This issue of CA—A Cancer Journal for Clinicians contains the American Cancer Society’s 30th annual review of cancer statistics.¹ Over the years the surveillance of these data and associated trends in cancer has had a significant impact on public health planning and the development of strategies for cancer control. To best direct our efforts in cancer control, we need to understand the components of the many diseases that constitute the diagnosis cancer. This insight can provide both an important benchmark of our successes and direct us to areas where we need to focus more effort. At a time when budget pressures mount in the biomedical community, these data should focus our attention on the most serious problems.

The need for a prevention strategy is obvious. Any disease whose incidence rate is rising demands our attention. Unless cancer cure rates improve as a result of better therapies or earlier detection, we will continue to see mortality increase at a pace that parallels increasing incidence. In cancers where causes are known, preventive steps can be emphasized. In others, where there is neither a known etiology nor a curative treatment, answers will only come from research.

Gastric cancer is a potentially interesting “stalking horse” that leads us to consider public health approaches in cancer. As a result of unspecified public health measures, we have witnessed a dramatic decrease in incidence and mortality of gastric cancer over the last six decades in the United States, while cancer of the stomach remains a leading cause of death from cancer in Asia and Eastern Europe.¹ What has the United States done to bring about the gradual disappearance of this cancer? Have we introduced a protective agent into the environment (the food supply) or have we taken the carcinogen out? The general use of refrigeration for food storage is a commonly used explanation of this decrease in incidence of gastric cancer. However, this explanation is at least one step removed from identifying an actual etiologic agent. If we had a biologic explanation for the decrease in gastric cancer incidence, we could model active strategies to achieve similar outcomes for other common cancers. What is the impact of food additives, such as vitamins and trace metals; the presence of chronic Helicobacter pylori infection; the common use of antibiotics and hormones; and the widespread use of aspirin and nonsteroidal anti-inflammatory drugs? The notable change in gastric cancer incidence and mortality has occurred as a result of public health measures and not conscious promotion of any modification of personal lifestyle.

Dr. Lenhard is a Professor of Oncology and Medicine and Director of Community Programs at the Johns Hopkins Oncology Center in Baltimore, Maryland, and President of the American Cancer Society.
Lung cancer presents a contrasting problem. Like gastric cancer we have neither an effective early diagnostic test nor curative therapies available for advanced disease. Therefore, as lung cancer incidence rises, mortality also rises. However, in contrast to gastric cancer, the causative agent for this disease is well known, and if public health principles were followed, tobacco would disappear from the environment, and a decreasing incidence rate would lead to decreasing mortality. In fact, we are already seeing a decrease in lung cancer in men under age 65 years.2 The 1996 statistics report confirms that the mortality rate of deaths from lung cancer has levelled off in men, but is still rising in women.1 This trend for women must be reversed. In lung cancer we are not lacking in knowledge, but in courage to remove a carcinogen, tobacco, from the environment. The overall impact on cancer mortality would be profound if past trends for this common disease were to be reversed.

This year’s statistics also highlight an important trend in cancer of the female breast. For many decades breast cancer incidence has been gradually increasing, while mortality remained stable. We now are seeing a true decline in mortality. There are several possible explanations for this, the most likely being that early detection by the use of mammography has led to diagnosis of this disease in a localized and curable stage. Evidence that supports this comes from an analysis of data from the Surveillance Epidemiology and End Results program that shows an annual stepwise decrease in reported mean tumor size of breast cancers removed from 1983 (2.74 cm) to 1991 (2.17 cm).3 The American Cancer Society’s emphasis on mammography as an early detection tool and the use of breast-sparing therapy, such as lumpectomy and radiation therapy, provide women both curable disease and better quality of life. In addition, the common use of adjuvant chemotherapy for patients with more advanced disease has also contributed to improved survival.

Oncologists are acutely aware of the financial impact of the disease and the high cost of research and clinical trials. These advances, however, are the direct result of research and remind us that cost/benefit analysis of research is an inexact method of assessing potential of high-impact findings. The American Cancer Society believes it should focus its resources on specific diseases that, if survival and/or morbidity is improved, have the greatest potential for significant impact. As we set our criteria and apply our efforts, we hope that a significant change in mortality will be reflected in the annual statistics that are reported in future annual reviews in CA. The statistics reported in this issue and the analysis of annual trends will provide us the measures needed to assess the impact of cancer control activities.

The American Cancer Society’s research program has recently undergone a comprehensive review to determine where to focus efforts to produce the greatest impact on this disease. Progress is being made in cancer control, and statistics support the strategies of both decreasing exposure to cancer-causing agents and working toward more effective early detection and treatment. Hopefully, all cancer patients and potential cancer patients will continue to benefit from the insight provided by the constant monitoring of the cancer problem that is exemplified in this year’s compilation of cancer statistics.

References
1. Parker SL, Tong T, Bolden S, Wingo PA: Cancer Statistics, 1996. CA Cancer J Clin 1996;46:5-27.
2. Ries LAG, Miller BA, Hankey BF, et al (eds): SEER Cancer Statistics Review, 1973-1991: Tables and Graphs, National Cancer Institute (NIH Pub. No. 94-2789). Bethesda, Md, NCI, 1994.
3. Personal Communication: Phyllis A. Wingo, PhD, American Cancer Society, 1995.