

# The Intersection of Rehabilitation and Palliative Care: Patients With Advanced Cancer in the Inpatient Rehabilitation Setting

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## Abstract

**Background:** Patients diagnosed with advanced cancer often differ from the traditional patient typically seen in the inpatient rehabilitation setting.

**Purpose:** To identify differences in care while highlighting the considerable similarities between the complementary specialties of palliative care and rehabilitation, and to provide rehabilitation clinicians with knowledge and skills to enhance care for palliative care patients and their families.

**Methodology:** Narrative literature review describing common functional losses in patients diagnosed with advanced cancer, followed by articulation of the intersection of palliative care with traditional rehabilitation approaches and goals.

**Conclusion:** The evidence supports implementation of a distinct body of skills and knowledge, referred to as “palliative rehabilitation,” among inpatient rehabilitation providers.

**Clinical Implications:** Implementing palliative rehabilitation skills can improve the quality of care within the inpatient rehabilitation setting for patients with advanced cancer.

**Keywords:** Cancer; inpatient rehabilitation; palliative care.

## Introduction

Patients diagnosed with advanced cancer may be admitted to inpatient rehabilitation facilities to address disability related to the disease or its treatment. For the rehabilitation clinician, treatment planning for common referrals is complicated by the context of advanced cancer. For example, cancer patients may benefit from multi-modal skilled nursing facility (SNF)-level rehabilitation after surgical fixation of pathological fractures. Patients diagnosed with advanced cancer may be admitted for debility, which may develop in postsurgical cancer patients with complication of sepsis or renal failure. Cancer patients

may be referred after an inpatient hospitalization, with the goal of becoming strong enough to tolerate additional rounds of cancer therapies. Although the skilled need of these patients may be familiar to rehabilitation providers, addressing these “traditional” rehabilitation needs within the context of advanced cancer or palliative care may be a new context for treating these needs (Cheville, Morrow, Smith, & Basford, 2017). Rehabilitation clinicians unfamiliar with pharmacologically complex symptom management in this population may be unaccustomed to what may appear as unorthodox treatment regimens compared to regimens commonly used for patients with impairments related to trauma or ischemia. Moreover, rehabilitation clinicians accustomed to initiating aggressive treatment regimens emphasizing independence in self-care and mobility may be unsure of appropriate goals of care for patients with advanced cancer admitted to the inpatient SNF setting.

Recent guidelines from the American Society of Clinical Oncology (ASCO) state that inpatients and outpatients with advanced cancer should receive palliative care services early in the course of their disease and concurrent with treatment (Ferrell et al., 2017). As providers trained in both rehabilitation and palliative care, we strive to share our integrated perspectives to improve the care of cancer patients. The purposes of this article are to (1) highlight the differences in the care of the advanced cancer patient compared

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to other traditional rehabilitation patients and (2) provide rehabilitation clinicians with the knowledge needed to enhance care for these patients and their families. We begin with a brief review of the evidence examining the loss of function in the patient diagnosed with advanced cancer and then discuss the intersection of palliative care with the traditional rehabilitation approach. The types of palliative care skills and knowledge that providers within the inpatient rehabilitation setting can utilize to enhance the care of this patient population are highlighted.

### **Considerations for Inpatient Rehabilitation**

Most patients with cancer treated in inpatient rehabilitation settings have persistent disease and will receive future anticancer therapies (Cheville et al., 2012); the effects of these anticancer therapies should inform key features of the rehabilitation, most notably the preparation of patients and their caregivers for potential future functional losses. Risk stratifying of patients with respect to their likelihood of future decline remains challenging with the current evidence base, although some factors have been implicated. Brain metastases, treatment-induced morbidities, symptom intensity, sarcopenia, and painful bone metastases have all been associated with near-term disablement (Berger et al., 2015). Therefore, it is reasonable to make two assumptions pertaining to cancer patients in inpatient rehabilitation settings: (1) similar issues drive deterioration following inpatient rehabilitation and (2) functional deterioration should be addressed as an integral part of the rehabilitation process.

