

Cancer Control: Life after the Plan



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**How many lives
will be lost from
cancer in the US in the
next hour?**

**How many lives
will be lost from
cancer in the US in the
next hour?**

60

**How many lives
will be lost from
cancer in Arizona in
the next hour?**

**How many lives
will be lost from
cancer in Arizona in
the next hour?**

1

NCI Challenge goal, 1986

**By the Year 2000 achieve a 50%
reduction in cancer mortality
compared to the 1985 rates**

ACS Challenge Goal, 1996

**By 2015 achieve a 50% reduction
in cancer mortality compared to
the 1990 rates**

Reactions to ACS Challenge Goals

“Here we go again”

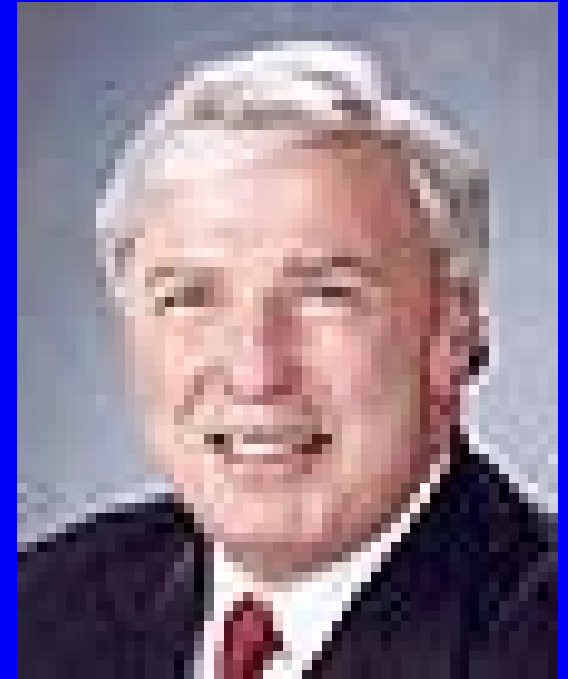
“How will we do that?”

“Who is ‘we’?”

Our challenge goal to the Nation

**Eliminate the suffering and death
due to cancer by 2015**

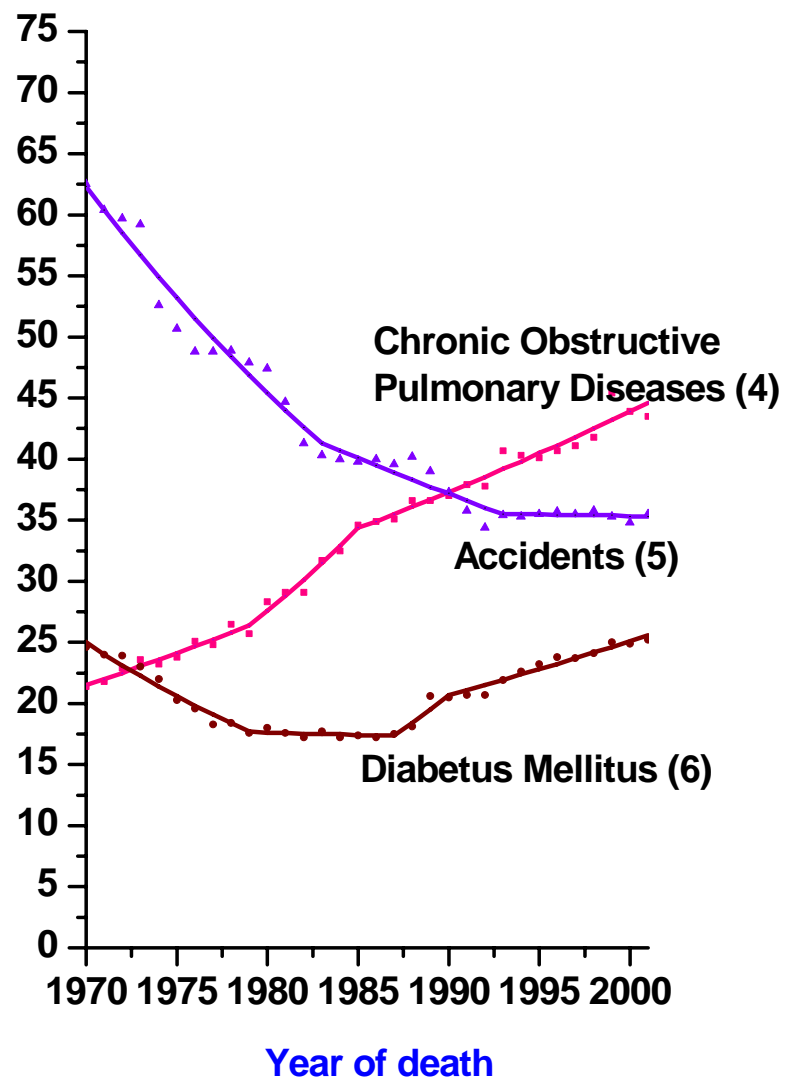
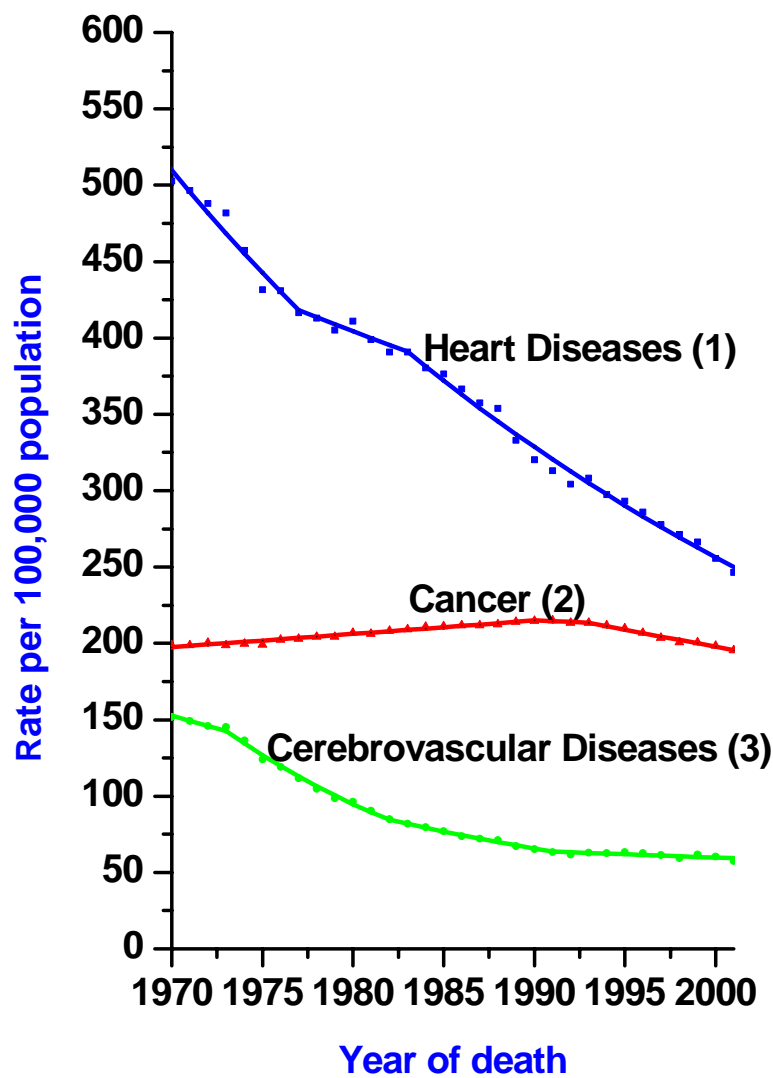
**Andrew vonEschenbach MD
Director, NCI**



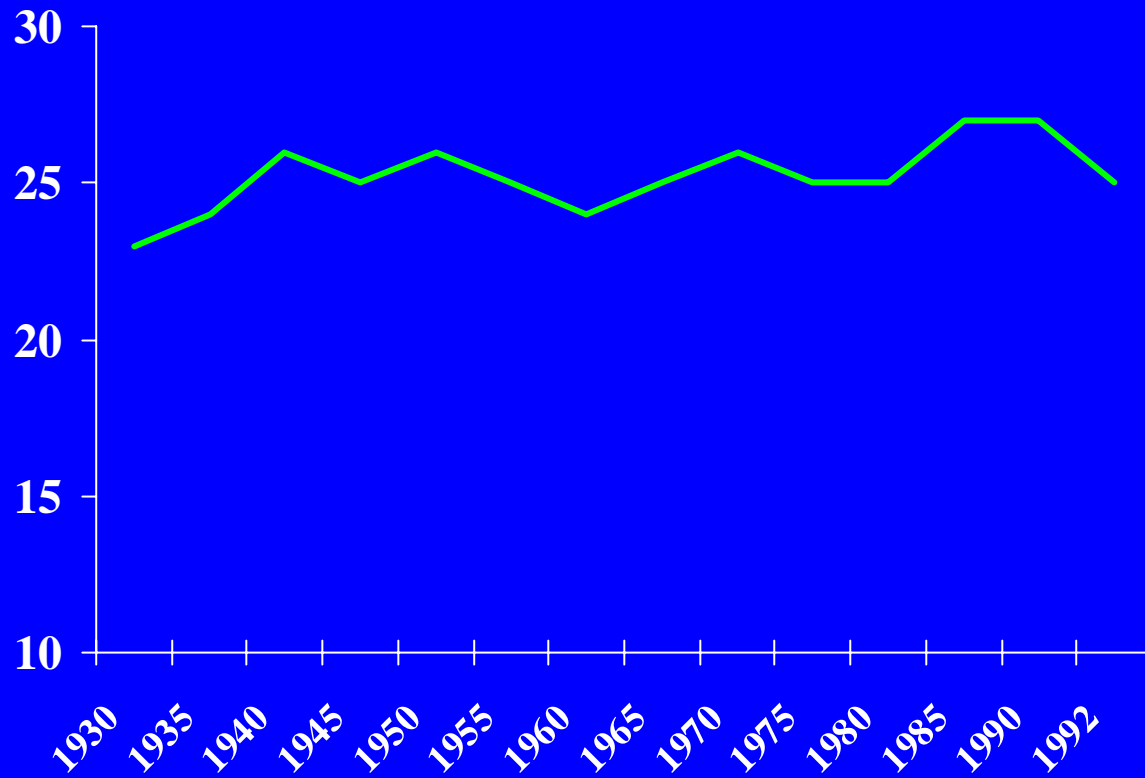
Reactions to NCI Challenge Goals

“He said what”?

