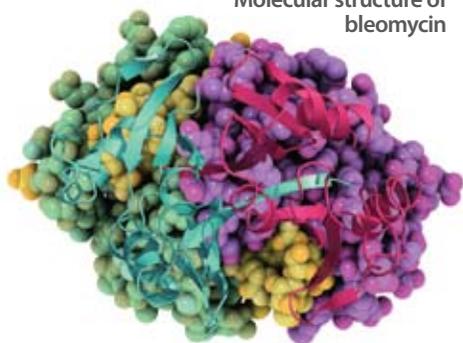


ASK A PHARMACIST

Molecular structure of bleomycin



Should a test dose of bleomycin be given? If yes, when?

We occasionally give patients bleomycin (Blenoxane, generics). Per policy at my facility, we always administer a test dose. However, I researched the issue and found no clear-cut answer on whether to use a test dose. Furthermore, some nurses believe patients should be given their premeds (which prevent hypersensitivity reactions) before the test dose, and some believe the premeds should not be given until after the test dose. We wait 30 minutes after the test dose. Should a test dose of bleomycin be administered? If yes, should the test dose be given with every dose or just the initial dose?
— Jenene Kittleson, RN, BSN, OCN, CBCN

Bleomycin is given intravenously for the treatment of multiple cancer types,

most frequently Hodgkin lymphoma (also known as Hodgkin disease) and germ cell cancers. Intravenous administration of bleomycin carries the risk of a severe idiosyncratic reaction consisting of hypotension, confusion, fever, chills, and wheezing. Symptoms usually manifest after the first or second dose and have been reported in approximately 1% of lymphoma patients receiving bleomycin. Because of this reaction, the bleomycin package insert recommends administering a test dose of 2 units or less to lymphoma patients prior to their first two doses.¹

Unfortunately, there is no one universal answer to this question. Many cancer centers administer a test dose of bleomycin prior to the first dose. However, no consensus has been established on whether this should be done. Some large oncology clinical trial groups, such as the Children's Oncology Group (COG), do not include test doses in their protocols. A 2005 review article noted that reactions to bleomycin have been reported at any point in treatment (not just with the first two doses).² The author concluded that there is a lack of association between timing of doses and the onset or severity of reactions and recommended against routine test doses of bleomycin.

When a test dose is used immediately before administration of a full dose, no standard waiting time exists. Reported waiting times range from 30 minutes to 4 hours, with 1 hour being

the most common wait. The nurse should remember that even if a patient does not react to a test dose, he or she still may have a reaction to bleomycin and should be monitored during and after the dose. Although premeds are not typically administered before a test-dose, they should be given before the full dose of bleomycin.

Patients who do experience the idiosyncratic reaction to bleomycin should be managed per institutional guidelines with antipyretics, antihistamines, corticosteroids, volume expansion, and pressor agents as required. Patients experiencing severe reactions should not receive bleomycin again unless they have been desensitized. ■

REFERENCES

1. Blenoxane [package insert]. Princeton, NJ: Bristol-Myers Squibb Company; 2010.
2. Lam MS. The need for routine bleomycin test dosing in the 21st century. *Ann Pharmacother.* 2005;39(11):1897-1902.

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