

mouth and pharynx" (48). Since most people who drink large amounts of alcohol regularly are also heavy users of tobacco, it is difficult to identify the relative contribution of these two factors or the role of the nutritional problems often associated with heavy alcohol use.

Additional data have been reported by Moore (62), on patients developing second primary mouth and throat cancers, after having been cured for at least three years prior to development of the cancer. These patients were all asymptomatic for at least three years prior to development of the second cancer. Of 117 patients with adequate smoking histories only 4 of 43 (9 percent) who quit smoking after the first cancer, developed a new primary. On the other hand, 27 of 74 patients (36 percent) who continued to smoke developed a second primary cancer. These data support the important contribution of smoking to the etiology of mouth and throat cancer.

Roth, et al. (73, 74) recently have shown that the dye-binding capacity of DNA of oral epithelial cells is significantly enhanced in cigarette smokers in contrast to nonsmokers, probably reflecting an increase in the DNA content of oral epithelial cells in smokers. This suggests some alteration in the DNA which may be a factor in oral carcinogenesis. Smokers had values of dye-binding capacity intermediate between nonsmokers and 21 patients with proven oral cancer. Those smokers who refrained from smoking for up to nine months showed a significant decrease towards more normal values.

It is clear that people who use tobacco have higher rates of oral cancer than those who do not. Research is needed to identify the dose relationships, to determine whether or not there are dosage thresholds, and to clarify the relationships between dosage, style of tobacco use, and part of the mouth affected.

It seems likely that factors such as alcohol consumption, nutritional problems, and oral hygiene may be interrelated with the tobacco habit in a fairly complex pattern. More research is needed to clarify these relationships.

For patients with oral cancer, and probably for those at a high risk of oral cancer because of other exposures, cessation of tobacco use can make an important contribution to reducing the risk of a new primary cancer.

CANCER OF THE LARYNX

Cancer of the larynx is mainly a disease of male smokers. Of the 2,629 deaths in 1965, over 88 percent were men. The 1967 report noted that the death rate for cancer of the larynx had not increased significantly since 1950. The incidence rates, however, have shown a steady increase since 1935.

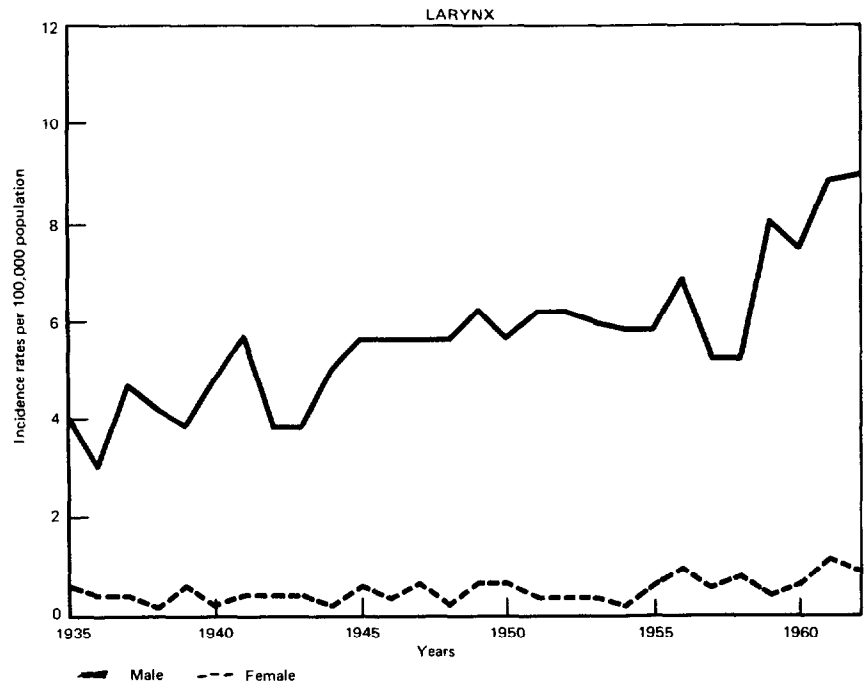


FIGURE 3—Age-adjusted rates of the incidence of cancer of the larynx, for males and females: Connecticut, 1935-1962
SOURCE: Eisenberg et al. (24).

The American Cancer Society (2) estimates the occurrence of 6,000 new cases of cancer of the larynx in 1968 but only about 2,800 deaths, due to relative curability of this disease if diagnosed early.

Several retrospective studies have again shown the extremely high rate of smokers [98 percent (86), 92 percent (75)] among patients with cancer of the larynx.

CANCER OF THE ESOPHAGUS

As reported in the 1967 Report (92) the death rates for cancer of the esophagus have increased only slightly in the period 1950-1964. The large scale prospective studies (18, 19, 34, 46) showed mortality ratios up to 11 in heavy cigarette smokers, while pipe and/or cigar smokers had ratios up to 5.

Preliminary data from a prospective study (37) in Japan also indicate an increased frequency of death from cancer of the esophagus among smokers as compared to nonsmokers.

No further information has become available on the relationship of esophageal cancer to alcohol and/or other confounding variables as discussed in the 1967 report.

CANCER OF THE PANCREAS

The 1967 report implied a relationship between smoking and pancreatic cancer due to the somewhat higher mortality ratios observed in three of the large scale prospective epidemiologic studies.

The American Cancer Society estimates that deaths due to cancer of the pancreas will total 18,000 in 1968 with a male/female ratio of approximately 3:2. The overall death rate for cancer of the pancreas has shown a steady rise; from 7.2 to 8.4 in males (+17 percent) and 4.4 to 4.9 (+11 percent) in females, for the time period 1953-55 to 1963-65 (2). The incidence rates have increased almost 50 percent in males since 1935, with no apparent increase for females.

In the past year, preliminary evidence from two retrospective studies (43, 102) has shown that only 10 percent of the patients with cancer of the pancreas are nonsmokers. The risk of developing cancer of the pancreas appears to increase in proportion to the amount smoked.

Preliminary data from a prospective study (37) in Japan also shows a significantly higher frequency of deaths from pancreatic cancer among smokers as compared to nonsmokers.

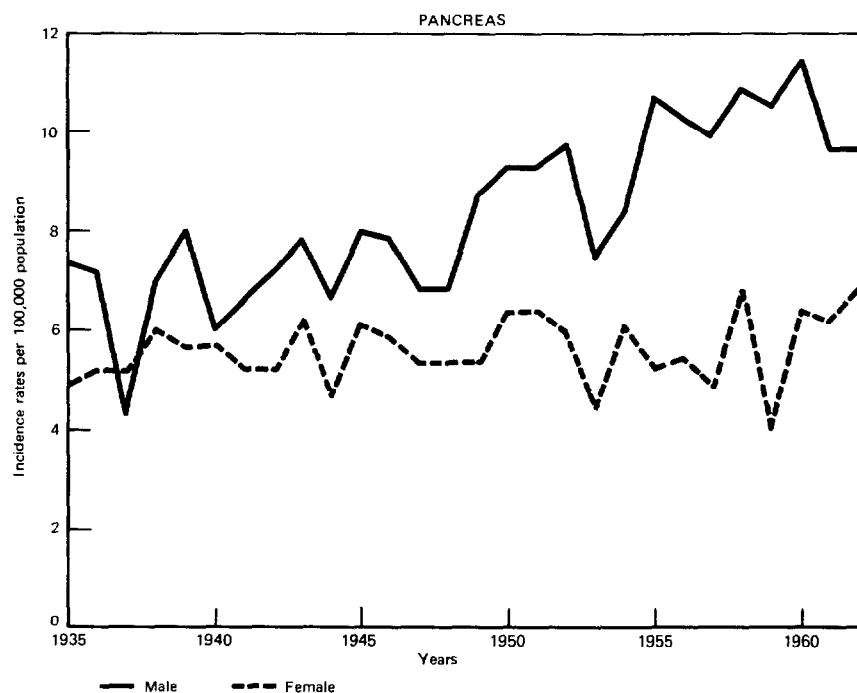


FIGURE 4—Age-adjusted rates of the incidence of cancer of the pancreas, for males and females: Connecticut, 1935-1962.

