Hypersensitivity reactions to chemotherapeutic agents can cause the discontinuation of first-line therapies. Chemotherapy desensitization is a safe, but labor-intensive, process to administer these important medications. A desensitization protocol can enable a patient to receive the entire target dose of a medication, even if the patient has a history of severe infusion reactions. In this article, the authors explain the pathophysiology of hypersensitivity reactions and describe the recent development of desensitization protocols in oncology. In part II of this article, which will appear in the April 2016 issue of the Clinical Journal of Oncology Nursing, the authors will give a detailed account of how a desensitization protocol is performed at an academic medical center.

At a Glance

- Chemotherapeutic and biotherapeutic drugs can cause severe, life-threatening hypersensitivity reactions; these reactions are most frequently associated with platinum agents, taxanes, and monoclonal antibodies, but all classes of chemotherapy and biotherapy require vigilance.
- Oncology nurses must be familiar with the signs and symptoms of hypersensitivity reactions and know how to respond to such reactions.
- Studies have demonstrated that complex desensitization protocols designed by allergists can allow patients to receive chemotherapeutic and biotherapeutic drugs, even if they initially experienced a severe hypersensitivity reaction.

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Hypersensitivity Reactions

Hypersensitivity reactions are a subgroup of adverse drug reactions that are unexpected and characterized by objectively reproducible signs and symptoms at doses that are normally tolerated. Immediate hypersensitivity reactions appear within one hour of the infusion. The symptoms of an immediate hypersensitivity reaction can include urticaria, rhinitis, angioedema, bronchospasm, or anaphylactic shock. Delayed hypersensitivity reactions can occur anytime thereafter;