

## The High Stakes of Cancer Prevention

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It's hard to find someone these days who hasn't had firsthand experience with cancer. Watching friends, neighbors, and loved ones struggle with the disease, more and more Americans sign up for walks, races, and donation pledges, hoping to help find the magic bullet—a cure. That cure, we hear again and again, is just around the corner. And now, for the first time since President Richard Nixon launched the war on cancer in 1971, public officials are talking about an all-out effort to wipe out the disease in our lifetime. After all, this is an election year, and cancer makes good politics. Who can argue against fighting cancer?

The question is how we go about it. Presidential hopeful Al Gore unveiled a plan in June 1999 to assure "revolutionary progress in preventing, detecting, and treating cancer in the 21st century." This past June he promised to double federal funding on cancer research to prevent and cure the most fatal cancers. Senator Dianne Feinstein (D-Calif.) launched her own cancer initiative last year, calling for a rehaul of the 1971 National Cancer Act through bipartisan legislation that "fully exploits current scientific opportunity and progress in the fight against cancer."

Both politicians have a very personal stake in the cancer debate. Gore lost his sister to lung cancer, an experience he described in grim detail in his famous 1996 Democratic National Convention speech. Feinstein lost her first husband to colon cancer, as well as many other family members and close friends to other forms of the disease. Yet, however well intentioned these initiatives are, neither proposal challenges the fundamental direction of the national cancer agenda. Gore's five-step plan makes no mention of preventing cancer until step four. Most of this "prevention" plank misleadingly focuses on improving access to screening tests and proposes campaigns limited to changing lifestyle habits and stopping children from smoking. Nowhere does Gore's proposal call for reducing or eliminating exposure to known carcinogens in our air, food, and water, in our consumer products (both personal care and household goods), or in our workplaces. Feinstein's initiative promises "to be as inclusive as possible in seeking input from the widest range of diverse sources," yet control of her proposal rests largely with the old guard of the cancer establishment, primarily represented by the American Cancer Society and the National Cancer Institute.

The cancer establishment has a long history of trivializing or ignoring prevention initiatives while claiming major gains in the war on cancer. Both the National Cancer Institute (NCI) and the American Cancer Society (ACS) are fixated on damage control—screening, diagnosis, and treatment—and genetic research, and are largely indifferent to cancer prevention. For the American Cancer Society, that indifference approaches outright hostility. What the cancer establishment calls prevention is more aptly described as a "blame-the-victim" approach, emphasizing poor lifestyle habits while downplaying the role of avoidable exposures.

The cancer establishment has been most negligent in its failure to provide Congress, regulatory agencies, and the public with well-documented scientific evidence of known cancer risks. This information is essential for Congress if it is to protect the public by legislating or banning the addition of recognized carcinogens, from food additives to pesticides. Regulatory agencies need it to create standards for a wide range of industrial carcinogens and, as citizens, we have a right to know about and to protect ourselves from dangerous chemicals that contaminate our food, air, water, and consumer goods. Where was the cancer establishment last May, when the Environmental Protection Agency, entrusted with keeping the nation's water supplies safe, approved arsenic levels that pose a greater cancer risk than any other tap-water standard (on the grounds that it could not justify the high costs of regulation since most resulting cancers would be "curable")?

This aversion to prevention is complicated by conflicts of interest springing from the cancer establishment's intimate connections with corporate America. The cancer drug industry regularly trolls the National Cancer Institute for executive hires, prompting former NCI Director Samuel Broder to charge that "the NCI has become what amounts to a governmental pharmaceutical company." Meanwhile, industrial interests are well represented on the American Cancer Society's twenty-two member board, which was created in 1990 to solicit corporate contributions over \$100,000. The board includes members from companies that either profit handsomely from treating cancer, like Amgen, or contribute to the disease by polluting the environment with a wide range of carcinogens, like the major pesticide manufacturer, American Cyanamid. It is no great surprise that ACS policies more often reflect the interests of these companies than those of public health.

