Oncology nurses, infuson pharmacists, physicians, operating room personnel, and support services personnel who work in oncology settings are at risk of exposure to antineoplastic drugs in their workplaces. According to the 1999 Bureau of Labor Statistics, the number of workers who may be exposed to hazardous drugs exceeds 5.5 million (National Institute for Occupational Safety and Health [NIOSH], 2004). Exposure to hazardous drugs most often occurs from aerosols, dust, spills, or contaminated surfaces during preparation, administration, and disposal. Exposure to hazardous drugs may occur through inhalation, skin contact, skin absorption, ingestion, or injection. The purpose of this article is to enlighten healthcare workers about the serious nature of antineoplastic drug exposure, inform hospital administrators of safety compliance issues, and educate the healthcare industry regarding a simple, highly effective, problem-solving process called SOLVE® to make medical workplaces safer.

A study of 7,094 pregnancies involving pharmacy and nursing staff exposed to antineoplastic agents found a statistically higher risk of spontaneous abortion (Valanis, Vollmer, & Steele, 1999). Protection from hazardous drug exposure depends on safety programs established by employers and followed by workers. Factors that affect worker exposure to antineoplastic drugs include the following.

- Drug handling (preparation, administration, and disposal)
- Frequency and duration of drug handling
- Potential for absorption through direct and airborne contact
- Availability of ventilated cabinets in the drug mixing environment
- Availability of personal protective equipment (PPE)
- Work practices that do not consider the long-term dangers of exposure.

The likelihood that a worker will experience adverse effects from hazardous drugs increases with the frequency of exposure, and the risk of adverse effects rises significantly with a lack of proper work practices.

Currently, neither NIOSH, the Occupational Safety and Health Administration (OSHA), nor the American Conference of Governmental Industrial Hygienists has established recommended exposure limits (RELs) or threshold limit values for workplace exposure to hazardous drugs. RELs refer to concentrations of chemical substances and represent conditions under which it is believed that nearly all workers may be repeatedly exposed without adverse effects.