

# WHAT WE KNOW ABOUT CANCER

BY WILLIAM SEAMAN BAINBRIDGE, M.D.

THE first truth to be learned about cancer is that, unlike many other diseases, it is no respecter of persons, places, or things. Cancer has been found among the most primitive tribes as well as the most highly civilized peoples; among the lowly as well as the high born; in the deepest jungles and in our most cosmopolitan cities. It has been found in animals, fish, fowl and reptiles as well as in the human race.

Cancer is universal. It is also one of the oldest of known diseases, recognized by the ancients at least two thousand years ago. They felt that there was a similarity between the tumor with its "roots" and the crab with its claws, and therefore called the disease cancer or "crab." Our early forbears believed that the tumor arose from the "roots" in the body, but today we know that the tumor is the local starting point and that the so-called roots are the offshoots. In the centuries since the first mention of tumors and cancer, we have traveled far, but the essential cause

of the disease is still an unsolved mystery. Opinions with regard to this have been exceedingly diversified, while treatments suggested and tried have been numerous and fantastic.

What is called cancer today is not the cancer of the ancients. In those days, the general term included a variety of diseases which have come gradually to be identified as separate entities and treated as such and it is likely that further differentiation may take place. Why, then, it is natural to ask, does one hear everywhere that cancer is on the increase?

Cancer is not materially on the increase, but there appears to be a greater number of cases due, in part, to more refinement of diagnosis, more carefully kept records, finding the condition ordinarily unsuspected until operation or autopsy, and greater longevity, which brings more people into the age brackets where cancer is more likely to develop.

Millions of dollars are spent annually to solve the cancer prob-

lem. Thousands of men and women give themselves day and night and millions of animals, also, contribute to this research. The problem is not an easy one because we are not at all sure that there is a single basic cause. In fact, it seems less and less probable that this is so. There are various types of malignant tumors and they run a different course, as do tumors even of the same type; they do not react similarly to the same treatment; they react differently in different people; two growths apparently of the same nature may react differently in the same individual. We call this relative sensitivity, which means simply that we don't know the answer.

While the essential cause of the malady continues hidden, we know that it is local in its beginning, that there are certain predisposing factors, or causative agents, in its onset. One of these is chronic irritation — external or internal — which may produce cancer with almost mathematical certainty. A chronic ulcer; a decayed, jagged or broken tooth that hits against the lip, or tongue, or cheek; an ill-fitting plate in the mouth; the tight nose-piece of eyeglasses, impinging constantly on the bridge of the nose and repeatedly abrading the skin; an injury due to an accident; scars from various burns, or from the use

of too much radium or X-rays; prolonged, excessive exposure to the strong sun; habitual smoking with the cigar, cigarette or pipe held always in the same place in the mouth; the constant intake of very hot or highly-seasoned food or drink; irritation from gallstones; an ulcer of the stomach not given proper attention — all these may result in the development of cancer. Then, though we do not know why, a birthmark suddenly may begin to change in appearance and character. A brown mole may become darker and increase in size. A little lump that we have noticed and not thought much about for years may begin to grow. When these changes take place, something has happened and it may be that cancer has started. Certain occupations, too, such as working in tar, soot, paraffin and arsenic may cause cancer formation.

For these reasons, even if there were no others, men and women must be urged again and again to have routine, periodic examinations. We know that certain conditions have a tendency to turn into cancer, but there are abnormalities which are precancerous and one cannot tell just when the metamorphosis from the benign to the malignant state may occur.

As a result of educational cam-

paigns, men and women realize today that if there is an abnormal discharge from any part of the body, it is expedient to consult the doctor. Such discharges, especially if bloodstained, are warning signals. At times, they are only fore-runners of trouble. At other times, they tell us that inroads have already been made upon the body's defenses. At all times, they demand immediate attention.

## II

Vast amounts of research are in progress today, both from the biological angle — parasites, bacteria and viruses — and from the internal chemical side, which includes vitamins, vitiated body fluids and the internal secretions. Body fluids, for instance, may become irritants through chemical alterations or by overloading them with solid material; they may also cause deficiency diseases or other abnormal states due to poisoning, if the environment of the individual cells which they bathe is changed.

The internal secretions have in them substances called hormones, of vital importance in the functioning and development of our bodies and material factors in the cancer problem. Most important of the glands of internal secretion, as they

relate to cancer, are the sex glands. Research workers are constantly experimenting in this field and the future may produce much for us along this line of the body's biochemistry. Through it, we may find the answer to a large part of the whole problem.

Years ago, many believed that diet played an important rôle in cancer production and cure. A diet of rice was advocated strongly by some, but in certain regions of China where rice is the main food, the natives have no immunity to the disease. Neither overfeeding nor underfeeding appears to have any effect in the development or cure of the malady. Of course, it is scarcely necessary to point out that either of the two extremes is detrimental in that it might throw the body's normal balance out of scale, and thus make it an easy prey to disease. That is about the closest it gets to causing cancer.

But there may be new developments in the diet field when it is studied from the standpoint of the chemical composition of various foods, based on the chemical and physiological needs of the body. Some people think this a hopeful field in the solution of at least part of the cancer problem. In the meantime, it is safe for all of us to have a balanced diet of food containing

those elements in good quantity which are essential for our nutrition. Fruits and vegetables — raw and cooked — whole-grain cereals, milk products and milk, sea food and meat contain the important minerals, particularly iron, iodine and calcium which we do not always acquire in sufficient quantity.

