Palliative care should be initiated early in the treatment continuum of cancer.

Background: Patients with cancer have complex physical, psychosocial, and spiritual needs that evolve throughout their disease trajectory. As patients are living longer with a diagnosis of cancer, the need is growing to address the morbidity due to the underlying illness as well as treatment-related adverse events. Palliative care includes treating physical symptoms as well as addressing psychosocial and spiritual needs. When these needs are addressed, the quality of care improves, costs decrease, and goals are aligned between the medical care provided and the patient and family. However, how best to integrate palliative care into oncology care is still an area of investigation.

Methods: The authors conducted a literature search, including randomized clinical trials and practice reviews, to evaluate the evidence for integrating palliative care into oncology care. Barriers to integration as well as sustainable paths forward are highlighted. The authors also utilize case studies as representative examples of integration.

Results: Current studies demonstrate that integrating palliative care into oncology care improves symptom control, rates of patient and family satisfaction, and quality of end-of-life care. However, for systemwide integration to be successful, commitment must be made to quality improvement, an infrastructure must be built to support palliative care screening, assessment, and intervention, and stakeholders must be engaged in the program. In addition, value must be demonstrated using metrics that affect quality, care utilization, and patient satisfaction.

Conclusions: Even though most US cancer centers have a palliative care program, palliative care remains limited in scope. An integrated approach for palliative care with oncology care requires a systems-based approach, with agreement between all parties on shared common metrics for value.

Integrating Palliative Care Into Oncology: A Way Forward
Kavitha Ramchandran, MD, Erika Tribett, MPH, Brian Dietrich, MD, and Jamie Von Roenn, MD

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Conclusions: Even though most US cancer centers have a palliative care program, palliative care remains limited in scope. An integrated approach for palliative care with oncology care requires a systems-based approach, with agreement between all parties on shared common metrics for value.

Introduction
Significant progress has been made in the management and treatment of cancer, but morbidity rates continue to increase.$^{1,2}$ An estimated 1,658,370 new cancer diagnoses and 589,430 cancer-related deaths are expected to occur in the United States in 2015.$^3$ These data reflect a 22% decline in overall cancer mortality, translating to approximately 1,519,300 fewer cancer-related deaths from 1991 to 2011.$^{3,4}$ This decrease in mortality may be associated with an increase in cancer morbidity, because a growing number of survivors experience the late-onset and long-lasting effects of cancer and its treatment.$^2$ Patients and families experience physical, psychological, and spiritual symptoms throughout the disease trajectory, sometimes leading to poor quality of life and suboptimal treatment outcomes.$^5$

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Palliative care can help relieve symptoms and improve well-being in patients and their families living with a serious illness. The World Health Organization (WHO) defines palliative care as:

An approach that improves the quality of life of patients and their families facing the problems associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual.

Palliative care should be initiated at the point of diagnosis and continued throughout survivorship and end of life. Many pivotal studies have demonstrated improvements in outcomes when palliative care is integrated into the continuum of care, including quality of life, mood, the utilization of health care, patient satisfaction, patient understanding of prognosis, and survival.

**Call for the Integration of Palliative Care**

Major organizations, such as the American Society of Clinical Oncology (ASCO), National Comprehensive Cancer Network (NCCN), Institute of Medicine (IOM), WHO, and the European Society for Medical Oncology (ESMO), endorse the integration of palliative care into comprehensive cancer care. ASCO published a vision for optimal oncology care for 2020 that identified integrated palliative care as an essential component of optimal cancer care. In a provisional clinical opinion, ASCO recommended integrated care for all patients with metastatic disease or high symptom burden. NCCN developed guidelines to facilitate the integration of palliative and oncological care with schematics for screening, assessments, interventions, reassessment, and after-death care. IOM explains that involving palliative care is a requirement for comprehensive care. WHO developed guidelines in 1990 for providing palliative care to patients with malignancy. ESMO has been a strong proponent of integrating palliative and cancer care. As a component of this effort, it created an accreditation program to identify cancer programs with well-integrated palliative care services.

