

Frailty in Older Adults

Assessment, support, and treatment implications in patients with cancer

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BACKGROUND: Frailty is defined as a disability in those of advanced age, often with comorbidities, poor nutritional status, cognitive decline, and reduced functional status.

OBJECTIVES: The purpose of this article is to discuss the concept of frailty, assess the use of a comprehensive geriatric assessment (CGA), and understand the implications for treatment to maintain or enhance physical, functional, and cognitive health of older adult patients with cancer.

METHODS: Literature about frailty in older adult patients diagnosed with cancer was reviewed to determine evidence-based assessment and treatment options.

FINDINGS: About half of all older adult patients with cancer experience some degree of frailty. CGA is a useful way to evaluate frailty and the extent of limitations. Many frailty-specific tools have been developed. Evidence-based strategies are available to address limitations associated with frailty in older adult patients with cancer.

KEYWORDS

geriatric oncology; frail; comprehensive geriatric assessment; cancer; older adult

DIGITAL OBJECT IDENTIFIER

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THE AGING OF THE BABY BOOMER GENERATION (THOSE BORN FROM 1945–1964) is producing a demographic shift in the population of the United States (U.S. Census Bureau, 2018). The number of adults aged 65 years and older will increase from the current 49.2 million to 73.1 million by 2030 (U.S. Census Bureau, 2018). The fastest growing age group consists of individuals aged 85 years and older, which will increase from 6.4 million to 11.8 million by 2035 (U.S. Census Bureau, 2018). Adults aged 65 years and older account for 15% of the population in the United States; however, they account for 53% of newly diagnosed cancers (Surveillance Epidemiology and End Results Program [SEER], 2018). The mortality rate is highest for those aged 65–75 years, at 26.5% (SEER, 2018).

Frailty is a key factor in determining the provision of healthcare services for older adults, particularly when it comes to cancer treatment decisions. By 2030, an estimated 70% of all cancers will occur among adults aged 65 years or older (White et al., 2014). Frailty is a complex syndrome characterized by declining functional reserves (Balducci, 2013) and adverse health outcomes, and it is estimated to occur in 19%–44% of older adults (Campitelli et al., 2016). Frailty or pre-frailty (the state between robust physical capability and dependency [van Velsen et al., 2015]) are estimated to occur in more than 50% of older adult patients with cancer (Ethun et al., 2017). The increasing risk of developing cancer and frailty in the older adult population necessitates astute and thorough assessment, individualized cancer treatment planning, and supportive care. This article will discuss the concept of frailty and the application of a comprehensive geriatric assessment (CGA) with implications for treatment and care for older adults with cancer.

Definition of Frailty

The concept of frailty has evolved from early descriptions associated with weakness and vulnerability. Frailty is currently defined broadly in the geriatric oncology literature in relation to the high-risk older adult characterized by disability, functional deficits, advanced age, comorbidities, polypharmacy, poor nutritional status, and/or cognitive decline (Huisingh-Scheetz & Walston, 2017). Research has focused on the development and validation of a formal definition of frailty and various assessment tools. Frailty is generally defined as a state of vulnerability to adverse stressors in older adults

and signifies a loss of physiologic reserve to maintain homeostasis (Huisinigh-Scheetz & Walston, 2017). A consensus conference group proposed the following medical definition of physical frailty (Morley et al., 2013):

A medical syndrome with multiple causes and contributors that is characterized by diminished strength, endurance, and reduced physiologic function that increases an individual's vulnerability for developing increased dependency and/or death. (p. 395)

The phenotypic frailty theory and the accumulated deficits theory have been proposed to explain the pathophysiological underpinnings of frailty (Fried et al., 2001). The phenotypic frailty theory is based on the belief that frailty develops from age-related cellular and physiological changes that lead to vulnerability and poor health outcomes and presupposes that an underlying physiological decline contributes to functional decline and a variety of comorbidities (Fried et al., 2001). The accumulated deficits theory, on the contrary, postulates that accumulated medical, physical, and social conditions result in increased vulnerability, and that an accumulation of comorbidities results in frailty (Mitnitski, Mogilner, & Rockwood, 2001).

