Palliative care benefits patients with cancer in the outpatient setting, and such care should be concurrently and routinely provided with oncology treatment.

New Frontiers in Outpatient Palliative Care for Patients With Cancer

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Background: Although much evidence has accumulated demonstrating its benefit, relatively little is known about outpatient palliative care in patients with cancer.

Methods: This paper reviews the literature and perspectives from content experts to describe the current state of outpatient palliative care in the oncology setting and current areas of innovation and promise in the field.

Results: Evidence, including from controlled trials, documents the benefits of outpatient palliative care in the oncology setting. As a result, professional medical organizations have guidelines and recommendations based on the key role of palliative care in oncology. Six elements of the practice sit at the frontier of outpatient oncology palliative care, including the setting and timing of palliative care integration into outpatient oncology, the relationships between primary and specialty palliative care, quality and measurement, research, electronic and technical innovations, and finances.

Conclusions: Evidence of clinical and health care system benefits supports the recommendations of professional organizations to integrate palliative care into the routine treatment of patients with advanced cancer.

Introduction

In fundamental ways, the field of palliative care has developed in the context of oncology, and the majority of both clinical palliative care service and palliative care research involves patients with cancer and is conducted in health care centers focused on providing oncology care. Although the development of palliative care began in the hospital setting for patients during their last days of life, end-of-life hospital care is but a part of the much broader approach to care defined by palliative care. Most patients spend most of their time outside of the hospital, either at home, in other residences such as assisted-living centers, rehabilitation facilities, and in outpatient medical offices.

Thus, outpatient or community-based palliative care is recognized as a key frontier in palliative care, and palliative care in the setting of oncology care is the core of that frontier.1 Six elements at the frontier of outpatient oncology palliative care are reviewed, including the (1) setting and timing of integrating palliative care into outpatient oncology, (2) the relationship between primary and specialty palliative care, (3) quality...
and measurement, (4) research, (5) electronic and technical innovations, and (6) finances.

Background

Palliative care is defined by the Center to Advance Palliative Care as “specialized medical care for people living with serious illness.”2 This type of care focuses on providing relief from the symptoms and stress of a serious illness, regardless of the diagnosis. The goal of such care is to improve the quality of life for both the patient and his or her family. A team of palliative care specialists, nurses, social workers, and other health care professionals collaborate to provide “an extra layer of support.” Because palliative care is appropriate for any patient, regardless of age or disease stage, it can be provided along with curative treatment.2 The National Cancer Institute defines supportive care as “care given to improve the quality of life of patients who have a serious or life-threatening disease.”3 We conceive of much of traditional oncology supportive care as included in the constellation of services offered as part of the field of palliative care. Others have argued that supportive care is a broader model than palliative care; however, many medical organizations, including the American Cancer Society and the National Cancer Institute, interchangeably use these terms.3,6

The field of palliative care grew out of the traditions of supporting patients facing the symptoms and distresses of illness within healing traditions generally and Western medicine specifically. With the failure of the Study to Understand Prognoses and Preferences for Outcomes and Risks of Treatment trial to improve the care of hospitalized patients at the end of life, the Robert Wood Johnson Foundation, the Soros Foundation, and others supported the development and growth of the field of palliative care.7 In 2006, palliative care was recognized by the American Board of Medical Specialties as a subspecialty of numerous boards of medicine and surgery. The American Academy of Hospice and Palliative Medicine and the Hospice and Palliative Nurses Association have offered a joint annual assembly since 2004, and the technical support provided by the Center to Advance Palliative Care has spurred on the development of an increasing number of inpatient palliative care services.8 The National Palliative Care Research Center (NPCRC) and the National Institute of Nursing Research (NINR)–funded Palliative Care Research Cooperative Group have fostered research in palliative care, with the NPCRC registry having compiled national operational data for inpatient services.9 In addition to the Palliative Care Leadership Center Initiative from the Center to Advance Palliative Care, other major international palliative care education is led by the End-of-Life Nursing Education Consortium.10,11 The California State University Institute for Palliative Care also offers online education for palliative care–related disciplines.12

