Perspectives:
Research in Context

By Mary Kay Barton, MD

Significant Risk of Falls in Older Cancer Patients

A recent study shows that close to 20% of patients aged 65 years or older with newly diagnosed cancer report experiencing a fall within the first 6 months after diagnosis. Symptoms of cancer and side effects of treatment such as fatigue, neurotoxicity, and deconditioning can increase the risk of falls in older adults.

According to the Centers for Disease Control and Prevention (CDC), falls in older adults are the leading cause of injury death and the most common cause of nonfatal injuries. In 2010 alone, 2.3 million older adults were treated in emergency rooms for nonfatal fall injuries, with about one-quarter needing hospitalization.

The current study (*Support Care Cancer* [published online ahead of print September 1, 2012]. doi: 10.1007/s00520-012-1579-4) explored the number of falls experienced by older patients with a new cancer diagnosis and whether these patients were identified as more frail than those not reporting a fall. "I think many health care providers are somewhat aware that falls might be an issue for their older patients, but they lack the time and knowledge about how to conduct a fall assessment," says lead author Martine Puts, PhD, MSc, BaN, assistant professor of nursing at the University of Toronto in Toronto, Ontario, Canada.

Risk in Line With Overall Population

Dr. Puts and her colleagues performed a secondary analysis of data collected in a prospective study assessing the health and vulnerability to adverse events from treatment of older patients with a new cancer diagnosis. Patients were interviewed at baseline, before the start of any treatment, and at 3 months and 6 months. A total of 112 patients participated; all were aged 65 years or older, with a new diagnosis of any stage of breast, colorectal, or lung cancer or a hematologic malignancy including myeloma or lymphoma. Along with the number of falls, other data collected included frailty markers, comorbidities, functional status, and medications. The 7 frailty markers were mobility impairment, cognitive impairment, mood disturbance, fatigue, low grip strength, physical inactivity, and poor nutritional status.

The mean age of all 112 participants was 74 years, 70% were women, and breast cancer was the most common diagnosis. Of the 91 patients who were interviewed at the 6-month mark, 19% reported at least 1 fall in the follow-up period.

The mean number of frailty markers in the entire population was 2.3, with mobility impairment (55%), physical inactivity (45%), and poor nutritional status (40%) being the most common. The mean number of comorbid conditions was 2, and 40% of patients were taking medications that increase the risk of falls. On analysis, however, there were no statistically significant differences in frailty markers or other sociodemographic and health characteristics between

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Cancer symptoms and treatment side effects such as fatigue can increase the risk of falls in older adults.

those who fell and those who did not. The authors acknowledged that the study's limitations included the small sample size, heterogeneous cancer diagnosis and stage, and lack of data about the circumstances leading to the fall. The study's strengths include the prospective design and short time between interviews.

Practical Implications

The researchers state that the fall rate of about 19% over a 6-month period is comparable to the reported fall rate of approximately 33% per year in the general older population in the community. Because the mobility impairment rate was higher than that found in other studies of the general population, and many symptoms of cancer and side effects of treatment are linked to falls, one would expect the fall rate to be higher. The lack of a higher fall rate could be due to patients having extra support at home because of their cancer diagnosis.

"There are hypotheses why older adults receiving cancer treatments might be at higher risk than the general older population, such as fatigue due to treatments and neurological toxicity," says Dr. Puts. "Hormonal treatments, such as androgen deprivation therapy and aromatase inhibitors, increase the risk of osteoporosis. Thus, when the older adult falls, they are more likely to have more serious injury. But very few studies have investigated this in a prospective study, and ours was too small to find any of the hypothesized risk factors."

Judy Stevens, PhD, senior epidemiologist in the Division of Unintentional Injury Prevention at the National Center for Injury Prevention and Control at the CDC, agrees that the study is likely too small to show differences. "Maybe it is just too early in the disease process, as one would expect that the side effects from cancer treatment would contribute to falls," Dr. Stevens says.

In a separate recent prospective study of 185 patients with advanced cancer, 50% experienced a fall over a 6-month period with a high risk of injury, regardless of age (*J Clin Oncol*. 2012;30:2128-2133). The incidence of falls in this study was about double the rate for healthy older persons. In the multivariate analysis, it was found that a primary brain tumor or brain metastasis, the number of falls occurring within the preceding 3 months, severity of depression, cancer-related pain, and benzodiazepine dose were independently associated with fall risk.

"A careful medication review is crucial in all patients, including oncology patients," Dr. Stevens says. "A prior study showed that stopping benzodiazepines cut the fall rate by two-thirds. However, cancer patients often cannot stop some medications that we know will increase fall risk, increasing the clinical challenge."

"The main point is that fall risk assessment is not always done for older adults with cancer, and it should be part of oncology care for older adults," Dr. Puts says. " [The American Geriatrics Society and British Geriatrics Society] have guidelines for fall screening for community-dwelling older adults, but I think outside the geriatric medicine setting, few clinicians are aware of these simple screening guidelines." (Guidelines can be found at americangeriatrics.org/health_care_professionals/clinical_practice/clinical_guidelines_recommendations/2010/) The guidelines include both risk assessment and prevention information.

"The clinical approach to fall prevention is quite effective if you follow the guidelines," Dr. Stevens adds. The CDC is developing a tool kit for clinicians to help them implement the guidelines. It uses the guideline algorithm and makes risk assessment and treatment of falls practical. "The tool kit is multifaceted and includes resources for clinicians such as risk assessment tools, fact sheets, case studies, guidelines for talking with patients about fall prevention, referral forms to community fall prevention programs, as well as educational materials for the individual patient," she says. ■

doi:10.3322/caac.21163