

## MEDICINE

# New Recruits Fight Cancer

Tried and proven methods are aided by recently developed chemicals ranging from radioactive gold wash to hormones made by sex glands.

By JANE STAFFORD

(Third of a series of five articles on what can be done about cancer)

► TO CURE cancer, doctors have three tried and proven methods: surgery, X-rays and radium. These make up the old guard in the cancer fight, and they still are the methods by which cancer patients can be and are being cured.

New recruits for the treatment side of the cancer fight range from radioactive gold to hormone chemicals made by the sex glands and even viruses.

With surgery, the abnormal growth, including its extension into surrounding tissues and lymph nodes, is cut out. With X-rays and radium, the nucleus of the cancer cell is damaged and as a result its division and multiplication into more cells is interfered with. Blood vessels in the region of the cancer are also damaged by X-rays and radium. The blood supply and nourishment of the cancer is therefore reduced and this adds damage to the direct injury of the cell.

Radium acts on cancer through the gamma rays it gives off. These rays are of the same nature as X-rays. Consequently scientists often speak of radiation treatment, to cover either or both X-rays and radium's gamma rays.

Some chemicals can be made radioactive in the atomic pile. Among these, the ones important in cancer treatment are cobalt, gold and iodine. Radioactive cobalt gives off the same gamma rays as radium. It is much cheaper and it can be fashioned into various forms, such as needles and fine wire, for effective application to the cancer. Or it can be made into a "bomb" for use at a slight distance from the patient,

somewhat as X-rays are used. It will probably, therefore, be used more and more to replace costly radium.

Radioactive iodine is used for treatment of cancer of the thyroid gland and its use in cancer treatment is limited to this kind of cancer. The reason it is useful in such cancer is that the thyroid gland gathers iodine to use for making its hormone. If radioactive iodine is supplied, the radiation is automatically delivered to the cancerous gland and to thyroid cancer cells that have spread to other parts of the body. Radioactive iodine is still on trial for doctors to learn which patients will be helped and which will not. For many thyroid cancer patients surgery or one of the older forms of radiation will continue to be used until more is known about results with radioactive iodine.

Radioactive gold has been reported to have great usefulness when used as a wash to relieve one of the complications of cancer, the fluid accumulation in the chest or abdomen. Injections of radioactive gold have been tried in cases of prostate gland cancer that were not suitable for operation. And preparation of radioactive gold seeds that can be left in the body permanently gives another promising method of using this material for cancer fighting.

Hormones are used in treatment of cancer of the breast and cancer of the prostate. For the latter condition, female hormone is used. For breast cancer in women before the menopause, male hormone is used. For elderly women and the occasional men breast cancer patients, female hormone is used.

These new recruits to cancer treatment are still very new. Some are still in the experimental stage, some are used as palliative treatment, to give relief of some of the symptoms in patients whose cancers have advanced so far that there is no hope of cure, though life may be prolonged a little and the patient kept more comfortable.

The old guard methods of fighting cancer, with good hope of curing it in many cases, have also been improved in recent years. Surgeons can operate more effectively because there are now anesthetics easier on the patient, antibiotics to check infection and new knowledge of building the patient's resistance with diet, vitamins and blood transfusions. All of the stomach or all of one lung can be cut out if the size of the cancer makes this necessary.

Radiation treatment has advanced, not only by the addition of radioactive cobalt,

iodine and gold, but also by the development of more powerful X-ray machines. Betatrons and synchrotrons which can operate at hundreds of millions of volts, produce highly penetrating electron beams valuable for treating cancer deep within the body. Rotation of the patient while under X-ray treatment is another new technique for improving results with radiation. One of the problems of radiation treatment has always been that of delivering a cell-killing dose of rays to the cancer without damaging healthy cells in the path of the rays. Improved techniques are overcoming this problem to some extent.

No proved case of cancer is known to have been cured by any unorthodox or secret methods or remedies, though countless sufferers have wished themselves into feeling better for a time after such treatment.

Science News Letter, April 12, 1952

Next Week: Reprieves But No Cures for Most Blood Cancers.



Earned \$400 the First Year

"Last year I made around \$400, and it was the first year I really started to write. Your course is the best way to get expert instruction in professional writing."—T. Edward Karlsson, 224 East 79th St., New York, N. Y.

## How Do You Know You Can't Write?

HAVE you ever tried? Have you ever attempted even the least bit of training, under competent guidance?

Or, even though you realize that the ability to write fluently is so important to scientists, have you been sitting back waiting for the day to come when you will awaken all of a sudden to the discovery, "I am a writer"?

If the latter course is the one of your choosing, you probably never will write. Lawyers must be law clerks. Doctors must be internes. Engineers must be draftsmen.

That is why the Newspaper Institute of America bases its writing instruction on journalism—continuous writing—the training that has produced so many successful authors.

### Learn to write by writing

Newspaper Institute's New York Copy Desk Method starts and keeps you writing in your own home. You receive actual assignments, just as if you were at work on a great metropolitan daily. Your writing is individually corrected and constructively criticized. Under such sympathetic guidance, you will find that (instead of vainly trying to copy someone else's writing tricks) you are rapidly creating your own distinctive, self-flavored style.

Many potential writers become awestruck by fabulous stories about millionaire authors and, therefore, give little thought to the \$25, \$50 and \$100 or more that can often be earned for material that takes little time to write—articles on—science, hobbies, travel, scientific papers, church articles and club activities, etc.—things that can easily be turned out in leisure moments.

### A chance to test yourself—FREE.

Our unique Writing Aptitude Test tells whether you possess the fundamental qualities necessary to successful writing—acute observation, dramatic instinct, creative imagination, etc. You'll enjoy taking this test. The coupon will bring it free, without obligation. Newspaper Institute of America, One Park Ave., New York 16, N. Y. (Founded 1925)

## FREE NEWSPAPER INSTITUTE OF AMERICA ONE PARK AVENUE, NEW YORK 16, N. Y.

Send me, without cost or obligation, your Free Writing Aptitude Test and further information about writing for profit, as promised in Science News Letter, April 12.

Mr. \_\_\_\_\_  
Mrs. \_\_\_\_\_  
Miss \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_  
(All correspondence confidential. No salesman will call on you.)

117-D-802

Copyright 1951 Newspaper Institute of America

## EARN EXTRA MONEY IN YOUR SPARE TIME ACT AS OUR AGENT SELL BRAND-NEW UNDER-WRITE PLANT MARKERS

Your writing appears UNDER the weather-proof surface! Writing can be done with any hard point.

Write today for FREE samples and complete selling information on how you can earn up to \$50 per week in your spare time by selling to garden lovers everywhere!

R. P. Cargille 118 Liberty Street  
New York 6, N. Y.