Assessing for Frailty

Frailty and vulnerability are associated with mortality, postoperative complications, and cancer treatment intolerance (Ramdass, Loh, & Howard, 2017). These are important considerations when caring for older adult patients diagnosed with cancer. A CGA is the gold standard in the interprofessional comprehensive evaluation of functional ability, physical performance status, cognitive and emotional function, social support, comorbidities, polypharmacy, and nutritional status, and is often conducted regularly throughout the cancer treatment process (Hurria et al., 2011; Krishnan et al., 2014; Marshall, Clarke, Varatharasan, & Andrew, 2015; Overcash, 2015; Wildiers et al., 2014; Xue et al., 2016). Adults older than age 70 years or individuals with significant weight loss (5% or greater) related to chronic disease should be screened for frailty (Mitnitski et al., 2001) using a CGA or one of the many other frailty instruments (Amblàs-Novellas et al., 2018; Evans, Sayers, Mitnitski, & Rockwood, 2014) (see Table 1).

Reviews of frailty assessment tools for older adult patients with cancer (Huisinigh-Scheetz & Walston, 2017; Kirkhus et al., 2017; Loh et al., 2018) show a great deal of variability in sensitivity and specificity among instruments (Hamaker, Vos, Smorenburg, de Rooij, & van Munster, 2012). Frailty assessment instruments are an important option when determining function versus assuming fitness based on chronologic age. An effective assessment can help to predict health outcomes (Joseph et al., 2014), determine mortality (Ritt, Ritt, Sieber, & Gassmann, 2017), and predict length of hospital stay (Krishnan et al., 2014). In addition, frailty assessment

instruments are superior to identifying frailty when compared to general oncology assessments (Kirkhus et al., 2017).

The most common frailty tool with established validity and reliability is the Fried Frailty Criteria (Fried et al., 2001). The Fried Frailty Criteria determines the presence of three or more criteria (i.e., weight loss, fatigue, slow gait, decreased grip strength, and low physical activity); these help to determine the existence of frailty. Pre-frailty is defined as having one or two components of frailty (Fried et al., 2001).

Comprehensive Geriatric Assessment and Frailty

Frailty has a direct effect on cancer treatment decisions (National Comprehensive Cancer Network [NCCN], 2018). In the past, chronologic age was used as a reason to exclude older adult patients from adjuvant cancer treatment or clinical trials (Aapro, Köhne, Cohen, & Extermann, 2005; Hurria, 2007; Kim, Park, Koo, Han, & Kim, 2013). However, more recently, increased focus has been placed on the importance of individual patient assessment before establishing a cancer treatment plan. The CGA is a battery of instruments used in oncology to determine baseline functional, physical, and cognitive status (Burhenn et al., 2016; Overcash, 2015), predict cancer treatment tolerance (Hamaker, Schiphorst, ten Bokkel Huinink, Schaar, & van Munster, 2014), predict survival and adverse outcomes of hospitalized patients (Antonio et al., 2017), determine caregiver distress (Libert et al., 2017), and enhance the quality of life of older adult patients (Panza et al., 2018; Puts et al., 2018). CGA can be made up of individual instruments to screen for problems with functional status, cognitive limitations, emotional status, social conditions, and other conditions common to aging. Previous literature examining CGA has found it beneficial in predicting short-term surgical risk (Lee et al., 2016) and survival in patients with colorectal cancer (Antonio et al., 2018; Hamaker, Seynaeve, et al., 2014). In addition, a review of the literature found that CGA affects cancer management strategies in 20%–49% of patients (Caillet et al., 2011; Hamaker, Schiphorst, et al., 2014), motivating many treatment plans (more than 50%) to be altered to receive less-aggressive therapy (Hamaker, Schiphorst, et al., 2014). CGA is used to assess frail patients at risk for rehospitalization, to enhance or maintain functional status and independence (Courtney et al., 2012), and to enhance safety when falls and malnutrition are a concern (Westgard et al., 2018). Instead of screening for unidentified problems in fit patients, the CGA is used to evaluate previously identified problems in weaker, complex patients (e.g., poor nutrition, pain, falls, impaired skin integrity, cognitive concerns, comorbidities) (Ekerstad, Östberg, Johansson, & Karlson, 2018).

