

MEDICINE

Cancer Yields to Research

With early detection of cancer and the advances made in research, particularly in chemotherapy, scientists feel the outlook for the future in the cancer fight is optimistic.

► CANCER was described as being "vulnerable" and already "yielding here and there" to medical science by Dr. John R. Heller, director, National Cancer Institute, U. S. Public Health Service, Washington, D. C., in a report to doctors at the American College of Chest Physicians meeting in New York.

Better research techniques and instruments developed by cooperative effort since World War II have begun to produce important results in the cancer fight, Dr. Heller said.

Among these he listed supervoltage generators, radioisotopes, tissue culture and, most recently, an ultraviolet television camera-microscope.

The outlook for the future is optimistic. All the factors involved in organizing and carrying on cancer research have combined in producing a great sustained effort that is only beginning to reach its full stride.

The most active and promising research area is chemotherapy, the treatment of cancer with chemicals. The United States and England have produced about two dozen active chemical agents in the last few years, Dr. Heller noted.

The chemicals have been effective against about 15 types of cancer, including leukemia, Hodgkin's disease, and advanced cancers of the breast and prostate gland.

The majority of chemicals were developed within the last ten years and can be classed as cell poisons, antimetabolites, hormonal alterants and other types.

Although radiation and surgery are still the only established and accepted methods for controlling or curing cancer, the known chemical agents can temporarily alleviate the symptoms and in many cases prolong the useful life of cancer patients.

They include the nitrogen mustards, methotrexate, aminopterin, 6-mercaptopurine,

myleran, CB-1348, and azaserine, Dr. Heller reported.

Early Cancer Detection

► IGNORANCE and simple negligence are today's major hurdles in detecting early signs of cancer. The current problem now is to win and influence many more people, the American Cancer Society reports.

Major emphasis should be given to an educational program that can reach and motivate the 40% of the U. S. population with no more than a grammar school education, it notes in its annual report.

Statistics now show one in three, not one in four, are being saved from cancer today. The survival rate for localized cancer has come up the most but there has been moderate improvement for cases with regional involvement and a very slight improvement for cases where the original cancer has spread to distant parts of the body.

"One half of all cases of cancer can be cured with present knowledge alone if action of individuals in seeking medical attention is early enough and if the latest and best means of diagnosis and treatment can be made more generally available," the Society reported.

The report urged wider use of the uterine cell examination technique for spotting cancer of the cervix in women. The test is known to be accurate in detecting 95% to 100% of symptomless cancers. Cervical cancer kills 11,500 women annually.

The American Cancer Society raised \$27,234,612 in its 1956 campaign. During 1956 approximately \$7,800,000 was used for research grants to universities, hospitals and research institutions.

The 1956-57 budget calls for spending a total of \$28,667,096 as follows: for educa-

tion, 29%; for research, 31%; for service to the cancer patient, 23%; for fund raising, 9%; and for administration, including salaries, office expense, travel, meeting expenses, audit fees, bulletins, etc., 8%.

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PSYCHIATRY

Warm Fingers Indicate Patient's Inner Feeling

► WHEN A PATIENT'S fingers become warmer during an interview with a psychiatrist, he is avoiding the problem at hand, the Society of Biological Psychiatry meeting in Atlantic City, N. J., was told.

A study with a unique "ego-detector" test that measures the skin temperature against the reaction of the individual during psychotherapy led a research team from Boston, Mass., to conclude:

1. A drop in finger skin temperature accompanies the individual's facing of a problem in therapy.

2. A skin temperature rise is associated with avoidance of the issue.

Dr. Stanley S. Kanter, Peter D. Watson and Alberto DiMascio told the Society that in instances of depression, affection, or ego defensive functioning, the skin temperature was rising or high. Where hostility or anxiety was expressed, the skin temperature fell or remained low.

In another report of psychiatric research, the Society was told that prolonged sleep treatments of from "25 to 30 days" helped more than half the mental patients it was tried on.

An attempt was made, Dr. H. Azima of Montreal, Canada, explained, to produce a pattern of sleep as similar to the physiological sleep as possible. This was partly achieved by giving three different barbiturates, in conjunction with the tranquilizers promazine or chlorpromazine.

A total of 114 patients underwent the treatment and were followed up from six months to four years later. Of 66 who received the prolonged sleep treatment alone, 57.5% showed improvement. The other 48 received sleep and shock therapy, with 52.4% improved.

Sleep, Dr. Azima suggested, is thought to help through ego-splitting and a disorganization-reorganization sequence.

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Questions

ARCHAEOLOGY—How old do archaeologists estimate the La Venta site of the Olmec culture is? p. 50.

BIOCHEMISTRY — What chemical compound found in tomatoes is being studied because of its resemblance to cholesterol? p. 59.

ENGINEERING—At how high a temperature will the "spacistor" operate reliably? p. 53.

PUBLIC HEALTH—What substance in cigarette tobacco, believed produced during burning, has been indicted as a cause of cancer? p. 51.

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