

Pancreatic cancer surveyed

An epidemiological survey of the incidence of pancreatic cancer in five metropolitan areas has found a combination of risk factors associated with this deadly cancer, University of Maryland researchers Ruey S. Lin and Irving I. Kessler report in the Jan. 9 *JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION*.

Pancreatic cancer victims, the survey reveals, were more likely to be of higher social class and to drink more wine and decaffeinated coffee than were a group of similar persons without the cancer. The increased risk was not negligible — women who smoked more than 10 cigarettes a day, had had an abortion or an ovary removal and drank decaffeinated coffee were at 34 times the usual risk of pancreatic cancer, and men who worked in dry cleaning or near gasoline and drank caffeine-free coffee were at five times the risk.

Pancreatic cancer, though rare, kills 20,000 persons in the United States yearly, and no single cause has been pinpointed. "We should be looking at multifactorial models," says Kessler.

A viral cause for Hodgkin's

Still more cancer epidemiology results — this time regarding Hodgkin's disease — are reported in the Jan. 15 *NEW ENGLAND JOURNAL OF MEDICINE* by Nancy Gutensohn and Philip Cole of Harvard School of Public Health in Boston who provide further evidence that Hodgkin's is caused by a virus.

Gutensohn and Cole compared 225 Hodgkin's patients ages 15 to 39 years with 447 healthy persons of the same ages and found that the Hodgkin's patients (like victims of pancreatic cancer — see above) were more likely than controls to come from relatively high-income, well-educated families, to have no or few siblings, to have lived in uncrowded homes and to have had fewer playmates as youngsters. Such characteristics, Gutensohn and Cole explain, resemble those of individuals who used to succumb to serious polio and suggest that a relatively sanitized childhood means little early development of immunity and thus later susceptibility to a serious infectious agent — polio virus in the case of polio victims and perhaps Epstein-Barr virus in the case of Hodgkin's victims. EBV antibodies and a higher rate of infectious mononucleosis (which is caused by the EBV) have been found in Hodgkin's patients.

More on Hodgkin's disease

The theory that Hodgkin's disease, a lymphatic cancer, arises from cancerous macrophages (a type of immune cell) has been called into question because some of the evidence supporting it has been found invalid, Nancy L. Harris, a pathologist with Harvard Medical School in Boston and her colleagues report in the Jan. 22 *NATURE*.

Although various kinds of cancer cells are being cultured, no one reported success in the long-term culturing of Hodgkin's cells until John C. Long, a pathologist with Massachusetts General Hospital in Boston, did so in 1973. Long's cell lines were then sent to several labs for study and were found to resemble macrophages and to induce tumors when injected into mice. These results helped build the theory that Hodgkin's arises from cancerous macrophages.

Last year when Long admitted that he had faked experimental results with the cell lines (and then resigned from Mass General), his colleagues — those authoring the *NATURE* report — suspected that the cell lines themselves might not really be Hodgkin's cell lines. The researchers tested the possibility and found that this was the case — three of the four strains of cultured cells were not from Hodgkin's patients but from monkeys, and the fourth was of human origin but not from a Hodgkin's patient.

The Mutch Martian memorials

Last Oct. 7, Thomas A. ("Tim") Mutch, then the National Aeronautics and Space Administration's chief scientist, was killed in a tragic mountain-climbing accident in the Himalayas (SN: 10/25/80, p. 260). Prior to accepting the NASA post, he had been the leader of the scientific team responsible for the photos taken by the two Viking landing craft on the Martian surface. Now a memorial to Mutch's memory has been announced, with another in the works — both of them on the planet Mars.

On Jan. 7, outgoing NASA administrator Robert Frosch announced that the Viking 1 lander had officially been renamed the Thomas A. Mutch Memorial Station. He unveiled an 8-by-10-inch stainless steel plaque announcing that the station is "dedicated to the memory of Tim Mutch, whose imagination, verve and resolve contributed greatly to the exploration of the solar system."

The plaque is signed and dated by Frosch, but beneath his signature is a line left blank for another date, and labeled "emplaced." Said Frosch in the announcement, "I am today charging a future administrator of NASA with the responsibility of assuring this plaque is subsequently placed on the lander vehicle." No return mission to Mars is now in the works, much less a manned one, but should a future astronaut be in a position to fulfill Frosch's charge, he or she will find the lander waiting at latitude 22.480° ± .002°N, longitude 47.97° ± .05° on the dusty slopes of Chryse Planitia in the Martian northern hemisphere.

Meanwhile, scientists with the International Astronomical Union's committee on Martian nomenclature are planning to acknowledge Mutch's contributions in another way, by naming a crater after him. Though the specific crater has not yet been officially selected, it will not be of the large, spectacular kind (most of which already have names anyway). Instead, it will be one of several smaller craters that are in lander 1's field of view — where the camera "eyes" of Mutch's Viking team could see it.

Voyager 2 okayed for Uranus

It all depended on Voyager 1. If the Voyager 2 spacecraft was going to be sent on the first-ever flyby of Uranus following its upcoming Aug. 25 encounter with Saturn, according to NASA's rules for the mission, Voyager 1 would first have to accomplish its own major Saturnian goals. These included radio occultation measurements of the rings and of the atmosphere of Titan, neither of which could be made up by Voyager 2 if its path past Saturn had to leave it on a Uranus-bound trajectory. Months before Voyager 1 even got to Saturn, project scientists were strongly leaning toward sending Voyager 2 to Uranus in either event, reasoning that a whole additional planet was too good to pass up in the uncertain climate for future missions. But Voyager 1's successful flyby made such a painful choice unnecessary.

Now NASA has made the Uranus extension official, which requires project officials at Jet Propulsion Laboratory in California to do . . . nothing. Voyager 2 has been targeted for a Uranus "aim-point" at Saturn since before the Voyager 1 flyby in November. If Voyager 1 had malfunctioned before getting its ring and Titan data, Voyager 2 would have had to be re-aimed to make up for the loss.

Voyager 2 is calculated to reach Uranus on Jan. 24, 1986, flying past the planet about 107,000 kilometers from the cloud-tops. Its path will allow earthbound radio signals from the spacecraft to pass through the fringes of the Uranian atmosphere, yielding temperature and pressure profiles. In addition, occultation measurements and photos should provide the first close-up data on the planet's dark, skinny rings. Voyager 2 will have flown for nearly eight and a half years to reach that goal — and it may then go on to Neptune, three more years away.