Review Article

Palliative care in gynecologic oncology: a narrative review of current literature and vision for the future

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Background and Objective: Several professional societies have recommended incorporating palliative care into routine oncology care, yet palliative care remains underutilized among women with gynecologic cancers. This narrative review highlights current evidence regarding utilization of palliative care in gynecologic oncology care. Additionally, the authors offer recommendations to increase early integration and utilization of palliative care services, improve education for current and future gynecologic oncology providers, and expand the palliative care workforce.

Methods: The authors reviewed studies of palliative care interventions in oncology settings, with an emphasis on studies that included women with gynecologic malignancies. A panel of author/experts were gathered for a semi-structured interview to discuss the future of palliative care in gynecologic cancer care. The interview was recorded and reviewed to highlight themes.

Key Content and Findings: Data supports routine integration of palliative care into gynecologic oncology practice. To expand delivery of palliative care, additional research that investigates implementation of palliative care across different healthcare settings is needed. There is a shortage of palliative care providers in the United States. Therefore, it is critical for gynecologic oncologists to receive a robust education in primary palliative care skillsets. Additionally, to expand the specialty palliative care workforce, palliative medicine leaders should recruit more gynecologic oncologists and other surgeons into palliative care fellowship programs.

Conclusions: Expanded utilization of palliative care offers an opportunity to improve quality of care and outcomes for women with gynecologic cancers.

Keywords: Gynecologic oncology; palliative care; surgical education

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Introduction

Patients with gynecologic malignancies are now living longer with cancers that were once notorious for their rapid lethality. This evolution in gynecologic cancer care may be attributable to advances in surgical techniques, changes in the delivery of systemic and radiation therapy, cancer genetics, and use of targeted therapies—all of which improved patients' progression free survival and stabilization of disease after relapse (1-3). Contemporary cancer care allows many patients to live with cancer as a chronic terminal disease instead of an acute terminal illness. Therefore, many of our patients experience a multitude of disease and treatment related symptoms that may impact their quality of life over an extended time (4,5). More than ever, it is critical to incorporate a palliative approach to care for women with gynecologic malignancy. We must explore the patient's world, their values and goals, and align management recommendations in order to provide the best quality of life for patients living with cancer as a chronic disease.

Palliative care is specialized medical care for those living with serious illness that focuses on relief of symptoms and stress from illness. Palliative care can be provided throughout the disease continuum, at any stage of disease, including concurrent with curative intent treatment, with the goal to improve quality of life for patients and their families (6). Primary palliative care involves the provision of essential palliative care skills by a clinician without subspecialty training. These essential skills include basic management of pain and symptoms, management of anxiety, depression, and spiritual distress, and discussions about prognosis, goals of care, suffering, and code status. In comparison, specialty palliative care involves consultation or co-management of patients by a clinician who completed hospice and palliative medicine board certification to address complex palliative care needs for patients with serious illness. Specialty palliative care skills include management of refractory pain or other symptoms, management of complex mental health and existential distress, and assistance with conflict resolution regarding goals or methods of treatment within families, between staff and families, or among treatment teams (7-10). To address provider barriers in the provision of palliative care, all gynecologic oncologists should be educated in primary palliative care skillsets, but also recognize when it is appropriate to refer patients to a palliative care specialist.

There is an expanding body of evidence that supports the numerous benefits of integrating palliative care early into routine oncologic practice (11-19). Given the robust data demonstrating the benefits of palliative care, several professional societies have issued recommendations for incorporating palliative care into routine oncologic care. In 2016, The American Society of Clinical Oncology (ASCO) issued evidence-based guidelines, including a recommendation that all patients with advanced cancer should receive dedicated palliative care services early in their disease course, concurrent with active treatment (20). The Society of Gynecologic Oncology (SGO) issued a position statement recommending early incorporation of palliative care for women diagnosed with gynecologic malignancy to ensure the highest quality, comprehensive clinical care throughout the continuum of disease (14). Despite these recommendations, palliative care remains underutilized, particularly among patients receiving surgical care. For example, a study by Olmsted *et al.* found that less than 50% of medical and surgical patients received a palliative care or hospice consultation in their last year of life, and surgical patients had significantly lower rates of palliative care services compared to medical patients (21).

