

Oncology and Innovation: The Potential and Promise

Len Lichtenfeld, MD, FACP

Deputy Chief Medical Officer

American Cancer Society

Washington, DC

October 11, 2006



Cancer Remains a Formidable Challenge in 2006

- **1.4 million new cases**
- **More than 1 million cases of non-melanoma skin cancer**
- **Over 62,000 cases of in situ breast cancer and 50,000 cases of in situ melanoma**
- **564,380 deaths**

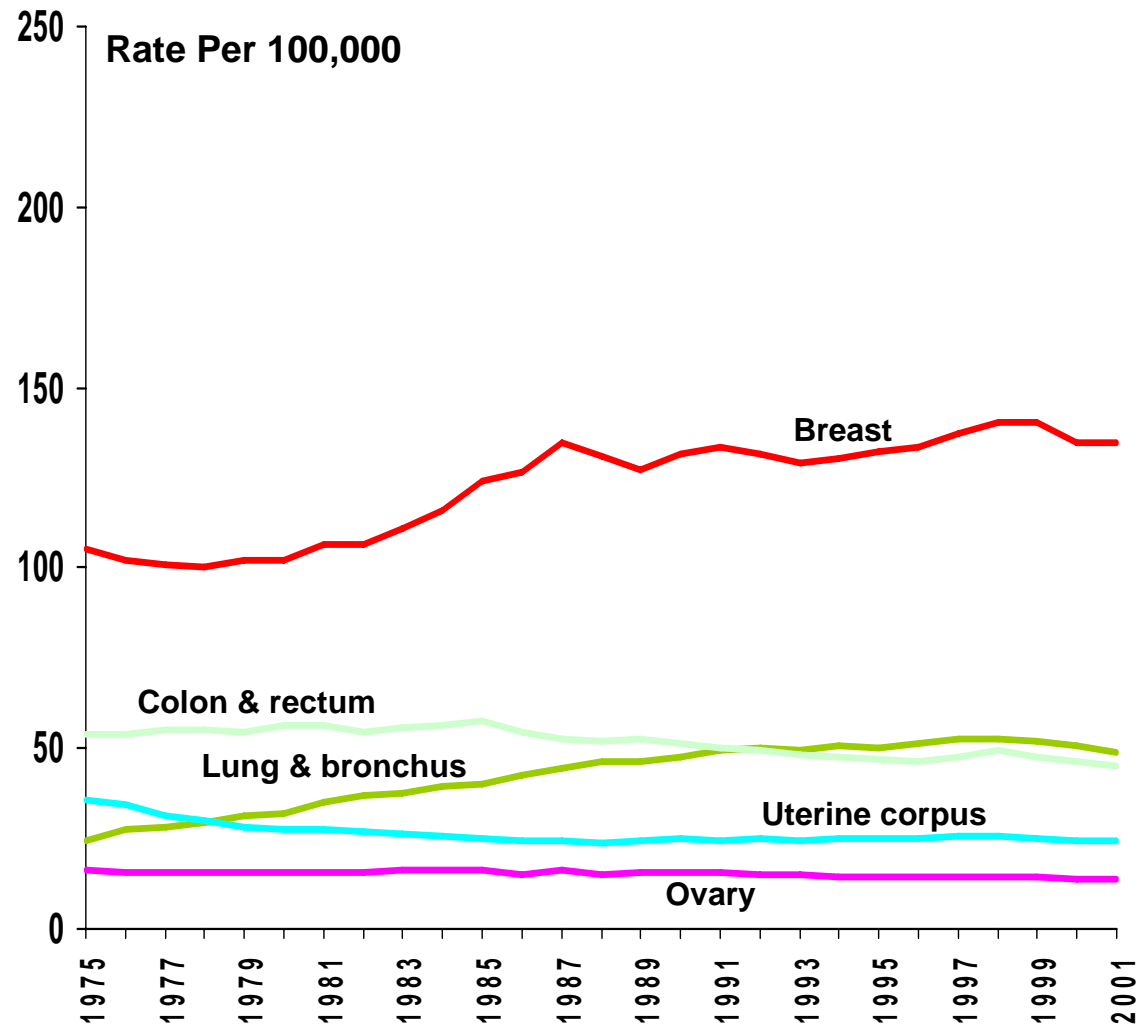
But There Has Been Real Progress

- **5 year relative survival has increased from 50% in the early 1970's to 65% by 2001**
