Module 5: Assessment and Management of Cancer Related Care of Older Adults with Complex Care Needs

Janine Overcash, PhD, RN, GNP-BC
Assistant Professor
University of South Florida
MDC 22
Tampa, Florida
33612
(813) 974 2107

This module is:

Reviewed and endorsed by
The National Gerontological Nursing Association (NGNA),
May 2007. http://www.ngna.org

ASSESSMENT AND MANAGEMENT OF CANCER RELATED CARE OF OLDER ADULTS WITH COMPLEX CARE NEEDS

Cancer is a disease that commonly affects many older people. The National Cancer Institute Surveillance, Epidemiology and End Results Program (SEER) offers data from 1998-2002 suggesting that 56 percent of all cancer diagnoses occur in people sixty-five and over (Yancik, 2005 [Level VI]). The typical cancer patient tends to be over sixty-five, with multiple diagnoses or comorbidity (Extermann, Overcash, Lyman, Parr, & Balducci, 1998 [Level VI]) and requires complex nursing assessment and planning. This module will discuss the incidence and prevalence of common cancers in the older patient and the impact of comorbidities and geriatric syndromes. Considerations in assessment, management, and issues of health promotion of the older cancer patient will be addressed.

Demographics of Cancer in the Senior Adult

Aging is a risk factor for many malignancies. In 2000-2003, the median age at the time of diagnosis for all sites of malignancy was sixty-seven (Figure 1). The median age at death from a malignancy was seventy-three (Figure 2). The lifetime probability of developing a malignancy increases with age (SEER, 2005). Age associated cancer risk is not only realized in the United States, but throughout developed countries around the world (Yancik & Ries, 2004 [Level VI]). It is crucial that nurses and other healthcare providers have the specific knowledge required to adequately care for the older person with cancer.

According to the National Cancer Institute 2002 data, approximately 10.1 million cancer survivors exist in the United States and 61 percent of those are over age sixty-five (Figure 3) (US Prevalence, 2004). Within the United States, death rates from cancer have diminished in the years between 1995-2002 for both men and women, however, the predicted increase in the aging population in the United States and around the world may result in increased projected cases (Havlik, Yancik, Long, Ries, & Edwards, 1994 [Level VI]). The most common site of cancer in women in the United States is breast cancer; for men it is prostate cancer . The leading site of cancer death for both men and women is lung cancer (American Cancer Society, 2007 [Level VI]). Projections for cancer risk also increase with age as calculated through the year 2050 (Table 1) (SEER, 2005).

Comorbidities and Geriatric Syndromes

The mean number of diagnoses or comorbidities in a person seventy and over is 5.6 (Fried et al., 2001 [Level VI]). In many cases, a diagnosis of cancer is only one of the comorbidities diagnosed in a senior person. One important issue in assessing and caring for the older cancer patient is to identify the comorbidities and the potential interactions associated with cancer treatment (Balducci & Extermann, 2000a [Level VI]). Adverse signs and symptoms experienced by an older cancer patient may not be exclusively caused by the cancer or cancer therapy, but by a comorbidity (Reiner & Lacasse, 2006 [Level VI]) (LV 2). An example may be joint pain in a person with a diagnosis of breast cancer with bone metastasis. The pain may be related to degenerative joint disease and the bone metastasis may be under control. Moreover, many domains must be considered when caring for an older patient. Issues of physical, emotional and cognitive comorbidity become synergistic with potential limitations in caregiver support, financial concerns and healthcare insurance coverage. While many seniors are very resilient and have a great

deal of vitality, proactively identifying and managing comorbidities and varying treatments may help preserve health and independence. It is important to assess for comorbidity, in that issues of sexual function and urinary incontinence have been found to be rather common and are associated with quality of life (Bhojani et al., 2008 [Level III]).

The most frequently noted comorbidities in older people are osteoarthritis, hypertension and diagnosed joint problems (Figure 4) (National Center for Health Statistics, 2006). However in 2008 (not yet reported by the Centers for Disease Control), it was found that hypertension was the first common comorbid condition and diabetes was the second (Piccirillo et al., 2008 [Level II]). Cancer is the fourth most common comorbidity. The leading causes of death for both men and women in the United States are from cardiovascular disease and cancer (National Center for Health Statistics, 2002). To care specifically for the oncological needs of the older cancer patient would be myopic and detrimental. Nurses must see the older patient as a complex system with multiple conditions and problems on physical, functional and psychosocial levels.

Geriatric syndromes generally refer to multifaceted, complex health problems that are motivated by various factors and generally reflected in issues such as vulnerability and deconditioning (Topinkova, 2008 {LevelV]). For patients in an acute care oncology setting, cognitive impairment, depression, weight loss and polypharmacy are some of the more common geriatric syndromes detected (Flood et al., 2006 [Level IV]). Examples of geriatric syndromes are illustrated in Tables 2 and 3. It is important that geriatric syndromes are detected prior to cancer treatment in order to reduce the probability of further complications associated with chemotherapy, radiation and other types of cancer treatment (Naeim & Reuben, 2001 [Level VI]). The comorbid conditions of depression and impaired functional status have been found to contribute to a poorer quality of life in patient prior to chemotherapy (Wedding et al., 2008 [Level II]).