SOURCE: Eisenberg, et al. (24).

These studies strengthen the earlier indications of an association between smoking and pancreatic cancer, but further research is needed in this area to elucidate the significance of this association.

GENITO-URINARY CANCER

CANCER OF THE BLADDER

As stated in the 1967 Report, there has been no increase in male or female death rates for cancer of the bladder over the 15 year period 1950–1964. However, the incidence rates for males have increased over 75 percent in the 25-year period from 1935–37 to 1960–62, and about 26 percent in the 15 year period from 1945–47 to 1960–62.

Deeley, et al. (16) reported on a retrospective study of 127 patients with cancer of the bladder and 126 patients with lung cancer, all matched with controls. The smoking “factors” (amount times duration of smoking) were significantly greater among cases than controls for both cancer sites. Even by age-groups, the “mean smoking factor” for either cancer was higher for cases than for controls. Preliminary data

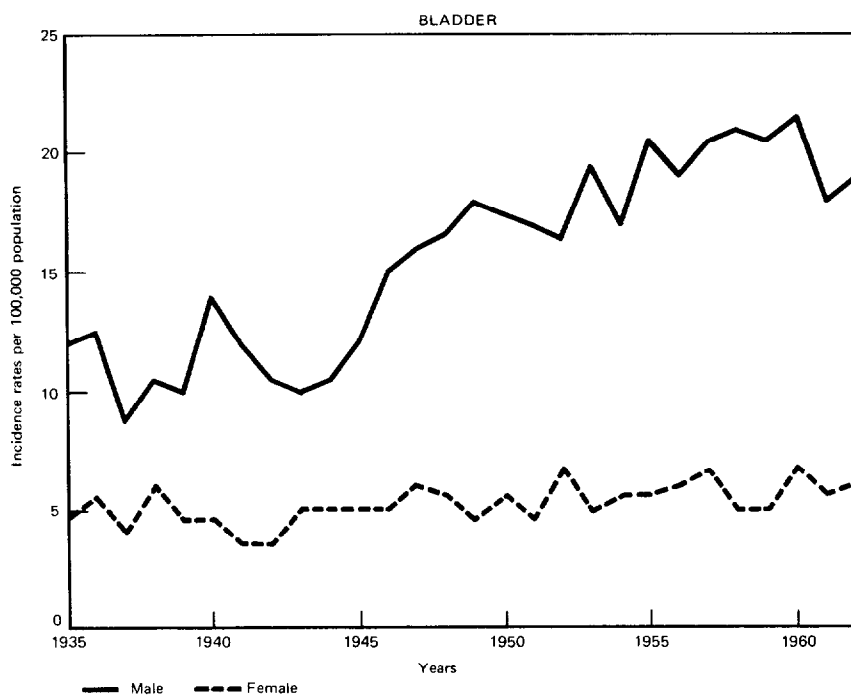


FIGURE 5—Age-adjusted rates of the incidence of cancer of the bladder, for males and females: Connecticut, 1935–1962.

SOURCE: Eisenberg, et al. (24)

from a prospective study (37) in Japan shows a higher frequency of deaths from bladder cancer among smokers.

Certain amino acids, as found in tobacco, form trace amounts of alpha- and beta-naphthylamines upon pyrolysis (59). The latter agent is an established bladder carcinogen. So far, however, only its isomeric alpha-naphthylamines has been identified in cigarette smoke (60, 67).

Further investigation is needed on the carcinogenic metabolites of tryptophan which have been shown to be increased in the urine of cigarette smokers (92).

CANCER OF THE KIDNEY

The 1967 Report did not mention the association between smoking and cancer of the kidney.

The U.S. Veterans study (46) shows increasing mortality ratios for cancer of the kidney with the amount of cigarette smoking. There is no apparent relationship with pipe and/or cigar smoking.

TABLE 3.—Mortality ratios and death rates for cancer of the kidney in U.S. veterans, by age, type and amount smoked for current smokers only

| | Number of cigarettes smoked per day | | | | | Pipe and/or cigars | Cigars | Pipe |
|-----------------------|-------------------------------------|------|-------|-------|-------------|--------------------|--------|-------|
| | 0 | 1-9 | 10-20 | 21-39 | 40 and over | | | |
| Mortality ratios..... | 1. 00 | . 97 | 1. 34 | 1. 68 | 2. 75 | 1. 15 | . 77 | 1. 32 |
| Death rates: | | | | | | | | |
| Age 45-54..... | | | | | | | | |
| Age 55-64..... | 8 | 5 | 8 | 10 | 26 | 5 | 7 | 2 |
| Age 65-74..... | 14 | 7 | 15 | 27 | 13 | 14 | 2 | 25 |
| Age 75-84..... | 7 | | | | | 40 | | |

SOURCE: Kahn, H. A. (46).

TABLE 4.—Mortality ratios and death rates for cancer of the kidney in male cigarette smokers, by specified age groups

| | Cigarette smokers | |
|-----------------------|-------------------|---------------------|
| | Age 45-64 | Age 65-79 |
| Mortality ratios..... | 1. 42 | 1. 57 |
| Death rates..... | ¹ (4)6 | ¹ (15)23 |

¹ Numbers in parentheses indicate death rates for persons who have never smoked regularly.

SOURCE: Hammond, E. C. (34).

Hammond (34) has also demonstrated higher mortality ratios in cigarette smokers for cancer of the kidney.

Preliminary evidence from a retrospective study in progress (102) suggests that cigarette smokers, especially those who smoke over 35 cigarettes a day, are over-represented in those patients with cancer of the kidney. More research should be done to try to ascertain if there is a meaningful relationship between smoking and cancer of the kidney.