- **Survival for Stage I breast cancer has increased from 80% in the 1950's to 98% today**
- **Childhood cancer survival has increased from 50% before the 1970's to nearly 80% in the late 1990's**
- **For the first time since 1930, the actual number of cancer deaths decreased in 2003**

Why?

- **Better screening for prevention and early detection**
- **Better diagnostics/imaging technology**
- **Better treatments**
- **Better drugs and understanding how to use them—and how *not* to use them**
- **Better availability of care**

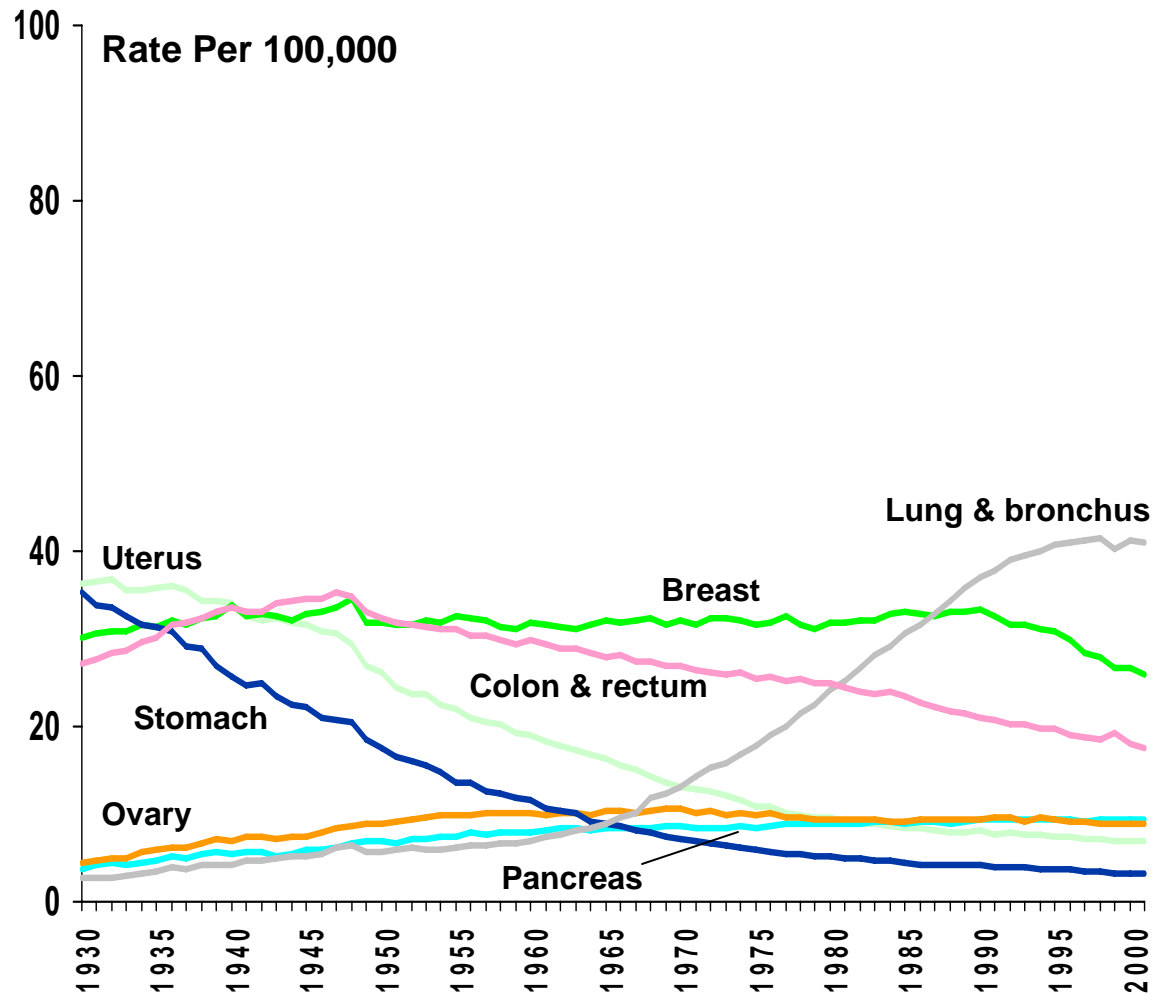
Cancer Incidence Rates* for Women, US, 1975-2001