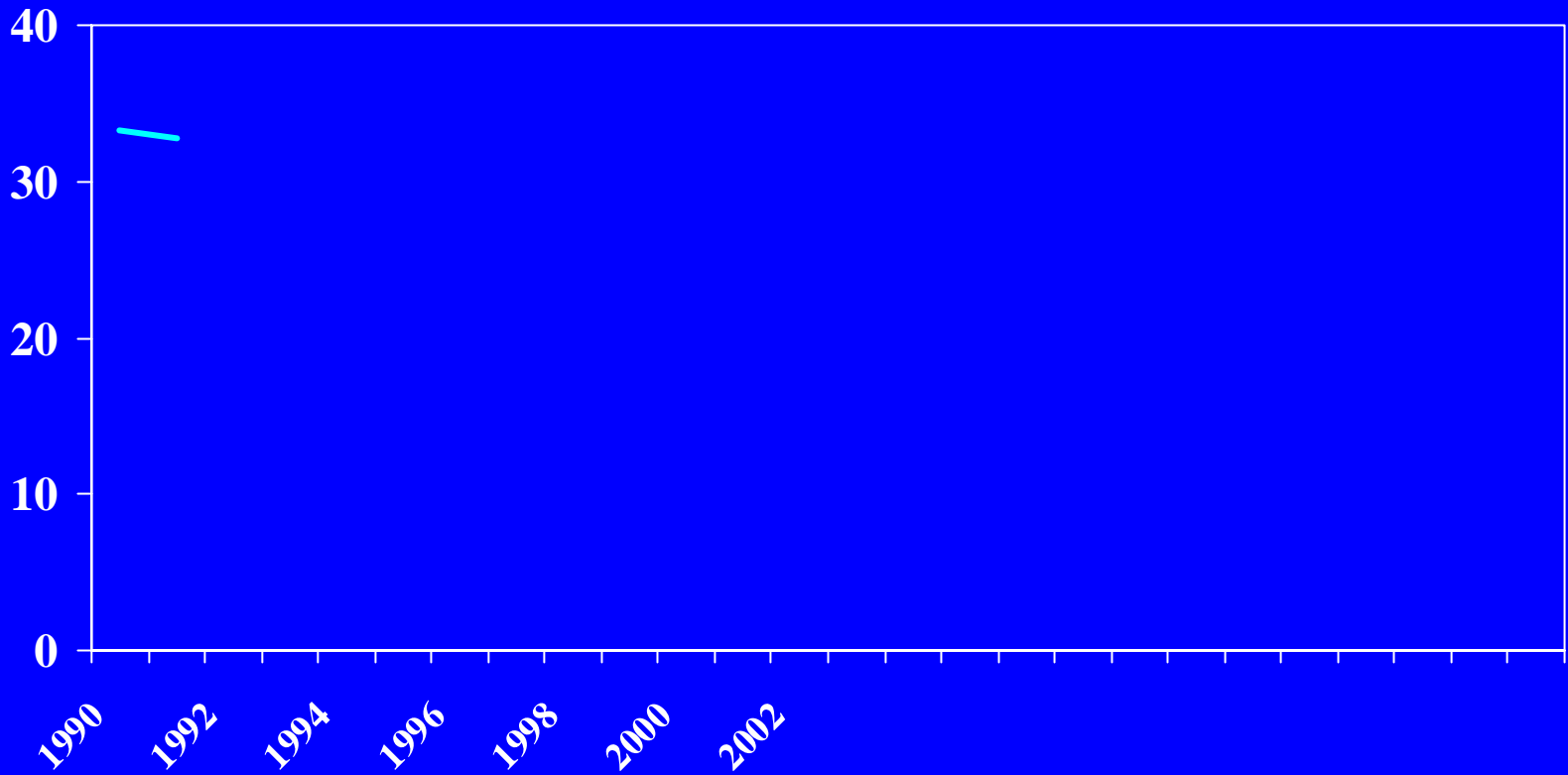
Trends in death by cause in the US



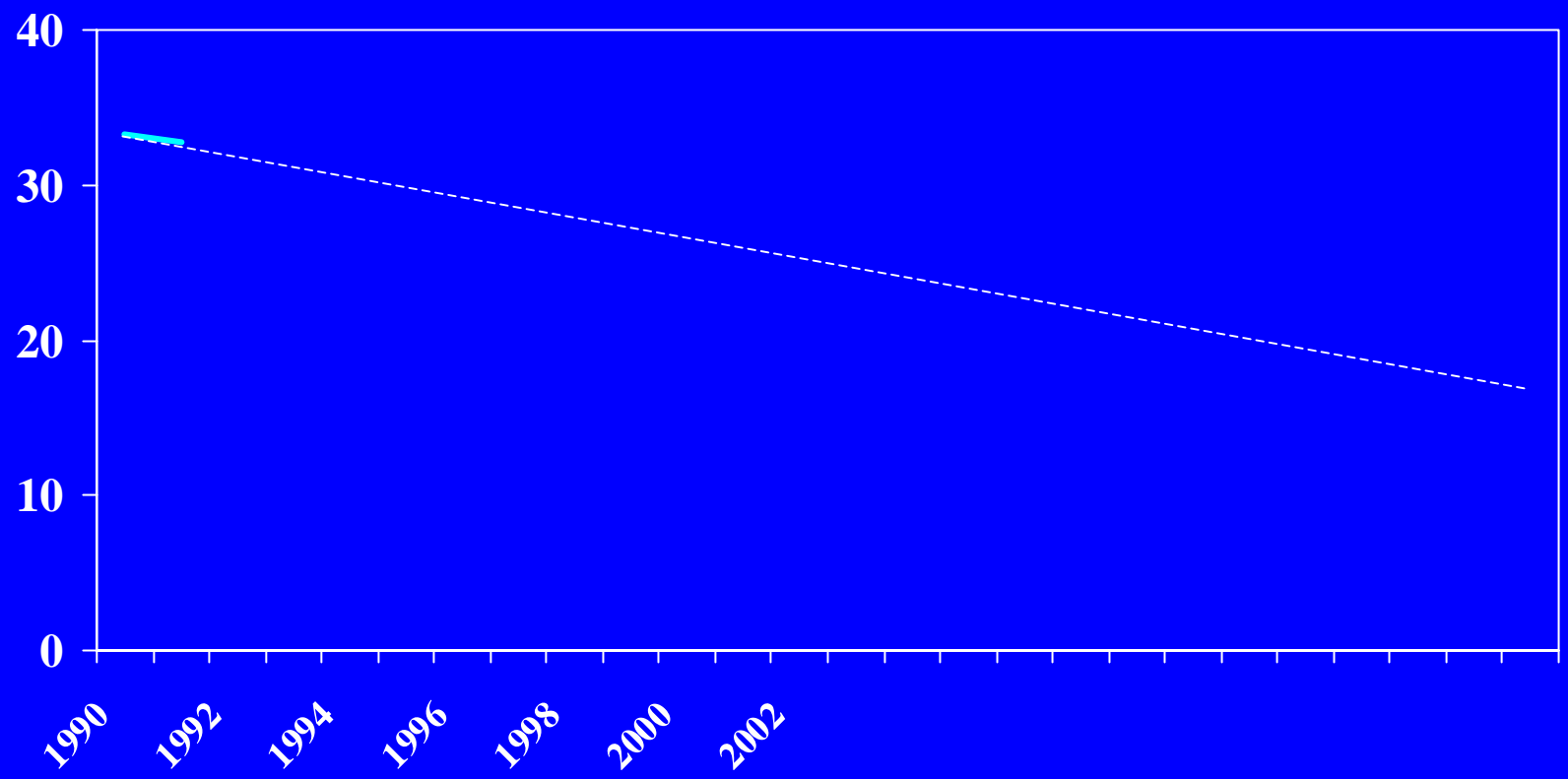
Breast cancer death rates in the US



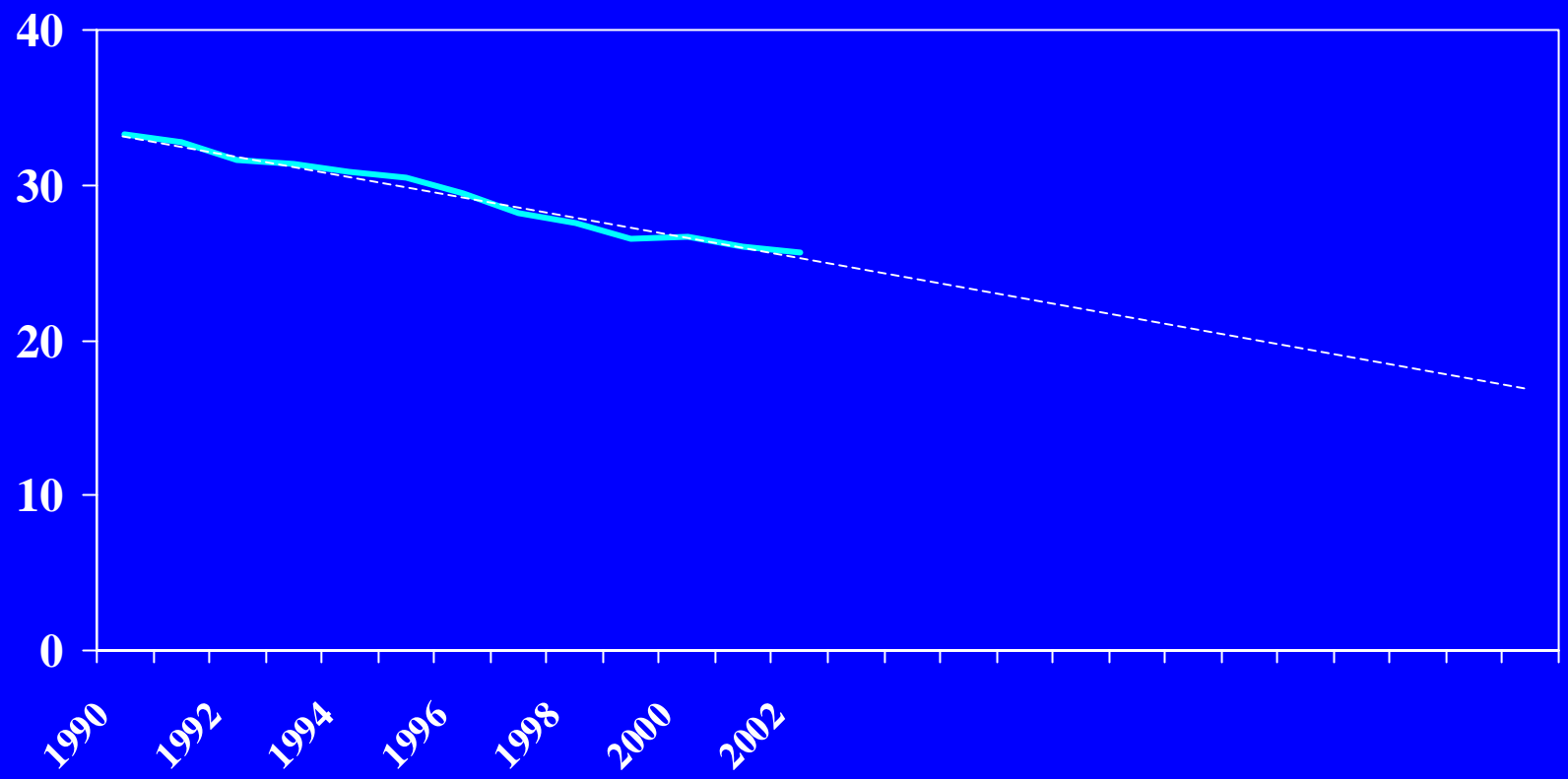
Breast cancer mortality trends



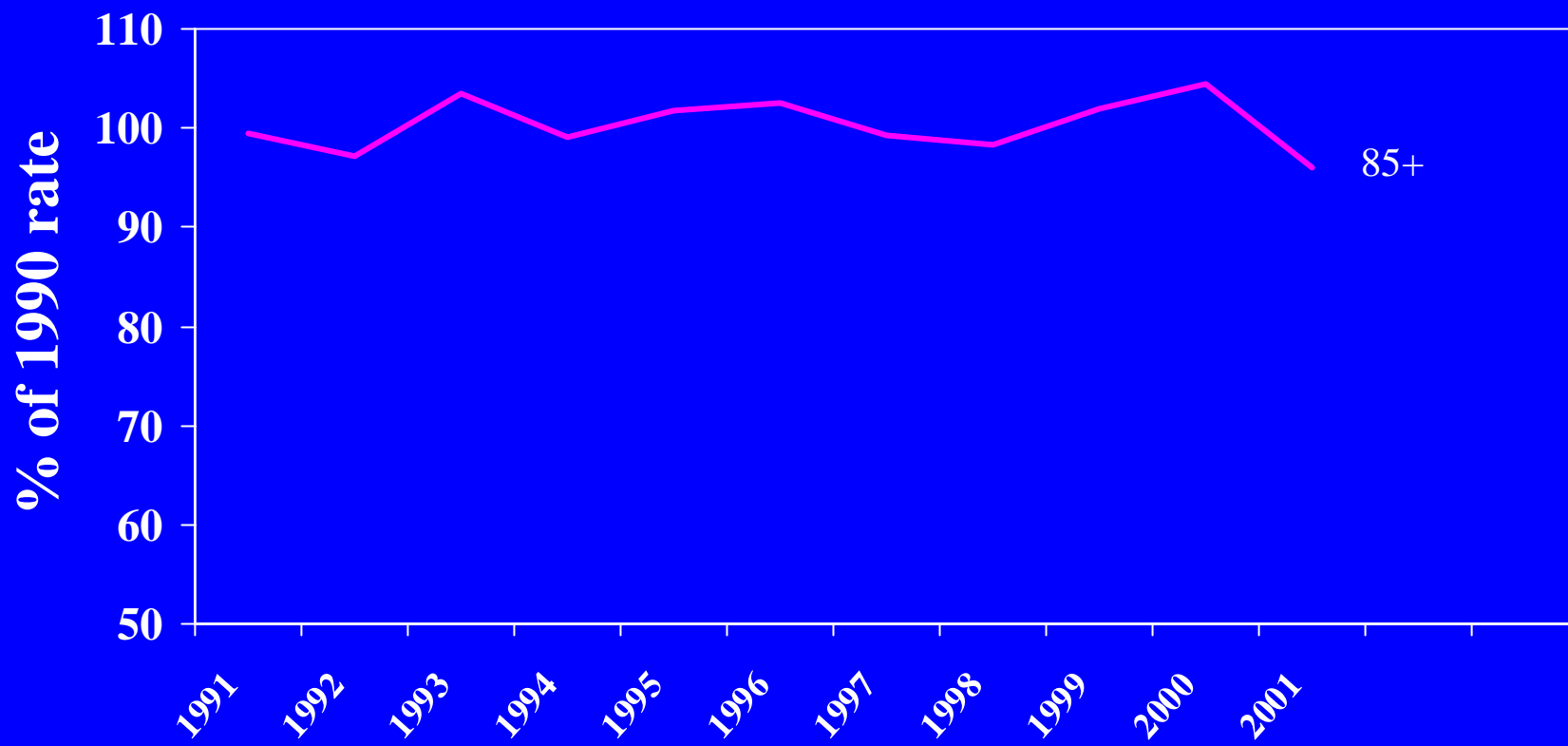
Breast cancer mortality trends



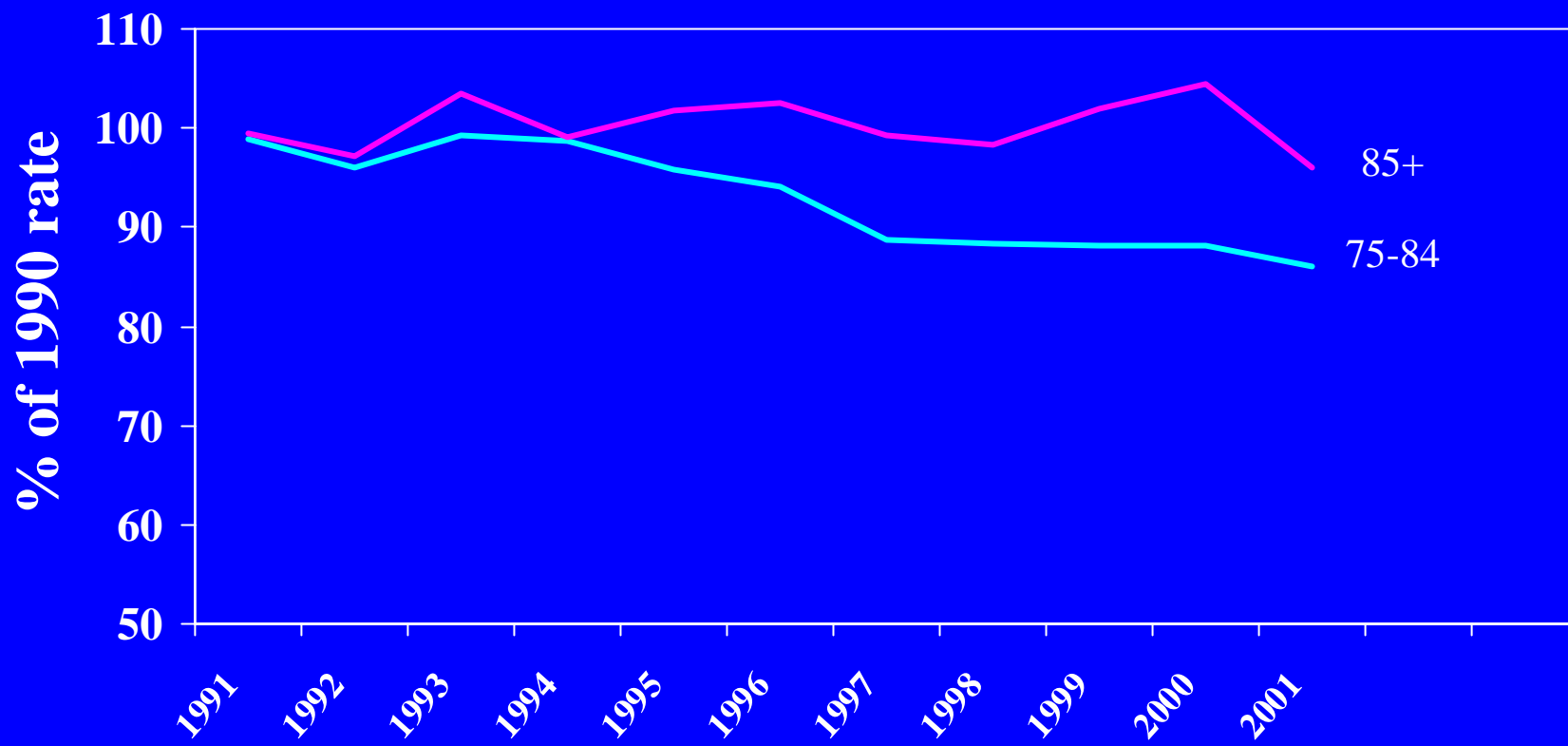
