihood of waiting more than 4 compared with 2–4 weeks for treatment was 10–50% greater for Hispanic and 15–70% greater for non-Hispanic Black people (compared with White, all comparisons statistically significant) in another study.[46] Those with unknown or other race were similar to the White group in one study[35] but experienced the longest delays in other studies.[34,45]

The evidence reviewed did not support the hypothesis that differences in treatment hospitals mediated the effects of racism on pretreatment interval timeliness. A large National Cancer Database cohort study (n=271,186) also found that Black people had a greater likelihood of treatment at medium–high– and high-volume centers (P<.001) and that race remained an independent predictor of mortality even when adjusted for hospital case volume.[36] Similarly, a national SEER (Surveillance, Epidemiology, and End Results) cohort study (n=12,307) found that Black race was associated with treatment at hospitals with high endometrial cancer surgical volume, which was associated with having a gynecologic oncologist as the treating surgeon.[47] However, this study did not reproduce the association between hospital characteristics and survival.[47] A National Cancer Database cohort reported that median time until surgery was marginally shorter at community hospitals and Integrated Network Cancer Program or other centers than academic centers.[34] Important regional differences may be hidden in national cohorts, as suggested by a North Carolina cohort (n=2,053) that found no significant association between referral pattern and race or ethnicity in multivariate analysis but did find that aggressive histology, later diagnostic year, and having any private insurance (compared with Medicaid insurance) predicted referral to high-volume centers.[48]

A national retrospective cohort (n=284,499) found that the likelihood of waiting longer for surgery was marginally higher for those who traveled more than 25 miles and about 10% higher for those who traveled between 51 and 100 miles compared with those who traveled less than 25 miles (average 26 days).[34] Regional studies found differing associations between distance traveled and barriers to care. A cross-sectional study of 1,532 surgeries for endometrial cancer in Arizona found that traveling more than 50 miles for care was much more likely for individuals with government insurance (comparator: private; *Arizona Health Care Cost Containment System* or Medicaid: aOR 3.41, 95% CI 1.89–6.15; Medicare: aOR 2.07, 95% CI 1.38–3.13) and, after controlling for facility volume, much more likely for Hispanic (aOR 2.73,

95% CI 1.70–4.32) and Native American (aOR 8.6, 95% CI 3.44–21.52) compared with White people.[49] A New York cohort saw the greatest distance traveled for those with private insurance (P<.001); that distance increased most over the study period for those with private insurance (31.8%, 95% CI 26.2–37.4) and for White people (4.2 miles, 95% CI 3.4–5.0, P<.001), with nonsignificant changes for Hispanic and Black people.[50] Likewise, a Maryland cohort study reported that, after rurality was incorporated, White people were up to two times more likely to travel more than 50 miles for endometrial cancer surgery, and the effect of rurality increased when accounting for race.[51]

The association of distance traveled for care with race and insurance status varied between regional studies. Although the geography of these trends could reflect disinvesting in communities of color[50,51] and barriers to health care access for rural communities of color,[49] this has not been directly studied, and no relevant interventions were identified.

Black, Asian, and other or unknown race; less insurance coverage; and lower socioeconomic status were associated with longer time from diagnosis until treatment[13,34,35,45,46] and more advanced stage at diagnosis.[10–18] However, we identified no studies that address how these factors create community-level barriers to accessing timely treatment. Studies are needed to guide intervention design.

DISCUSSION

Mapping evidence gaps elucidated future studies with the potential to address disparities in stage of diagnosis of endometrial cancer. We designed our protocol to capture intervention studies yet only found two,[32,38] both of which addressed knowledge about endometrial cancer. Defining clinically significant delays and the degree to which the Pathway to Treatment intervals contribute to total delay is an important next step to determine needs assessments and intervention goals.

The scope of literature on the appraisal and help-seeking intervals disproportionately investigates patient-driven delays, outlining the neoliberal perspective that individuals are ultimately responsible for their health outcomes.[52] Stage of endometrial cancer is associated with access to primary care[53] and insurance,[12,14,15] pointing toward expanded health care access as a means to shorten, or even bypass, the appraisal and help-seeking intervals. The role of infrastructure, politics, racism, and other "isms" in creating conditions for poor endometrial cancer outcomes warrants further study. For example, no studies on transportation infrastructure were identified, even

within studies on distance traveled for endometrial cancer treatment.

