
THE



BEFORE IT STARTS
CAMPAIGN

***How to Win the Losing War
Against Cancer***

FEBRUARY 2003

THE STOP CANCER BEFORE IT STARTS CAMPAIGN

*How to Win the Losing War Against Cancer**

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SUMMARY

Since passage of the 1971 National Cancer Act, the overall incidence of cancer in the U.S. has escalated to epidemic proportions, now striking about 1.3 million and killing about 550,000 annually; nearly one in two men and more than one in three women now develop cancer in their lifetimes. While smoking is unquestionably the single largest cause of cancer, besides a risk factor for some other cancers, the incidence of lung and other smoking-related cancers in men has declined sharply. In striking contrast, there has been a major increase in the incidence of predominantly non-smoking cancers in men and women, **which is disproportionately higher among Black Americans**, and also in the incidence of childhood cancers.

Nevertheless, the “cancer establishment,” the National Cancer Institute (NCI) and American Cancer Society (ACS), have repeatedly made misleading assurances of major progress in the war against cancer for over two decades. These culminated in their 1998 *Report Card*, claiming a recent “reversal of an almost 20-year trend of increasing cancer cases.” However, this “reversal” was minimal and artifactual. Furthermore, in October 2002, NCI admitted to significant errors in underestimating its published incidence data, apart from delays in reporting these data.

The escalating incidence of cancer does not reflect lack of resources. Since 1970, NCI’s budget has increased approximately 30-fold, reaching \$4.6 billion for 2003, while annual ACS revenues are approximately \$800 million. Paradoxically, NCI’s escalating budget over the last three decades is paralleled by the escalating incidence of cancer.

Apart from basic research, the cancer establishment’s mindset remains fixated on “secondary” prevention or damage control—screening, diagnosis, and chemoprevention (the use of drugs or nutrients to reduce risks from prior avoidable carcinogenic exposures)—and treatment. This is coupled with indifference to primary prevention, preventing a wide range of avoidable causes of cancer, other than faulty lifestyle—smoking, inactivity, and fatty diet. This exclusionary claim remains based on a scientifically discredited 1981 report by British epidemiologists, Drs. Richard Doll and Richard Peto; Doll’s strong pro-industry record over recent decades is still largely unrecognized. They **guesstimated** that lifestyle factors are responsible for up to 90% of all cancers, with the balance arbitrarily assigned to environmental and occupational causes. For

the ACS, this indifference to primary prevention extends to hostility, compounded by conflicts of interest with the giant cancer drug and other industries. Not surprisingly, The Chronicle of Philanthropy, the nation’s leading charity watchdog, has charged that the ACS is “more interested in accumulating wealth than in saving lives.” These considerations are more critical in view of the increasing domination of NCI policies by the ACS.

In 1992, NCI claimed that its funding for prevention research was \$350 million, 17% of its approximately \$2 billion budget; this claim manipulatively included funding for “secondary” prevention. However, independent estimates, unchallenged by NCI, were under \$50 million, 2.5% of its budget. In NCI’s 2001 \$3.7 billion budget, \$444 million, 12%, was allocated to “Cancer Prevention and Control,” with no reference to primary prevention. ACS “Environmental Research” funding in 1998 was \$330,000, less than 0.1% of its \$678 million revenues, apart from \$873 million assets.

The U.S. cancer establishment conducts minimal research on avoidable exposures to a wide range of industrial carcinogens contaminating the totality of the environment—air, water, soil, the workplace, and consumer products—carcinogenic prescription drugs and “low dose” diagnostic medical radiation. As critically, the cancer establishment has failed to warn the public, media, Congress and regulatory agencies of such avoidable exposures to industrial and other carcinogens, incriminated in rodent tests and in epidemiological studies.

This failure to warn the public of cancer risks from avoidable exposures to industrial carcinogens and ionizing radiation is in striking contrast to the cancer establishment’s prodigious stream of press releases, briefings, and media reports claiming the latest advances in screening and treatment, and basic research. This silence also violates the 1988 Amendments to the National Cancer Program, calling for **“an expanded and intensified research program for the prevention of cancer caused by occupational or environmental exposure to carcinogens.”**

The decades-long silence of the cancer establishment on a wide range of avoidable causes of cancer, other than personal lifestyle, has tacitly encouraged powerful corporate polluters and industries manufacturing carcinogenic products. Such corporate conduct has been characterized, “white collar crime,” by Cong. J. Conyers in his 1979 and 1984 Bills, intended to extend such legislation to economically motivated crimes with

adverse public health or environmental consequences. The cancer establishment is thus complicit in these adverse public health consequences, and bears heavy responsibility for losing the winnable war against cancer and for the current cancer epidemic. In its *Cancer Facts and Figures 2000*, the ACS dismissively reassures that carcinogenic exposures from dietary pesticides, **“toxic wastes in dump sites,” ionizing radiation from “closely controlled” nuclear power plants, and non-ionizing radiation, are all “at such low levels that the risks are negligible.”** These concerns are heightened by Senator Feinstein’s well-intentioned initiative to shift major control of national cancer policy from the public (NCI) to the private (ACS) sector, and still further by the February 2002 appointment as NCI Director of Dr. Andrew Von Eschenbach, past President-Elect of the ACS, who fully supports this privatization.

National cancer policies are now threatened more than ever before by the indifference of the cancer establishment to primary prevention, and its silence on avoidable causes of cancer, other than personal lifestyle. As seriously, this silence reflects denial of citizens' democratic Right-to-Know and empowerment, and rejection of environmental justice, by sacrificing citizens' health and welfare to powerful corporate interests. Representatives of consumer, labor, environmental, activist cancer groups, socially responsible business, and integrative and holistic medicine, strongly supported by independent scientists, must become actively engaged in developing the grass-roots STOP CANCER BEFORE IT STARTS Campaign, if the losing war against cancer is to be won.

The war against cancer must be fought by strategies based on primary prevention, rather than reactively on “secondary” prevention or damage control. As importantly, this war must be waged by leadership accountable to the public and not special interests.

LOSING THE WINNABLE WAR AGAINST CANCER

Pressured by leading representatives of the National Cancer Institute (NCI) and the American Cancer Society (ACS), Congress passed the National Cancer Act in 1971. The Act launched the National Cancer Program, under direction of the NCI, to attack and eradicate cancer, and “to disseminate cancer information to the public.” President Nixon enthusiastically embraced the Act, inaugurated The War Against Cancer, and increased

NCI’s budget from \$149 to \$223 million. Since 1970, NCI’s budget has escalated to \$4.6 billion for 2003, an approximately 30-fold increase (Appendix I). **Notwithstanding these massive increases, we are losing the winnable war against cancer. Cancer now strikes 1.3 million Americans and kills 550,000 annually.** Noteworthy is the parallelism between NCI’s escalating budget and the escalating incidence of cancer.

Escalating Incidence of Cancer

Over recent decades, the incidence of cancer has escalated to epidemic proportions (1), now striking nearly one in two men (44%) and more than one in three women (39%). This increase translates into approximately 56% more cancer in men and 22% more cancer in women over the course of a single generation (2). As admitted by recent NCI and ACS estimates, the number of cancer cases will increase still further because of the growth and aging of the population, dramatically doubling by 2050 (3).

From 1973 to 1999, based on the latest (now three years old) available data (1), the overall incidence of cancers, **adjusted to reflect the aging population**, has increased by approximately 24% (Appendix II). Although the overall incidence of lung cancer increased by 30%, it decreased by 6% in men and increased by 143% in women, reflecting major changes in their respective smoking practices; these rates also reflect the well-recognized and significant risks of passive smoking. Unquestionably, smoking has been and remains the single largest and most important cause of cancer. Particularly striking, however, has been the increase of predominantly non-smoking cancers, notably: malignant melanoma (156%); liver (104%); non-Hodgkin’s lymphoma (87%); thyroid (71%); testis (67%); post-menopausal breast cancer (54%); brain cancer (28%); and acute myeloid leukemia (16%). Childhood cancers have increased 26% overall: acute lymphocytic leukemia (62%); brain (50%); bone and joint (40%); and kidney (14%). Childhood cancers remain their number one killer, other than accidents. The median age for the diagnosis of cancer is now 67 in adults and 6 in children.

During recent years, the incidence of lung cancer in men has decreased more sharply, while that of predominantly non-smoking cancers has continued its steady increase (1). From 1992 to 1999 (a seven-year period), increasing incidences (Appendix III) include: thyroid (22%); malignant melanoma (18%); acute myeloid leukemia (13%); and post-menopausal breast cancer

(7%). Childhood cancers have increased 7% overall: bone and joint (20%); leukemias (18%); acute lymphocytic leukemia (16%); and kidney (14%). It should be noted that the overall age-standardized incidence of cancer has increased steadily from 1973 to 1999 (Appendix II), despite NCI's escalating budget (Appendix IV). It should be further recognized that the increasing incidence of cancer in the U.S., particularly of non-smoking cancers, is also reflected in other major industrialized nations (4).

Excess Incidence Rates in Black Americans

Overall, Black Americans have the highest age-standardized cancer incidence and mortality rates than other racial and ethnic groups (1). The incidence rate for Black Americans is about 9% higher than whites (Appendix V); the excess rates for a wide range of other sites range up to 124%. As disturbingly, the death rate for all cancers combined is about 30% higher in Black Americans than whites.

Excess rates in Black Americans reflect denial of environmental justice, and a wide range of racially-linked risk factors. These include: residence in highly polluted urban communities; residence in proximity to chemical industries and hazardous waste sites; excess consumption of high animal fat fast foods, highly contaminated with industrial pollutants and pesticides; and discriminatory occupational employment. The excess mortality in blacks from cancer, overall and at all sites, most likely reflects delayed access to diagnosis and treatment, besides lower quality health care.

Misleading Assurances by NCI and ACS

In striking contrast to the escalating incidence of overall and site-specific cancers from 1973 to 1999, and in spite of massively increased resources, the NCI and ACS have continually made empty claims for major progress in the war against cancer.

In 1984, reacting to growing concerns about increasing mortality, for which lack of funding and Congressional support were blamed, the NCI launched the "Cancer Prevention Awareness Program." It was claimed that this would halve the 1980 overall cancer mortality rate of 160/100,000 to 84/100,000 by 2000 (12). This was followed by a 1986 NCI document on *Cancer Control Objectives*, which similarly claimed that the overall mortality rate would be halved by 2000. In fact, this rate has remained unchanged, other than a

minor reduction, reflecting decreased lung cancer in men due to their reduced smoking. The lifetime risks of dying from cancer are now 24% for men, and 20% for women.

On March 12, 1998, at a heavily promoted Washington, D.C. press briefing, the NCI and ACS released a *Report Card*, announcing a recent "reversal of an almost 20-year trend of increasing cancer cases, and deaths. These numbers are the first proof that we are on the right track," enthused then- NCI director Dr. Richard Klausner. Media coverage was extensive. A *New York Times* headline announced: "A sharp reversal of the incidence [of cancer, and that] the nation may have reached a turning point in the war against cancer." *Science* commented: "The news could not have come at a better time for cancer researchers. Just as Congress began working on the 1999 biomedical budget, a group of experts announced . . . that the U.S. has 'turned the corner' in the war on cancer."

In fact, the "reversal" of overall incidence rates from 1992 to 1998 was manipulated and small (about 7%). This was largely due to the reduction of lung cancer in men following their decreased smoking. Also, any true decline would then have been considerably less had incidence rates, besides mortality, been more appropriately age-adjusted to the then current age distribution of the population rather than that of 1970, as misleadingly calculated by NCI, with its relatively higher representation of younger age groups (5). It should further be noted that the recent claimed declines in mortality, based on five-year survival rates, ignore factors such as "lead-time bias," earlier diagnosis resulting in apparently prolonged survival even in the absence of any treatment (12).

The reduction in the incidence of prostate cancer is also highly questionable, as admitted by the *Report Card* authors: "These decreased incidence rates (purportedly by approximately 20%) may be the result of decreased utilization of PSA screening tests." Moreover, the incidence rates for many non-smoking cancers have continued to escalate sharply (Appendix III), and to outweigh the decline in lung cancer incidence in men (1, 6).

Ignoring these criticisms, the cancer establishment persisted in empty promises for winning the cancer war. The NCI 2001 *Cancer Progress Report* claimed that rates of new cancers and deaths were falling overall, while admitting that this decline largely reflected a reduction in smoking-related deaths in men, a notable achievement for which the American Lung Association

played a major role. However, the *Report* again ignored the sharply increased incidence, both overall and for a wide range of non-smoking cancers, from 1973 to 1999. The *Report* also ignored the 4% increase in cancer mortality over the same period, in spite of multibillion-dollar expenditures on treatment and treatment research.

As a leading critic on the politics and finance of science recently commented, “The good news about cancer must be emphasized and, if need be, manufactured, to keep up public spirits and support...for more money...without public interference in the use of the money” (7). The *Report* also admitted that the costs of cancer treatment, direct costs, had more than doubled from \$18 billion in 1985 to \$41 billion in 1995. Additionally, indirect costs from loss of wages, taxes, earnings and productivity were estimatedly \$100 billion; in 1999, there were about 8.3 million cancer survivors, 3.2 million of whom were less than 65 years old.

Of further interest is an analysis of leading causes of death from 1973 to 1999. **Cancer has increased by 30%, from 17.7% to 23.0% (1); in striking contrast, according to the CDC National Center for Health Statistics 2001, mortality from heart disease decreased by 21%, from 38.4% to 30.3%.** Of related interest is the fact that, according to CDC, AIDS deaths over the last 20 years total under 500,000 in contrast to current annual cancer deaths of 550,000.

In May 2002, in a stunning reversal, the NCI and ACS suddenly abandoned their long-standing promises for winning the war against cancer. In their Annual Report to the Nation, they admitted that **the incidence of cancer is expected to double by 2050 due to the aging population** (3). No reference, however, was made to the sharply increasing incidence of cancers in younger age groups, such as childhood and testes (Appendix II). Most recently, NCI investigators have admitted that “reporting delay (of over two years) and reporting error – (have resulted in) downwardly biased cancer incidence trends, particularly in the most recent diagnostic years” (8). As reported in the *Wall Street Journal*, these “revised estimates present a dispiriting picture of the nation’s progress in preventing cancer” (9). Of concern is the silence with which other mainstream media have greeted NCI’s admission.

THE CANCER ESTABLISHMENT’S MINIMAL RESEARCH ON PREVENTION

The research policies and priorities of the NCI and ACS remain dominated by professional mindsets fixated on damage control (screening, diagnosis and treatment), and basic research. High priority for screening persists in spite of long-standing challenges, which have finally received headline coverage, as to its questionable effectiveness for cancers such as prostate, lung, and premenopausal breast, and childhood neuroblastoma (10). Minimal emphasis and even indifference remains directed to prevention of avoidable causes of cancer, other than those attributed to lifestyle factors, smoking, inactivity, and fatty diet, without any consideration of carcinogenic contaminants. This is in striking contrast to the cancer establishment’s misdirected priority for “secondary” prevention, misleadingly characterizing screening and diagnosis, and “chemoprevention,” by the use of vitamins or drugs (such as Tamoxifen), in generally futile attempts to reduce the effects of prior carcinogenic exposures; **the distinction between “secondary” prevention and prevention is crucial**; the latter is essential for winning the winnable war on cancer. The longstanding indifference of the ACS to prevention even extends to hostility, such as supporting the Chlorine Institute in defending the continued global use of organochlorine pesticides. This track record is so unarguable as to challenge ACS’s role in national cancer policy (Appendix VI).

These professional mindsets are compounded by poorly recognized institutionalized conflicts of interest, particularly for the ACS. For decades, powerful groups of interlocking corporate interests, with the highly profitable cancer drug industry at their hub, have dominated the losing war against cancer. In a surprisingly frank statement, Dr. Samuel Broder, NCI Director from 1989 to 1995, stated the obvious: “The NCI has become what amounts to a government pharmaceutical company” (11). Broder resigned from NCI to become Chief Scientific Officer of Ivax, subsequently moving to become Chief Medical Officer of Celera Genomics; both companies are major manufacturers of cancer drugs. By linking their interests with those of major cancer drug companies, both NCI and ACS have directed their priorities away from research on prevention to virtually exclusionary emphasis on damage control (12).

The professional mindset of the NCI is strikingly confirmed by the lack of expertise in prevention of its

successive 3-member executive President's Cancer Panels since their inception in 1971; additionally, some members had deep personal ties with drug and petrochemical industries. Concerns on professional mindsets also apply to the successive 18-member National Cancer Advisory Boards, which “almost totally lack expertise in environmental and occupational carcinogenesis” (12). This is in clear violation of Section 407(a)(1)(B) of the National Cancer Act, requiring that no less than five Board members “**shall be individuals knowledgeable in environmental carcinogenesis.**”

NCI and ACS Reliance on Industry-Biased Claims on Cancer Causation

The cancer establishment has long insisted that faulty lifestyle, particularly smoking, inactivity, and fatty diet—excluding recognition of its contamination with carcinogenic pesticides—is the predominant cause of cancer. This exclusionary or predominant lifestyle emphasis, also known as “blame the victim,” remains strongly reinforced by U.S. and international reliance on the biased and inept 1981 report on U.S. cancer mortality by U.K. epidemiologists, Drs. Richard Doll and Richard Peto (13); over the last three decades, Doll's track record on prevention reveals strong pro-industry bias and conflicts of interest (Appendix VII). In the absence of any scientific data, Doll and Peto **guesstimated** that lifestyle factors are responsible for up to 90% of cancer mortality. This left a small balance, which they arbitrarily assigned to occupation, pollution, and “industrial products.” Strangely excluded from their 1981 guesstimates was any consideration of mortality for people over the age of 65 and for Black Americans, just those groups among whom cancer disproportionately impacts; also excluded was any consideration of cancer incidence. Further excluded was recognition of the substantial evidence that a wide range of occupational carcinogens are major causes of many cancers, particularly lung (12); there is also clear evidence of additive or synergistic interactions between carcinogenic occupational exposures and smoking. Moreover, “non-smoking attributable” exposures, occupational and air pollution, are responsible for about 20% of lung cancers (10). Nevertheless, NCI and ACS continue to direct minimal research and emphasis on occupational and environmental causes of cancer, in spite of substantial data relating them to the escalating incidence of overall and site-specific cancers.

