

# Trends in Cancer Treatment Costs in the United States

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**Ireland-NCI Workshop on Health Economics  
and Health Policy Research**

**April 22, 2009**



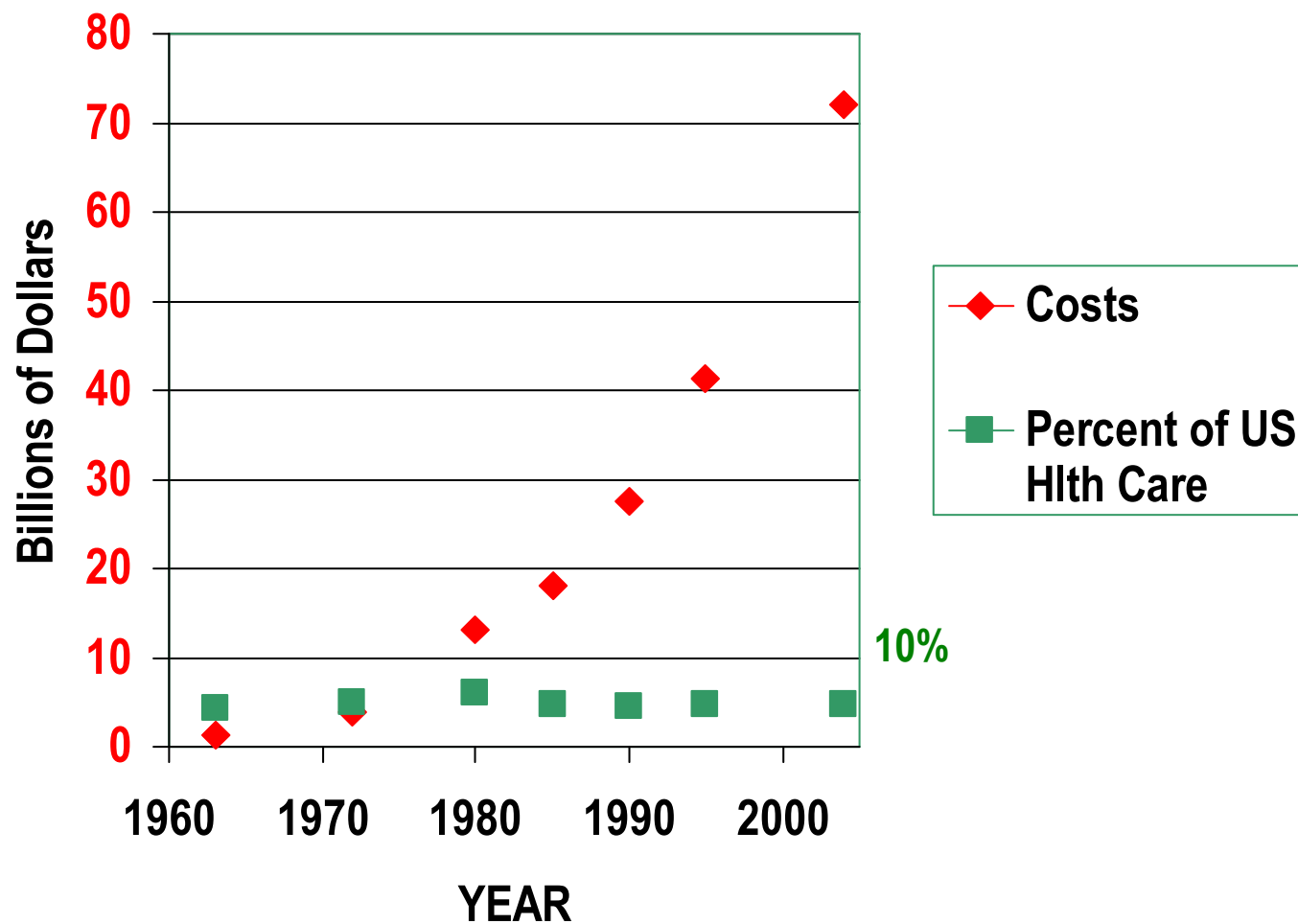
## Why Do We Care About Trends in Cancer Treatment Costs?

- With an aging population and increased survival the prevalence of cancer is increasing, even while cancer incidence rates may be declining.
- Cancer is perceived to be an expensive disease, especially with the recent emergence of targeted, biological drugs.
- Aggregate cancer expenditures may explain a significant proportion of overall trends in healthcare costs
- Cost effectiveness analyses of cancer prevention and screening interventions may have to be revised if treatment costs increase dramatically (for example colorectal cancer screening)

## Trends in Aggregate Cancer Costs

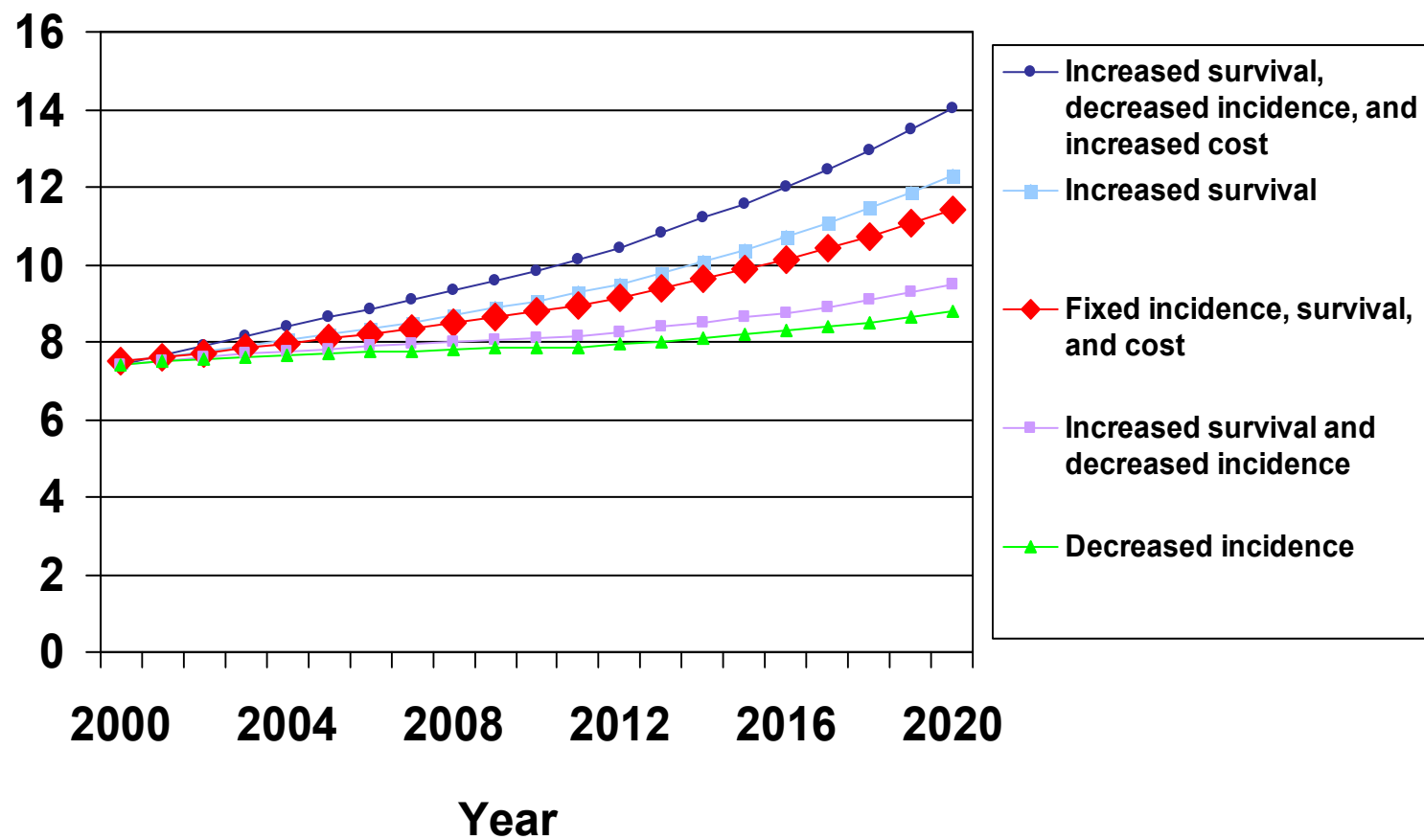
- Cancer treatment costs as a proportion of total U.S. healthcare costs
  - Does not include prevention and screening
  - Based on naïve updates of older primary data; starting for year 2005 and going forward we will have “new and improved” estimates
- Projection of cancer treatment costs as a function of the aging population and other factors