The objective of this paper is to review current evidence regarding utilization of palliative care in gynecologic oncology and offer recommendations to increase integration of palliative care services, improve the education of current and future gynecologic oncology providers, and expand the palliative care workforce. We present the following article in accordance with the Narrative Review reporting checklist (available at https://apm.amegroups.com/article/view/10.21037/apm-22-708/rc).

Methods

Literature review

The authors conducted a narrative review based on methodology described by Siddaway *et al.* (22). With this methodology, there was not a predefined hypothesis; rather our literature search sought to provide a broad overview of issues relevant to palliative care in gynecologic oncology, with a focus on palliative care utilization, trainee education, and specialty palliative care training. Studies were identified using PubMed and Google Scholar database searches using search terms agreed upon by the authors (*Table 1*). The authors ultimately reviewed 50 articles, which provided a scoping review of current literature in gynecologic oncology and palliative care. Data extraction involved a description of

Table 1 Research strategy summary

Items	Specification
Date of search	05/01/2022 to 06/01/2022
Databases and other sources searched	PubMed, Google Scholar
Search terms used	Palliative care, gynecologic oncology, National Cancer Institute cancer centers with palliative care, Center to Advance Palliative Care, American Society of Clinical Oncology guidelines palliative care, Society of Gynecologic Oncology Position, Statement on palliative care, timing of palliative care, quality of life outcomes with palliative care, palliative care for surgical patients, palliative care utilization in surgical oncology, inpatient palliative care utilization, cost savings with palliative care
Timeframe	2000–2020
Inclusion and exclusion criteria	Inclusion criteria: original research studies, review articles, case reports or series, editorials from peer-reviewed journals. Exclusion criteria: news articles; online blogs
Selection process	All articles were selected by the authors, but article selection was led by L. Spoozak and C. Salyer

study findings and interpretation by the authors, which are presented in subsequent sections.

Expert opinion

To provide expert consensus on the future of palliative care in gynecologic oncology, author L. Spoozak invited leaders at the intersection of gynecologic oncology and palliative care (Littell, Pearl, Brown, Popowich, Lefkowits) to gather for a semi-structured discussion that explored the future of palliative medicine in gynecologic oncology. At this meeting, co-authors were asked to consider aspirational goals for the integration of palliative care into gynecologic oncology and what steps would be required to reach these goals. The meeting was not used to discuss specific articles or data, but rather the authors arrived at this meeting as experts in the field and were prepared to discuss goals for future research and the role of palliative care in gynecologic oncology. The meeting was conducted virtually and was recorded with all co-authors' permission. The co-authors were also given the opportunity to complete a questionnaire that was a written version of questions asked during the committee meeting (Appendix 1). The audio recording and written responses were reviewed by authors L. Spoozak and C. Salyer to identify themes which are presented in the following sections.

Findings

The authors identified three major areas of improvement for palliative care in gynecologic oncology practice: (I) routine implementation of palliative care services in all practice settings and resource environments, (II) primary palliative care training for trainees and current gynecologic oncologists, and (III) expanding the workforce of gynecologic oncologists with formal training in palliative care through fellowship training in hospice and palliative medicine (HPM).

Routine implementation of specialty palliative care for gynecologic cancer

Studies investigating the integration of palliative care into routine oncologic practice consistently find that palliative care improves quality of care and patient perceived outcomes, while decreasing healthcare costs (20). While there are no randomized trials in the gynecologic oncology population exclusively, there are cluster randomized trials involving multiple solid tumor sites of origin, including gynecologic malignancies. In a trial by Zimmermann *et al.*, patients with advanced cancers were randomized to receive outpatient palliative care in addition to standard oncology care. The study included 71 patients with gynecologic malignancies. They found that patients randomized to receive outpatient palliative care had significantly improved quality of life (QoL) scores, symptom management, and satisfaction with care (19). Similar results were seen in the ENABLE series of studies by Bakitas *et al.* (11,23-25). While not gynecologic specific, a randomized control trial by Temel *et al.*, early incorporation of outpatient palliative

care into routine oncologic practice among patients with non-small cell lung cancer demonstrated a survival advantage (11.6 *vs.* 8.9 months, P=0.02) (18). Data suggest similar benefits to palliative care consultations in inpatient settings (26,27). Retrospective data from a cohort of gynecologic oncology patients utilizing inpatient palliative care services found improvement in symptom burden (15). A number of studies demonstrated that palliative care consultations decrease health system costs, with increasing evidence that such consultations early in patients' disease course are associated with even greater cost savings (28-30).