The ACS is even more dismissive than the NCI in

its understanding and priorities on cancer prevention. **In *Cancer Facts and Figures 2002*, ACS reassures that cancer risks from dietary pesticides, hazardous waste sites, ionizing radiation from “closely controlled” nuclear plants, and non-ionizing radiation are all at such low levels as to be “negligible.”**

The cancer establishment's continued trivialization of the major impact of occupational cancer is egregious. Based on NIOSH surveys, some 11 million men and 4 million women are involuntarily exposed to a wide range of occupational carcinogens, representing the single largest cause of avoidable cancer. A 1979 confidential report by consultants to the chemical industry trade association (the American Industrial Health Council) admitted that exposures to occupational carcinogens were responsible for at least 20% of all cancer, and that they posed a “**public health catastrophe**” (14). Although this report was widely leaked, it was ignored by Doll and Peto (13). A more recent limited and conservative estimate concluded that occupational exposures overall are responsible for 10% of cancer mortality, about 55,000 avoidable annual deaths (15); for workers exposed to highly potent carcinogens, mortality rates are much higher. **Poorly recognized is the doubling and quadrupling of the incidence of mesotheliomas, uniquely induced by asbestos, in white and Black American men, respectively, from 1977 to 1999** (1). Additionally, paternal and maternal exposures to occupational carcinogens have been incriminated as significant causes of childhood cancer, the overall incidence of which has increased by 26% since passage of the National Cancer Act (Appendix II). It should be further stressed that lower level exposures to occupational carcinogens, such as asbestos and benzene, often extend from within industrial plants to local communities and, to a lesser extent, the entire U.S. population.

NCI and ACS Reject the Precautionary Principle

The cancer establishment ignores the fundamental and widely accepted Precautionary Principle. Illustratively, it has failed to undertake research on nationwide community concerns on clusters of adult and childhood cancers in the vicinity of major air polluting urban facilities, nuclear power plants, petrochemical industries, and Superfund hazardous waste sites; these are disproportionately and discriminatorily located in low socio-economic, Black American, and other ethnic

communities. This failure is further compounded by the availability of data on air and water pollutants from large chemical industries and hazardous waste sites, following EPA's creation of The National Toxic Release Inventory (TRI) in 1987. More detailed and user-friendly Right-to-Know exposure data at the state level, particularly in Massachusetts and New Jersey, are now available (16). Worse still, both NCI and ACS have remained silent or dismissive of such concerns. Furthermore, NCI's silence fails to reflect substantial data incriminating avoidable and unknowing exposures of the population-at-large to industrial carcinogens, particularly Persistent Organic Pollutants (POPs), and novel man-made radioactive isotopes, which contaminate the totality of the environment: air, water, soil, the workplace, and consumer products, such as food, household products, cosmetics and toiletries. Such exposures have, to varying degrees, been incriminated in the escalating incidence of overall and site-specific cancers over recent decades.

A further example of NCI's dismissiveness of avoidable causes of cancer is the insistence by Dr. Richard Klausner, NCI Director from 1995 to 2001, at Congresswoman Nancy Pelosi's (D-CA) July 26, 1996, Fort Mason, San Francisco "Town Hall Meeting" on breast cancer, that exposure to "low level diagnostic ionizing radiation does not demonstrate an increased risk." However, this is contrary to the August, 2000 conclusion of NCI's own three senior staffers involved in the U.S. Scoliosis Control Study (Drs. M. Doody, J. Lonstein, and C. Land), that the allegedly relatively low cumulative breast dose involved was responsible for a 70% excess breast cancer mortality.

NCI's minimal priorities for primary prevention research, and dismissal of the Precautionary Principle are further exemplified by its trivialization of the significance of evidence derived from valid carcinogenicity tests in rodents; the ACS is even more dismissive. Illustrative is the September 1992 statement by Dr. Richard Adamson, past director of NCI's Division of Cancer Epidemiology, trivializing the risks of food contaminated with pesticides shown to be carcinogenic in validated rodent tests; as Director of the Washington office of the National Soft Drinks Association, Adamson promotes the use of artificial sweeteners, particularly the carcinogen saccharin. Further illustrative is the June 1995 dismissal by senior NCI staffer Dr. Leslie Ford of the well-documented evidence on the potent hepatocarcinogenicity in rats, and formation of irreversible DNA

adducts, of Tamoxifen used in breast cancer chemoprevention trials in healthy women (17). She dismissed this evidence, of which women still remain uninformed, as "premature," claiming that carcinogenic effects were seen only at "high doses," although these were similar to those used in the trial. Ford further attempted to discredit this evidence on the remarkable grounds that no women in the trial had developed liver cancer over the preceding few years. The same logic would have eliminated most unequivocal carcinogens, such as asbestos, benzene, and vinyl chloride, which rarely, if ever, induce cancer with such brief latency.

In striking contrast to the NCI and ACS, in February 2002, the Canadian Cancer Society has unequivocally affirmed the Precautionary Principle, "to develop our cancer prevention and risk reduction messages." However, in its September 2001 "Discussion Document," the Canadian Government effectively rejected this Principle, as recently criticized by the Canadian Environmental Law Association, in favor of a cost-benefit and scientific risk-based framework.

In further explicit support of the Precautionary Principle, the Canadian Cancer Society joined with the Sierra Club of Canada in April 2002 in demanding a ban on the "cosmetic" use of carcinogenic pesticides in the home, garden, lawn and recreational facilities (18). However, the Minister of Health, Anne MacLellan, rejected this demand, claiming that "there is no evidence to support such a case. Pesticides are registered only if their risks have been determined to be acceptable when used according to instructions." In striking contrast, Quebec's Minister of the Environment presented a new pesticide management code in July 2002, "with strict regulations designed to progressively institute a decreased and more prudent use and sale of (cosmetic) pesticides" that are carcinogenic or endocrine disruptive, including lindane, malathion and 2,4-D. U.S. manufacturers of 2,4-D have threatened to sue under Chapter 11 of NAFTA. It should be emphasized that such pesticide uses are being withdrawn in the U.S. because of requirements of the 1996 Food Quality Protection Act, and increasing legal liability deterrents.

NCI and ACS Ignore Recent Confirmatory Evidence on Environmental Causes of Cancer

The relation of environmental factors to risks of breast cancer has been supported by a 1995 report on immigrants from high-risk nations, like the U.S. and

Canada, to low-risk nations, such as Japan, and also the reverse migration (19). Slowly but surely, no matter at what age they moved from their country of origin, the immigrants assumed risks similar to those experienced by native-born women. More striking confirmation comes from a 2000 publication on a large-scale study of identical twins in Sweden, Denmark, and Finland; this showed that cancer risk in adopted children parallels that of their adoptive, rather than biological, parents. “The overwhelming contribution to the causation of cancer in the population of (90,000) twins that we studied was the environment” (20). The critical significance of these findings has been recently stressed. “Thus the conclusion from twin studies is consistent with the conclusion from migrant studies: **the majority, probably the large majority, of important cancers in western populations are due to environmental rather than genetic factors.** Overly enthusiastic expectations regarding genetic research for disease prevention have the potential to distort research priorities for spending and health” (21).

More striking still is the fact that the cancer establishment has ignored the June 2002 admission by Doll that most non-smoking cancers “are caused by exposure to chemicals, often environmental ones” (Appendix VII). Nevertheless, NCI and ACS policies and priorities still remain fixated on Doll’s 1981 report, trivialising the role of carcinogenic environmental exposures (p. 8).

It should be further recognized that the majority of environmental and other carcinogens also induce other chronic toxic effects, notably genetic, endocrine disruptive and reproductive, neurotoxic, haematological, and immunological, for which there are no incidence trend data comparable to those for cancer. Cancer, in effect, thus likely represents a quantifiable paradigm of a wide range of other adverse public health impacts of poorly controlled or regulated industrial technologies.

THE CANCER ESTABLISHMENT’S MINIMAL FUNDING FOR PREVENTION

The cancer establishment grossly exaggerates its alleged budgetary allocations for research and advocacy on primary prevention, while trivializing the role of industrial carcinogens as avoidable causes of cancer.

The National Cancer Institute

NCI claimed that \$350 million (17%) of its approximately \$2 billion 1992 budget was allocated to primary prevention. However, prevention expenditures, based on

published independent estimates, unchallenged by NCI, were under \$50 million (2.5%), of which \$19 million (0.9%) was allocated to occupational cancer (22). Only about \$15 million (0.35%) of the \$4.2 billion 2002 budget was allocated to intramural occupational research. These trivial allocations strikingly exemplify NCI’s continuing neglect of cancer prevention.

The NCI leadership has used semantic tactics to mislead and confuse Congress regarding claimed allocations for primary prevention. NCI exaggerates such allocations by including unrelated “secondary” prevention, screening, diagnosis, and chemoprevention, by the use of dietary “nutraceuticals” or drugs such as Tamoxifen, in futile efforts to reduce susceptibility to prior carcinogenic exposures. Not surprising was the March 16, 1992 reaction by Congressman David Obey (D-WI), at hearings before a House Subcommittee of the Committee on Appropriations: “A number of scientists have suggested that cancer prevention receives an even smaller percentage of the budget than what NCI considers primary prevention.” This skepticism is further detailed in May 1998 exchanges between Congressman Obey and Dr. Klausner. Questions by Congressman Obey, and Klausner’s responses are summarized below, followed by (the author’s) comments on his responses (12):

Question: “Provide a breakdown of NCI’s cancer prevention funding by categories . . . where prevention is the primary purpose of the grant.”

Answer: “Funding for primary prevention in 1997 was over \$480 million, almost 50% (of which) was directed towards environmental exposures, 19% was directed towards nutrition research, 14% involved smoking, and 2% was related to occupational exposures . . . Opportunities in cancer prevention are emerging and we anticipate fully to take advantage of these opportunities.”

Comment: The claimed \$480 million primary prevention expenditures, approximately 20% of the budget, is inconsistent with NCI’s February 1997 budget, for “research dollars by various cancers,” listing an allocation of \$249 million for “cancer prevention and control.” Furthermore, no information was provided on the alleged 50% expenditure on “environmental exposures.” The 19% for nutrition research was allocated to chemoprevention, in attempts to protect against avoidable exposures to environmental carcinogens, and to the “protective effects” of low-fat, and high fruit and vegetable

diets, while ignoring evidence on the role of their contamination with carcinogenic pesticides. As disturbing was the less than 2% allocated to occupation, the single most important cause of avoidable carcinogenic exposures. The balance of 15% of the alleged \$480 million primary prevention expenditures was unaccounted. In response to a later request for information from the House Committee on Government Reform and Oversight, Klausner responded by simply doubling this figure to approximately \$1 billion.

Question: “Other than tobacco and exposure to sunlight, do you think that the general public has been adequately informed about avoidable causes of cancer?”

Answer: “The NCI and other organizations including the ACS . . . have worked for years to inform the public about lifestyle choices that could increase or decrease the risks of cancer . . . through NCI’s Cancer Information Services . . . and through distribution of millions of publications. In addition, when testing shows that chemicals cause cancer, NCI and other agencies including the National Toxicology Program (NTP) and the International Agency for Research on Cancer (IARC), publicize the test results.”

Comment: This response illustrates NCI’s fixation on personal responsibility for cancer prevention. NCI still takes no responsibility for public dissemination of scientific information on avoidable risks from involuntary and unknowing exposures to a wide range of carcinogenic chemicals, including those identified and systematized by IARC and, on a more limited basis, by NTP. Moreover, senior NCI scientists are on record as denigrating the human relevance of carcinogenicity test data. Furthermore, NCI has rarely, if ever, testified before Congress on the validity of published evidence on avoidable carcinogenic exposures, nor has it provided such information to Regulatory agencies.

Question: “Should the NCI develop a registry of avoidable carcinogens and make this information widely available to the public?”

Answer: “Such information is already available from NCI’s Cancer Information Service . . . and also from IARC and the NTP.”

Comment: IARC and the NTP have not developed such registries, nor is it their mission.

Question: “During the hearing, you stated that NCI could effectively spend \$5 billion by 2003. Provide a budget mechanism table that shows how you would allocate this level of spending in 2003, compared to 1998.”

Answer: “NCI envisions a three-pronged approach:

1. “Sustain at full measure the proved research programs that have enabled us to come this far.
2. “Seize ‘extraordinary opportunities’ to further progress brought about by our previous successes. Our goals in these areas are: Cancer genetics; pre-clinical models of cancer; and imaging technologies, defining the signatures of cancer cells.
3. “Create and sustain mechanisms that will enable us to rapidly translate our findings from the laboratory into practical applications that will benefit everyone.”

Comment: This response is as broad in generalization as sparse in detail.

The most revealing evidence of NCI’s highly restricted priorities for primary prevention is detailed in its *2001 Cancer Progress Report*. The report compared past “progress with the cancer-related targets set forth in the Department of Health and Human Services Objectives for the first decade of the 21st century.” The *Report* stated that “behavioral factors,” detailed in 19 pages, are responsible for as much as 75% of all cancer deaths in the U.S., while recognizing that “certain chemicals in the environment are known to cause cancer.” However, these carcinogenic chemicals, summarily dealt with in three pages, were restricted to second-hand smoke, benzene in the air, particularly from smoking and occupational exposures, and radon in the home.

More limited comprehension of primary prevention is revealed in the *Highlights* of NCI’s May 2001 *Cancer Facts and Figures*. The opening sentences state: “Cancer prevention is a major component and current priority—to reduce suffering and death from cancer. Research in the areas of diet and nutrition, tobacco cessation, chemoprevention, and early detection and screening are the NCI’s major cancer prevention programs.” Nevertheless, NCI claimed that 12% of its \$3.75 billion budget is allocated to “Cancer Prevention and Control,” without any reference to primary prevention, and environmental and occupational carcinogens.

The American Cancer Society

In 1998, the ACS claimed that it funded 19 large research grants on “Environmental Carcinogenesis” at a cost of \$2.6 million; 0.4% of its \$678 million revenues, apart from \$873 million assets. However, the great majority of these grants were in molecular biology; only three, funded for a total of \$330,000 (less than 0.1% of revenues), reasonably qualified as environmental cancer research. The ACS also claimed that it funded 92 “Prevention” grants with \$23 million. Again, these largely dealt with molecular biology, with \$2.4 million allocated to tobacco and diet, excluding any consideration of dietary contamination with carcinogenic pesticides. A recent report has confirmed that concentrations of residues of toxic and carcinogenic pesticides, including DDT, in conventional foods are three times higher than in organic foods (23).

THE CANCER ESTABLISHMENT’S FAILURE OF OUTREACH AND ADVOCACY FOR PREVENTION

Both NCI and ACS have instant access to the receptive media, powerful PR operations, and close contacts with Congress. Fully utilizing these outreach resources, the cancer establishment issues a prodigious, ongoing stream of information, press releases, databases, and public educational materials. The latter include the Comprehensive Public Cancer Database System dealing with screening, diagnosis, clinical research, and the latest claimed advances in treatment. In sharp contrast, the cancer establishment makes little or no effort to warn the public of well-documented risks, based on experimental and/or epidemiological evidence, from unknowing exposure to a wide range of industrial carcinogens, including those in consumer products, food, cosmetics, toiletries, and household products. As importantly, the cancer establishment has also failed to warn of potential carcinogenic risks on the basis of incomplete or suggestive, although not definitive, evidence and also to direct high priority to research and advocacy on such risks. Such failure disregards fundamental principles of public health and the scientific basis of the Precautionary Principle. This mandates the categorical responsibility of industry to provide unequivocal evidence on the safety of any new candidate product or process before its introduction into commerce, thereby ensuring that it does not pose potential or recognized human or environmental risks.

Silence of the NCI and ACS on Avoidable Causes of Cancer Based on Experimental Evidence

The cancer establishment has failed to warn the public, the media, Congress, and regulatory agencies of well-documented **experimental** evidence, based on carcinogenicity testing in mice and rats, on a wide range of avoidable risk factors or causes of cancer (12). It should further be stressed that only about 2,000 (2.6%) of the 75,000 industrial chemicals in use (listed in the Environmental Protection Agency’s Toxic Substances Control Act inventory) have as yet been tested for carcinogenicity. Since 1970, the International Agency for Research on Cancer (IARC) has evaluated about 900 of these tests, more than half of which did not meet basic scientific requirements. Clearly, industry should be held responsible for the full costs of testing the overwhelming balance of untested or poorly tested chemicals. This testing should be undertaken on a crash basis by the National Toxicology Program; surprisingly, this still has only limited testing capacity.

The validity of extrapolating experimental evidence of carcinogenicity to human risk has been fully supported for decades by independent scientists, blue ribbon expert federal and non-federal committees, and by the World Health Organization’s International Agency for Research on Cancer. Additionally, such evidence has been confirmed, generally decades later, for approximately half of the epidemiologically confirmed carcinogens (12). Of striking relevance is the December 2002 report of the International Consortium’s Mouse Genome Project which reported that roughly 99% of mouse genes have a functional equivalent in the human genome, that their biological programming is amazingly similar, and that the mouse is thus an ideal laboratory animal for investigating the molecular basis of human disease.

Examples of carcinogens identified by experimental evidence include:

Environmental and Occupational

- Based on the Environmental Protection Agency’s (EPA’s) statewide Toxics Release Inventory (TRI) law, 6.5 billion pounds of toxic chemicals, including nearly 100 million pounds of carcinogens (identified experimentally and/or epidemiologically), are discharged by industry into the environment annually; however, the TRI is restricted to 20,000 industrial facilities and only 650 chemical pollutants. This information is readily acces-

sible, at the community and zip code levels, in the Environmental Defense's Scorecard (www.scorecard.org); this also details the health risks of high priority pollutants, particularly carcinogenic.

