

## FEATURE ARTICLE

# Part II: Nursing Implications of Administering Chemotherapy in Interventional Radiology or the Operating Room

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Technologies and cancer therapies develop at a rapid pace, which makes staying current with changes difficult for nurses. Newer cancer modalities combine surgery or interventional radiology techniques to deliver regional chemotherapy, limiting systemic toxicities. Chemotherapy-certified nurses must be available to assist with chemotherapy administration in nontraditional areas. This article provides an overview of how clinical trials were implemented using newer modalities that integrate surgery or interventional radiology to deliver regional chemotherapy in a research setting in a safe, effective manner.

### At a Glance

- ◆ Surgical and interventional radiology techniques increasingly are being employed to deliver regional cancer therapies.
- ◆ Chemotherapy administration in nontraditional areas for oncology requires substantial preplanning, teamwork, education, and creativity.
- ◆ Chemotherapy safe-handling principles serve as the guideline for implementing unique cancer therapy clinical trials in the interventional radiology suite and the operating room.

Combination chemotherapy and surgery traditionally have been primary treatments for several types of cancer, including colorectal carcinoma, hepatocellular carcinoma, and metastatic ocular melanoma. Combining multiple modalities to fight cancer is thought to produce better response rates compared to use of a single form of therapy. However, systemic toxicities often limit the amount of chemotherapy that a patient can receive. Regional infusion of chemotherapy allows direct exposure to the neoplasm while limiting systemic toxicities (Alexander, Bartlett, Fraker, & Libutti, 1996; Soulen, 1994; Wallace, 1984). Infusion of hepatic intra-arterial chemotherapy has been revisited many times since the 1980s, and intra-arterial chemotherapy as well as other regional chemotherapy regimens have become popular again (Reid & Sze, 2002; Wallace). For many years, interventional radiologists have been injecting chemotherapy, usually doxorubicin, cisplatin, or mitomycin C, selectively through catheters into the hepatic artery to treat unresectable hepatocellular carcinoma. Admin-

istration usually is combined with embolization or blockage of blood vessels (Camma et al., 2002).

In the authors' institution, clinical trials have been developed to test the efficacy of regional antineoplastic therapies. The trials, performed in the operating room (OR) and interventional radiology (IR) suite, have produced new challenges and expanded the role of surgical and IR staff delivering antineoplastic therapies. Trials consist of surgery with intraoperative regional

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