Couch and Williams. The statement that virtually all of the radioactivity from [^{125}I] 19-iodocholesterol was concentrated in the rat's thyroid gland is unwarranted, since conversion of the highest value reported, 190% injected dose per gram of tissue (Day 3 in Table 1), to percentage dose per total organ, using an organ weight of 16 mg (*3*), gives a value of only 3%. The fate of the remaining 97% is unclear from the data given. Presumably this was excreted by the animal before the scanning, which suggests that the rat metabolizes the 19-iodo isomer more extensively and rapidly than the 6-isomer.

Thus the scintigraphic differences can be more reasonably attributed to a metabolic factor peculiar to the rat, rather than to tracer contamination.

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Reply

Every animal study (*1–3*) and clinical trial (*4*) to date agrees that 6-iodomethylnorcholesterol concentrates to a greater extent in the adrenal gland than does 19-iodocholesterol. The reports differ only in the magnitude of the difference. It is possible that there is a species difference between the rat and human that can account for differences in visualization of the adrenal upon injection with either of the radiolabeled iodocholesterol isomers. This, however, can be proven only by comparison of the two pure isomers in the same human subject. Such a comparison should await the availability of I-123-labeled material to avoid excessive radiation dose to the adrenal (*5*). We look forward to publication by Kraychy and Leeper of the details of separation of the isomers and the method employed to establish the purity of the final radiopharmaceutical. Until then the question of a species difference or product contamination must remain open.

Our statement about localization of radioactivity from [^{125}I] 19-iodocholesterol in the thyroid gland was taken out of context. In the *scintiscan* of the rat, all of the *visible* radioactivity shows up in the thyroid. As Kraychy and Leeper correctly point out, about 3% of the injected dose is localized in the thyroid gland. The remainder is in other organs or has been excreted.

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