Comorbid conditions in cancer survivors are also important to the care of the older patient (Ridner & Dietrich, 2008 [Level II]). In the care of the breast cancer survivor, lymphedema has been found to be associated with comorbidity.

Caring for the Frail Older Cancer Patient

Some older people with comorbidities and accompanying geriatric syndromes have little or no functional reserve and therefore are considered frail. The definition of frail is rather broad and varies between scholars and disciplines. For the oncology patient, a definition of frail may be considered as eighty-five years old or older, dependence in one or more activities of daily living, three or more comorbid conditions and the presence of one or more geriatric syndrome (Balducci & Stanta, 2000 [Level VI]). To define frailty, several clinical concepts should be considered (Rockwood, Fox, Stolee, Robertson, & Beattie, 1994 [Level VI]; Rockwood, Hogan, & MacKnight, 2000 [Level VI]):

1. Cormobid impairment
2. Dependency in daily activities
3. Poor physiological reserves
4. Advanced age
5. Vulnerability
6. Inability to maintain homeostasis

A “cycle of frailty” has been developed to further describe the concept with respect to clinical considerations (Fried et al., 2001 [Level VI]; Woods et al., 2005 [Level III]):

1. Weight loss equal to or greater than ten pounds. in one year or 5 percent of body weight in a year
2. Weakness as measured by grip strength
3. Self-reported poor stamina and exhaustion
4. Inability or great difficulty in walking fifteen feet
5. Low physical activity level

Definitions may vary concerning frailty but themes of vulnerability and dependency prevail. While many older people diagnosed with cancer are active and independent, some patients are considered frail and do require large amounts of care and support.

The extent to which a person is considered frail has an impact on cancer screening (Heflin, Pollak, Kuchibhatla, Branch, & Oddone, 2006 [Level III]), treatment (Balducci & Yates, 2000; Kohne, Folprecht, Goldberg, Mitry, & Rougier, 2008 [Level IV]), palliation (Kaasa, Torvik, Cherny, Hanks, & de Conno, 2007 [Level IV]); Kohne et al., 2008 [Level IV]) and treatment outcomes (D'Hondt et al., 2004 [Level II]). It is important for the clinical nurse to recognize frailty or patients who may become frail as a result of cancer treatment or other comorbid conditions. A Comprehensive Geriatric Assessment will identify patients who are frail and need a more robust plan of care (Rao, Hsieh, Feussner, & Cohen, 2005 [Level VI]). It has been found that frail patients receiving chemotherapy have higher rates of discontinuation of treatment and mortality compared to non frail patients (Basso et al., 2008). Additionally, assessment of nutrition, mobility, strength, energy, physical activity, mood and cognition have been shown to be more sensitive to the detection of frailty compared to simply assessing function (Retornaz et al., 2008 [Level III]).

The continuum of health may trend toward frailty as a result of a cancer diagnosis or cancer treatment. Some chemotherapy may prove to be too toxic and the patient may be considered frail for a period of time. Other patients may respond to chemotherapy or other cancer treatments and become less frail. Degrees of frailty intercede with the health and well-being of a patient throughout the cancer treatment process. The extent to which the patient is able to sustain health throughout the cancer treatment process may depend on factors such as the absence of health limiting comorbid conditions, good physical and emotional condition, adequate support systems, good functional status and independence (see Figure 5). When the patient becomes compromised and health assets (good physical functioning, good physical condition, etc.) debilitate, then factors associated with frailty become realized (Balducci & Extermann, 2000b [Level VI]).

Functional Status of the Older Patient with Cancer

An important geriatric syndrome relevant to the older cancer patient is impaired functional status which can be associated or preceded by other geriatric syndromes such as dementia (Wang, Larson, Bowen, & van Belle, 2006 [Level VI]) coping, depression (Turvey, Klein, & Pies, 2006) and falls (Harlan, Clegg, Abrams, Stevens, & Ballard-Barbash, 2006 [Level VI]). Functional status is the ability or inability of a patient to perform various tasks that maintain independence. Two types of functional status domains exist: Activities of Daily Living (ADL) and Instrumental Activities of Daily Living (IADL). The ADLs are the ability, inability or the need for assistance in bathing, dressing, feeding, toileting, incontinence and/or transferring (Bischoff-Ferrari et al.,

2004; Katz, Downs, Cash, & Grotz, 1970 [Level III]) and are the more basic tasks that can be important to living alone. The IADLs are tasks that require more skill such as driving or getting to places beyond walking distance, using the telephone, cooking, cleaning, laundry, small handyman chores, taking medication and managing money(Elley et al., 2007) (Lawton & Brody, 1969 [Level III]). Patients who have limitations in IADL have increased risk of falls (Overcash, 2007 [Level III]) and therefore require careful screening and education. Scores on IADL indicative of functional limitations become more common with increased age (Serraino, Fratino, & Zagonel, 2001 [Level IV]). Assessing frailty with ADL and IADL instruments alone may not provide detection of all frail patients. Approximately 42% of older cancer patients were deemed frail based on markers of frailty and not ADL and IADL scores (Retornaz et al., 2008 [Level III]). Frailty must be considered as discussed using broader elements of clinical assessment (Fried et al., 2001).