In 1992 a coalition of sixty-five experts in public health, preventive medicine, and cancer research—including former directors of three federal agencies—accused the ACS and NCI of misleading the public and Congress with their repeated claims to be winning the war on cancer. The coalition (chaired by a co-author of this article, Dr. Samuel S. Epstein) called for greater emphasis on prevention and recommended a large-scale national campaign to educate the public that "much cancer is avoidable and due to past (and continuing) exposures to chemical and physical carcinogens in air, water, food, and the workplace, as well as to lifestyle factors, particularly smoking."

The coalition predicted that such sweeping reforms would never come to pass without amending the National Cancer Act "explicitly to reorient the mission and priorities of the NCI to cancer cause and prevention." With the odds of getting cancer at an all-time high, we desperately need new cancer legislation if we are to win the war against cancer. But there is little hope of effecting meaningful reform with the cancer establishment in charge, sounding the same tired battle cry they did in 1971.

### **Don't Believe the Hype**

Last March, newspapers across the country dutifully heralded a decline in cancer incidence and mortality, citing the latest annual report of the American Cancer Society, National Cancer Institute, and other cancer organizations. The report credited the decline to lifestyle changes, improved detection, and reduced smoking.

Despite such celebrated claims of progress against the disease, the facts tell a different story. Reversal in overall mortality rates has been minimal and due largely to a reduction in lung cancer deaths from reduced smoking in men rather than to advances in treatment. Overall five-year survival rates for all cancers have remained virtually static since 1970, from 49 to 54 percent for all races combined, and from 39 to 40 percent for African Americans. Dr. John Bailar, formerly an epidemiologist at the NCI and now chair of the Department of Health Studies at the University of Chicago, has found that reduced mortality rates are more likely the result of earlier detection and diagnosis rather than improved cancer treatments.

Meanwhile, cancer incidence has escalated to epidemic proportions over recent decades, with lifetime risks in the United States now reaching one in two for men and one in three for women. In 2000, more than 1.2 million new cancer diagnoses are expected, and some 550,000 Americans will die from the disease. The overall increase of all cancers from 1950 to 1995 was 55 percent, of which lung cancer accounted for about a quarter. Meanwhile, the incidence of a wide range of non-smoking cancers, such as non-Hodgkin's lymphoma, multiple myeloma, and adult brain cancer, is increasing at proportionately greater rates, including an alarming rise in childhood cancer of over 20 percent.

Longer life expectancy cannot explain these increases, as incidence and mortality rates in cancer registries are age-adjusted to reflect these trends. Nor can the epidemic be attributed primarily to poor lifestyle habits. Smoking is clearly the single most important cause of cancer, but lung cancer rates for men are declining because men are smoking less. (Rates for women are about the same, as the number of women smokers has remained steady.) And while a high-fat diet may increase risk by passing on toxic chemicals that accumulate in fatty tissues, fat per se cannot be incriminated as a major cause of cancer, in sharp contrast to heart disease. In Mediterranean countries, where up to 40 percent of the average person's diet is composed of olive oil, breast cancer rates are low, and epidemiological studies over the past two decades have consistently failed to establish any causal relationship between breast cancer and fat consumption.

Finally, rising rates cannot be attributed to genetic factors. Not only do genetic factors alone account for relatively few cancers, the genetics of human populations cannot possibly have changed within the past few decades. And in what may be the largest study ever to compare the role of genes versus environment in cancer, Dr. Paul Lichtenstein and his colleagues reported in *The New England Journal of Medicine* last July that "the overwhelming contributor to the causation of cancer in the populations of twins that we studied was the environment."

What then is driving the modern cancer epidemic? Study after study points to the role of runaway industrial technologies, particularly those based on petrochemicals. The explosive growth of the petrochemical industry since the 1940s has far outpaced legislative and regulatory controls, producing a dizzying array of synthetic chemicals that have never been screened for human health effects: of the roughly 75,000 chemicals in use today, only some 3 percent have been tested for safety. For over fifty years, in other words, the American public has been unknowingly exposed to avoidable carcinogens from the moment of conception until death.