CITED REFERENCES

- (1) ABELIN, T., GSELL, O. T. Relative risk of pulmonary cancer in cigar and pipe smokers. *Cancer* 20(8) : 1288-1296, August 1967.
- (2) AMERICAN CANCER SOCIETY. 1968 Cancer facts and figures. New York, 1967. 31 pp.
- (3) AUERBACH, O. Personal communication. March 1968.
- (4) AUERBACH, O., HAMMOND, E. C., KIRMAN, D., GARFINKEL, L., STOUT, A. P. Histologic changes in bronchial tubes of cigarette-smoking dogs. *Cancer* 20(12) : 2055-2066, December 1967.
- (5) BEST, E. W. R. A Canadian study of smoking and health. Ottawa, Department of National Health and Welfare, 1966. 137 pp.
- (6) BOCK, F. G. Personal communication. April 1968.
- (7) BOCK, F. G. Dose response: Experimental carcinogenesis. *In: Wynder E. L., Hoffmann, D., editors. Toward a Less Harmful Cigarette.* Bethesda, U. S. Public Health Service, National Cancer Institute Monograph 28, June 1968. (In press.)
- (8) BRETTHAUER, E. W., BLACK, S. C. Polonium-210: Removal from smoke by resin filters. *Science* 156(3780) : 1375-1376, June 9, 1967.
- (9) BROSS, I. D. J. Effort of filter cigarettes on the risk of lung cancer: *In: Wynder, E. L., Hoffmann, D., editors. Toward a Less Harmful Cigarette.* Bethesda, U.S. Public Health Service, National Cancer Institute Monograph 28, June 1968. (In press.)
- (10) BROWN, R. L., SUH, J. M., SCARBOROUGH, J. E., WILKINS, S. A., JR., SMITH, R. R. Snuff dippers' intraoral cancer: Clinical characteristics and response to therapy. *Cancer* 18(1) : 2-13, January 1965.
- (11) BUELL, P., DUNN, J. E. Relative impact of smoking and air pollution on lung cancer. *Archives of Environmental Health* 15(3) : 291-297, September 1967.
- (12) BUELL, P., DUNN, J. E., BRESLOW, L. Cancer of the lung and Los Angeles-type air pollution. Prospective study. *Cancer* 20(12) : 2139-2147, December 1967.
- (13) CARFI, N., DUGNANI-LONATI, R. Polonium-210 in Italian tobacco. *Health Physics* 12 : 1808, December 1966.
- (14) CASARET, L. J. The role of radioactive substances in effects of smoking. *In: Wynder, E. L., Hoffmann, D., editors. Toward a Less Harmful Cigarette.* Bethesda, U.S. Public Health Service, National Cancer Institute Monograph 28, June 1968. (In press.)
- (15) COOPER, D. A., CRANE, A. R., BOUCOT, K. R. Primary carcinoma of the lung in nonsmokers. *Archives of Environmental Health* 16(3) : 398-400, March 1968.
- (16) DEELEY, T. J., COHEN, S. L. The relationship between cancer of the bladder and smoking. *In: Bladder Cancer.* Chapter 13. Proceedings of the

5th Inter-American Conference on Toxicology and Occupational Medicine, University of Miami, School of Medicine, Coral Gables, Fla., 1966. Pp. 163-169.

- (17) DICKENS, F. Mold products, including antibiotics as carcinogens. *In: Carcinogenesis: A broad critique.* Houston, The University of Texas, M. D. Anderson Hospital, 1967. Pp. 447-470.
- (18) DOLL, R., HILL, A. B. Mortality in relation to smoking: Ten years' observations of British doctors. *British Medical Journal* 1(5395): 1399-1410, May 30, 1964.
- (19) DOLL, R., HILL, A. B. Mortality in relation to smoking: Ten years' observations of British doctors. *British Medical Journal* 1(5396): 1460-1467, June 6, 1964.
- (20) DONTENWILL, W., RECKZEH, G., STADLER, L. Inhalationsexperimente mit Cigareetenrauch. *Beiträge zur Tabakforschung* 3(6): 438-448, September 1966.
- (21) DUNGAL, N. Lung carcinoma in Iceland. *Lancet* 2(6624): 245-247, August 12, 1950.
- (22) DUNN, W. I., DYKSTRA, C. L. Tobacco habits in carcinoma of the upper respiratory tract. *Archives of Otolaryngology* 86(1): 79-81, July 1967.
- (23) DYMOND, H. F., KILHORN, K. D. The characterization of tobacco smoke by gas chromatography and a digital computer. *In: Littlewood, A. B., editor. Gas Chromatography 1966.* London, The Institute of Petroleum, 1967. Pp. 353-392.
- (24) EISENBERG, H., CAMPBELL, P. C., FLANNERY, J. T. Cancer in Connecticut. Incidence characteristics 1935-1962. Hartford, Connecticut State Department of Health, 1967. 97 pp.
- (25) EPSTEIN, S. S., ANDREA, J., JAFFEE, H., JOSHI, S., FALK, H., MANTEL, N. Carcinogenicity of the herbicide *maicic hydrazide*. *Nature (London)* 215(5108): 1388-1390, Sept. 23, 1967.
- (26) ERMOLAEVA-MAKOVASAYA, A. P., PERTOSOV, L. A., POPOV, D. K. Polonium-210 content of tobacco. *Gigiena i Sanitariya* 30: 40-43, December 1965.
- (27) FERRI, E. S., BARATTA, E. J. Polonium-210 in tobacco products and human tissues. *Radiological Health Data and Reports* 7(9): 485-488, September 1966.
- (28) FERRI, E. S., CHRISTIANSEN, H. Lead-210 in tobacco cigarette smoke. *Public Health Reports* 83(9): 828-832, September 1967.
- (29) FROST, D. V. Selenium and cancer. *Chemical and Engineering News* 45(44): 6, October 16, 1967.
- (30) GRAHAM, S. Cancer of the lung related to smoking behavior. *Cancer* 21(3): 523-530, March 1968.
- (31) GUILLAN, R. A., ZELMAN, S., ALONSO, R. A. Adenocarcinoma of the lungs. An analysis of 24 cases in men. *American Journal of Clinical Pathology* 47(5): 580-584, May 1967.
- (32) GUTHRIE, E. F., BOWERY, T. G. Pesticide residues in tobacco. *Residue Review* 19: 31-56, 1966.
- (33) HAENSZEL, W., SHIMKIN, M. B., MILLER, H. P. Tobacco smoking patterns in the United States. *Public Health Monograph No. 45*, May 1956. 111 pp.
- (34) HAMMOND, E. C. Smoking in relation to the death rates of 1 million men and women. *In: Haenszel, W., editor. Epidemiological Approaches to the Study of Cancer and Other Diseases.* Bethesda, U.S. Public Health Service, National Cancer Institute Monograph No. 19, January 1966. Pp. 127-204.

- (35) HARRIS, R. J. C., NEGRONI, G. Production of lung carcinomas in C57BL mice exposed to a cigarette smoke and air mixture. *British Medical Journal* 4(5580) : 637-641, Dec. 16, 1967.
- (36) HIRAYAMA, T. An epidemiological study of oral and pharyngeal cancer in Central and Southeast Asia. *Bulletin of the World Health Organization* 34(1) : 41-69, 1966.
- (37) HIRAYAMA, T. Smoking in relation to the death rates of 265,118 men and women in Japan. Tokyo, National Cancer Center, Research Institute, Epidemiology Division, September 1967. 14 pp.
- (38) HOFFMANN, D., RATHKAMP, G. Chemical studies on Tobacco smoke. V. Quantitative determination of chlorinated hydrocarbon insecticides in cigarette tobacco and its smoke. *Beiträge zur Tabakforschung*: 1968. (In press.)
- (39) HOFFMANN, D., WYNDER, E. L. Selective reduction of the tumorigenicity of tobacco smoke. Experimental approaches. *In*: Wynder, E. L., Hoffmann, D., editors. *Toward a Less Harmful Cigarette*. Bethesda, U.S. Public Health Service, National Cancer Institute Monograph 28, June 1968. (In press.)
- (40) HOLTZMAN, R. B. Polonium-210 in bronchial epithelium of cigarette smokers. (Letter) *Science* 155(3762) : 607, Feb. 3, 1967.
- (41) HOLTZMAN, R. B., ILCEWICZ, F. H., Lead-210 and polonium-210 in tissues of cigarette smokers. *Science* 153(3741) : 1259-1260, Sept. 6, 1966.
- (42) ISHIKAWA, S. Japan Lung Cancer Society epidemiological study on lung cancer, with special reference to the association with smoking habit. Tokyo, Japan. 7 pp.
- (43) ISHII, K., HIRAYAMA, T. Personal communication. March 1968.
- (44) JACOBI, U. Die natürliche Strahleneinwirkung auf den Atemtrakt. *Biophysik* 2 : 282-300, 1965.
- (45) JOHNSON, D. E., MILLAR, J. D., RHOADES, J. W. Nitrosamines in tobacco smoke: *In*: Wynder, E. L., Hoffmann, D., editors. *Toward a Less Harmful Cigarette*. Bethesda, U.S. Public Health Service, National Cancer Institute Monograph 28, June 1968. (In press.)
- (46) KAHN, H. A. The Dorn Study of smoking and mortality among U.S. veterans: Report on 8½ years of observation. *In*: Haenszel, W., editor. *Epidemiological Approaches to the Study of Cancer and Other Diseases*. Bethesda, U.S. Public Health Service, National Cancer Institute Monograph No. 19, January 1966. Pp. 1-125.
- (47) KELLER, A. Z. Personal communication. June 1968.
- (48) KELLER, A. Z. Cirrhosis of the liver, alcoholism and heavy smoking associated with cancer of the mouth and pharynx. *Cancer* 20(6) : 1015-1022, June 1967.
- (49) KELLER, A. Z. The epidemiology of lip, oral, and pharyngeal cancers, and the association with selected systemic diseases. *American Journal of Public Health and the Nation's Health* 53(8) : 1214-1228, August 1963.
- (50) KELLER, A. Z., TERRIS, M. The association of alcohol and tobacco with cancer of the mouth and pharynx. *American Journal of Public Health and the Nation's Health* 55(10) : 1578-1585, October 1965.
- (51) KILIBARDA, M., PETROVIC, D., PANOV, D., DJURIC, D. Contamination with polonium-210, uranium and radium-226 due to smoking. *Health Physics* 12 : 1808, December 1966.
- (52) KOLB, W., BAUMGARTEL, K., DRESCHHOFF, G. Der Polonium-210 Gehalt von Rauchkondensat und Tabak. *Umweltradioaktivität und Strahlenbelastung* No. 3 : 165-170, Dec. 6, 1966.