Understanding physical function is very important; for example, women who are highly physically active have a significantly reduced risk of hospitalization for breast cancer (Wyrwich & Wolinsky, 2000 [Level VI]). Patients who have a poor functional status, comorbidity and perhaps other geriatric syndromes may be considered for palliative cancer treatment versus someone who may be of more advanced age and better functional status (Balducci & Yates, 2000 [Level VI]). Functional status, not chronological age, may be a more important indicator of tolerance to cancer therapy.

Functional status assessment is a helpful baseline measure prior to cancer treatment (Garman & Cohen, 2002 [Level VI]). Changes in functional status while undergoing cancer treatment may be reflective of the tolerance of therapy or disease progression (Chen et al., 2003; Given, Given, Azzouz, & Stommel, 2001 [Level VI]; Reiner & Lacasse, 2006 [Level VI]). Monitoring functional status throughout the cancer diagnostic and treatment periods may motivate proactive interventions that maintain independence in the older cancer patient.

Falls in the Older Patient with Cancer

Not a great deal of research exists in the area of falls and the older cancer patient. Falls are defined as unintentionally coming to the ground or some lower level for reasons other than trauma or loss of consciousness (Kellogg International Work Group, 1987 [Level VI]). The American Geriatrics Society offers a simple screening question of asking the patient if he or she has fallen in the last year (American Geriatrics Society, 2001). Cancer treatment can be associated with intrinsic risk factors for falls such as fatigue and anemia, which may put the older cancer patient at greater risk for a fall (Holley, 2002 [Level VI]). Additionally, prostate cancer patients receiving long term androgen deprivation therapy have been found to have an increased risk of falls (Bylow et al., 2008 [Level II]). Anemia is another issues found to be associated with falls (Pandya, Bookhart, Mody, Orsini, & Reardon, 2008 [Level II]). Injury from a fall can be a serious complication, therefore, screening and patient education can be reasonable proactive interventions. For many older patients, a fear of falling is very debilitating and assessing the extent of the fear and possible solutions may help ameliorate anxiety and consequently reduce risk (Guigoz, Lauque, & Vellas, 2002 [Level VI]; Vellas, Wayne, Romero, Baumgartner, & Garry, 1997 [Level VI]). It is unreasonable to completely abolish the risk of a fall, however, having a conversation about what to do in the event of a fall can help preserve life and independence.

Health Promotion and Cancer Risk Reduction

Health prevention can be divided into three levels of healthcare: primary prevention, secondary prevention and tertiary prevention. Primary prevention considers activities such as a healthy diet and exercise in order to reduce opportunity for disease process. Secondary prevention activities are screening activities such as mammography or blood tests such as prostatic specific antigen (PSA) levels to detect disease process prior to the pathology becoming evident. Tertiary prevention or care refers to treatment for a diagnosed condition, such as seeking treatment for a diagnosed breast cancer or prostate cancer. Since 1990, numbers of age-adjusted deaths have declined in the United States as a result of primary prevention (Hesse, Moser, Rutten, & Kreps, 2006). Nurses in community health, ambulatory and inpatient settings can have a positive effect on health prevention and promotion.

Ambulatory care nurses can help enhance participation in secondary prevention activities by sending invitation letters to patients for breast cancer screening, mailing education materials, making phone calls and issuing direct reminders (Bonfill, Marzo, Pladevall, Marti, & Emparanza, 2001). Moreover, education in outpatient clinics on concerns such as participation in screening mammography can be enhanced by newsletters, educational material and culturally sensitive materials (Coleman et al., 2003 [Level I]). Checklists and labels regarding whether the tests are due, ordered or overdue can be helpful as well as delineation of the division of responsibility on follow up. Internal reminders for clinic staff can also enhance participation in screening activities (Roetzheim et al., 2004). It is a prime nursing role to describe the risks and benefits of screening to assist the older patient in making decisions concerning their healthcare (Yarbrough, 2004 [Level I]).

Home health nurses can help by educating the patients, families and support persons in all levels of health prevention (Bourbonniere & Kagan, 2004 [Level V]). Home healthcare nurses have been shown to increase two-year survival of advanced stage, older, post-surgical cancer patients (McCorkle et al., 2000 [Level II]). No matter the setting, nurses have the opportunity and the ability to offer crucial healthcare information that can reduce the risk of advance disease.

Nurses must also recognize that African-American or black women are less likely to receive adequate mammography screening when compared to white women and particular attention must be given to enhance opportunities for screening (Smith-Bindman et al., 2006 [Level VI]). Residents in long-term care facilities are also less likely to receive cancer screening as recommended by the American Cancer Society (Bassett & Smyer, 2003 [Level VI]). Older people with lower socioeconomic status are also at risk for not receiving screening with mammography when they would generally benefit (Williams, Lindquist, Sudore, Covinsky, & Walter, 2008). Awareness of high-risk groups is necessary knowledge for nurses in order to target groups who are most likely to forgo cancer screening.

