MEDICINE

Cancer Cure On Way

Many scientists are at work on problems of growth, and any day one of them may unlock the door to this secret of nature. Promising leads have already been made.

➤ A CURE for cancer will be found.

This is the considered opinion of top-flight cancer authorities given at the meeting of the National Advisory Cancer Council in Washington.

Here are the reasons:

Five promising leads to cure of cancers have already been found through physics and chemistry since 1939. They are: 1. Injection treatment with male sex hormone to relieve pain and prolong lives of elderly women with breast cancer. 2. Discovery that a chemical, urethane, brings at least temporary improvement in leukemia and other types of so-called blood cancers. 3. Discovery that the nitrogen mustard war gases give at least as good results as X-rays in treatment of some of these blood cancers. 4. Radiophosphorus for leukemia and radioiodine and other radioactive chemicals, atom bomb by-products, as potential cancer weapons. 5. Discovery that sugary chemicals from some germs can destroy cells in animals, leaving normal cells unharmed. These chemicals, now being tried on patients, are a development by American scientists that is equivalent to the much-publicized K-R anti-cancer serum of Soviet scientists.

Already one out of five men with cancer of the prostate gland are being saved from once certain death by treatment for which chemistry gave the lead and which in turn has led to the sex-hormone treatment of breast cancer in women.

Thirty out of every 100 patients with stomach cancer, third most important kind of cancer, can be cured by operation if they get to the surgeon early.

The cancer problem now is about at the point where the atom bomb was just before the uranium atom was split in 1939. Scientists had been talking about atomic power for years before then, but lacked the key to unlock it. Work toward that end, however, was going on in many laboratories. In the same way, scientists in many laboratories are now seeking a key to unlock the secrets of growth. Any day someone may learn one of these secrets which will show the way to conquest of one kind of cancer as splitting the uranium atom showed one way to unlock atomic power.

To help speed that day, the National Advisory Cancer Council recommended grants amounting to about $300,000 to support 25 studies of cancer in 18 universities, hospitals and research institutions.

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AERONAUTICS

All-Weather Line Succeeds

➤ AN ARMY AIR FORCES all-weather air line between Andrews Field, Md., and the Clinton County Air Base, Wilmington, Ohio, has proved that an airline can maintain a schedule in "zero-zero" weather.

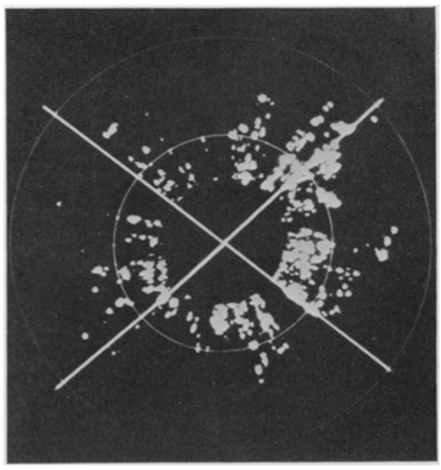
In its first six months of operations, the airline has completed 125 round trips. Two flights were not completed but neither was grounded by the weather. One flight was unable to come to Washington because of the number of other aircraft in the Washington "stack," the traffic control system used by the Civil Aeronautics Administration there. The other grounded flight was due to hydraulic failure in the landing gear.

Actually, all flights made by the all-weather airline are in zero-zero conditions. When the sky is clear, the pilot wears blue goggles to look through a windshield covered with red polaroid glass. He is unable to see through the windshield and flies with instruments to simulate bad weather-flying.

In more than one-fifth of the flights completed by the unique airline, instrument conditions really existed, and the pilot had no need for "blind coloring" of windshield and goggles.

All the landings now are made with GCA, the ground control approach system which uses radar operators on the ground to direct pilots by radio instructions down safely.

New equipment at Wilmington which is now being installed at Andrews Field includes micro-wave early warning, MEW, a long-range warning system, and a new traffic-controlled radar, known as CPW-18. Study is now being made of static-free communicatioons for the installations.



RADAR SCOPE—This is one of the radar scopes, shown in an Army Air Forces photograph, used by the traffic controllers of the AAF All-Weather Airline. The spots of light represent returned radar signals from permanent ground objects such as buildings and hills.

Scheduled for early testing on the new airline is the Army's "push-button" C-54 transport plane, designed to fly completely automatically. The plane has made successful flights from its test center at Wright Field, Ohio, but it has not been used on the all-weather run.

Plans for the all-weather air line were first reported last spring in an exclusive Science Service story. Flight operations between Andrews Field and the Ohio base began Aug. 1, after early plans for a transcontinental run were found to be less economical.

Using Douglas C-54 Skymasters, the airline has successfully maintained a schedule of round trips five days a week since then. The airline's primary job is to serve as a testing ground for all-weather flying equipment—and to prove that schedules can be maintained without regard to weather conditions.

Certain Army air safety requirements have been waived to operate the line, but pilots must hold a green instrument certificate gained with more than 1,500 hours' flying time and a minimum of 100 hours of flying under actual instrument time. Pilots flying the run must have completed 50 landings with GCA.

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