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Shimkin has been in the forefront of many advances in cancer. He established the pulmonary tumor response in mice as a quantitative bioassay procedure, as well as a model for biomathematical formulations. His quantitative studies on polycyclic hydrocarbons (with W. R. Bryan) are classical. He discovered the induction of interstitial cell testicular tumors in mice and the inhibition of mammary carcinogenesis in mice by adrenalectomy. Biometric analyses of clinical data led Shimkin to important conclusions on the natural history and effects of treatment in leukemia, lymphoma, and breast cancer. His analyses were influential in demolishing the dogma of radical surgery for cancer of the breast and lung. He has been a pioneer in studies on the relationship of smoking to lung cancer and his deductions reported in Advances in Cancer Research, Vol. 3, published in 1955, preceded by 7 years the 1962 report of the Surgeon General of the U. S. Shimkin has served the cause of cancer in two major editorial capacities. He was Editor-in-Chief of the Journal of the National Cancer Institute, from 1955 to 1960, and of CANCER RESEARCH, from 1964 to 1969. The cover photograph, taken about 1963, illustrates a familiar Shimkin pose. An accompanying figure shows data from a study of alkylating agents [M. B. Shimkin, J. H. Weisburger, E. K. Weisburger, N. Gubareff, and V. Sunzteff. Bioassay of 29 Alkylating Chemicals by the Pulmonary-Tumor Response in Strain A Mice. J. Natl. Cancer Inst., 36: 915-935, 1966 (the figure appears on p. 927)].