- The fluoridation of drinking water, with industrial grade fluorosilicate wastes, in spite of evidence that fluoride induces a dose-related incidence of bone cancer in rats.
- Some one million U.S. women work in industries that expose them to over 50 carcinogens, incriminated as causing breast cancer in rodent and, to a lesser extent, epidemiological studies.

Consumer Products

- High concentrations of multiple residues of carcinogenic pesticides in non-organic fruits and vegetables (23), that are of particular significance in the diets of infants and young children.
- Irradiation of meat and poultry, with 300,000 times or greater exposure to ionizing radiation than a chest X-ray, induces the formation of unique, volatile and stable, radiolytic products and increased benzene levels, posing carcinogenic and genotoxic risks, besides major vitamin depletion (24). While FDA requires a small radura label on irradiated food sold at retail, there are no such requirements for food served at school lunches and hospitals or in restaurants. More disturbingly, as noted in the November/December 2002 *Food Quality Magazine*, FDA is considering changing the radura label to a misleadingly euphemistic "cold pasteurization" label.
- Mainstream industry cosmetics and toiletries contain a wide range of carcinogenic ingredients, such as phenyl-p-phenylenediamine, and diethanolamine. They also contain "hidden" carcinogens from precursors such as: diethanolamine, which apart from its own carcinogenicity following skin application to mice, interacts with nitrites to form the potent carcinogen nitrosodiethanolamine; diazolidinyl urea and quaternium 15, which break down to release formaldehyde; and polyethylene glycol, which is contaminated with two carcinogens, ethylene oxide and 1,4-dioxane. Such exposures are of particular concern in view of: the virtual lifelong use of multiple carcinogenic ingredients in common cosmetics and personal care products; their appli-

cation to large areas of skin; and the concomitant presence of strong detergents in these products, notably sodium lauryl sulfate, which facilitate the skin absorption of carcinogens.

- The use of the highly potent and volatile 1,4-dichlorobenzene, as a room and toilet deodorizer.

Medical

- The extensive marketing of Raloxifene (Evista) since 1997 by Eli Lilly for the prevention of osteoporosis, and alleged prevention of breast cancer, in spite of the industry's own unpublicized experimental evidence that the drug induces ovarian cancer in mice and rats at about one third of the recommended therapeutic dose. This is compounded by Lilly's admission, unpublicized in full-page newspaper advertisements, that the "clinical relevance of these tumor findings is unknown," and by the 8% increase in the incidence of ovarian cancer from 1997 to 1999, the date of the latest available surveillance data. These concerns are supported by recent evidence that Evista stimulates cell growth in estrogen receptor positive ovarian cancer cells (25).
- The strongly promoted use of Tamoxifen by NCI and ACS in chemoprevention trials on breast cancer prevention in healthy women, despite evidence that its effectiveness is highly questionable, and that the drug is a potent liver carcinogen in rats (17), quite apart from the absence of informed patient consent regarding this grave danger. In July 2002, the FDA strengthened the Warnings section of the drug's label to inform physicians about the increased risk of uterine sarcoma, but without making any reference to risks of liver cancer.
- The over-prescribed use of Ritalin for "attention deficit disorders" in children (and athletes), in spite of the evidence that it induces liver cancer and rare aggressive hepatoblastomas in mice at doses similar to the "therapeutic" (26), and in the absence of informed parental consent.

Silence of the NCI and ACS on Avoidable Causes of Cancer Based on Epidemiological Evidence

Examples of the cancer establishment's reckless failure to warn the public, the media, Congress and reg-

ulatory agencies, particularly the FDA, OSHA and EPA, of **epidemiological** evidence on a wide range of avoidable and involuntary risk factors or causes of cancer (12). These include:

Environmental

- The entire U.S. population, to varying degrees, is exposed to a wide range of industrial carcinogens identified epidemiologically and/or experimentally. Of particular importance is a group of 12 chlorinated Persistent Organic Pollutants (POPs), furans, dioxins, PCBs and pesticides, which have polluted the totality of the environment—air, water, hazardous waste sites, soil, food and the workplace.
- A wide range of POP's (p. 9) have been identified by the EPA since 1970, in extensive body burden studies on human fat, and to a lesser extent in blood and urine; more recent studies in the U.S. and other nations have confirmed and extended these studies. On January 31, 2003, the Federal Centers for Disease Control and Prevention reported the findings of their Second National Report on Human Exposure to Environmental Chemicals, on 116 carcinogenic and toxic pesticides and other environmental contaminants in the blood of over two thousand volunteers chosen as a representative slice of the U.S. population; the Environmental Working Group and Commonwealth also reported on 210 environmental and consumer product contaminants in the blood and urine of nine Americans.
- The strong relationship between chlorination of drinking water contaminated with organic chemicals, such as decayed leaves in reservoirs, and bladder and rectal cancers; this is due to the formation of potent carcinogens, known as trihalomethanes (THMs), including chloroform and carbon tetrachloride.
- The herbicide atrazine, extensively used in the U.S. on cornfields and lawns, while banned in most European nations, is the most common pollutant in rainwater, snow runoff, ground water and drinking water. A series of epidemiological studies over the last decade have incriminated atrazine as a cause of non-Hodgkin's and Hodgkin's lymphoma, and prostate and ovarian cancer, while atrazine has also been shown to induce breast cancer in rodents, and endocrine disruptive effects (27). Against this background of NCI's silence is the April 2002 headline news following publication of evidence that atrazine induces multiple sex organ abnormalities in frogs at levels in water as low as 0.1 parts per billion (28).
- The relationship between fluoridation of drinking water, with industrial fluorosilicate wastes (contaminated with carcinogenic heavy metals), and bone cancer in young men; fluoride is added to the water supply of about 60% of the U.S. population, in contrast to only 2% of the European population, which has much lower rates of dental caries.
- The strong relation between lung cancer and its non-smoking attributable causes, including radon, air pollution with diesel exhaust, and a wide range of carcinogenic occupational exposures.
- The commonplace recycling of toxic wastes, containing heavy metals, dioxins, and radionuclides, into common plant food and farm fertilizers. These wastes bioaccumulate in soil, and contaminate food, water, and air (29). Of major concern is the increasing and systematic recycling of radioactive wastes from nuclear reactors and weapons facilities into building materials and consumer products, such as cutlery, frying pans, bicycles and baby strollers; this recycling has been authorized by the Department of Energy and the Nuclear Regulatory Commission, under heavy pressure from the nuclear industry.
- The strong relationships between exposures to global atmospheric weapons fallout from 1959-1963, and to more recent environmental releases of novel radioisotopes from nuclear power stations and the escalating incidence of breast, thyroid, prostate cancers, and childhood leukemia, and brain cancer (30).
- The relationship between childhood cancer and radioactive emissions from 103 aging nuclear power plants; notorious among these is the Indian Point complex, with its worst safety rating, located in a densely populated region within a 50 mile radius encompassing 7% of the U.S. population. High and increasing levels of radioactive Strontium-90 in baby teeth of this population, the "Tooth Fairy Study" (31), support this evidence.

- The relationship between electromagnetic frequency (EMF) radiation from domestic appliances, cell phones, proximity of residence to power lines, and electrical and other occupations to a wide range of cancers. These include male and female breast cancers, brain cancer, and adult and childhood leukemia (32).

Occupational

- Some 11 million men and 4 million women are exposed occupationally to industrial chemicals, and ionizing and EMF radiation; these are well recognized causes of a wide range of cancers, including lung.
- The strong relationship between non-Hodgkin's and Hodgkin's lymphoma, and chronic lymphocytic leukemia and exposure to herbicides, particularly 2,4-D, in agricultural workers, and Agent Orange in U.S. military personnel.
- Suggestive evidence of major excesses of non-Hodgkin's lymphoma, brain, colorectal and prostate cancers in golf course maintenance workers and superintendents exposed to high concentrations of carcinogenic herbicides and fungicides; runoff from golf courses can result in heavy contamination of watersheds.
- The relationship between occupational exposure to atrazine and ovarian cancer in women, and prostate cancer in men.
- The relationship between paternal or maternal exposures to occupational carcinogens and childhood cancers, besides delayed cancers in adult life.

Consumer Products

- Excess blood levels of the natural Insulin-like Growth Factor One (IGF-1) are strongly related to major excesses of breast, colon and prostate cancers (12, 33). Unlabelled milk, and other dairy products, from cows injected with Monsanto's genetically engineered bovine growth hormone (rBGH/BST), are contaminated with high levels of IGF-1; consumption of these dairy products thus poses increased risks of these cancers. Similar concerns are increasingly posed by the reckless, and highly profitable, use by poorly qualified physicians of genetically engineered human growth hormone (rHGH) for unfounded

claims of anti-aging treatment.

- The high residues of estradiol, and other natural and synthetic sex hormones in U.S. meat, from cattle implanted with sex hormones in feedlots prior to slaughter, to increase carcass weight, pose risks of breast and other hormonal cancers (12); such use of all hormones as growth promoters was banned in Europe in December 2002. Other risks include hormonal contamination of water by run-off from feedlots, and endocrine disruptive effects, approximately 10,000 times more potent than pesticides such as DDT.
- The relationship between frequent consumption of nitrite-dyed hot dogs and childhood leukemia and brain cancer.
- The relationship between perineal dusting with talcum powder by premenopausal women and ovarian cancer.
- The relationship between non-Hodgkin's lymphoma, multiple myeloma, bladder and breast cancers, and prolonged use, by some 20 million U.S. women, of permanent and semi-permanent black or dark brown hair dyes.
- The relationship between malignant melanoma and the use of sunscreens, particularly in children, which encourage prolonged sun exposure while failing to block UVB radiation.
- The relationship between childhood cancers, particularly brain cancer, non-Hodgkin's lymphoma and leukemia, and domestic exposure to pesticides from uses in the home, including pet flea collars, lawn and garden; another major exposure is from commonplace uses in schools.

Medical

- The relationships, with varying degrees of strength, between breast cancer and avoidable carcinogenic exposures such as: prolonged use of estrogen and progesterone hormone replacement therapy (ERT), as belatedly and qualifiedly admitted by NCI and ACS, in spite of strong long-standing evidence; cumulative ionizing radiation risks of pre-menopausal mammography; occupational exposure of some one million women to carcinogens, particularly methylene chloride, benzene, ethylene oxide and phenylenediamine dyes; and proximity of residence to Superfund hazardous waste sites and nuclear reactors. The

latter is of particular concern since millions of U.S. citizens live within a few miles of these sites, and also since President Bush phased out funding for the cleanup of 33 sites in 18 states in June 2002.

- The decades old evidence of the relationship between ERT and ovarian cancer; for women using estrogen-only replacement therapy for over 20 years, the increased risk is over 3-fold. It should further be noted that the incidence of ovarian cancer, from 1973 to 1999, in whites over 65 has increased by 21%, in sharp contrast to a decrease of 19% in Black Americans; use of ERT appears less common in Black Americans than whites.
- The very high risks of unopposed estrogen replacement therapy, inducing uterine cancer in one in 100 women annually after 10 years use; this is much greater than the one in 250 annual incidence of lung cancer in heavy smokers (12).
- The relationship between the widely prescribed use of Lindane, for treatment of lice and scabies, and childhood brain cancer.
- The strong relationship between “low dose” diagnostic ionizing radiation, particularly CT scans and fluoroscopy, and breast, childhood and other cancers.

Denial by NCI and ACS of Citizens’ Right-to-Know

In spite of these widely ranging examples, the cancer establishment has never attempted to develop any registry of avoidable carcinogenic exposures, including body burden data (p. 14), and make it available to the public. This is in striking contrast to the extensive user-friendly public educational outreach programs of NCI and ACS on cancer treatment and screening. Until such a registry becomes available, in the absence of an acute emergency, patients should specifically request full documentation on the risks of any drug, available in the Warnings and Precautions section of the annual *Physicians Desk Reference*. This is also in striking contrast to the misleading May 1998 response by past NCI Director Klausner to a question by Congressman Obey whether NCI’s Cancer Information Service provides the public with a comprehensive registry of avoidable carcinogens. NCI’s silence effectively denies U.S. citizens of their fundamental democratic Right-to-Know of

information on avoidable causes of a wide range of cancers which could empower them to reduce their own risks of disease and death. In this, the cancer establishment appears to make common cause with the chemical industry.

This longstanding denial of citizens’ Right-to-Know impacts disproportionately on low income black and other ethnic minorities, besides raising serious concerns on environmental justice. These population groups are at particularly high risk in view of their general discriminatory location near petrochemical plants, hazardous waste sites, municipal incinerators, and nuclear reactors. However, the cancer establishment has rarely, if ever, undertaken epidemiological cluster analyses of claimed excess incidences of a wide range of cancers in such communities, let alone investigate their relation to local exposure to industrial carcinogens.

The cancer establishment’s denial of Right-to-Know extends to failure to provide Federal and State agencies with scientific data on carcinogenicity on which regulatory decisions are critically based, claiming that this is not their responsibility. However, regulatory agencies are charged with a wide range of other responsibilities. They also lack the authority and wealth of scientific and educational resources specifically directed to cancer which are heavily invested in the cancer establishment; regulatory agencies are also susceptible to industry lobbying and, more importantly, pressure from pro-industry administrations. Most critically, NCI and ACS have rarely, if ever, provided such data to Congress as a necessary basis for developing appropriate legislation and regulatory authority, apart from failing to inform the public-at-large (12, 34).

It should be stressed that NCI’s silence on primary cancer prevention is in flagrant violation of the 1971 National Cancer Act’s specific charge “to disseminate cancer information to the public.” This silence is in further denial of the 1988 Amendments to the National Cancer Program (Title 42, Sec. 285A), which call for “an expanded and intensified research program for the prevention of cancer caused by occupational or environmental exposure to carcinogens.”

The silence of the ACS and its track record on prevention (Appendix VI) is in contrast to their misleading claims for advocacy, as emphasized in its *Cancer Facts and Figures 2002*: “Cancer is a political, as well as medical, social, psychological, and economic issue. Every day, legislators make decisions that impact the lives of

millions of Americans who have been touched by cancer. To affect those decisions positively, the Society has identified advocacy as part of its mission and as one of its top corporate priorities, and works nationwide to promote beneficial policies, laws, and regulations for those affected by cancer.”

Avoidable causes fall into four categories, posing widely differing types of empowerment, ranging from the personal to political:

- Consumer products: NCI and ACS have failed to inform the public of available information on common carcinogenic ingredients and contaminants in food, cosmetics and toiletries, and household products. They have also failed to provide such information to Congress, and to urge regulatory agencies to require explicit identification and warning labels for all such carcinogens. Such market place pressures would then enable consumers to boycott those industries marketing unsafe products in favor of socially responsible businesses, which are increasingly marketing safer products.
- Medical: A wide range of carcinogenic drugs are commonly prescribed to patients in the absence of ethical and legally-required informed consent, and of any safe alternatives. The cancer establishment has failed to systematize such information and circulate it to all physicians and the public, and to recommend explicit warning labels on all carcinogenic drugs. Patients should thus request their physicians to provide them with any such evidence (experimental and epidemiological) of cancer risks, as identified in the Warnings and Precautions section of the annual *Physicians Desk Reference* (PDR). For drugs so identified, patients should request available non-carcinogenic alternatives.

There is now strong evidence that allegedly “low dose” ionizing radiation from diagnostic procedures, particularly CT scans and fluoroscopy, poses significant risks of cancer. These risks are avoidable, as average doses can be substantially reduced without any loss of image quality. Emergencies apart, patients should seek radiologists who are increasingly practicing dose-reduction imaging procedures.

- Environmental: The cancer establishment has failed to collate and systematize avoidable infor-

mation on carcinogenic contaminants in air and water on an ongoing basis, and to make this readily available to the public (12). This information has now become available, at community and zip code locations, in the Environmental Defense’s Scorecard (p. 13). Such information would enable activist citizen groups to take political action at the state level in efforts to reduce these carcinogenic exposures. It should be stressed that neither NCI nor ACS have considered, let alone initiated, epidemiological analyses to investigate possible cancer clusters in highly polluted communities.

- Occupational: There is substantial information on a wide range of carcinogenic products and processes to which some 11 million men and 4 million women are exposed (12). While industries employing more than 10 workers are required, by the Occupational Safety and Health Administration, to supply them with Material Safety Data Sheets, such information is generally inadequate and often misleading. While some unions take aggressive action to reduce occupational carcinogenic exposure, this is by no means the rule. Furthermore, plants employing less than 10 workers, generally lower socio-economic ethnic minorities, are virtually exempt from any such protective measures. Again, NCI and ACS should systematize such information and make it fully available to unions and workers on a national basis.

Finally, the cancer establishment’s massive funding of a nationwide network of research institutes and hospitals virtually ensures the silence or reticence of their captive epidemiologists and other scientists on primary prevention. These constraints were strikingly exemplified in a widely-publicized May 2002 Public Broadcasting Service television report, *Kids and Chemicals*, on the relationship between chemical exposures and childhood cancer, and other diseases. The program featured well-qualified experts, some funded by the cancer establishment, who expressed strong concerns while misleadingly stressing the inadequacy of current information. One stated: “We suspect that children who are exposed to pesticides are at greater risk of childhood cancer than other children. But mostly we don’t know.” Another claimed: “We have a very serious lack of information of how to go about preventing these

diseases, because we haven't had enough information." For these reasons, the experts called for a "National Children's Study" over the next 20 years at a cost of \$50 million annually. However, this proposal strangely trivialized substantial and longstanding available scientific information on avoidable causes of childhood cancer, of which the public still remains uninformed by the cancer establishment. Additionally, no mention was made of the primary responsibility of the NCI and ACS, whose funding is more than adequate, to undertake further research on avoidable causes of childhood cancer.

An Egregious Example of NCI's Denial of Right-to-Know

NCI's record of denial of Right-to-Know has, on occasions, extended to what amounts to frank suppression of data on avoidable causes of cancer. This is well illustrated with regard to the relation between atom bomb tests and thyroid cancer.