Breast cancer mortality trends



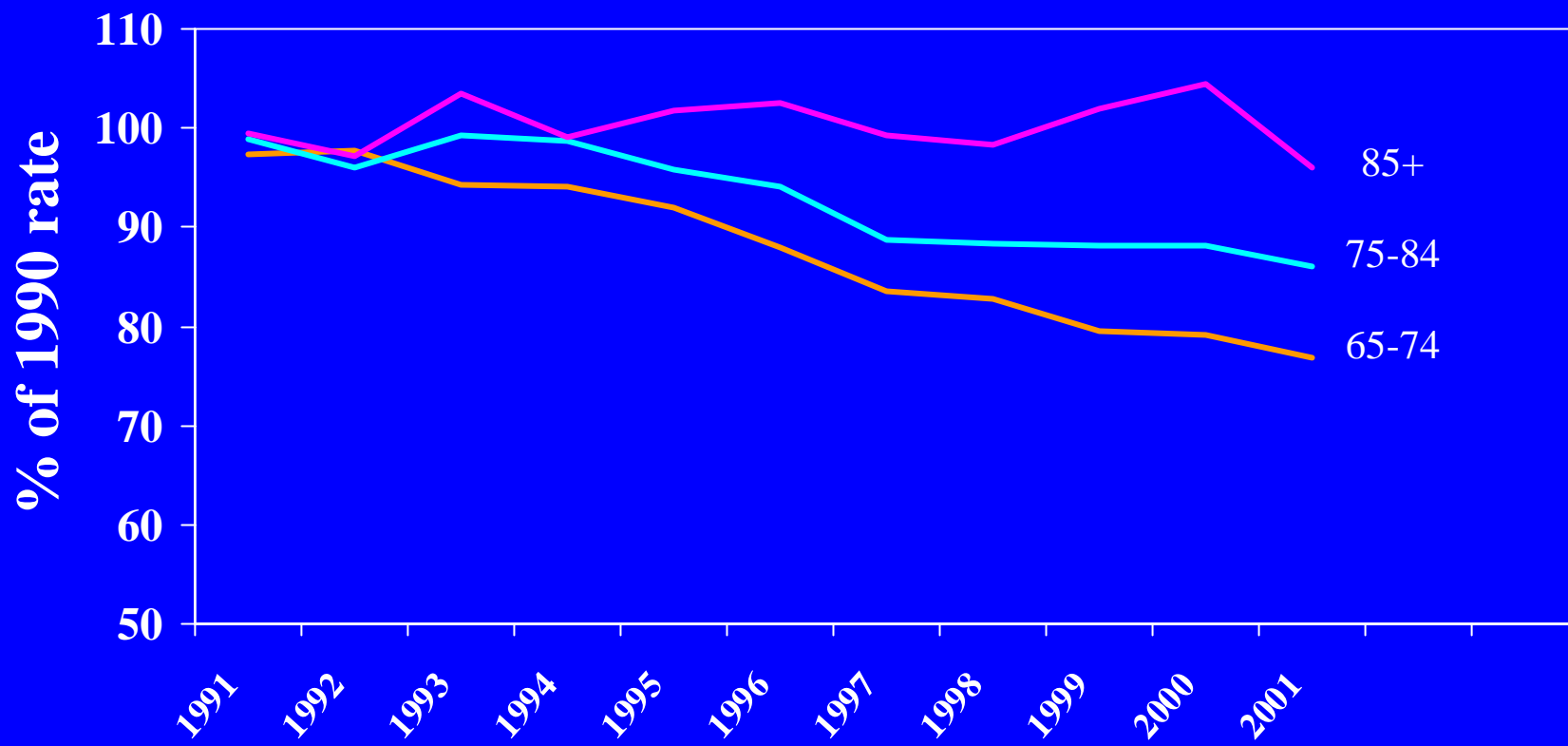
Breast cancer mortality



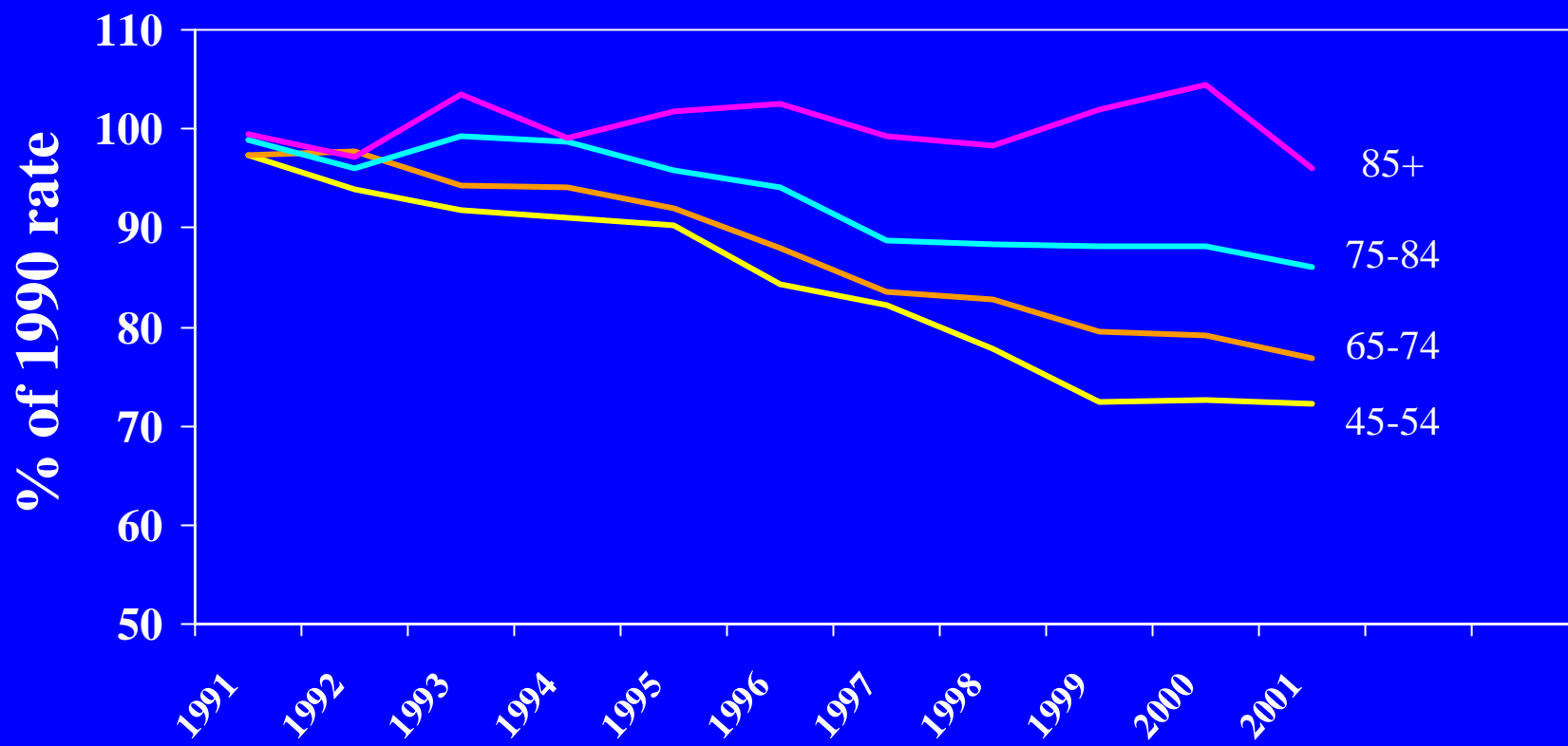
Breast cancer mortality



Breast cancer mortality



Breast cancer mortality



Factors adversely affecting cancer trends in the elderly

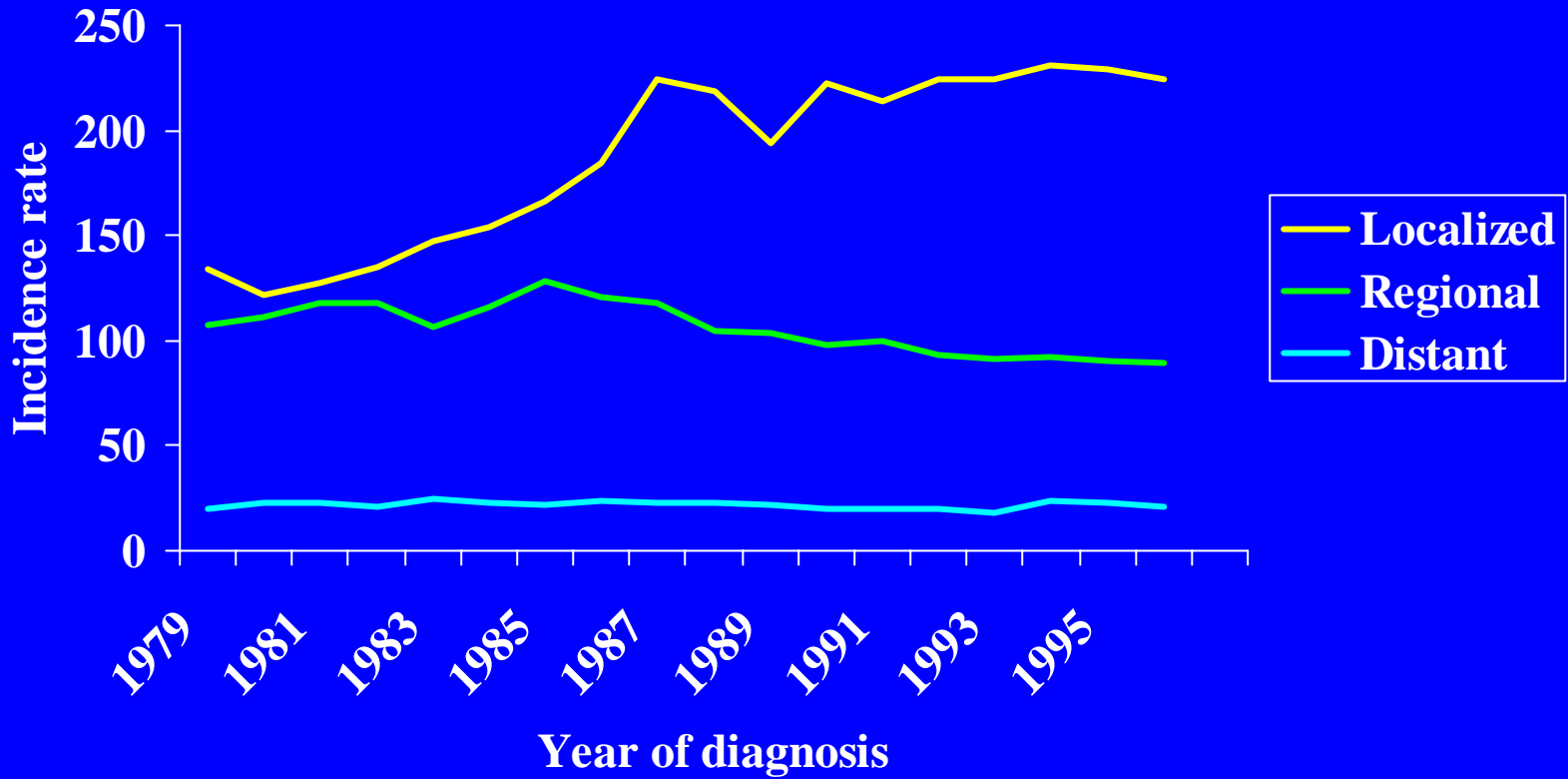
- Cardiovascular disease reduction
