

## JOURNAL CLUB

# Chemotherapy-Induced Hypersensitivity Reactions

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This article has been chosen as being particularly suitable for reading and discussion in a Journal Club format. The following questions are posed to stimulate thoughtful critique and exchange of opinions, possibly leading to changes on your unit. Formulate your answers as you read the article.

1. Is this article research-based? Can we assess the level of evidence being presented?
2. Which drugs that we administer on a regular basis are likely to cause hypersensitivity reactions?
3. How structured is our patient assessment with regard to hypersensitivity risk factors? What changes can we make?
4. Do we educate patients regarding symptoms of hypersensitivity reactions?
5. What is our process for accessing emergency supplies if hypersensitivity reactions occur?

At the end of the session, take time to recap the discussion and make plans to follow through with suggested strategies.

**Purpose/Objectives:** To assist clinical nurses in understanding the complex nature of chemotherapy-induced hypersensitivity reactions as well as effectively preventing or managing these reactions.

**Data Sources:** Published articles and abstracts, pertinent book chapters, computerized databases.

**Data Synthesis:** Most available chemotherapy drugs can cause hypersensitivity reactions, but certain drug groups frequently are associated with these reactions (e.g., asparaginases, taxanes, platinum compounds, epipodophyllotoxins). Preventing hypersensitivity reactions is the primary goal; however, understanding the principles of managing these reactions is critical because hypersensitivity reactions can occur despite using appropriate prevention strategies.

**Conclusions:** Chemotherapy-induced hypersensitivity reactions are potentially life-threatening. Nurses working with chemotherapy drugs must understand which drugs are associated with a high risk of causing hypersensitivity reactions and must be prepared to attempt to prevent or manage reactions.

**Implications for Nursing:** The potentially life-threatening nature of hypersensitivity reactions to chemotherapy requires that nurses have a plan to manage them. This may include a written policy on staff education and training, appropriate equipment, and medications.

The term “hypersensitivity” has been used widely in the cancer literature in recent years. Some authors use the term to refer to allergic reactions, and others use it to refer to infusion-related side effects, such as fever, chills, and rigors, seen with many of the newer targeted therapies. A hypersensitivity reaction is defined in this article as an exaggerated immune response that results in local tissue injury or changes throughout the body in response to an antigen or foreign substance. Most hypersensitivity reactions

### Key Points . . .

- ▶ All chemotherapy drugs have the potential to cause hypersensitivity reactions.
- ▶ Groups of chemotherapy drugs that have a high risk of causing hypersensitivity reactions include asparaginases, taxanes, platinum compounds, and epipodophyllotoxins.
- ▶ Skin testing, desensitization procedures for certain chemotherapy drugs, and premedication before chemotherapy administration can aid in the prevention of hypersensitivity reactions.
- ▶ Successful management of patients experiencing hypersensitivity reactions includes having a plan that guides nurses and encompasses the education and training needs of staff as well as appropriate equipment and medications for the specific setting of care.

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