**Barriers**

Significant barriers still prevent the effective integration of palliative care into the continuum of cancer care. Such barriers include an inadequately trained workforce, cultural stigma (eg, palliative care equates to end-of-life care), lack of payment models supporting early and regular palliative care, and a need for well-defined metrics for quality palliative care. In addition, guidance on methods for integration is lacking. At a minimum, integrating palliative care into cancer care requires 3 components: (1) routine identification of palliative care needs through screening, (2) standardized assessment of palliative care needs, and (3) management and treatment of identified needs. Clarity is lacking on how to accomplish all 3 areas.

Moving from evidence to practice requires an understanding of the barriers and strategies to identify, assess, and manage palliative care needs. This review will focus on key lessons learned from randomized controlled trials focused on the integration of palliative care and provide possible strategies for implementing and integrating scalable, patient- and family-centered models of palliative care into cancer care.

**Evidence and Implications**

Providing concurrent palliative care and standard care for the management of cancer has proven benefits. Studies of integrated care in the inpatient/hospital or home setting have shown that the addition of palliative care to standard care reduces hospital-based costs and improves the quality of end-of-life care and symptom management. Because medical oncology is increasingly provided in the ambulatory setting, more relevant data to assess the impact of integrating cancer and palliative care arise from studies performed in the outpatient setting. The results of 3 randomized controlled trials demonstrated improved outcomes for study participants randomized to the palliative care intervention. An investigation of these studies provides insights for the integration of palliative medicine into cancer care.

Temel et al randomized 151 patients with newly diagnosed metastatic lung cancer to receive either early palliative care in conjunction with standard oncology care or standard oncology care alone. Early palliative care consisted of a visit with a palliative care team at intervals of at least 30 days, from the point of diagnosis until end of life. Outcomes measured included changes in mood and quality of life, aggressiveness of end-of-life care (chemotherapy ≤ 14 days before death, lack of hospice care, or admission to hospice ≤ 3 days before death), and understanding of prognosis. Study patients assigned to the integrated palliative care arm had significant improvement in quality-of-life scores compared with those assigned to the standard oncology care (P = .03), as well as fewer depressive symptoms (P = .01) and less-aggressive, end-of-life care (P = .05). Despite less-aggressive, end-of-life care, study patients in the concurrent palliative care arm had prolonged rates of survival compared with those assigned to the standard treatment arm (8.9 vs 11.6 months; P = .02). In addition, those in the integrated care arm had a more accurate understanding.
of their prognosis, were more likely to have resuscitation preferences documented, and were less likely to receive chemotherapy at the end of life than their counterparts (9% vs 50%; \( P = .02 \)). At baseline, approximately one-third of all study participants said they thought their disease could be cured with treatment. The investigators hypothesized that this decreased utilization of chemotherapy at the end of life may account for the improved survival rates.

In Project Educate, Nurture, Advise, Before Life Ends, Bakitas et al9 led a randomized study of a computerized educational intervention in a rural setting. A total of 312 patients with advanced solid tumors and life-limiting prognoses (approximately 1 year) were randomized to receive usual care or usual care plus nursing intervention. The nursing intervention was based on a chronic care model that focused on patient empowerment and encouraged patient self-management and problem solving. It consisted of 4 weekly sessions focused on symptom management, communication and social support, problem solving, and advance care planning, followed by at least monthly telephone contact. Outcomes measured included symptom intensity, quality of life, mood, and resource use. Compared with those in the usual care group, those in the intervention group reported significant improvement in quality of life (\( P = .02 \)), depression (\( P = .02 \)), and a favorable trend in symptom intensity (\( P = .06 \)). No difference was seen in the use of health care resources between the study groups, as measured by the number of emergency department visits or days in the hospital or intensive care unit. Bakitas et al concluded that a nurse-led intervention had the potential to impact quality of life and mood, but it was less likely to impact symptom intensity or resource utilization. Rather, they hypothesized that a more intensive intervention (eg, in person) might be more likely to significantly impact symptoms and resource use, although they admitted that such a model is less feasible for patients living in rural areas.

