

# Cancer: Clues in the Mind

East Coast psychoanalyst Lawrence LeShan must have felt like a latter-day Columbus when he first proposed studies to chart the hidden passages between cancer and what he calls the "despair personality." Every hospital and research center in the New York City metropolitan area refused to allow him the use of their facilities or patients to pursue such a project. One research director, according to LeShan, even went so far as to tell him, "If in ten years you prove your theory, I still won't believe it."

In spite of that prevailing sentiment, LeShan eventually persuaded the Ayer Foundation to contribute research funds and the Institute of Applied Biology (both in New York City) to allow him access to that institution's cancer patients. But what methods of inquiry could possibly isolate the effect of the psyche on the incidence of cancer?

LeShan began by testing cancer patients with the Rorschach (ink blot) test; then he tried the Thematic Apperception test. Soon, however, he realized both these approaches were too obviously psychological in nature. The patient subjects were anxious lest the tests reveal personality flaws. They reacted in a defensive manner, constricting the answers and invalidating the results. LeShan finally turned to the Worthington Personality History, a four-page information form the patients were asked to fill out after being told it was a "backgrounder" to help the doctors decide on effective therapies. Designed to allow the patients to tell their life stories in their own words, this format gave LeShan what he considered an understanding of his patients' "major unconscious stresses, the ego defenses and the techniques of functioning and relating used in everyday life."

That was 21 years ago. Since then LeShan has obtained 455 Worthington profiles and interviewed 250 cancer patients at length (from two to eight hours each). Most important, the psychoanalyst has carried out intensive individual psychotherapies (some lasting years) with 71 terminal cancer patients. It was the insight gained from these experiences that prompted LeShan early last year to publish a book that has provoked a revival of interest in the possible psychosomatic causation of cancer.

LeShan writes in his *You Can Fight For Your Life: Emotional Factors in the Causation*

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The data are controversial, but some researchers continue to suggest the possibility of psychosomatic factors in the causation of cancer

BY GREGORY MCQUERTER

*tion of Cancer* (M. Evans, 1977) that three emotional aspects occurred in his patients significantly more often than in a control group of 12,000 Worthington profiles taken from industrial studies: An inability to express anger or resentment coupled with a "facade of benign goodness"; the presence of "indicators of emotional tension concerning the death of a parent"; and the loss of the patients' "reason for being," a pervasive despair that seemed to arise (at least in part) from a long series of perceived failures and the loss of a central relationship present in 68 of the 71 patients undergoing psychoanalysis.

This pattern of susceptibility suggested to LeShan that the tumors may be the somatic upshot of an emotional death-wish, a kind of hari-kiri at the cell level.

Many scientists, most notably tumor biologists and oncologists, received LeShan's book with considerable skepticism. The critics argued that not only was the patient sample quite small and his tests and interviews with them subjective, but that many of his patients volunteered themselves for the research—factors that could very well bias the overall study. When viewed on its own merits, the critics argued, LeShan's study was intriguing but in no way conclusive evidence.

But LeShan's book has probably more than served its purpose. Not only has it spawned wide popular interest (LeShan spent much of 1977 touring the country to talk about his findings), but it has also served as a touchstone for a number of elegant studies that before LeShan's work seemed incoherent but now fit together into a theory that seems to implicate chronic emotional stress as a carcinogen.

The idea that emotions are linked with malignancy is not new. The second century Greek physician Galen attributed cancer to a melancholy disposition; old wives' tales refer to this dread genre of diseases as manifestations of "the beast within"; more recently, Wilhelm Reich wrote that cancer is the somatic expression of an ungratified libido.

But only in the last 10 years have researchers begun to amass evidence that a rather specific personality profile, or psychic predisposition, is somehow connected with cancer. One of the most com-

prehensive studies was undertaken by Caroline Thomas of Johns Hopkins University. She appeared at a Georgetown University symposium last October to review her ongoing psychological analysis of 1,337 medical students from graduation through maturation and even to eventual death. Thomas says her data indicate that cancer tends to strike those persons who are low-key, non-aggressive and keep their emotions to themselves. In addition, she says, most of the victims tend to be lonely persons who had not been close to their parents (SN: 12/27/75, p. 394).