- (53) KRAUS, F. T., PEREZ-MESA, C. Verrucous carcinoma. Clinical and pathologic study of 105 cases involving oral cavity, larynx and genitalia. *Cancer* 19(1) : 26-38, January 1966.
- (54) KRISHNA, G., SAXENA, O. N., SINGH, A. K. Oral carcinoma. *Indian Journal of Surgery* 29(5) : 229-235, May 1967.
- (55) KRÖLLER, E. Untersuchungen zum Nachweis von Nitrosaminen in Tabakrauch und Lebensmitteln. *Deutsche Lebensmittel-Rundschau* 63(10) : 303-305, October 1967.
- (56) LACASSAGNE, A. Tumeurs des Cellules de Leydig du Testicule du Rat, sous l'influence de 162 Po, p'-DDD. *Unio Internationalis Contra Cancrum. Monograph No. 7* : 241-242, 1967.
- (57) LITTLE, J. B., RADFORD, E. P., Jr. Polonium-210 in bronchial epithelium of cigarette smokers. (Letter) *Science* 155(3762) : 606-607, Feb. 3, 1967.
- (58) MAGEE, P. N., BARNES, J. M. Carcinogenic nitroso compounds. *Advances in Cancer Research* 10 : 163-246, 1967.
- (59) MASUDA, Y., MORI, K., KURATSUNE, M. Studies on bladder carcinogens in the human environment. I. Naphthylamines produced by prolysis of aminoacids. *International Journal of Cancer* 2(5) : 489-493, 1967.
- (60) MILLER, R. L., STEDMAN, R. L. Essential absence of beta-naphthylamine in cigarette smoke condensate. *Tobacco* 165(8) : 32 Aug. 25, 1967.
- (61) MITCHELL, R. I., GIESEKE, J. A. Mechanical filtration: A review of filtration mechanisms pertinent to cigarette smoke. *In*: Wynder, E. L., Hoffmann, D., editors. *Toward a Less Harmful Cigarette*. Bethesda, U.S. Public Health Service, National Cancer Institute Monograph 28, June 1968. (In press.)
- (62) MOORE, C. Multiple mouth-throat cancer. *American Journal of Surgery* 110(4) : 534-536, October 1965.
- (63) MOORE, G. E., BOCK, F. G. "Tar" and nicotine levels of American cigarettes. *In*: Wynder, E. L., Hoffmann, D., editors. *Toward a Less Harmful Cigarette*. Bethesda, U.S. Public Health Service, National Cancer Institute Monograph 28, June 1968. (In press.)
- (64) MOSHY, R. J., HALTER, H. M. Reconstituted tobacco leaf technology: A tool for tobacco smoke modification. *In*: Wynder, E. L., Hoffmann, D., editors. *Toward a Less Harmful Cigarette*. Bethesda, U.S. Public Health Service, National Cancer Institute Monograph 28, June 1968. (In press.)
- (65) NEURATH, G. Tobacco products and smoke. General report. *Beitrag zur Tabakforschung* 4(1) : 1-17, August 1967.
- (66) NEURATH, G. Zur Frage des Vorkommens von N-nitroso-Verbindungen in Tabakrauch. *Experientia* 23(5) : 400-404, 1967.
- (67) PAILER, M., HÜBSCH, W. J., KUHN, H. Untersuchung der aliphatischen und aromatischen primären und sekundären Amine des Zigarettenrauches mit Hilfe der Gaschromatographie und Massenspektrometrie. *Fachliche Mitteilungen der Oesterreichischen Tabakregie No. 7* : 109-118, April 1967.
- (68) RAJEWSKY, B., STAHLHOFEN, W. Polonium-210 activity in the lungs of cigarette smokers. *Nature* 209(5030) : 1312-1313, Mar. 26, 1966.
- (69) REDDY, D. G., ANGIJLI, V. C. Experimental production of cancer with betel nut, tobacco and slaked lime mixture. *Journal of the Indian Medical Association* 49(7) : 315-318, Oct. 1, 1967.
- (70) RICHARDS, J. C., WOENS, W. F., Jr. Effect of porous cigarette papers on the yield of major vapor phase and certain particulate phase components of cigarette smoke. 20th Tobacco Chemists' Research Conference, Winston-Salem, N.C., Nov. 2, 1966. 16 pp.

