Prince Of Wales College Graduates, 1948

WALDO DINGWELL

claims Morell as his home, and first came to P.W.C. in 1939. Waldo served in the Army during the war and returned to take up the study of Medicine in 1945.

FRANK GALLANT

first came to P.W.C. in 1940 and then left to serve in the R.C.A.F. Returning in 1945, he took up the study of Medicine and hopes to continue his studies in such next year. Frank's home is in Charlottetown.

HUBERT MacNEILL

joined the Veterans' Special Matriculation Class in January 1946 after having served in the Army. Hubert's home is in Summerside, and he may continue his Medical studies at McGill.

OLIVER MacLEOD

returned to P.W.C. after service in the Army, in January 1946. Oliver's home is in Hartsville and he first entered P.W.C. in 1940. Oliver hopes to study Dentistry at Dalhousie.

—Photos by Craswell.

Can Atomic Fission Work for Man's Good?

Science Is Hopeful, But It's Much Too Early To Be Over-Optimistic

By S. BURTON HEATH

NEA Staff Correspondent

WASHINGTON — (NEA) — To borrow a very old joke and give it a really sad setting: The treatment was wholly successful. An extremely bad cancer was completely cured. But the patient died.

A malignant cancer had spread all over the body of a 47-year-old man before it was discovered. He was given radioactive phosphorus. In two weeks he was back at work In five weeks the cancer appeared to be gone.

Two months after treatment the cancer came back, growing faster than ever. With any standard treatment he was certain to die. Radiologists gambled, in hope of saving him. They gave him the most radiation he might survice. Again he recovered and seemed perfectly well.

Eighteen days after this second treatment he began to bleed in the gums and under the skin. Penicillin and transfusions kept him alive two weeks. Then he died. Autopsy showed that the cancer was gone—so completely gone that the doctors couldn't find where it had started. Every tumor cell had been killed by the radioactivity in the phosphorus. But so had the patient.

The episode is told by Dr. Edward Chamberlain, professor of Radiology at Temple University, in The Future of Atomic Energy, which is Volume I of the Westinghouse Educational Foundation's Science and Life In the World, published by Whittlesey House, The McGraw Hill Book Company.

The story is important because it shows why scientists do not want sensational stories about the medical wonders that atomic fission is going to produce.

Medical men, agricultural scientists and industrial experimenters all believe that radioactive isotopes, which are a by-product of the atomic pile, will do many good things in their fields. Experiments are progressing in scores of lines, and some are hopeful.

But it is much too early to get

There is no question that radioactivity can be used to kill cancer. It has been used that way for years, from radium and x-rays. Atomic fission opens up new possibilities, though the rays are identical. But the case described by Dr. Chamberlain proves that enough radiation to kill the cancer cells may be enough radiation to kill the patient. Science has to try to learn how to make radiation kill only bad cells and **over - optimistic about particular uses of isotopes to cure diseases.** leave good ones alone. This may take years.

The bones like calcium and take much of what enters the body. So there was hope that radioactive calcium and strontium, introduced into the body, would go to the bones and kill bone tumors. Unfortunately, too much went where it shouldn't and the treatment proved dangerous.

Radiologists had another idea. It is to put boron into an organ that is cancerous. Then bombard this boron with a narrow beam of high-speed neutrons, which are the most penetrating of all nuclear rays. This makes boron itself become radioactive. It gives off intense rays, but they do not travel far. It is hoped that their intensity would kill the cancer cells, but that they would not go far enough to scatter those cells or to reach nearby healthy tissues.

Much of the work being done with isotopes depends on the fact that each part of the human body attracts particular elements. These elements can be radioactivated by putting them into an atomic pile and letting the neutrons upset their atomic structures.

Iodine tends to go to the thyroid, so radioactive iodine can be used both to study the thyroid's working and to fight over-activity. Isotopes of iron, sodium and hydrogen can be used to study how various substances — into which those isotopes have gone—pass through the placental barrier from mother to fetus and support the new life in the womb.

Radioactive iron is used to trace the red blood cells, radioactive sodium to follow the blood's circulation from heart back to heart, radioactive potassium and sodium to study the pituitary and adrenal glands.

These things are possible because even the relatively weak radiations from such isotopes can be measured with Geiger counters. The counters, placed outside the body follow the isotopes' movements inside.

But these things are studies. They help to show how the body works, which is important. They may help to locate and identify diseases and suggest how to cure them. They aren't cures.

