

Survey, Analysis, and Projection of the Medical Research, Diagnostic and Therapeutic Uses of Radioisotopes

Paul Aebersold, Ph.D. and Paul J. Blaetus

ABSTRACT

A BRIEF REVIEW of the results of techno-economics research completed recently by Stanford Research Institute is presented.

Data have been collected on radioisotopes use in medical research, diagnosis and therapy. Analyses have been made and preliminary projections prepared on the near-term future outlook for increased utilization of radioisotopes in medicine.

Analysis of the use of radioisotopes in medical research has been based primarily on information obtained from review of approximately 2,500 medical research grants underway at the present time wherein radioisotopes are used. The use of radioisotopes in this area is considered both as it relates to future medical research activities and as it may foretell future clinical applications.

Radioisotope uses in clinical diagnosis and therapy are analyzed in terms of isotope species, geographical relationships, clinical procedures, and other quantitative aspects. Summary data are presented on primary shipments, redistribution and consumption patterns.

The relationships between teletherapy and super-voltage x-ray therapy are examined and certain techno-economics relationships are set forth. Conclusions are cited as to the possible future position of radioisotopes in this clinical application.

In the above, medical and morbidity statistics are used to gage penetration of radioisotope procedures in the research, diagnostic and therapeutic markets and estimates are made of future usage.

Office of Isotope Development, U. S. Atomic Energy Commission, Washington, D.C.

"The Thyroid Scintiscan"

Paul M. Meadows, M.D.

ABSTRACT

THIS PAPER represents the analysis of 400 scintiscans of the thyroid, over 50 of which were proved surgically. The correlation of scan appearance with size and nodularity is emphasized. A new concept of thyroid nodules is introduced, particularly in relation to the pre-operative diagnosis of thyroid adenomata. Ten cases of proven Hashimoto's Disease are discussed and the pre-operative diagnosis by scintiscan appearance is considered. A study of the correlation of scintiscanographic area, as measured by planimeter, and thyroid weight is presented. Scans of functioning and non-functioning carcinomata are shown.

School of Medicine, University of Pittsburgh

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