For the older person, a question to consider is when should screening stop? Is it an age or a series of indicators, or perhaps both? There are no clear answers to the screening questions. There are some factors to consider in the decision to screen an older person for cancer and they generally depend on:

- Life expectancy
- Functional status

- Comorbid conditions
- Potential tolerance for cancer treatment
- Presence of geriatric syndromes

The National Comprehensive Cancer Network (Balducci et al., 2005; NCCN, 2004 [Level VI]) offers three questions to note when considering cancer screening in an older person:

1. Is the older person going to die of cancer or with cancer?
2. Is the patient at risk for the complication of cancer during her or his lifetime?
3. Is the patient able to tolerate cancer treatment?

For those with a life expectancy of five or more years, breast cancer screening appears indicated. While the debate about prostate cancer screening continues, it seems that for men with a ten-year expected survival, screening would be beneficial (Balducci, 2005b [Level VI]). The data change rapidly with regard to cancer screening. Various organizations may also differ on screening recommendations. For example, mammography reduces breast cancer mortality by approximately 20 percent to 35 percent for women fifty to sixty-nine years of age (Elmore, Armstrong, Lehman, & Fletcher, 2005 [Level I]). While the American Cancer Society offers guidelines of mammography annually for women forty and over, some suggest that biennial mammography for women sixty-five and over reduced mortality and cost (Mandelblatt et al., 2003 [Level I]). It is important to know which guidelines are adopted by the facility or work concentration arena. Refer to organizations such as the American Cancer Society or the National Cancer Institute for the most current guidelines on cancer screening for the older person.

Assessment of the Older Cancer Patient

Expect to spend more time collecting history and physical data from an older cancer patient as compared to younger patients in the outpatient clinic and inpatient hospital settings. It has been shown that older patients tend to feel that the quantity and quality of care are not satisfactory, therefore it is important to allocate the necessary time to gather the data that will support optimum care (Chouliara, Kearney, Stott, Molassiotis, & Miller, 2004 [Level IV]). When conducting health assessments of seniors, ask patients and families to verbalize important elements they feel should be included in their health histories. For example, some patients may want to focus on past cancer risk exposures that could be associated with malignancy. Other patients may want to focus on diet, vitamin and mineral supplementation. Reserving an adequate amount of time to conduct a thorough health assessment can result in a more satisfied patient and family, reduce anxiety and establish trust that will form the foundation for a good nurse-patient relationship.

Some issues to consider when assessing an older person for cancer (screening) or for cancer treatment related issues are:

1. Older people tend to present later for assessment of troublesome signs and/or symptoms.
2. Older people may have multiple care providers.
3. Older people may have a limited social support network which makes transportation, care giving etc. more difficult.
4. Older people may have comorbidities that can mask signs and symptoms of malignancy.

5. Older people may be a caregiver to a spouse or other family member thus hampering regular healthcare.
6. Older people may be subjected to ageism by healthcare providers.

Other signs of symptoms of cancer are included in Table 4.

Health History

A health history can be the most valuable aspect of the health-related data collection process. Understanding how to respect and ensure confidence in the older patient can construct a trust on which excellent care can be extended. For the ambulatory care nurse, starting the interview by assessing the reason for the ambulatory care visit can establish a sense of trust and caring. Some patients are not self motivated to see a healthcare provider and are compelled by a family member. Others are referred by another physician or nurse practitioner. Whatever the motivation, it is important that the nurse understand why the patient is initially presenting for care. Initially, assess the patient expectation for the healthcare visit. Some patients want a plan for complete cancer screening, and others may want to be followed for continued care of a past history of cancer. Other helpful interview techniques are:

1. Understand if patients have had a cancer in their past medical history
2. Determine what cancer treatment the patients has had and how well it was tolerated
3. Determine at what age the patient was diagnosed with a malignancy (cancers behave differently in people seventy and over)
4. Determine history of cancer screening examinations
5. Assess for geriatric syndromes with valid and reliable screening tools (geriatric syndromes may be present but not obvious)
    a. Fall screen using the AGS questions (American Geriatrics Society, 2001 [Level VI])
        i. If a patient has fallen in the last year then further screening is necessary (The “Get Up and Go” test will be discussed in the physical exam portion of the manuscript)
    b. Functional status self-report assessments for outpatients
        i. Activities of Daily Living (Bischoff-Ferrari et al., 2004)(Katz, Downs, Cash, & Grotz, 1970 [Level III])
        ii. Instrumental Activities of Daily Living (Elley et al., 2007)(Lawton & Brody, 1969 [Level III])
    c. Emotional screening self report
        i. Geriatric Depression Scale (Yesavage et al., 1982 [Level III])
        ii. SF-12 (Ware, Kosinski, & Keller, 1996)
    d. Cognitive screening
        i. Mini Mental State Exam (MMSE) (Folstein M., Folstein, & McHugh, 1983 [Level III]).
        ii. Polypharmancy screening

Screening for potential problems before they become life limiting may help enhance the treatment outcomes of the older care patient (Ingram et al., 2002 [Level IV]). Holistic screening with many of the above screening measures is referred to as a Comprehensive Geriatric Assessment (CGA). While no assessment or screening battery could possibly detect all limitations, the CGA is intended to detect several common

limitations depending on what screening instruments are included. Nurses are generally at the core of the CGA development and implementation. Constructing a CGA relevant to the population of older patients is important to the intended outcomes of the screening. Moreover considering what type of limitations can be addressed and followed is also important to the development of screening. If healthcare providers can not follow up on certain issues detected as part of the CGA, then perhaps screening for those issues may be not prudent.

