

# Putting Evidence Into Practice: Prevention and Management of Bleeding in Patients With Cancer

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The primary cause of bleeding in patients with cancer is thrombocytopenia and it commonly is attributed to myelosuppressive chemotherapy, radiation therapy, or bone marrow infiltration of the malignancy. Oncology nurses have a critical role to play in the prevention and management of bleeding in patients with cancer. As part of an Oncology Nursing Society Putting Evidence Into Practice (PEP) project team, the authors of this article reviewed the current literature to identify effective interventions in the prevention and management of bleeding in patients with cancer. The authors evaluated research studies conducted since 1991, current clinical practice guidelines, and systematic reviews. The literature was reviewed, synthesized, and developed into evidence tables that were ultimately published in a PEP card. All data were reviewed by experts in the field of thrombocytopenia. The Prevention of Bleeding PEP card was unveiled at the 8th Annual Institutes of Learning in November 2007.

**B**leeding in patients with cancer results from a complex interplay of disease and treatment-related factors. Bleeding may be the result of a reduction in the quantity or functional quality of platelets, an alteration in clotting factors, a paraneoplastic syndrome, or a combination of such factors. Thrombocytopenia is the primary cause of bleeding in patients with cancer and is commonly attributed to myelosuppressive chemotherapy, radiation therapy, or from bone marrow infiltration of the malignancy. Other causes of thrombocytopenia include splenic sequestration of platelets, immune-mediated thrombocytopenia, and platelet destruction from disseminated intravascular coagulation (DIC) (Avvisata, Tririndelli, & Kakanaporn, 2003).

Bleeding is manifested in several ways. Ecchymosis and petechiae can be presenting signs of thrombocytopenia and bleeding. More overt manifestations include epistaxis, hemoptysis, hematemesis, melena, hematuria, vaginal bleeding, and bleeding around wounds and vascular access lines. Although bleeding may occur slowly with continuous low-volume oozing, the potential for an acute cataclysmic event exists. Overall, the consequences of bleeding and subsequent hemorrhage may be profound with potential for hypovolemia, intracranial hemorrhage, and death (Pereira & Phan, 2004).

Nurses in the oncology outpatient and hospital setting often are the first to detect potential and actual bleeding issues and play a key role in the prevention of a catastrophic bleeding

event. To prevent and manage bleeding, nurses should use evidence-based interventions reflected in the published literature. Therefore, the purpose of this article is to provide nurses with current evidence about the prevention and management of bleeding in patients with cancer. The second purpose is to discuss the process and the development of the Prevention and Management of Bleeding Putting Evidence Into Practice (PEP) content from the Oncology Nursing Society (ONS).

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