- (71) ROSENFELD, L., CALLAWAY, J. Snuff dipper's cancer. *American Journal of Surgery* 106(5) : 840-844, November 1963.
- (72) ROSENFELD, L., CALLAWAY, J. Squamous cell carcinoma of the oral cavity. *Southern Medical Journal* 56(12) : 1394-1399, December 1963.
- (73) ROTH, D., FREDERICKSON, D. T., OPPENHEIM, A., LONDON, M. Bioassay of the effects of smoking on DNA content of human respiratory epithelium. *Cancer* 21(6) : 1132-1136, June 1968.
- (74) ROTH, D., OPPENHEIM, A., FREDERICKSON, D. T. DNA dependent dye binding by oral epithelium in relation to smoking habits. *Archives of Environmental Health* : 1968. (In press)
- (75) ROZENBILDS, J. G. Carcinoma of the larynx and hypopharynx in South Australia 1952-1966. *Medical Journal of Australia* 2(6) : 244-249, Aug. 5, 1967.
- (76) SERFONTEIN, W. J., SMIT, J. H. Evidence for the occurrence of N-nitrosamines in tobacco. *Nature (London)* 214(5084) : 169-170, Apr. 8, 1967.
- (77) SHANTA, V., KRISHNAMURTHI, S. Further studies in etiology of carcinomas of the upper alimentary tract. *Acta; Unio Internationalis contra Cancrum* 20 : 586-594, 1964.
- (78) SHANTA, V., KRISHNAMURTHI, S. Further studies in aetiology of carcinomas of the upper alimentary tract. *British Journal of Cancer* 17(1) : 8-23, March 1963.
- (79) SINGH, A. D., VON ESSEN, C. F. Buccal mucosa cancer in South India. Etiologic and clinical aspects. *American Journal of Roentgenology, Radium Therapy and Nuclear Medicine* 96(1) : 6-14, January 1966.
- (80) SMITH, G. A. L., SULLIVAN, P. J., IRVINE, W. J. The determination of oxidisable nitrogen oxides present in cigarette smoke. *Analyst* 92 : 456-462, July 1967.
- (81) STECKER, R. H., DEVINE, K. D., HARRISON, E. G., Jr. Verrucose "snuff dipper's" carcinoma of the oral cavity. A case of self-induced carcinogenesis. *Journal of the American Medical Association* 189(11) : 838-840, Sept. 14, 1964.
- (82) STEDMAN, R. L. The chemical composition of tobacco and tobacco smoke. *Chemical Reviews* 68(2) : 153-207, April 1968.
- (83) STEDMAN, R. L. Nicotine reduction in tobacco and tobacco smoke. *In*: Wynder, E. L. Hoffman, D., editors. *Toward a Less Harmful Cigarette*. Bethesda, U.S. Public Health Service, National Cancer Institute Monograph 28, June 1968. (In press)
- (84) STOCKS, P. Lung cancer and bronchitis in relation to cigarette smoking and fuel consumption in twenty countries. *British Journal of Preventive and Social Medicine* 21(4) : 181-185, October 1967.
- (85) STOCKS, P. Recent epidemiological studies of lung cancer mortality, cigarette smoking and air pollution, with discussion of a new hypothesis of causation. *British Journal of Cancer* 20(4) : 595-623, December 1966.
- (86) TERRACOL, J., CALVET, J., MARQUES, P., COLL, J. Le tabac et le cancer du larynx. *Vie Medicale* 48 : 1149-1150, August 1967.
- (87) THORARINSSON, H., HALLBRIMSSON, J., BJARNASON, O., PETERSON, G., Carcinoma of the lung in Iceland. *Diseases of the Chest* 52(6) : 754-759, December 1967.
- (88) TSO, T. C. The effect of farm production practices on nicotine and total particulate matter in cigarette smoke. *In*: Wynder, E. L., Hoffman, D., editors. *Toward a Less Harmful Cigarette*. Bethesda, U.S. Public Health Service, National Cancer Institute Monograph 28, June 1968. (In press.)

- (89) TSO, T. C., HARLEY, N., ALEXANDER, L. T. Source of lead-210 and polonium-210 in tobacco. *Science* 153(3738) : 880-882, August 19, 1966.
- (90) TSO, T. C., SOROKIN, T. Examination of aflatoxin B₁ in leaf tobacco and in cigarette smoke condensate. *Beiträge zur Tabakforschung* 4(1) : 18-20, August 1967.
- (91) U.S. PUBLIC HEALTH SERVICE. Smoking and Health. Report of the Advisory Committee to the Surgeon General of the Public Health Service. Washington, U.S. Department of Health, Education, and Welfare, Public Health Service Publication No. 1103, 1964. 387 pp.
- (92) U.S. PUBLIC HEALTH SERVICE. The Health Consequences of Smoking. A Public Health Service Review : 1967. Washington, U.S. Department of Health, Education, and Welfare, Public Health Service Publication No. 1696, 1967. 227 pp.
- (93) U.S. PUBLIC HEALTH SERVICE. National Clearinghouse for Smoking and Health. 1966 National Health Survey. [Unpublished data.]
- (94) U.S. PUBLIC HEALTH SERVICE. NATIONAL CENTER FOR HEALTH STATISTICS. Mortality from diseases associated with smoking : United States, 1950-64. Washington, U.S. Department of Health, Education, and Welfare, Vital and Health Statistics Series 20, No. 4, Public Health Service Publication No. 1000, October 1966. 45 pp.
- (95) U.S. PUBLIC HEALTH SERVICE, NATIONAL CENTER FOR HEALTH STATISTICS. Vital Statistics of the United States 1965 Mortality 2 (Part A) : 1967.
- (96) U.S. SENATE. CONSUMER SUBCOMMITTEE. Reviewing progress made toward the development and marketing of a less hazardous cigarette. Hearings before the Consumer Subcommittee of the Committee on Commerce. U.S. Senate, 90th Congress, First Session, Aug. 23-25, 1967. Serial No. 90-52, 1968. 329 pp.
- (97) VINCENT, R. G., MARCHETTA, F. The relationship of the use of tobacco and alcohol to cancer of the oral cavity, pharynx or larynx. *American Journal of Surgery* 106(3) : 501-505. September 1963.
- (98) WAHI, P. N., KEHAR, U., LAHIRI, B. Factors influencing oral and oropharyngeal cancers in India. *British Journal of Cancer* 19(4) : 642-660, December 1965.
- (99) WAINGROW, S. M., HORN, D., IKARD, F. F. Dosage patterns of cigarette smoking in American adults. *American Journal of Public Health and the Nation's Health* 58(1) : 54-70, January 1968.
- (100) WEST, P. W. Selenium and cancer (reply to Dr. Frost) (letter). *Chemical and Engineering News* 45(44) : 6-7, Oct. 16, 1967.
- (101) WEST, P. W. Selenium in paper and its possible association with lung cancer among cigarette smokers. [Unpublished.] 7 pp.
- (102) WYNDER, E. L. Personal Communication. March 1968.
- (103) WYNDER, E. L., BERG, J. W. Cancer of the lung among nonsmokers. Special reference to histologic patterns. *Cancer* 20(7) : 1161-1172, July 1967.
- (104) WYNDER, E. L., HOFFMANN, D. Tobacco and tobacco smoke. Studies in experimental carcinogenesis. New York, Academic Press, 1967. 730 pp.
- (105) WYNDER, E. L., HOFFMANN, D., editors. Toward a Less Harmful Cigarette. Bethesda, U.S. Public Health Service, National Cancer Institute Monograph 28, June 1968. (In press)
- (106) WYNDER, E. L., TAGUCHI, K. T., BADEN, V., HOFFMANN, D. Tobacco carcinogenesis. IX. Effect of cigarette smoke on respiratory tract of mice after passive inhalation. *Cancer* 21(1) : 134-153, January 1968.