# Trends in Cancer Treatment Expenditures In Nominal Dollars and Percent of Health Care



# Projected Costs of Colorectal Cancer Care, Sensitivity Analysis 2000-2020

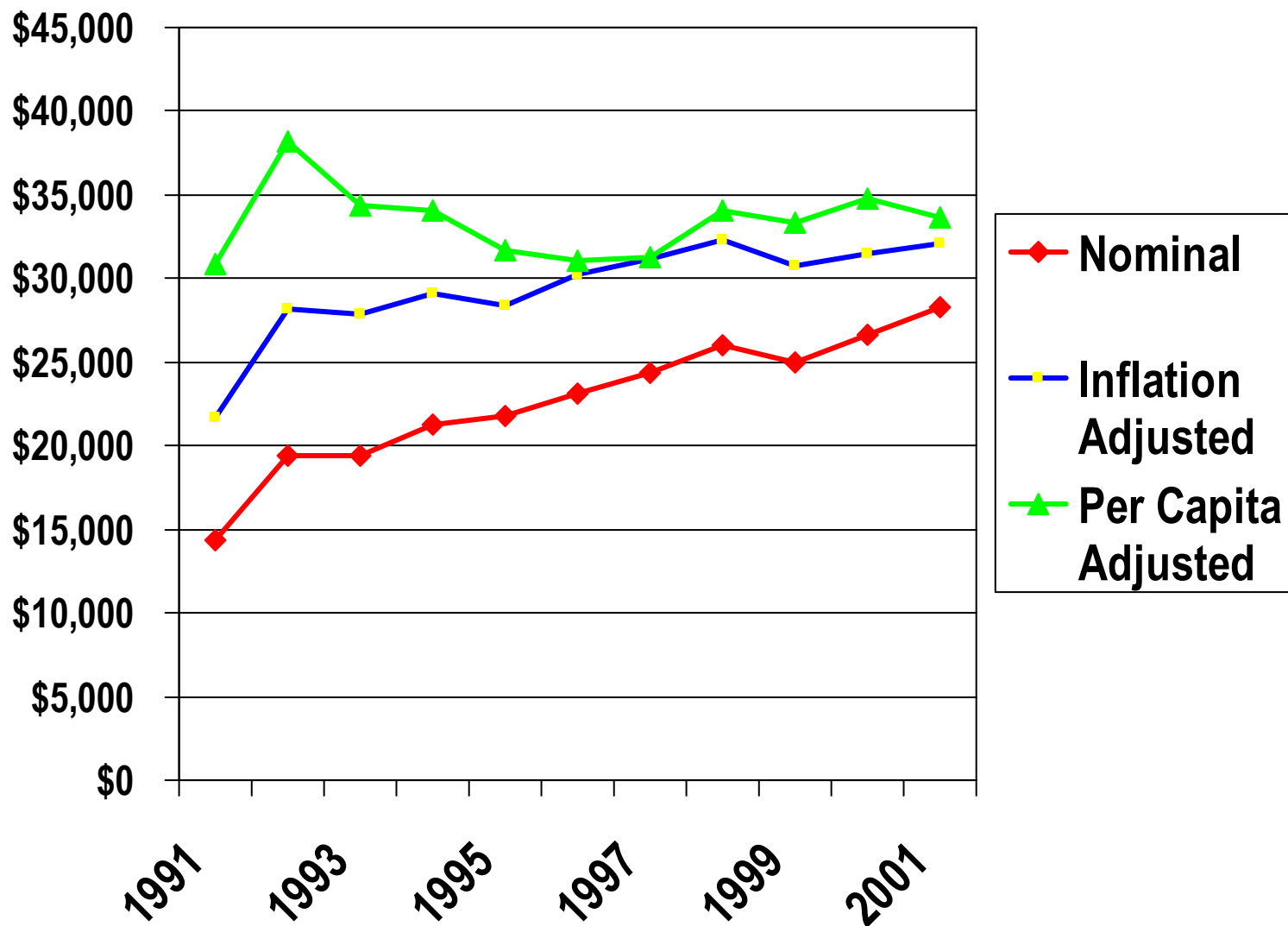
Dollars, in billions



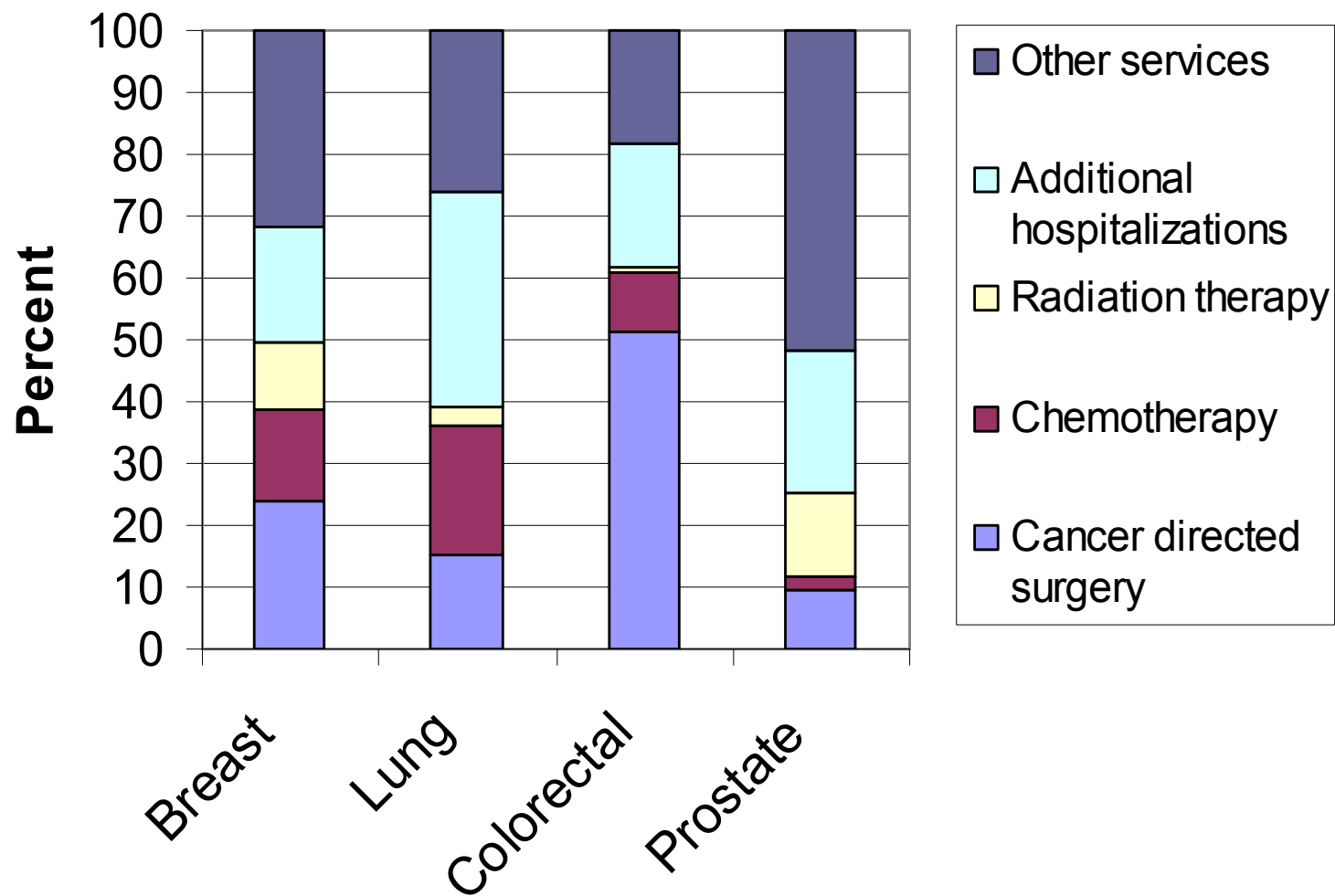
## Trends in Per Patient Cancer Treatment Cost

- Estimates Based on SEER-Medicare Data