Future functional deterioration for these patients can and should be proactively countered. Although it must be acknowledged that the degree, nature, and impact of disease progression can never be precisely predicted, patterns have been described and should be the initial basis for anticipating future threats to vulnerable patients' independence. Extrapolating from reports on cancer related disablement, factors that may undermine gains achieved through inpatient rehabilitation can be divided into the following categories.

#### **Symptoms**

Pain and fatigue are mostly strongly associated with impending loss of function (Berger et al., 2015). Pharmacological, behavioral, and procedural treatments effectively reduce pain, whereas validated fatigue treatments are confined to activity based and psychosocial interventions (Pruitt, 2017). Symptom worsening with specific activities is often overlooked and can be detected during inpatient rehabilitation. Pain management approaches may be serially trialed during rehabilitation to identify those that are both effective and well tolerated. Once identified, these treatments should be integrated into a

patient's overall care plan, with instructions for treatment intensification in the event that symptoms worsen.

#### **Neurological Deficits**

Compromise of peripheral and central nervous system structures frequently occurs in the advanced stages of prevalent cancers: breast, lung, lymphoma, and melanoma (Antoun, Borget, & Lanoy, 2013). Unfortunately, even after definitive local treatment, there is always the potential for disease progression or for the development of new metastatic sites. The initial indication of progressive neural disease is often functional decline. Directing patients and caregivers to be vigilant for such losses can facilitate early detection and timely treatment.

#### **Musculoskeletal**

Compromise of musculoskeletal integrity, particularly in the setting of symptomatic bone metastases (Berger et al., 2015; Mochamat et al., 2017), can spur similar functional deterioration. Foci of potential musculoskeletal vulnerability should be identified and deliberately, yet cautiously, stressed during inpatient rehabilitation to assess the likelihood of future worsening. Compromise of weight bearing structures (e.g., femurs) due to metastases or tumor encroachment is of particular concern (Cheville et al., 2013). Dweighting and compensatory strategies, including orthotics and assistive devices, even if not acutely required, can be incorporated into the rehabilitation process to familiarize patients and their caregivers with approaches that may be useful in the future.

#### **Treatment**

Certain disease directed treatments are notorious for causing functional decline through diverse mechanisms. A majority of patients with advanced disease will continue to undergo anticancer treatment and confront the risk of severe toxicity. Although toxicity related debility may not be preventable, rehabilitation can prepare patients by educating them about validated strategies to preserve and recover their functional abilities.

#### **Generalized Debility and Loss of Lean Muscle**

Loss of lean muscle is a hallmark of frailty and an insidious marker of disease progression (Bakitas et al., 2009). In general, sarcopenia is gradual and progressive, leading to nonfocal but, nonetheless, debilitating impairments. No treatments are robustly supported in reversing sarcopenia in the setting of progressing illness, but therapeutic nihilism is not warranted, as protein supplementation and gentle resistive exercise are relatively benign and potentially

effective approaches that can be incorporated into inpatient rehabilitative management (Ferrell & Grant, 2014; Temel et al., 2010).

### Palliative Care and Palliative Rehabilitation

Palliative care is often misconstrued as care in the hospice setting or at end of life. However, its scope is much broader. Palliative care is a clinical specialty dedicated to providing relief from the symptoms and stress of serious illness with the goal of improving quality of life (QoL) for patients with serious illness and their families (Center to Advance Palliative Care, 2011). Current guidelines call for the provision of palliative care consultation within weeks of a diagnosis of advanced cancer (Ferrell et al., 2017).

The diagnosis of advanced cancer, possibly in conjunction with cancer related disablement, may have resulted in the patient and their family having received a consultation from a palliative care provider or team in the hospital or outpatient setting. A growing body of research has established the effectiveness of palliative care in improving both physical symptoms and QoL in patients with advanced cancer (Bakitas et al., 2009; Kavalieratos et al., 2016; Wright et al., 2008). Moreover, palliative care, particularly early in the course of cancer, has been shown to reduce aggressive treatment at end of life, and some studies have demonstrated a survival benefit (Bakitas et al., 2009; Temel et al., 2010). A recent meta-analysis examined the association of palliative care interventions in improving patient and caregiver outcomes in multiple serious illnesses, including advanced cancer. The authors concluded that, although results for caregivers were mixed, palliative care was associated with improved QoL and symptom burden for patients, though no survival benefit was found (Kavalieratos et al., 2016).