A Canadian trial by Zimmerman et al10 also supports the finding that the early integration of palliative care into cancer care in the outpatient setting improves patient outcomes. This cluster-randomized controlled trial of 461 patients with advanced solid tumors from 24 clinics in Toronto, Canada, assessed the impact of early consultation and follow-up by a palliative care team in addition to standard oncology care compared with standard cancer care alone. Eligible participants had advanced cancer and a clinical prognosis of between 6 and 24 months. Those in the intervention arm had an initial consultation with a palliative care team and at least monthly follow-up visits. Outcomes measured included symptom severity, quality of life, satisfaction with care, and patient/family difficulties communicating with their health care team. At 3 and 4 months, patients in the intervention arm reported improvements in quality of life (\( P = .05 \) and \( P = .003 \), respectively) and satisfaction with care (\( P = .0003 \) and \( P < .001 \), respectively). Improvement in symptom severity was noted at the 4-month time point alone (\( P = .05 \)). The authors noted that quality of life is a broad construct that can improve, even when a change in symptoms is lacking.

The randomized trials conducted by Temel et al,8 Bakitas et al,9 and Zimmermann et al10 provide key lessons for integrated practice, including (1) the benefits of normalizing the standard integration of palliative care for all patients, (2) the impact of integrating palliative care on the psychosocial domain of care, and (3) the need for sustainable management of palliative care resources and value-driven metrics.

**Normalizing Palliative Care**

Among the 3 randomized controlled trials presented, all patients in the intervention arms were connected to palliative or supportive consultation. Temel et al8 attributed some benefits of the intervention to immediate eligibility and enrollment of patients with a new diagnosis of advanced cancer. Also notable is that the study dropout rate was 1%, suggesting that, once initiated, utilization of palliative care may be driven by patient satisfaction, family member satisfaction, or both. A national poll conducted by the Center to Advance Palliative Care revealed that 7 out of 10 people are unfamiliar with palliative medicine, but, once it was described or offered to them, 92% said they would consider it as support to improve quality of life and symptom management. In addition, the results of a qualitative study from Schenker et al24 suggested that patients with unmet physical and psychosocial symptoms are likely to perceive a need for specialist palliative care. No significant association was seen between perceived need and likelihood to request palliative services. However, patients were more likely to see palliative specialists if their oncologist recommended the service. Based on these data, educating the public and establishing palliative care as a standard of care at the time of a cancer diagnosis is likely to be acceptable to patients and families. In addition, oncologists are key players in introducing patients to and supporting palliative care for those with an identified need.

**Psychosocial and Decision-Making Support**

Palliative medicine is traditionally associated with the management of physical symptoms and transitioning to end-of-life care. However, evidence suggests that palliative medicine can be a source of psychological and decision-making support. In the study by Temel et al,8 the palliative care clinicians in
the trial focused their attention on assessing psycho-social symptoms, establishing goals of care, assisting with decision-making regarding treatment, and coordinating care. This focus was associated with significant improvement in quality of life, decreased depressive symptoms, and greater understanding of prognosis among the study participants. Likewise, Zimmerman et al. realized a more pronounced impact on quality of life than on physical symptoms as a result of the palliative care intervention. Bakitas et al. also found a positive effect on quality of life and mood in the palliative care intervention group.

A summary of evidence in support of the early integration of palliative care proposed the following dominant mechanisms by which palliative care may affect outcomes: psychological support, knowledge of illness, and coping behaviors (Fig 1). Caring for psychosocial health, as well as empowering decision-making skills for patients and families, is integral to optimal cancer care.

**Sustainable Management of Palliative Resources**

Primary palliative care is defined as the “basic skills and competencies required of all physicians and other health care professionals.” For example, primary palliative care may include neuropathy management by an oncologist during routine care. Secondary palliative care refers to practices of “specialist physicians and organizations that provide consultation and specialty care.” Specialists may be consulted when symptoms are challenging to control with initial interventions (eg, complex pain syndromes, refractory anxiety; Fig 2).