- Costs Estimated by Treatment Phase
- Costs Estimated by Components of Care, e.g. Surgery, Chemotherapy, Radiation, Hospitalization, Other Services.

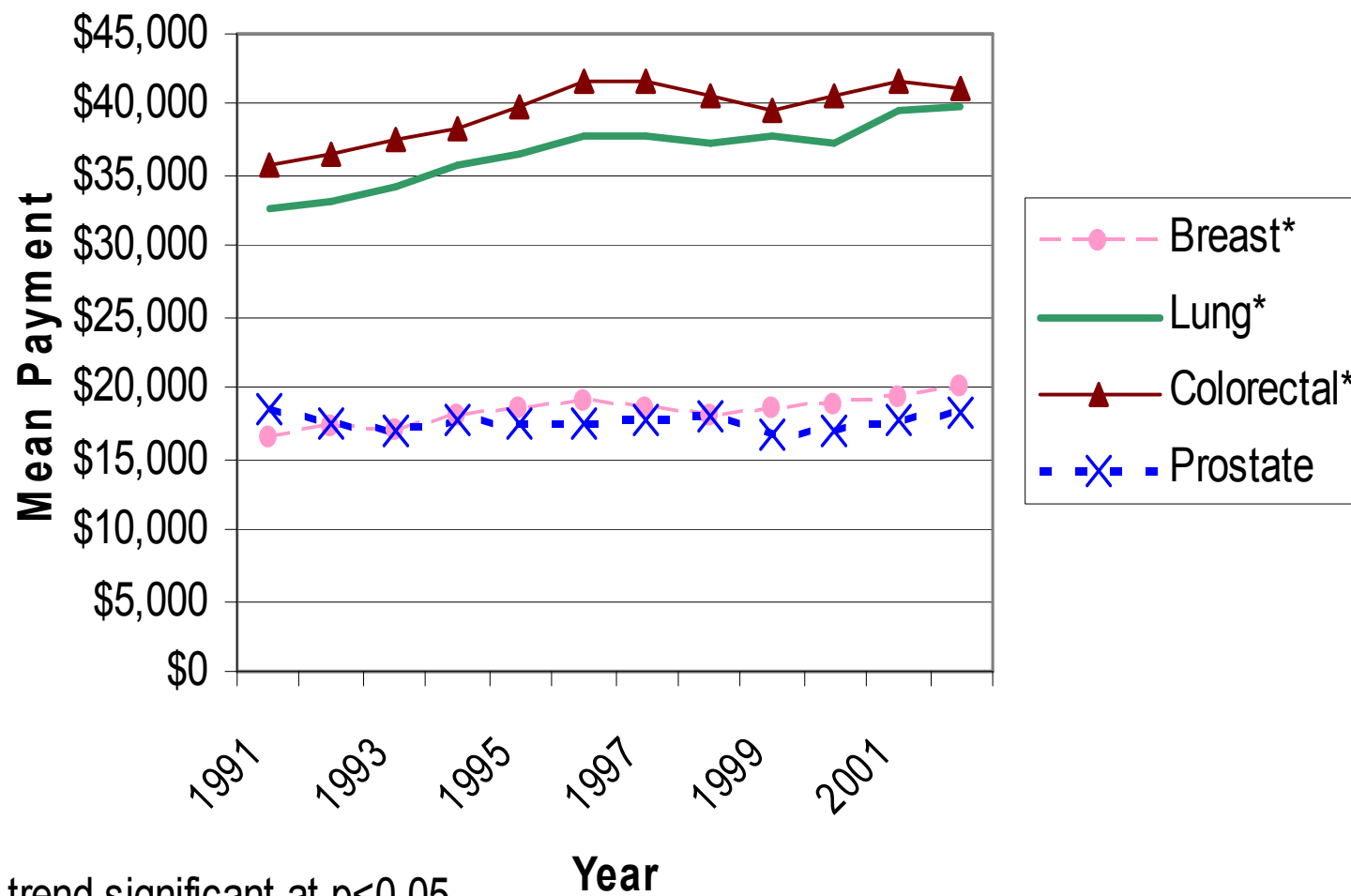
## Last Year of Life Costs For Colorectal Cancer, In Nominal, Inflation Adjusted (1994 Dollars) and Per Capita Terms