Despite the above-described benefits, studies still show that palliative care consults are not routinely utilized (31), particularly by surgical oncologists (21). A retrospective study of ovarian cancer patients found that only 28% of women receiving treatment for ovarian cancer were referred to palliative care, 42% of these in outpatient and 58% in inpatient settings (32). A study of hospitalized gynecologic oncology patients found that only 70% of patients are referred to hospice or palliative care before death and only 18% received a palliative care consultation within 30 days prior to death (26).

There are many factors that potentially explain why gynecologic oncologists and other surgical oncologists do not routinely request specialty palliative care for their patients. Systemic barriers, including lack of available palliative care specialists and institutional variation in availability of inpatient and/or outpatient palliative care services play a key role. In a study by Wentlandt *et al.*, oncologists were surveyed to identify variables that facilitated palliative care referral. The study found that comprehensiveness and availability of specialty palliative care services were predictors for timely palliative care referral, suggesting that availability of services are critical for integrating palliative care into routine oncologic practice (33).

Access to palliative care services

As access to palliative care services varies by institution, additional data are needed to incorporate specialty palliative care in different resource environments. The majority of research in palliative care is conducted at academic centers with access to both inpatient and outpatient palliative care services, often through clinical trials that receive funding. While there is abundant evidence that palliative care leads to improved outcomes, it is not clear how to routinely implement referral practices that are concordant with ASCO and SGO guidelines outside of research settings. A study by Hui *et al.* found that 98% of National Cancer Institute (NCI)-designated cancer centers had an outpatient palliative care program available compared to only 61% of non-NCI designated centers. Among NCI-designated centers, 98% reported presence of an inpatient palliative care team, 98% had access to outpatient palliative care clinic, and 92% had an interdisciplinary palliative care team consisting of a physician, nurse, and at least one psychosocial team member. For non-NCI centers, frequency of these palliative care services was only 89%, 63%, and 67%, respectively. The authors concluded that NCI-designated cancer centers had more integrated palliative care services because of greater resources, staffing, and infrastructure. However, because more than 80% of patients with cancer are treated at non-NCI designated centers, it is critical to implement a systematic palliative care referral program in community cancer centers (34).

Vision for the future: implementing palliative care referral models across different resource environments

To provide integrated palliative care within gynecologic oncology practice, all cancer centers should have a systematic approach to referring patients for specialty palliative care at their institution. Implementation will vary according to whether institutions have access to inpatient and/or outpatient palliative care services, including availability of palliative care providers. The majority of palliative care for gynecologic cancer patients in the United States can be implemented through one of three basic models, (I) full access to inpatient and outpatient palliative care, (II) inpatient palliative care only, and (III) no access to specialty palliative care services (i.e., primary palliative care). As noted in the data from Hui *et al.* (34), those cancer centers without full access to palliative care (meaning both inpatient and outpatient) are more likely to have inpatient service only and it would be rare for a site to report only outpatient services. Within each model, the authors recommend implementing a systematic approach to consultation with a palliative care provider with criteria that should prompt the gynecologic oncologist to seek specialty palliative care services. As gynecologic oncology providers are often limited by the amount of time, they can dedicate to symptom management when they must focus on medical and surgical management of their cancer patients, systematizing palliative care referrals will ensure these services are routinely incorporated into routine gynecologic oncology care.

Table 2 Triggers for outpatient palliative care referral (10,35)

- Positive symptom screening tool in moderate to severe range score
  - i.e., Edmonton Symptom Assessment System-revised (ESAS-r)
- Consider in all patients with stage III, stage IV, or recurrent disease
- Complex care requirements
- Frequent hospital admissions
- Frequent urgent visits or contact with staff for symptom control
- Limited social support
- Complex goals of care
- Difficulty with cancer coping
- Rapid disease progression

Table 3 Triggers for inpatient palliative care referral (10,36)

- Prognosis 12 months or less
- Frequent admissions
- Admission for symptom control
- Complex care requirements such impaired function requiring assistance or support and impaired activities of daily living
- Failure to thrive
- Assistance with goals of care or transitions of care
- Rapid disease progression

