cally different from the form implicit to direct application of d′ from published tables. Theoretically predicted ROC curves for the quadrant localization detection task in fact suggest that the authors' data indicate increased observer performance due to scan smoothing, with results obtained using the best filter quantitatively approaching the theoretical optimum, at least for the conditions studied.

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ACKNOWLEDGMENTS

This work was supported in part by USPHS Grant No. GM-18940 (Center for Radiologic Image Research). Franklin McLean Memorial Research Institute (formerly the Argonne Cancer Research Hospital) is operated by the University of Chicago for the United States Atomic Energy Commission.

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THE AUTHOR'S REPLY

Published tables of d′ depend on an assumption that each observation is normally distributed with the same variance under noise alone and signal plus noise. This has been well recognized in the published literature. In spite of this, some students of visual perception have chosen to use these published tables of d′ as indices of detectability under conditions where probability distributions are not known and might be other than Gaussian. Metz and Goodenough are correct in describing the potential hazard in this approach. They offer as alternative a new set of d′ based on their theoretical prediction of what the probability distributions should be in visual search. With confirmation in real testing, this approach may increase the usefulness of the method.

The Metz-Goodenough analysis of our data suggests a slight trend of improvement in observer performance as smoothing increases; ours did not. To confirm this trend with statistical reliability, another study would be required. Accepting the trend, the consequence is the same, the effect of smoothing on improving observer performance was small in our study.

For the present, our conclusions remain the same. A major goal in smoothing pictures of near threshold objects is to match the most significant components of the spatial frequency spectrum of the object to the optimum spatial frequency response of the eye. If one views a scan picture at an optimum distance or minifies the picture appropriately, this is already accomplished. Additional smoothing does not help observer performance very much because the false-positive rate increases just as much as the true detection rate does.

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CALCULATION OF ABSORBED DOSE FROM RADIOPHARMACEUTICALS

In their Letter to the Editor, Lane and Greenfield (*1*) report the results of an interesting comparison of the "classical" method of calculating the absorbed dose from internally administered radiopharmaceuticals and that recommended by the MIRD Committee. The shortcomings of the former method, based on the use of geometrical factors, are mentioned in articles of Smith (*2*), Loevinger (*3*), and others. I only wish to draw attention to some points which may be of importance in judging the validity of conclusions of Lane and Greenfield.

The authors determined the average geometric factors for organs of the standard man on the basis of the table published in 1965 by Focht, et al (*4*)