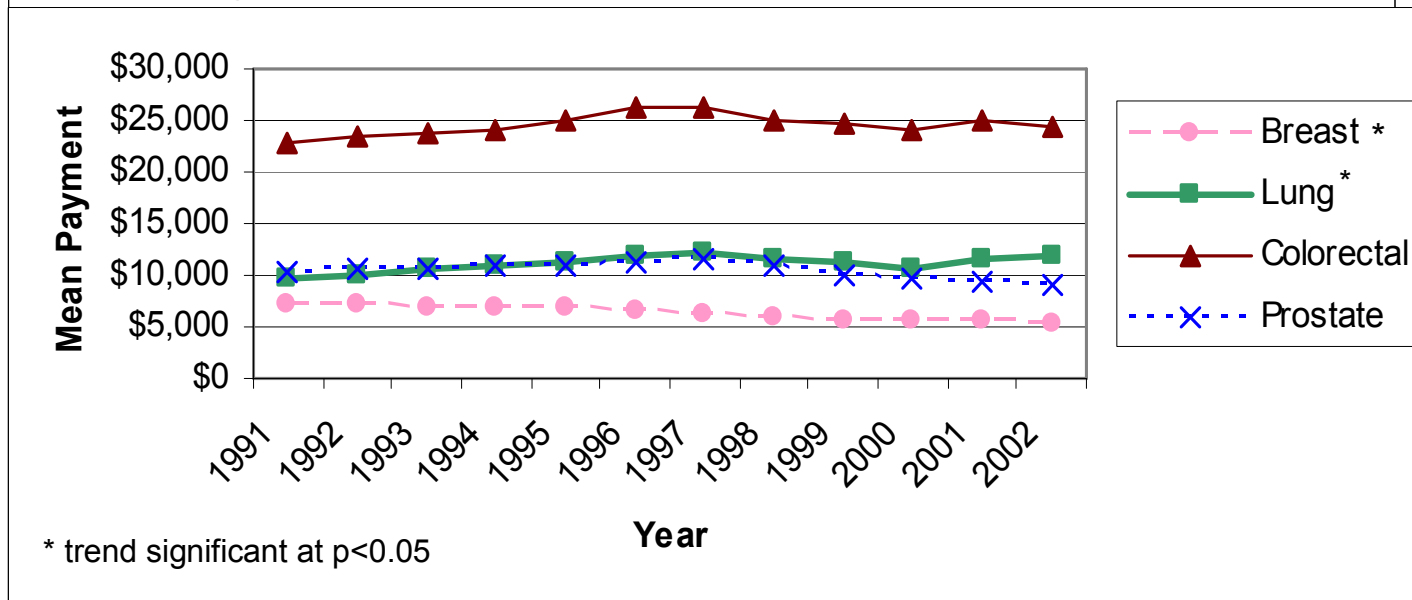
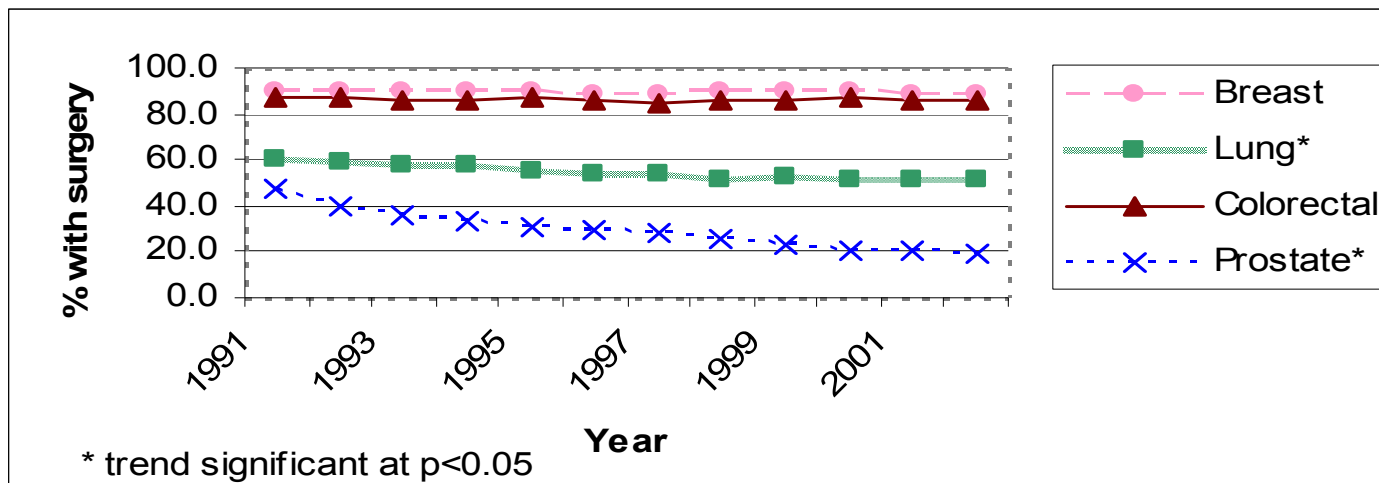
# Percent of Services Captured by Categories of Initial Care: 2002 Data



