

## PSYCHIATRY

# Cancer, Personality Link

Feelings of despair and certain other personality traits have been shown typical of both male and female cancer patients even before diagnosis of the disease.

► A DEFINITE LINK exists between cancer and personality, a group of scientists from this country and abroad report.

Certain events seem to have occurred in the lives of people who later develop cancer, researchers told the Conference on Psychological Aspects of Cancer sponsored by the New York Academy of Sciences in New York.

In a study of 32 women with leukemia or lymphoma, Dr. William A. Greene of the University of Rochester, New York, found that "the illness developed while these women were manifesting effects of sadness or hopelessness in response to separation or threats of separation from a key person such as parent, spouse or child" or making other adjustments.

A similar study of 61 men revealed that in most of them the leukemia or lymphoma was preceded by "anxiety, depressive symptoms and feelings of hopelessness."

These symptoms were "in relation to experiences of separation from a parental figure, a spouse or child as well as changes in long-time work or some threatening disabling operative procedure," Dr. Greene said.

In another psychological study of about 700 patients, 72% with cancer had a certain

life history pattern found in only 10% of other patients, reported Dr. L. LeShan of the Institute of Biology, New York.

The cancer victims' childhood and early adolescence were marked "by feelings of inadequacy and a sense that emotional relationships were dangerous and should only be invested in cautiously."

In later adolescence or adulthood, the person developed an intense relationship which became the major focus of his life, Dr. LeShan said.

Some time later, this relationship was lost and "no acceptable substitute could be found." In the cases studied, the loss of this crucial relationship occurred from 6 months to 8 years before the first cancer symptoms were noted.

"Evaluation of the published cancer mortality statistics demonstrates that these factors are to be found in the over-all cancer population from which this sample was drawn," Dr. LeShan pointed out.

Feelings of despair were typical of the cancer patients and were evident before the cancer appeared, he said.

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## SPACE

## Mariner IV Could Not See Life Forms on Mars

► IN THE UNLIKELY EVENT that there is intelligent life on Mars, the Mariner spacecraft, which will pass within 5,500 miles of the planet on July 14, will overlook it completely.

Mariner's camera will show no objects smaller than about one and a half miles across.

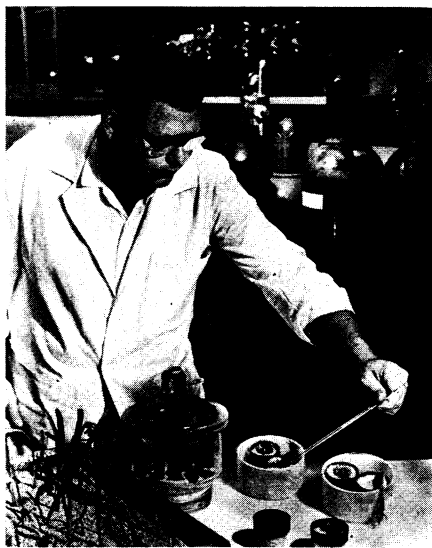
Pictures of the moon taken by Ranger spacecrafts 7, 8 and 9 show tiny craterlets and other features less than a yard across. The photos of Mars, however, will not be much clearer than pictures made of the moon through telescopes based on earth.

Very few authorities believe that we will find intelligent life on Mars, but they disagree whether or not some sort of primitive lifeforms, possibly simple plants, can exist there.

Several kinds of plants have been raised under a simulated Martian environment by Union Carbide Corporation and have been shown to be able to survive with no oxygen and so little water that a temperature of minus 76 degrees Fahrenheit would be needed to freeze all the traces out.

Dr. Sanford M. Siegel, director of the research program, suggested that the most highly developed form of life on Mars is probably nothing more than a simple, multicellular animal, living in a symbiotic relationship with an equally simple plant.

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Union Carbide Corporation

**COLD CLIMATE**—The soil temperature for these small cactus plants was lowered to that of liquid nitrogen, —320 degrees F., by Dr. Sanford M. Siegel of Union Carbide Research Institute. Actively growing plants did not survive, but dormant forms, such as seed and spores, were found to have a high tolerance for extreme cold.

## MEDICINE

## Leukemia Not Contagious For Husbands and Wives

► HUSBANDS and wives do not give each other leukemia, a New York State study indicates.

Dr. Samuel Milham Jr. of the New York State Department of Health, Albany, reported in *Science*, 148:98, 1965, that only seven husbands and wives, out of 876 spouses whose death certificates were studied, both died of leukemia.

Three of these seven couples died of different types of leukemia.

Since five control cases used for comparison in the study died of leukemia, the significance of the husband and wife deaths was not statistically notable, Dr. Milham said.

He undertook the study because of previous reports indicating some "clustering" of cases in acute childhood leukemia. In the rare instances of striking family clusters, however, the relative roles of heredity and environment could not be separated.

"In order to investigate the occurrence of leukemia in individuals intimately associated with, but not genetically related to, persons with leukemia, I have studied the disease in married couples," he said.

The study was simplified because of the fact that cancer has been a reportable disease in New York State since 1940, when a cancer-reporting system was established at the New York State Department of Health.

In addition to the reports filed by physicians and laboratories, cases of cancer reported on death certificates are routinely added to the reporting system.

The death certificates used were bound in books of 500 by county of residence and month of death, so selection of matched controls could be automatically made with the county of residence and month of death, Dr. Milham explained.

Controls were matched with the particular spouses on these criteria: age within five years, sex, race, marital status, township of residence and date of death within four weeks.

The distribution of stated causes of death in mates was not significantly different from that of the matched controls, Dr. Milham said.

"In summary," he said, "husbands and wives of individuals who die of leukemia do not have a demonstrably increased risk of dying of leukemia."

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## ZOOLOGY

## Vitamin A Speeds Up Tadpole Metamorphosis

► A TADPOLE starts turning into a frog or toad much faster when high concentrations of vitamin A are added to the water in which they grow, it was reported in *Nutrition Reviews*, 23:106, 1965.

The additional vitamin accelerates the metamorphosis of the tadpoles by increasing the permeability of certain membranes and hence releasing special enzymes called cathepsin.

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