Temel et al. utilized a high-resource, specialist model in which patients met with their assigned palliative care clinicians in coordination with their oncologists. Alternatively, Bakitas et al. described a...
nurse-led approach that equipped the nursing team with palliative care skills, including didactic training and reference tools, and incorporated patient self-management. Both interventions realized significant improvements in quality of life and depression.\(^8,9\) Given the increased palliative care needs of people affected by cancer and the limited specialist workforce, models such as Project Educate, Nurture, Advise, Before Life Ends that utilize scripted interventions to build capacity for palliative care are critical to the sustainable provision of services.\(^9\) Scalable models for palliative care integration will require education of all health care professionals who provide primary palliative care as well as adequate support (eg, time, reimbursement). In addition, appropriate guidelines and referral criteria must be put into place for specialist support.

**Establishing Standard Measurements and Defining Value**

Integrating palliative care into oncology could have a higher likelihood of success if its value is clearly defined and accurately and consistently measured.\(^28,29\) In addition, clarity is needed on which components of a palliative care intervention affect which outcomes. For example, what interactions and with whom are absolutely necessary to achieve improved psychosocial well-being? The randomized studies by Temel et al,\(^8\) Bakitas et al,\(^9\) and Zimmemann et al\(^10\) all included well-defined primary and secondary outcome measures. Comparisons between interventions and future investigations require an accepted common set of quality indicators that reflect the goals and scope of the specialty.

Several groups have proposed quality metrics for palliative care.\(^28-31\) ASCO’s Oncology Practice Initiative includes metrics on symptom measurement (pain, dyspnea, constipation) as well as quality of end-of-life care (time on hospice, location of death).\(^30\) The Center to Advance Palliative Care also convened a panel to establish a common set of metrics to measure patient/family, clinical, operational, and financial outcomes (Table 1).\(^31\) Its consensus recommendations included metrics for symptom assessment, goals of care, family support, and transition management. It also recommended measurements of satisfaction among patients, their family members, and the health care team. Kamal et al\(^28\) reported on the landscape of quality measures relevant to palliative care utilizing domains defined by the National Quality Forum (Table 2). They identified metrics in physical, psychological, cultural, social, ethical, end of life, and spiritual care.\(^28\)

<table>
<thead>
<tr>
<th>Categories</th>
<th>Common Metrics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient/family</td>
<td>Satisfaction scores</td>
</tr>
<tr>
<td>Clinical</td>
<td>Symptom control scores, Psychosocial assessment scores</td>
</tr>
<tr>
<td>Operational</td>
<td>Demographics, Disease diagnosis and staging, Referring health care professional, Emergency department visits, Hospital admissions/readmissions, Hospital and intensive care unit lengths of stay, Hospice referral</td>
</tr>
<tr>
<td>Financial</td>
<td>Daily pre- and post-consultation hospital cost, Net loss/net gain for inpatient deaths</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Care Domain</th>
<th>Example Metrics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical</td>
<td>Symptom assessment and management (pain, dyspnea, fatigue, nausea)</td>
</tr>
<tr>
<td>Psychological</td>
<td>Psychosocial support, Caregiver depression, Depression, Grief and bereavement</td>
</tr>
<tr>
<td>Social</td>
<td>General management, Family satisfaction, Family preferences</td>
</tr>
<tr>
<td>Spiritual</td>
<td>Spiritual support, Value of life, Spiritual need</td>
</tr>
<tr>
<td>Cultural</td>
<td>Communication needs, Culturally sensitive care</td>
</tr>
<tr>
<td>End of life</td>
<td>Pain at end of life, Information at end of life, Death recognition, Peace at death</td>
</tr>
<tr>
<td>Ethical aspects</td>
<td>Respect, Insight into illness, Impaired capacity, Advance care planning, Patient preferences</td>
</tr>
</tbody>
</table>