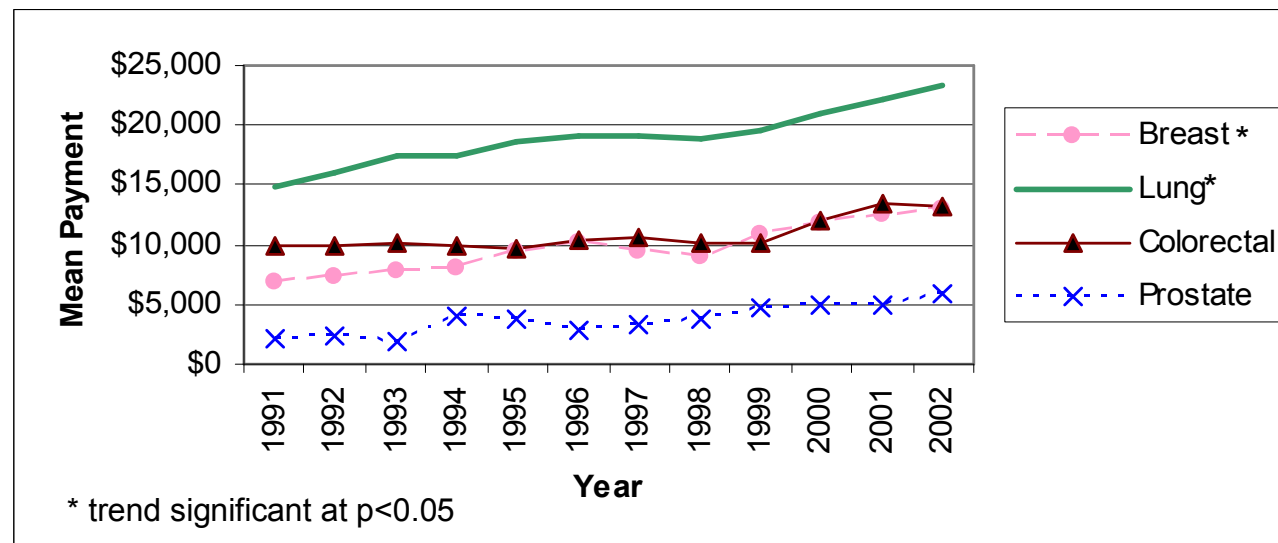
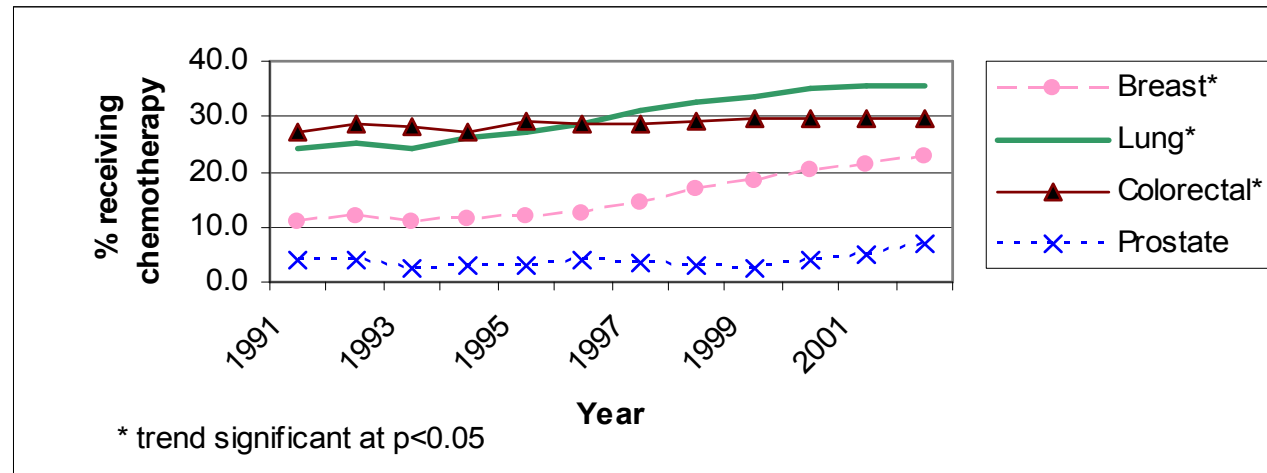
# Trends in Mean Medicare Payments During the Initial Care Period



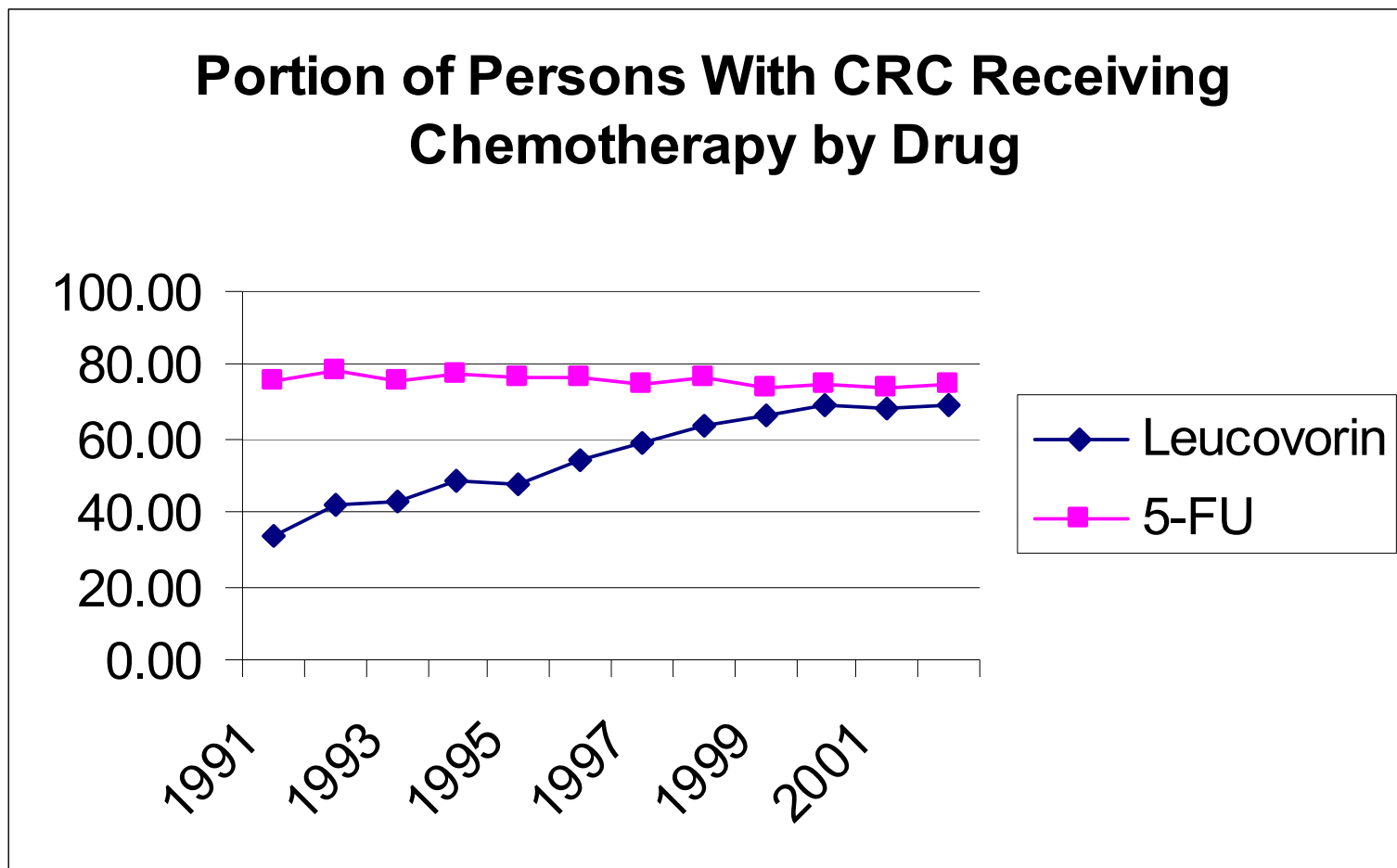
# Trends in the Percent of Patients Undergoing Cancer Directed Surgery and Mean Payment for Those Having Surgery