Palliative care and rehabilitation align in their philosophical approaches to patients, particularly in their commitment to improve overall QoL and commitment to interdisciplinary treatment approaches. There is a small but growing body of literature highlighting these areas of intersection and calling for integration between palliative care and rehabilitation, particularly in the care of patients with advanced cancer. These two specialties share an interdisciplinary approach to providing holistic patient care. As early as 2000, collaboration between rehabilitation and palliative care, utilizing interdisciplinary models of care to improve comfort and decrease symptoms, was described (Barawid, Covarrubias, Tribuzio, & Liao, 2015; Cheville et al., 2017; Hopkins & Tookman, 2000; Silver et al., 2015). The authors also noted the role that maximizing functional independence plays in reducing

caregiver burden. Moreover, the collaboration of these two specialties is now viewed as a necessary component of high-quality cancer care (Homsy et al., 2006; Quill & Abernethy, 2013).

Integrating rehabilitation and palliative care, particularly in the oncology population, has found its fullest expression in the recent explication of a new term, *palliative rehabilitation*. Cheville et al. has defined palliative rehabilitation as function-directed care delivered in partnership with other disciplines and aligned with the values of patients who have serious and often incurable illnesses in contexts marked by intense and dynamic symptoms, psychological stress, and medical morbidity to realize potentially time-limited goal (Manfredi et al., 2000).

Alongside the growth of palliative care has come the realization that all providers, regardless of discipline, should possess a basic level of palliative care skills and knowledge. The term *primary palliative care* has been coined to describe the practices of these palliative care principles and skills (Quill & Abernethy, 2013). The components of primary palliative care include

- basic assessment and management of pain and symptoms,
- basic assessment and management of depression and anxiety, and
- basic discussion addressing goals and advanced care planning.

Given the emphasis on whole-person care, the rehabilitation clinician is uniquely situated to utilize these skills in the inpatient rehabilitation settings in the care of patients with advanced cancer. Each of these three components is addressed below using the case of the advanced cancer patient in an inpatient rehabilitation facility or SNF.

### Assessment and Management of Pain and Symptoms

Patients in the advanced stage of a serious illness typically experience multiple symptoms. One study of patients referred to a palliative medicine program found 10 symptoms for every one symptom that was spontaneously reported by a patient (Homsy et al., 2006). Routine, standardized assessment of symptoms is critically important to allow for identification of often overlooked or underreported symptoms such as functional limitations or fatigue, which then allows for more effective management and improved QoL (Manfredi et al., 2000). Patient reports and descriptions of physical symptoms and their severity are the cornerstone for symptom assessment in palliative care.

A recent randomized clinical trial evaluated the impact of routine symptom assessment via electronic tablets

to usual care among patients with advanced solid tumors receiving outpatient chemotherapy (Basch et al., 2017). Quality of life measures improved significantly among those receiving routine symptom assessment screening. Moreover, patients who participated in routine electronic symptom assessment exhibited lower rates of emergency room visits and hospitalizations while remaining on chemotherapy longer. Furthermore, there was a significant *improvement in survival* among those who receive routine monitoring of their symptoms. It is important to note that the study intervention focused solely on electronic patient report of symptoms. Severe or worsening symptoms generated provider clinical alerts. The authors suggest that these improved outcomes are likely due to increased clinician awareness of symptoms and enhanced existing symptom management processes, thus potentially preventing downstream complications and allow for continuation of cancer treatment. This recent trial underscores the importance of symptom assessment and management not only for improving QoL but also perhaps for improving survival as well.

The use of validated, standardized symptom assessments is a key component of palliative rehabilitation. The Edmonton Symptom Assessment Scale is a commonly used scale in palliative care, has been validated in the cancer population, and has been shown to be short, sensitive, responsive to change, and easily self-completed without being significantly burdensome to patients (Chang, Hwang, & Feuerman, 2000). Multiple studies have demonstrated its utility in identifying common symptoms in the rehabilitation setting that can allow the opportunity for treatment, when feasible (Fu, Raj, & Guo, 2017; Guo, Young, Hainley, Palmer, & Bruera, 2007). Many other assessment screens are available and validated, including the Memorial Symptom Assessment Scale-Short, MD Anderson Brief Symptom Inventory, Symptom Distress Scale, and many others. Once a specific tool has been chosen, it should be used consistently to assess change over time and ensure reliability.

