Shakespeare’s proverbial comment about the ebb and flow in the tides of men certainly applies to the article, “Cancer Statistics, 2001,” beginning on page 15 in this issue of CA.1 Put simply, after a two–decade increase during most of the 1970s and 1980s, US cancer incidence and mortality rates flattened and then went into a significant and accelerating decline in the 1990s. Over the past few years, as the story of this decline steadily unfolded, the notion of declining cancer rates as being counterintuitive gave way to the comforting assumption that it was normal and to be expected.

NOTHING BUT THE FACTS

With superb clarity, this group of eminent epidemiologists has outlined the temporal trends in cancer incidence and mortality rates that we have observed over most of the past three decades. They have also outlined why these and all such data should be interpreted with caution, given the possible lack of geographic representativeness, the three–to–four–year time lag in the data upon which projections are made, and the inherent hazards associated with mathematical modeling. They have summarized their numbers with the precision of scientists who deal purely with the facts (“and nothing but the facts”), as well they should.

THE HUMAN DIMENSION

I, on the other hand, have the happy task of going beyond the statistics in attempting to draw some conclusions from the facts. In taking up this challenge, I am reminded of Dr. Irving Selikoff’s timeless adage: “Statistics are merely aggregations of numbers with the tears wiped away.” The human dimension of our subject—the suffering and sorrowful loss—should never be forgotten.

It would be presumptuous of me to use this forum to parse the individual site–specific cancer rate changes, with the object of outlining specific interventions to which I happen to be partial. These decisions will have to be made at the local level by the varied cancer constituencies who work together in defining local needs and establishing local priorities. Of course, once established, these needs and priorities must not become unfunded local mandates. Clearly, substantial federal, state, local, and private monies will be needed for these efforts. Cancer incidence and mortality rates are as given to respond to evidence–based community interventions and targeted fiscal resources, as a tumor targeted by a drug with a proven clinical dose–response relationship.
CANCER CONTROL AND INTERVENTION

The broad areas of cancer control and intervention can be summarized under the rubrics “Cancer Prevention,” “Cancer Screening/Early Detection and Treatment,” “Technology Transfer,” and “Cancer Research.”

Cancer Prevention

Cancer prevention is easier said than done, although we know that two major preventable risk factors alone—tobacco and poor diet—account for about two thirds of all deaths from cancer. The task of translating knowledge of prevention into practice and making an impact on the target groups at maximal risk is difficult, but must be attempted. Only prevention will affect both cancer incidence and mortality. There is a vast and ever-growing body of literature that outlines how we can effect cancer prevention on an individual, as well as a population, basis.

Screening/Early Detection and Treatment

Advances achieved in the screening/early detection and treatment of cervical and breast cancers need to be expanded aggressively to colorectal and prostate cancers. Early detection and treatment for these cancers, especially for the former, have an immense potential for impact on the public health. Of course, early detection and treatment only affect mortality and not the actual genesis of these cancers.

Technology Transfer

By technology transfer, I refer to the problems of access to health care inherent in the existing medical care caste system, which is shameful in a country as wealthy as ours. We must make cancer prevention, as well as the health care advances in diagnosis and therapy that are currently available to a small number of people via our tertiary care academic medical cancer centers, available to all individuals.

Cancer Research

Targeted cancer research must be another central focus of our efforts, with adequate funding, of course, across the entire spectrum of cancer research. This ranges from bench research, where we elucidate the very origins of cancer—with all of the future applications that this implies—through epidemiologic, behavioral, clinical, and even technology transfer (or diffusion) research.

The diffusion stage is where we attempt to get what has been newly discovered about prevention, detection, treatment, and rehabilitation into the hands of practicing health care professionals. We must never neglect these necessary efforts at getting the science to the street, or moving medical advances from the bench to the bedside, in as short a time as possible. We must attempt to minimize the “town/gown” schism that exists in medical care worldwide.