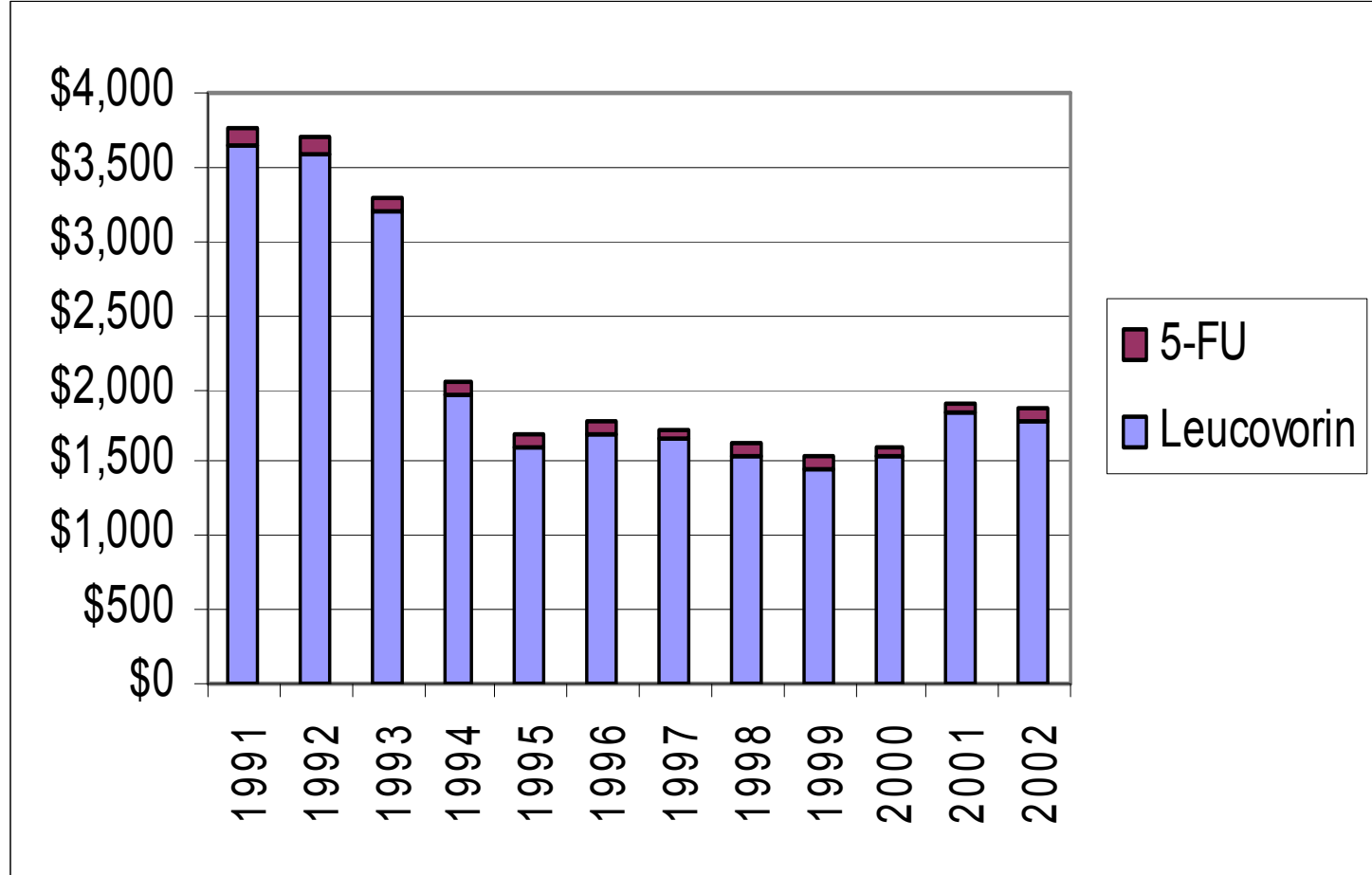
# Trends in the Percent of Patients Receiving Chemotherapy and Mean Payment for Those Getting Chemotherapy