In 1983, responding to public protests and demands, Congress enacted Public Law (97-414). This directed the Department of Health and Human Services (DHHS) to investigate the risks of thyroid cancer from Iodine-131 (I-131) radioactive fallout following atom bomb tests at the Nevada Test Site (NTS) in the 1950's and early 1960's; DHHS delegated this investigation to the NCI. Fourteen years later, in October 1997, NCI published its report; this was based on data which had already been available in 1989.

This report showed that, depending on age at the time of the tests, site of residence, and diet, particularly amount of milk consumption by children, the public was exposed to varying levels of I-131, for some two months following each of the 90 tests. In 1997 Congressional testimony, Dr. Klausner estimated that the overall average thyroid dose to 160 million people was about 2 rads. Based on these data, it was further estimated that from 11,000 to 212,000 thyroid cancers would be expected. However, no attempt had been made to communicate this critical information to the approximately 160 million people exposed. Had they been so informed, they could have readily reduced their risks by simple thyroid medication.

At a September, 1999 hearing by the Senate Subcommittee on Investigation of the Committee on Governmental Affairs, former Senator John Glenn (D-OH) charged that the NCI investigation was "**plagued by lack of public participation and openness.**" Senator Tom Harkin (D-IA) charged that "**... since the**

NCI report was put out last October, there still has been no concerted effort to release this information (to the general public.) This is a travesty." More specifically, a Committee staff report concluded:

1. "Researchers at the NCI substantially delayed the release of the I-131 report, despite data that showed that significant numbers of children received doses of radiation that were much higher and posed greater health risks than previously believed.
2. "The NCI neither involved the public in its study nor adequately responded to governmental requests for information developed through the study.
3. ". . . NCI management performed little oversight or tracking of the project. As a result, they failed to ensure that the report was completed in a timely fashion and that important issues were addressed in an open manner.
4. "**The report does not meaningfully inform the American public of the impacts of the radioactive fallout from the weapons testing program.**
5. "The failures of the I-131 study have been repeated in a NCI-lead international effort to study the effects of radioactive iodine releases on thyroid cancer in the areas surrounding Chernobyl."

In January 2003, 13 years after NCI concluded its risk estimates from I-131 weapons testing fallout, it released a new publication, *Radioactive I-131 from Fallout*, to health care providers and advocacy groups, but still not to the general public. It should be emphasized that the incidence of thyroid cancer has escalated by 71% from 1973 to 1999 (Appendix II).

Silence of the Cancer Establishment Legitimizes Corporate Corruption of Science and Public Policy

The silence of NCI and ACS with regard to primary prevention is in large measure responsible for the continued denial of the public's fundamental Right-to-Know of avoidable carcinogenic exposures, and for the faulty science on the basis of which regulatory decisions have become subverted by special interests. A battery of industry-funded and promoted think tanks, notably the Cato, Hudson, and International Life Sciences Institute, support industries responsible for avoidable carcino-

genic exposures. They claim that particular carcinogens do not pose significant hazards. Additionally responsible are indentured academics and academic think tanks, notably the Harvard Center for Risk Analysis, whose past Director, Dr. John Graham, is now the Administrator of the Office of Information and Regulatory Affairs of the Office of Management and Budget. These claims are based on a complex of “risk management” models, “risk benefit analysis”, and highly questionable “risk assessment” of individual carcinogens that ignore additive or possibly synergistic interactions with other carcinogenic exposures. These claims are also based on spurious and self-serving challenges to the human relevance of rodent carcinogenicity test data, and on the insistence on the commonality of their mechanisms of action before such data can be extrapolated to humans. Apart from longstanding contrary evidence, the December 2002 Mouse Genome Project findings are strongly supportive of the human relevance of data from laboratory tests in mice (p. 12). Guidelines developed by Graham, and incorporated in the December 2000 “Data Quality Act,” effectively challenge and sharply limit the regulation of carcinogens, as well as a wide range of other public health hazards.

An equally ominous development is the growing influence of industry-sponsored journals, notably *Regulatory Toxicology and Pharmacology* (RTP), published by the prestigious and reputable Elsevier/Academic Press. RTP is owned by the powerful industry-sponsored International Society of Regulatory Toxicology and Pharmacology (ISRTP), sponsored by major petrochemical and pharmaceutical companies and their trade associations. Not surprisingly, RTP’s editorial board is dominated by industry-affiliated lawyers and scientists, including former senior NCI staffers. RTP’s “peer-reviewed” publications are biased, and trivialize or dismiss the scientific evidence on the causal relation between avoidable exposures to industrial carcinogens and the escalating incidence of cancer. They also emphasize policies based on “risk management” rather than risk prevention.

NCI’s silence has become even more serious since the current Administration has appointed prominent industry consultants to key federal advisory committees dealing with environmental health, testing synthetic chemicals, and evaluating exposures to industrial car-

cinogens (35). Illustrative is the August 2002 appointment of Dr. Roger McLellan to a new 16-member National Center for Environmental Health Committee. McLellan, past Director of the Chemical Industry Institute for Toxicology, has made a career of trivializing evidence for the carcinogenicity of proven carcinogens, including more recently diesel exhaust. Further illustrative is the broad restructuring, by Health and Human Services (HHS) Secretary Tommy Thompson, of Federal scientific and regulatory advisory committees, such as those of the Centers for Disease Control and Prevention (CDCP). Thompson has eliminated those committee members failing the Administration’s political litmus test and low priority for environmental concerns, and replaced them with handpicked candidates closely associated with industry stakeholders, whose goal is “regulatory paralysis--rather than the application of honest balanced science” (35). More ominous is the unprecedented political interference with the National Institutes of Health peer-review scientific study sections, which are also advisory committees under Federal law, by stacking them with members favorable to industry interests. All these concerns are exacerbated by the well-developed defensive strategies of the chemical industry, and by its major victories in recent Congressional races (Appendix IX).

In late October, 2002, Cong. Henry Waxman (D-CA) and 11 other members of Congress wrote to HHS Secretary Thompson, expressing strong concerns about “a pattern of events ... suggesting that scientific decision making is being subverted by ideology and that scientific information that does not fit the Administration’s political ideology is being suppressed.” Thompson’s reply was unresponsive.

More surprisingly, a recent publication has documented evidence that, since 1994, strong direct and indirect corporate pressures, conflicts of interest and procedural non-transparency have seriously jeopardized the independence and integrity of the World Health Organization’s International Agency for Research on Cancer (IARC) programs for the evaluation of human carcinogenic risks. “Evidence for carcinogenicity provided by results of experimental bioassays has been disregarded on the basis of unproven mechanistic hypotheses, . . . very serious consequences for public health may follow” (36).

THE PRIVATIZATION OF NATIONAL CANCER POLICY

On February 27, 2002, Senator Dianne Feinstein (D-CA) introduced The National Cancer Act of 2002 (S.1976). Co-sponsored by 30 bipartisan Senators, including Majority Leader Tom Daschle (D-SD) and Hilary Clinton (D-NY), the Bill is a radically different version of the 1971 Act that launched the National Cancer Program. The Bill adds \$1.4 billion to the \$4.6 billion 2003 budget authorized by President Bush, extra funds coming from the new Federal cigarette tax increase, and a further 50% annual increase to 2007, reaching a grand total of \$14 billion. Feinstein said her goal is to “form our new battle plan to fight cancer.” The legislation was referred to the Committee on Health, Education, Labor, and Pensions, then chaired by Senator Judd Gregg (R-NH). In April 2002, a similar bill, with 11 co-sponsors, was submitted to the House of Representatives.

These Bills would establish a national network of 20 “translation” centers to combine basic and clinical research, and to commercialize promising findings. They also mandate insurance coverage for cancer screening, smoking cessation, genetic testing, and quality care standards, while making no reference to prevention.

Regrettably, this well-intentioned Bill unwittingly surrenders the National Cancer Program to special interests. The legislation has been strongly criticized by survivor coalitions, headed by the Cancer Leadership Council, and also the American Society for Clinical Oncology (ASCO). Of major concern, the Bill displaces control of cancer policy from the public to the private sector, the federal NCI to the “nonprofit” ACS, and thus creates confusing duplication and overlapping responsibility.

The Background to Senator Feinstein’s Bill

As disturbing as the Bill is, it’s background. Meeting behind closed doors in September 1998, the ACS created, funded and promoted the National Dialogue on Cancer (NDC). This was co-chaired by former President George Bush and Barbara Bush, with Senator Feinstein as vice-chairman, and former Governors Tom Ridge of Pennsylvania and Tommy Thompson of Wisconsin as “Collaborating Partners” (37). Included also were some 100 representatives of survivor groups and the cancer drug industry. The NDC

leadership, including ACS President-Elect and now NCI director Dr. Andrew Von Eschenbach, without informing its NDC participants, then unilaterally spun off its own Legislative Committee, co-chaired by Dr. John Seffrin, CEO of the ACS, and Dr. Vincent DeVita, NCI director from 1980 to 1988, to advise Congress on the proposed new Act. DeVita’s track record as NCI Director was characterized by hostility to cancer prevention, and attempts to mislead Congress to the contrary (12).

The ACS track record raises concerns on conflicts of interest and special interests, in sharp contrast to the public interest (Appendix VI). Dr. John Durant, Executive President of the American Society of Clinical Oncology (ASCO), awarded the Society’s 2002 Presidential U.S. Cancer Fighter of the Year, charged: “It has always seemed to me that this was an issue of control by the ACS over the cancer agenda. They are protecting their own fundraising capacity . . .” from competition by survivor groups (37). Not surprisingly, the authoritative U.S. charity watchdog, *The Chronicle of Philanthropy*, warned against the transfer of money from the public purse to private hands. “**The ACS is more interested in accumulating wealth than saving lives**” (38).

These conflicts of interest extend to the personal. The Legislative Committee co-chair, DeVita, is Board Chairman of CancerSource.com, a website promoting the ACS *Consumers’ Guide to Cancer Drugs*; other Committee members also serve on the Board. These members have thus developed their own special interests in a publicly-funded forum. As disturbing, DeVita, and Dr. John Mendelsohn, Director of the NCI’s M.D. Anderson Comprehensive Cancer Center, were consultants and board members of the publicly traded cancer drug company, ImClone Systems, Inc. (39). Mendelsohn was also a board member of Enron, besides serving on its Audit Committee; Enron was a generous and long-term supporter of the M.D. Anderson. In May and June 2001, DeVita expressed enthusiastic views on cancer drugs that target “EGF” receptors in television and radio interviews (40, 41). However, he failed to disclose his annual \$100,000 consulting fees from ImClone, which was then actively seeking FDA approval of its targeted cancer drug Erbitux. DeVita also insisted, contrary to NCI’s own data, that the overall incidence of cancer had been decreasing at a steep rate every year since 1990. In May 2002, Dr. Samuel Waksal resigned as president and CEO of ImClone. One month later, he was arrested on

charges of criminal conspiracy, securities fraud and perjury, and civil damages for insider trading, and was subsequently indicted on charges of insider trading, bank fraud, forging a signature and obstructing a federal investigation.

In the September/October 2002 issue of *The Cancer Journal*, an article by its co-editor DeVita, "A Perspective on the War on Cancer" was prefaced by the following disclaimer: "No benefits in any form have been or will be received from a commercial party related directly or indirectly to the subject of this article." However, as pointed out in a November 15, 2002 letter (by the author) to the Journal's other co-editors, Drs. Samuel Hellman and Steven Rosenberg, this disclaimer is inconsistent with DeVita's conflicts of interest relating to the CancerSource.com web site, and his ImClone consulting fees. The editors of the Journal responded that it "takes matters of conflict of interest and disclosure very seriously," but nevertheless declined to publish the letter.

ACS has interlocking interests with the pharmaceutical, cancer drug, mammography film and machine, and biotechnology industries (38). This is reflected by generous ACS allocations for research on highly profitable patented cancer drugs, and aggressive promotion of premenopausal mammography. In striking contrast, less than 0.1% of revenues in 1998 were allocated to environmental, occupational and other avoidable causes of cancer. More seriously, ACS policies on primary cancer prevention extend from a decades-long track record of indifference, or even hostility, compounded by pro-industry bias (Appendix VI), even to the tobacco industry. Shandwick International, representing R.J. Reynolds, and Edelman Worldwide, representing Brown & Williamson Tobacco Company, have been major PR firms for the ACS; Shandwick assisted the NDC in drafting the new National Cancer Act (42), while Edelman conducted the ACS voter education campaign for the 2000 Presidential elections. ACS promptly discontinued these relations, protesting "front end due diligence," once the damaging information became public (42).

The highly politicized and non-transparent agenda of the ACS is troubling. This is further exemplified by expenditures on lobbying, including donations to Democratic and Republican Governors' associations: "We wanted to look like players and be players," an ACS representative admitted (38). Tax experts have warned that these contributions may be illegal as chari-

ties are not allowed to make political donations. Marcus Owen, Director of the IRS Exempt Organization Division, also warned, "The bottom line is campaign contributions will jeopardize a charity's exempt status."

It should be emphasized that the ACS has long exercised dominant influence over NCI policy, and remains "the tail that wags the NCI dog." This influence has been further consolidated by the February 2002 appointment of Dr. Andrew Von Eschenbach as NCI Director; prior to his appointment, Eschenbach was Vice-President of the M.D. Anderson Cancer Center and President-elect of the ACS. Furthermore, as a condition of his appointment, Eschenbach obtained agreement that he continue as NDC's leader. Thus, irrespective of the fate of the Feinstein initiative, to all intents and purposes, the National Cancer Program has become privatized.

THE STOP CANCER BEFORE IT STARTS CAMPAIGN

Background

The policies and priorities of the U.S. cancer establishment have remained unchanged for decades despite periodic challenges from the activist scientific community, labor and activist groups. Pre-eminent was a February 4, 1992, Washington, D.C. press conference (chaired by the author), when a statement on "Losing the War Against Cancer" was released by a group of 68 leading national experts in cancer prevention and public health, and past directors of three federal agencies (12).

Expressing strong concerns over the failure of the "War Against Cancer," the 1992 statement emphasized: "This failure is evidenced by the escalating incidence of cancer to epidemic proportions over recent decades." The statement expressed "further concerns that the generously funded cancer establishment, the NCI and ACS, have misled and confused the public and Congress by repeated claims that we are winning the war against cancer. In fact, the cancer establishment has continually minimized the evidence for increasing cancer rates which it has largely attributed to smoking and dietary fat, while discounting or ignoring the causal role of avoidable exposures to industrial carcinogens in air, food, water, and the workplace."

The 1992 statement proposed a comprehensive series of reforms as general guidelines for redefining the mission and priorities of the NCI (Appendix VIII). These were largely directed to correcting the overwhelming imbalance in priorities, and funding between

research and advocacy on primary cancer prevention, and that on “secondary” prevention or damage control (screening, diagnosis and treatment), and molecular biology research.

Subsequent to the February press conference, on May 5, 1992, then NCI Director Dr. Samuel Broder, admitted that the issues of environmental carcinogenesis and prevention “are important enough, and are complicated enough, that they will require full attention on a scientific and scholarly basis” (12). However, NCI policies and priorities have remained unchanged.

Over a decade later, and commemorating the 30th anniversary of President Nixon’s inauguration of the “War Against Cancer,” we more urgently warn of its continuing failure. Notwithstanding an approximate 20-fold increase of NCI’s budget over the last three decades (Appendix I), and prior repeated insistence of winning the cancer war, the NCI and ACS have admitted that **the incidence of cancer is expected to increase dramatically due to the aging population, doubling by 2050 (3); further evidence on the increasing incidence of cancer was admitted by NCI scientists in October 2002 (8, 9)**. Conspicuous by its absence was recognition of the increasing incidence of cancer in childhood and younger age groups, as well as the fact that most cancers at all ages reflect prior avoidable carcinogenic exposures, and could thus be prevented. As disturbing is the privatization of the National Cancer Program (p. 20-21), and the increasing and powerful influence of the ACS, in view of its hostility to primary cancer prevention and conflicts of interest (Appendix VI). ACS’s influence will effectively consolidate special interest influence over future national cancer policy.

Funding for Prevention

Paramount in the recommendations of the 1992 statement was the urgent need to redirect NCI budgetary allocations to research and public outreach on primary prevention: “The NCI must urgently accord similar emphasis to primary prevention, in terms of budgetary and personnel resources, as all its other programs combined, including screening, diagnosis, treatment and basic research. This major shift in direction should be initiated in the near future and phased into completion within five years or so. This shift will require careful monitoring and oversight to prevent misleading retention of old unrelated programs, particularly ‘secondary’ prevention, under new guises of primary prevention.” This precaution is essential in view of NCI’s track

record of budgetary manipulation, as revealed in the 1988 exchanges between Congressman Obey and former NCI Director Klausner (p.10-11). Clearly, a detailed analysis of NCI’s budgetary allocations by the General Accounting Office (GAO) is critical and overdue. This should focus on prevention research, public information and outreach, excluding “secondary” prevention—screening, diagnosis, and chemoprevention. Also, claimed funding for prevention research must be restricted to research specifically designed for such purposes, as opposed to studies in which such research is secondary or merely incidental to other objectives. More specifically, NCI should be required to provide such information on budgetary allocations for each of the following program areas.

Prevention of Avoidable Exposures to Industrial Carcinogens: avoidable exposures to industrial and other carcinogens in the workplace; avoidable exposures to industrial and other carcinogens in air; avoidable exposures to industrial and other carcinogens in water; avoidable exposures to carcinogens in consumer products, food, household products, cosmetics and toiletries; and exposures to carcinogenic prescription drugs.

Prevention of Lifestyle Risk Factors: smoking prevention; smoking cessation; alcohol; and excessive exposure to sunlight.

“Secondary” Prevention: screening, diagnosis, and chemoprevention.