- Incomplete use of effective treatments
- Reductions in clinical preventive services
- Compression of mortality due to cancer control but not cure at earlier ages

Mammography

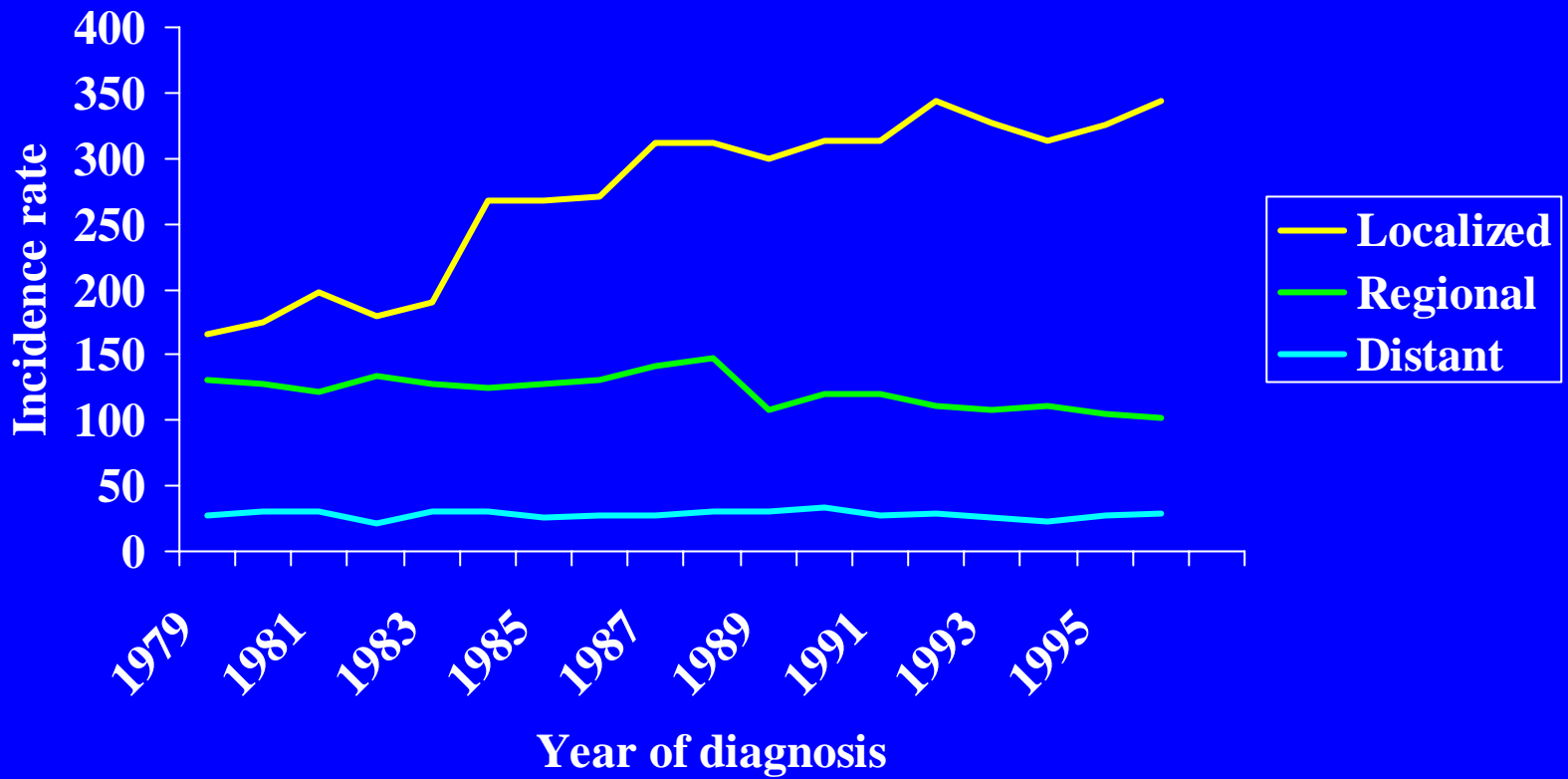
- 40,000 deaths per year
- 10% due to failure to get mammograms
- 4000 deaths preventable per year by full reach of mammography