Other studies tend to support Thomas and LeShan. The ANNALS OF THE NEW YORK ACADEMY OF SCIENCE reported in 1966 that lung cancer patients had difficulty externalizing their emotions. Hungarian psychologists Jan Csirszka and J. Hegedus earlier in the 1960s reported that leukemic children displayed the symptoms of such clinically accepted psychosomatic disorders as ulcers and colitis—profound feelings of guilt, lowered productivity and an inability to express hostile feelings and to develop good social relations.

Another study tends to corroborate LeShan's second prime ingredient, the carcinogenic effect of psychic trauma. University of Rochester's William A. Greene, in studies of life histories of three sets of identical twins, found that the twin out of each set who contracted and died of leukemia had experienced a psychological upheaval, while the other twin had not (SN: 12/27/75, p. 394).

Analyses of national census figures are equally revealing. Female cancer mortality rates in the United States from 1929 to 1931 reveal that widows suffered the highest death rate by far, in accordance with LeShan's prediction that "loss of a central relationship" is a prime factor in the pathogenesis of cancer. (This could also result from older age; widowers are generally older. However, comparison with another disorder whose age-grading appears to parallel cancer, diabetes, shows the relationship between cancer and marital status does not exist where diabetes is concerned.)

Another study indicates that second-generation Americans—whose parents still retain their native customs and whose descendants have acquired the orientation of a new culture—suffer from higher cancer rates than their immediate ancestors or their progeny. Danish and English mortality rates during World War I show the number of cancer deaths decreased during the war—when these peoples were united against a common enemy. After the

war, when post-war fantasies failed to materialize, the rate increased. But in the World War II climate in Ireland, where hatred for fascism collided with an entrenched distrust of the English, cancer rates rose during the war.

In light of such evidence, many medical scientists concede there is some sort of veiled relationship between psychic stress and cancer. But, they caution, it is not clear which is the cause and which is the result, or whether there are hidden variables intervening within the cancer equation. Tumor biologist and 1960 Nobel Prize winner P. B. Medawar, for example, believes LeShan's theory "may be putting the cart before the horse. Cancers — which can lie dormant for as much as 50 years before surfacing — may predate and perhaps trigger the psychic negativity LeShan speaks of." More probably, Medawar thinks, "Cancer and despair may be collateral manifestations of a physical — e.g., hormonal — disorder."

But Daniel Horn, the epidemiologist who first documented the link between cigarettes and lung cancer, notes that one finding is relatively undisputed — the loss of a central relationship prior to the appearance of cancer symptoms. If this is true, it indicates that emotional strife engendered by personal loss predates the cancer.

But indirect evidence, however convincing, is still not enough for many practitioners. As N.Y. Times medical writer Jane E. Brody notes in her recent book, *You Can Fight Cancer and Win* (Quadrangle, 1977), what many scientists want is tangible evidence of a metabolic relationship between emotions and cancer or, more precisely, a biochemical action in the brain that triggers a cellular chain of events that directly cause a tumor.

Such a precise pathway has yet to be biochemically blazed. But evidence of one possible mechanism has been filtering in from the cancer front for more than 20

years. Massive experiments done by stress pioneer Hans Selye and, more recently, at Walter Reed Army Hospital by John Mason (a clinical psychiatrist now at Yale University), suggest that hormones may be the neurochemical currency that converts anxiety into malignancy. Through exhaustive experiments with animals in the 1950s and 1960s, Selye has found that mammals, when stressed, will immediately begin counteracting the stress by issuing corrective hormones to all parts of the body. One aspect of this reaction causes a part of the brain, the hypothalamus, to activate the pituitary, which in turn releases chemicals activating the adrenal cortex.

Mason presented evidence at the Georgetown University symposium that at least one adrenal hormone, 17-hydroxycorticosteroid (17-OHCS), is directly affected by stress. In a long-term study of mothers of leukemic children, Mason found most 17-OHCS levels shot up during stressful events. (A few mothers, however, seemed to have "remarkably effective defensive psychological mechanisms," that were paralleled by reduced 17-OHCS levels during acute stress Mason added.)

More remarkable is Mason's study of army recruits indicating loss of a relationship may permanently alter hormone levels: Twelve of 14 army recruits who had previously lost their mothers showed higher than expected urinary 17-OHCS levels, while recruits who had lost their fathers showed depressed levels. The probability of this distribution occurring through chance is 1 in 2,000. Says Mason, "It would appear there is some interaction between losing a parent, one's psychological defenses and one's characteristic 17-OHCS level." The level even seems to vary according to the nature of the relationship — specific feelings may have extremely precise biochemical counterparts.

