

# Administering Chemotherapy in Nononcology Settings: A Case Study

Nancy Smith, MS, RN, OCN®

Providing chemotherapy for patients in a variety of settings may be a challenge for oncology nurses. Increased acuity and comorbidities of patients needing chemotherapy have resulted in a greater incidence of administration in nononcology settings, such as intensive care units (ICUs). In addition, patients with conditions other than cancer are receiving chemotherapy. Because of a lack of certified and experienced chemotherapy nurses in the ICU, oncology nurses may be pulled from their unit to administer chemotherapy. Another possibility is that nonchemotherapy-certified nurses may be asked to administer chemotherapy. Caring for patients receiving chemotherapy may be stressful for nononcology nurses because of their lack of knowledge regarding chemotherapy precautions and the management of side effects and toxicities. Not only is coordination and cooperation between nursing personnel vital, certified oncology nurses must be able to assess the situation, provide the necessary information and education, and safely administer the chemotherapy. This article describes a case study and provides suggestions for planning in similar situations.

Patients are receiving antineoplastic and immunomodulatory agents for noncancer diagnoses more frequently, primarily for autoimmune diseases. More than 80 autoimmune diseases have been identified, affecting an estimated 15–24 million people in the United States (National Institutes of Health, 2005). Antineoplastic and biotherapy agents are used in the treatment of several autoimmune diseases, including multiple sclerosis, rheumatoid arthritis, antineutrophil cytoplasmic antibody-associated vasculitis, and systemic lupus erythematosus (SLE) (Petri, 2004). Those patients are being treated primarily in cancer and infusion centers, but occasionally their conditions may be acute, requiring emergency treatment. Often, these patients are in intensive care units (ICUs) or other inpatient floors that may not have nurses certified in oncology or chemotherapy and biotherapy, which poses a challenge for all involved in their care.

Autoimmune diseases are characterized by an abnormal and inappropriate response of the immune system that results in antibodies destroying the body's own cells, tissues, and organs. SLE is a multisystem, autoimmune, connective tissue disorder, mediated by B and T cells. SLE may present with a wide range

of clinical manifestations, including renal involvement. Cytotoxic agents have been used to treat SLE since 1947, and cyclophosphamide is the cornerstone of treatment for severe SLE. The clinical pharmacology of cyclophosphamide makes it an excellent immunomodulatory agent for the treatment of autoimmune diseases (Gladstone et al., 2002). High-dose IV cyclophosphamide therapy has resulted in significant improvements in this potentially life-threatening disease (Dussán, Magder, Brodsky, Jones, & Petri, 2008). Dosages may be based on milligrams per kilogram, not on body surface area (D'Cruz, 2002).

In the following case study, a patient was admitted for acute SLE nephritis. The situation required flexibility and cooperation on the part of the ICU and oncology nurses to provide optimum care for the patient. The situation provided an excellent opportunity for the oncology and ICU nurses to collaborate,

set mutual goals, provide education for the patient and family, and develop a plan of care.

## Case Study

D.B., a 46-year-old woman, was admitted to the ICU with acute SLE nephritis. The day following her admission, the nephrologist ordered a dose of cyclophosphamide to be given over four hours following plasmapheresis. The oncology unit was notified and one of the oncology nurses went to the ICU to evaluate the situation and determine, along with the ICU nurse, the best course of care. When the oncology nurse went to the ICU, D.B. was undergoing plasmapheresis. The nurses and pharmacist chose a time to administer the chemotherapy. Then, the oncology nurse introduced herself to D.B. and her family, discussed the plan of care with them, and left the unit.

Nancy Smith, MS, RN, OCN®, is an oncology nurse educator at Baylor Regional Medical Center in Grapevine, TX. The author takes full responsibility for the content of the article. The author did not receive honoraria for this work. No financial relationships relevant to the content of this article have been disclosed by the author or editorial staff.

Digital Object Identifier: 10.1188/11.CJON.433-435