Physical Examination

Normative aging changes refer to changes that typically occur in humans as a result of growing older. Understanding what is a normal aging process and what is pathological is important knowledge for the clinical nurse. Performing regular physical exams can provide useful data regarding cancer disease progression, treatment tolerance and functional status. Physical examination is an opportunity to teach the patient about health and cancer screening. In a recent study, women were found to be more satisfied with routine clinical breast examination if it was perceived as informative and understandable (Foxall, Barron, & Houfek, 2003 [Level IV]).

Physical assessment data is the objective dimension to healthcare data collection. Self-report measures are helpful however, they have been shown to be less sensitive then performance based evaluations (Kuriansky, Gurland, & Fleiss, 1976 [Level III]; Naeim & Reuben, 2001 [Level III]). Some helpful performance-based evaluations are:

1. Physical Performance Test battery (Simmonds, 2002 [Level VI]) which has aged related norms and has shown to be valid and reliable in cancer patients
2. Six-minute walk (Enright et al., 2003 [Level VI])
3. Timed “Up & Go” test (Podsiadlo & Richardson, 1991 [Level III])

Conditions such as dehydration and fluid and electrolyte imbalance can result in changes of level of consciousness, delirium and/or dementia. Delirium develops rapidly, affects attention, is reversible and can be a sign of further comorbidity; when treated it can result in shorter hospital stays (Beers & Berkow, 1999-2005; Edlund et al., 2006 [Level VI]). Delirium can result from medications and infections (Furlaneto & Garcez-Leme, 2006 [Level VI]), and therefore it is important to assess and report changes in cognition. Dementia is a more insidious memory loss which often does not reflect a change in level of consciousness. Cognitive disturbances can be exhibited as verbal communication alterations (aphasia), difficulty in motor abilities (apraxia) and altered ability to organize and plan (Beers & Berkow, 1999-2005 [Level VI]).

Symptom Management of the Older Person Undergoing Cancer Treatment

When an older patient receives cancer treatment, several factors must be considered. It has been shown that older patients have similar prolonged survival specific to some cancer treatments as do younger patients (Au, Mulder, & Fields, 2003 [Level I]). Chronological age may be a consideration in establishing curative treatment in someone with a five year or less predictive survival, however, factors such as comorbidity, deconditioning, functional status and presence of geriatric syndromes must be considered (Balducci, 2005a [Level I]). For older women with breast cancer and extensive comorbidity, it has been suggested that endocrine therapy alone without surgical intervention may be a more reasonable treatment modality when considering overall health status (Hind, Wyld, Beverley, & Reed, 2006 [Level I]). In general, older patients

undergoing chemotherapy are likely to tolerate the treatment well with respect to comorbidity (Chen et al., 2003 [Level VI]). Not only physical symptoms can affect the quality of life of the older cancer patient, but emotion support is also a concern. Management of depression is supportive cancer care has been shown to effective aspect of care (Strong et al., 2008 [Level II]).

Symptom clusters are defined as problems that tend to occur simultaneously. Issues such as pain, fatigue and diminished quality of life tend to occur together in many cancer patients (Fox & Lyon, 2006 [Level III). Lack of appetite, nausea, poor sense of well-being and pain have been found to cluster as has fatigue, drowsiness and shortness of breathe (Fan, Hadi, & Chow, 2007 [Level III]). Often, cancer treatment can have an effect on symptom clusters. Radiation therapy has been associated with pain, fatigue, drowsiness and poor well-being (Chow, Fan, Hadi, & Filipczak, 2007 [Level III]). It is important for the nurse to anticipate that adverse or uncomfortable symptoms do not often occur in isolation and often problems are most likely occurring simultaneously.

Nurses must pay particular attention to the following adverse symptoms:

- Mucositis or oral stomatitis can occur from chemotherapy and/or radiation therapy
- Chemotherapy induced nausea and vomiting
- Fatigue
- Hematological Toxicities
- Neurotoxicity
- Pain
- Sleep, Wake Disturbances

Many resources exist in the management of treatment related symptoms such as the Oncology Nursing Society website which is equipped with clear evidenced-based interventions (Oncology Nursing Society, 2006 [Level VI]). Early detection and management of treatment related adverse symptoms and palliation can enhance the quality of life of the older cancer patient (Duggleby & Raudonis, 2006 [Level VI]). The following nursing interventions can be applied to the following adverse cancer treatment symptoms:

- Oral mucositis treatment (Clarkson, Worthington, & Eden, 2003 [Level I]; Oncology Nursing Society, 2006; Scully, Sonis, & Diz, 2006 [Level VI])
    - Ice chips
    - Avoid dehydration
    - Routine oral care
    - Proactive treatment with granulocyte-macrophage colony stimulating factor (GM-CSF)
    - Antibiotics
    - Oral care solutions
        - Normal saline solution
        - Baking soda solution
        - Salt and soda solution
- Chemotherapy induced nausea and vomiting
    - Antiemetics (Schwartzberg, 2006 [Level VI])
        - Serotonin-receptor antagonist (palonosetron)
        - Neurokinin-1 receptor antagonist (aprepitant)

