

Administration Guidelines for Radioimmunotherapy of Non-Hodgkin's Lymphoma with ⁹⁰Y-Labeled Anti-CD20 Monoclonal Antibody

TO THE EDITOR: With interest we read the review article concerning administration guidelines of radioimmunotherapy with ⁹⁰Y-ibritumomab (1). It is a significant step for nuclear medicine to have a new therapeutic radiopharmaceutical available. As stated by the authors, it will alter the role of the nuclear medicine physician in oncologic care. Therefore we would like to stress a point that is related not to radiation safety but to direct patient care.

Because the article deals with the administration of ⁹⁰Y-ibritumomab, we would like to highlight the potential hazards accompanying the administration of a (radiolabeled) antibody. The article mentions that patients can have chills, fever, and even anaphylactic reactions, but we think this point needs more attention. These side effects may be observed in more than half the non-Hodgkin's lymphoma patients treated with biologically active monoclonal antibodies (2,3). Therefore, it is essential that patients receive premedication, consisting of an antihistaminic drug and acetaminophen, before actual infusion of the antibodies, to reduce the incidence and seriousness of these side effects. Still, severe respiratory events may occur, especially during the first infusion of the monoclonal antibodies. Therefore, the presence of corticosteroids, antihistamines, and epinephrine is mandatory during and after administration of the antibodies. Despite the fact that these side effects may mainly be observed by the hematologist during the rituximab infusion, which precedes the infusion with ⁹⁰Y-ibritu-

momab, it is essential for nuclear medicine physicians to be aware of, and know how to deal with, possible side effects during infusion and during the first hours after infusion of either the unlabeled or the labeled antibodies.

We fully agree with the authors that radioimmunotherapy is a multidisciplinary treatment in which the nuclear medicine physician will be primarily responsible for administration of the radiolabeled antibodies and for radiation safety. Nevertheless, it is important to realize that the physical and physiologic reactions to treatment with monoclonal antibodies are as important as radiation safety in this respect.

REFERENCES

1. Wagner HN Jr, Wiseman GA, Marcus CS, et al. Administration guidelines for radioimmunotherapy of non-Hodgkin's lymphoma with ⁹⁰Y-labeled anti-CD20 monoclonal antibody. *J Nucl Med.* 2002;43:267–272.
2. Maloney DG, Grillo-López AJ, White CA, et al. IDEC-C2B8 (rituximab) anti-CD20 monoclonal antibody therapy in patients with relapsed low-grade non-Hodgkin's lymphoma. *Blood.* 1997;90:2188–2195.
3. Kaminski MS, Estes J, Zasadny KR, et al. Radioimmunotherapy with iodine ¹³¹I tositumomab for relapsed or refractory B-cell non-Hodgkin lymphoma: updated results and long-term follow-up of the University of Michigan experience. *Blood.* 2000;96:1259–1266.

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