### **Follow the Money**

The American Cancer Society's mission statement says it is dedicated to "preventing cancer and saving lives—through research education, advocacy, and service." Yet what the Society seems to do best is accumulate wealth. According to James Bennett, a professor of economics at George Mason University who tracks charitable organizations, the ACS held a fund balance of over \$400 million with about \$69 million worth of holdings in real estate, office buildings, and equipment in 1988. ("How raw land helps us find a cure for cancer or helps cancer victims is an enigma I can't fathom," says Bennett.) Of that money, the ACS spent only \$90 million—barely a quarter of its budget—on medical research and related programs. The rest covered "operating expenses," including about 60 percent for salaries, pensions, executive benefits, and overhead. By 1989, ACS cash reserves had reached over \$700 million.

In a 1992 *Wall Street Journal* article, Loyola University professor of economics Thomas DiLorenzo charged that a high percentage of funds raised by the ACS went to pay overhead, salaries, benefits, and travel expenses for national executives in Atlanta. For every ACS affiliate, salaries and fringe benefits were by far the largest single budget item. Most direct services were provided by volunteers. For every dollar spent on direct community services, such as driving cancer patients from the hospital after chemotherapy and providing pain medication, approximately \$6.40 was spent on compensation and overhead. At most, 16 percent of all money raised nationally was spent on direct services. Yet Society fundraising appeals routinely asked for more funds to support their cancer programs.

"If current needs are not being met because of insufficient funds, as fundraising appeals suggest," asked DiLorenzo, "why is so much being hoarded? Most contributors believe their donations are being used to fight cancer, not to accumulate financial reserves. More progress in the war against cancer would be made if they would divest some of their real estate holdings and use the proceeds—as well as a portion of their cash reserves—to provide more cancer services."

Things haven't changed much since DiLorenzo's findings. By 1998, based on the Society's annual budget report, revenues had reached \$677 million. In 1998, the Society spent some \$140 million on "supporting services" such as overhead, salaries in the \$220,000 range for regional directors (national executives' salaries are not disclosed), benefits and travel expenses, fundraising, and public relations. It had \$800 million in reserves.

The Society's penchant for storing wealth over funding research and services prompted the Chronicle of Philanthropy, a watchdog organization that monitors major charities, to analyze its budgets and programs. The Chronicle concluded that the American Cancer Society is "more interested in accumulating wealth than saving lives."

### **Prevention First?**

Even as the Society's purse grows, its spending on prevention research remains nominal at best. Responding to a 1999 article in *Sierra*, the magazine of the Sierra Club, which charged the ACS with indifference to prevention, Dr. Harmon Eyre, executive vice president for research and medical affairs for the Society, released details of its allocations for research on environmental carcinogenesis. Yet while Eyre claims cancer cause and prevention are a high priority and receive generous funding from the ACS, his documentation says the contrary. Eyre's figures indicate the Society spent \$2.6 million in 1998 on nineteen large research grants on environmental carcinogenesis, but only three grants could reasonably qualify as environmental cancer research. And although the Society claims it allocated \$100 million of its \$677 million budget to support cancer research in 1998, analysis reveals that actual expenditures on environmental carcinogenesis totaled less than \$500,000, well under one-hundredth of one percent of the Society's total annual budget.

The situation with the National Cancer Institute is not much better. The agency has professed a commitment to prevention, but its budget and policy priorities belie any such claim. Of an approximately \$3 billion budget, the National Cancer Institute allocates less than one percent to researching occupational cancers, even though they are the most preventable cancers. Over 10 percent of adult cancer deaths result from occupational exposures, which are also a recognized cause of cancer in children: parents exposed to carcinogens on the job often expose their unborn children to the same cancer-causing chemicals. And while the NCI says that diet accounts for roughly one-third of all cancers, it spends just \$1 million on education, media, and public outreach to promote the consumption of fruits and vegetables for cancer prevention, while ignoring well-documented evidence that produce contaminated with carcinogenic pesticide residues increases risk. It also fails to educate the public about the cancer risks posed by a wide range of industrial by-products and contaminants, particularly dioxin.

