

MEDICINE

Cobalt for Cancer Tested

This radioactive material is being tested at four institutions to determine standard dose for treatment. Will be a cheap and plentiful substitute for radium.

► TESTING of radioactive cobalt from the atomic pile for treatment of cancer patients is now under way at four institutions.

This is the material which Chairman David E. Lilienthal of the Atomic Energy Committee told President Truman could become a cheap and plentiful substitute for costly radium now used in cancer treatment.

The four institutions where the new material is being tested are: Ohio State University, at Columbus, Ohio; Memorial Hospital in New York; the University of California at San Francisco and Washington University at St. Louis.

Cancer patients generally may not get radioactive cobalt treatment for some little time. This is not because of any production bottleneck. It is because the dose has to be standardized. This is a job for experts and is what is now being done. But it may take two or three years or even longer, A.E.C. officials said. They pointed out that it took 25 to 30 years for standardization of radium dosage.

The material will cost only about a tenth of what radium costs, it appears from comparison of present prices. A.E.C. list price for one unit of radioactive cobalt is \$33 f.o.b. Oak Ridge, Tenn. To this must be added a \$25 handling charge, made on all shipments of radioactive material from Oak Ridge, and the shipping charges on the unit in its 200-pound lead container. The total would probably come to between \$60 and \$75. The cost of an equivalent amount of radium, on a dosage basis, would be \$500. To this must be added insurance, which is very costly on radium, and handling and packing charges. Radium, because of the radon gas which emanates from it, involves a more difficult handling problem.

Smaller hospitals usually borrow or rent their radium from larger institutions, because it is so scarce and costly they cannot afford to own any. Some larger centers have theirs on loan from the National Cancer Institute of the U.S. Public Health Service.

Radioactive cobalt would be used in needles or tubes in the same way that radium is used for cancer treatment. It

cannot be used in a colloidal form, as radioactive gold is now being used, because it has too long a half life. Its half life is 5.3 years. An advantage of the colloidal form in which radioactive gold is being used is that not only gamma radiation but also beta radiation from

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New "Blue Baby" Disease

► SANITATION chemists were alerted to the hazard of a new "blue baby" disease that comes from nitrates in drinking water.

The disease may be confused with congenital heart disease, which also produces "blue babies," but it is not the same condition, James G. Weart, sanitary engineer of the Illinois Department of Public Health, explains in his report to the American Chemical Society meeting in Chicago.

Infant methemoglobinemia is the name of the blue baby disease that comes from too much nitrate in drinking water. The disease is apparently limited to babies under six months of age.

In Illinois alone 33 cases of the disease with five deaths have been reported in the past year. Cases are being reported with increasing frequency in Iowa, Kansas, Oklahoma, Texas, Nebraska, Missouri, Minnesota and Michigan as well as Canada and Belgium.

The disease may also exist in the richer agricultural areas of Europe and Asia, where soil and water conditions would favor its development. The role of water in causing the disease has only been known since 1945, so more cases may be reported as physicians become familiar with the symptoms.

Babies usually recover swiftly if a satisfactory water is substituted for the high-nitrate water in their formulas and drinking water. But in countless rural homes no other source of water is available and there is no practical way of removing the nitrate from the water. For this reason Illinois doctors have been advised not to prescribe feeding formulas involving water unless the nitrate content of the water is known to be within

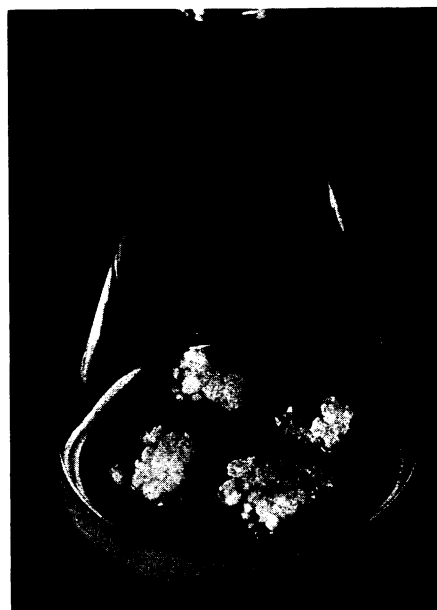
many billions of point sources are utilized to bombard the cancer.

Commenting on the development of radioactive cobalt for cancer treatment, Dr. Leonard Scheele, director of the National Cancer Institute until his appointment this month as Surgeon General of the U. S. Public Health Service, said:

"If radioactive cobalt proves to be an entirely effective substitute for radium in the treatment of cancer patients, and we have reason to believe this will be so, it will afford welcome relief to hospitals and medical centers throughout the country."

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safe limits. A maximum safe limit of 10 parts of nitrate nitrogen per million parts of water has been set.



PLANT TISSUES GROW IN CULTURE—Masses of undifferentiated plant tissue can be grown from just a few cells each, taken from tumorous growths on plants known as crown galls. Those shown here were produced from a crown gall of a periwinkle plant, supplied with a nutrient mixture of accurately known chemical composition, in the plant pathology laboratories of the University of Wisconsin, by Prof. A. J. Riker, Mrs. Alice Butsche and A. C. Hildebrandt. They were shown before the recent meeting in Madison of the American Association of Anatomists.