Selye also touches on this. In students undergoing "anxiety inducing interviews,

active aggressive emotional displays are associated with a rise in [urinary] norepinephrine, whereas tense, anxious but passive behavior results in a predominant elevation of adrenaline elimination."

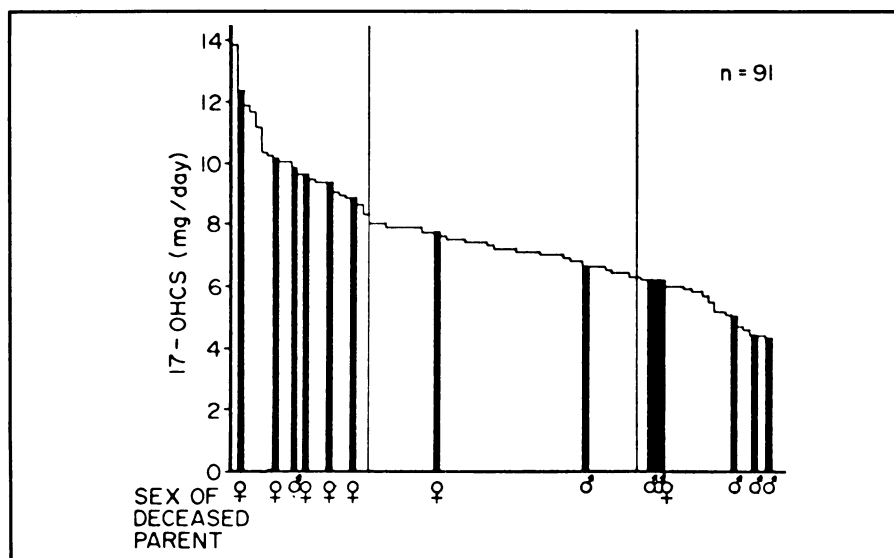
The work of Mason and Selye lends meaning to an effect Charles B. Huggins of the University of Chicago intuited years ago in dealing with men suffering from prostatic cancer, that aberrant hormone levels could accelerate the progress of the malignancy. Castration, together with an injected regimen of estrogen, is reported to have achieved remission in 80 percent of Huggins's cases.

Conventional wisdom has it that neoplastic (tumor) cells are constantly circulating through our bodies. Why these cells implant and grow into tumors in some persons and not in others may also have to do with a suppressed immune system. Many workers are returning to the theory that the body "knows" a cancer when it "sees" one, and tries to fight it. Both viral and chemically induced tumors have recently been found to secrete tumor-specific antigens which are attacked by the host's tumor-specific antibodies.

Attacking naturally occurring cancer cells, then, may be a natural function of the immune response — a function it carries out until chronic disease or anxiety renders it useless. It has been established that emotional stress can damage the thymus, the major gland of the immune system. Psychologists Claus and Marjorie Bahnson of the Eastern Pennsylvania Psychological Institute have found a strong correlation between depression and lowered immune competence (SN: 12/27/75, p. 395).

Both the immune system and psychoneuroendocrine theories remain just that, however — speculation. Information on the mind-cancer connection is scattered and often contradictory. (Two studies show no significant increase of cancer in mice subjected to stress.) The problem is further complicated by the fact that viruses, radiation and chronic physical irritants, as well as countless chemicals, cause cancer. And then there is always the confounding problem of human variability. Age, weight, sex and other traits may further compound the infinite variability posed by personality differences. In short, there may be as many causes of cancer as there are people, or molecular structures — or even thoughts.

It is extremely likely cancer results from several pathogens acting together. As Murray Bowen, a family psychologist at Georgetown University, has noted, the onset of malignancy may require the "coming together of a specific set of factors, just as a convergence of atmospheric conditions will induce a hurricane." That metaphor probably would not be lost on LeShan, Thomas and all the other investigators whose work indicates the silent storm of cancer flourishes best in an ambience of despair. □



Personal loss may permanently alter hormone balance. Recruits whose mothers had died showed a high hormone level; those whose fathers had died showed a low level.