

## CJON WRITING MENTORSHIP PROGRAM ARTICLE

# Cancer-Related Anemia: Clinical Review and Management Update

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Anemia is a decrease in circulating red blood cells that contributes to a complex group of symptoms. Anemia may be present in more than half of all patients with cancer but often is assessed, documented, prevented, and treated inadequately. Individuals with cancer are living longer, and the number of cancer treatment options provided at various points in the cancer continuum is growing; however, many treatments contribute to anemia. Because anemia can develop from multiple causes, treatment must be tailored to the underlying etiology. Cancer-related anemia can significantly affect therapeutic outcomes and patients' quality of life. Therapeutic interventions may include blood transfusions, administration of recombinant human erythropoietin, and interventions to support patient symptoms, most significantly, fatigue. Oncology nurses play a central role in risk assessment, symptom management, treatment planning, and evaluation and therefore must understand the etiology and physiology of cancer-related anemic states as well as evidence-based interventions to ensure optimal outcomes.

In patients with cancer, anemia can result from secondary blood loss, displacement of normal bone marrow cells by malignant cells, myelotoxic therapy, or a tumor, yet the condition may not become evident unless it represents a source of significant symptoms or patient distress. Risk factors for anemia development include platinum-based treatment regimens, specific tumor types, and low baseline hemoglobin levels. Anemia has the potential to impact patient performance status, quality of life, clinical symptoms, therapeutic efficacy, and survival. Treatment interventions directed toward the underlying etiology of anemia involve iron supplementation, blood transfusion, and administration of recombinant human erythropoietin (rHuEPO). Novel approaches that may add to the complement of strategies designed to address anemia in patients with cancer are being developed (Cella, Dobrez, & Glaspy, 2003; Gillespie, 2003; Groopman & Itri, 1999; Mercadante, Gebbia, Marrazzo, & Filosto, 2000).

Although considerable progress has been made in preventing or alleviating many of the common toxicities associated with cancer and its therapy, anemia continues to be frequently overlooked and undertreated (Loney & Chernecky, 2000). Anemia contributes to fatigue, a symptom that adversely affects functional status and causes considerable distress to patients and their families (Stovall & Young, 2006; Von Gunten, 1999). In addition, the lack of a standard definition regarding symptomatic anemia requiring intervention and the availability of suboptimal assessment tools further complicate the problem of anemia in patients with cancer (Gillespie, 2003; Groopman & Itri, 1999). Oncology nurses are pivotal to the care of patients with cancer-related anemia (CRA) because they are

### At a Glance

- ◆ Anemia often is assessed, documented, prevented, and treated inadequately.
- ◆ Cancer-related anemia can significantly affect therapeutic outcomes and patients' quality of life.
- ◆ Oncology nurses play a central role along the continuum of care of patients experiencing cancer-related anemia.

a constant presence along the continuum of care; therefore, oncology nurses must be able to identify pertinent assessment criteria, identify patients at risk, carry out evidence-based interventions, and evaluate therapeutic outcomes.

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