Medication errors in chemotherapy occur frequently and have a high potential to cause considerable harm. IV infusion errors, which usually involve high-risk medications delivered directly into the patient’s bloodstream, have been identified as having the greatest potential for harm. IV infusion programming errors have a greater likelihood of causing injury or death. IV infusion at the incorrect rate will be delivered to the patient.

What are some strategies than can be used to avoid these types of chemotherapy errors? Computerized IV infusion safety systems—smart pumps—have been on the market since 2002. Smart pumps are specifically designed to avert IV infusion programming errors and provide actionable data on various aspects of the errors. Implementation of an IV infusion safety system might be the best initial approach to safeguard patients against high-risk medication errors. Smart pump technology should be encouraged to augment current medication safety practices. The addition of safety features such as dose alerts, dosing and flow rate limits, and other programming safeguards will allow for detection of pump programming errors.

High-alert medication policies require a defined independent check system that must be performed when dealing with high-alert medications. Most facilities that administer chemotherapy agents require the nurses to do an independent check or a “time-out” for the verification process. Independent checks or verification usually are performed by two chemotherapy competent nurses and include the following steps.

• Laboratory values are checked independently by each nurse.
• A nurse checks the order independently followed by the independent review by a second nurse.
• A nurse checks the product label against the original order using two patient identifiers; the second nurse verifies.
• Both nurses proceed to the patient and verify that he or she is the correct patient using two patient identifiers.