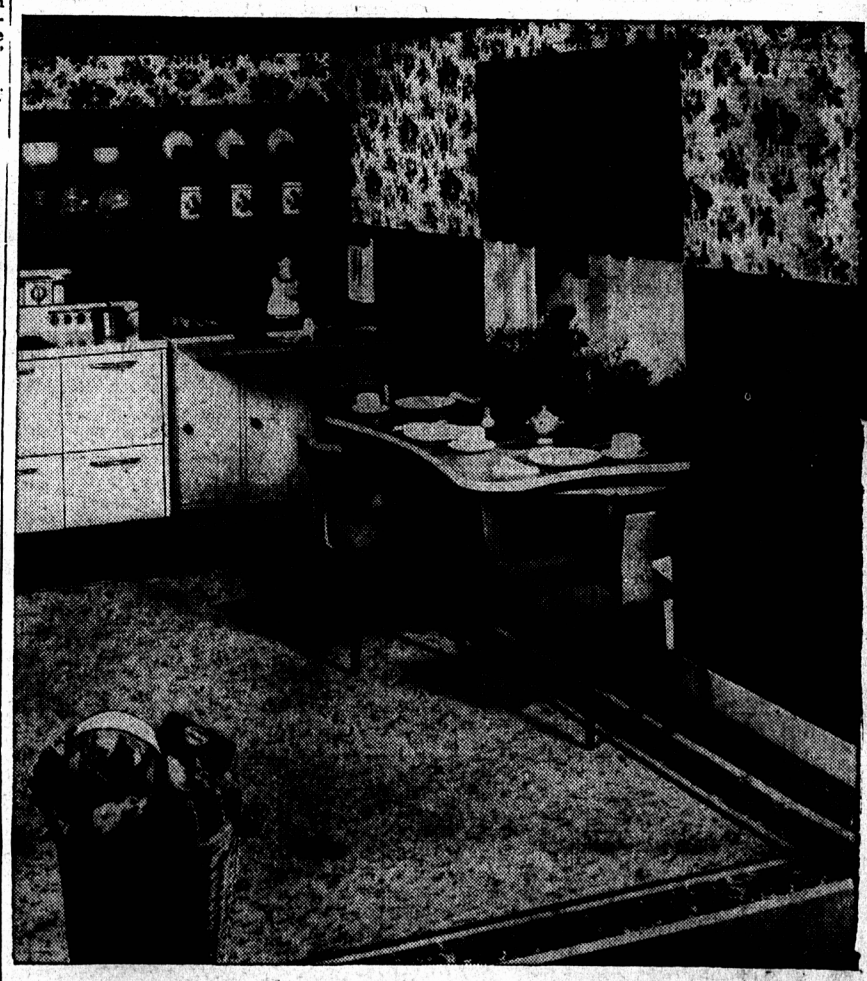
Only one new curative method may have been found yet. Radioactive isotopes of sodium and phosphorus have been used to treat leukemia. That is a disease in which the bone marrow, the spleen and the lymph make too many white corpuscles. These are not strong, to fight infection, and they crowd out red corpuscles so that the body does not get enough oxygen and anemia results.

The radioactive elements slow down white cell production by injuring the red bone marrow and the tissues of the lymph and the spleen. They also kill off existing white cells. Obviously such treatment must be used very carefully, because when it injures the red marrow it also slows down production of red cells which already were too few. And it is important not to kill off too many white cells.

The Atomic Energy Commission is financing a study to see what radioactivity does to help the soil grow plants; and also, by using isotopes as tracers, to learn how much of their phosphorus various plants get from fertilizer and how much from other sources.

Industry is using isotopes in many ways: to locate new sources of oil—to check leaks in high-pressure pipes carrying dangerous gases—to detect flaws in heavy castings—for chemical analysis.

Radioactive iodine is one atomic by-product medical scientists are using in their efforts to make the atom work for man's good. The radioactive iodine is drawn from a lead container into a glass of milk (left) which the patient drinks. Then the path of the iodine used to treat certain types of thyroid cancer, is traced with a Geiger counter (above).



As the United Nations' council at Lake Success, N.Y., pondered the question of Palestine, leaders from many nations met in intimate discussion. In this photograph, Dr. Hillel Silver, Speaker for the Jewish Agency, talks earnestly to Andrei Gromyko (right) delegate from the U.S.S.R. The Security Council approved the preamble of the Palestine truce formula.

ITALIAN ELECTION RESULT (Copyright in All Countries)

SMOTHER THAT SNEEZE

Good personal hygiene is a most important measure for the control of droplet infections, the root of many respiratory diseases. If people could avoid the expulsion into the air of organisms from the nose and throat, a major source of infection would be eliminated.

Paper handkerchiefs for use when sneezing or coughing or blowing the nose are valuable as they may be burned after use. Dust control measures in the home and industry are also good methods of preventing the spread of these diseases, national health authorities say.

ROBBERS PLEAD GUILTY

COOKSVILLE, Ont., May 3—(CP)—Gerald Wheelwright, 17, of Hamilton and Victor Vincent, 22, of Montreal pleaded guilty today to charges of assault with attempt to steal. The pair appeared in connection with an attempt a week ago to force employees of the Royal Bank here to open the vault. Cooksville is 10 miles west of Toronto.

INVESTIGATE SLASHING

HAMILTON, May 3—(CP)—Late today police were investigating the mysterious slashing about the neck, face and arms of a 20-year-old married Hungarian girl who had been in this country but seven months. The girl, Mrs. Arado Lineto, was taken to hospital after her father discovered her lying in a pool of blood in the garage at the rear of his home.