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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.