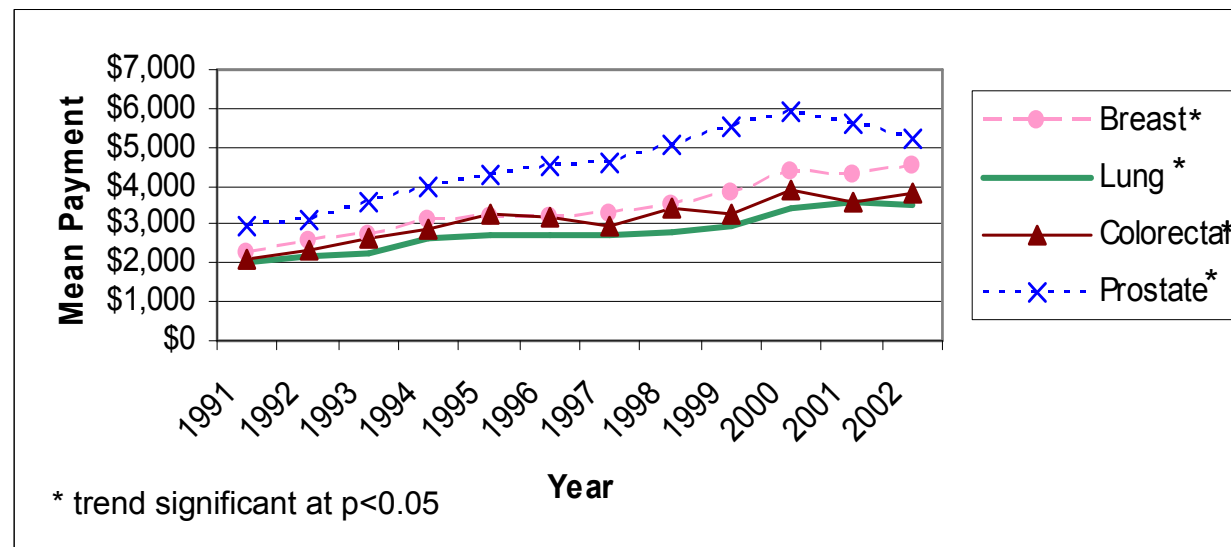
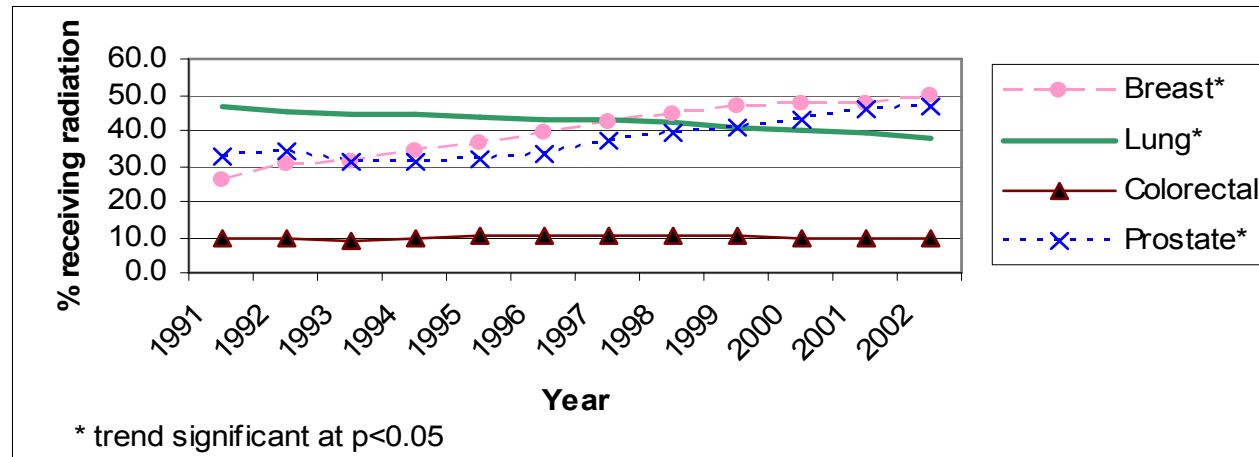
# Portion of Persons With CRC Receiving Chemotherapy by Drug



## Mean Cost of Chemotherapy by Drug Type for CRC patients Receiving Chemotherapy



# Trends in Percent of Patients With Radiation Oncology Service and Mean Payment for Those Getting Radiation Oncology



## Conclusions About Cost Trends- Breast and Prostate Cancer

- Breast cancer costs have remained stable over time. While use of and cost of chemotherapy and RT have increased over time, this has been offset by a decline in cancer-directed surgery costs.
- The cost of prostate cancer care declined from 1991-1999 as less surgery was performed; the increase in mean costs that began in 2000 can be explained by more use of hormone therapy

## Conclusions About Cost Trends- Lung and Prostate Cancers

- Between 1991 and 2002, the increase in costs of cancer care was greatest for lung and CRC cases.
- Yet for these cancers, of the services categories we examined, chemotherapy was the only one that showed an increase in both the percent of patients treated and the mean cost of care

# Last Year of Life Costs

## Identification of Specific Categories\* of Services to Include in Last Year of Life

For the last year of life, we looked at facilities rather than services:

- Any Inpatient Hospitalizations
- Skilled Nursing Facility Claims
- Home Health Services
- Hospice Claims
- All other services

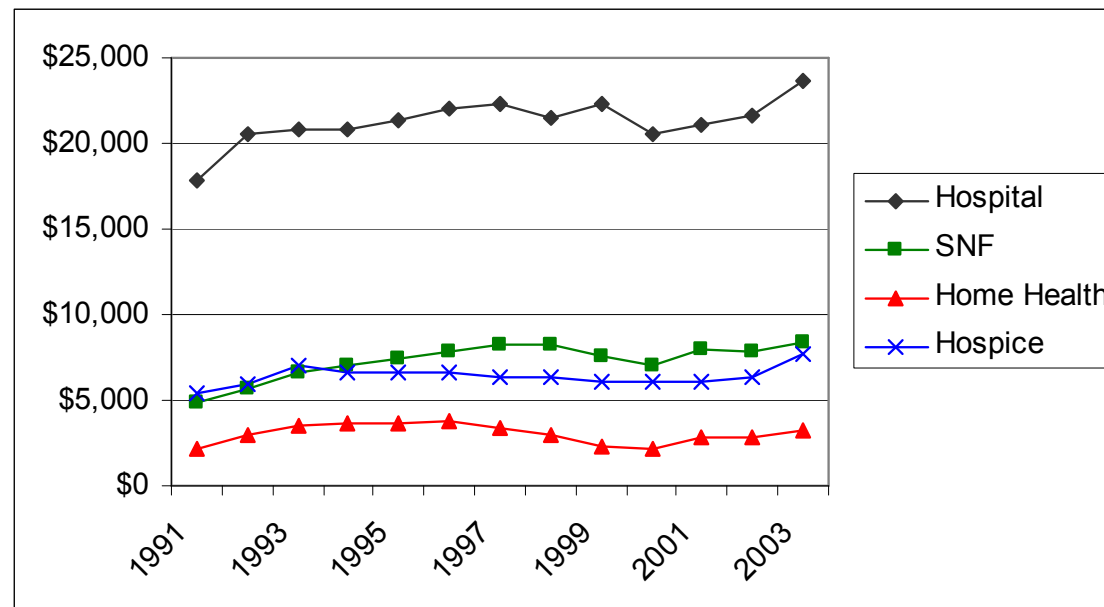
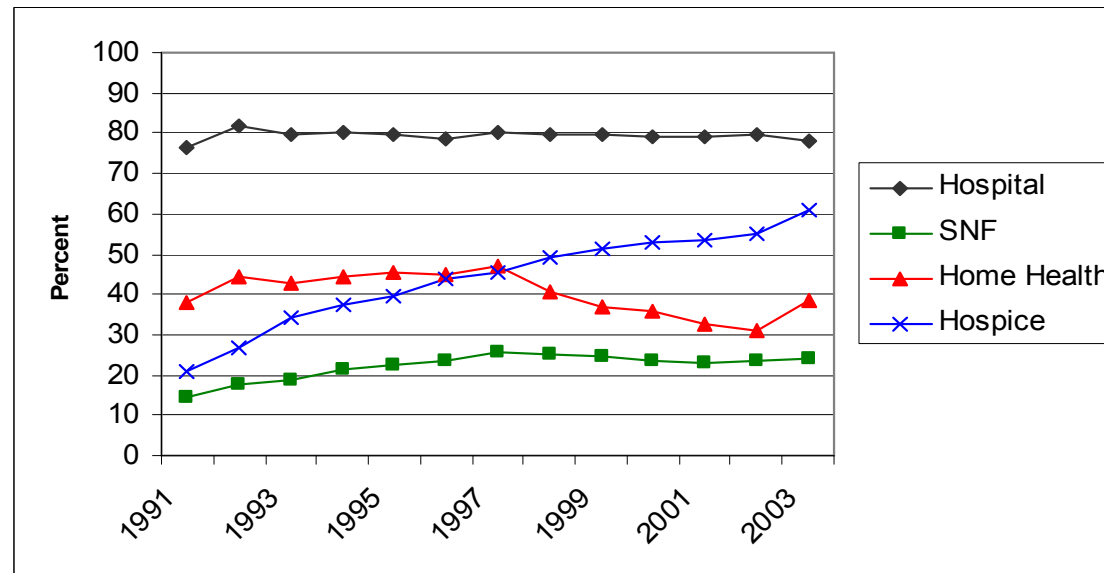
We also looked at specific claims for chemotherapy administration and agents. These are NOT mutually exclusive from the categories above