The question of heredity in cancer is raised constantly by those in whose family the disease has left its mark. The scientific consensus is that heredity plays no part. Proof of this statement is provided by our leading insurance companies, which pay no attention to a cancer history in the families of applicants for insurance, either in relation to an increase in premium or the granting of the policy itself.

Fear is a strong factor in disease. The mental has its effect on the physical, just as the physical reacts to the mental. Fear and worry can so affect the metabolism of the body that functional and physiological changes may occur. One cannot think himself into having cancer, but the fear element should not be permitted to gain the upper hand or a real psychosis may develop. Cancerphobia is a disease often more difficult to eradicate than the cancer itself. The mind cannot cause cancer development, but neither can the mind cure

cancer once it has appeared. No amount of psychoanalysis or mental healing will help.

*Cancer can be cured, but it must have early diagnosis and immediate attention. It is local in its beginning, and in certain parts of the body which seemed impossible to treat only a few years ago, it is now being cured.* That is the promise which those of us who have spent our time and energy in the study and treatment of the disease for many years can offer today.

Medical literature is filled with cases of cancer which have been cured. Immeasurable strides have been made since the days when, in the lay mind, it was a disgrace to have the disease. Not long ago, there were people who believed that cancer had a venereal origin. When the medical profession finally succeeds in wholly amputating the unwarranted stigma still connected with the disease, a larger number of sufferers will arrive in time to secure help.

### III

Our knowledge of cancer today, as agreed upon by the authorities in the field, may be summed up as follows:

1. The congenital and hereditary nature of cancer holds no element

of alarm and should not be considered at all by the public.

2. Nothing in the incidence of cancer points to its contagiousness or infectiousness. The public need have no concern regarding this phase of the question.

3. Those members of the public in charge of or in contact with sufferers from cancer with external manifestations or discharges of any kind, need at most take the same precautionary measures they would adopt in the care of any ulcer or open septic wound.

4. The vast majority of authorities holds that cancer is local in origin, but there are others who believe that some types of the disease have a constitutional background. It is probable that more than one factor enters into the origin and development of cancer. In fact, many authorities agree with the author that cancer is not one but a group of diseases.

5. The cure of cancer is complete removal of the growth.

6. When such removal is impossible, much can be done with our present methods to prolong life and save suffering.

7. There is strong reason to believe that the risk of cancer development can be diminished by eradicating certain conditions regarded as predisposing factors.

8. Some occupations, notably working in pitch, oil, tar, paraffin, analin and soot, and with X-rays or radium, if not safeguarded, are conducive to the production of malignancy, presumably on account of the chronic irritation or inflammation that is caused.

9. Prominent among predisposing factors for which one should be on guard are: lowered nutrition, chronic irritation and inflammation, repeated acute injury, benign tumors, warts, moles, nevi (birthmarks), cicatricial tissue such as scars. It must be borne in mind that changes occurring in the character of benign tumors or other tissue, as well as the occurrence of any abnormal discharge from any part of the body, especially if bloodstained, should be regarded with suspicion.

10. Suggestions regarding eugenic, dietetic and other means of limiting the development of cancer should not be accepted by the public until endorsed by expert scientific consensus. Such consensus does not exist today.

11. There is nothing in the origin of cancer which calls for a feeling of shame or the necessity of concealment.

12. All who are anxious about their health and wish to preserve it should, on the one hand, avoid

assuming that they are sufferers from one or another disease, but on the other hand, should have periodic physical examinations.

13. At all times, there is much to be hoped for and nothing to be feared from living a normal, moderate life.

14. The discovery of any abnormal physical condition indicates the

need for competent professional and not personal attention.

15. The watchwords for the public until the cancer problem is fully solved are: Alertness without apprehension, hope without neglect, early and efficient examination when there is doubt, early and adequate treatment when warranted by the diagnosis.



*"Freedom of speech? Bah! They don't even  
let you talk to a submarine."*

## BRITAIN'S CIVIL DEFENSE LESSONS FOR AMERICA

BY S. L. SOLON

**B**RTAIN has learned the lessons of civil defense at great cost in lives and substance. Fifty thousand civilian Britons have been blown to death by German high explosives. A hundred thousand more have been maimed for life. Billions in property have been destroyed. It will be worth America's while to learn some of Britain's lessons.

*The Problem of Waiting.* — Everyone knows the story of the little Cockney who was evacuated from London during last year's ferocious blitz. After three nights in a quiet corner of Hampshire, he insisted on returning to the city to take his place amidst the falling bombs. "Can't stand it in the country," he complained, "there's nothing to take my mind off the war." The Civil Defense authorities are sometimes inclined to voice the same complaint. They know the problem of waiting which afflicts any large organization, primed for action, and nowhere to go.

Thousands of air raid wardens wait — and no bomb is dropped.

Thousands of fire-watchers watch — and there are no fires. Thousands of nurses roll their bandages and splints, with never a patient. Yet, as the Ministry of Home Security has discovered, it is easier to solve the problem of monotony once an effective force is organized than it is to improvise that force when blitz bursts on an unprepared area. During periods of lull, it is possible to release trained civil defense personnel for more immediate war work, knowing that they can be recalled at a moment's notice.

That is one of the important lessons Britain has learned in civil defense, the stocky, horn-spectacled Minister of Home Security, Mr. Herbert Morrison, told me. Consequently, he is ready today to release many thousands of civil defense workers to the war industries. "The civil defense services," he remarked, "want to be pulling their weight, lull or no lull, and the nation as a whole would willingly sacrifice some of its security in order to get ahead with forging the