The American Cancer Society has not only remained silent about removing known carcinogens from our midst, it has lent its considerable influence and media muscle to help industry defeat such efforts. Thumbing its nose at an impressive body of legislative and regulatory precedents such as the Delaney amendment, which until 1996 banned the addition of known carcinogens to food products, the ACS has consistently rejected the relevance of animal evidence as predictive of human risk. (In direct contradiction to previous ACS protests and statements, Eyre claims the Society had not supported Delaney because it "was just not strong or potentially effective enough.") When studies unequivocally proved in 1971 that diethylstilbestrol (DES) caused vaginal cancers in teenage daughters of women who had taken the drug during pregnancy, the ACS refused to testify at congressional hearings on whether the FDA should ban the drug's use as an animal-feed additive. (It had long ignored evidence that DES is a potent carcinogen in rodents, known since 1939.) And in 1977, the ACS called for a congressional moratorium on the FDA's proposed ban on saccharin, going so far as to advocate its use by nursing mothers and babies in "moderation" despite clear-cut evidence of its carcinogenicity in rodents and very suggestive evidence of bladder cancer in humans.

Backing the cosmetics industry in 1977 and 1978, the ACS fought proposed regulations for permanent dark hair-coloring products containing dyes known to cause breast cancer in animals, and now implicated as a cause of non-Hodgkin's lymphoma and other cancers. In 1982 it formally codified its insistence on unequivocal human evidence of carcinogenicity before speaking out against potential public health hazards, ignoring virtually every tenet of responsible public health policy. The Society, however, apparently has no problem defending chemicals or products when no such proof of their safety exists. In 1992, the ACS issued a joint statement with the Chlorine Institute in support of the continued global use of organochlorine pesticides, despite evidence that some were known to cause breast and other cancers. And in 1996, it joined a diverse group of patients and physician groups to file a petition against the FDA to ease restrictions on silicone breast implants. The ACS failed to disclose industry studies that showed the gel in the implants induced cancer, and that the implants were contaminated with known carcinogens such as ethylene oxide and crystalline silica.

In its latest annual report, "Cancer Facts & Figures 1999," the ACS makes no reference to avoidable causes of a range of cancers, although it belatedly acknowledges that women can take steps to reduce breast cancer risk. (The 1998 report makes no reference to prevention.) Despite a promise of "cancer facts," the Society neglects to inform the public about a number of well-documented cancer risks. Among them: dusting the genital area with talc increases risk of ovarian cancer; home and garden use of pesticides, or consumption of nitrite-colored hot dogs contaminated with the highly potent carcinogen nitrosamine are well-recognized risk factors for childhood leukemia and brain cancer; and animal and dairy fats and mainstream produce are exposing consumers to a wide range of carcinogenic pesticide residues, unlike safer organic foods.

### **Defending Pesticides**

The degree of collusion between the ACS and the chemical industry became clear to Marty Koughan, a public television producer, in 1993, when he was working on a documentary about pesticide dangers to children for PBS's Frontline. Koughan's investigation relied heavily on "Pesticides in the Diet of Children," an embargoed, groundbreaking report from the National Academy of Sciences. The report declared the nation's food supply "inadequately protected" from cancer-causing pesticides and a significant threat to children's health.

Shortly before Koughan's program was scheduled to air, a draft of the script was leaked to Porter-Novelli, a high-powered PR firm for produce growers and the agrichemical industry. In true Washington fashion, Porter-Novelli plays both sides of the fence, representing not only government agencies but also the industries they regulate. Its 1993 client list included DuPont, Monsanto, American Petroleum Institute, and Hoffman-LaRoche—as well as the USDA and the NCI. Porter-Novelli has also done pro bono work for the ACS for years.

First crafting a rebuttal to help manufacturers soothe the public fears about pesticide-contaminated food, Porter-Novelli then faxed a copy to ACS headquarters in Atlanta. The rebuttal was emailed to 3,000 regional ACS offices to help field viewers' calls after the show aired. It read: "The program makes unfounded suggestions ... that pesticide residues in food may be at hazardous levels. Its use of 'cancer cluster' leukemia case reports and non-specific community illnesses as alleged evidence of pesticide effects in people is unfortunate. We know of no community cancer clusters which have been shown to be anything other than chance grouping of cases and none in which pesticide use was confirmed as the cause."

This unabashed defense of the pesticide industry was taken up by the right-wing group Accuracy in Media in an article called "Junk Science on PBS." Asking, "Can we afford the Public Broadcasting Service?" the piece went on to discredit Koughan's documentary: "'In Our Children's Food' ... exemplified what the media have done to produce these 'popular panics.'"