\* All categories are mutually exclusive

## Preliminary Findings

- For each of the service categories, we looked at trends in the portion of patients with claims in each category as well as the mean costs by type of service for breast, lung, colorectal, and lung cancers
- We found that within each category, the trend lines by cancer site were almost identical
- We present data on lung cancer only to illustrate trends

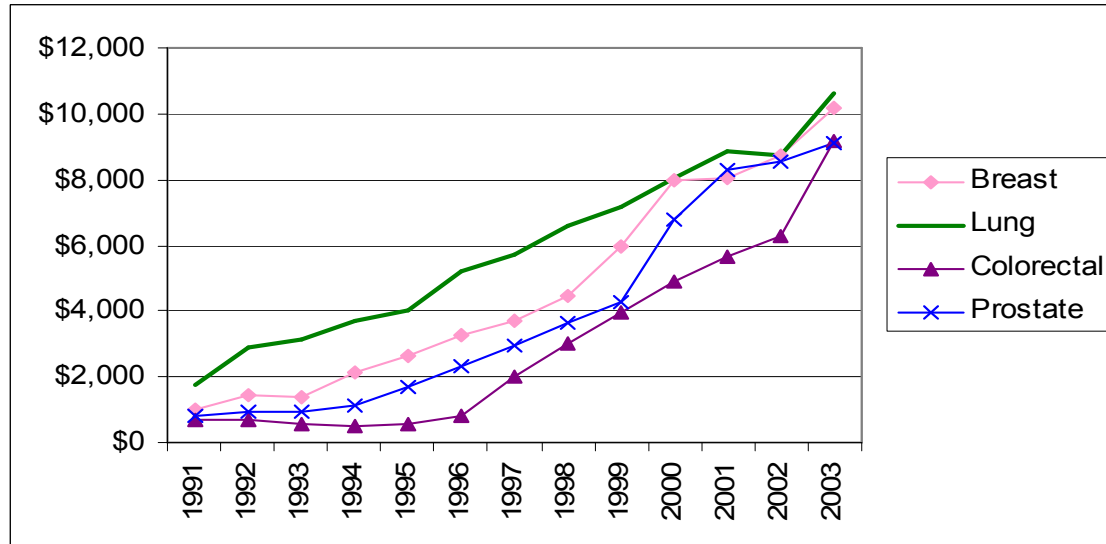
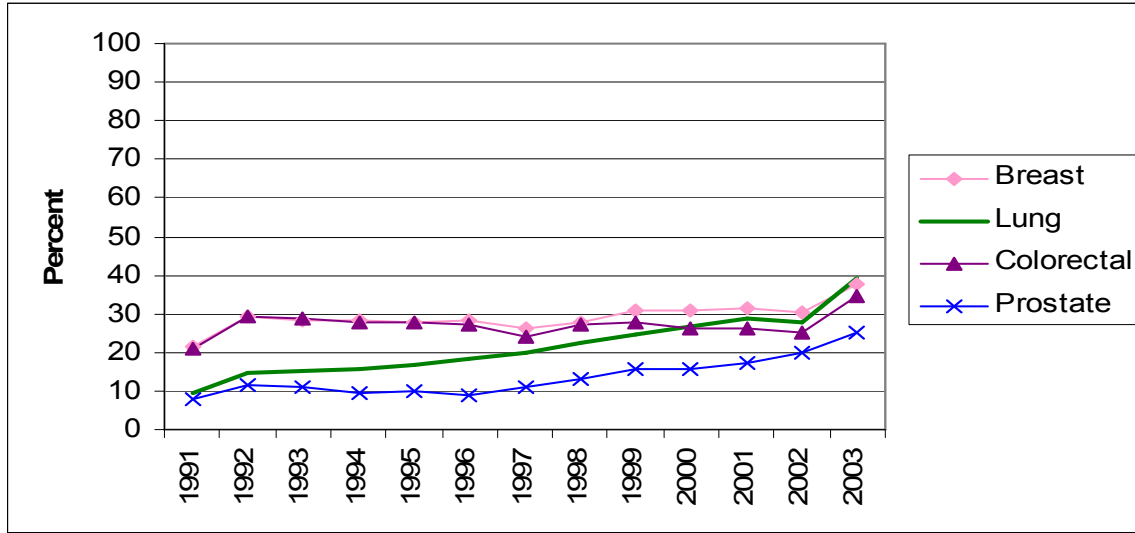
# Trends in the Percent of Patients With Claims and Mean Payment by Type of Service: Lung Cancer



## Preliminary Observations About Trends in Last Year of Life

- A large portion of patients have a hospitalization during their last year of life
- Hospice use has increased appreciably from 1991 to 2002. One might think that people are discharged from hospital to supportive care
- However, adjusted hospital costs increased significantly during this time- is this longer LOS, more intense service?

## Additional Preliminary Data - Trends in the Percent of Patients Receiving Chemotherapy and Mean Payment for Those Treated



## Next Steps

- SEER-Medicare data for case diagnosed through 2005 now available
- Expensive new drugs disseminated during this period
- Part D Medicare data (oral medications) will be available
- We need to compare SEER-Medicare estimates to estimates from other sources, e.g. MEPS and HMOs

# Acknowledgements

- NCI – Health Services and Economics Branch
  - Joan Warren
  - Robin Yabroff
- NCI – Statistical Research and Applications Branch
  - Eric Feuer
  - Angela Mariotto
- Information Management Systems
  - Marie Topor
  - Angela Meekins
- Harvard University
  - Elizabeth Lamont