Although some palliative care skills require subspecialty training, the core elements of palliative care, including basic symptom management, should be delivered by all practitioners (Quill & Abernethy, 2013). If rehabilitation patients are experiencing uncontrolled nausea, profound fatigue from poor sleep, severe pain, or any other symptom related to cancer and its treatment, achieving rehabilitation goals will be extremely challenging or simply impossible. Cultivating some fluency with cancer symptom management and understanding its impact on patients' function is a critical issue for rehabilitation clinicians taking care of patients with advanced cancer. What follows is a brief overview of some of the most common symptoms encountered in the cancer setting with a succinct

overview of pharmacological regimens typically used in the palliative care setting.

### **Pain**

Pain continues to be poorly controlled in nearly half of all patients with cancer, which may have devastating effects on QoL, physical functioning, and distress (Kwon, 2014). The mainstay of effective cancer pain treatment includes opioid medications but often includes adjuvant medications, nerve blocks, and nondrug interventions such as massage, acupuncture, and radiation therapy (Smith & Saiki, 2015). As rehabilitation clinicians seek the balance between the patient's ability to participate in rehabilitative therapies while maintaining effective pain management, nonpharmacological therapies should be implemented where possible. Both hypnosis/relaxation training and cognitive behavioral therapies are evidence-based pain management interventions. In addition, alternative therapies such as dry needling and acupuncture have shown some promising results in smaller trials (Syrjala et al., 2014; Vas, Phanse, & Pai, 2016). When pain cannot be managed effectively in the rehabilitation setting, consultation with other disciplines including psychology, neurology, and anesthesia can provide expertise and further treatment options.

### **Nausea and Vomiting**

Preventing and managing nausea is vital to optimize the rehabilitation process, as it is obviously vexing to focus on rehabilitation while experiencing this distressing symptom. Therefore, anticipatory, prophylactic treatment and regular around-the-clock dosing schedules are most likely to provide the greatest benefit to the patient. Rational treatment necessitates knowledge of the vomiting pathway and its associated neurotransmitter receptors, combined with the knowledge of the most likely mechanisms involved. Drug therapy should be directed at the probable mediators of nausea (i.e., dopamine, serotonin, histamine, cholinergic pathways, etc.). Medications approved for other indications may be invaluable for the management of nausea. For example, haloperidol or olanzapine, typically used for the management of psychosis, may be quite effective for the management of nausea in the cancer setting (Dev, Wong, Hui, & Bruera, 2017).

### **Anorexia and Cachexia Syndrome**

Anorexia, or loss of appetite, is one of the most common symptoms in cancer patients receiving palliative care (Donnelly & Walsh, 1995; Shragge, Wismer, Olson, & Baracos, 2006) and among cancer patients receiving



inpatient rehabilitation (Guo et al., 2007). For cancer patients, loss of appetite may be accompanied by cachexia, a systemic syndrome characterized by severe weight loss due to excessive wasting of muscle and adipose tissue mass (Mueller, Burmeister, Bachmann, & Martignoni, 2014). The pathophysiology of cancer cachexia is complex and includes symptoms that impact caloric intake, as well as chronic inflammation, hypermetabolism, and hormonal alterations (Dev et al., 2017). Pharmacological options available to treat anorexia and cachexia are extremely limited and generally confer modest benefit at best. Options may include corticosteroids, which may improve appetite, well being, and fatigue in the short term (Elamin, Glass, & Camporesi, 2006; Moertel, Schutt, Reitemeier, & Hahn, 1974; Popiela, Lucchi, & Giongo, 1989; Yavuzsen, Davis, Walsh, LeGrand, & Lagman, 2005). Megestrol acetate may also improve appetite and weight gain (mainly as fat) but also increases the risk of side effects including thromboembolism and adrenal suppression (Elamin et al., 2006; Kornblith et al., 1993; Loprinzi et al., 1999; Walsh, Nelson, & Mahmoud, 2003; Yavuzsen et al., 2005). Dronabinol may also be effective for appetite stimulation for some patients, although generally less effective than megestrol (Jatoi et al., 2002; Walsh et al., 2003). Recent studies have also incorporated nonpharmacological approaches, such as examining protein support and physical activity (Antoun & Raynard, 2018).