Model 1: Comprehensive inpatient and outpatient palliative care

For institutions with full access to both inpatient and outpatient palliative care, gynecologic oncologists should rely on routine outpatient palliative care referrals for symptom management and optimization of patients' quality of life during therapy. There are widespread shortages of specialized palliative care providers. Therefore, palliative care should be triaged to those patients whose needs extend beyond primary palliative care, preferably early in their disease course (*Table 2*). In a phase II trial by Zimmermann *et al.*, patients with advanced cancer were triaged with Edmonton Symptom Assessment System-revised (ESAS-r), and those patients with moderate to severe scores (screen positive) were triaged to receive specialty palliative care. The authors found that screen-negative patients had better QoL, depression, and symptom control scores at baseline compared to screen-positive patients. Furthermore, among the 56% of screen-positive patients who elected to receive specialty palliative care, mood and symptom control improved over time compared to those screen-positive patients who decline palliative care (35). Findings from this study suggest that using a similar symptom-base screening tool would allow gynecologic oncology providers to identify patients who would benefit from dedicated specialty palliative care in a systematic fashion. This approach would be particularly beneficial for institutions who may have limited availability of outpatient palliative care providers. Other possible screening methods to trigger outpatient palliative care referral are outlined in *Table 2*.

Established, outpatient palliative care will allow gynecologic oncology patients to have dedicated care for symptom management and optimizing their quality of life, and to build rapport with their provider so they may begin more complex, nuanced discussion such as goals of care, code status, advanced care planning, and hospice transitions early in their disease course. In this model, inpatient consultations should be reserved for truly acute palliative care needs, e.g., admission for pain crisis, sudden functional decline, need for inpatient hospice, or multiple admissions. The Center to Advance Palliative Care (CAPC) released a consensus statement in 2011 identifying primary and secondary criteria that should trigger a palliative care assessment at the time of admission (*Table 3*). Primary criteria include a life-limiting condition and one of the following: prognosis of 12 months or less, more than one admission for the same condition within several months, admission prompted by uncontrolled symptoms, complex care requirements, decline in function, feeding intolerance, or failure to thrive. These primary criteria are intended to serve as basic indicators for unmet palliative care needs and should represent the minimum of patients who receive palliative care referrals. Secondary criteria are more specific indicators, and should be incorporated if hospitals have the resources to refer a larger volume of patients to palliative care (36). We would like to highlight that outpatient palliative care integration is not only possible in an academic or cancer center model. In a recent Society of Gynecologic Oncology and Association of Community Cancer Centers on Demand webinar entitled, "Real-World Palliative Care in Gyn Oncology", available via SGO Connect ED, multiple practice models were highlighted, one included a novel private practice model that integrated a HPM physician into their practice group. This model was financially viable and importantly served the patients to

meet ASCO and SGO guideline goals.

Model 2: Inpatient palliative care only

Institutions with limited palliative care availability are most likely to have inpatient services only, as evident from the data by Hui et al regarding availability of palliative care services at NCI-designated and non-designated cancer centers (34). In this model, providers should continue to consult inpatient palliative care per CAPC recommendations outlined in the preceding section. For primary palliative care, gynecologic oncologists will need to rely on upskilling their outpatient oncology team to provide primary palliative care services for patients. In a study by Smith et al, authors were able to implement tools and techniques used in randomized palliative care trials with oncology staff in a community-based clinic. The authors utilized the TEAM (Time, Education, Assessment, and Management) approach which worked in practice as it did in clinical trials. This protocol required oncology practices to schedule an extra one-hour monthly appointment for palliative care assessments and discussions with patients. During this hour, the physician or advanced practice provider educated patients about prognosis, engaged in formal goals of care discussions, conducted symptom, spiritual, and psychosocial health assessments, and managed patient needs using an interdisciplinary team. This protocol allowed researchers to successfully replicate the services of a palliative care team in a community-based oncology practice (37). While this approach may be sustainable in a region with a high volume of oncologists and oncology APPs, in places where an oncologist is a limited resource such as in many rural parts of the United States, primary care providers may be better suited to fill this role and meet this need.

Model 3: No specialty palliative care available

Most cancer centers have at least inpatient palliative care services, but those centers without any access to specialty palliative care will face the biggest challenge incorporating routine palliative care into gynecologic oncology practice. In this model, the authors recommend upskilling outpatient palliative care within oncology practices using the TEAMS approach as outlined above (37). For inpatient care, gynecologic oncologists will need to develop a greater level of skill and comfort with managing acute symptoms and transition to hospice discussions. When gynecologic oncologists are clinically challenged caring for their patients, there are additional resources that can be utilized in lieu of a dedicated palliative care service (*Table 4*). These resources include contacting a palliative care expert through an established network, e.g., SGO palliative care committee or palliative care experts at a neighboring medical centers for professional advice or consultation, seeking symptom assistance through CAPC circles network, increasing expertise in symptom management through training with CAPC modules and improving serious illness communication through VitalTalk simulation trainings or utilizing outreach resources such as Project ECHO where available (38-40). Again, we encourage private and community-based practices to consider recruiting HPM physicians into their practice groups as discussed in the SGO/ACCC Webinar, "Real-World Palliative Care in Gyn Oncology", and additionally looking to other community care models such as Kaiser Permanente or Geisinger for examples of non-university based integrated care.