SUPPLEMENTAL CANCER REFERENCES

- S1. ALLEN, M. S., Jr., DRASH, E. C. Primary melanoma of the lung. *Cancer* 21(1) : 154-159, January 1968.
- S2. ASHLEY, D. J. B. Lung cancer in miners. *Thorax* 23(1) : 87-91, January 1968.
- S3. AYRE, J. E., RESSEL, F. A. Early diagnosis of lung cancer by cytology. *Medical Times* 96(1) : 1-18, January 1968.
- S4. BAKER, R. R., CHERRY, J. Carcinoma of the larynx. *Archives of Surgery* 90(3) : 449-453, March 1965.
- S5. BEARD, R. E. (Discussion of) BENJAMIN, B. Actuarial methods of mortality analysis; adaptation to changes in the age and cause pattern. *Proceedings of the Royal Society; Series B. Biological Sciences* 159(974) : 56-64, Dec. 10, 1963.
- S6. BLATT, I. M., HAWDOL, C. J. New concepts in management of head and neck cancer: Malignancy of floor of the mouth and tongue. *Journal of the Louisiana State Medical Society* 118(2) : 46-52, February 1966.
- S7. BROSS, I. D. J. Spurious effects from an extraneous variable. *Journal of Chronic Diseases* 19 : 637-647, 1966.
- S8. BROWN, J. R., SHEPARD, R. J. Some measurements of fitness in older female employees of a Toronto Department store. *Canadian Medical Association Journal* 97 : 1208-1213, Nov. 11, 1967.
- S9. BROWN, P. W., FOWLER, C. A. The toxicity of tobacco smoke solutions to *Proteus Vulgaris*. *Beitrage zur Tabakforschung* 4(2) : 78-83, October 1967.
- S10. BURDETTE, W. J., EVANS, C. Management of coin lesions and carcinoma of the lung. *Annals of Surgery* 161(5) : 649-673, May 1965.
- S11. CARNOW, B. W. Bronchogenic carcinoma: A simple cytological office screening procedure for early detection. *Chicago Medical School Quarterly* 26 : 13-17, Spring 1966.
- S12. CEDERLOF, R. The value of twin studies in epidemiology. *World Medical Journal* 14(6) : 168-171, November-December 1967.
- S13. CHANG, K. M. Betel nut chewing and mouth cancer in Taiwan. Second Report: Observation of the oral mucosa in the betel nut chewer. *Tai-wan I Hsueh Tsa Chih* 65(2) : 79-86, Feb. 28, 1966.
- S14. CHAPMAN, W. H. Effects of oral tobacco tar and a paraffin foreign body on the mouse bladder. Chapter 14. *In: Bladder Cancer. Proceedings of the 5th Inter-American Conference on Toxicology and Occupational Medicine, University of Miami, School of Medicine, Coral Gables, Fla., 1966. Pp. 170-179.*
- S15. CLAYSON, D. B. Chemicals and environmental carcinogenesis in man. *European Journal of Cancer* 3(4/5) : 405-416, November 1967.
- S16. CLAYSON, D. B. Human and experimental bladder cancer. *Annali della Facolta de Medicina e Chirurgia della Universita degli Studi di Perugia che Pubblicano gli Atti della Accademia Anatomica-Chirurgica* 57(4) : 502-520, July 31, 1967.
- S17. Coal mining, pneumoconiosis, and lung cancer. *British Medical Journal* 4(5578) : 502-503, Dec. 2, 1967.
- S18. COOPER, K. H., GEY, G. O., BOTTENBERG, R. A. Effects of cigarette smoking on endurance performance. *Journal of the American Medical Association* 203(3) : 189-192, Jan. 15, 1968.
- S19. COORAY, G. H., LESLIE, N. D. G. Bronchial neoplasms among the Ceylonese. *British Journal of Cancer* 12(1) : 1-4, March 1968.

- S20. DALHAMN, T., ROSENGREN, A. The effect of oxygen lack of the tracheal ciliary activity. *Archives of Environmental Health* 16(3) : 371-373, March 1968.
- S21. DALHAMN, T., RYLANDER, R. Tar content and ciliotoxicity of cigarette smoke. *Acta Pharmacologica et Toxicologica* 25(3) : 369-372, 1967.
- S22. DAoust, R. Les cancerologues a Tokio. (Editorial.) *Union Medicale du Canada* 96(1) : 1-2, January 1967.
- S23. DENK, W., HANSLUWKA, H., KARRER, K. Regionale Unterschiede in der Haufigkeit des Lungenkarzinoms in Osterreich. *Weiner Medizinische Wochenschrift* 118(4) : 64-72, Jan. 27, 1968.
- S24. DENOIX, P. Frequences des differents cancers. *Le Concours Medical* 89(2) : 263-269, Jan. 14, 1967.
- S25. DEVILLIERS, A. J. Cancer of the lung in a group of fluorspar miners. *Canadian Cancer Conference* 6 : 460-474, 1966.
- S26. DREXLER, J. Asymptomatic polyps of the rectum and colon. I. A reexamination. *Archives of Internal Medicine* 119(5) : 503-509, May 1967.
- S27. DREXLER, J. Asymptomatic polyps of the rectum and colon. II. Frequency, smoking, and arteriosclerotic heart disease. *Archives of Internal Medicine* 121(1) : 62-66, January 1968.
- S28. EGLIMEX, S., SAVAS, I. Brons kanserleri. *Tip Fakultesi Mecmuasi* 29 : 487-492, 1966.
- S29. EINHORN, J., WERSALL, J. Incidence of oral carcinoma in patients with leukoplakia of the oral mucosa. *Cancer* 20(12) : 2189-2193, December 1967.
- S30. EL-MOFTY, S. Oral cancer in the United Arab Republic. *Oral Surgery, Oral Medicine and Oral Pathology* 24(2) : 240-245, August 1967.
- S31. EPSTEIN, S. S. Carcinogenicity of organic extracts of atmospheric pollutants, *Journal of the Air Pollution Control Association* 17(11) : 728-729, November 1967.
- S32. FORGACS, J., CARLL, W. T. Mycotoxicoses: Toxic fungi in tobaccos. *Science* 152(3729) : 1634-1635, June 17, 1966.
- S33. FRESH, J. W., SUN, S. C., RAMPSCH, J. W. Nasopharyngeal carcinoma and environmental carcinogens. *Unio Internationalis contra Cancrum Monograph Series* 1(20) : 124-129, 1967.
- S34. GELBOIN, H. V., KLEIN, M., BATES, R. R. Inhibition of mouse skin tumorigenesis by Actinomycin D. *Proceedings of the National Academy of Sciences of the United States of America* 53(6) : 1353-1360, June 1965.
- S35. GEMANT, A. Cell invasiveness and carcinogenic hydrocarbons. *Grace Hospital Bulletin* 46(1) : 3-9, January 1968.
- S36. GOLDMAN, K. P. Mortality of coal-miners from carcinoma of the lung. *British Journal of Industrial Medicine* 22(1) : 72-77, January 1965.
- S37. GOLDMAN, K. P. Prognosis of coal-miners with cancer of the lung. *Thorax* 20 : 170-174, 1965.
- S38. GOLLEDGE, A. H., WICKEN, A. J. Local variation in the incidence of lung cancer and bronchitis mortality. *Medical Officer* 112 : 273-277, Nov. 13, 1964.
- S39. GRAHAM, S. Lung cancer as related to smoking behavior patterns. Presented at the American Public Health Association, Miami Beach, Fla., Oct. 26, 1967. [Unpublished.] 9 pp.
- S40. GSELL, O. Epidemiologie des Bronchialkarzinoms. Erhebungen über die Umgebungseinflüsse in der Schweiz. *Oncologia* 19 : 194-217, 1965.
- S41. GSELL, O., STROEL, M. Maligne Tumoren in Beziehung zum Tabakrauchen. (9 Jahre Beobachtungen bei Ärzten in der Schweiz.) *Oncologia* 20 (Supplement) : 45-51, 1966.