Additional funding for NCI programs on prevention should also be provided by the private sector. Individual petrochemical, drug and radionuclear industries should be held liable for direct and indirect costs relating to NCI’s research on their suspect or known carcinogens. These costs include: rodent testing; monitoring; epidemiology; surveillance; and full disclosure of all relevant information to the public, the media, federal and state regulatory agencies, and Congress. In this connection, some of the shift in funding, from clinical and basic research to prevention, should be offset by private sector funding. In part, this could be effected by reinstating the “reasonable pricing” clause from agreements between the NCI and the cancer drug industry intended to protect against exorbitant profiteering from the sale of drugs developed by the NCI with taxpayers’ dollars (12, 43). These agreements were struck in 1995, at the insistence of former NIH Director Harold Varmus, a past major recipient of NCI funds for basic cancer research.

TABLE 1: THE "DIRTY DOZEN" CONSUMER PRODUCTS LIST (12,44)

FOOD

Beef frankfurters (e.g., Oscar Meyer Foods Corporation)

Unlabeled toxic ingredients: *benzene hexachloride*, carcinogenic; *dacthal*, carcinogenic (can be contaminated with dioxin); *dieldrin*, carcinogenic; *DDT*, carcinogenic; *heptachlor*, carcinogenic; *hexachlorobenzene*, carcinogenic; *lindane*, carcinogenic; *hormones*, carcinogenic and feminizing; *antibiotics*, some are carcinogenic e.g., sulfamethazine.

Labeled toxic ingredients: *nitrite*, interacts with meat amines to form carcinogenic nitrosamines.

NOTE: Substantive evidence of causal relation to childhood cancer

Whole milk (e.g., Borden or Lucerne)

Unlabeled toxic ingredients: DDT, carcinogenic; *dieldrin*, carcinogenic; *heptachlor*, carcinogenic; *hexachlorobenzene*, carcinogenic; *antibiotics*, some are carcinogenic; *recombinant bovine growth hormone and IGF-1*.

NOTE: Substantive evidence of breast, prostate, and colon cancer promotion.

COSMETICS AND TOILETRIES

Talcum powder (e.g., Johnson & Johnson, Inc.)

Labeled toxic ingredients: *talc*, carcinogenic.

NOTE: Substantive evidence of causal relation to ovarian cancer.

Cover Girl® Replenishing Natural Finish Make-Up (Foundation) (Procter & Gamble, Inc.)

Labeled toxic ingredients: *BHA*, carcinogenic; *talc*, carcinogenic; *titanium dioxide*, carcinogenic; *triethanolamine (TEA)*, interacts with nitrites to form carcinogenic nitrosamines; *lanolin*, often contaminated with DDT and other carcinogenic pesticides.

Crest® Tartar Control Toothpaste (Procter & Gamble, Inc.)

Labeled toxic ingredients: *FD&C Blue #1*, carcinogenic; *saccharin*, carcinogenic; *fluoride*, carcinogenic.

Alberto VO5® Conditioner (Essence of Neutral Henna) (Alberto-Culver USA, Inc.)

Labeled toxic ingredients: *formaldehyde*, carcinogenic; *polysorbate 80*, can be contaminated with the carcinogen 1,4-dioxane; *FD&C Red #4*, carcinogenic.

Clairol Nice 'n Easy® (Permanent Haircolor) (Clairol, Inc.)

Labeled toxic ingredients: *quaternium-15*, formaldehyde releaser, carcinogenic; *diethanolamine (DEA)*, interacts with nitrites to form a carcinogenic nitrosamine; *phenylene-diamine*, carcinogenic.

NOTE: Substantive evidence of causal relation to lymphoma, multiple myeloma, and other cancers.

HOUSEHOLD PRODUCTS

Ajax Cleanser® (Colgate-Palmolive, Inc.)

Unlabeled toxic ingredients: *crystalline silica*, carcinogenic.

Zud Heavy Duty Cleanser® (Reckitt & Colman, Inc.)

Unlabeled toxic ingredients: *crystalline silica*, carcinogenic.

Lysol® Disinfectant Spray (Reckitt & Colman, Inc.)

Labeled or unlabeled toxic ingredients: *orthophenylphenol (OPP)*, carcinogenic.

Zodiac® Cat & Dog Flea Collar (Sandoz Agro, Inc.)

Labeled toxic ingredient: *propoxur*, carcinogenic.

Ortho Weed-B-Gon® Lawn Weed Killer (Monsanto Co.)

Labeled toxic ingredient: *sodium 2,4-dichlorophenoxyacetic acid (2,4-D)*, carcinogenic.

NOTE: Substantive evidence of causal relation to lymphoma, soft tissue sarcoma, and other cancers.

Unprotected by these restraints, the NCI paid for the research and development, and subsequent expensive clinical trials on the cancer drug Taxol. The NCI then gave Bristol-Myers Squibb the exclusive right to market and sell Taxol at the exorbitant price of approximately \$5.00 per milligram, more than 20 times the manufacturing price. Taxol has been a blockbuster for the industry, posting sales of over \$3 billion since its approval in 1992. **So, the taxpayers pay twice.** First with their tax dollars for NCI research and testing, and second by buying drugs from industry at grossly inflationary prices. This blatantly pro-industry policy is the rule rather than the exception for drugs developed by the NCI.

Charitable donations are potentially other major sources of private sector funding for primary prevention, as opposed to damage control. Publicizing the longstanding track record of ACS's indifference and hostility to primary prevention (Appendix VI) could justifiably provide the basis of a national economic boycott of the ACS. Such funding could then well be diverted to the Stop Cancer Campaign; funding from major foundations can also be realistically anticipated.

Basic Principles

Essentially, the Campaign's proposed initiatives are based on four fundamental considerations:

1. *Self-interest:* The most realistic strategy for developing national grass-roots initiatives is that based on **self-interest rather than on abstractions or ideology**. Cancer is unique in this regard as it impacts on virtually every family in the nation. The incidence of cancer, particularly non-smoking cancers, has escalated to epidemic proportions over recent decades. It now strikes nearly one in two men and more than one in three women in their lifetimes, and is the number one killer of children, other than accidents; few families remain unaffected.

2. *Self-empowerment:* The devastating impact of cancer is likely to be met with passivity or even denial unless citizens are provided with practical information on how to reduce their own risks. Once provided with the relevant scientific information, there are a wide range of ways by which citizens can exercise self-empowerment, ranging from their lifestyle, shopping, medical treatment, and the frankly political.

Of obvious importance is prevention of smoking, particularly prior to addiction in late adolescence. Less well recognized, but of paramount importance, is the fact that mainstream industry consumer products—food,

cosmetics and toiletries, and household products—contain multiple carcinogenic ingredients and contaminants in the absence of any label warnings (Table 1). **Once so informed, citizens could be empowered to reduce their own cancer risks by shopping for safer alternatives which, particularly for food, are becoming increasingly available** (12,44).

Citizens should be further empowered by providing them with well-documented, reader friendly information on avoidable causes of a wide range of cancers, particularly those whose incidence has dramatically escalated over recent decades (12). Of particular interest in this regard is breast cancer, in view of its multiple risk factors (45,46). These include environmental and occupational, medical and lifestyle (Table 2).

TABLE 2:
COMMON CAUSES OR RISK
FACTORS FOR BREAST CANCER (45)

ENVIRONMENTAL AND OCCUPATIONAL

Diets high in animal and dairy fats contaminated with carcinogenic, estrogenic and endocrine disruptive pollutants.

Exposure to carcinogenic chemical pollutants from neighboring chemical plants or hazardous waste sites.

Workplace exposure to a wide range of carcinogens.

MEDICAL

Oral contraceptives, particularly with early and prolonged use.

Estrogen replacement therapy, particularly with high doses and prolonged use.

Ionizing radiation from diagnostic procedures, particularly fluoroscopy.

Ionizing radiation from premenopausal mammography screening, with early and repeated exposures.

Nonhormonal prescription drugs, such as some anti-hypertensives.

Silicone gel breast implants, especially those wrapped in polyurethane foam.

LIFESTYLE

Alcohol, with early and excessive use.

Tobacco, with early and excessive use.

Consumer products contaminated by carcinogenic ingredients or contaminants, such as: dark hair dyes, with early and prolonged use; meat contaminated with estrogenic and other hormones following implantation of cattle with hormones prior to slaughter; and milk contaminated with excess IGF-1 levels following injection of cows with genetically engineered bovine growth hormone (rBGH).

Inactivity and sedentary lifestyle.

Nulliparity or delayed parity, and failure to lactate.

As yet, self-empowerment of patients in relation to their physicians is relatively limited. However, the dawning recognition of the dangers, and sometime ineffectiveness, of modern profit-driven medicine is beginning to challenge patients' traditional faith in their primary care physicians, including with regard to concerns on the safety of, often heavily promoted, prescription drugs. This recognition is the first step to medical self-empowerment. Patients should routinely request full information on any dangers of their prescription drugs, as detailed in the Warnings and Precautions sections of the annual *Physicians Desk Reference* (PDR); such informed consent is both an ethical and legal requirement. For those drugs posing carcinogenic or other serious hazards, patients would then be empowered to request safer alternatives (12). Since 1994, carcinogenicity data have been available in the PDR for only some 240 new drugs. In a survey of tests designed by the pharmaceutical industry to prove their safety, 101 of these drugs were carcinogenic in rodents, while an additional 27 were carcinogenic in epidemiological studies (47). Thus, nearly half the drugs surveyed pose carcinogenic risks. Of particular and illustrative concern is the near routine prescribing of ERT, in spite of two decades old evidence of major increased risks of breast and ovarian cancers following its prolonged use.

Disturbingly, many carcinogenic drugs have been identified at tests dosages near or at the therapeutic level. These include: the calcium channel blocker Plendil; the epilepsy drug Depokene; and the anti-osteoporosis drug Evista. "This contrasts sharply with evidence on the carcinogenicity of pesticides and most other industrial carcinogens which is based on tests at maximally tolerated doses. ...Thus, based on comparative doses or exposure levels, prescription drugs, as a class, may pose higher cancer risks than most other recognized carcinogens" (47). It should be further emphasized that about 2.5 billion prescription drugs are written annually, about nine for every man, woman and child, and about 700 on a lifetime basis. On the basis of these considerations, **a leading national authority has concluded that prescription drugs may pose the single most important class of unrecognized and avoidable cancer risks for the entire U.S. population** (47). With few exceptions, NCI and ACS have remained silent on the carcinogenicity of prescription drugs (12). It should be further emphasized that, as yet, there are no requirements for epidemiological evaluation of most drugs intended for long-term use (47).

Self-empowerment is also overdue for a major risk of breast, pediatric, and other cancers from medical procedures, particularly those from high dose diagnostic X-ray procedures (48). It is estimated that there are now 500 million radiological procedures annually, 60 million of which are computerized tomography (CT) scans, and six million of which are in the pediatric age range (under 15 years); pediatric doses for body and head scans range from 3 to 7, and 8 to 15 rads, respectively. Of current concern is the increasing use of routine CT colonography ("virtual colonoscopy") screening; this could promote the malignant transformation of otherwise benign polyps.

As for chemical carcinogens, there is no safe level or threshold for exposure to ionizing radiation which induces cumulative genetic damage from successive exposures, and which can also interact synergistically with chemical carcinogens (48). It is thus essential that X-ray dosage for each diagnostic procedure be reduced to the lowest possible level. Nevertheless, a series of articles, recently published in leading radiological journals, have documented evidence that the dosage from a wide range of radiological procedures is much higher than needed for good quality imaging. Moreover, techniques for reducing dosage by up to 5 times for most X-ray procedures, such as CT scans and fluoroscopy, are relatively simple and inexpensive (48). This is particularly important for pediatric CT scans, where dosage is as much as 2 to 14 times higher than needed, and as children are highly sensitive to the carcinogenic effects of X-rays which have been clearly incriminated as a cause of childhood cancer. It should be further noted that the use of such scans has doubled over the last six years, although radiologists admitted, at their August 2001 National Conference, that 30% of all scans are unnecessary. Diagnostic X-rays, particularly fluoroscopy, have also been clearly incriminated as a cause of breast cancer (48). For these reasons, patients and parents should recognize such serious radiation risks, seek those currently few radiologists and clinics now practicing dose-reduction techniques, and request dosage records for each examination.

Recognizing these growing concerns among radiologists, in the summer of 2002, the NCI issued to them a *Guide for Health Care Providers*, warning that "pediatric CT has become a public health hazard." However, NCI has still failed to issue any such warning to the public, whose rights to this critical life-threatening information is unarguable.

In striking contrast to the difficulties of self-empowerment regarding diagnostic X-rays, this is less of a problem for screening mammography. Contrary to routine misleading assurances that radiation dosage from screening is trivial and comparable to that from a transatlantic flight, the dosage from two films narrowly focused on each breast is about 500 times greater than that of a chest X-ray; the cumulative dosage from screening over a 10-year premenopausal period is 5,000 times greater. Screening mammography, especially for a premenopausal woman, thus poses significant cancer risks, apart from other dangers, ineffectiveness, and inflationary costs (49). Breast self examination, following a brief training period, together with annual clinical examination, preferably by a trained nurse, is an effective and safe alternative. As importantly, it empowers women to take personal responsibility for their own breast health and lives, and frees them from dependence on modern, often profit-driven, technology and its enthusiastic practitioners (49).

Finally, individual citizens have increasing opportunities for exercising self-empowerment politically, individually or on a community basis. By plugging their zip code into the Environmental Defense Scorecard (www.scorecard.org), they can obtain information on carcinogenic and other toxic pollutants to which they are exposed. Armed with this information, they can organize to alert the media, and join with local, regional or national environmental groups to publicize their concerns to local and state health authorities, and to their state Governors.

3. *Right-to-Know*: An overwhelming body of critical information on a wide range of involuntary and avoidable carcinogenic exposures still remains buried in industry and government files or in the relatively inaccessible scientific literature. This deprives citizens and workers of their inalienable and democratic right-to-know, and ability to take personal action so as to reduce their own risks of cancer. As importantly, it limits their interest and ability to join with activist consumer and environmental organizations to take political action at the community, state, and Congressional levels.

4. *Environmental Justice*: Cancer disproportionately impacts on Black Americans and other disadvantaged socioeconomic and ethnic population groups, and also on labor. This represents a flagrant rejection of environmental justice.

Development of Broadly Based Coalitions

In the final analysis, the success of the Stop Cancer Campaign depends on the ability of a wide range of activist groups to mobilize powerful nationwide grass roots citizen support. This can best be achieved by informing citizens of the escalating incidence of cancer, particularly non-smoking cancers, and practical ways for reducing their own risks. This clearly depends on the leading role of activist scientific experts in cancer prevention and public health. As critically, the Campaign depends on the creation of a community of interest between the scientists and its widely ranging activist groups and individuals. These can operate cooperatively and/or semi-autonomously in community, city, county, state, or national coalitions.

Activist Scientists: These represent a small minority of cancer scientists. The great majority is funded by the cancer establishment for research in diagnosis, treatment and molecular biology. At best, they have minimal interest and qualifications in prevention, other than smoking.

The activist experts will play the key role in providing credible scientific information to the wide range of Campaign supporters. They will also be a major resource for Congressional and state legislative initiatives. It should be further emphasized that many of these scientists have extensive and longstanding experience in public policy, including Congressional testimony and consultancy, membership of Federal advisory committees, and *pro bono* advisors to environmental, consumer, and citizen groups.

Mainstream Citizen Groups: The impact of cancer is maximal among retired citizens, reflecting past exposure to avoidable carcinogens. The median age for the diagnosis of cancer overall is 67, and it is estimated that the number of cancer cases in the aging population will double by 2050. Furthermore, retirees represent the most rapidly growing and socially responsible segment of the population. As importantly, they are the most politically influential, non-partisan lobbying group. They are well represented by the American Association of Retired Persons (AARP), and other organizations, notably the National Silver Haired Congress (NSHC), with whom CPC has worked in the past.

Expressing concerns on avoidable exposures to carcinogens, the 2000 NSHC adopted specific resolutions, calling on the U.S. Congress to expand labeling laws to warn against "human exposures to carcinogens and other additives in food, cosmetics and household prod-

ucts (that) have caused an increase in cancer rates.” The NSHC also called for other resolutions including a ban on the use of rBGH, a moratorium on food irradiation, and making food libel laws illegal. Clearly, retirees could well create a powerful mainstream citizens movement, and be critical to the success of The Stop Cancer Campaign.

Integrative and Holistic Physicians: Major changes are developing in the understanding and practice of health care. Key is the emergence of integrative and holistic medicine, which poses a powerful challenge to modern high-tech and profit-driven medical practice. This challenge has been reinforced by the belated recognition of the ineffectiveness and dangers of a wide range of medical interventions. Examples include: ERT; heavily promoted expensive anti-hypertensive drugs, such as Merck’s Vioxx, as opposed to the more effective and inexpensive generic diuretics, such as Naproxen; and surgery for osteoarthritis of the knee. Not surprisingly, it is estimated that some 40% of all Americans are now making many million more visits to integrative than to primary care physicians. Integrative physicians have clearly established themselves as teachers, rather than just treaters. These physicians and their organizations, other than any receiving funds from the cancer establishment, could play a lead role in the Campaign, and one which could attract larger grass-roots support than any other group. They could do this by shifting the current near exclusive emphasis on cancer treatment to at least equal emphasis on prevention, and providing the public with information on unknowing exposures to a wide range of avoidable causes of cancer; these include mainstream industry consumer products, carcinogenic prescription drugs (12,47), and high dose radiation diagnostic procedures (48).

Cancer Survivor Groups: There are a wide range of mainstream cancer survivor groups which provide important and much needed services and support to patients with particular cancers, such as testicular, breast, brain, lymphomas, and childhood. However, closely following the lead of the cancer establishment, these groups are narrowly focused on diagnosis and treatment, to the exclusion of prevention. Illustrative is the following advertisement:

<p style="text-align: center;">National Childhood Cancer Foundation</p> <p style="text-align: center;">New York Times article, 12/22/02, “The Tax Clock is Ticking. Quick: Pick a Charity”— “received the highest grade of A+ ...”</p> <p style="text-align: center;">Cancer kills more children in America than any other Disease. The National Childhood Cancer Foundation, A network of physician-scientists, cares for over 90% Of the children with cancer in North America and Conducts research seeking new cures.</p> <p style="text-align: center;">Help us cure children’s cancer!</p> <p style="text-align: center;">800-458-6223 www.NCCF.org</p>

With this mindset, the National Childhood Cancer Foundation appears unaware of information on a wide range of risk factors for childhood cancers and delayed cancers in adult life (Table 3). Publicizing this information could enable the Foundation to prevent, besides also treating, these cancers.