Evidence regarding the diagnostic interval showed that inferior diagnostic evaluations were provided to Black people nationally, which was associated with later endometrial cancer stage. Underutilization of endometrial sampling significantly contributes to guideline discordance.[43,44] Possible explanations that warrant investigation include discrimination, higher rates of loss to follow-up from barriers to accessing health care, geographic differences in rates of guideline concordance, and higher prevalence of leiomyomas, making ultrasonograms less sensitive.[54]

Another factor possibly contributing to diagnostic delays and guideline discordance is whether health care professionals disclose concern for cancer.[37] The (knowledge to have) concern for cancer was significant across the appraisal, help-seeking, and diagnostic intervals and was one of the only factors identified that could plausibly reduce time to diagnosis,[29,32,37,38,42] and participants of multiple studies stated their desire to know more about gynecologic cancer, particularly from health care professionals.[28,32,37] Not disclosing when tests are for cancer attenuates personal agency to advocate for care and may encourage some to decline care.[55]

Future studies could help focus interventions by further characterizing populations at risk of Pathway to Treatment delays with an intersectional lens.[25] For example, sexual orientation may also contribute to disparate delays characterized by interconnected social identities[25]; self-identified lesbians have an increased prevalence of chronic disease and risk factors for endometrial cancer, including nulliparity and obesity,[56–59] as well as less contact with the health care system, particularly with respect to gynecologic health screening.[60] The greater likelihood that the gynecologic concerns and pain of people of color are not addressed by their health care professionals[61–63] significantly intersects with other identities[25] and warrants further study as a mechanism of delay.

Future studies should use appropriate methods for measuring and analyzing racism. Not only is race a rough proxy for racism, but the classification of race was imprecise in that most studies did not specify how race was assigned, some studies excluded all participants who were neither White nor Black,[36,39,42,43,47] and others grouped all non-White participants together.[13,48] This imprecision obfuscates the experiences of at-risk populations; this review found that those with other or unknown race had significantly different outcomes compared with White comparator

groups.[34,36,50] Analytical design can perpetuate gaps in data representation. Asian people were explicitly represented in 14 studies, five of which performed multivariate analysis, but only two included Asian people in multivariate analyses. Federal policies also create data representation gaps, as seen with Arab Americans, a large population subjected to widespread discrimination and significant cancer epidemiologic differences from non-Hispanic White people,[64,65] whose health outcomes are invisible because of a lack of federal recognition.[66–68] The causal relationship between data representation and health outcomes is not ascertainable from endometrial cancer literature but is often bidirectional.[69]

Health care–generated data are inadequate to disentangle the effects of racism and other institutions on the endometrial cancer Pathway to Treatment. Diagnostic and billing codes only roughly represent care provided,[68] and chart reviews offer information from the perspective of health care professionals or systems with limited information on social determinants of health and on the appraisal and help-seeking intervals. Few studies included,[29] let alone centered,[37] the priorities and voices of diverse people with endometrial cancer. It is paramount that communities of diverse endometrial cancer survivors should drive efforts to understand the Pathway to Treatment of endometrial cancer.

This review has several strengths. Adherence to best practice standards for systematic scoping reviews supports the reliability and reproducibility of our findings.[26,70] The Pathway to Treatment theory-driven methodology improves useability and person-centeredness of the evidence. The qualitative and geographically regional quantitative studies add important context to quantitative evidence.

The Pathway to Treatment model is limited by the assumed linear progression from the detection of first body symptoms to the start of treatment. In addition, the evidence evaluated for this review could not be exhaustively represented here, so themes discussed were selected on the basis of our assessment of clinical significance. Finally, we acknowledge the power imbalance (and, therefore, unmeasured content bias) in academic knowledge creation.

In conclusion, qualitative studies of endometrial cancer survivors suggest that personal and community health and health care experiences may affect symptom appraisal and the process of deciding to seek care. No studies directly assessed the effect of health care access on the help-seeking or diagnostic intervals. Delays of the pretreatment interval were associated with later endometrial cancer stage and with several

dimensions of discrimination, including racism (measured in proxy by race). However, no studies assessed the prevalence of delays in the appraisal, help-seeking, and diagnostic intervals. Few studies used person-centering or participatory methods. Two intervention studies were identified, both of which targeted health care literacy.

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