Summary of palliative care integration recommendations

- ❖ All cancer centers should establish triggers for referral to palliative care, with the goal of triaging those patients with the greatest need to receive specialty palliative care within 6 months or greater from end of life;
- ❖ Cancer centers without outpatient specialty palliative care may implement the TEAMS approach to integrate palliative care into oncology clinics;
- ❖ Cancer centers without any specialty palliative care services should have established networks to eliminate barriers to expert consultation when needed;
- ❖ Future research in palliative care and gynecologic oncology should identify methods and best practices for implementing routine palliative care in both inpatient and outpatient settings.

Palliative care education for trainees and current gynecologic oncologists

Another important aspect of integrating palliative care into routine gynecologic oncology practice is increasing primary palliative care education for fellows and practicing gynecologic oncologists. The preceding section highlights systemic barriers, but there are also provider barriers that limit integration of palliative care into gynecologic oncology practice. Provider barriers include surgeons' misperception that consulting specialty palliative care implies that they are "giving up", poor prognostic awareness, fear of upsetting patients, and a misunderstanding of what specialty palliative care offers and/or how palliative services optimize patient care (7,8). These provider barriers should be addressed through formalized education for trainees and continuing

Table 4 Provider resources for primary palliative care training and specialty palliative care consultation

Program	Description and Target Audience
Primary palliative care education resources	
VitalTalk	Evidence-based training program for clinicians seeking to improve communication skills when interacting with patients with severe illness. Includes option for online course and in-person workshops for education training, as well as faculty development workshops • Trainees • Faculty • How to access: VitalTalk. (2022). "Evidence-based skills training courses". Retrieved 5/20/2022, from https://www.chooseyourpath.vitaltalk.org/
Education in Palliative and End-of-Life Care (EPEC)	A program designed to train physicians on essential competencies for quality palliative and end-of-life care. Data is presented over 16 modules and 4 plenaries • Faculty • How to access: Northwestern University. EPEC (2022). "EPEC: Education in Palliative and End-of-Life Care". From https://www.bioethics.northwestern.edu/programs/epec/
Center to Advance Palliative Care (CAPC)	A program that provides a wide variety of primary palliative care courses for healthcare providers to become more effective at primary palliative care within the context of each profession • Trainees • Faculty • Advanced Practice Providers • Nurses • Social work • Case management • Counselors/therapists • How to access: Center to Advance Palliative Care. (2022). "Clinical Training Courses". From https://www.capc.org/training/
Best Case/Worse Case (BC/WC)	A free tool for surgeons to improve shared-decision making in the setting of high-risk surgical interventions. The toolkit is designed to create a framework for to help physicians discuss options with patients and families • Trainees • Faculty • How to access: University of Wisconsin-Madison. The Patient Preferences Project. (2022). "Best Case Worst Case (BC/WC) Toolkit". From https://patientpreferences.org/best-case-worst-case/
Society of Gynecologic Oncology (SGO) Connect ED	An online platform for SGO members that contains key educational content for gynecologic oncologists • Trainees • Faculty • How to access: Society of Gynecologic Oncology. "Connect ED: Content Library". Retrieved May 20th 2022, from https://connected.sgo.org

Table 4 (*continued*)

Table 4 (*continued*)

Program	Description and Target Audience
Options for specialty palliative care consultation and collaboration	
CAPC circles	Online community for virtual discussion among CAPC members. It provides opportunity to problem solve, network and generate solutions for issues related to provision of palliative care. The discussion boards are maintained by CAPC™ faculty and staff • How to access: Center to Advance Palliative Care. "CAPC Circles". Retrieved May 23, 2022, from https://www.capc.org/capc-circles/
Project ECHO	Utilizes Zoom technology to connect health care providers with specialists in regular online sessions designed around case-based learning and mentorship • How to access: University of New Mexico. "Project ECHO". From https://hsc.unm.edu/echo/
SGO Palliative Care Committee	This committee consists of SGO members with special interest in advancing palliative care in gynecologic oncology. Roster of members is available online through SGO • How to access: Society of Gynecologic Oncology. (2022). "Committee Rosters 2022-2023". From https://www.sgo.org/members-only/volunteer/committee-rosters/#palliative-care-task-force

education opportunities for current gynecologic oncology providers.