Activist Cancer Groups

An outstanding exception to mainstream survivor groups is The Women’s Health Movement, notably The Breast Cancer Fund and Breast Cancer Action. Both organizations have succeeded in combining emphasis on breast cancer awareness and prevention with providing patient support. They have also recruited a network of over 80,000 grass-roots activists and activist professionals who have challenged the cancer establishment’s minimal priorities for prevention. Additionally, they have recently undertaken a systematic analysis of the literature on the causal relation between exposure to chemicals and breast cancer (46).

Another activist cancer group is the Chicago-based Cancer Prevention Coalition (CPC). The objectives of the Coalition are dual and complementary. The first is directed to cancer prevention on the personal level, by informing consumers of their avoidable risks from undisclosed carcinogenic ingredients and contaminants in food and other consumer products, such as cosmetics, and home and garden pesticides (44). With such information, consumers become empowered to shop for safer alternatives, and demand explicit product labeling of any hazardous ingredients. The second objective is to generate major emphasis on cancer prevention, particularly informing the public of all avoidable carcinogenic exposures and of the need to phase them out, and of

**TABLE 3:
AVOIDABLE CAUSES OR RISK
FACTORS FOR CHILDHOOD
CANCER (12)**

ENVIRONMENTAL AND OCCUPATIONAL

Radioactive fallout from nuclear energy plants and weapons testing.

Industrial pollutants in drinking water.

Exposure to pesticides from urban spraying and uses in school, including wood playground sets treated with chromated copper arsenate.

Maternal or paternal exposures (pre-conception, conception, and post conception) to occupational carcinogens.

MEDICAL

Diagnostic X-radiation, particularly computerized tomography scans.

Ionizing radiation for treatment of scalp ringworm and enlarged tonsils.

Maternal X-radiation during late pregnancy.

Pediatric prescription drugs, such as Lindane shampoos, and Ritalin.

Prescription drugs during pregnancy, such as DES and Dilantin.

DOMESTIC

Dietary from nitrites in meat, and pesticides in non-organic produce, particularly baby foods.

Home, lawn, garden and pet flea collar pesticides.

Carry home of occupational carcinogens.

avoidable causes of a wide range of cancers. All such information is detailed on CPC's web site, www.preventcancer.com; the Campaign report in full will also be posted on this site.

The CPC has developed a nationwide network of over 100 local national and international offices. These act as community-based foci for education on cancer prevention, including providing citizens and the media, at local and state levels, with CPC press releases and other information. Additionally, CPC communicates with representatives of its national offices by bimonthly interactive conference calls, each focusing on a particular aspect of cancer prevention.

Environmental and Consumer Groups: Major national environmental and consumer groups will play a major role in developing and coordinating strategies for the Campaign. They are highly experienced in their current missions and programs, some of which also focus on cancer prevention, and are generally well staffed and

funded. As such, they represent a unique resource for a wide range of initiatives, particularly developing nationwide, state, county and city grass-roots citizen campaigns, public relations, and education of the body politic.

Progressive Labor: Based on minimal estimates, occupational carcinogenic exposures are responsible for 10% of overall cancer mortality; for certain occupational exposures, mortality rates are much higher. Occupational exposures are also a major cause of childhood cancers, following parental exposures during pregnancy. Once mobilized, labor could play a major role in the Campaign.

Minority Groups: Blacks are at major increased risk of cancer (p. 6). This reflects their discriminatory residence in densely populated and polluted urban centers, proximity of residence to major chemical industries and hazardous waste sites, and employment in high-risk occupations. Some of these disadvantaged communities have launched public health campaigns that have triggered growing interest and widespread support. Their responsiveness to environmental racism and injustice has broadened the impact of the public health movement. The Congressional Black Caucus, ministers, and ethnic-oriented media could all play a major leadership role in the Campaign.

HIV/AIDS Groups: Prevention campaigns by these groups have precedentially triggered a new sense of accountability regarding fiscal and research priorities. The Gay movement has challenged the medical establishment's lack of responsiveness to their health needs, including their high incidence of cancer, particularly non-Hodgkin's lymphoma and Kaposi's sarcoma. Lesbian groups are also well recognized for their emphasis on female reproductive cancers. These activists represent influential allies, and could play a leadership role in the Campaign.

Socially Responsible Business: Most business and industry ignore the externalized costs of cancer, besides other chronic disease, environmental degradation, and sustainable development. In striking contrast, socially responsible business (SRB) is beginning to transform the global economy into a new paradigm of natural capitalism, which reflects the growing realization that safety sells (Appendix X). Thus, SRB, through its non-profit Social Venture Network (SVN), could play a unique role in educating citizens as to the dangers of a wide range of mainstream industry products and of environmental pollutants, and to the practical feasibility of reducing or

eliminating such dangers in favor of safer products and technologies. Of particular interest in this regard is the 1989 Massachusetts Toxics Use Reduction initiative, requiring state industries to disclose what chemicals they use and to phase them out in favor of safer alternatives. Of particular concerns, however, are unsubstantiated or deceptive claims of safety, “green washing,” by both small business and large corporations.

Interfaith Institutions: Churches, synagogues and mosques of all shades of religious belief and practice share the basic theme of social justice. Unknowing and avoidable exposures to industrial and other carcinogens, with a resulting toll in suffering, disease and death, thus pose an undeniable challenge to social justice. As such, interfaith leaders represent unique and responsive congregations nationwide. In this, they could be assisted by institutions, such as the Interfaith Center for Corporate Responsibility and the Franciscan Ecology Movement.

Constitutional Rights Experts: With the exception of The Center for Constitutional Rights (with whom CPC has actively worked), the constitutional rights movement should be mobilized to take a leadership role on environmental justice and Right-to-Know concerns.

Global Activists: The policies of the U.S. cancer establishment, with its minimal priorities and allocations for research and advocacy on prevention, still remain a “gold standard” for other industrialized nations, such as Sweden, and more critically for “lesser developed” countries. Continuing reliance by the NCI and ACS on the discredited claim by Doll that “occupation, pollution, and industrial products” are trivial causes of cancer (13), still poses a serious global threat (Appendix VII). This claim encourages the poorly regulated rush to industrialize impoverished Third World and other developing countries. The Stop Cancer Campaign is thus global. As such, the role and cooperation of global activists is critical.

Illustrative is the need for a campaign against Canada’s continued export of virtually all the asbestos it mines to Asia and other developing nations. Canada, the world’s largest exporter of asbestos, has exerted powerful pressure to block asbestos from being condemned by the World Health Organization, the International Program on Chemical Safety, and the International Labor Organization (50). Third World country workers are dying because of Canada’s claims on the safety of the “controlled use” of asbestos, and its unwillingness to close its Quebec mines. The Canadian government per-

sists in this lethal trade, despite the recent World Trade Organization (WTO) ruling in favor of national bans of asbestos imports (50).

Finally, there is an overdue and urgent need for an international Right-to-Know initiative, as recently emphasized by a coalition of AFL-CIO, Oxfam, Amnesty International, the Sierra Club, and Friends of the Earth. Giant U.S. corporations, trading on the U.S. stock exchange, that have major international operations should be required to fully disclose information that could adversely impact on the environment and health of communities where they are based. This Right-to-Know initiative should be based on the (post-Bhopal) Toxic Release Inventory U.S. law (p. 12). This inventory would provide local communities with a critical tool to mobilize and force industry to reduce their exposures to toxic and carcinogenic industrial emissions.

STRATEGY FOR THE CAMPAIGN

There are four basic components of the Campaign’s strategy. The first is the availability of an information resource; the second is the expansion of the Campaign’s support base; the third is the development of an action plan; and the fourth is integration and communication between Campaign supporters. Additionally, it is anticipated that individual Campaign groups will develop initiatives primarily reflecting their own established agendas. These include: cancer prevention and public health scientists; retiree citizen organizations; integrative physicians; activist cancer groups; environmental and consumer groups; and socially responsible business.

The Information Resource

The Stop Cancer Campaign report, sponsored and endorsed by approximately 100 scientists, activist and integrative physicians, representatives of activist cancer, environmental, consumer, and other groups and individual activists, is the primary source of information for the Campaign strategy, and the basis for its implementation. The full report, released at a February 20, 2003, press conference in Washington, D.C., is posted on CPC’s web site, www.preventcancer.com; this site also provides information, readily accessible via a search engine, on a wide range of avoidable exposures to carcinogens, the causes of a wide range of cancers, and failed national cancer policy, together with recommendations for reform.

Expansion of the Coalition Support Base

While representatives of a wide range of groups and individual activists have sponsored or endorsed the Campaign, the membership and outreach of each group will be expanded by their own representatives. Support will also be solicited from additional groups, such as The National Silver Haired Congress, The Women's Health Movement, and The Holistic Health Network.

The Action Plan

The action plan consists of three major goals, each with an overall game plan, objective, and timeline.

1. *Exposé of the Cancer Establishment:* This will be based on scientific evidence, with vigorous documentation and skilled PR, of the indifference of the NCI and ACS to primary cancer prevention. The exposé will be all the more effective in view of the dramatic escalation in the incidence of cancer, particularly non-smoking cancers. A major task of the Campaign is to devise a media strategy to obtain significant coverage of the failed policies of the NCI and ACS.
2. *Congressional Initiatives:* These will be based on the scientific data detailed in the Campaign report, and on its leading scientists. Responsibility will also be shared among national environmental consumer and health groups, particularly those with substantial Congressional expertise. These groups will develop and nurture a cadre of supporters on Capitol Hill for a bevy of bipartisan investigative and legislative initiatives, and as spokespersons in the media and press events.

Congressional Committees have the authority to initiate investigations and direct the GAO or other relevant agencies to conduct them. Such investigations will confirm: NCI's minimal budgetary allocations for prevention, contrary to its insistence otherwise; the ineffectiveness of present policies on cancer prevention; and the practical feasibility of primary prevention. The optimal strategy would be to create multiple investigations, which will develop a drumbeat for prevention. Also, irrespective of their Committees, individual members can initiate any such investigations.

A legislative agenda, using both appropriations and authorization procedures, for increasing resources for prevention will be developed. **Of critical importance would be an explicit mandate to NCI to conduct an in-depth analysis and review of information on all**

known causes and risk factors for all cancers, with initial priority to those whose incidence rates have significantly increased since 1973, when the Cancer Statistics Review (SEER) was initiated (1). Of comparable importance will be the development of a comprehensive register of all avoidable carcinogens in the totality of the environment, and making this readily available to the public on an ongoing basis. It may be noted that Dr. Klausner, former NCI Director misleadingly claimed that such information "is readily available from NCI's Cancer Information Source," in response to questions from Cong. D. Obey in May, 1998 (p. 10-11).

NCI should further be directed to develop high priority for primary prevention, in accordance with requirements of the National Cancer Act and its Amendments, and to develop parity between budgetary allocations for prevention and "secondary" prevention or damage control—screening, diagnosis, treatment—and basic research over the next few years. On an interim basis, new budgetary line items for primary prevention should be developed. An additional priority should be to alert Congress on the recent, well intentioned but misdirected, initiative by Senator Feinstein (D-CA), which achieved bipartisan Senate support in February 2002 (S.1976), to privatize the National Cancer Program. This will be paralleled by recruiting Congressional champions for alternative model legislation directing high priority to prevention, and for being a force on the annual NCI appropriations.

A timely initiative would be the re-introduction of legislation on economically motivated white collar crime, such as the 1979 and 1984 Bills (H.R. 4973 and 6350) by Cong. John Conyers (D-MI), with adverse public health or environmental consequences resulting from suppression or "non-disclosure" of risks from hazardous products or processes. The insensitive or reckless pursuit of profit by powerful petrochemical and other industries has contaminated the totality of the environment—air, water, soil, hazardous waste sites, the workplace, and consumer products. Parallel is the aggressive marketing of carcinogenic prescription drugs in the absence of label warnings. The silence of the cancer establishment on the resulting wide range of avoidable cancers has tacitly encouraged such corporate conduct, supported by its scientific apologists. **Timely comparisons could be reasonably made between the roles of the NCI and ACS as scientific auditors of prevention programs, and those of Arthur Andersen and other**

financial auditors of miscreant industries, such as ImClone, Global Crossing, and Enron.

Another timely legislative initiative would be joining with the International POPs Elimination Network of Non-Governmental Organizations (NGOs) in obtaining support of implementary Senate legislation for endorsing the May 2001 Stockholm Convention. This treaty mandates the global elimination of 12 organochlorine petrochemicals (in the first instance), which are readily disseminated worldwide and which bioaccumulate in the food chain. So far, 24 nations have endorsed the Convention, nearly half of the 50 needed to ratify it. U.S. ratification would virtually ensure its enactment. The U.S. cancer establishment, and others worldwide, have remained silent on the carcinogenic hazards of POPs (p. 14).

3. *State Initiatives:* Political initiatives will be developed at the state and local levels, based on the scientific credibility of the Campaign report. Since the 2002 mid-term elections, Congress may well remain divided and grid locked. Accordingly, leadership and innovative policies on domestic agendas is likely to shift from the national to state county and city levels. The short- and long-term impacts of this shift may exceed any marginal Congressional domestic initiatives. Priority should thus be directed to working with state governors who are likely to be particularly sensitive to broadly based grass roots domestic concerns, of which the escalating and avoidable incidence of cancer is surely a major concern. As Senator Tom Daschle (D-SD) stated on December 9, 2002: "Governors are now on the front level—(and) have unique and critical insights into the most urgent policy debates in America." In this connection, it should be noted that Democratic governors now control 24 states, an increase from 21. These include 13 of the largest states representing 53% of the population, including Pennsylvania, Illinois and Michigan, and also Republican strongholds like Kansas and Wyoming.

Of immediate priority is implementing state-level toxics reduction. With the active cooperation of environmental groups and socially responsible business, all states should be pressed to enact the equivalent of the Massachusetts 1989 Toxics Use Reduction Act, requiring statewide industries to disclose the chemicals they use. Since passage of the Act, environmental emissions in the state decreased by 73%, from 20.6 to 5.5 million

pounds, by improving and redesigning manufacturing processes and products. Additionally, 25 non-compliant states will be urged to stop exempting pesticides from taxes. City and county actions on cancer prevention, such as toxic-free procurement, will also be implemented. Media training will be organized for local activist groups in order to provide high profile coverage in numerous media outlets.

Integration and Communication

The mechanisms for interactive communication and coordination, between the wide range of scientists, integrative physicians, retirees, representatives of labor, consumer, environmental, socially responsible business, and other groups, will be developed at national and regional strategy conferences. It is anticipated that these will include the use of CPC's web site, with its listserv, which can enable interactive communication between Campaign supporters, and which can be periodically updated. Additionally, it is anticipated that scientific, medical, environmental, consumer and other groups will also make such information available on their own web sites.

APPENDIX I
ESCALATION OF THE NATIONAL CANCER INSTITUTE BUDGET

YEAR	BUDGET (\$ BILLIONS)
1970	0.15
1971	0.22
1972	0.37
1973	0.49
1974	0.55
1975	0.69
1976	0.76
1977	0.81
1978	0.87
1979	0.93
1980	1.0
1981	1.0
1982	1.0
1983	1.0
1984	1.1
1985	1.2
1986	1.3
1987	1.4
1988	1.5
1989	1.6
1990	1.7
1991	1.8
1992	2.0
1993	2.0
1994	2.1
1995	2.1
1996	2.3
1997	2.4
1998	2.5
1999	2.9
2000	3.3
2001	3.7
2002	4.2
2003	4.6
2004	6.0 (requested)

NOTE: Approximate 30-fold increase from 1970-2003

APPENDIX II

AGE-ADJUSTED INCIDENCE RATES* (ALL RACES), 1973-1999 (1)

SITE	1973	1999	% CHANGE
Oropharynx	13.1	10.3	-21.4
Esophagus	3.9	4.9	25.6
Stomach	13.1	8.4	-35.9
Colo-rectal	57.8	54.3	-6.1
Liver	2.7	5.5	103.7
Pancreas	12.3	10.7	-13.0
Larynx	5.1	4.1	-19.6
Lung	49.0	63.5	29.6
Males	85.9	81.1	-5.6
Females	20.9	50.7	142.6
Breast (All ages)	98.5	139.1	41.2
Under 50 years	39.1	43.0	10.0
Over 50 years	254.0	390.8	53.9
Cervix	17.2	8.0	-53.5
Uterus	31.7	25.1	-20.8
Ovary (All ages)	16.5	17.0	3.0
Under 65 years	11.5	11.1	-3.5
Over 65 years	50.4	57.8	14.7
Testis	3.3	5.5	66.7
Kidney	7.9	11.1	40.5
Bladder	18.1	21.2	17.1
Prostate	85.3	174.8	104.9
Brain	5.3	6.8	28.3
Thyroid	4.2	7.2	71.4
Malignant Melanoma	6.8	17.4	155.9
Hodgkin's Disease	3.4	2.8	-17.6
Non-Hodgkin's Lymphoma	10.2	19.1	87.3
Multiple Myeloma	4.6	5.0	8.7
Leukemias	12.5	11.2	-10.4
Acute Myeloid	3.1	3.6	16.1
Childhood (0-14 years)**			
All sites	11.5	14.5	26.0
Bone and Joint	0.5	0.6	39.8
Brain	2.3	3.4	50.2
Hodgkin's Disease	0.7	0.4	-32.7
Kidney	0.7	0.8	14.2
Leukemias	3.3	4.7	44.5
Acute Lymphocytic	2.2	3.6	61.7
Non-Hodgkin's Lymphoma	1.0	0.8	-21.7
All sites (excluding Lung)	336.0	412.6	22.8
Males	362.6	474.7	30.9
Females	328.6	371.6	13.1
All sites	385.0	476.1	23.7
Males	448.5	555.8	23.9
Females	349.5	422.3	20.8