Professional medical organizations have offered guidelines and recommendations about the role of palliative care in oncology.13-19 The National Comprehensive Cancer Network (NCCN) is conducting a study of palliative care services among its member organizations (personal communication, Jessica Sugalski, MPPA). Marking the philosophical, clinical, and financial alignment of palliative care and oncology, the American Society of Clinical Oncology (ASCO) launched the first annual Palliative Care in Oncology Symposium in October 2014.20

Benefits

The benefits of outpatient palliative care to patients with cancer and their families and health care professionals, in addition to the health care system, have been well documented in a series of studies.21-24 One review catalogued these benefits, noting that much of the research referenced came from studies in oncology.25 The most rigorous study designs include the randomized trials of early palliative care in non–small-cell lung cancer, telephonic palliative care for rural patients in a cancer center, and palliative care across 24 medical oncology clinics in Canada.22-24 Randomized studies demonstrate improved satisfaction, clinical outcomes, mortality, and health care utilization.21

In aligning patient care with individual patient preferences, palliative care helps to prevent unwanted, burdensome, and potentially ineffectual oncology-directed treatments at the end of life.25 The result of this impact on utilization is a demonstrated decrease in the overall cost of care in the setting of improved quality care in outpatient palliative care for patients with cancer.26-29 Palliative care in the oncology setting is helping to align quality and cost.30

Guidelines

In light of data demonstrating the benefits of palliative care for patients with cancer, ASCO issued a provisional clinical opinion that “combined standard oncology care and palliative care should be considered early in the course of illness for any patient with metastatic cancer and/or high symptom burden.”13 Thus, ASCO is signaling that palliative care is a routine part of standard oncological care for patients with advanced disease. The American College of Surgeons Commission on Cancer (CoC), which issues basic regulations for oncology centers in the United States, issued standard 2.4 in 2011 that requires these centers to have palliative care services on site or by referral.14 Although the CoC is not explicit about how this standard is enforced, the directive is a powerful statement about the central role of palliative care in standard oncological care.

The Institute of Medicine (IOM) also focuses on palliative care and has addressed palliative care in the
oncology setting. A palliative focus underlies the recommendation of the IOM and directive of the CoC to oncology centers for universal psychosocial distress screening. In addition, palliative care is part of the supportive care guidelines updated every year by the NCCN, and palliative care is included as a recommended resource in many of the other NCCN guidelines, including adult cancer pain and ovarian cancer, among others.

Prevalence and Characteristics of Care Services

Given the fundamental role of palliative care in oncology care and other care programs, relatively little is known about the prevalence and characteristics of outpatient oncology palliative care services on a national scale. In 2010, Hui et al assessed the institutionally reported prevalence of outpatient palliative care at US National Cancer Institute (NCI)–designated and non–NCI-designated comprehensive cancer centers. They reported that 59% and 22% of all NCI-designated cancer centers and non–NCI-designated centers reported an outpatient palliative care clinic, respectively. Rabow et al reported on established outpatient palliative care practices in the United States, noting that 80% of patients referred had cancer, and oncologists accounted for 76% of the overall referrers. In 2013, Smith et al described the general landscape of outpatient palliative care in the United States and found that the majority of referred patients had cancer. Unpublished data also add to our understanding of outpatient oncologic palliative care practice. In 2014, the NCCN obtained information about the presence of palliative care services from 18 of their 23 member institutions at that time, and all had inpatient palliative care services and 16 (89%) reported offering outpatient palliative care (personal communication, Jessica Sugalski, MPPA).

Although national data are limited, some individual states have sought to document the prevalence of outpatient palliative care services. Rabow et al studied outpatient palliative care practices affiliated with California hospitals and found that 7% of hospitals within California had affiliated outpatient practices (a proportion not significantly changed compared with a survey conducted 4 years earlier), with nearly one-half of referrals from oncology.

Many problems exist with these prevalence data. Prevalence estimates for the penetrance of palliative care in oncology centers may be overestimated due to inconsistent definitions of what constitutes outpatient oncology palliative care and the potential inaccuracies of self-reported survey data. Except for NCCN data, as yet unpublished, much of the data are not recent. Although increasing attention is being paid to outpatient palliative care and many institutions appear to be developing services, the evidence for rapid growth is scant. The study of outpatient palliative care affiliated with California hospitals suggested that, although new palliative care programs are developing, established programs are also disappearing to the point that the prevalence of outpatient palliative care may not be changing as many expect.

