Radiation Tolerance of Normal Tissues

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Jerome M. Vaeth, San Francisco, Calif.

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The authors and the publisher have exerted every effort to ensure that drug selection and dosage set forth in this text are in accord with current recommendations and practice at the time of publication. However, in view of ongoing research, changes in government regulations, and the constant flow of information relating to drug therapy and drug reactions, the reader is urged to check the package insert for each drug for any change in indications and dosage and for added warnings and precautions. This is particularly important when the recommended agent is a new and/or infrequently employed drug.

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In 1970, our 6th San Francisco Cancer Symposium and the subsequent volume 6 of Frontiers of Radiation Therapy and Oncology addressed the subject of the effects of ionizing radiations on normal tissues. The volume was enthusiastically received and quickly became the reference text for radiation tolerance. Much in addition to time has elapsed in that 18 years. Prior to 1970, most of the concepts of irradiated normal-tissue tolerance were based on 'so-called' conventional treatment schemes - 6,000 rad in 6 weeks, delivered daily five times weekly. In today's treatment programs, 'six in six' is almost the exception. Even established concepts of tolerance must now be reexamined in the light of new knowledge of the immune system, sensitizers, modifiers, chemotherapy, and altered fractionation schemes. We have yet to develop a vocabulary for defining and comparing the quality and quantity of normal-tissue
tolerance. There is now an accumulation of both basic and clinical data enabling us to reexamine the older concepts and formulate the new. On March 4 and 5, 1988, a distinguished faculty, many of whom addressed the 6th San Francisco Symposium, joined us in San Francisco and addressed this challenge. The presentations assembled in this 23rd volume of this series are vital to the safe utilization of radiations in the treatment of cancers.

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Jerome M. Vaeth

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