*Expressed as the number of cancers per 100,000 population

**Based on 1975-1999 data

APPENDIX III

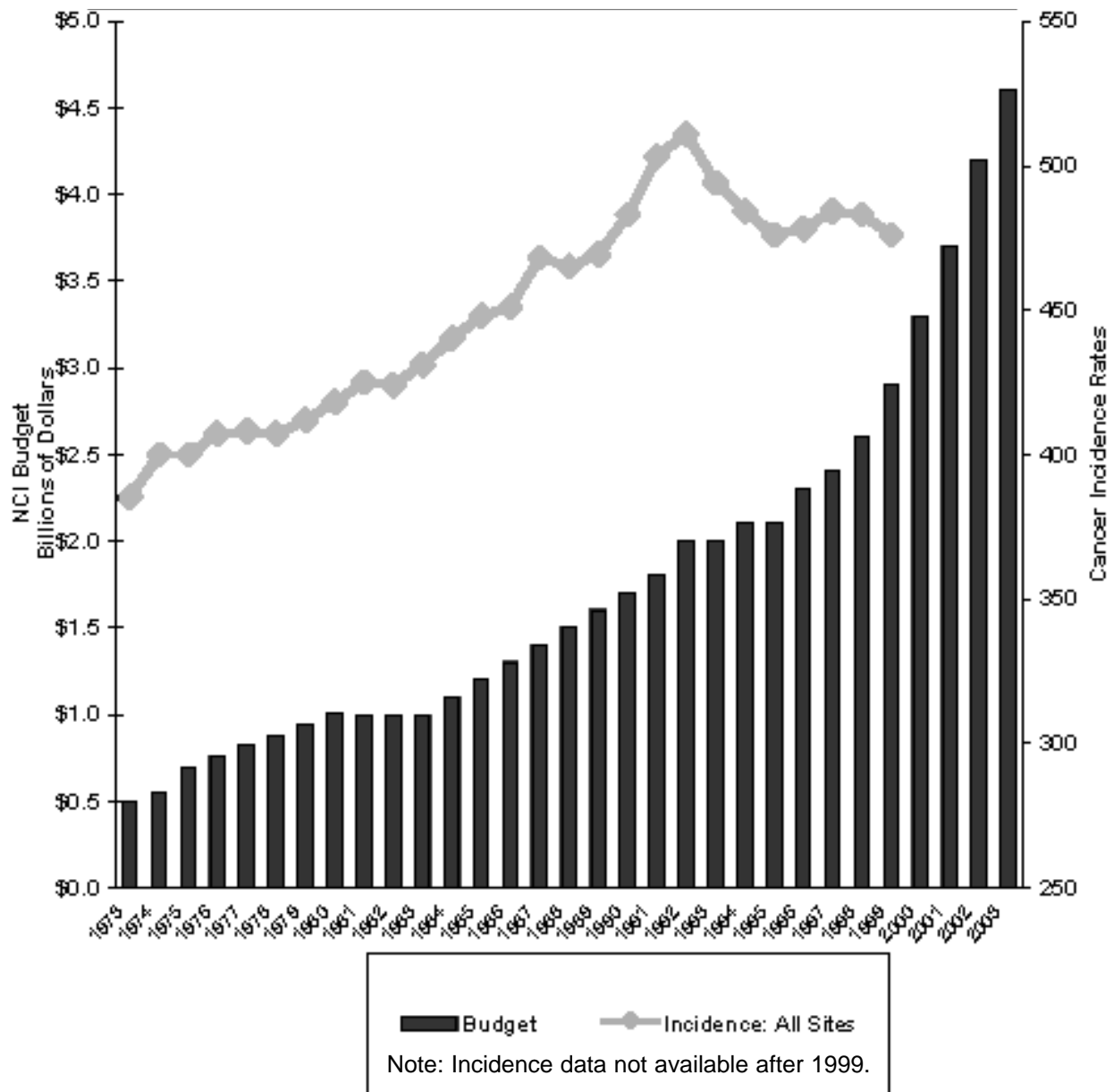
AGE-ADJUSTED INCIDENCE RATES* (ALL RACES), 1992-1999 (1)

SITE	1992	1999	% CHANGE
Oropharynx	12.2	10.3	-15.6
Esophagus	4.6	4.9	6.5
Stomach	9.2	8.4	-8.7
Colo-rectal	58.0	54.3	-6.4
Liver	4.0	5.5	37.5
Pancreas	10.7	10.7	0.0
Larynx	5.0	4.1	-18.0
Lung	69.6	63.5	-8.8
Males	97.4	81.1	-16.7
Females	49.9	50.7	1.6
Breast (All ages)	132.0	139.1	5.4
Under 50 years	43.4	43.0	-0.9
Over 50 years	363.9	390.8	7.4
Cervix	10.0	8.0	-20.0
Uterus	24.8	25.1	1.2
Ovary (All ages)	17.6	17.0	-3.4
Under 65 years	11.8	11.1	-5.9
Over 65 years	58.0	57.8	-0.3
Testis	5.2	5.5	5.8
Kidney	10.7	11.1	3.7
Bladder	21.2	21.2	0.0
Prostate	235.9	174.8	-25.9
Brain	7.0	6.8	-2.9
Thyroid	5.9	7.2	22.0
Malignant Melanoma	14.8	17.4	17.6
Hodgkin's Disease	2.9	2.8	-3.4
Non-Hodgkin's Lymphoma	18.6	19.1	2.7
Multiple Myeloma	5.9	5.0	-15.3
Leukemias	12.8	11.2	-12.5
Acute Myeloid	3.2	3.6	12.5
Childhood (0-14 years)			
All sites	13.5	14.5	7.4
Bone and Joint	0.5	0.6	20.0
Brain	3.2	3.4	6.2
Hodgkin's Disease	0.5	0.4	-20.0
Kidney	0.7	0.8	14.3
Leukemias	4.0	4.7	17.5
Acute Lymphocytic	3.1	3.6	16.1
Non-Hodgkin's Lymphoma	0.8	0.8	0.0
All sites (excluding Lung)	441.6	412.6	-6.6
Males	558.1	474.7	-14.9
Females	367.5	371.6	1.1
All sites	511.2	476.1	-6.9
Males	655.5	555.8	-15.2
Females	417.4	422.3	1.2

*Expressed as the number of cancers per 100,000 population

APPENDIX IV

RELATION BETWEEN NCI BUDGET AND CANCER INCIDENCE RATES, 1973-1999



APPENDIX V

AGE-ADJUSTED CANCER RATES FOR WHITES AND BLACK AMERICANS, 1999* (1)

SITE	WHITES	BLACK AMERICANS	% EXCESS IN BLACK AMERICANS
INCIDENCE			
Multiple myeloma	4.6	10.3	124.0
Stomach	7.2	12.4	72.2
Prostate	163.0	267.0	63.8
Pancreas	10.3	16.0	55.3
Lung	63.5	81.4	28.2
Colo-rectal	54.0	62.0	14.8
All sites	478.0	519.0	8.6
MORTALITY			
All sites	200.0	257.0	29.0

*Expressed as the number of cancers per 100,000 population

APPENDIX VI:
THE AMERICAN CANCER SOCIETY TRACK RECORD ON PRIMARY PREVENTION*

- In 1971, when studies unequivocally proved that diethylstilbestrol (DES) caused vaginal cancers in teenaged daughters of women administered the drug during pregnancy, the ACS refused an invitation to testify at Congressional hearings requiring the FDA to ban its use as a growth promoting hormone for cattle in feedlots.
- In 1977 and 1978, the ACS opposed regulations proposed for black or dark brown hair coloring products, containing coal tar dyes known to cause breast and liver cancer in rodents, in spite of evidence of human risk.
- In 1977, the ACS called for a Congressional moratorium on the FDA's proposed ban on saccharin, and even advocated its use by nursing mothers and babies in "moderation," despite clear-cut evidence of its carcinogenicity in rodents.
- In 1978, Tony Mazzocchi, then senior representative of the Oil, Chemical and Atomic Workers International Union, stated at a Washington, D.C. roundtable between public interest groups and high-ranking ACS officials: "Occupational safety standards have received no support from the ACS."
- In 1978, Congressman Paul Rogers censured the ACS for doing "too little, too late" in failing to support the Clean Air Act.
- In 1982, the ACS adopted a highly restrictive cancer policy that insisted on unequivocal epidemiological evidence of carcinogenicity before taking any position on public health hazards. Accordingly, the ACS still trivializes or rejects evidence of carcinogenicity in experimental animals, and has actively campaigned against laws (the 1958 Delaney Law, for instance) that ban deliberate addition to food of any amount of any additive shown to cause cancer in either animals or humans.
- In 1984, the ACS created the October National Breast Cancer Awareness Month, funded and promoted by Zeneca, an offshoot of the U.K. Imperial Chemical Industry, a major manufacturer of petrochemical products. The ACS leads women to believe that mammography is their best hope against breast cancer. A recent ACS advertisement promised that "early detection results in a cure nearly 100% of the time." Responding to questions from a journalist, an ACS communications director admitted: "The ad is based on a study. When you make an advertisement, you just say what you can to get women in the door. You exaggerate a point. **Mammography today is a lucrative [and] highly competitive business.**" Even more seriously, the Awareness Month publications and advertisements studiously avoid any reference to the wealth of information on avoidable causes and prevention of breast cancer.
- In 1992, the ACS supported a statement by the Chlorine Institute defending the continued global use of organochlorine pesticides—despite clear evidence of their persistence and carcinogenicity. Society Vice President Clark Heath, M.D., dismissed evidence of this risk as "preliminary and mostly based on weak and indirect associations."
- In 1992, the ACS launched the breast cancer "chemoprevention" program, in conjunction with the NCI, aimed at recruiting 16,000 healthy women at supposedly "high risk," into a 5-year clinical trial with the highly profitable drug Tamoxifen, manufactured by Zeneca. Evidence of the claimed effectiveness of Tamoxifen is, at best, arguable. Furthermore, evidence of the drug's life-threatening adverse effects in healthy women is trivialized. More seriously, information that Tamoxifen poses grave risks of liver cancer, as it is a highly potent liver carcinogen in rats in whom it also induces irreversible DNA adducts, remains undisclosed to women recruited into clinical trials.
- In 1993, *The Chronicle of Philanthropy*, the nation's leading charity watchdog, warned that the ACS is "**more interested in accumulating wealth than in saving lives.**"
- In 1993, just before PBS aired the *Frontline* special entitled, "In Our Children's Food," the ACS came out in support of the pesticide industry. In a damage-control memorandum, sent to some 48 regional divisions and their 3,000 local offices, the ACS trivialized pesticides as a cause of childhood cancer. ACS also reassured the public that food contaminated with residues of carcinogenic pesticides is safe, even for babies. When the media and concerned citizens called ACS, they then received reassurances crafted by Porter-Novelli, a powerful PR firm for the agribusiness industry, and then rehashed and sent to another client, the ACS: "The primary health hazards of pesticides are from direct contact with the chemicals at potentially high doses, for example, farm workers who apply the chemicals and work in the fields after the pesticides have been applied, and people living near aerially sprayed fields. The American Cancer Society believes that the benefits of a balanced diet rich in fruits and vegetables far outweigh the largely theoretical risks posed by occasional, very low pesticide residue levels in foods." In support of this ACS-agribusiness initiative, these reassurances were then rehashed for a third time by the right-wing group, Accuracy in Media (AIM), which pub-

lished quotes from the ACS memorandum in an article with the banner headline: “Junk Science on PBS,” with an opening, “Can we afford the Public Broadcasting Services?”

- In February 1994, the ACS published a study designed to reassure women on the safety of dark permanent hair dyes and trivialize risks of fatal and non-fatal cancers, as documented in over six prior reports. However, the ACS study was based on a group of some 1,100 women with an initial age of 56 who were followed for seven years only. The ACS concluded that “women using permanent hair dyes are not generally at increased risk of fatal cancer.” However, risks of cancer in women over 63 are up to 20 times higher for non-Hodgkin’s lymphoma and multiple myeloma, 34 times for bladder cancer, and 8 times for breast cancer. As designed, the ACS study would have missed the great majority of these cancers, and excluded dark hair dyes as important risks of avoidable cancers.
- In September 1996, the ACS together with patient and physician organizations, filed a “citizen’s petition” to pressure FDA to ease restrictions on access to silicone gel breast implants. What the ACS did not disclose was that the gel in these implants had clearly been shown to induce cancer in several industry rodent studies, and that these implants were also contaminated with other potent carcinogens, notably ethylene oxide and crystalline silica.
- In 1998, ACS allocated \$330,000, under 0.1% of its \$678 million revenues, to research on Environmental Carcinogenesis, while claiming allocations of \$2.6 million, 0.4% of its revenues. Furthermore, in its annual publication, *Cancer Facts & Figures*, designed to provide the public and medical profession with “basic facts” on cancer, other than information on incidence, mortality and treatment, there was little or no mention of primary prevention. For breast cancer, ACS stated: “Since women may not be able to alter their personal risks factors, the best opportunity for reducing mortality is through early detection.”
- In May 1999, the ACS issued a statement trivializing cancer risks from consumption of genetically engineered, rBGH/BST, milk containing high levels of the growth factor IGF-1. This reassurance was in striking contrast to substantial published scientific evidence that elevation in blood levels of IGF-1 are strongly associated with excess risks of breast, colon and prostate cancers.
- In the January 21, 2000, *Cancer Letter*, commenting on the ACS behind the scenes creation of a Legislative Committee to gain major control of national cancer policy, Dr. John Durant, former executive President of the American Society of Clinical Oncologists, charged: “It has always seemed to me that was an issue of control by the ACS over the cancer agenda. They are protecting their own fundraising capacity . . .” from competition by survivor groups.
- In the January 28, 2000, *Cancer Letter*, it was revealed that the ACS had close ties to the tobacco industry. Shandwick International, representing R.J. Reynolds Holdings, and Edelman, representing Brown & Williamson Tobacco Company, have been major PR firms for the ACS in its attempts to rewrite the 1971 National Cancer Act, and in conducting voter education programs in the past presidential campaign.
- In the ACS *Cancer Facts and Figures 2002*, the Community Cancer Control Section includes a “Look Good ... Feel Better program to teach women cancer patients beauty techniques to help restore their appearance and self-image during chemotherapy and radiation treatment.” This program is partnered by the National Cosmetology Association and The Cosmetic, Toiletry and Fragrance Association Foundation, which have failed to disclose the wide range of carcinogenic ingredients in toiletries and cosmetics. These trade organizations have also failed to disclose evidence of excess risks of breast and other cancers following long-term use of black or dark brown permanent and semi-permanent hair dyes. The ACS has failed to inform women of these avoidable risks.
- In the ACS *Cancer Facts and Figures 2002*, the Environmental Cancer Risk Section **dismissively reassures that carcinogenic exposures from dietary pesticides, “toxic wastes in dump sites,” ionizing radiation from “closely controlled” nuclear power plants, and non-ionizing radiation, are all “at such low levels that risks are negligible.”**

There is a high probability that the ACS track record on primary prevention will be perpetuated in future policies of the NCI following the February 2002 appointment of Dr. Andrew Von Eschenbach as NCI Director; prior to this, Eschenbach was President-Elect of the ACS. Furthermore, as a condition of appointment as NCI Director, Eschenbach continued his leadership of the National Dialogue on Cancer.

*Largely based on reference No. 12

APPENDIX VII:
SIR RICHARD DOLL'S PRO-INDUSTRY TRACK RECORD ON PREVENTION

In 1954, together with Dr. Bradford Hill, Doll warned that, besides smoking, exposure to nickel, asbestos, gas production tars, and radioactivity were major causes of cancer (12). In 1955, Doll published a landmark report warning of high cancer rates in asbestos workers (51). In 1967, in the prestigious Rock Carling Fellowship lecture, Doll further warned that an “immense” number of substances were known to cause cancer, and that prevention of cancer was a better strategy than cure (52). In the late sixties, Doll could have even been considered a radical.

However, over subsequent decades, Doll drastically changed his views, and gradually emerged as a major defender of corporate industry interests. This role, still virtually unrecognized, has been reinforced by his key influence in U.S. and other cancer establishments worldwide. In these overlapping roles, Doll has trivialized or dismissed industrial causes of cancer, which he predominantly attributed to faulty lifestyle, particularly smoking. Furthermore, as the leading spokesman for U.K. charities, Doll has insisted that they should focus exclusively on scientific research, and not become involved in prevention research and education (12). Doll's track record speaks for itself:

- In 1976, in spite of well-documented concerns on the risks of fluoridation of drinking water with industrial wastes (12), Doll declared that it was “unethical” not to do so (53).
- In his 1981 report on causes of cancer mortality in the U.S. (13), in the absence of any scientific evidence, Doll trivialized the role of environmental and occupational causes of cancer. He claimed that occupation was responsible for 4% of mortality rather than at least 20%, as previously admitted by consultants to the American Industrial Health Council of the Chemical Manufacturer's Association (14).
- In 1982, as a longstanding consultant to Turner & Newall (T&N), the leading U.K. asbestos corporation, Doll gave a speech to workers at one of their largest plants (54). This speech was in response to a TV exposé that forced the Government to reduce occupational exposure limits to an allegedly low level (1f/cc). Doll reassured the workers that the new exposure limit would reduce their lifetime risk of dying from occupational cancer to “a pretty outside chance” of 1 in 40 (2.5%). This, however, is an extremely high risk. Doll also declined to testify on behalf of dying plaintiffs or their bereaved families in civil litigation against asbestos industries. Furthermore, Doll filed a sworn statement in U.S. courts in support of T & N (54).
- In 1983, in support of U.S. and U.K. petrochemical companies, Doll claimed that lead in petroleum vehicle exhaust was not correlated with increased blood lead levels and learning disabilities in children (55). Doll's research had been generously funded by General Motors.
- In 1985, The U.K. Society for the Prevention of Asbestos and Industrial Disease (SPAID) criticized Doll for manipulating scientific information in order to assure that only 1/100,000 people working in an office containing undamaged asbestos risked disease and death (56).
- In 1985, Doll wrote to the judge of an Australian Royal Commission, investigating claims of veterans who had developed cancer following exposure to the herbicide Agent Orange in Vietnam, in strong support of the defense claims of its major manufacturer, Monsanto. He stated that, “TCDD (dioxin), which has been postulated to be a dangerous contaminant of the herbicide, is at the most, only weakly and inconsistently carcinogenic in animal experiments” (57). In fact, dioxin is the most potent known tested carcinogen, apart from confirmatory epidemiological evidence. Doll's defense, resulting in denial of the veterans' claims, was publicized by Monsanto in full-page advertisements in worldwide major newspapers.
- In 1987, Doll dismissed evidence of childhood leukemia clusters near 15 U.K. nuclear power plants (58). Faced with evidence of a 21% excess of lymphoid leukemia in children and young adults living within ten miles of these plants, Doll advanced the novel hypothesis that “over clean” homes of nuclear workers rendered their children susceptible to unidentified leukemia viruses (59).
- In 1988, Doll claimed that the excess mortality from leukemia and multiple myeloma among servicemen exposed to radiation from atom bomb tests was a “statistical quirk” (60). Doll revisited this study in 1993 and eliminated the majority of cases which developed within two years of exposure, claiming that such short latency disproved any possible causal relation (61).