- S42. GUERNSEY, L. H. Squamous-cell carcinoma of the floor of the mouth arising from previously biopsied keratotic lesions. *Oral Surgery, Oral Medicine and Oral Pathology* 21 (2) : 262-269, February 1966.
- S43. HAMMOND, E. C. Epidemiological evidence on the effects of air pollution. Presented at the 60th Annual Meeting, Air Pollution Control Association, June 14, 1967, Cleveland, Ohio [Unpublished.] 27 pp.
- S44. HAMMOND, E. C. Prospects in cancer epidemiology, and a theory on carcinogenesis. *Environmental Research* 1 (1) : 102-113, June 1967.
- S45. HARRISON, D. F. N. Snuff—Its use and abuse. *British Medical Journal* 2(5425) : 1649-1651, Dec. 26, 1964.
- S46. HENSCHLER, D. Kanzerogene stoffe in pflanzen. *Therpiewoche* 17(43) : 1733-1738, Oct. 25, 1967.
- S47. HORIE, A. KOHCHI, S., KURATSUNE, M. Carcinogenesis in the esophagus. II. Experimental production of esophageal cancer by administration of ethanolic solution of carcinogens. *Gann* 56(5) : 429-441, October 1965.
- S48. HUDSON, P. B. Summary of development of the chemosol process as a fuel additive for cigarette tobacco and supporting chemical and biological test results. Subcommittee on Consumers, Senate Commerce Committee, Aug. 23, 1967. [Unpublished.] 11 pp.
- S49. HUEPER, W. C. Occupational cancers of the lung in radioactive ore miners in U.S.A. In: Harris, R. J. C., editor. *Proceedings of the Ninth International Cancer Congress. Unio Internationalis Contra Cancrum Monograph Series Volume 10.* New York, Springer-Verlag, 1967. Pp. 143-146.
- S50. KAMINSKI, E. J., FANCHER, O. E., CALANDRA, J. C. *In vivo* studies of the ciliastatic effects of tobacco smoke. Absorption of ciliastatic components by wet surfaces. *Archives of Environmental Health* 16(2) : 188-193, February 1968.
- S51. KHANOLKAR, V. R. The story of the Indian Cancer Research Center, Parel, Bombay. *Proceedings of the National Institute of Sciences of India, Part B: Biological Sciences* 32(1/2) : 97-103, April 1966.
- S52. KING, H., BAILAR, J. C. III. Epidemiology of urinary bladder cancer. A review of selected literature. *Journal of Chronic Diseases* 19(7) : 735-772, July 1966.
- S53. KINOSHITA, S., SATO N., SAITO, N., NISHIDA, K., DAKE, F., HORIUCHI, Y. Intracutaneous tests with tobacco extracts and cardiovascular disease. Report I. With a special reference to coronary artery disease. *Arerugi* 16(11) : 729-733, November 1967.
- S54. KNYCHALSKA-KARWAN, Z. Leukoplakia blony sluzoweg jamy ustnej. *Folia Medica Cracoviensia* 8(3) : 435-476, 1967.
- S55. KOIVUNIEMI, A., HOLSTI, L. R. Cytologic population screening in the early detection of lung cancer. *Annales Medicinæ Internæ Fennicæ* 56: 65-71, 1967.
- S56. KROLLER, E. Ein Beitrag zur Beurteilung von Tabakzusatzstoffen auf Grund ihrer Pyrolyseprodukte. 3. Weissbrand- und Flottbrandmittel. *Bundesgesundheitsblatt* 9(22) : 333-334, 1966.
- S57. KUNDU, P. N. Oral cancer and the dental surgeon. *Journal of the Indian Medical Association* 46(1) : 35-36, Jan. 1, 1966.
- S58. ILLIENFELD, A., ARCHER, P. G. BURNETT, C. H., CHAMBERLAIN, E. W., CHAZIN, B. J., DAVIES, D., DAVIS, R. L., HABER, P. A. HODGES, F. J., KOPROWSKA, I., KORDON, B., LANE, J. T., LAWTON, J. H., LEE, L., JR., MACCALLUM, D. B., McDONALD, J. R., MILDER, J. W., NAYLOR, B., PAPANICOLAOU, G. N., SLUTZKER, B., SMITH, R. T. SWESTON, E. R., UMIKER, W. O. An evaluation of radiologic and cytologic screening for the early detection of lung cancer: A Cooperative pilot study of the American Cancer Society and

- the Veterans Administration. *Cancer Research* 26(10):2083-2121, October 1966.
- S59. LYNCH, G. A. Cancer of the lip. *Ulster Medical Journal* 36(1): 44-50, 1967.
- S60. MAS ISARRE, M., SOLSONA MOTREL, F. Atmosfera y Cancer. *Medicina y Cirugia de Guerra* 29(1): 15-34, January 1967.
- S61. MATTHEWS, D. M. Inter-relationships between smoking, cyanide metabolism, and vitamin B12 metabolism. London, Westminster Hospital, October 1967. [Unpublished.]
- S62. MELCHIOR, E. Some aspects of the actual cancer problem. Proceedings of the Near and Middle East First International Cancer Congress, Ankara, Turkey, Sept. 10-15, 1965. Turkish Association for Cancer Research and Control, 1966. Pp. 9-15.
- S63. MERRIMAN, J. E. Dynamic exercise tolerance tests: Effects in normal subjects of stopping smoking. (Abstract) *Circulation* 36(4) (Supplement II): 186, October 1967.
- S64. MOORE, C. Cancer of the mouth. *Southern Medical Bulletin* 54(2): 15-22, June 1966.
- S65. MOORE, C. Smoking and cancer of the mouth, pharynx, and larynx. *Journal of the American Medical Association* 191(4): 283-286, Jan. 25, 1965.
- S66. MORGAN, J. F., TOLNIA, S., TOWNSEND, G. F. Studies on the *in vitro* anti-tumor activity of fatty acids: II. Saturated dicarboxylic acids. *Canadian Journal of Biochemistry and Physiology* 38: 597-603, 1960.
- S67. MUNOZ, N., CORREA, P., BOCK, F. Comparative carcinogenic effect of two types of tobacco. *Cancer* 21(3): 376-389, March 1968.
- S68. Nonsmokers share carcinogenic risk while breathing air among smokers. *Medical Tribune* 8(117): 2, Dec. 4, 1967.
- S69. OETTEL, H. Erkrankungsrisiko des passiven Rauchens? *Deutsche Medizinische Wochenschrift* 92(44): 2042-2043, Nov. 3, 1967.
- S70. OGURA, J. H., MALLEN, R. W. Carcinoma of the larynx. Diagnosis and treatment. *Postgraduate Medicine*: 493-498, November 1963.
- S71. Oropharyngeal Cancer in India. *Lancet* 1: 1026, May 7, 1966.
- S72. PAMUKOU, A. M. Etiology of bovine urinary bladder cancer. Proceedings of the Near and Middle East First International Cancer Congress, Ankara, Turkey, Sept. 10-15, 1965. Ankara, Turkish Association For Cancer Research and Control, 1966. Pp. 484-489.
- S73. PEARSON, F. G., THOMPSON, D. W., DELARUE, N. C. Experience with the cytologic detection, localization, and treatment of radiographically undemonstrable bronchial carcinoma. *Journal of Thoracic and Cardiovascular Surgery* 54(3): 371-382, September 1967.
- S74. PETERSON, G. F. Cancer of the lung in Iceland. A study on cases diagnosed during the period 1931-1957. *Acta Radiologica (Supplement 188)*: 198-209, 1959.
- S75. PINDBORG, J. J., KIAER, J., GUPTA, P. C., CHAWLA, T. N. Studies in oral leukoplakias. Prevalence of leukoplakia among 10,000 persons in Lucknow, India, with special reference to use of tobacco and betel nut. *Bulletin of the World Health Organization* 37: 109-116, 1967.
- S76. PINDBORG, J. J., POULSEN, H. E. Studies in oral leukoplakias. I. The influence of snuff upon the connective tissue of the oral mucosa. Preliminary report. *Acta Pathologica et Microbiologica Scandinavica* 55: 412-414, 1962.
- S77. PINDBORG, J. J., POULSEN, H. E., ZACHARIAH, J. Oral epithelial changes in thirty Indians with oral cancer and submucous fibrosis. *Cancer* 20: 1141-1146, July 1967.