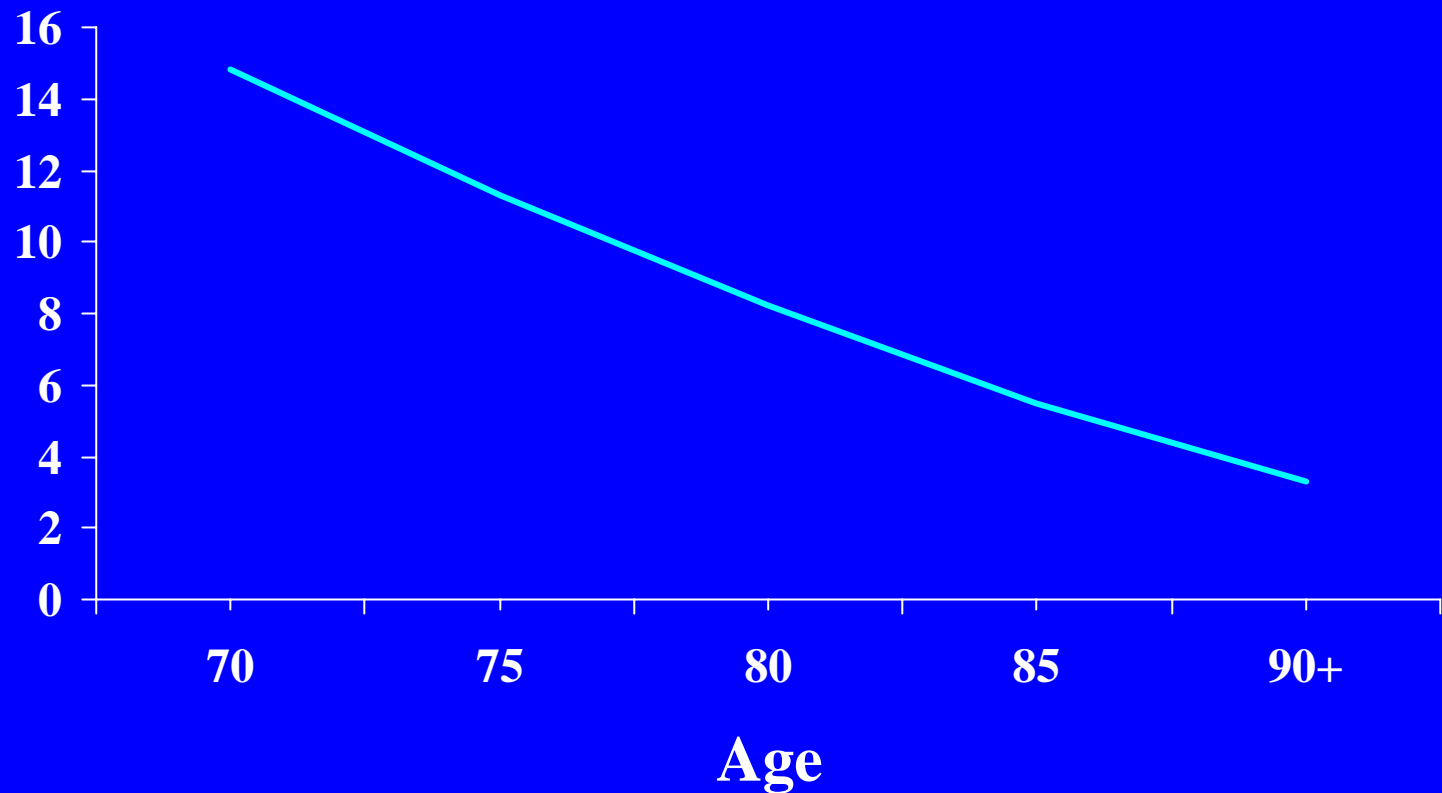
Age 60-64



Age 75-79

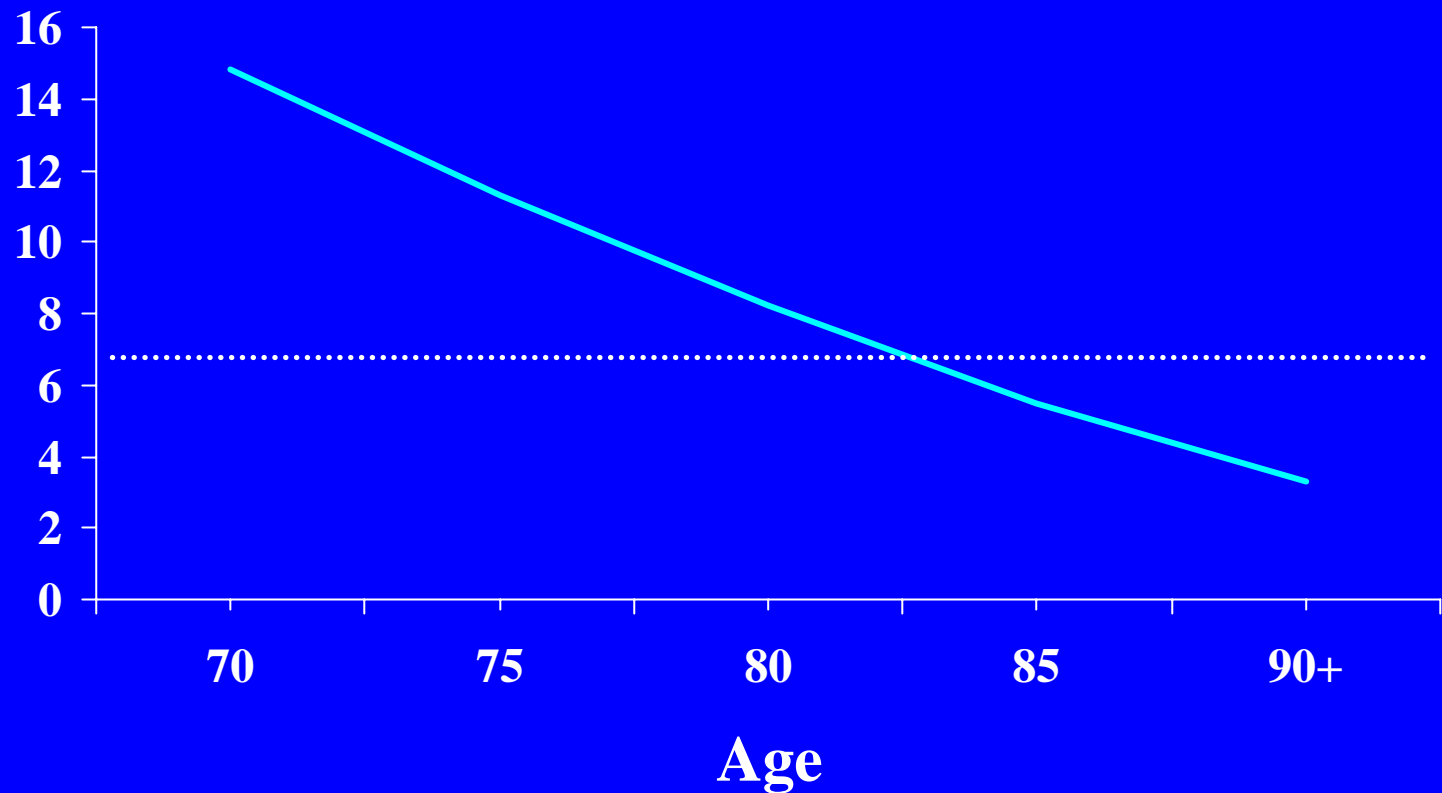


Years of life expectancy for women ages 70 and older



Source: Colorado Vital Statistics, 1996.

Years of life expectancy for women ages 70 and older

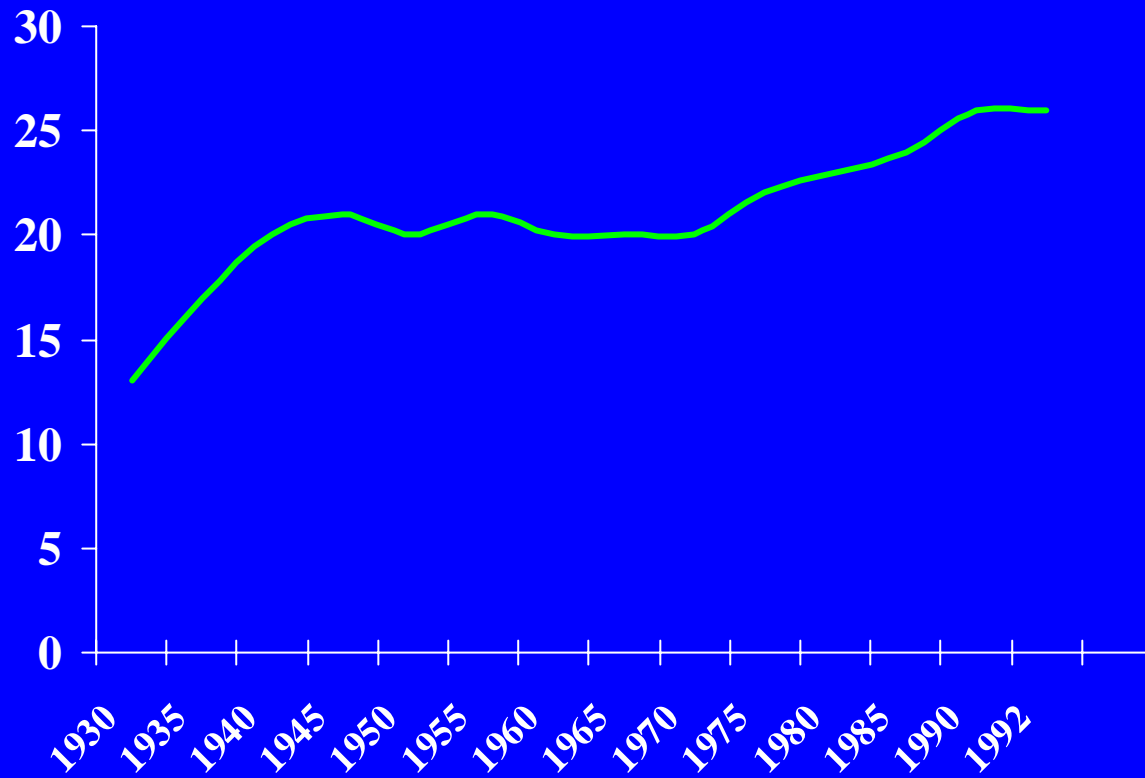


Source: Colorado Vital Statistics, 1996.

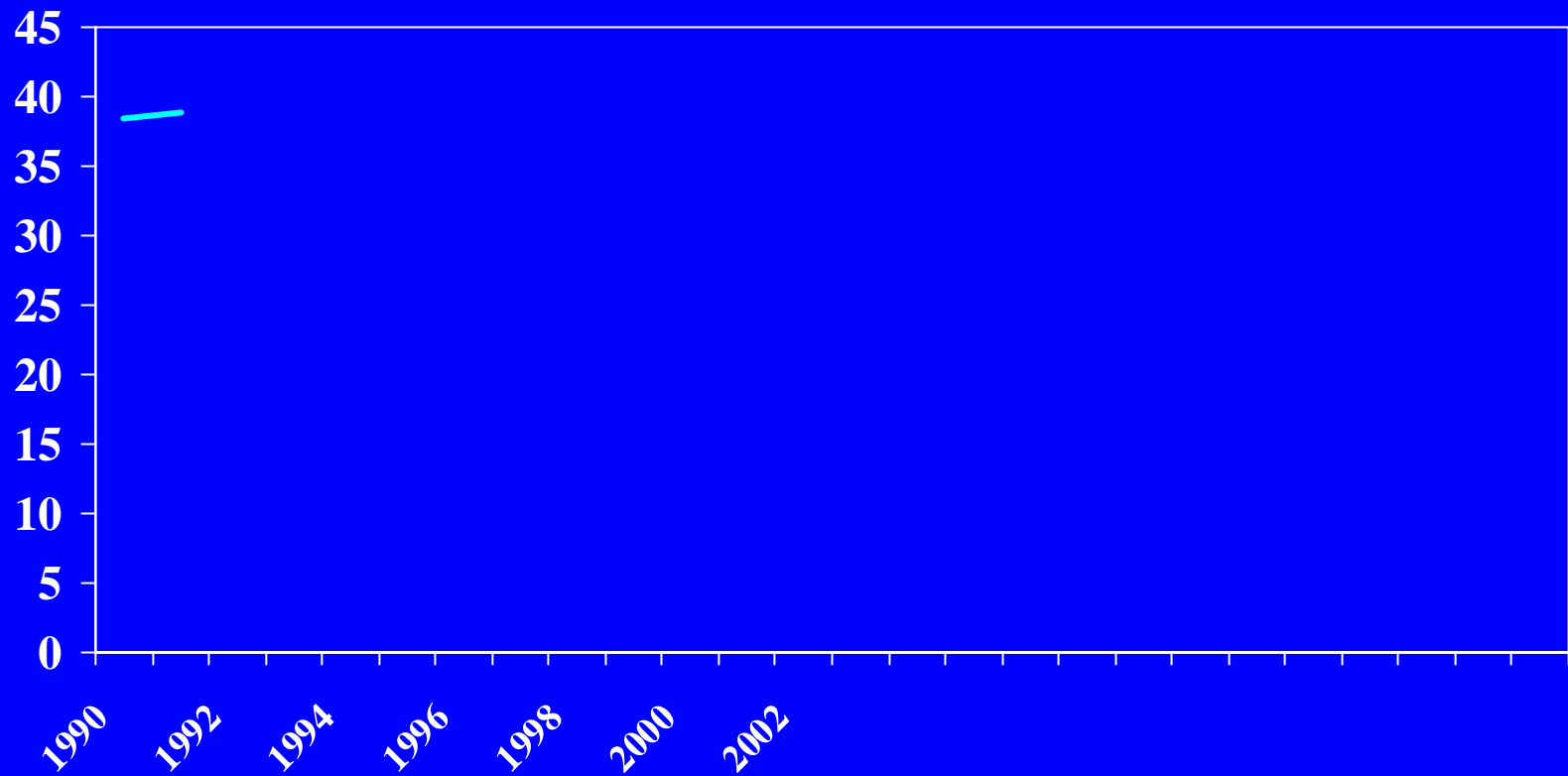
Future factors for breast cancer

- **Early detection**
 - **Mammography ceiling soon**
 - **But need for increase in elderly**
 - **New methods needed**
- **Lower exposures to HRT**
- **Improved treatment**
- **Reverse obesity epidemic**