Designing Sustainable Palliative Care: 2 Case Studies

Several organizations have been using innovative approaches to develop models of integration that incorporate knowledge from randomized trials as well as an understanding of local systems, culture, and stakeholders.33-36 Cancer Care Ontario (CCO; Toronto, Ontario, Canada) and Stanford Health Care (Palo Alto, California) are 2 case studies that offer strategies for integrating palliative care into cancer care beginning with routine screening and assessment. Both include efforts to define the roles and resources required for primary and specialist palliative care to accomplish this and manage the needs of patients and their families. CCO implemented a province-wide screening for symptoms, whereas Stanford Health Care is establishing value-based palliative care at a single academic medical center.33,37 Both are using a participatory, quality-improvement approach.

Cancer Care Ontario: Symptom Management

CCO, which is the provincial agency responsible for continually improving cancer services, launched the Provincial Palliative Care Integration Project (PPCIP) to improve care through systemwide screening, assessment, and management of cancer-related symptoms.33 CCO developed this quality-improvement initiative based on evidence that better symptom management and collaborative care “improves the patient experience across the cancer journey.”58 In the first iteration of the PPCIP, the Edmonton Symptom Assessment Scale (ESAS) was used to screen for physical and psychosocial symptoms, and toolkits were developed to facilitate follow-up assessment and symptom management.39 The project was pilot tested in 1 clinic, but it expanded throughout the province to include more than 25,000 symptom-intensity screenings.33 CCO established a consistent reporting mechanism, the Interactive System Assessment and Collection, which allowed regional cancer centers to track the success of ESAS as a tool and use patient data to inform treatment decisions.39 Interactive System Assessment and Collection is now embedded within electronic health records at 11 hospitals.39 It captures physical symptoms through ESAS and functional status using the Patient-Reported Functional Status tool.39

In 2008, the results were publically reported and symptom screening became a quarterly performance indicator for each regional cancer care program.33 Survey results published in 2012 reported that 89% of patients thought ESAS was important to complete, 79% thought their health care professionals used the results to help formulate their care plan, and 78% reported that their symptoms had been controlled to a comfortable level.33 As the CCO initiative evolved, health care professionals outside of the initial PPCIP could view these results and request participation in the program.39 Participation increased from 6 hospitals in 2007 to 29 hospitals by 2013, and provincial screening has steadily increased, averaging 58% en route to their target of 70%.39

CCO provides a promising example of integrating at least 1 essential component of palliative care — symptom management — into oncology. It established a specific aim for symptom management, developed standard processes at the regional level, and created a transparent measurement system to track screening, symptom intensity, and functional status over time. In addition, it has normalized the integration of palliative care into routine cancer care from the point of diagnosis.

Stanford Health Care: Value-Based Palliative Care

In 2013, a patient with lymphoma receiving treatment at Stanford Health Care asked whether palliative care was supposed to be patient-centered. Indeed, the health care delivery model was not designed with a patient or family member in mind. The conversation prompted a design initiative at the Stanford Cancer Institute to improve quality of life for all 3 stakeholders — patients, their family members, and the health care team — by incorporating their values into the core processes and measures of palliative care delivery. This project is 1 component of the Stanford Cancer Institute Transformation Initiative, a joint project of the School of Medicine and Stanford Health Care to transform the experience of patients with cancer through comprehensive, coordinated, and compassionate care.37

Stanford Health Care aims to routinely identify, assess, and manage the palliative care needs of patients and families from the point of diagnosis through survivorship and end of life. The institutional target is 100% screening for palliative care needs utilizing a global screening tool, the Patient Reported Outcomes Measurement Information System, which is a patient reporting tool that evaluates physical, emotional, social, spiritual, and functional needs. The hypothesis is that the primary oncology team can manage 50% of palliative care needs, and 50% will be referred to specialist services. Data will be gathered via electronic medical records of Stanford Health Care and will be documented on a dashboard visible to all stakeholders.