Regardless of the specific prevalence figures on local and national scales, the issue of greatest practical importance is how the capacity of outpatient oncologic palliative care compares to the need. ASCO’s recommendation for routine palliative care for all US patients with metastatic cancer or high symptom burden suggests shortages of workforce and clinical capacity. With the support of the California HealthCare Foundation, Kerr et al assessed the outpatient palliative care capacity in California, including information about the presence of outpatient palliative care services from oncology centers. They estimated a range of need for palliative care based on estimates of the number of all deaths in California and the number of deaths from 7 illnesses, including cancer, thus accounting for the majority of nontraumatic deaths in the state. Their estimate suggests that the current capacity for outpatient palliative care (oncological and nononcological) in California is 24% to 37% of the need, with no type of palliative available in nearly 40% of California counties. An international study demonstrated that most oncology palliative care specialists felt their institutions were unlikely to expand palliative care services due to financial constraints.

Although the national prevalence and sustainability of outpatient oncological palliative care programs is not precisely known, interest in the field exists and there are many exciting areas of innovation and growth. Six of these areas are reviewed below.

Integration of Care Setting

Palliative care specialists seek to integrate palliation within routine oncology care to improve clinical quality. However, despite widespread calls for integration, no consensus exists about how this is best done. We do not have a clear vision of what constitutes integration or the added value of various elements of integration. At a basic level, integration is influenced by the setting of palliative care. Although stand-alone palliative care clinics in academic medical centers were some of the first outpatient palliative care services offered to patients with cancer, palliative care services are “embedding” into oncology practices. Embedded clinics improve the potential for palliative–oncological integration and collaboration, and they increase convenience for patients able to avail themselves of “one-stop” clinical care. Embedded care requires enhanced palliative care competencies for nurses and social
workers in these clinics in order to provide interdisciplinary palliative care.45

The precepts of patient-centered care suggest the need for services available to patients with cancer throughout the course of their disease and wherever that patient is living (home, long-term care, rehabilitation facility). Those in outpatient palliative care are recognizing the need for more home-based palliative care services.46,47 Providing “palliative care everywhere,” including in the gaps of care between health care transitions and at night and on weekends, is likely to be necessary to prevent the inefficient utilization of emergency departments and acute care hospitals for preventable symptom-management burdens.48

Although patients who are homebound due to advanced cancer may also be too disabled to benefit from chemotherapy, oncologists may be able to extend the care of homebound patients with orally targeted therapies and home-based palliative care. In fact, home-based palliative care is increasingly recognized as key for patients who are homebound or nearly so and have significant symptomatology but do not qualify for home hospice because of a prognosis longer than 6 months, patient refusal of hospice, or the desire to receive concurrent oncological or other disease-management services (eg, blood transfusions, artificial nutrition) along with palliative care.49 This includes specialty oncology home services that offer monitoring of home infusion of chemotherapy and other fluids.49

Given resource and workforce limitations, innovative palliative care programs are collaborating with hospice organizations or home-based medical and assisted-living services that often have the expertise and capabilities to provide palliative care at home, including in rural and challenging urban settings.49

Timing
Outpatient palliative care allows patients with cancer to be seen early in the course of their illness.29 Potential benefits of early outpatient oncology palliative care include aggressive management of adverse events and symptoms, longitudinal psychosocial support for patients and their caregivers, and the facilitation of conversations on the understanding of illness, prognostic understanding, and transitions of care as agreed upon by the health care team.