Assessing for comorbid conditions is important in the care of frail older adult patients diagnosed with cancer (Decoster et al., 2015). Cancer survivors report a mean of five comorbid conditions, of which two will develop after the cancer diagnosis (Leach et al., 2015). Common comorbidities in patients with cancer

are congestive heart failure, pulmonary disease, and diabetes (Bluethmann, Mariotto, & Rowland, 2016). These comorbidities increase the risk for adverse events during cancer treatment. CGA is effective in detecting problems in frail older adults in long-term care and to determine risk and management needs that require frequent attention (Pilotto et al., 2017).

In addition, CGA is helpful for identifying frail older adults who are experiencing pain. About 53% of people diagnosed with any stage of disease report pain (van den Beuken-van Everdingen et al., 2007b). Among those with pain, more than 33% may rate pain as moderate to severe (van den Beuken-van Everdingen et al., 2007b). Older adults are at greater risk for experiencing pain compared to younger patients (Fillingim, 2017). Biological and psychosocial issues place older adults at risk for pain. The biological reasons are the association of aging with decreased ability to modulate pain, greater number of comorbidities causing pain (including cancer), and biologic alterations (e.g., inflammation,

oxidative stress) (Fillingim, 2017; Naugle, Ohlman, Naugle, Riley, & Keith, 2017). Psychosocial reasons include lack of social support, poor sleep quality, and undertreatment of pain (Fillingim, 2017; Overcash, Tan, Patel, & Noonan, 2018).

A CGA can determine whether a frail older adult is at risk for financial toxicity. The notion of financial toxicity considers how the cost of cancer treatment influences quality of life (Fessele, 2017; Katz, 2018). Of concern is the growing role of expensive novel therapies in cancer treatment, which are increasing the cost of cancer care (while also improving survival) (Howard et al., 2016). A study of insured patients with cancer seeking copayment assistance found that 42% experienced a significant or catastrophic financial burden (Zafar et al., 2013). Of note, those experiencing financial burden were more likely to be younger than age 65 years. Medicare may help older adults avoid or reduce financial toxicity; however, the high cost of cancer treatment is placing strain on both the Medicare program and beneficiaries.

TABLE 1.
FRAILITY SCREENING TOOLS WITH ASSOCIATED ASSESSMENT CATEGORIES

SCREENING TOOL	AGE	PHYSICAL FUNCTION	COGNITION	PSYCHO-SOCIAL	NUTRITION	COMORBIDITY	SENSITIVITY (%)	SPECIFICITY (%)
Abbreviated Comprehensive Geriatric Assessment (Overcash et al., 2006)		✓	✓	✓			51–84	86–97
Balducci Criteria (Balducci, 2007)	✓	✓					84–94	50
Barber Score (Barber et al., 1980)		✓	✓	✓		✓	59	79
Fried Frailty Criteria (Fried et al., 2001)		✓			✓		31–87	49–96
Geriatric 8 (G8) (Bellera et al., 2012)	✓	✓	✓	✓	✓	✓	65–97	3–75
Groningen Frailty Index (Bielderman et al., 2013)		✓	✓	✓	✓	✓	39–66	69–87
Modified G8 (Martinez-Tapia et al., 2016)	✓	✓	✓	✓	✓	✓	89	79
Rockwood Score (Rockwood et al., 1999)		✓	✓			✓	47–54	88–100
Triage Risk Screening Tool (Meldon et al., 2003)		✓	✓	✓		✓	59–92	42–100
Vulnerable Elders Survey (Saliba et al., 2001)	✓	✓					39–88	62–100

Note. Sensitivity is defined as the probability of correctly identifying some condition or disease state. Specificity is defined as the proportion of those without disease who will have a negative test result.