Gynecologic oncology fellow education

In surveys of gynecologic oncology fellows, researchers found that 89% of fellows felt that palliative care skills were integral to their training. However, only 11% reported having any formal palliative care training such as a rotation or fellowship. Consequently, fellows rated the quality of their palliative care teaching in end of life as significantly lower than other topics taught during fellowship training (55% *vs.* 92%) (41,42). When gynecologic oncology fellowship program directors were surveyed about their perception of palliative care curriculum, 100% of respondents were open to using different palliative care curriculum materials. At the time of the study, only 48% reported a required or elective palliative care rotation and only 14% reported having a written curriculum (41,42). These data suggest that gynecologic oncology fellows appreciate the importance of palliative care skills as part of their education, but illuminates an obvious training gap that must be addressed to better enable quality palliative care services for every patient.

Continuing education for practicing gynecologic oncologists

Given that palliative care topics have only been recently incorporated into Accreditation Council for Graduate Medical Education (ACGME) milestones Version 2.0, many practicing oncologists did not receive formal education on primary palliative care skills (43). There are no data exploring current gynecologic oncologists' comfort with providing primary palliative care. However, surveys among other surgical oncologists have reported that 76.1% of surgeon respondents reported no formal education in palliative care, 37.9% had inadequate training in techniques to forgo life-sustaining measures and 42.7% had inadequate training in communication (44). Given that practicing oncologists are responsible for not only providing palliative care to their patients, but also serving as teachers for current gynecologic oncology fellows, it is critical for all gynecologic oncologists to have opportunity to engage in continuing education in palliative care. There are many available opportunities, including educational sessions at SGO Annual Meeting, SGO Connect ED Palliative Care Education Series (launching in 2022), VitalTalk courses, CAPC Symptom Education Modules and a variety of other online CME courses available through both universities and hospital systems (38,40,45). In a study by Lefkowits *et al.*, gynecologic oncologists who participated in a two-day communication skills workshop reported statistically significant improvements in their ability to engage in challenging communication tasks (46). These findings suggest that even short, directed interventions can

produce meaningful impacts in clinical practice.

Vision for the future: formal education in primary palliative care for all gynecologic oncology trainees and providers

The need for improved primary palliative care education is supported by fellows, program directors, and practicing gynecologic oncologists. Yet, standardized education efforts are still not being implemented across the United States. The ACGME milestones for gynecologic oncology fellowship include an evaluation of fellows' primary palliative care skills, including symptom management, end of life care, and three domains of communication skills (interprofessional and team communication, critical cancer conversations, and patient and family-centered communication and shared decision making) (43). There are suggested competencies for Canadian subspecialty training in gynecologic oncology, but comprehensive palliative care skills are also not explicitly required in Canada (47). Trainees are unlikely to master primary palliative care skills if there is inconsistency in the quantity and quality of palliative care education when compared to other common procedural and oncologic competencies. The authors recommend that all gynecologic oncology fellowship programs should have minimum standards for fellow education. This should include at least a mandatory 4-week comprehensive palliative care rotation with inpatient, outpatient, and potentially, hospice experiences. Educational curricula can be supported utilizing pre-existing programs such as CAPC education module coursework in symptom management, completing the SGO Connect Ed palliative care coursework (launching in 2022), participating in Vital Talk lectures and communication training, as well as structured lectures through individual institutions (38,45,48). Additionally, palliative care skill training should be routinely incorporated into clinical service so that trainees receive a more longitudinal education in primary palliative care, i.e., weekly discussions regarding challenging end of life issues for patients on service. Through these efforts, our hope is that trainees would enter the workforce with competency in the milestones outlines by ACGME, which include complex patient communication, symptom management, and eliciting patients' goals of care.