A growing body of literature suggests that early outpatient palliative care is beneficial.22-25,29,50 Three randomized control trials of early, integrated palliative care plus oncological care compared with standard oncological care alone reported improvements in quality of life, depression, and satisfaction among patients with advanced cancer and limited prognoses.22-24,50 Temel et al22 found that 151 patients with newly diagnosed non–small-cell lung cancer had a 2.5-month longer survival rate when they were randomized to early palliative care. Early palliative care has also been associated with reduced health care utilization in studies comparing early palliative care with usual oncology care and late palliative care (ie, > 90 days or < 90 days before death).22,25,29

However, the optimal timing of outpatient palliative care involvement to maximize clinical benefit remains unknown. A recent study randomizing patients with advanced cancer to early in-person outpatient palliative care consultation plus nursing telephonic coaching sessions (within 30–60 days of diagnosis) or late sessions (approximately 4 to 5 months after diagnosis) found no improvements in patient outcomes (eg, quality of life) or health care utilization.23 However, the same study found a 15% improvement in rate of survival for patients receiving early palliative care.23 The results of this study raise questions regarding the optimal timing of palliative care interventions along with the mechanisms that contribute to increased survival rates.23 Further complicating the question of timing is that the benefits of palliative care may differ by cancer type and prognosis. Additional research is needed to guide when, along a patient’s cancer journey, palliative care can have the most reliable and effective impact.

In most referral systems, outpatient oncologists play a crucial role in deciding on the need for and timing of palliative care referral.51 Although a significant increase has been seen in the use of palliative care by oncologists overall, data from a national survey suggest that a minority of oncologists frequently refer their patients to pain or palliative care specialists.52,53 Furthermore, when referrals do occur, they tend to be late in the patient’s illness course, typically 30 to 60 days before death.54 Potential explanations for the lack of referrals or late referrals include the misperception by the oncology team members that palliative care means end-of-life care, concern that referral will cause patients to feel defeated, frightened, or lose hope, limited access to services, not knowing the appropriate time to refer, and under-recognition of the patient concerns that might benefit from palliative care consultation. One study found significant differences between the reasons an oncologist referred to palliative care compared with a comprehensive screening system.55

Currently, no national standards for outpatient palliative care referral exist. Identifying reliable markers and developing standardized screening tools to trigger timely outpatient palliative care referral would likely address some barriers to referral and help integrate palliative care into oncology care. Potential indicators could include prognosis using validated prognostic models, index hospitalization for symptom management or loss of function, development of increased symptom burden, referral of patients with cancers with historically poor prognoses and/or high symptom burden, or progression after first-line chemotherapy.
Primary vs Specialty Palliative Care

The future of comprehensive cancer care includes palliative care beginning at diagnosis and, in particular, for advanced disease. Given both the need for and benefits of providing palliation in the oncology setting, as well as the shortages of health care professionals specializing in palliative care, the development of primary palliative care training and competence among oncologists is key. With mandates from ASCO, CoC, NCCN, and IOM for palliative care as part of comprehensive cancer care, outpatient oncology care necessitates that all health care professionals providing oncology care have primary palliative care skills as well as access to palliative care specialists.13-19 All oncologists must learn to understand basic palliative care concepts and to appropriately utilize palliative care as part of comprehensive, patient- and family-focused care.

A distinction is emerging between primary palliative care and specialty palliative care within oncology care.66 Although both settings pertain to pain and symptom management and communication, clear delineations exist in skills (Tables 1 and 2).56-59 Primary palliative care addresses relief of symptoms, including basic management of pain and symptoms (eg, depression, anxiety) and communication skills. Oncology physician fellowships offer an overview of palliative care, symptom management, and communication skills. Oncology nurses may receive education in common symptoms for specific cancers and management of those symptoms. Other specialized programs, such as End of Life Nursing Education Consortium and Education in Palliative Care and End-of-Life Care for Oncology, focus on the care of patients with cancer.57,61 Another program for psychologists, social workers, and spiritual care professionals is the Advocating for Clinical Excellence: Transdisciplinary Palliative Care Education.62 In real time, the collaboration around individual patients between specialty palliative care teams and oncology teams can create opportunities for cross education. In clinical work together, oncologists can learn primary palliative care concepts and palliative care specialists can learn about primary oncology concepts.

