

2. Reilly RM, Juma N, Ege GN. Lymphatic kinetics of subcutaneously administered ^{111}In IgG and IgM monoclonal antibodies in a rabbit model [Abstract]. *J Nucl Med* 1987; 28:715.
3. Halpern SE, Hagan PL, Bartholomew RM, et al. Kinetics and biodistribution of subcutaneously administered ^{111}In IgG and IgM antibodies in a mouse model [Abstract]. *J Nucl Med* 1986; 27:902.

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REPLY: We appreciate the comments of Reilly regarding our manuscript Kinetics of Interstitially Administered Monoclonal Antibodies for Purposes of Lymphoscintigraphy (1). In that manuscript we observed, in addition to faster injection site clearance of an Fab fragment (when there was no ambulation) than of its intact parent, that a radioiodinated IgM monoclonal antibody cleared from the injection site at a rate comparable to that of the intact IgG antibody studied (as determined by external scintigraphy). By contrast, Reilly has observed slower clearance (by gamma camera imaging) from the injection site in five rabbits for an Indium 111 labeled IgM than for a comparably labeled IgG (2). While in his abstract, no indication of the variability of the data is provided, so assessment of the statistical significance of this difference is not possible; his results are similar to those of Halpern who has reported slower clearance of indium-111 (^{111}In) IgM antibodies from the injection site in mice (by tissue counting) than for IgG's (3). Our studies differ methodologically from both of these in that we evaluated an iodine-131 (^{131}I) IgM, but did not evaluate ^{111}In IgM as did the other investigators. Certainly, as we mentioned, some of our results could be due to deiodination, though our comparative study of the ^{111}In and ^{131}I labeled IgG did show slower clearance of the iodinated IgG even to 24 hr after injection. We certainly agree with Reilly that there can be significant differences in biological behavior among antibodies of the same class and even of the same isotypes, and it may be a combination of these two factors that account for our different results. We also observed continued clearance of radioantibody from the injection site after 24 hr, apparently in contrast to the results of Reilly. This continued clearance is certainly desirable from a dosimetric standpoint.

Of what may be of equal or greater importance than injection site egress rate is that we, and Reilly, both observed higher normal nodal uptake of IgM than of IgG (1,2). Additional studies we have since conducted have shown normal node/blood ratios significantly higher for IgM than for several different intact IgGs (4). These higher normal nodal uptakes of IgM than of IgG may be a major limitation to the use of IgMs for immunolymphoscintigraphy, regardless of the rate of clearance from the injection site, in that it may be more difficult to detect an antigen-specific signal if nodal background activity is too high. Further study of IgM injection site clearance and in particular, nodal uptake will be of interest due to the possibility of biologic variability among members of the IgM class. We thank Mr. Reilly for his interest in our work.

References

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antibodies for purposes of lymphoscintigraphy. *J Nucl Med* 1987; 28:1736-1744.

2. Reilly RM, Juma N, Ege GN. Lymphatic kinetics of subcutaneously administered In-111 IgG and IgM monoclonal antibodies in a rabbit model. *J Nucl Med* 1987; 28:715.
3. Halpern SE, Hagan PL, Bartholomew RM, et al. Kinetics and distribution of subcutaneously administered In-111 IgG and IgM antibodies in a mouse model. *J Nucl Med* 1986; 27:902.
4. Wahl RL, Liebert M, Wilson BS, Petry NA. Radiolabeled antibodies, albumin and antimony sulfide colloid: a comparison of lymphoscintigraphic agents. *Nucl Med Biol* 1988; 15:3, 243-250.

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Correction: Duplication of Figures

In the article by Weinberg et al., "Validation of PET-Acquired Input Functions for Cardiac Studies" (*J Nucl Med* 1988; 29:241-247), duplicate figures were submitted for Figures 6 and 7. The correct Figure 6 is shown below.