- Fatigue (American Cancer Society, 2007 [Level VI]; Oncology Nursing Society, 2006)
    - Anemia related fatigue treatment with erythropoietin
    - Exercise
    - Rest
    - Fluid intake
- Hematological toxicities (American Cancer Society, 2007 [Level VI]; Oncology Nursing Society, 2006)
    - Thrombocytopenia (low platelet count)
        - Medications that protect the platelets
        - Blood transfusion and plasma exchange
    - Neutropenia (low white blood cell count)
        - Colony-stimulating factors (CSFs)
        - Antibiotics to prevent infections
        - Reduce opportunity for infection
            - Flu shot
            - Be aware of signs and symptoms of infection
            - Avoid large crowds of people
- Neurotoxicity (Oncology Nursing Society, 2006)
    - Peripheral neuropathy
        - Burning or tingling and numbing on the hands and feet often associated with various types of chemotherapy
            - General management with safety precautions for driving, walking and performing activities of daily living
            - Medications to help with the pain
                - Lidocaine patch
                - Anticonvulsants
                - Tricyclic antidepressants
- Pain Management (Oncology Nursing Society, 2006)
    - Adequate assessment of pain using a valid and reliable tool
    - Treatment of pain
        - Analgesics
        - Surgery
        - Radiation
        - Anesthesiology
    - Sleep-Wake Disturbances (Oncology Nurse Society, 2006)
        - Assessment of sleep patterns
        - Sleep hygiene plan
        - Pharmacologic plan
        - Complementary therapies
        - Exercise

Patient education is a critically important nursing intervention in the care of the older cancer patient. Providing information regarding cancer prevention and screening is very helpful to many senior patients. Many older patients are very knowledgeable about using internet resources; therefore supplying patients and families with relevant websites

can be very helpful. Verbal instructions given at the time of cancer treatment or diagnosis can be overwhelming and not completely understood. Have written directions in large print with telephone numbers prepared so that patients can read the information at a more "teachable moment." Oncology has a unique language that can be intimidating to many patients of all ages. Clearly written information to re-communicate what was discussed in the clinical visit can be very helpful and possibly result in less patient phone calls to the nurse and physician and reduced patient anxiety.

A major role in supporting the patient through cancer diagnosis and treatment is understanding and respecting generational norms that can motivate help seeking behavior (Ballantyne, 2004 [Level III]). Generational norms have been associated with reduced cancer screening use and less participation in healthcare decisions, however, it is important to assess individual health beliefs and strategies (Bourbonniere & Kagan, 2004). Many baby boomers (people in their sixties) are extremely participatory in healthcare processes and decisions and utilize internet resources (Kiel, 2005; Tak & Hong, 2005 [Level VI]). Understanding the patient's beliefs and priorities will be essential in developing an individual care plan.

Nursing Support of the Family and the Caregiver

Many older and functionally impaired seniors are living at home with unpaid caregivers, generally spouses and/or children. Understanding the social support network and the extent of the actual support is important. Patients who live alone tend to be less likely to receive adequate healthcare (Goodwin, Hunt, Key, & Samet, 1987 [Level VI]). Being married tends to have a more positive affect on survival outcome in cancer patients (Goodwin, Hunt, Key, & Samet, 1987; Vercelli et al., 2006 [Level VI]). While much of the physical examination is focused on the patient, it is vital to also assess the family and caregiver. Understanding the coping skills of the caregivers and intervening with strategies to improve coping can enhance the quality of life of the caregiver (McMillan et al., 2006 [Level II]).

Many caregivers are family members who are unprepared for the role of caregiver to a person with cancer. Assistance with medications, specific signs and symptoms and palliative care are some of the most stressful issues reported by caregivers (Haley, 2003 [Level VI]). Caregivers to seniors with dementia have a great deal of stress and it is very helpful for nurses to assess to coping mechanisms (Haley & Pardo, 1989 [Level VI]). Caregivers also report a great deal of stress associated with caring for a person with advanced disease. Receiving adequate information to anticipate pending disease course and signs and symptoms have been reported by caregivers as beneficial (Hudson, 2006 [Level VI]). Despite the data that supports psychosocial support of the caregivers of cancer patients, a lack of such support is often realized (Akechi et al., 2006 [Level VI]). Nurses must develop and implement a plan of care that supports the patient and caregiver in time of cancer care and palliation.

End-of-life care can be a great support to family members of those with a prognosis of six months or less. Regular visits from nurses, social workers, home health aides and clergy can be very beneficial for the patient and family (Steele, Mills, Hardin, & Hussey, 2005 [Level VI]). Hospice care is an option for many patients and families and available in most areas of the country. The National Hospice and Palliative Care Organization have resources to help educate patients and families on the services provided.