Payments for cancer treatment totaled \$34.4 billion in 2011, representing almost 10% of Medicare fee-for-service dollars (Stockdale & Guillory, 2013). Medicare beneficiaries with cancer average about \$1,000 more out-of-pocket expenditures over a two-year period than beneficiaries without cancer (Davidoff et al., 2013). Reports also demonstrate that Medicare beneficiaries without supplemental insurance are at greatest risk for financial toxicity from cancer, where out-of-pocket expenditures can consume, on average, as much as 24% of household income (Davidoff et al., 2013; Narang & Nicholas, 2017).

Administering a Comprehensive Geriatric Assessment in Frail Older Adult Patients With Cancer

Administering a CGA in frail patients with cancer may require several clinical encounters to reduce patient fatigue often experienced during a longer, single clinical visit. For more fit seniors, a CGA is often administered once a year. In vulnerable frail patients, a CGA (or specific instruments) should be administered every clinical visit to detect changes in cognitive status and functional fitness; these can rapidly decline. Clinical measures include the Geriatric Depression Scale (GDS) (Yesavage et al., 1982), the Mini-Cog (Borson, Scanlan, Brush, Vitaliano, & Dokmak, 2000), the Activities of Daily Living Scale (Lawton & Brody, 1969), the Instrumental Activities of Daily Living Scale (Katz, Downs, Cash, & Grotz, 1970), the Mini Nutritional Assessment (Cereda, 2012), the PROMIS pain (McCaffery & Beebe, 1989), falls (American Geriatrics Society, British Geriatrics Society, and American Academy of Orthopaedic Surgeons Panel on Falls Prevention, 2001), and social participation tools (Hahn et al., 2016).

A CGA can be made up of any relevant, valid, and reliable instruments specific to the needs of patients. Time to conduct a CGA is a consideration when deciding which and how many instruments should be included. For a new patient, a CGA with interprofessional specialty assessments (e.g., physical therapist, dietitian, social worker) often requires a 90-minute appointment. An established patient can require 30 minutes for CGA assessment (Overcash, 2015).

Although many components of a CGA are objective measures, a future challenge will be whether the subject assessments, such as pain and social isolation (Hahn et al., 2014), are conducted through provider assessment, patient-reported outcome measures, or both approaches in tandem. Providers may underestimate the severity of toxicities from cancer treatments, particularly as the toxicities increase (Falchok et al., 2016; Nakaguchi et al., 2013; Okuyama et al., 2011). Clinicians can consider patient narratives, family discussions, professional experience, and expertise in the management of frail older adults. Scores on CGA instruments only provide a part of the data; caring for complex older adult patients requires careful consideration of all types of information.

A CGA helps clinicians understand the health of the patient from a perspective beyond the information obtained with the traditional history and physicals (Overcash, 2015). Understanding how an older patient is able to bathe, ambulate, administer medications, and sleep, as well as manage anxiety and maintain emotional and cognitive status, all help to complete the clinical picture (Wright et al., 2017; Yamano et al., 2017). In general, a CGA is used to provide a wide range of information necessary to collectively develop the best course of action to care for patients with malignancies (Society for International Oncology in Geriatrics, 2017; Wildiers et al., 2014).

Incorporating the patient, family, and the interprofessional team in the development of the cancer treatment plan using the results of a CGA can help achieve realistic outcomes and manage expectations (Baronner & MacKenzie, 2017). Consulting the patient and family from the perspective of patient priority-directed decision making (Tinetti, Esterson, Ferris, Posner, & Blaum, 2016) can help identify patient priorities for treatment that may focus less on the individual diseases and more on quality of life and functional status. Although a CGA may illuminate many comorbidities and actual and potential limitations, some patients may not be willing to undergo some of the rigors of a clinical management plan. When this happens, providers can align management strategies with the personal goals of the patient and family (Ferris et al., 2018).

Referrals Based on a Comprehensive Geriatric Assessment

A CGA identifies possible referral options for services such as physical therapy, exercise programs, home health care, memory disorder clinics, long-term care, and medical specialists. Understanding resources available in the community is essential to addressing the limitations detected in a CGA. In addition, anticipating what limitations can be identified based on the screening instruments will help prepare the healthcare team for developing strategies and recommendations based on CGA findings (Overcash, 2018). Local physical therapists, memory disorder clinicians, neurologists who specialize in cognitive disorders, geriatric psychologists, and other related providers should be contacted to determine if they take new patients, the types of insurance they accept, and other issues that are helpful to know before referring a patient. Proactive planning can reduce some of the burden patients and families feel when they are trying to carry out provider recommendations. Proactively identifying referral sources and determining if they will take new patients can also reduce the time required in clinic (see Figure 1).