Among practicing gynecologic oncologists, the authors recommend that all gynecologic oncology groups, particularly those with fellowship programs, elect a palliative care champion to lead integration of palliative care at their institutions. Ideally, this palliative care champion would have Hospice and Palliative Medicine (HPM) fellowship training in addition to Gynecologic Oncology. Champions without specialized fellowship training may seek additional continuing professional development to support their role, through courses such as VitalTalk faculty development training. The palliative care champions will serve as the leader within their gynecologic oncology groups for educating fellows and working to integrate palliative care into their institutions' gynecologic oncology practices. These leaders in palliative care should have the opportunity to serve on SGO's Palliative Care Committee. Doing so would foster a community of palliative care experts within the field of gynecologic oncology to continue advancing comprehensive cancer care for patients with gynecologic malignancies.

Summary of education recommendations

- All gynecologic oncologists should be able to define palliative care;
- All practicing gynecologic oncologists should receive education in primary palliative care skills, including difficult conversations, symptom management, and end of life care;
- All gynecologic oncologists should know when and how to refer patients for specialty palliative care consultation at their institution;
- Current gynecologic oncology fellows should receive primary palliative care education during their training to meet ACGME milestones, and there should be minimum standards that are required for all fellowship programs;
  - A minimum 4 week dedicated palliative care rotation;
  - All fellows complete CAPC courses in symptom management;
  - All fellows complete palliative care modules on SGO Connect Ed (launch in 2022);
  - All fellows participate in dedicated communication training, for example Vital Talk Serious Illness Communication and Mastering Tough Conversations workshops or Best Case/Worst Case communication tool training;
- All gynecologic oncology providers should recognize when a hospice referral is appropriate and assist their

patients with this transition in care.

Expanding the specialty palliative care workforce—gynecologic oncologists are an untapped resource to advance surgical palliative care

There is a dire need for additional palliative care providers. As of 2019, there were 7,408 physicians with hospice and palliative medicine certification and less than 2% of who completed residency in a surgical specialty (49). By the year 2030, there is a projected shortage of over 16,000 palliative care specialists, as the number of patients eligible for palliative care will grow by over 20% with no more than 1% growth in palliative care physicians (50). Surgeons are underrepresented in the palliative care workforce and are an untapped population to recruit and train as specialty palliative care providers.

In a study of surgeons who completed hospice and palliative medicine, key barriers to completion of specialty palliative care training were bias from surgeons and the palliative care community. Participants found that palliative medicine faculty members made assumptions that surgeons lacked the necessary knowledge and clinical attributes to succeed in a hospice and palliative medicine fellowship (51). These findings indicate that HPM fellowship directors and program faculty would benefit from education about the rigor of surgical residency training and how to incorporate surgical trainees into their fellowship programs, especially given that ACGME and ABME allow for a variety of trainees to apply and qualify for HPM certification (52).

Another potential barrier to the recruitment of surgeons into palliative care are the recent changes to maintenance of certification for palliative medicine. Previously, surgeons who were boarded by the American Board of Obstetrics and Gynecology (ABOG) or the American Board of Surgeons (ABS) could maintain their palliative medicine certification through their original board. Now, surgeons are required to maintain hospice and palliative medicine certification through the American Board of Internal Medicine (ABIM) and must meet all ABIM requirements to maintain subspecialty certification (53). These additional requirements placed on surgeons boarded through ABOG or ABS may deter surgeons from seeking or maintaining palliative medicine certification. Entry requirements to Royal College palliative care training programs in Canada also present a barrier.

Vision for the future: expand recruitment of palliative care specialists to include gynecologic oncologists

Given the impending crisis in the availability of specialty palliative care providers, the authors recommend that all palliative care fellowship program directors should actively recruit surgeons into HPM fellowship. In a study by Bassette *et al.*, surgeons with HPM training were asked about timing for completion of fellowship. The participants reporting completing hospice and palliative medicine fellowship at different points in their career—immediately after residency, after completing a surgical fellowship, and after years of working in practice. The surgeons in the study were highly satisfied with their training experience and felt that it was feasible for surgeons to complete HPM fellowship (54). Gynecologic oncology and HPM leaders must collaborate to grow the surgical palliative care work force. Having more surgeons as palliative care specialists will improve surgical trainee education in palliative care, improve patient care outcomes, and aid with the impending workforce shortage of palliative medicine providers.

To maintain surgeons in palliative medicine, the authors would recommend that the ABIM provide additional training and support for surgeons transitioning to the new Maintenance of Certification process. There is a need for rapid expansion in the number of palliative medicine providers and changes that further limit surgeons' ability to obtain and maintain subspecialty training will only worsen the palliative medicine workforce crisis.