### ***Cancer Related Fatigue***

Cancer related fatigue is among the most common and distressing symptom experienced by patients with cancer. Physiological contributors such as electrolyte imbalance should be considered and addressed as appropriate. In addition, stimulant medications such as methylphenidate may be helpful for some patients with advanced cancer for fatigue (Qu et al., 2016). In the rehabilitation setting, stimulant medications might be scheduled prior to rehabilitation sessions with the goal of trying to optimize participation by minimizing fatigue.

### ***Delirium***

Without careful clinical assessment, delirium can be easily mistaken for other primary psychiatric conditions because of its neuropsychiatric symptoms that are also commonly seen in other disorders, such as dementia, depression, and psychosis (Del Fabbro, Dalal, & Bruera, 2006; Qu et al., 2016). Delirium is a common and often distressing medical complication in the patient with advanced illness (Bruera et al., 1992; Friedlander, Brayman, & Breitbart, 2004). A useful and validated tool that assesses the severity of delirium in patients with advanced

disease is the Memorial Delirium Assessment Scale (Breitbart et al., 1997). Delirium can also be associated with disease progression or brain metastases, as well as infections or medication side effects (Breitbart & Alici, 2012). Management options include identification and treatment of potential underlying causes, with correction, if possible, of the identified contributing factors as well as symptomatic treatment with both nonpharmacological and pharmacological interventions. A recent randomized clinical trial found that the addition of lorazepam to haloperidol may provide superior control of agitation in patients with persistent delirium and advanced cancer (Hui et al., 2017).

### ***Depression and Anxiety***

Symptoms of depression and anxiety are common in patients with advanced cancer, as well as those receiving palliative care. The amelioration of depressive and anxious symptoms for patients is among the areas where palliative care has shown strong effectiveness (Kavalieratos et al., 2016). As previously described, the Edmonton Symptom Assessment Scale as well as other measures of depression and anxiety have been used extensively in both palliative and advanced cancer populations and screen both physical symptoms and depression and anxiety (Bagha et al., 2013). These screeners identify the presence of symptoms of anxiety and depression, but diagnoses should be confirmed by diagnosis-specific measures (e.g., PHQ9) or clinical interview (Brenne et al., 2016). ASCO has developed guidelines for assessment and treatment of depression and anxiety in cancer patients that address assessment, pharmacological and nonpharmacological treatment options, and follow-up and reassessment (Andersen et al., 2014). The guidelines describe, including a flow chart, workflow for screening assessment with recommended tools and cutoff scores. Initially patients are screened, and positive screens are followed by administration of a more detailed assessment. These results are sorted into three strata: no/mild symptoms, moderate, or moderate to severe/severe symptoms. Each of these strata includes depressive or anxious symptoms, as well as functional impairment and next steps for consultation or referral. From here, a care map for each stratum is provided with detailed descriptions of services and evidence-based treatments. These documents are available in the open access publication from ASCO.

The presentation of anxiety and depression in advanced cancer may appear somewhat different than in a more typical patient suffering from a more discrete episode of illness (i.e., joint replacement). In addition to the stresses of the diagnosis, treatment side effects, and

functional limitation secondary to disease progression and treatment, several studies have indicated that the presence of a tumor and subsequent biological effects may trigger depression in the cancer patient (Pyter, Pineros, Galang, McClintock, & Prendergast, 2009).

For the rehabilitation provider, the evaluation of resources and current screening and treatment practices are an excellent starting point. The ASCO guidelines highlighted above provide the necessary steps of screening, assessment, and symptom stratified care to evaluate current screening and treatment processes, as well as provide information and resources for evidence-based treatment (Andersen et al., 2014). These resources can then be tailored to the needs identified in the advanced cancer patient based on available guidelines and research.