Nurse-Led Models of Care

Clinical options to address frailty in patients with cancer are reflected in nurse-led models of care. Policy initiatives and older adults' desire to age in place have promoted the shift of services from institutions to communities for frail older adults

who require supportive services to maintain independence (Wenzlow, Eiken, & Sredl, 2016). Nurse leaders have developed innovative care models to support the needs of community-based frail older adults. Although these models were initially developed for frail older adults without cancer, studies of these models have important implications for frail older adults with cancer (Van Cleave, Smith-Howell, & Naylor, 2016). One model is the Transitional Care Model, which provides continuity of care across care settings while focusing on patients' and family caregivers' preferences. The Transitional Care Model has consistently demonstrated positive outcomes, including decreased healthcare costs and improved survival for patients discharged from the hospital (Naylor et al., 2004, 2014; Naylor & McCauley, 1999).

Another model, Community Aging in Place, Advancing Better Living for Elders (CAPABLE), was developed to support older adults who want to age in their homes. The CAPABLE model is a structured home-visit program that is administered by an occupational therapist, RN, and home repair technician. The program includes an interprofessional assessment and customized plan to enhance self-care ability and functional goals. A study of the CAPABLE model in older adults who were dually eligible for Medicare and Medicaid demonstrated that the intervention group improved or maintained their function. The intervention group also experienced lower likelihood of hospitalization or long-term service use, which translated into Medicaid cost savings (Szanton et al., 2018; Szanton, Leff, Wolff, Roberts, & Gitlin, 2016).

Community-dwelling older adults who are frail may experience social isolation, which can have detrimental health effects, including increased mortality (Cudjoe et al., 2018; Nicholson,

“Frailty is a complex syndrome estimated to occur in 19%–44% of older adults.”

2012). The Program of All-Inclusive Care for the Elderly (PACE), a community-managed care program for older adults who are eligible for placement in a nursing home, may help prevent social isolation (Eng, Pedulla, Eleazer, McCann, & Fox, 1997; Sullivan-Marx, Bradway, & Barnsteiner, 2010). The PACE program provides primary care, acute care, and long-term care using a senior day center with a full-service medical clinic.

Nurse leaders have also been instrumental in demonstrating that early palliative care services can improve quality of life and survival for patients with advanced cancer (Bakitas et al., 2009; Ferrell et al., 2017). Understanding the array of potential services that may be necessary as a result of CGA is critical to the effectiveness of geriatric oncology care. Interprofessional team members communicate to deliver appropriate services to frail older adults with cancer. However, one challenge is the ability of healthcare providers to synthesize the large amount of data collected from multiple assessments using different platforms, such as web-based tools or paper questionnaires. Interactive data visualization tools integrated within electronic health records that are accessible to all healthcare team members may facilitate patient-provider discussions and help providers identify the services that meet the needs and goals of frail older adults with cancer (Hartzler, Izzard, Dalkin, Mikles, & Gore, 2016).

Case Study

J.T., an 85-year-old woman who resided in an assisted living apartment, had begun to experience a decline in her physical abilities. J.T.'s complaints included vision and hearing loss, fatigue with minimal activity, and an 8-pound weight loss in the past year. Activities, such as bathing and dressing, had become difficult, and walking in the apartment was exhausting. Social interactions were becoming more difficult as well. Then, one month ago, J.T. experienced a fall that did not result in an injury; however, radiographic evaluation in the emergency department revealed osseous metastasis. A diagnosis of hormone receptor-positive breast cancer, treated with five years of anastrozole therapy when she was aged 74 years, appeared to have spread to the bone. It was recommended that J.T. see her oncologist for additional care. After seeing her oncologist and having a complete workup, it was

