Pancreatic Cancer

Observational Study: In a German study involving 50,000 households, there was a positive association for both men and women between high protein intake and the risk of pancreatic cancer (Böing H et al. Regional nutritional pattern and cancer mortality in the Federal Republic of Germany. Nutr Cancer 7(3):121-30, 1985).

Observational Study: Consumption of fiber from fruits, vegetables, and whole grain products was inversely linked to pancreatic cancer risk, with a relative risk of 0.22 vs. 0.78 in the highest versus lowest quartile for fiber intake (Howe G et al. Dietary factors and risk of pancreatic cancer: Results of a Canadian population-based casecontrol study. Int J Cancer 45:604-8, 1990).

Observational Study: In a case-control study, none of the risks of pancreatic cancer associated with coffee consumption (cumulative cups of regular; decaffeinated; all types of coffee) were significantly different from unity; however one-sided trend tests of increased risk with increased consumption of regular coffee and of coffee of any type yielded significant results (p<0.05) (Clavel F et al. More on coffee and pancreatic cancer. N Engl J Med 316(8):483-4, 1987).

Observational Study: Only marginally significant risks for pancreatic cancer were found for both sexes as related to coffee consumption, and only in the heaviest consumption category (Hsieh C-C, et al. Coffee and pancreatic cancer (Chapter 2). N Engl J Med 304:630-3, 1986).

Observational Study: An exposure-response relationship was found between coffee consumption and pancreatic cancer, but only for men (Mack TM et al. Pancreas cancer and smoking, beverage consumption, and past medical history. JNCI 76:49-60, 1986).

Negative Observational Study: In a follow-up study based on the physical examinations of 50,000 students, student coffee

**Observational Study:** An exposure-response relationship was found between coffee consumption and pancreatic cancer, but only for women (Gold EB et al. Diet and other risk factors for cancer of the pancreas. Cancer 55:460-7, 1985).

**Observational Study:** 369 pts. with proven pancreatic cancer of and 644 controls were questioned about their coffee intake. There was a strong association between coffee consumption and pancreatic cancer which was not affected by controlling for cigarette use or by whether the coffee was decaffeinated (MacMahon B et al. Coffee and cancer of the pancreas. N Engl J Med 304(11):630-3, 1981).

**Negative Correlation**

**General**

**Observational Study:** 6765 middle-aged men (ages 51-59) without a history of MI were followed for 7.1 years. Coffee consumption was unrelated to age. There were significant positive correlations between the number of cups of coffee consumed daily and smoking, serum cholesterol, stress score, and alcohol abuse. Conversely, there were inverse relationships between coffee consumption and systolic BP, physical activity during leisure time and occupational class. There was an inverse relationship between mortality from all causes and coffee consumption, which was significant for both non-smokers and for smokers and non-smokers combined, and was due to a lower cancer mortality as well as to a lower mortality from other causes. The latter was statistically significant for both nonsmokers and smokers (Rosengren A, Wilhelmsen L. Coffee, coronary heart disease and mortality in middle-aged Swedish men: findings from the primary prevention study. J Intern Med 230:67-71, 1991).

**Observational Study:** A weak negative association was found
between total cancer incidence and coffee consumption

**Observational Study:** In a study of 181 pts. in Greece with cancer of the pancreas, there was no correlation between coffee consumption and the risk of pancreatic cancer (Kalapothaki V et al. Tobacco, ethanol, coffee, pancreatitis, diabetes mellitus and cholelithiasis as risk factors for pancreatic carcinoma. Cancer Causes Control 4:375-82, 1993).

**Observational Study:** The dietary intakes of people who developed pancreatic cancer within the yr. versus those people who remained cancer-free was studied. Coffee consumption was unrelated to pancreatic cancer risk (Baghurst P et al. A case-control study of diet and cancer of the pancreas. Am J Epidemiol 134:167-79, 1991).

**Observational Study:** No increase in incidence of cancer of the pancreas was found among those with high coffee consumption (Jacobsen BK et al. Coffee drinking, mortality, and cancer incidence: Results from a Norwegian prospective study. J Natl Cancer Inst 76(5):823-31, 1986).