Stanford Health Care has engaged a diverse group (called the Core Innovation Team) of patients, family members, administrators, and physicians in oncology and palliative medicine to co-design strategies for primary and specialist palliative care. Baseline data to inform the work of the Core Innovation Team include interviews with patients and family members about their perceptions and knowledge of...
palliative care as well as their personal values and goals. Physicians were interviewed to determine their understanding of palliative care, what components of palliative care they practiced, and when and how they integrated specialist palliative care. Physician values and goals were also assessed as well as how their own well-being might be improved in the context of their work.

An initial design session with the Core Innovation Team and several external stakeholders, including experts from health care consulting, marketing, and CCO, used the baseline data to identify high-impact areas for process improvement. Participants in the workshop defined quality of life as a key target from the outset and brainstormed how palliative care might promote improved quality of life for patients, families, and the health care team (Fig 3).

Similar to CCO, Stanford Health Care is utilizing rapid quality-improvement cycles to test new approaches. Solutions are selected based on feasibility and potential impact within the domains of primary, secondary, and specialist palliative care delivery (Table 3). Proposed solutions are being tested with disease-oriented, multidisciplinary practice teams (eg, gynecological oncology and hematology) before scaling across disease groups and the entire cancer center.

**Key Lessons for “Practical” Integration**

The PPCIP of CCO is one of the first of its kind to create a successful system for the real-time screening for palliative care needs. However, because of differences in culture and payment models, CCO’s processes must be modified to work within the US health care system. Thus, Stanford Health Care is

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**Table 3. Potential Solutions Being Piloted and Modified to Improve Quality-of-Life Care at Stanford Cancer Institute**

<table>
<thead>
<tr>
<th>Potential Solution</th>
<th>Description</th>
<th>Resources</th>
<th>Process</th>
<th>Education</th>
<th>Communicating Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two questions for quality of life</td>
<td>Oncologists are prompted to ask questions that help document goals and priorities in a patient’s health care plan.</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>“What to expect” symptom management and transition tool series</td>
<td>Patients and family members are provided tailored symptom and adverse-event descriptions and management strategies at key stages along the care continuum.</td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>“Here when you need me” shadow and buddy system</td>
<td>Nurse navigators are paired with palliative care and oncology social workers for shadowing, communication role play, and ongoing “on-call” buddy support for complex needs.</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Palliative Care Always (online course)</td>
<td>Oncology fellows, residents, nurse navigators, and social workers participate in a case-based, interactive course focused on patient experience, communication, and primary palliative competencies.</td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Standard screening, assessment, and referral</td>
<td>Oncology teams co-develop a standard screening process using the PROMIS global screening and referral algorithm for supportive services. Triggers are embedded to prompt discussion of PROMIS and potential specialist support. Focus is placed on social work as in-house support.</td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Specialist “hub” with triage support for noncurative needs</td>
<td>Specialist teams form a single service group and call center for complex needs. Screening, ad hoc oncology, and patient-initiated referrals are sent to the “hub” and connected with the appropriate specialist based on patient-centered referral criteria.</td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Core panel of quality metrics and reporting mechanism</td>
<td>Process and outcome measures for physical, emotional, spiritual, social, cultural, and ethical domains for quality of life are regularly reported to clinical teams, patients, and administration. Results help define future modifications.</td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>

PROMIS = Patient Reported Outcomes Measurement Information System.
attempting to create a modified process by learning from CCO’s best practices and allowing areas for flexibility in order to maximize the likelihood of success within a different health care system. Both organizations share common strategies for integrating palliative care.

Quality Improvement Strategy
CCO and Stanford Health Care employ a structured, quality-improvement process to guide the integration of palliative care into the clinical workflow. CCO leadership coached regional teams in Canada to use the Institute for Healthcare Improvement’s model to create and test concepts that might “achieve significant results in quality and innovation”; the questions utilized appear in Fig 4.40

The central team at CCO and Stanford Health Care developed firm aims and target metrics (question 1 and 2; see Fig 4), and then local teams were given the flexibility to develop steps that could gain traction at their own institutions and lead to the desired improvements (question 3; see Fig 4).40 The teams test potential solutions using various cycles (see Fig 4) and visible, rapid reporting mechanisms to provide feedback to stakeholders.40 In the case of CCO, immediate data availability and visibility compelled additional hospitals to join the initiative.39 Reporting also revealed opportunities for improvement.33 Stanford Health Care is starting its program with limited test pilots with single clinical teams. Data will be reported back in real time to the physicians, thus allowing for rapid learning and refining of the initial care delivery prototypes.