FIGURE 1.
ORGANIZATIONS OFFERING CLINICAL
RECOMMENDATIONS FOR OLDER ADULTS

AMERICAN COLLEGE OF SPORTS MEDICINE

Offers guidelines for assessment and instructions on how to write prescriptions for exercise

- www.acsm.org

AMERICAN OCCUPATIONAL THERAPY ASSOCIATION

Offers guidelines to address home safety modifications and other information that nurses and nurse practitioners may find helpful

- www.aota.org/Practice/Researchers/practice-guidelines.aspx

NATIONAL COMPREHENSIVE CANCER NETWORK

Offers older adult oncology guidelines to assist with treatment decisions

- www.nccn.org/professionals/physician_gls/pdf/senior.pdf

NATIONAL INSTITUTE ON AGING

Offers recommendations for physical activity and maintaining a healthy lifestyle

- <https://go4life.nia.nih.gov>

determined that her breast cancer had metastasized to bone. After discussion of diagnosis, overall prognosis, and treatment options, J.T. and her family decided that she would try her oncologist's recommendation of starting palbociclib and letrozole therapy. J.T. believed that this would be a good option for her after learning about the side effects. J.T. was instructed that her palbociclib prescription was sent to a specialty pharmacy and she would be hearing from them. J.T. received a telephone call two days later and was told that she does not have prescription coverage and, although some prescription assistance was available from grant foundations, she would need to pay \$1,000 per month for the medication.

Case Study: Nursing Implications and Assessment

For J.T., a CGA could address lower-extremity strength, risk of falls, and balance and gait using a Timed Up and Go test (Podsiadlo & Richardson, 1991). Functional status assessment using the Activities of Daily Living Scale (Katz et al., 1970) and the Instrumental Activities of Daily Living Scale (Lawton & Brody, 1969) tools determine the extent to which J.T. is able to live independently and perform necessary tasks. Because social interactions are difficult, a screening using the GDS (Yesavage et al., 1982) can help identify strategies to address those interactions.

Clinicians frequently monitor pain and medication use. In addition, clinicians also evaluate the patient's exposure to financial toxicity and discuss issues with the patient/family and interprofessional team to determine reimbursement options, less-expensive medication, and community resources (de Souza et al., 2017). The social worker can discuss strategies to reduce cost and anxiety associated with financial concerns (Overcash, 2018).

Fall and Functional Interventions

Falls are a considerable risk related to previous falls, older age, reduced physical ability, and frailty (Cheng & Chang, 2017; Huang, Blackwood, Godoshian, & Pfalzer, 2018). To reduce falls and injury from falls, multifactorial interventions are recommended to address environmental concerns, sensory problems, nutritional consideration, and other related factors (Grossman et al., 2018; Pega, Kvizhinadze, Blakely, Atkinson, & Wilson, 2016). Exercise to enhance balance and muscle strength is beneficial in reducing falls (Grossman et al., 2018). Even for a frail person older than age 85 years, exercise can be beneficial in reducing falls and ameliorating the effects of frailty (de Labra, Guimaraes-Pinheiro, Maseda, Lorenzo, & Millan-Calenti, 2015; Kato, Islam, Koizumi, Rogers, & Takeshima, 2018; Silva, Aldoradin-Cabeza, Eslick, Phu, & Duque, 2017).

Once a patient has deconditioned, it can be difficult to enhance functional status. Exercise interventions can increase physical fitness in frail older adults (Ahlund, Back, Oberg, & Ekerstad, 2017). For frail older adults, safety and risk of falls with

IMPLICATIONS FOR PRACTICE

- Understand that frailty can determine cancer treatment decision making.
- Conduct a comprehensive geriatric assessment to help determine the extent of frailty and cancer treatment considerations.
- Be instrumental in providing transitional care to frail older adult patients with cancer.

injury, ambulation assistance with devices, and daily stimulation must be considered (Ahlund et al., 2017).

