MEDICINE

Cyclotron Treatment of Late Cancer Encouraging

Sixty-One of 129 Patients Who Faced Death Are Saved And Some Perhaps Cured; Ready To Use on Less Hopeless

SIXTY-ONE of 129 patients who faced death from advanced cancer have been saved and some of these perhaps cured by treatments with the great atom-smashing machine—results so encouraging that less advanced cases will now be treated by University of California physicians, it was announced to the Radiological Society of North America meeting in San Francisco.

This announcement, made by Dr. John C. Larkin, research associate in the radiation laboratory, and Dr. R. S. Stone, professor of roentgenology in the University's Medical School, has been awaited by physicians and patients everywhere since treatment of late cancer with the atom-smashing cyclotron was begun three years ago.

A total of 153 patients have been treated during the three years. The 129 with which the report was concerned were treated with the 225-ton cyclotron; the remaining 24 with the 85-ton cyclotron.

Beams of neutrons—sub-atomic particles — are given off by the cyclotron during the atom-smashing process. These neutron beams are shot into the cancerous tissue, producing a marked shrinking of the tumor. The patient feels no sensation, however.

Drs. Larkin and Stone reported that cancer of the skin with extension into the underlying bony structures, cancers of the mouth and throat and primary cancers of the prostate gland have shown the best response to treatment. They said results are "encouraging," and enough is now known about cyclotron treatment to start using it on patients with less advanced cancer.

Science News Letter, December 13, 1941

Predicts Better Diagnosis

TELEVISION and electron microscope principles will be combined with X-rays to give doctors in the future bigger and brighter views of the interior of the body for diagnosing hidden signs of disease, Dr. W. Edward Chamberlain, of Temple University, predicted.

The electron image of the television camera could be produced with X-rays, instead of with light as at present, he suggested. The electrons could then be accelerated to produce a much brighter image which could be magnified by principles used in the electron microscope. This, finally, would be focused on a fluorescent screen, as the X-ray picture now is. Then the specially trained doctor, by rotating a patient into various positions, would have the equivalent of literally thousands of ordinary X-ray pictures and nothing that now can be shown on these would escape his powers of observation.

Science News Letter, December 13, 1941

Hidden Tumors Located

THE "brain wave" machine may locate hidden tumors in the human brain, enabling surgeons to operate more effectively, Dr. E. R. Witwer, of Detroit, reported.

The electro-encephalograph records on charts tiny waves stimulated by the electric currents of the brain. Unlike healthy brain tissue, tumors seem to generate no current. The tissue around the tumor, however, displays a variety of waves which usually are below 4 cycles per second. These are called Delta waves. They interfere with the normal tracing in the area of a tumor, producing a Delta focus. Presence of such a focus can often guide the surgeon to the tumor, Dr. Witwer explained.

Science News Letter, December 13, 1941

Fever for Cancer

A NEW treatment for advanced cancer patients which combines artificial fever with X-rays was described to the Radiological Society by Dr. H. S. Shoulders, of Nashville, Tenn. Dr. Shoulders' method calls for the "administration of X-ray therapy while the patient's temperature is elevated, causing an intensification of the destructive effect of X-rays on the cancer cells. . . ."

Dr. Shoulders said he had tried his method on six advanced cancer patients. Although only one was considered clinically and roentgenologically cured, the other five are living and fairly comfortable—and all were pronounced incurable before the combined treatments were given, he added.

Science News Letter, December 13, 1941

GENETICS

Drug Speeds Evolution As Does Colchicine

EVOLUTIONARY changes in plants can be promoted by treatment of actively growing tissues with sufanilamide, which produces effects similar to those brought about by colchicine, Prof. John M. Beal of the University of Chicago told the A.A.A.S. The germ-killing drug stops the process of mitosis or cell division in mid-career, causing the formation of extra large cells with double or quadruple the normal number of chromosomes. This in turn often brings about the origin of strange new plant varieties, some of them giants.

Science News Letter, December 13, 1941

WHITE SQUIRRELS

This pair of albino squirrels with pink-eyes were photographed on the property of Mrs. Elizabeth Haeussler, of Minneapolis, Minn., where they had been born in a maple tree. Mrs. Haeussler hand-fed the unusual babies.