Koughan was outraged that the ACS was being used to defend the pesticide industry. "At first, I assumed complete ignorance on the part of the ACS," said Koughan. But after unsuccessful efforts to get the national office to rebut the AIM article, Koughan finally grasped what was happening. "When I realized Porter-Novelli represented five agricultural companies, and that the ACS had been its client for years, it became obvious that the ACS had not been fooled at all," he said. "They were willing partners in the deception, and were in fact doing a favor for a friend by flacking for the agricultural industry."

### **Friends of the Mammography Industry**

Just as interlocking interests with major chemical manufacturers go a long way toward explaining the Society's resistance to prevention initiatives, close connections to the mammography and cancer-drug industry shed light on its treatment recommendations. Five of its past presidents were radiologists. In every move, it reflects the interests of major manufacturers of mammogram machines and film, including Siemens, DuPont, General Electric, Eastman Kodak, and Piker. If every premenopausal woman were to follow its mammography guidelines, the annual revenue to health care facilities would be an additional \$2.5 billion.

The mammography industry conducts research for the Society and its grantees, serves on its advisory boards, and donates considerable funds. DuPont, a major manufacturer of mammography equipment (in addition to being a major petrochemical manufacturer), is a primary supporter of the ACS Breast Health Awareness Program. The company sponsors television shows and other media productions touting mammography; produces advertising, promotional, and informational literature for hospitals, clinics, medical organizations, and doctors; produces educational films; and lobbies Congress for legislation promoting access to mammography services. In virtually all important actions, the ACS aligns itself with the mammography industry, failing to pursue viable alternatives to mammography.

The ACS urges premenopausal women to get mammograms even though evidence suggests that premenopausal women are more sensitive to cancer risks from radiation; there is no evidence of benefit or effectiveness for premenopausal women; false negatives—as well as false positives—are common because the dense breast tissue of premenopausal women confounds test results. The NCI no longer endorses premenopausal mammography, nor is it practiced in Canada or Europe or any other country in the world.

Mammography is truly an ACS crusade, and the annual "National Breast Cancer Awareness Month" campaign is at its center. ACS representatives help sponsor promotional events and stress the need for mammography every October with the campaign's centerpiece, National Mammography Day. Absent from the proselytizing is any information on environmental and other avoidable causes of breast cancer. This is no accident. As the multimillion-dollar funder of Breast Cancer Awareness Month, pharmaceutical giant AstraZeneca influences every leaflet, poster, and commercial product produced by the campaign. It's no wonder these publications focus almost exclusively on mammography while ignoring carcinogenic industrial chemicals and their relation to breast cancer. When it founded Breast Cancer Awareness Month in 1985, AstraZeneca (formerly known as Zeneca before it merged with the Swedish pharmaceutical company Astra) was owned by Imperial Chemical Industries, a leading international manufacturer of industrial chemicals and carcinogenic pesticides. National Breast Cancer Awareness Month is a masterful public relations coup for AstraZeneca, providing the company with valuable, albeit undeserved, goodwill from millions of American women.

AstraZeneca profits from treating breast cancer, and hopes to profit still more from the prospects of large-scale national use of Tamoxifen for breast cancer "prevention." The NCI and the ACS both embraced AstraZeneca's new drug, aggressively launching a "chemoprevention" program in 1992 aimed at recruiting 16,000 healthy women at "high risk" of breast cancer. The five-year clinical trial claimed that Tamoxifen reduced breast cancer risks by 30 percent. The risks of this toxic drug, including potentially fatal uterine cancer and blood clots, were noted but trivialized. As the trials progressed, it became clear that the risk of serious complications outweighed professed benefits. Women have still not been informed about delayed risks of liver cancer. Equally troubling, neither the ACS nor the NCI has pursued evidence that regular use of a cheap, nonpatented, over-the-counter drug—*aspirin*—has been shown to reduce risks of breast cancer. (A 1996 study found that women who took aspirin three times a week for five years reduced their risk by up to 30 percent, a finding worth pursuing.)