Fatigue, Weight Loss, and Depression

To address J.T.'s issues of fatigue, weight loss, and depression, ways to add exercise to her daily routine should be considered (Henshall, Allin, & Aveyard, 2018). Regular exercise, home visits, nutritional supplementation, and individual tailored management strategies are all reasonable interventions for weight loss, fatigue, and depression (Apostolo et al., 2018; National Institute on Aging, 2018). Older adults who take part in structured physical activity programs with health education experience less mobility disability than those who do not participate in activity programs (Sink et al., 2015). The benefit of structured physical activity programs extends to hospitalized frail older adults. Structured mobility programs for hospitalized patients can improve mobility and decrease admissions to nursing homes (Killey & Watt, 2006; Nolan & Thomas, 2008; Pahor et al., 2014).

Sensory Limitations

To address J.T.'s vision and hearing limitations, clinicians can conduct screening to determine if glasses or hearing aids are appropriate. Medicare does not pay for glasses, hearing aids, or routine care, and many people do not have the financial resources to cover appropriate services. Older adults with vision impairment are more likely to be hospitalized (Bal et al., 2017) and an investigation into possible community resources may be necessary to help seniors receive appropriate vision care.

Medication Concerns

To evaluate medication side effects associated with cancer treatment, clinicians can regularly review a patient's medications. For example, patients with congestive heart failure may be prescribed beta blockers to decrease the workload of the heart. By taking beta blockers, frail older adults are at risk for hypotension if the patient is experiencing chemotherapy-induced nausea and vomiting or if the patient has diabetes. Frail older adults are at risk for glucose fluctuations during cancer treatment because of poor oral intake or inability to self-administer their medications (van den Beuken-van Everdingen et al., 2007a). These glucose fluctuations are associated with poor outcomes, such as infections and mortality (Hammer et al., 2009, 2016). For patients with pulmonary disease, frail older adults who overuse inhaled beta agonists may develop tachycardia or supraventricular arrhythmias (Kee, Hayes, & McCuiston, 2014).

Pain management for frail older adults has special considerations. One of the most important components of management

of pain is structured assessment. A rich body of pain research has generated important measures, such as the Brief Pain Inventory (Cleeland, 1991), which provides opportunities for patients to report the site of pain and how the pain interferes with their daily lives. However, pain assessment in frail older adults presents special challenges, particularly for individuals with cognitive impairment. A website maintained by the University of Iowa (<https://geriatricpain.org>) provides information about tools and educational materials for providers and caregivers regarding the pain experienced by older adults. Patients, in consultation with their providers, can discuss their pain management. This collaboration includes patient and caregiver education about risks and benefits of pain medication (Guerrero, Bolier, Van Cleave, & Reid, 2016).

Case Study: Interprofessional Team Recommendations

The interprofessional care team worked together to address J.T.’s treatment plan and complications. The palliative care team monitors her medications and helps reduce her bone pain, the social worker continues to investigate solutions to reduce the financial concerns associated with the cancer treatment (the drug company agreed to reduced costs during a period of several months to make palbociclib more affordable), and the dietitian evaluates J.T.’s weight loss and communicates with the assisted living facility, which results in more favorable meal choices for J.T. In addition, a home-health aid will visit several times a week to provide assistance and supervise a home exercise program designed for frail older adults. Nurse-led models, such as PACE and CAPABLE, may be options for J.T., depending on availability. Although not all problems detected using a CGA were addressed, some of the most pressing concerns were identified and strategies were developed. To enhance communication, team members entered assessment data into J.T.’s electronic health record (EHR) via web-based applications. Summaries of findings and providers’ recommendations were displayed in the EHR with data visualization tools. Using data that can be accessed by the entire healthcare team, management strategies will be reevaluated and communicated to J.T.’s primary care nurse practitioner.

Conclusion

Frailty can affect cancer treatment decisions, treatment, and outcomes. Nurse-led models of care, such as the Transitional Care Model (Naylor et al., 2004) and PACE (Eng et al., 1997), can help guide management plans. Conducting a CGA is an important and beneficial element of geriatric oncology care. Evaluating the complex needs of frail older adults diagnosed with cancer can require ample time and personnel to maintain or enhance functioning. Interventions are available to address problems associated with frailty and cancer. Understanding the unique needs associated with frailty and cancer can positively affect the quality of life of the patient and his or her family.

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