- S78. PINDBORG, J. J., RENSTRUP, G. Studies in oral leukoplakias. II. Effect of snuff on oral epithelium. *Acta Dermato-Venerologica* 43: 271-276, 1963.
- S79. PLAZA, F., AVELLO, A. Carcinoma del labio. *Acta Cancerologica* 5(2): 49-56, 1966.
- S80. POKRANT, H., WORNIALLO, M. Badania cytologiczne blony sluzowej jamy ustnej u nalogowych palaczy tytoniu. *Czasopismo Stomatologiczne* 20(2): 139-143, 1967.
- S81. QUIGLEY, L. F., JR., SHKLAR, G., COBB, C. M. Reverse cigarette smoking in Caribbeans: Clinical, histologic, and cytologic observations. *Journal of the American Dental Association* 72: 867-873, April 1966.
- S82. RAMIREZ, D. F., NADAL, H. M., ESCANAVERINO, R. B. Carcinoma of the oral cavity and pharynx. *Boletin de la Asociacion Medica de Puerto Rico* 59(4): 188-195, April 1967.
- S83. ROBERTS, J. A. F. Snuff (letter). *British Medical Journal* 1: 187-188, Jan. 16, 1965.
- S84. RUDDON, R. W. Alteration of enzyme induction patterns in rats with the carcinogen dimethylnitrosamine. *Life Sciences* 6(21): 2299-2306, Nov. 1, 1967.
- S85. SAFFIOTTI, U. Lung Cancer: An experimental approach. *Cancer Bulletin* 19(4): 72-73, July-August 1967.
- S86. SAFFIOTTI, U., CEFIS, F., KOLB, L. H. A method for the experimental induction of bronchogenic carcinoma. *Cancer Research* 28(1): 104-124, January 1968.
- S87. SAFFIOTTI, U., CEFIS, F., SHUBIK, P. Histopathology and histogenesis of lung cancer induced in hamsters by carcinogens carried by dust particles. *In: Severi, L., editor. Lung Tumours in Animals. Perugia, Italy, Division of Cancer Research, University of Perugia, June 1966. Pp. 537-546.*
- S88. SCHIEVELBEIN, H., GRUMBACH, H. Der Einfluss von Tabakrauchbestandteilen auf den Tryptophanstoffwechsel. *Zeitschrift fur Krebsforschung* 70(1): 48-54, 1967.
- S89. SCHIEVELBEIN, H., GRUMBACH, H. The influence of tobacco smoke components on the activity of kynureninase, Chapter 15. *In: Bladder Cancer. Proceedings of the 5th Inter-American Conference on Toxicology and Occupational Medicine, University of Miami, School of Medicine, Coral Gables, Fla., 1966. Pp. 180-186.*
- S90. SCHMITT, C. K., FOLSOM, T. C. Histologic evaluation of degenerative changes of the lower lip. *Journal of Oral Surgery* 26(1): 51-56, January 1968.
- S91. SELTZER, C. C. An evaluation of the effect of smoking on coronary heart disease. I. Epidemiological evidence. *Journal of the American Medical Association* 203(3): 193-200, Jan. 15, 1968.
- S92. SHEDD, D. P., VON ESSEN, C. F., CONNELLY, R. R., EISENBERG, H. Cancer of the buccal mucosa, palate and gingiva in Connecticut, 1935-1959. *Cancer* 21(3): 440-446, March 1968.
- S93. SHEDD, D. P., VON ESSEN, C. F., CONNELLY, R. R., EISENBERG, H. Cancer of the floor of the mouth in Connecticut, 1935-1959. *Cancer* 21(1): 97-101, January 1968.
- S94. SHEDD, D. P., VON ESSEN, C. F., CONNELLY, R. R., EISENBERG, H. Cancer of the pharynx in Connecticut, 1935-1959. *Cancer* 21(4): 706-713, April 1968.
- S95. SHEDD, D. P., VON ESSEN, C. F., FERRARO, R. H., CONNELLY, R. R., EISENBERG, H. Cancer of tongue in Connecticut, 1935-1959. *Cancer* 21(1): 89-96, January 1968.

- S96. SIBSAT, M. V., DOCTOR, V. M. A histopathologic study on the effect of tobacco chewing on the buccal mucosa in Indians and its relationships to cancer. *British Journal of Cancer* 21: 277-284, 1967.
- S97. Smoke and nasopharyngeal cancer. *Lancet* 2(7417): 833-834, Oct. 23, 1965.
- S98. STEWART, W. H. Smoking and health: A progress report. Presented at the 8th Annual American Cancer Society Science Writers' Seminar, Phoenix, Arizona, Mar. 29, 1966. [Unpublished.] 10 pp.
- S99. STEWART, W. H. Statement before the Consumer Subcommittee of the Committee on Commerce. U.S. Senate, Aug. 25, 1967. 10 pp.
- S100. TAGLIAFERRO, E., FRANCA, F. Fumo di tabacco e cancro bronco-pulmonare. *Minerva Medica Guiliiana* 7(1): 78-80, January-March 1967.
- S101. TAUBENHAUS, L. J., MALOOF, E. C., SCANLON, J. W. Smoking and oral pathology: An epidemiologic study. *Journal of the American Geriatrics Society* 12(9): 871-876, September 1964.
- S102. TOLNAI, S., MORGAN, J. F. Studies on the *in vitro* antitumor activity of fatty acids: III. Saturated monocarboxylic acids. *Canadian Journal of Biochemistry and Physiology* 39: 713-719, 1961.
- S103. TOWNSEND, G. F., MORGAN, J. F., TOLNAI, S., HAZLETT, B., MORTON, H. J., SHUEL, R. W. Studies on the *in vitro* antitumor activity of fatty acids. I. 10-Hydroxy-2-decanoic acid from royal jelly. *Cancer Research* 20: 503-510, May 1960.
- S104. U.S. PUBLIC HEALTH SERVICE. Cancer of the mouth. Washington, U.S. Department of Health, Education, and Welfare, Public Health Service Publication No. 1461, 1966. 6 pp.
- S105. URAGODA, C. G. Incidence of bronchial carcinoma in a Ceylon chest clinic. *British Journal of Diseases of the Chest* 61: 154-158, July 1967.
- S106. VILENKINA, G. YA., CHERKES, L. D. Soderzhanie nukleinykh kislot v pecheni krysa, poluchavshikh s pishchey selen. *Voprosy Pitaniia* 25(1): 30-33, 1966.
- S107. VOGLER, W. R., LLOYD, J. W., MILMORE, B. K. A retrospective study of etiological factors in cancer of the mouth, pharynx, and larynx. *Cancer* 15(2): 246-258, March-April 1962.
- S108. WACHSMUTH, W., VIERECK, H. J. Fumo e carcinoma bronchiale. *Terapia* 50: 185-188, September-October 1965.
- S109. WAHI, P. N., KAPUR, V. L., LUTHRA, U. K., SRIVASTAVA, M. C. Submucous fibrosis of the oral cavity: 2. Studies on epidemiology. *Bulletin of the World Health Organization* 35(5): 793-799, November 1966.
- S110. WEY, W., PFALTZ, C. R. Schädigungen der schleimhaut der oberen Luft- und speisewege durch Tabak. *Praxis* 55: 182-184, February 1966.
- S111. WYNDER, E. L., SHIGEMATSU, T. Environmental factors of cancer of the colon and rectum. *Cancer* 20(9): 1520-1561, September 1967.
- S112. YASHAR, J. J., GURALNICK, E., MCAULEY, R. L. Multiple malignant tumors of the oral cavity, respiratory system, and upper digestive system. Experience at the Pondville State Hospital from 1949 to 1959. *American Journal of Surgery* 112(1): 70-75, July 1966.
- S113. ZANOLLI, M., PUELMA, H. O., ONETO, J. Primary bronchogenic carcinoma. *Diseases of the Chest* 53(2): 183-185, February 1968.
- S114. ZECHNER, G. Zum Problem des Raucherkehlkopfs. *Acta Oto-Laryngologica* (Supplement 224): 521-530, 1967.
- S115. ZIMMERMANN, E. R., ZIMMERMANN, A. L. Effects of race, age, smoking habits, oral and systemic disease on oral exfoliative cytology. *Journal of Dental Research* 44(4): 627-631, July-August 1965.