Beyond education, new paradigms of primary palliative care in oncology are evolving. One model is an oncology nurse navigator who employs primary palliative care skills to address patient symptom needs, engage patients in their care through advance care planning, provide emotional support, and communicate

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<tr>
<th>Table 1. — Primary and Specialty Palliative Care in Oncology Care</th>
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<tr>
<td><strong>Primary</strong></td>
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<tr>
<td>Basic symptom management of physical and psychological symptoms</td>
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<td>Cancer-related pain</td>
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<tr>
<td>Depression</td>
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<tr>
<td>Anxiety</td>
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<td>Relief of symptoms</td>
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Communication
Cancer prognosis Goals of treatment Communication Conflict management within the circle of patients, families, and health care team

Advance care planning Ethics (in particular, medical futility)


Table 2. — Importance of Palliative Care as Part of Cancer Care

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<th>Goals</th>
<th>Action</th>
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<td><strong>Primary Palliative Care Recommendations</strong></td>
<td><strong>Specialty Palliative Care Recommendation</strong></td>
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<tr>
<td>The cancer care team should provide patients and their families with understandable information on cancer prognosis, treatment benefits and harms, palliative care, psychosocial support, and estimates of the total and out-of-pocket costs of cancer care.</td>
<td>Members of the cancer care team should coordinate with each other and with primary/geriatrics and specialist care teams to implement patient care plans and deliver comprehensive, efficient, and patient-centered care.</td>
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<td>In the setting of advanced cancer, the cancer care team should provide patients with end-of-life care consistent with their needs, values, and preferences.</td>
<td>Academic institutions and professional societies should develop interprofessional education programs to train the workforce in team-based cancer care and promote coordination with primary/geriatrics and specialist care teams.</td>
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<tr>
<td><strong>Specialty Palliative Care Recommendation</strong></td>
<td><strong>All individuals caring for patients with cancer should have appropriate core competencies.</strong></td>
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<td>Cancer care delivery organizations should require that the members of the cancer care team have the necessary competencies to deliver high-quality cancer care, as demonstrated through training, certification, or credentials.</td>
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with the oncology team about care needs.65 Other palliative care teams have reported on their primary palliative care education for oncologists.64

Even in the setting of primary palliative care by oncologists, specialist palliative care teams can improve the overall care of patients with cancer.65-72 Specialty palliative care includes the complex management of refractory pain and symptoms, addressing grief and existential distress, and medical futility, as well as more advanced communication such as management of conflict among patients, families, and the health care team. A qualitative review of a small sample of patients with lung cancer who had early intervention specialty palliative care received a range of services, including psycho/spiritual/emotional support, symptom management, advance care planning, and promotion of illness understanding.65 Other studies have demonstrated better symptom control and earlier referral to hospice with specialty palliative care.66,67 By reducing and relieving the stress of care, specialty palliative care saves oncologists time and allows the oncology team to focus on cancer treatment.68,69 Implementation of specialty palliative care within oncology varies and can include palliative care teams that have clinical space in the oncology clinic and are embedded into care delivery, advanced-practice oncology nurses or oncologists who provide oncology care on one day and specialty care on other days, and specialty palliative care clinics within the community.70-72

The relative roles and balance of responsibilities between primary and specialty palliative care teams in the outpatient setting remain to be clarified, but they will need to individualized based on resources, expertise, and access to specialty health care professionals. Integration of primary and specialty palliative care is likely to vary depending on whether the oncology practice is part of an independent practice, hospital, or large health care system.

Quality and Metrics

The theoretical benefits of outpatient palliative care services or an informal sense of patient and clinician satisfaction were historically sufficient to justify support for services. However, increasingly, outpatient palliative care is being challenged to demonstrate its quality objectively, similar to other fields of medicine. This has ignited a broad conversation about how the quality of outpatient palliative care can be best measured.