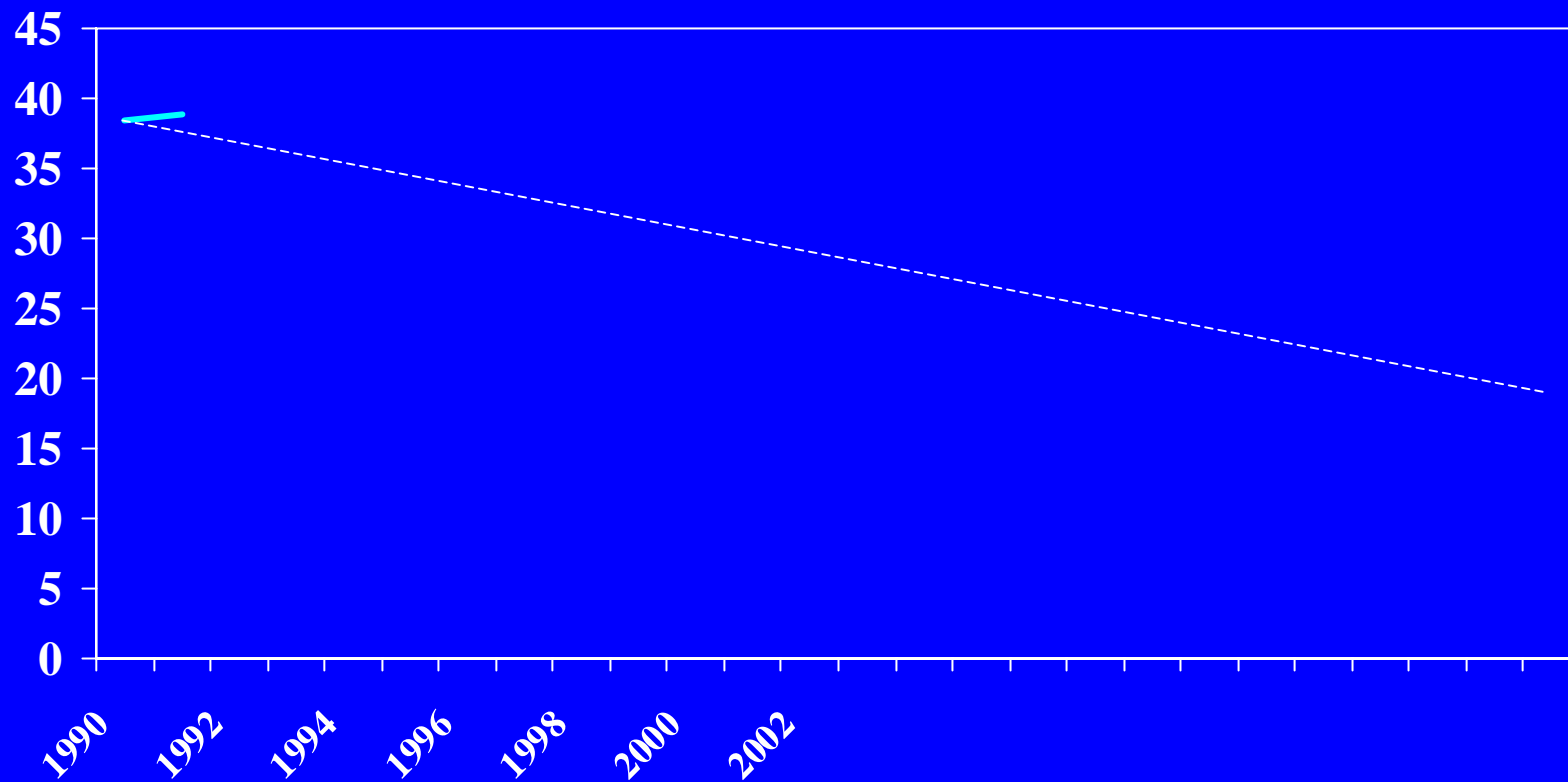
Prostate cancer death rates in the US



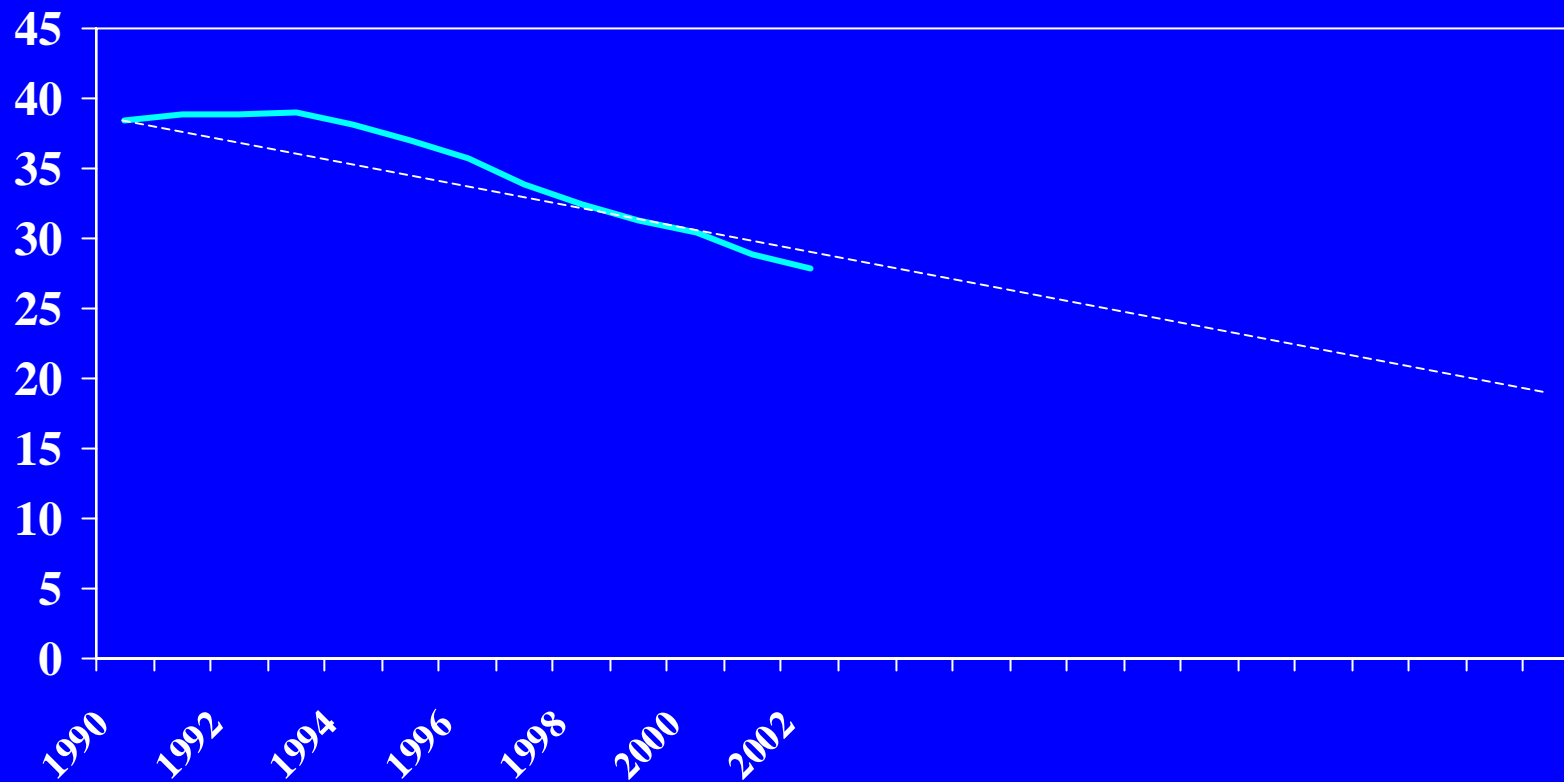
Prostate cancer mortality trends



Prostate cancer mortality trends

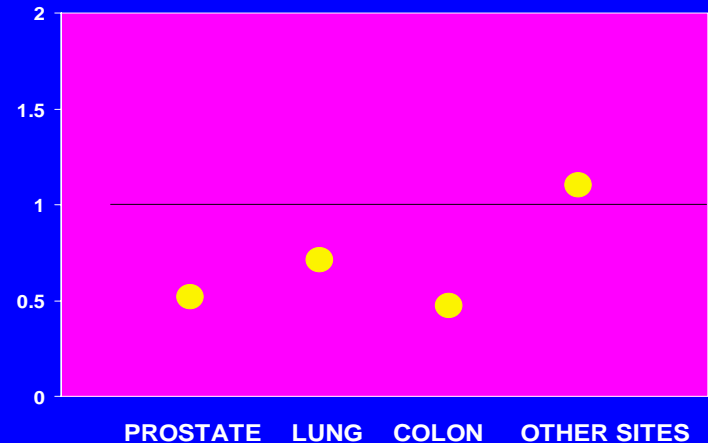


Prostate cancer mortality trends



Surprise reductions in prostate cancer in RCTs

- ATBC Trial found 30% reduced incidence in Vitamin E arm (50 IU/day)
- NPSC Trial found 50% reduced incidence in selenium arm (200 mcg/day)
- SELECT Trial
 - (Selenium, Vitamin E)