Screening Is Necessary But Insufficient
Although a standardized process for screening is necessary, resources for assessment and management are also required. CCO created a symptom management toolkit with a mobile application as a resource for health care professionals. As the screening rate edges closer to the provincial target of 70%, symptom management of severe symptoms is still inadequate.38,39 For example, patients with severe pain do not always receive an opioid.39 Thus, CCO continues to work toward improved patient symptom assessment and treatment, including strategies to modify their reporting system, to better capture how clinical teams address severe symptoms, and further engage health care professionals.39 Stanford Health Care is harnessing these insights to establish an evidence-based process for screening and is also evaluating the assessment and management processes to ensure that palliative care needs are met.

Stakeholder Engagement
Physician engagement was a key strategy for CCO for managing process changes throughout Ontario.33 Regional and local teams recruited self-identified clinical champions who prioritized patient experience as a philosophy of care, and these champions participated in forums to assist the executive leadership with decisions about next steps for improved care delivery and evaluation.33 Stanford Health Care is also engaging physicians, patients, and families at every level of development and testing. Patient representatives are co-developing interventions and are involved in the implementation and evaluation. Stanford Health Care has taken this 1 step forward by ensuring that patients and families are also trained in leadership skills so as to more advocate for their needs during the process.
Conclusions

Although most US cancer centers report the existence of a palliative care program in their centers, palliative care remains limited to the inpatient setting in the majority of these centers.41-43 Even fewer cancer centers have integrated practices, involve palliative care in tumor boards, or embedded educational opportunities.40 Barriers to integrated practice have been described and include knowledge and attitudes regarding palliative care, limited trained workforce, and lack of care and payment models that support early and regular palliative care. The early integration of palliative care into the treatment of patients with cancer is recommended.44-46

How best to integrate palliative care into cancer care is an area of active investigation and interest. Lessons from clinical trials, as well as examples from Cancer Care Ontario and Stanford Health Care, provide strategies for scalable integration.8-10,33,38,39 These strategies include:

• Create reproducible outcomes with flexible structure: Exact models for integration will evolve and vary by institution and patient population. However, even with model variability in care delivery, a consistent expectation is the early identification and assessment of palliative care needs for all patients with cancer, from the point of diagnosis through survivorship and end of life. Establishing this as a new standard of care will improve patient and family outcomes.

• Start small and learn quickly: Significant opportunity lies in the principles of quality improvement and rapid learning.37 Utilizing the Institute for Healthcare Improvement approach with a set aim, clear metrics, and rapid iterative cycles is feasible and necessary to create new and successful models for integration.

• Leverage primary and specialist palliative care teams: Understanding the role of primary teams for the provision of palliative care is critical for integrating palliative care into the continuum of cancer care. Providing education, training, and infrastructure to support the team’s role as palliative care providers is a promising strategy for meeting patient needs with a limited workforce. An interdisciplinary approach that includes social work and chaplaincy may further increase efficiencies in primary palliative care delivery in psychosocial and spiritual areas.

• Measures matter: Current metrics utilized in palliative care studies evaluate quality of care within a narrow framework primarily limited to quality of end-of-life care and assessment of mood and physical symptoms. The development of a broad range of metrics that align with the domains of palliative care (eg, decision-making, empowerment, connection) has the potential to demonstrate the anticipated increased value of integrated practice.

These strategies are a starting point for institutions and health care systems to begin their own processes for integrated care. This is crucial to improve quality of care for patients with a cancer diagnosis and their families. Routinely identifying palliative care needs early on and assessing such needs both have the potential to change the conversation between patients and health care professionals and create a health care paradigm in which the values of patients and their families come front and center in the delivery of cancer care.

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