- In a 1988 review, on behalf of the U.S. Chemical Manufacturer’s Association, Doll claimed that there was no significant evidence relating occupational exposure to vinyl chloride and brain cancer (62). However, this claim was based on an aggregation of several studies, in some of which the evidence for such association was statistically significant.
- In a 1992 letter to a major U.K. newspaper, Doll pleaded the public to trust industry and scientists and to ignore warnings by the “large and powerful anti-science mafia” of risks from dietary residues of carcinogenic pesticides (63).
- In January 2000 depositions, Doll admitted to donations from Dow Chemical to Green College, Oxford, where he had been the presidential “Warden” (64). He also admitted that the largest “charitable” donation (£50,000) came from Turner & Newall, U.K.’s leading asbestos multinational corporation, “in recognition of all the work I had done for them.”

In spite of this explicit record of pro-industry bias, Doll has recently attempted to challenge charges which have “impugned my scientific independence” (65).

Doll’s long-standing domination of U.K. cancer charities (66) and government policy is exemplified by a 1999 letter (to the author) from the Ministry of Health stating that, based on Doll’s 1981 report (11), “relatively little of the cancer burden (5-10%) is attributed to occupational, environmental or consumer exposure to specific chemicals” (67).

Faced with growing evidence of the scientific untenability of his virtual dismissal of causes of cancer other than smoking and lifestyle, coupled with highly damaging revelations of conflicts of interest, Doll has suddenly retracted his long-standing dismissal of environmental causes of cancer. As a member of a recent IARC scientific working group, convened to review evidence relating tobacco smoking and cancer, Doll finally admitted: **“It does look as if it’s the cancers that are principally caused by hormones that are not affected by smoking. Most of the other cancers throughout the body are induced by exposure to chemicals, often environmental ones”** (68). This retraction, countless cases of avoidable cancers and deaths late, has been ignored by cancer establishments worldwide.

APPENDIX VIII:
THE 1992 RECOMMENDED REFORMS OF NCI POLICIES

The following reforms were proposed by a group of 68 leading experts in cancer prevention and public health, including past directors of federal agencies, at the February 4, 1992, Washington, D.C., press conference (p.26). These proposals were offered as general guidelines, rather than as a specific blueprint (12):

1. The NCI must urgently accord similar emphasis to primary prevention, in terms of budgetary and personnel resources, as all its other programs combined, including screening, diagnosis, treatment and basic research. This major shift in direction should be initiated in the near future and phased into completion within five years or so. This shift will require careful monitoring and oversight to prevent misleading retention of old unrelated programs, particularly secondary prevention, under new guises of primary prevention.
2. A high priority for the primary cancer prevention program should be a large scale and ongoing national campaign to inform and educate citizens, the media, regulatory agencies, Congress, the Presidency and a wide range of involved industries, that much cancer is avoidable and due to past exposures to chemical and physical carcinogens in air, water, food and the workplace, besides lifestyle factors, particularly smoking. It should, however, be noted that a wide range of occupational exposures and urban air pollution have also been incriminated as causes of lung cancer. Accordingly, the educational campaign should stress the critical importance of identifying and preventing carcinogenic exposures and eliminating or reducing them to the very lowest levels attainable within the earliest practically possible time.
3. The NCI should develop systematic programs for the qualitative and quantitative characterization of carcinogens in air, water, food and the workplace, with particular emphasis on those that are avoidable. Such information should be made available to the general public, and particularly to sub-populations at high risk, by an explicit and ongoing "right-to-know" educational campaign, such as the specific labeling of food and other consumer products with the identity and levels of all carcinogenic ingredients or contaminants. While taking a lead in this program, the NCI should work cooperatively with federal and state regulatory and health agencies and authorities, industry, public health and other professional societies, labor, and community-based citizen groups.
4. The NCI should cooperate with NIEHS, NIOSH and other NIH institutes, in investigating and publicizing other chronic toxic effects induced by carcinogens, including reproductive, neurological, haematological and immunological diseases, besides cancer.
5. The NCI should cooperate with NIOSH, and other federal institutions including CDC, to develop large scale programs for monitoring, surveillance and warning of occupational, ethnic, and other sub-population groups at high risk of cancer due to known past exposures to chemical or physical carcinogens.
6. In close cooperation with key regulatory agencies and industry, the NCI should initiate large-scale research programs to develop non-carcinogenic products and processes, as alternatives to those currently based on chemical and physical carcinogens. This program should also include research on the development of economic incentives for the reduction or phase-out of the use of industrial carcinogens, coupled with economic disincentives for their continued use, especially when appropriate non-carcinogenic alternatives are available.
7. The NCI should provide scientific expertise to Congress, federal and state regulatory and health agencies and authorities, and industry on the fundamental scientific principles of carcinogenesis including: the validity of extrapolation to humans of data from valid animal carcinogenicity tests; the invalidity of using insensitive or otherwise questionable epidemiological data to negate the significance of valid animal carcinogenicity tests; and the scientific invalidity of efforts to set "safe levels" or "thresholds" for exposure to individual chemical and physical carcinogens. The NCI should stress that the key to cancer prevention is reducing or avoiding exposure to carcinogens, rather than accepting and attempting to "manage" such risks. Current administration policies are, however, based on highly questionable mathematical procedures of quantitative risk assessment applied to exposures to individual carcinogens, while concomitant exposures to other carcinogens in air, water, food and the workplace are ignored or discounted.
8. The NCI should provide Congress and regulatory agencies with scientific expertise necessary for the development

of legislation and regulation of carcinogens. Illustrative of such need is the administration's revocation in 1988 of the 1958 Delaney amendment to the Federal Food Drug and Cosmetic Act, banning the deliberate addition to foods of any level of carcinogen. This critical law was revoked in spite of the overwhelming endorsement of its scientific validity by a succession of expert committees over the past three decades. Disturbingly, the NCI has failed to provide scientific evidence challenging the validity of this revocation, including its likely impact on future cancer rates.

9. The limited programs on routine carcinogenicity testing, now under the authority of the NTP, should be expanded and expedited with the more active and direct involvement of the NCI. (On a cautionary note, it should be emphasized that this program, which is clearly the direct responsibility of the NCI, was transferred to the NTP in 1978 because of mismanagement and disinterest of the NCI). Under-utilized federal resources, particularly national laboratories, should also be involved in carcinogenicity testing programs. The cost of carcinogenicity testing of profitable, and potentially profitable, chemicals should be borne by the industries concerned, and not by the Federal NTP, and ultimately the taxpayer; however, NTP should maintain exclusive responsibility for the testing and reporting of results.
10. The NCI should undertake large scale intramural and extramural research programs to characterize known carcinogenic exposures, both industrial and lifestyle, for phase-out and elimination within defined early periods.
11. The NCI should substantially expand its intramural and extramural programs on epidemiology research, and develop large-scale programs on sensitive human monitoring techniques, including genetic and, quantitative chemical analysis of body burdens of carcinogens, and focus them specifically on cancer cause and prevention. The NCI should also take a key role in the design, conduct and interpretation of epidemiological investigations of cancer by federal and state regulatory and health agencies and authorities.
12. The NCI should develop large-scale training programs for young scientists in all areas relating to cancer cause and prevention.
13. Continued funding by the NCI of its Comprehensive Cancer Centers should be made contingent on their developing strong community out-reach programs on cancer cause and prevention, as opposed to their present and almost exclusive preoccupation with diagnosis and treatment. Centers should also establish tumor registries focused on identifying environmental and occupational carcinogens, and on the surveillance of occupational and other populations at high risk of cancer.
14. With Congressional oversight and advice from the NIH Office of Scientific Integrity, the NCI should take early action to disclose information on any interlocking financial interests between its Presidential Panel, Advisory Board, advisory committees and others in the cancer establishment, and major pharmaceutical companies involved in cancer drugs and therapy, and other industries. The NCI should also take the necessary precautions to prevent such future conflicts.
15. The three member National Cancer Advisory Panel (NCAP) should be replaced by an executive committee recruited from advisory committees, conforming to standard requirements of the Federal Advisory Committee Act for openness and balanced representation. Half of all appointees to NCI advisory committees should be recruited from scientists with credentials and record of active involvement in cancer cause and prevention. Appointments should also be extended to representatives of citizens', ethnic and women's groups concerned with cancer prevention.

The 1992 statement, however, concluded (12): "There is no conceivable likelihood that such reforms will be implemented without legislative action . . . Compliance of the NCI should then be assured by detailed and ongoing Congressional oversight and, most critically, by House and Senate Appropriation committees. However, only strong support by the independent scientific and public health communities, together with concerned grassroots citizen groups, will convince Congress and Presidential candidates of the critical and immediate need for such drastic action."

APPENDIX IX:
DEFENSIVE STRATEGIES OF THE CHEMICAL INDUSTRY

Since the world's largest chemical accident in 1984 at a Union Carbide plant in Bhopal, India, which killed 3,000 and injured 100,000, the industry has used a wide range of deceptive and fraudulent strategies to improve its tarnished image, while at the same time surreptitiously blocking regulatory reform.

The “Responsible Care Campaign”

In launching the Chemical Manufacturer's Association (CMA) 1988 campaign, its former Chairman Robert Roland announced: “We are not asking the public to trust us. We are asking everyone to track us.” However, these platitudes, heavily promoted by a multimillion dollar ad campaign, were in striking contrast to the CMA's vigorous opposition to Right-to-Know legislation, and to regulations to prevent chemical accidents, and toxic and carcinogenic emissions from industrial facilities.

Chemical Industry Poised To Launch New Campaign To Improve Its Public Image (69)

As detailed in a recent trade report, business groups are now preparing an unprecedented elaborate and coordinated campaign to improve the public image of chemical makers by emphasizing significant improvements in the industry's environmental and safety record, while also touting the key role of chemicals in many popular products.

The campaign is being modeled on a highly successful communications strategy advanced by the plastics industry over the past decade, which cost over \$250 million and is thought to have dramatically improved public perception of the industry. The campaign is also credited with helping ease regulatory pressures on the industry, particularly related to waste disposal, industry officials say.

“Without any public understanding of what we do or how we do it or why, we inadvertently create an information vacuum,” said Greg Lebedev, the new president and CEO of the American Chemistry Council (ACC) in a 10/28/02 speech in Houston. “In many respects, we have become an industry without a definition.”

Without an aggressive strategy to change public attitudes, Lebedev warned that chemical makers would fall victim to “the activist industry: extreme environmentalists, health terrorists and predatory trial lawyers.” The environmentalists feed their opinions into media reports and influence government regulators, Lebedev said.

ACC officials proposed to spend \$5 million on a “reputation initiative,” which will communicate what they view as a strong environmental record and also highlight the benefits from products that originate in chemical factories. If approved by the ACC board of directors, in June of next year, the money would fund pilot projects for the latter half of 2003, possibly leading up to a wider campaign the following year.

Chemical companies could be asked to pay additional dues to ACC in order to pay for the initiative, sources say. But given the economic downturn, it is still uncertain whether companies will be willing to contribute, though most businesses support the project's overall goals, says a source familiar with the project.

The “reputation initiative” has three major goals. The first, to initiate discussions with community groups, environmentalists and other organizations involved in the political process. ACC has already set up a “leadership dialogue” that brings together public policy experts to discuss a variety of long-term problems affecting the industry (Chemical Policy Alert, July 30, p. 2).

The second part of the effort will be to pull together under the new initiative a number of existing voluntary programs to improve the industry's health and safety performance. These include: the Responsible Care program, which is currently being overhauled in an effort to improve its effectiveness; the High Production Volume (HPV) chemical testing program; the Long-Range Research Initiative on testing chemical hazards; and a voluntary program to track children's health risks.

Finally, industry officials will identify target audiences to whom they would communicate their message, possibly through a major advertising campaign. Possible audiences could be the general public, local communities, the media and government officials.

The upcoming public relations initiative was inspired by a campaign conducted by the American Plastics Council, which last year merged with ACC. The campaign, known as “plastics makes it possible,” included advertisements, working with the media to generate favorable press coverage, and responding aggressively to any public statements about the

industry's environmental record. Industry groups also worked with local officials to develop an extensive state government relations program.

"The American Plastics Council faced the very same conundrum, and they had a very successful improvement program," said Thomas E. Reilly, Jr., chairman of the board at ACC, in a speech on Oct. 28 in Houston. "Can we succeed like plastics? We won't proceed to go forward until there's solid logic to indicate that we can."

Chemical Industry Scores Major Victories In Congressional Races (70)

As detailed in another recent trade report, the 2002 midterm election was a major victory for the chemical industry, as nine of the top ten recipients of industry contributions won their races. Most notably, Rep. Jim Talent (R-MO), who was the single largest recipient of chemical industry money of all candidates in the 2002 elections, narrowly edged by Sen. Jean Carnahan (D-MO), in one of the most closely watched congressional races in the country.

Republicans Texas Attorney General John Cornyn, Elizabeth Dole (NC), Rep. Lindsey Graham (SC), and former Mayor of Saint Paul Norm Coleman (MN) all scored victories that were critical in allowing the GOP to regain control of the Senate. Each of these candidates was among the top ten recipients of chemical industry money in the 2002 election cycle, according to data compiled by the Center for Responsive Politics.

On the House side, 18 of the top 20 recipients of chemical industry money won their elections. Most of the industry's contributions went to incumbents, particularly members of the House leadership and members of the Energy and Commerce Committee.

Talent and Cornyn were the top two recipients of chemical industry money for this election cycle, receiving \$54,600 and \$42,700 respectively. Dole was seventh, receiving \$32,250; Graham was ninth, receiving \$29,550; and Coleman was tenth, receiving \$27,550.

In addition, Lamar Alexander, the former governor of Tennessee, won the state's Senate seat, backed by \$16,000 of chemical industry money. The seat was left open by Sen. Fred Thompson (R), who retired from the Senate.

Another notable recipient of industry money was Sen. James M. Inhofe (R-OK), . . . (now) chairman of the Senate Environment and Public Works Committee (replacing James M. Jeffords, (I-VT), has been a strong supporter of industry-backed chemical security legislation that would codify the industry's "Responsible Care" program. Inhofe received \$20,750 from the industry, placing him 16th among recipients running in the election.

The data shows that the industry has contributed a total of \$5.5 million to political candidates during the current election cycle. The top 20 candidates receiving money from the industry include 16 Republicans and four Democrats, according to data reflecting contributions both from individuals and from political action committees (PACs) associated with chemical groups.

Sen. George Voinovich (R-OH) received \$55,150, the largest total contribution from the chemical industry. Voinovich, who is not up for reelection until 2004, is currently the ranking member on the Senate Environment and Public Works Subcommittee on clean air, wetlands, private property and nuclear safety. The next four top recipients are Talent, Cornyn, House Speaker Dennis Hastert (R-IL), and House Energy and Commerce Committee Chairman W.J. "Billy" Tauzin (R-LA).

By far the top contributor within the chemical industry was Agvar Chemicals, a manufacturer of bulk pharmaceutical chemicals, at \$773,625. Almost all the contributions went to Democratic candidates.

Other major contributors include the American Chemistry Council (ACC), which donated \$456,627, followed closely by Contran Corp and Dow Chemical. All three organizations donated primarily to Republicans. The top Democratic recipient from the overall industry was Rep. John Dingell (MI), the ranking member on the House Energy and Commerce Committee, at \$33,000.

The industry gave approximately \$1.7 million from individuals, \$1.34 million from PACs, and \$2.4 million in soft money. Contributions included \$3.7 million to Republicans and \$1.9 million to Democrats.

A fitting coda to this revealing track record of chemical industry strategies is provided in a newly released massively documented muckraking book by two prominent public health historians (71). They emphasize that a key theme is industry's control of information, characterized by "lying and obfuscation."

APPENDIX X:
EXAMPLES OF SOCIALLY RESPONSIBLE BUSINESS

These examples illustrate the roles of marketplace pressures and responsible industries in reducing carcinogenic, and otherwise toxic, exposures.

- Certified organic food products.
- Stonyfield Farm, Horizon Organic, and Organic Valley, which sell non-genetically engineered (rBGH) organic dairy products.
- Seventh Generation, which manufactures and sells safe household products.
- The Healthy Building Network, which promotes construction and sale of “green” buildings.
- Aveda, Dr. Hauschka Kosmetik, and Neways, which sell safer cosmetics and toiletries.
- Patagonia, a leading sportswear manufacturer, which has completely converted to organic cotton, by using integrated pest management strategies rather than carcinogenic pesticides.
- The Atlanta-based Interface, Inc., which leases floor covering services without toxic adhesives, and recycles old carpets, rather than disposing them in landfills or municipal incinerators; and chemical industries.

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