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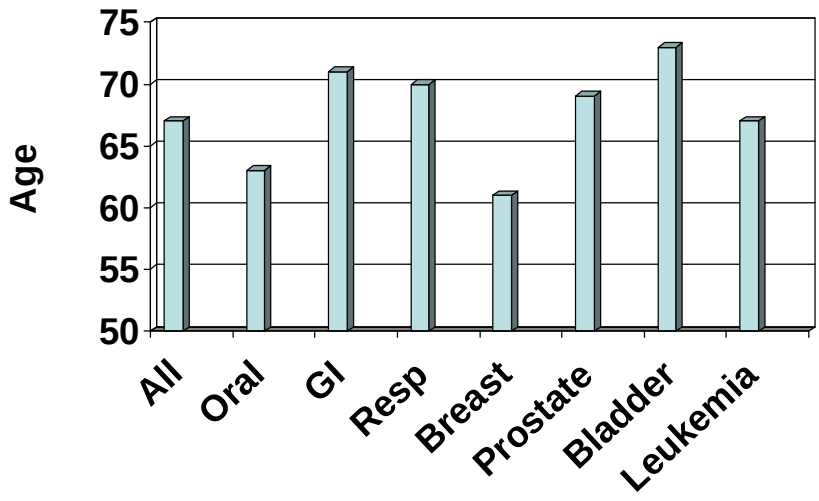


Figure 1. Median age of cancer patients at diagnosis, 1998-2002. National Cancer Institute, SEER Cancer Statistics Review 1975-2002.

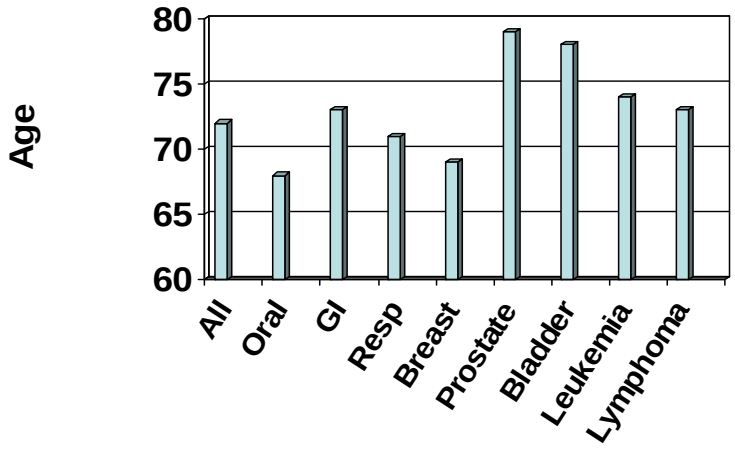


Figure 2. Median age of cancer patients at death, 1998-2002. National Cancer Institute, SEER Cancer Statistics Review 1975-2002.

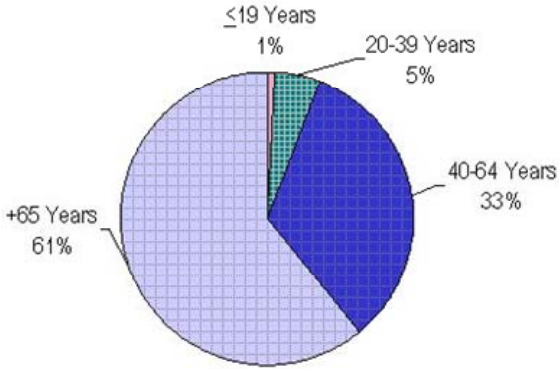
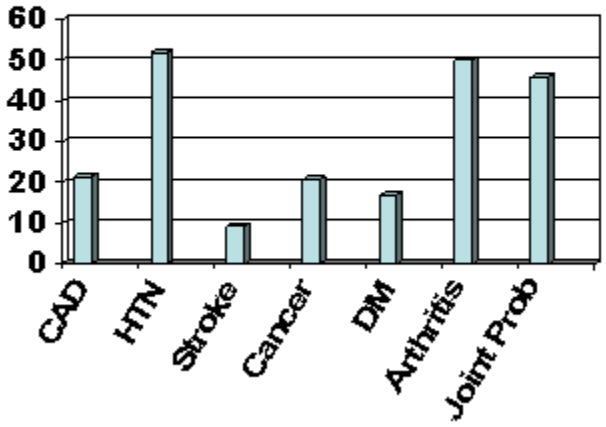


Figure 3: Estimated Number of Persons Alive in the U.S. Diagnosed with Cancer by Current Age. Data source: 2004 Submission. U.S. Estimated Prevalence Limited Duration Prevalence proportions and adjusted to represent complete prevale population estimates from the U.S. Bureau of Census

Table 1. Projected number* of cancer cases for 2000 through 2050 based on projected census population estimates† and age-specific cancer incidence rates, SEER and NPCR areas as reported by NAACCR‡ 1995-1999.

Year	Ages				
	<50	**50-64**	**65-74**	**75-84**	**85+**
2000	188,492	361,345	365,135	295,346	93,214
2010	187,277	508,404	416,896	309,509	129,969
2020	180,988	575,401	623,250	376,789	153,097
2030	196,867	521,791	754,156	577,297	203,943
2040	208,781	551,774	679,610	710,852	328,485
2050	219,618	605,921	719,301	654,560	447,394

Figure 4. Prevalence of Chronic Conditions in people 65 and over.



