Case-control study of papillomavirus and cervical cancer. W. Reeves (Gorgas Memorial Laboratory, Panama City, Panama), L. Brinton, M. Garcia, M. Brenes, R. Herrero, R. de Britton, E. Gaitan, F. Tenorio, and W. Rawls.

Human papillomavirus has been identified as an important sexually transmitted risk factor for cervical cancer, but evidence to date has been circumstantial; well-controlled studies of human papillomavirus, behavioral factors and cervical cancer have not been conducted. A case-control study enrolled all 762 invasive cervical cancers in Panama, Costa Rica, Bogota, Colombia and Mexico City, Mexico between January 1986 and June 1987 and 1,456 randomly selected, age-matched controls. Subjects were interviewed and swab specimens taken to assay for human papillomavirus (HPV) DNA, using filter in situ hybridization. Infection with HPV-16/18 was highly associated with disease. Risks increased from 2.3 to 7.6 with intensity of infection. In contrast, HPV-6c/11 was not associated with substantial elevations in risk. The associations with HPV-16/18 persisted after adjustment for age, sexual, and reproductive experience, smoking and Pap smears. Although HPV 16/18 infection was significantly related to disease, the strength of association was less than suggested by clinical studies. If human papillomavirus infection is a biologically significant predictor of cervical cancer, it must act synergistically with other factors.
mean clinical activity is 129.0 ± 35.0 for smokers and 116.1 ± 29.4 for nonsmokers. No confounding effects of age or sex were found. There were no differences in relapse risks observed in former smokers compared with lifelong nonsmokers. The finding that smoking increased the risk of relapse for Crohn's disease patients (p < 0.001) is of clinical importance, given that the prevalence of smoking among Crohn's disease patients in this study was 42%.

Microinucleated erythrocytes as an index of cytogenetic damage in humans. D. F. Smith,* J. T. MacGregor, N. K. Hooper, R. A. Hiatt, L. R. Goldman, B. Peters, C. M. Wehr, and L. A. Yuan (California Dept. of Health Services, Berkeley, CA 94704). An easily-measured index of cytogenetic damage in humans is the prevalence of erythrocytes containing micronuclei (Howell-Jolly bodies). Under normal conditions, micronucleus-containing cells are removed by the spleen, but persons having splenic function persist, and may serve as sensitive indicators of genotoxic exposure. Forty-four subjects from the Kaiser Permanente Medical Care Program who had splenectomies due to trauma donated a blood sample and completed a questionnaire about environmental and dietary factors. Their micronucleated cell counts fit a log-normal distribution, with means of 33 micronucleus-containing cells per 1,000 reticulocytes, and 2.7 per 1,000 normochromic erythrocytes. A multiple regression analysis showed that age and male sex were associated with a higher prevalence of micronuclei-containing cells. Drinking five cups of coffee or tea per day (relative to none) and taking calcium were associated with a twofold increase, while taking vitamins A, C, or E was associated with a 40% decrease (p = 0.05). Smoking, alcohol, and deconfinned coffee were among the factors not associated with micronuclei frequencies. This assay should permit monitoring for cytogenetic damage both in mature erythrocytes (indicating genotoxic exposures within the last four months) and reticulocytes (reflecting exposures during the past week). The authors plan intervention studies to confirm these and other risk factors.

Reye's syndrome recognition. Physicians assigned to the prior aspirin use viniette were twice as likely to recognize Reye's syndrome (odds ratio = 2.4) as those in the other two groups. It was found that 41% of the physicians surveyed did not recognize Reye's syndrome. Only 6% of all physicians said they would order blood tests that would help them confirm the diagnosis or recognize the syndrome. Ninety percent of these surveyed said that aspirin was important or extremely important, and 43% said that aspirin was a necessary criterion for the diagnosis of Reye's syndrome. Statistical modeling based upon these data indicates that differential recognition due to diagnostic suspicion can cause large distortions in observed relations between Reye's syndrome and aspirin.

Case-control study of papillomavirus and cervical cancer. W. Reeves (Gorgas Memorial Laboratory, Panama City, Panama), L. Brinton, M. Garcia,* M. Brenes, R. Herrero, R. de Britton, E. Gaitan, F. Tenorio, and W. Rawls. Human papillomavirus has been identified as an important sexually transmitted risk factor for cervical cancer, but evidence to date has been circumstantial; well-controlled studies of human papillomavirus, behavioral factors and cervical cancer have not been conducted. A case-control study enrolled all 762 invasive cervical cancers in Panama, Costa Rica, Bogota, Colombia, and Mexico City, Mexico between January 1986 and June 1987 and 1,456 randomly selected, age-matched controls. Subjects were interviewed and swab specimens taken to assay for human papillomavirus (HPV) DNA, using filter in situ hybridization. Infection with HPV-16/18 was highly associated with disease. Risks increased from 2.3 to 7.6 with intensity of infection. In contrast, HPV-6/11 was not associated with substantial elevations in risk. The associations with HPV-16/18 persisted after adjustment for age, sexual, and reproductive experience, smoking and Pap smears. Although HPV-16/18 infection was significantly related to disease, the strength of association was less than suggested by clinical studies. If human papillomavirus infection is a biologically significant predictor of cervical cancer, it must act synergistically with other factors.

Diagnostic suspicion bias—Reye's syndrome and aspirin. M. Le Voit* and G. Carlo (George Carlo and Associates, Inc., Washington, DC 20036). The role of aspirin in the etiology of Reye's syndrome remains controversial. International studies of this relation are inconsistent, suggesting that factors other than aspirin may be important. This study addresses how information and beliefs concerning the role of aspirin held by practicing physicians in the United States could produce diagnostic suspicion bias in studies of Reye's syndrome and aspirin. Telephone interviews were conducted with 1,044 primary care physicians in 10 states. A case history viniette that described a typical doctor's office presentation of Reye's syndrome was read to physicians, and their diagnostic reasoning was explored. Physicians were randomly assigned to one of three versions of the viniette: 1) no prior medication use; 2) prior aspirin use; or 3) prior acetaminophen use. Mention of Reye's syndrome as a possible diagnosis was the main dependent variable and the operational definition of consideration of feline leukemia virus vaccine intervention strategies using a modified Reed-Frost epidemiologic model. B. Gerstman* (FDA, Office of Epidemiology, Rockville, MD 20857). Feline leukemia virus is a common horizontally transmitted retrovirus of domestic cats. Acute infection is usually transient and sub-clinical. A small proportion of acutely infected cats develop persistent chronic active infection which, unlike acute infection is associated with immunodeficiency, hematologic, neoplastic, and other chronic diseases. These diseases often develop years after initial infection. A modified Reed-Frost epidemiologic model is used to simulate feline leukemia virus infection in free-roaming cat populations and feline leukemia virus cluster households. Models include the following health and disease...