*Age-adjusted to the 2000 US standard population.

Source: Surveillance, Epidemiology, and End Results Program, 1975-2001, Division of Cancer Control and Population Sciences, National Cancer Institute, 2004.

Cancer Death Rates*, for Women, US, 1930-2001



*Age-adjusted to the 2000 US standard population.

Source: US Mortality Public Use Data Tapes 1960-2001, US Mortality Volumes 1930-1959, National Center for Health Statistics, Centers for Disease Control and Prevention, 2004.

Examples of Progress

Breast Cancer:

Mammography

Breast conserving treatment

Adjuvant therapy

Hormonal/chemotherapy

Examples of Progress

- **Chemotherapy**
- **Aromatase inhibitors**
- **Targeted Therapies**

Herceptin

Tarceva/Iressa

Gleevec

Erbitux

Avastin

Sutent

- **Vaccines?**

Examples of Progress

- **Genetic testing**

BRCA 1 and BRCA2

- **Gene therapy**

- **Mapping the cancer genome**

But At What Cost?

- **Annual economic burden of cancer: \$210 Billion**
- **Costs of drugs are measured in the thousands of dollars/year, and are approaching \$100,000/year for some treatments**
- **Some of the survival benefits are measured in days**
- **Budgets in the public and private sectors are not limitless**

Medicare: The Reality of Budget Neutrality

SGR

Bevacizumab (Avastin) \$280 million

Bortezimab (Velcade) \$73 million

Cetuximab (Erbix) \$112 million

Pemetrexed (Alimta) \$91 million

Where To From Here?

- **We are in the midst of a revolution in the treatment of cancer**
- **We are developing drugs at a more rapid pace**
- **We risk bottlenecks in drug development and clinical trials**
- **We do not have sufficient public funding to do the studies we need to do**
- **We are at risk of inadequate funding to maintain the current pace of cancer research**

A Glimpse Into the Future

- **Detection and treatment—before the tumor can be found**
- **Improved targeting and treatment of specific individual cancers**
- **Prevention vaccine?**
- **But what about the ROI?**

The Greatest Challenges

How are we going to be certain that:

- Every person in this country has access to medical care?**
- Every person in this country has access to preventive and early detection services?**
- Every person in this country who is diagnosed with cancer gets the right treatment at the right place at the right time?**

Thank you!





Fundamentals Still Count

To save the most lives from cancer, health care providers, health plans, insurers, employers, policy makers, and researchers should be concentrating their resources on *helping people to stop smoking, maintain a healthy weight and diet, exercise regularly, keep alcohol consumption at low to moderate levels, and get screened for breast, cervical, and colorectal cancer.* Such efforts may also help alleviate the disproportionate burden of cancer borne by members of racial and ethnic minority groups.

Fulfilling the Potential of Cancer Prevention and Early Detection, Institute of Medicine, 2003

A 19 percent decline in the rate at which new cancer cases occur and a 29 per cent decline in the rate of cancer deaths could potentially be achieved by 2015 if efforts to help people change their behaviors that put them at risk were stepped up and if behavioral change were sustained. *This would equate to the prevention of approximately 100,000 cancer cases and 60,000 cancer deaths each year by the year 2015.*

Fulfilling the Potential of Cancer Prevention and Early Detection, Institute of Medicine, 2003