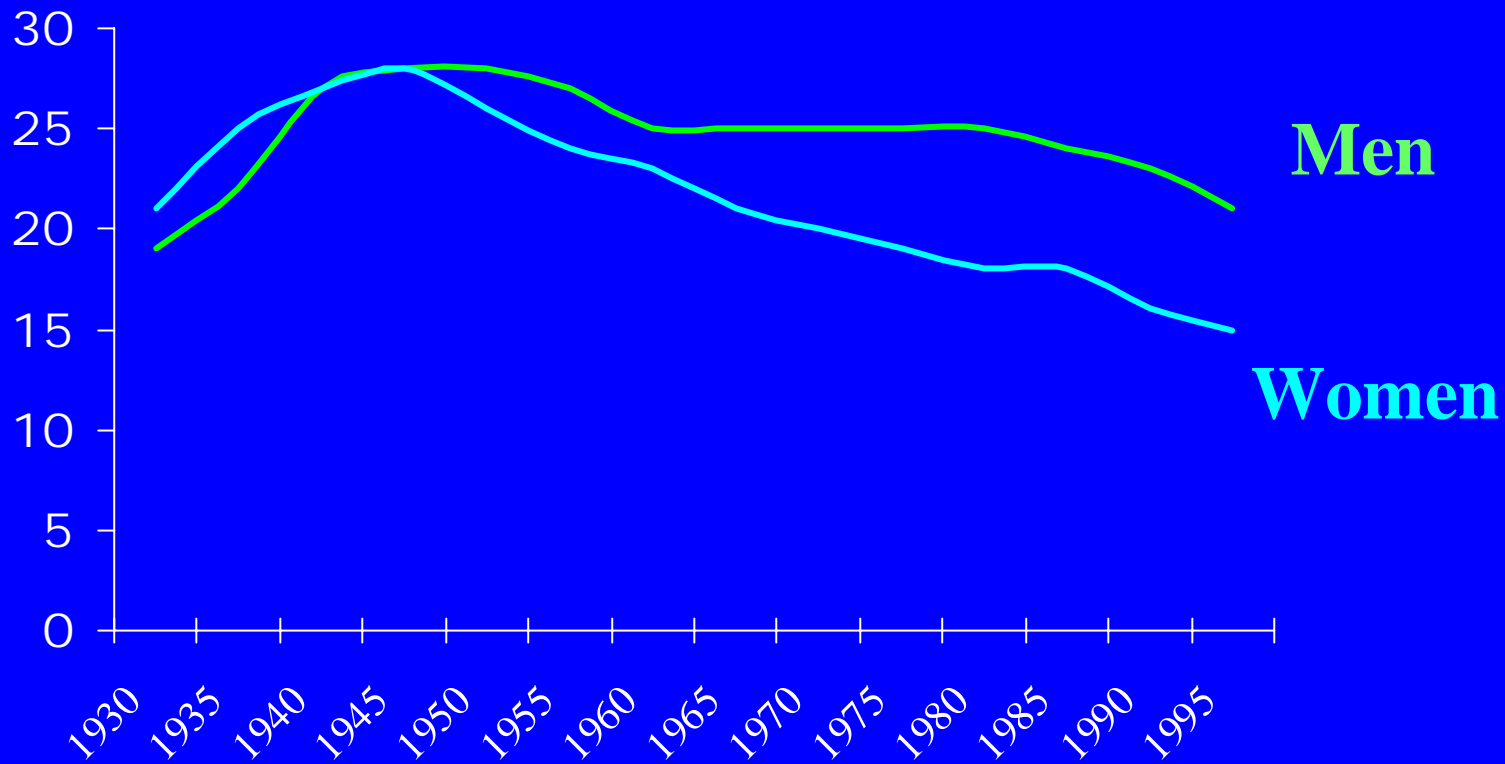


Future factors for prostate cancer

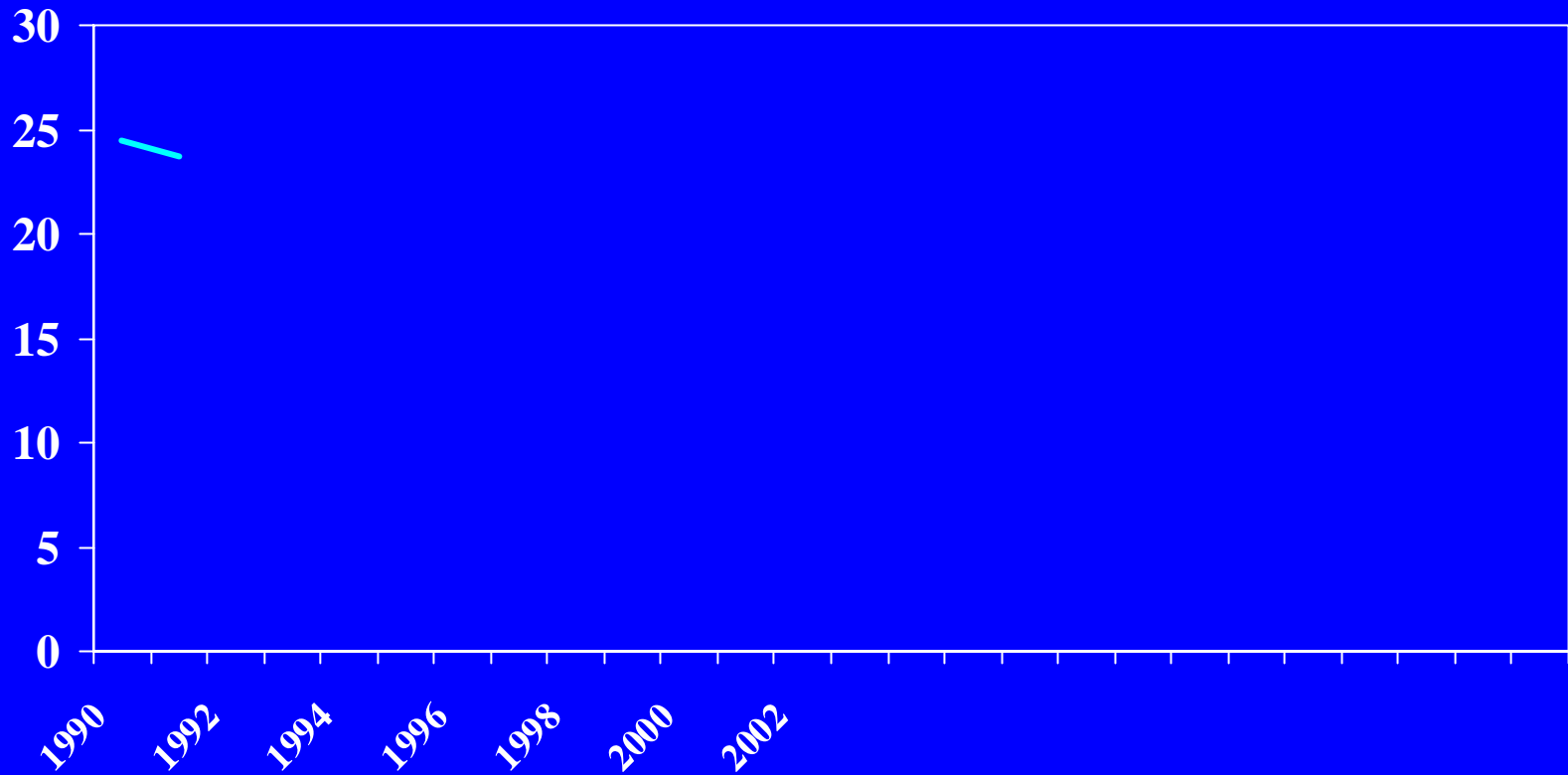
- **Resolve questions about PSA (PLCO)**
 - efficacy, periodicity
 - better proteomic predictors
- **Improved treatment**
- **Improved anti-androgens**
- **Chemoprevention (SELECT)**



