Re: Differences in Lung Cancer Risk Between Men and Women: Examination of the Evidence

Zang and Wynder (1) have observed that the relative increase in the risk of lung cancer associated with cigarette smoking is greater for women than for men. They suggest that this difference is due to "a higher susceptibility to tobacco carcinogens in women," perhaps from "differences in metabolic activation and detoxification of lung carcinogens." However, I believe their data are also compatible with the hypothesis that cigarette smoking produces the same absolute increase in lung cancer risk among men and women; the reason for the higher relative risk in women is a result only of their lower incidence of lung cancer from other causes. While the authors consider and dismiss this possibility, they do so on the basis of an indirect argument, relating to the greater exposure of women than men to passive cigarette smoke. However, the data on the occurrence of lung cancer among persons who have never smoked cigarettes are available to directly address the issue and indicate that in the United States the rate of this disease is about 50% higher in male than in female nonsmokers (2).

I feel that a differential susceptibility to carcinogens in tobacco smoke between men and women has not yet been documented and that it would be premature to speculate regarding the possible bases for such a difference.

NOEL WEISS, M.D., DR.P.H.
School of Public Health and Community Medicine
University of Washington Health Sciences Bldg.
1959 Pacific Ave., NE
Seattle, WA 98195

References


Response

While we concur that the gender difference in susceptibility to lung carcinogens needs to be further investigated, we don't believe that our results could have been caused by a higher lung cancer risk for nonsmoking males. The suggestion that our data are "compatible with the hypothesis that cigarette smoking produces the same absolute increase in lung cancer risk among men and women" and that the apparent higher risk of women caused by smoking merely reflects their lower risk from other causes is contradicted by our data and by those of McDuffie et al. (1), according to which women with lung cancer were two to three times more likely to have never smoked than men. Thus, contrary to the suggestions of this correspondence, odds ratios for women due to smoking were underestimated, rather than overestimated, in our data, and yet they remained consistently higher than the odds ratios for men, particularly at the highest levels of lifelong exposure to tobacco smoke. In fact, this gender difference prevailed, even after the effects of other exposures were minimized by substituting light smokers for never smokers in the referent category.

To support the contention that nonsmoking men have an approximately 50% higher risk of lung cancer than nonsmoking women, Dr. Weiss cites a report on smoking-related death rates, based on the American Cancer Society's cohort study of 1959-1960 (2). However, prior to 1960, relatively few women smoked regularly. Thus, the misclassification of ex-smokers as never smokers, a common source of bias in studies of this type, may have inflated the base-line lung cancer risk of males relative to females. In fact, the author himself qualified the accuracy of these lung cancer death rates by stating, on page 150 of the monograph, that they were "based on a small number of deaths, and are subject to considerable sampling variation (2)." In any case, since our data had a higher frequency of lung cancer cases in females than in males who never smoked, the gender differences in risk obtained by us could only have been diminished, rather than overestimated, by exposures to other lung carcinogens.

NOEL WEISS, M.D., DR.P.H.
School of Public Health and Community Medicine
University of Washington Health Sciences Bldg.
1959 Pacific Ave., NE
Seattle, WA 98195

References


Long-Term Freedom From Disease Progression With Interferon Alfa Therapy in Two Patients With Malignant Hemangiopericytoma

Malignant hemangiopericytoma is a highly vascular soft-tissue sarcoma derived from the capillary pericyte (1-3). Once metastatic and unresectable, the vascular soft-tissue sarcomas are universally fatal, with reported median survival times of 6-12 months (4-6). Chemotherapy with a wide variety of agents has resulted in response rates of 15%-30% (6). The vast majority of the responses are partial and are of less than 6 months' duration (6). Chemotherapy has not been shown to prolong survival in patients with malignant hemangiopericytoma or other soft-tissue sarcomas in the metastatic setting (7).

Given the dismal prognosis of these patients with metastatic, unresectable disease and the lack of substantial benefit reported with chemotherapy, we elected to treat two such consecutive patients with interferon alfa (IFN-α). IFN-α was selected to treat this highly vascular tumor because of its known antiangiogenesis properties (8,9). IFN-α has shown marked clinical benefit in nonmalignant but life-threatening pulmonary hemangiomatoses and infantile hemangiomas (10,11) plus acquired immunodeficiency syndrome-associated Kaposi's sarcoma (12). We report here on the clinical efficacy of IFN-α in these two patients with malignant hemangiopericytoma. Since treatment initiation, these patients have experienced...