Discussion of Goals and Advance Care Planning

Communication

Rehabilitation clinicians may encounter difficult situations in which they are asked to answer questions about prognosis from their patients with advanced cancer. Similarly, some patients and families may display unrealistic expectations from the rehabilitation team because of limited insight about their medical condition. For example, a patient recently diagnosed with a malignant brain tumor might be admitted to a rehabilitation facility without the benefit of adequate time and communication with their oncology team to understand their medical circumstances. Rehabilitation clinicians should be prepared to respond to these challenges. Even though they may not be able to answer questions about future medical treatment strategies and prognoses, all clinicians should develop some skills to address the emotional and psychological impact of serious illness on patients and their families.

All members of the rehabilitation team also have an opportunity to help with this process through good communication and trust among the patient, family, and clinical team and supportive counseling.

Knowing the goals patients have for their care allows for a context in which all other medical decisions can be made, including rehabilitation goals. It is important to begin by getting an idea of the patient’s own understanding of their illness and its course, as well as the understanding of their family or caregiver. This can often be quite different from the medical team’s understanding. For instance, many cancer patients receiving palliative chemotherapy believe that they are receiving curative treatment (Craft, Burns, Smith, & Broom, 2005). These are some additional communication techniques often used in the palliative care setting (Quill et al., 2010; see Table).

“Strong Enough for Chemo”

One specific case that rehabilitation providers may encounter with the advanced cancer patient is related to the desire to pursue further treatment, perhaps in the context of nonresponsiveness to current therapies or due to toxicities from the therapies. Not infrequently, the onus is placed on the patient to improve their strength before prescribing further cancer treatment (i.e., “get stronger and then we can consider further chemo”). The patient may feel he or she has a responsibility to the oncology provider or family members to “get better” or back to a previous level of functioning. This too often unfairly burdens the advanced cancer patient as progressive debility may be part of the inevitable clinical course that cannot be overcome with willpower alone. Given the progressive nature of advanced cancer or the frailty of the patient, the rehabilitation provider may recognize that continuation

Table Communication techniques for palliative rehabilitation

Communication Goal	Techniques
Building trust	Listen before responding. Demonstrate respect. Encourage patients and families to talk.
Validating emotional expression	Acknowledge emotions that are being expressed, e.g., “I can see this is very overwhelming.”
Validating appropriateness of patient reaction	Normalize the experience for the patient, e.g., “Anyone in your shoes would be upset right now.”
Exploring emotions	Explore more about what is underneath the expressed emotions, e.g., “Tell me, what worries you the most?”
Addressing unrealistic goals	Use “I wish” statements to express empathy, temporarily suspend the role of clinicians to relate as human beings, and imply the limits of treatment without offering false hope. Examples include “I wish we had more effective treatments for this cancer” or “I wish you could be there for your son’s graduation” (vs. “I hope your oncologist can find an effective treatment,” which can imply false hope).
Provide support	Establish that you are there to help support the patient during time, with statements such as “Our team will support you through this as best as we can.”

of chemotherapy may not always be a realistic goal. In these situations, the rehabilitation provider can use primary palliative care interventions such as the “I wish” statements described above to connect with and validate the patient’s hopes without providing false optimism.

### ***Advance Care Planning and Goals of Care***

Advance care planning is too often restricted to considerations of a patient’s resuscitation status, despite the fact that most patients with progressive illnesses will confront critical functional losses that overwhelm their caregivers and undermine explicit preferences to remain at home. Advance care planning is, essentially, the focused and structured consideration of adverse contingencies. Unplanned and unwelcome functional contingencies, for example, worsening gait instability and falls, driven by disease progression are virtually inevitable among patients with advanced cancer (Lunney, Lynn, Foley, Lipson, & Guralnik, 2003). The discharge planning process from inpatient rehabilitation facilities, of necessity, focuses on a patient’s current abilities, but the failure to prepare patients for possible functional deterioration lessens the value of rehabilitative efforts. Unaddressed functional losses undermine QoL and community integration and increase a patient’s risk of rehospitalization and their caregiver burden (Greenwald, Cronin, Carballo, Danaei, & Choy, 2017).

