

## BOOK REVIEW

THOMAS L. MARTIN JR. AND DONALD C. LATHAM, *Strategy for Survival*, (University of Arizona Press, Tucson, 1963; price \$6.00)

There have been two books published within the last several years which supply detailed information at a highly technical and advanced political level for those concerned with the serious problems of nuclear weapons effects and strategy. These are of course "Effects of Atomic Weapons" published by the Federal Government and Herman Kahn's treatise, "On Thermonuclear War".

Martin and Latham have produced a remarkable distillation of the major subjects of these two books in a relatively non technical presentation. Graphs are rarely used but tables are used extensively. The complexities of pertinent calculations are sequestered in an appendix. References are easily found and pertinent. The text is quite valuable to individuals interested in or responsible for civil defense planning. The authors obviously are in favor of extensive civil defense planning and preparation.

The most unfortunate aspect of this book is that it has been released at a time when both the general public and the responsible professions have become less concerned about problems of nuclear weapons or at least are more occupied with other problems of the moment. Of particular interest is the very thought provoking discussion of fallout and blast proof shelters. The authors obviously favor an elaborate system of shelters. They do, however, present with the necessary references the cogent arguments of such opposition groups as the Physicians for Social Responsibility, the Committee of Sane Nuclear Policy and the Peace Research Institute.

It is quite obvious that these matters will not be satisfactorily resolved for some years; in fact such extended debates as these issues generate may in themselves be as great a deterrent to war as any others which have been devised. A thorough discussion of the consequences of nuclear holocaust is frequently chilling to the most ardent militarists.

It is fair to recommend "Strategy for Survival" to all thinking scientists and laymen as a simple clear presentation of an enormous groups of confusing facts of the gravest worldwide concern.

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## LETTERS TO THE EDITOR

### TO THE EDITOR

We read with interest the article by Shealy, *et al.*, in the *Journal of Nuclear Medicine*, March 1964, regarding the use of  $Ga^{67}$  as a brain scanning agent. However, we would like to point out that their conclusions about  $Ga^{67}$ -EDTA (Versonate) were based on a small number of cases.

Since our preliminary report on localization of brain tumors with  $Ga^{67}$ -EDTA and the positron camera (1), we have examined over 100 patients. Thirty-two of these have had surgical or autopsy verification of brain tumors, and 27 (85%) were correctly localized with  $Ga^{67}$ -EDTA. In comparison, Sweet, *et al.*, reported an overall accuracy of 80 per cent with  $As^{74}$  and the positron scanner (2), and Silvertone and Gillespie reported an overall accuracy of 83 per cent with  $Hg^{203}$ -Neohydrin and the conventional focused collimator scanner (3).

We believe  $Ga^{67}$ -EDTA is an excellent scanning agent. It has given results as good as other agents for which a similar series of patients have been reported. However, short lived isotopes require rapid imaging, and we seriously question whether satisfactory results can be obtained with the conventional positron scanner.

Recent phantom studies (4) indicate that the positron scintillation camera using  $Ga^{67}$ -EDTA will detect lesions  $\frac{1}{2}$  the volume that can be detected by the conventional positron scan-

ner using  $As^{74}$ . The increase in sensitivity is obtained even though the phantom was set up to simulate our clinical condition where brain pictures are obtained in 4 to 10 minutes with a dose of 350 to 750 microcuries of  $Ga^{67}$ -EDTA. Shealy, *et al.*, however, found that 2 to 3 millicuries of  $Ga^{67}$ -EDTA was sometimes an inadequate dose with their positron scanner.

We agree the search should continue for better agents, but our results indicate  $Ga^{67}$ -EDTA to be as effective as the other agents now in use.

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## REFERENCES

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2. SWEET, W. H., MEALEY, J., BROWNELL, G. L., AND ARONOW, S.: Coincidence Scanning with Positron-Emitting Arsenic or Copper in the Diagnosis of Focal Intercranial Disease. In *Medical Radioisotope Scanning*, Vienna, International Atomic Energy Agency, 1959, p. 163.
3. SILVERSTONE, B. AND GILLESPIE, G. G.: Localization of Brain Tumors with Radioactive Mercury. *Tufts Folio Medica* IX:77-82 (July-Sept. 1963).
4. GOTTSCHALK, A., AND ANGER, H. O.: Sensitivity of the Positron Scintillation Camera for Detecting Simulated Brain Tumors. *Amer. J. Roengenol. Radium Therapy and Nuclear Med.* (*in Press*). Also in *Donner Laboratory Semiannual Report*, Spring 1963, UCRL-11033, p. 126.

## TO THE EDITOR

In his correction to the paper entitled "The Use of a Modified Radioactive Test for Evaluating the Peripheral Circulation", that appeared in the *Journal*, April 1964, p. 319, Dr. Kanner indicates that the corrected result for the integration of the equation:

$$N = N_F (1 - e^{-\lambda t}) \quad (1)$$

should be

$$\text{Area} = N_F \left( t - \frac{T_{1/2}}{0.69} \right) \quad (2)$$

However, equation (2) is not the correct integral of equation (1). Integration of equation (1) leads to the equation

$$\begin{aligned} \text{Area} &= \int_0^t N dt = N_F \int_0^t (1 - e^{-\lambda t}) dt \\ &= N_F \left[ t - \frac{T_{1/2}}{0.69} (1 - e^{-\lambda t}) \right] \end{aligned} \quad (3)$$

If desired, the accuracy of this amended result can be confirmed by comparing the derivatives of the equations (2) and (3) to equation (1).

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