CAD: Coronary Artery Disease
HTN: Hypertension
DM: Diabetes Mellitus

National Center for Health Staticis, Trends in Health and Aging. http://www.cdc.gov/nchs/agingact.htm. Accessed on June 1, 2006

Table 2
Geriatric Syndromes

Name of Syndrome	Signs and Symptoms
Dementia	Memory loss, language disturbance, alterations in motor activities, inability to recognize familiar objects, gradual onset.
Delirium	Alteration in consciousness, memory loss, rapid onset, cognition fluctuates during various periods of the day.
Vision	Visual acuity diminishes with age, reduced ability to see close objects (presbyopia), dry eyes, cataracts, macular degeneration, floaters, tearing, glaucoma.
Hearing	General sensorineural hearing loss (prebycusis), conductive hearing loss with cerumen impaction or infection.
Falls	Can occur from environmental factors (Inadequate lighting, slippery floors) and intrinsic factors (weakness, anemia, poor vision).
Malnutrition	Decreased appetite and taste, dental problems with may lead to painful chewing, food intolerances, depression, obesity can also be a form of undernutrition in that not enough necessary nutrients may be consumed, unintentional weight loss or gain, fatigue.
Incontinence	Loss of urine unintentionally. Associated with infections, barriers to getting to the bathroom. Stress incontinence when laughing, coughing, or sneezing. Overflow incontinence occurs when the bladder reaches capacity. Enlarged prostate.

Adapted From Source: Beers, M. H., & Berkow, R. (Eds.). (1999-2005). *The Merck Manual of Diagnosis and Therapy* (17 ed.). Rathway: Medical Services, USMEDSA, USHH.

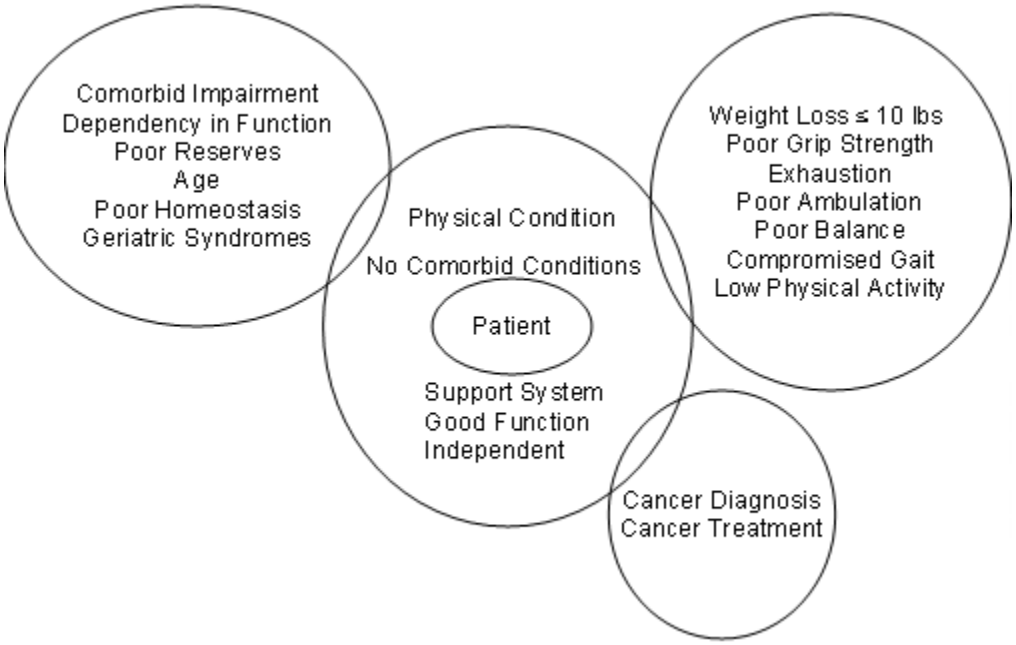
Table 3
Geriatric Syndromes

Name of Syndrome	Signs and Symptoms
Depression	May be associated with other comorbidities (heart disease, cancer) Flat affect, disengaged, feelings of worthlessness, restless, poor sleep, weight loss or gain.
Sleep Disorders	May be associated with other comorbidities or syndromes (pain, heart disease). Daytime tiredness, lack of energy, early rising. Risk factor for falls, Difficulty with activity of daily living.
Functional Limitations	Inability to provide self care, requires some degree of assistance. Risk for falls, undernutrition, poor healthcare.
Polypharmacy	Taking more drugs then required for comorbidities. Can result in adverse reactions and impaired health.

Taking multiple medications that can result in adverse reactions and impaired health

Adapted From Source: Beers, M. H., & Berkow, R. (Eds.). (1999-2005). *The Merck Manual of Diagnosis and Therapy* (17 ed.). Rathway: Medical Services, USMEDSA, USHH.

Figure 5. Factors Associated with Frailty in the Older Cancer Patient



Adapted from Sources: Fried, L. P., Tangen, C. M., Walston, J., Newman, A. B., Hirsch, C., Gottdiener, J., et al. (2001). Frailty in older adults: evidence for a phenotype. *Journals of Gerontology. Series A, Biological Sciences and Medical Sciences, 56*(3), M146-156. and Balducci, L., & Extermann, M. (2000b). Management of the frail person with advanced cancer. *Critical Reviews in Oncology/Hematology, 33*(2), 143-148.