**Observational Study:** No association was found between risk of pancreatic cancer and coffee consumption (Kinlen LJ, McPherson K. Pancreas cancer and coffee and tea consumption: A case-control study. Br J Cancer 49:93-6, 1984).

**Observational Study:** No association was found between risk of pancreatic cancer and coffee consumption (Wynder EL et al. Epidemiology of coffee and pancreatic cancer. Cancer Res 43:3900-6, 1983.)
The relationship between milk and dairy product intake to cancer risk is uncertain.

**Positive Correlation**

**General Observational Study:** The reported milk consumption habits of 3334 pts. and 1300 comparable controls were studied. As a gp., cancer pts. more often reported frequent whole milk consumption; control pts. were more likely to report never drinking whole milk. Some associations were observed for a computerized index of milk fat intake, but the overall pattern of effects was not fully explained by variations in fat content (Mettlin CJ et al. Patterns of milk consumption and risk of cancer. Nutr Cancer 13:89-99, 1990).

**Experimental Crossover Study:** 43 healthy men aged 19-56 yrs. were randomly assigned to either a low-fat, high-fiber or high-fat, low-fiber diet for 10 wks. and, after a 2-wk. washout period, crossed over to the other diet. Mean plasma concentrations of total and sexhormone-binding globulin (SHBG)-bound testosterone were 13% and 15% higher, respectively, on the high-fat, low-fiber diet and the difference from the low-fat, high-fiber diet was significant for the SHBG-bound fraction (p=0.04). Moreover, their daily urinary testosterone excretion was 13% higher on the high-fat, low-fiber diet (p=0.01), while their urinary excretion of estradiol and estrone and their 2-hydroxy metabolites were 12-28% lower (p≤0.01). Findings suggest that diet may alter endogenous sex hormone metabolism in men; specifically, a high-fat, low-fiber diet may affect sex hormone metabolism in a way that may increase prostate cancer risk (Dorgan JF, Judd JT, Longcope C, et al. Effects of dietary fat and fiber on plasma and urine androgens and estrogens in men: a controlled feeding study. Am J Clin Nutr 64:850-5, 1996).

**Observational Study:** The dietary intakes of people who developed pancreatic cancer within the yr. versus those people who remained cancer-free was studied by reviewing the estimated contributions of 48 nutrients as well as amts. of individual food items. People who latter developed cancer had consumed more boiled eggs and omelets, sweets,
and fatty foods, and less vegetables and fruits than had controls. Pts. in the highest quartile for cholesterol intake had a 3.19 relative risk as compared to people in the lowest quartile. Although tobacco use was associated with increased risk, the relative risk was not as great as when a person consumed a high-cholesterol or high-sugar diet (Baghurst P et al. A case-control study of diet and cancer of the pancreas. Am J Epidemiol 134:167-79, 1991).

‘Macrobiotic’ (very low fat, moderately high fiber, moderately reduced calorie) diet

Observational Studies:
1. Case histories were examined retrospectively. One-yr. survival was found to be higher among 23 pts. with pancreatic cancer who modified their diets than in 9800 controls for whom there was no evidence of diet alteration.

2. In a case control study of 18 pts. with metastatic prostate cancer (stage D2), 9 of whom adopted a macrobiotic diet to a great or moderate extent, there was a statistical association of dietary modification with longer survival and quality of life. (Carter JP, Saxe GP, Newbold V, et al. Hypothesis: dietary management may improve survival from nutritionally linked cancers based on analysis of representative cases. J Am Coll Nutr 12(3):209-26, 1993).

VITAMINS

Folic Acid

Selenium
Observational Study: 22 cases of pancreatic cancer were compared to 44 matched controls. Prediagnostic serum selenium levels were lower among cases than among controls. This difference remained after adjustment was made for possible confounding by smoking, educational level, and the other measured serum levels. While the association was significant when the data were analyzed as a whole, its effect was seen principally in men (Burney PGJ et al. Serologic precursors of cancer: Serum micronutrients and the subsequent risk of pancreatic cancer. Am J Clin Nutr 49:895-900, 1989).