An essential, though potentially more challenging, dimension of advance care planning in rehabilitation medicine is the exploration of a patient’s values and preferences in the event of significant functional decline and whether the related disability may influence their continued receipt of disease directed therapies. Other topics broached in advance care planning could include a re-evaluation of discharge or consideration of hospice. Although it might be argued that such considerations are beyond the scope of rehabilitation service providers, no other professional caregivers are equipped to engage in pragmatic and informed discussions about the reality of living in health states characterized by disability. Valuation of functional status and its implications may be more pressing for patients facing a high risk of immanent and severe functional morbidity. These patients often recognize the potential for increasing dependency. Tellingly, the fear of becoming a burden is the most frequent reason that patients seek physician assistance in dying at the end of life (van der Maas et al., 1996). Gently introducing the topic, for example, “This may not resonate, but some patients have expressed concern about losing their ability to function. Do you have these thoughts?” gives patients the opportunity to engage. Although inevitably a difficult topic, many patients and caregivers welcome

the opportunity to explore future eventualities in a safe and supported forum.

### ***General Approaches to Rehabilitative Advance Care Planning***

Strategies to prepare patients and their caregivers for the possibility of future functional decline cluster in several areas that are within the conventional purview of rehabilitation service providers. These approaches should be interwoven throughout all phases of the inpatient rehabilitation process.

#### ***Education***

Alerting patients and their caregivers about future functional losses need not be a source of alarm. Rather handled appropriately, such discussion can enable patients to direct their attention in appropriate and constructive ways. For example, patients with malignant spinal cord compression can be educated that worsening bowel or bladder dysfunction should trigger workup for progressive myelopathy. In addition, they can learn and practice strategies to negotiate such worsening, if it occurs.

#### ***Preventive Strategies***

Strategies to minimize the adverse effects progressive neuropathy, sarcopenia, or other impairments that may worsen over time can empower patients and minimize unplanned healthcare utilization. A home therapy regimen matched to a patient’s unique vulnerabilities may include dynamic balance activities, gentle conditioning, resistive exercises, or cognitive remediation. Similarly, analgesic regimens can be titrated upward for worsening movement associated pain.

#### ***Planning/Trouble Shooting***

Deconstructing daily activities, identifying those tasks that are challenging, and proactively developing compensatory approaches can enable patients to maintain their independence despite future deterioration. Approaches may include the use of more supportive assistive devices, for example, a walker versus a cane, or the use of an orthotic. Pacing and energy conservation techniques may be beneficial as well.

#### ***Identifying Resources and Developing a Safety Net***

Many patients are ill-informed regarding community and outpatient resources that may be leveraged to mitigate their progressive decline. Oncological clinicians may be similarly ill-informed. Therefore, offering explicit and granular guidance regarding community-based rehabilitative services is an important consideration in discharge planning. Providing the patient’s primary care, oncology, and any involved palliative care team with a copy of the

## Key Practice Points

- Rehabilitation clinicians may be unfamiliar with goals of care, symptom management, and treatment approaches in patients diagnosed with advanced cancer who are admitted to the inpatient rehabilitation setting.
- Palliative care and rehabilitation share a commitment to improve overall quality of life and multidisciplinary treatment. Rehabilitation providers are uniquely positioned to offer primary palliative care in conjunction with rehabilitation interventions to enhance care in this cancer population in the inpatient setting.
- Education in primary palliative care includes basic knowledge of the impact of cancer disablement, physical and psychological symptom management, and expanding goals of care to include advance care planning.

rehabilitation treatment summary and recommendations for proactive functional preservation will promote consistent understanding across key stakeholders. In addition, patients and their caregivers should be able to identify which care teams to contact in the event of worsening symptoms or function.

## Conclusion

The rapid aging of the United States population and continued expansion of the therapeutic arsenal are projected to increase the population prevalence of advanced cancer and the societal burden of cancer related disablement. These trends will likely lead to more patients being seen by rehabilitation providers in inpatient rehabilitation settings. These patients may present with complex pharmacological regimens and views of care goals than the “typical” rehabilitation patient. The integration of primary palliative care approaches with rehabilitation interventions provide the opportunity to enhance the care of this patient and maximize the contributions to increased function and QoL for patients and their caregivers. Equipped with these skills and knowledge, rehabilitation clinicians can change the face of cancer care.

## Conflict of Interest

The authors declare no conflict of interest.

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