

MEDICINE

Three-Way Cancer Attack

New chemicals or different combinations of them, starving the cancer and finding materials that make cancer more easily treated are the three prongs.

► THE CHEMICAL attack on cancer these days is three-pronged.

One prong consists of the search for and trial of new chemicals and combinations of them that might destroy the cancer without harm to the rest of the body. Among the newest of these are compounds called ethylene amines developed in the research department of Lederle Laboratories at Pearl River, N. Y. Three of these have now been selected as worthy of trial on patients, following further pharmacological studies, Dr. J. H. Williams, speaking for the research team, told members of the American Association for Cancer Research at their meeting in New York.

A second prong of the chemical attack on cancer consists of withholding chemicals from the patient's diet. Some of this work has reached the stage of human trials. The hope of such studies, of course, is to find a way of starving the cancer to death without cutting down too much on food needed by the rest of the body.

Signs that this might be good treatment for patients with Hodgkin's disease were reported by Dr. Walter J. Frajola and associates of Ohio State University College of Medicine. The chemicals they withheld are two protein building blocks, lysine and phenylalanine. The diet their patients got during these studies consisted of a corn-starch pudding, "cake," and water mixtures of the essential amino acids, minus the one under study.

Third prong of the chemical attack on cancer consists in finding chemicals that

might make cancers more susceptible to X-rays. Sometimes a chemical is given for this purpose but in studies by Dr. W. R. Franks and associates at the University of Toronto, the plan was to try withholding certain chemicals.

When they kept copper out of the diet of mice with a transplanted tumor, the tumor grew at a slower rate and was more susceptible to X-rays. Keeping magnesium out of the diet, on the other hand, caused slower growth of the tumors but did not increase the effect of X-rays. If anything, it lessened their effectiveness.

To scientists, the importance of these studies lies in the knowledge gained about fundamental chemical processes under restrictions of copper or magnesium. The effectiveness of X-rays is increased, the copper part of the study suggests, when the amount of catalase in the body is decreased. Decrease in the activity of the enzyme, catalase, would be expected to reduce the rate of removal of any peroxide formed by the irradiation. From such clues might come better methods of treatment.

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MINERALOGY

Mineral Nasonite Found In West for First Time

► A DEPOSIT of the extremely rare mineral nasonite, one part of it yellow and the other a pale bluish-green, has been found for the first time in the West in a com-

mercial quarry at Crestmore near Riverside, Calif. The only other known occurrence of nasonite is in zinc deposits at Franklin, N. J.

The discovery was made by Dr. Joseph Murdoch, professor of geology at the University of California at Los Angeles. Nasonite, he said, is a form of calcium lead silicate and is derived from earlier galena. The variation in color is due to accessory elements, vanadium accounting for yellow, copper for blue. Nasonite is such a rare mineral that it has no commercial value.

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