

MEDICINE

X-Ray Burns Healed, Cancer Prevented By New Method

International Cancer Congress Hears Of New Research Into Possible Causes and Cures of Dread Disease

X-RAY and radium burns of many years standing have been healed and probably kept from turning into cancers by a method reported by Dr. Erich Uhlmann of Chicago at the International Cancer Congress meeting in Atlantic City.

Effective cancer treatment may even result from modification of the method used to treat these dangerous sores, which are the same kind that claimed the lives of many of the X-ray pioneers. Dr. Uhlmann said that he is now working at an adaptation of the method to cancer treatment.

The treatment is a combination of alpha rays, beryllium and boron. Skin burns and ulcers, produced by X-ray or radium treatment, which failed to heal in spite of many kinds of treatments over a long period, "healed completely in a short time" under this new form of treatment, Dr. Uhlmann reported.

Ten-year cures of both the ulcers and of some which had started to become cancers were reported. The cancers were not healed by the treatment but their growth was definitely retarded. They were then removed by cold cautery (dry ice). Following this the wounds and the original injury healed "in a surprisingly short time" and there have been no recurrences in the ten years since the treatment.

Dr. Uhlmann suggests that either neutrons or secondary alpha rays may be responsible for the success of the treatment. Beryllium is the greatest source scientists now have for the fast neutron rays. Bombarding beryllium with deuterons in the cyclotron or making it into a bomb with radon gas from radium will produce neutrons. Apparently Dr. Uhlmann stumbled on this last method of making neutrons long before these powerful rays had actually been discovered.

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Hope For Vaccination

CONQUEST of cancer by vaccinating against it seems closer to reality

today as a result of experiments reported to the Congress.

Mice have been made resistant to cancer by giving them a complex substance called a chemoantigen, Dr. W. R. Franks of Toronto reported. In London, England, Dr. William Cramer has immunized mice against skin cancer and Dr. Thomas Lumsden has discovered in the blood of many cancerous animals a poisonous substance which kills cancer cells under certain conditions, they reported.

Dr. Franks produced cancer resistance in his mice by linking cancer-causing chemicals with casein, the protein of milk. He reported a "significant reduction in tumor production," when this substance was given before cancer-causing agents were set to work in the animals' bodies.

The anti-cancer vaccination experiments have so far been limited to laboratory animals and it may be a long time before any such results can be achieved with humans, if they ever can be.

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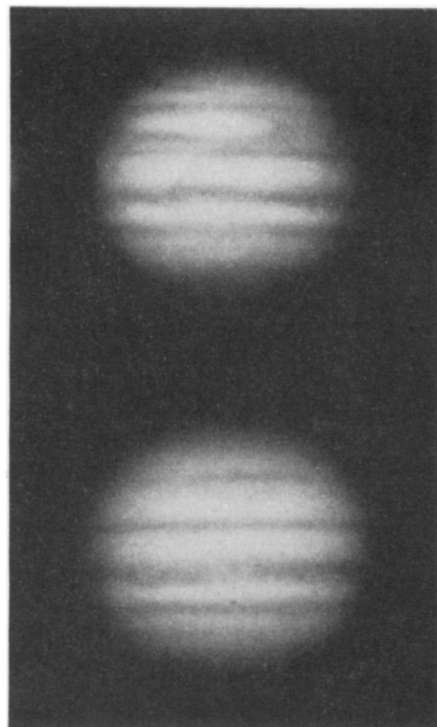
See Cells Become Cancerous

THE SEARCH for a chemical to cure cancer has been advanced by the discovery of a cancer indicator which lets scientists see under the microscope the cells that are becoming cancerous.

The indicator was demonstrated by Prof. Albert Dustin of Brussels. It is the old-time gout remedy, colchicine, obtained from the meadow saffron. It has no practical value as a cancer test, but it has opened new fields for research on cancer and also on gland action and other unsolved medical problems.

Colchicine speeds up the division of certain types of cells into new cells. It also has the power to halt this cell division at one stage, called the metaphase. It is this double effect of the drug that lets scientists see the cancer cells under the microscope when they are becoming cancerous.

It is important to look at just the right time to see this take-off into cancer, Prof. Dustin found. Cancer-causing chemicals



JUPITER DRAWS NEAR

Jupiter, biggest of all the planets and over 314 times as heavy as the earth, makes its nearest approach to our planet in 24 years on Sept. 27. On that date Jupiter will be 367,110,000 miles away. What Jupiter looks like in large telescopes is shown in these photographs made at Lowell Observatory. The streaks which run across Jupiter's visible surface have no fixed patterns. They change from time to time. Their cause is still one of astronomy's mysteries.

are first injected into rats or other laboratory animals. Then colchicine, the indicator, is injected, to speed up the division of the cells. Between 7 and 10 hours, no more and no less, the cells are arrested in their dividing. This is the time when the scientist can see that the cancer cells are ready to proceed to abnormal division, and normal cells are ready to go on dividing normally.

If a chemical is ever found to cure cancer or to prevent it, it probably will have to achieve its effect on the cells at this stage of their lives. Colchicine, the indicator that shows up this stage, will, it is believed, show whether or not the proposed chemical cure is having any effect on the cancer cells at this crucial period.

At this same period of division, cells are most vulnerable to the destructive action of X-rays. Colchicine, which speeds up cell division so that many more cells are in the dividing stage, promises to make X-rays more effective in cancer treatment. By giving colchicine