The American Academy of Hospice and Palliative Medicine and Hospice and Palliative Nurses Association convened a working group to review the existing literature about quality measures in palliative care and to select 10 measures considered to be the highest priority because of their scientific validity and clinical utility to promote across the field.73 The majority of quality metrics prioritized by this initiative pertained to either hospice or inpatient palliative care, because these are the settings in which most of the research has been done.74 An important next step will be to determine how they should be extrapolated to the outpatient palliative care in oncology centers. Similarly, the National Quality Forum formally endorsed 13 quality measures for palliative care in 2012, but the majority of these pertain to patients in the hospital or hospice settings; 1 measure is specifically tailored to measure the quality of outpatient palliative care at oncology centers.75 The Quality Oncology Practice Initiative is an oncologist-led quality assessment program that has promoted a unified set of quality measures for oncology since 2011.76 Its list of metrics includes several that pertain to palliative care, including pain assessment and management, dyspnea assessment, constipation assessment, management of nausea and emesis, provision of hospice and palliative care, and location of death.77 Although evidence for these activities is abstracted from oncologist notes, more complete information about the quality of care that patients with cancer receive could be determined by also examining the work of palliative care specialists. The American College of Surgeons CoC set a new standard to be implemented by 2015 stating that all patients with cancer must be screened at least once for distress and social concerns using a survey instrument (eg, distress thermometer).18,78 The role of palliative care specialists in performing or responding to screening has not yet been determined, but having a robust plan will be critical to respond to the distress identified.

Traditionally, quality metrics considered for outpatient palliative care are intended for patients being evaluated by palliative care specialists. However, an even larger — and unanswered — question is how to measure and improve the quality of the primary palliative care that oncology teams provide to patients.

In addition to establishing consensus quality metrics for palliative care, methods must be developed to collect and share standardized data across outpatient palliative care programs to benchmark and drive improvement. The Palliative Care Quality Network and the Quality Data Collection Tool provide 2 formats for the prospective collection and comparison of standardized palliative care data.79,80 Prospective data collection makes it possible to obtain patient-reported outcomes in a standardized way, thus allowing for quality improvement efforts that target clinical outcomes (eg, constipation improvement) rather than just processes of care (eg, treatment of constipation). These organizations also provide opportunities for the collaboration of coordinated quality improvement projects across sites that may enable greater gains in quality and safety than any single program could make alone.79,80

Robust measurement, reporting, and quality improvement are important next steps for outpatient pal-
liative care to help ensure the best care for our patients and to continue to earn the confidence of oncology specialists.

Research
Recognizing its growing importance, prominent entities such as the IOM, the Patient Centered Outcomes Research Institute, and the National Institutes of Health have recommended that palliative care research become a national priority. Many unanswered questions warrant research in outpatient oncology palliative care. The study by Temel et al raised a number of key questions, including whether the benefits seen in patients with non–small-cell lung cancer can be generalizable to patients with other cancers, whether their study results can be generalizable to other oncology centers, whether palliative care focused on those with metastatic disease would show the same benefit in if provided to those without metastases, and, of the 7 key elements of palliative care in their intervention, which one would account for the most benefit and which ones are true across different cancers in different settings.

Other important research questions in outpatient oncology palliative care include which models of care offer the most effective patient-centered approach to care and which patient and treatment factors contribute most to poor quality of life and how these factors can be modulated to improve patient wellbeing. In 2013, the National Institute of Nursing Research launched the Innovative Questions initiative. The goal of this initiative was to initiate a dialogue with the National Institute of Nursing Research stakeholders to identify novel scientific questions. Two of the topic areas were of particular relevance to outpatient oncology palliative care: symptom science and end-of-life/palliative care. A number of these questions directly related to outpatient oncology palliative care research (Table 3).

Investigators, health care systems, and national organizations are seeking to facilitate research into these questions. The NPCRC promotes palliative care research in an era where many palliative care researchers work in isolation with few other collaborators in their institution. The NPCRC also helps to develop junior investigators and supports research that can be rapidly and directly translated into improved clinical practice. The Palliative Care Research Cooperative Group focuses on answering research questions that cannot be easily answered at a single site. It provides infrastructure for efficient, multisite palliative care research by offering a network of motivated, coordinated, investigators/sites that create capacity for multisite research, as well as methods, tools, and processes that promote the timely and valid conduct of robust cooperative group research. These 2 organizations support oncology palliative care research and seek to facilitate investigator development in research oriented toward oncology palliative care.

Technology
To comprehensively care for patients across the continuum of oncology care (in hospitals, clinics, home, and in the community), the future of outpatient palliative care in the oncology setting will depend on technological innovations. Technology is beginning to address barriers of space, time, and the limited clinical availability of specialty expertise, and it will be useful as part of a number of the elements of outpatient palliative care in the oncology setting.