Summary of recruitment recommendations

- The gynecologic oncology and hospice and palliative medicine communities should work together to promote gynecologic oncologists achieving hospice and palliative medicine fellowship training;
- All hospice and palliative medicine fellowships should accept and actively recruit surgical trainees.

Summary

Routine integration of primary and specialty palliative care into gynecologic oncology practice has the potential to improve quality of patient care and patient perceived outcomes, as well as decrease healthcare costs. To increase delivery of palliative care to gynecologic oncology populations, there needs to be additional research investigating implementation models in different resource

settings, including those without access to specialty palliative care. There is a shortage of specialty palliative care providers across the United States. Therefore, gynecologic oncology trainees and providers in practice need more robust education in primary palliative care skillsets in order to provide primary palliative care for their patients. To expand the palliative care workforce, gynecologic oncology and palliative medicine leaders must collaborate to recruit more surgeons into HPM fellowship programs to obtain specialty palliative care training. Through these efforts, we can improve quality of care and outcomes for patients with gynecologic cancers.

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Footnote

Reporting Checklist: The authors have completed the Narrative Review reporting checklist. Available at https://apm.amegroups.com/article/view/10.21037/apm-22-708/rc

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Conflicts of Interest: All authors have completed the ICMJE uniform disclosure form (available at https://apm.amegroups.com/article/view/10.21037/apm-22-708/coif). LS is the Vice-Chair of the Society of Gynecologic Oncology Palliative Care Committee (unpaid); MLP reports that he receives royalties from his institution's research foundation on behalf of LineaRx for research on circulating tumor cells, which has no relevancy to this manuscript. He has a patent for a surgical device that has no relevancy to this manuscript. Besides, he also serves on palliative care and other committees for the Society of Gynecologic Oncology and the International Gynecologic Cancer Society (unpaid); CL had participated in GSK ad board 2021 and she is the Chair of the Society of Gynecologic Oncology Palliative Care Committee (unpaid). The other authors have no conflicts of interest to declare.

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Supplementary

Appendix 1

The Future of Palliative Care and Gynecologic Oncology

Education and Recruitment:

What are the aspirational ways you would like to see palliative care education grow in the field of gynecologic oncology?

What ideas do you have regarding training medical students, residents, fellows in primary palliative care skillsets?

What should be the standard educational requirements for gynecologic oncology fellows in training? Obstetrics and gynecology residents? i.e. online modules, time spent on palliative care service

What ideas do you have regarding recruitment of gynecologic oncologists into the field of HPM? How could we facilitate entry into fellowship considering the unique needs of surgeons in training?

What ideas do you have regarding mentorship for HPM in gynecologic oncology? How would this differ for recent fellowship graduates versus those with a well-established practice?

Patient Care:

Where does palliative care need to grow in relationship to patient care for gynecologic cancer?

What are critical deficits that need to be addressed urgently?

How are you improving provision of palliative care for gynecologic cancer patients at your institutions?

How would you want to see palliative care applied to the outpatient practice of gynecologic oncology?

What ideas do you have for an optimal approach to application of palliative care skillsets to gynecologic surgery and hospitalizations for surgery?

How should we modify our practice model to improve access to palliative medicine consultation in the outpatient and inpatient setting?

What is the optimal time for exposure to palliative medicine in the trajectory of gynecologic cancer care?

Should palliative care be provided by the oncologist or an HPM trained provider?

How can we address disparities in uptake of palliative care services among underrepresented groups? Ie, women of color, rural populations, undocumented persons, sexual and gender minorities, women with criminal-legal involvement

Research and advocacy:

What are the research deficits in gynecologic oncology as it relates to palliative medicine?

How should palliative care be incorporated in the context of clinical trials?

What critical research questions are unanswered regarding HPM and gynecologic oncology?

What questions are unanswered about palliative medicine and survivorship for patients living with metastatic cancer?

How can we apply symptoms science more optimally in the field of gynecologic oncology?

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What surgical consent and counseling research questions are underexplored in gynecologic oncology?
What care giver /support questions are unanswered in gynecologic oncology that may be explored through a palliative medicine framework?

What education research questions need to be explored as they relate to HPM and gynecologic oncology?

How do we advocate for palliative care research to be a priority topic at national meetings, ie SGO or ASCO?

How do we advocate for research funding for research into palliative medicine and gynecologic oncology?

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