For years the ACS demonstrated its allegiance to the multibillion-dollar cancer drug industry by aggressively attacking potential competitors through its "Committee on Unproven Methods of Cancer Management," created to "review" unorthodox or alternative therapies. This committee, staffed by "volunteer health care professionals," invariably promoted mainstream, expensive, and arguably toxic drugs patented by major pharmaceutical companies, and opposed alternative or "unproven" therapies, which are generally cheap, non-patentable, and minimally toxic. As with Senator Joseph McCarthy's blacklist of suspected communists, once a clinician or oncologist was associated with "unproven methods," harassment and blackballing often followed, and funding would dry up. This witch hunt against alternative practitioners was in striking contrast to the Society's uncritical endorsement of conventional toxic chemotherapy, despite increasing concern that chemotherapy may not significantly improve survival rates for most cancers. After an extensive review of clinical oncology studies, for example, Dr. Ulrich Abel of the Institute of Epidemiology and Biometry at the University of Heidelberg, Germany, concluded that for most patients chemotherapy functions as little more than a placebo, with an attendant decline in quality of life from the toxic treatment.

### **Bucking the Cancer System**

Over the past twenty years cancer patients have become increasingly frustrated—but also increasingly organized. Disillusioned with the cancer establishment's definition of "progress" and "prevention" and fed up with the toxic side effects of conventional treatments, grassroots cancer activists convinced forty members of Congress to investigate the efficacy of alternative therapies. Congress enlisted the Office of Technology Assessment (OTA), a congressional think tank, to do the job. In 1990, OTA identified some 200 promising studies on alternative treatments, and concluded that NCI had "a mandated responsibility to pursue this information and facilitate examination of widely used 'unconventional cancer treatments' for therapeutic potential."

Yet mainstream cancer organization have not followed the OTA's recommendations. For example, in the January 1991 issue of its *Cancer Journal for Clinicians*, the ACS dismissed the Hoxsey therapy, a nontoxic combination of herb extracts developed in the 1940s by populist Harry Hoxsey, as a "worthless tonic for cancer." However, a detailed critique of Hoxsey's treatment by Dr. Patricia Spain Ward, a leading contributor to the OTA report, concluded just the opposite: "More recent literature leaves no doubt that Hoxsey's formula does indeed contain many plant substances of marked therapeutic activity." In his recently published book, *When Healing Becomes a Crime*, Kenny Ausubel chronicles the cancer establishment's unbridled—and scientifically unsubstantiated—attacks against the Hoxsey treatment and other promising new therapies, without even bothering to investigate their effectiveness.

This is not the first time that ACS claims of quackery have been called into question or discredited. A growing number of other innovative therapies originally attacked by the ACS are gaining acceptance. These include hyperthermia, Tumor Necrosis Factor, (originally called Coleys' Toxin), hydrazine sulfate, and Burzynski's antineoplastons. Well over 100 promising alternative nonpatented and nontoxic therapies have already been identified. Clearly, such treatments merit clinical testing and evaluation, with ACS and NCI funds, using similar statistical techniques and criteria as those established for conventional chemotherapy.

Bypassing the blithely unresponsive NCI and ACS, the National Institutes of Health created its own agency, the Office of Alternative Medicine (OAM), in 1992 to study unconventional approaches to treatment. In 1998, eight years after the OTA's report, Congress upgraded the OAM to an independent institute, The National Center for Complementary Alternative Medicine. Soon thereafter, the Society begrudgingly abandoned its decades-long crusade against "quackery."

When President Nixon launched the war on cancer in 1971, the cancer establishment seized the opportunity to pursue its own narrow self-interest. Its policies and strategies on cancer continue to ignore the essential steps required to wage an effective battle against the disease and remain based on two myths: First, that there has been dramatic progress in the treatment and cure of cancer. Second, that any increase in cancer incidence and mortality is due to an aging population and smoking—discounting evidence that occupational exposures and urban air pollution are also implicated in many cases of lung cancer—while denying any significant role for involuntary and avoidable exposures to industrial carcinogens.

Cancer is preventable. But we'll make little headway if public officials like Al Gore and Dianne Feinstein fail to recognize the importance of prevention and the critical need for drastic, immediate reform. It is time for the cancer establishment to deploy its considerable war chest toward implementing meaningful cancer prevention strategies and eliminating the toxic output of industry. We must put lives before profits. Only then will we begin to make real progress in the war on cancer.