Technology can provide patient education and support. Beyond how patients and families use social media, support groups are available online with and without professional facilitation, and smart phone applications and websites exist to assist patients and families with symptom assessment, advance care planning, and family caregiver support. The applicability and benefits of a select number of these services have been evaluated. Telephonic and video health technology can provide effective clinical care for patients unable to travel due to disability or distance. Few interventions have been rigorously evaluated. Patient outcomes electronically reported are the core to some of these technologies and this will be facilitated by developments in what has been called the “quantified self.”

Table 3. — Selected Items From the Innovative Questions Initiative

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<th>Question</th>
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<td>How do we overcome barriers in underserved, hard-to-reach populations to implement culturally congruent, patient-, and caregiver-centered palliative care strategies?</td>
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<tr>
<td>What oncology palliative care interventions/strategies best align with patient and caregiver goals?</td>
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<tr>
<td>How do type, intensity, complexity, and fluctuation of symptom burden in oncology patients impact individual and family goals for care?</td>
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<td>What are the best models for community-based oncology palliative care?</td>
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<tr>
<td>What are the strategies for assessing caregiver preparedness and self-care abilities for oncology palliative care early in the illness trajectory?</td>
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<td>For symptom management at the end of life, what are the best minimally invasive methods to monitor functional status, physiological status, and patient reported outcomes?</td>
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<td>What electronic data collection methods can be used by health care professionals to monitor, evaluate, and improve palliative/end-of-life care?</td>
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<tr>
<td>What are the best ways to measure patient reported outcomes using standardized, widely used instruments or common data elements?</td>
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life-sustaining treatment paradigms and advance directives, can be stored and accessed online, improving care across the continuum of sites over time. Patient privacy and Health Insurance Portability and Accountability Act concerns must be addressed as clinical care, patient-reported outcomes, and storage of these data and other health documents occur electronically and move online and, thus, outside the physical boundaries of individual medical centers and across state and national lines. The potential for better care from analysis and research using “big data” is profound. Technology can also increase the efficiency of primary palliative care education and consultation. Educational curricula can be shared within computerized health systems and electronic medical records, as well as online. Palliative care specialists can provide e-consults to treating oncologists at a distance.

Financing
In a fee-for-service system for oncology care, the incentives of individual oncologists and hospitals are aligned with the provision of multiple treatments and services (volume-based payment) without respect to the value of those treatments and services.22 The future of oncology care likely involves the ongoing development and penetration of more global health care budgets, including for oncology care, in which efficiency and value (both clinical benefits and cost) are scrutinized and incentivized. ASCO recommends the early integration of palliative care as part of comprehensive oncology care, in which efficiency and value (both clinical benefits and cost) are scrutinized and incentivized. ASCO recommends the early integration of palliative care as a way to improve quality and value, thus reducing the rising costs of oncology care at the end of life.30,95 Although most research documenting the cost effectiveness of palliative care has been conducted in the inpatient setting, outpatient oncology palliative care has demonstrated its role as part of comprehensive oncology care to improve the efficiency of health care utilization, thereby helping to control costs.12,25,94,95 Palliative care in the outpatient oncology setting will continue to be defined by the historical alignment of quality and cost in today’s environment of health care reform.

Conclusions
Evidence suggests that palliative care in the outpatient oncology setting is beneficial. As a result, professional organizations have issued guidelines and recommendations about the role of palliative care in oncology.13-19 Palliative care is integral to quality comprehensive care for patients with symptoms from cancer, advanced disease, or other serious illness.38,95 Six areas are at the forefront of outpatient palliative care for patients with cancer, including (1) the setting and timing of palliative care integration into the outpatient setting, (2) the relationship between primary and specialty palliative care, (3) quality and metrics, (4) research, (5) electronic and technology innovations, and (6) health care financing. Experts in these frontiers have also begun to address the profound challenge of workforce shortages in specialty palliative care. Through the successful integration of oncology and palliative care, all patients with cancer should be able to receive standard, comprehensive, integrated care that allows them to live as long and as well as possible.

References