CANCER INCIDENCE AMONG ETHNIC/MINORITY POPULATIONS

One area of obvious concern, and one that urgently needs addressing, is the elevated incidence of cancer among individuals in the lower socioeconomic strata of society and among members of some ethnic/minority populations. The occurrence of (and mortality from) cancer, and the behavioral antecedents of cancer, relate inversely to education, income, social class, and often, with being Caucasian. African Americans have the highest cancer incidence rates, and declining rates that have

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been recently reported are relatively smaller or non-existent for non-whites, except among Hispanics, who actually had accelerated declines. Similarly, African Americans are about 33% more likely to die of cancer than are whites. Nevertheless, the gap in mortality rates between white, black, Hispanic, and Asian Americans has been narrowing in the past decade, probably due to targeted outreach by the Centers for Disease Control and Prevention and other providers of care to these population groups.

Regrettably, cancer mortality rates among American Indians are actually increasing. Later diagnosis and possibly poorer treatment contribute to the higher mortality rates among African-American men and women and their poorer probability of survival.

As Harold Freeman, MD, Chairman of the President’s Cancer Panel has often said, “Poverty is in its own way a potent carcinogen.” We must thus target our resources at high-risk populations with aggressive outreach, prevention, screening, and treatment efforts. To do less would be both morally wanting and poor public policy.

As the late Reverend Martin Luther King had averred from his jail cell in Alabama, albeit in a somewhat different but applicable context, in this brilliant adaptation from the Prophet Amos, “I have a dream…we will not be satisfied until justice rolls down like waters and righteousness like a mighty stream. Injustice anywhere is a threat to justice everywhere.” Cancer prevention and control must no longer be regarded as merely an economic, racial/ethnic, or medical problem. We have to reframe the issue as one that is fundamental to social justice.

REALISTIC GOALS

It behooves us to act proactively in the interest of our collective cancer destiny to become change agents working for improved public health policies, medical practices, and treatments. To that end, the American Cancer Society has set the ambitious, and realistic, goals of a 25% reduction in the cancer incidence rate and a 50% reduction in the cancer mortality rate by the year 2015 in the US. These expectations seem more and more achievable with each successive report, such as the one included in this issue of CA, showing continued significant declines in cancer rates.

Will these declines persist? We cannot really ever know for sure, hence the *quod vide* in the title of this editorial. However, we must make every effort to assure that we bring the American Cancer Society’s vision to fruition.

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Significant cancer prevention efforts do result in measurable cancer incidence outcomes. As an example, California’s halving of the adult per capita consumption of cigarettes with its aggressive anti-tobacco program has, over the past decade (from 1988 to 1997), contributed to the recent significant declines in lung cancer incidence rates among men and women in the state. The large California decline among men is a better than a 50% increase over such reductions elsewhere in the country over that same period. The decline among California women is unique in that lung cancer rates are still increasing in women elsewhere in the US, while they are declining in California. Overall, the decline in lung cancer rates in California occurred at nearly five times the rate of decline in the rest of the US for this 10-year period.
Resource Allocation

Certainly, as the situation changes, we will need to make judicious mid-course corrections that reallocate cancer prevention, early diagnosis, treatment, and research resources. We need the American Cancer Society, the National Cancer Institute, the Centers for Disease Control and Prevention, cancer centers, community hospitals, state health departments, consumer and provider cancer advocacy groups, and other members of the greater cancer constituency to work arm-in-arm to allocate resources in a collegial, non-partisan fashion where they will do the most good in achieving our collective goals. To do this, resource allocation and cancer policy decisions should be subjected to a litmus test before they are put into effect: How capable are they of specifically contributing to the reduction of cancer incidence and mortality rates?

BE THAT CHANGE

Prophecy has its inherent pitfalls. Kierkegaard wrote, “Life can only be understood backwards, but unfortunately has to be lived forwards.” America’s latter day poet/philosopher Yogi Berra said much the same thing when he sagely suggested, “The future ain’t what it used to be.”

I contend that the future can be molded by all of us if we work jointly and single-mindedly toward our common goal of reducing cancer incidence and mortality. As Mahatma Gandhi once said in my native India, “If you want to change the world, be that change.”

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