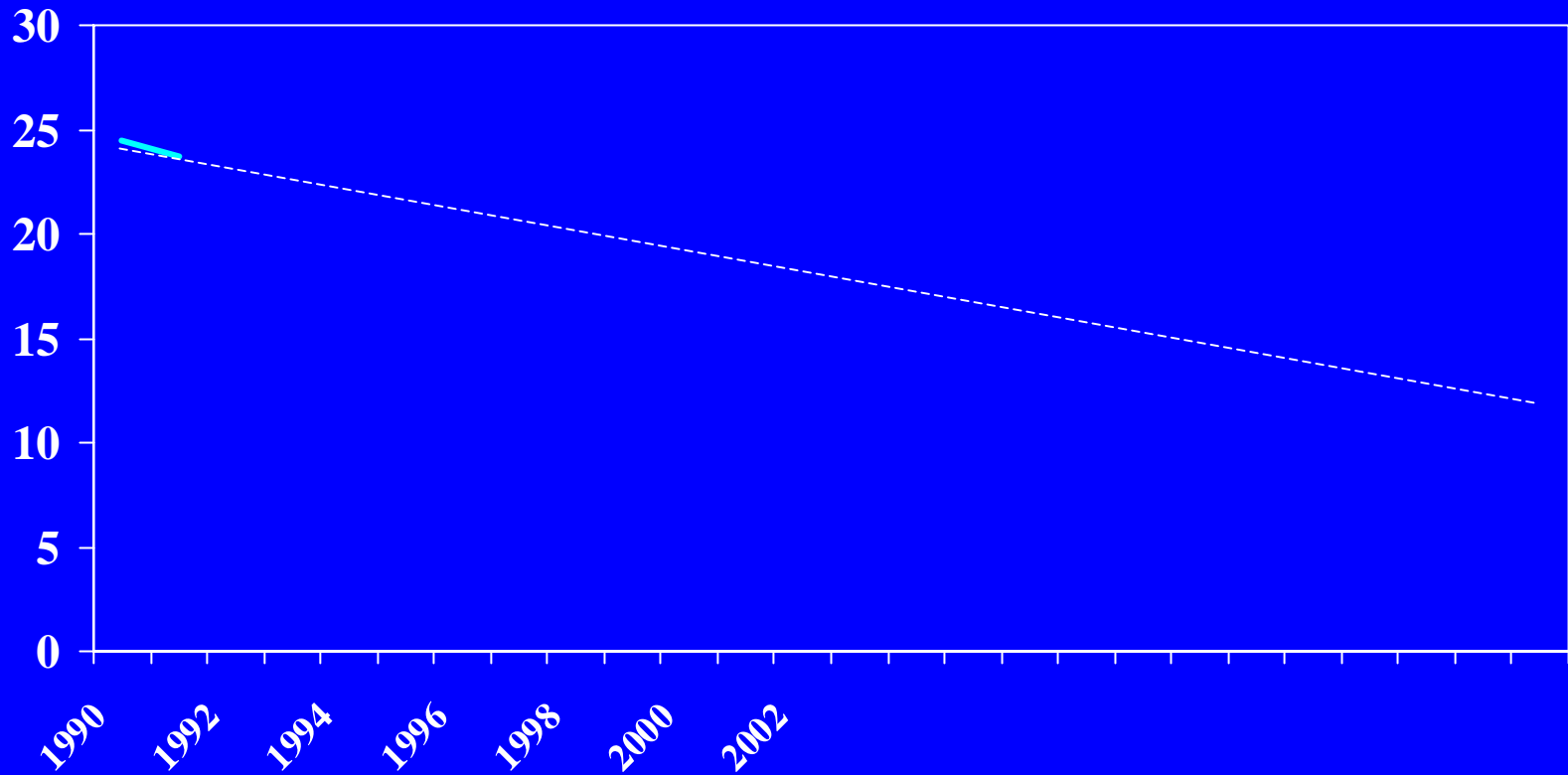
Colorectal cancer death rates in the US



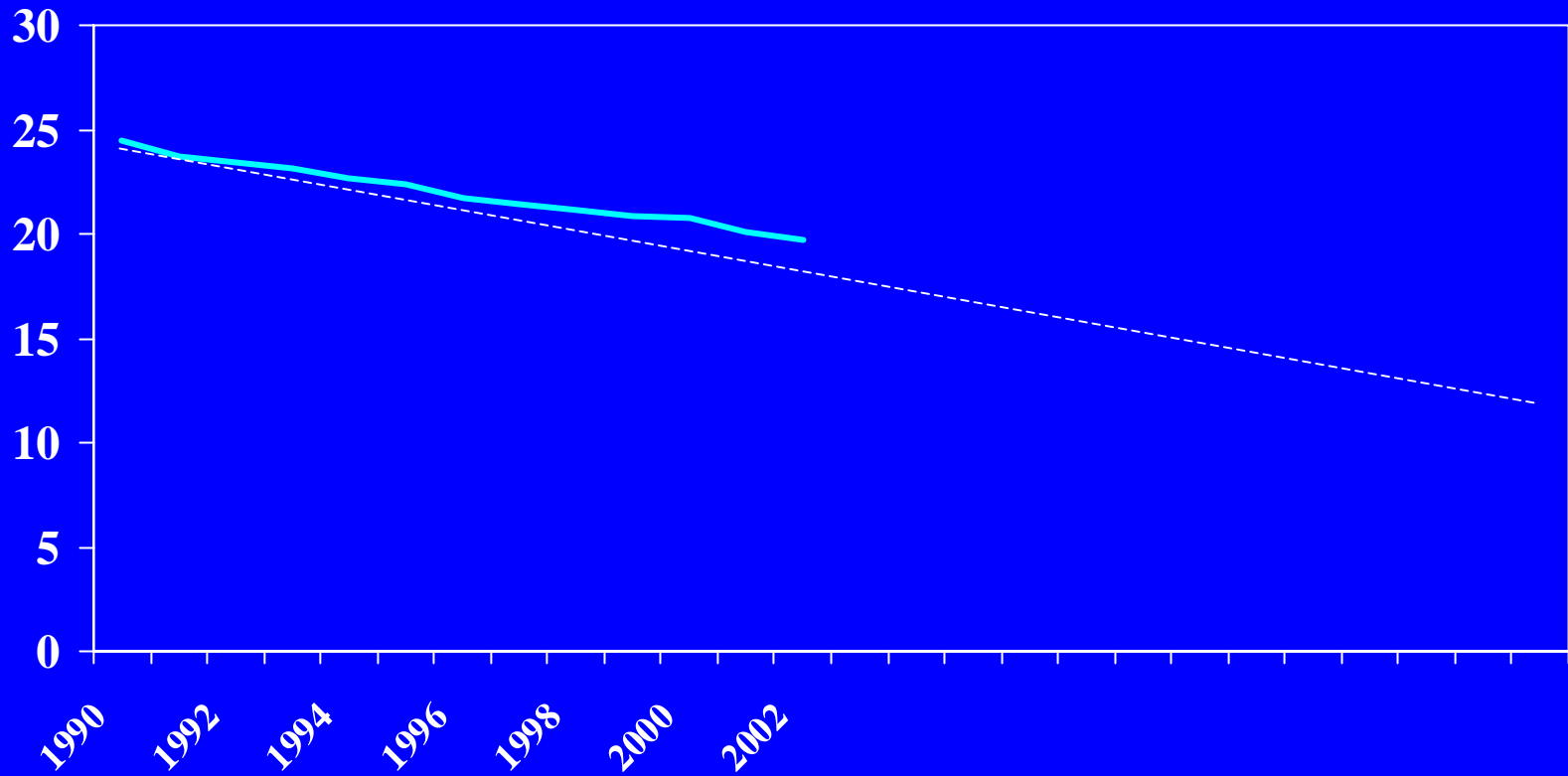
Colorectal cancer mortality trends



Colorectal cancer mortality trends



Colorectal cancer mortality trends



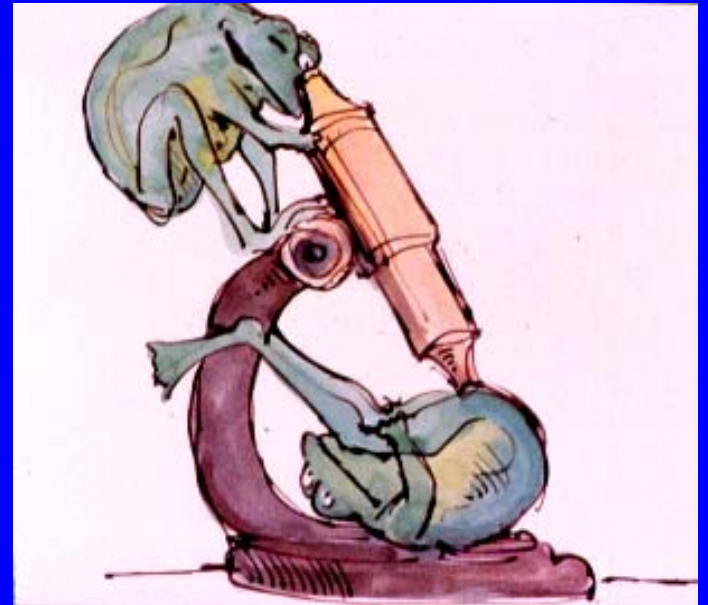
Ways to Prevent Colorectal Cancer

- Exercise
- Weight control
- Diet rich in fruits and vegetables, low in fat
- Chemoprophylaxis
 - ✓ NSAIDs
 - ✓ Calcium
 - ✓ Estrogen
 - ✓ Folate?
 - ✓ Selenium?
- Remove adenomas



Colorectal screening

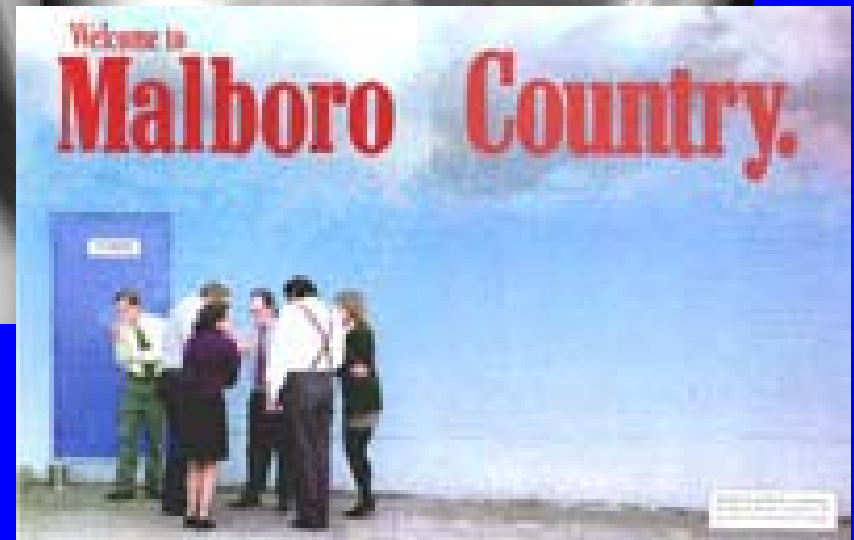
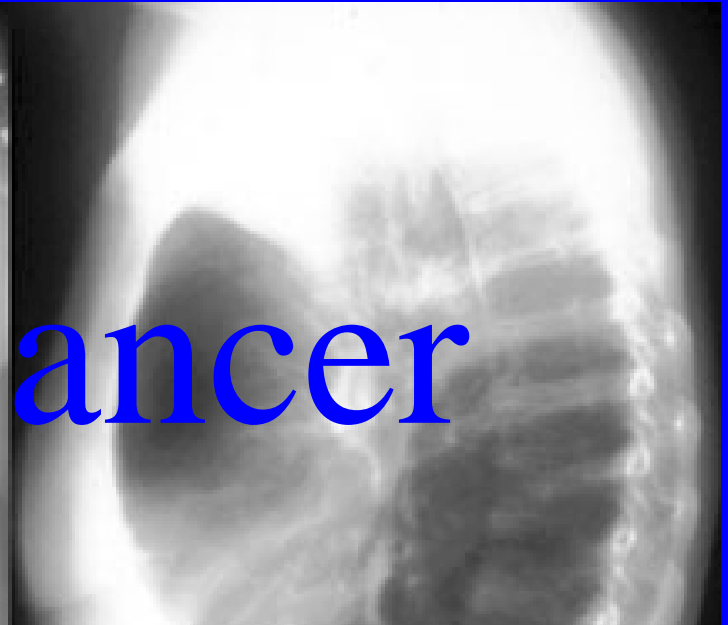
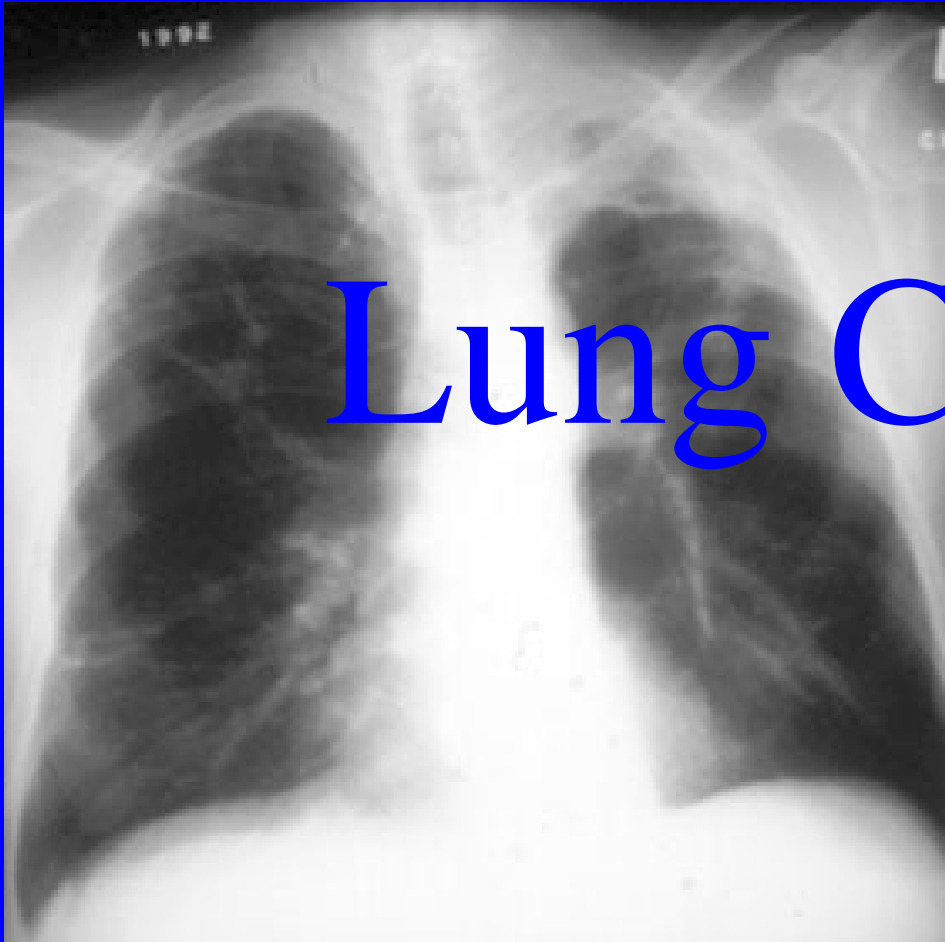
- 57,000 deaths per year
- 35% due to failure to be screened
- 19,000 deaths per year could be prevented with screening by ACS guidelines



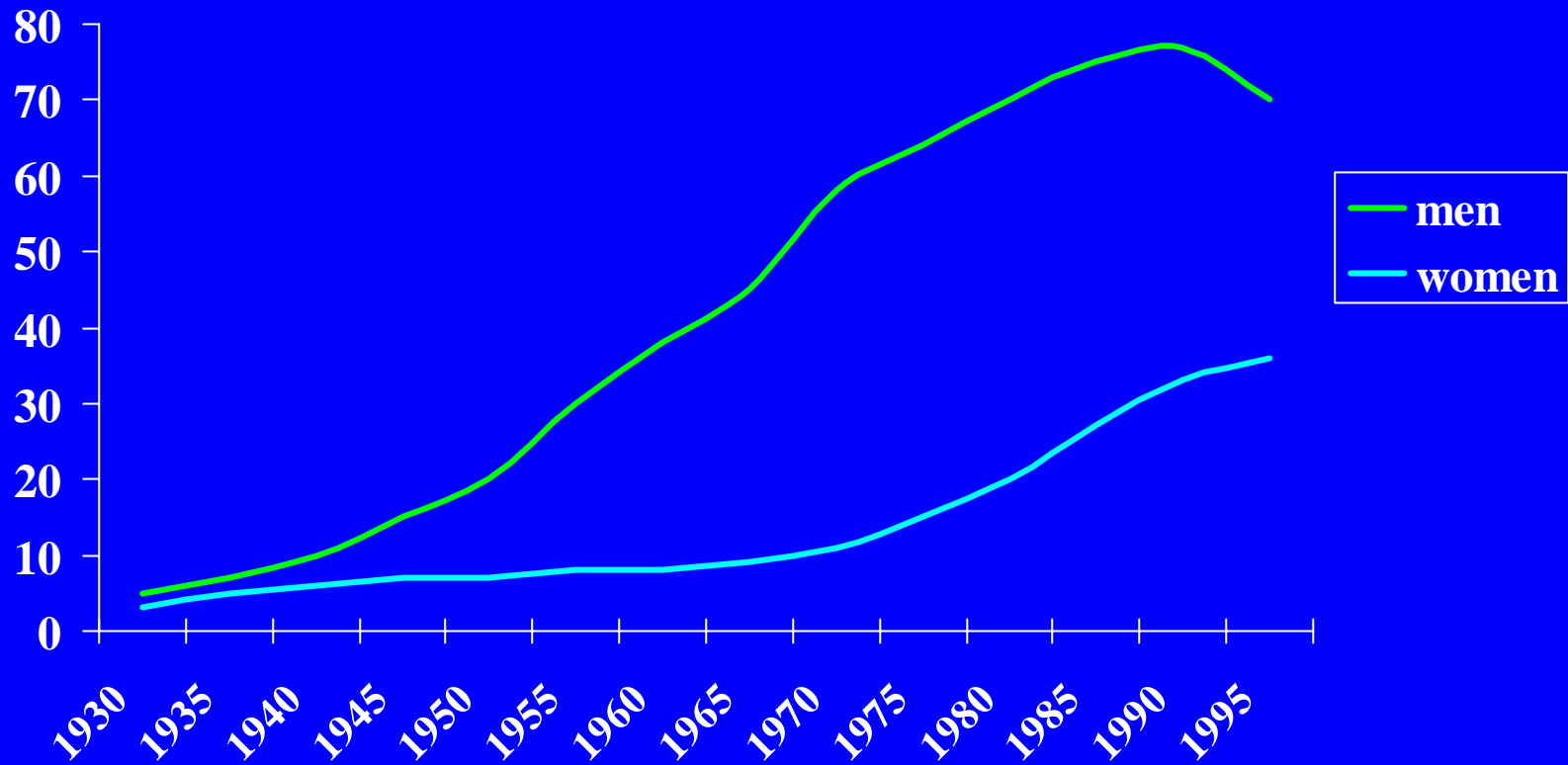
Future factors for colorectal cancer

- **Screening**
 - **Improve reach of current methods (50%)**
 - **Develop better methods (CT, DNA)**
- **Reverse obesity epidemic**
- **Increase physical activity**
- **Chemoprevention**
 - **Calcium, aspirin**
 - **Selenium, vitamin D**

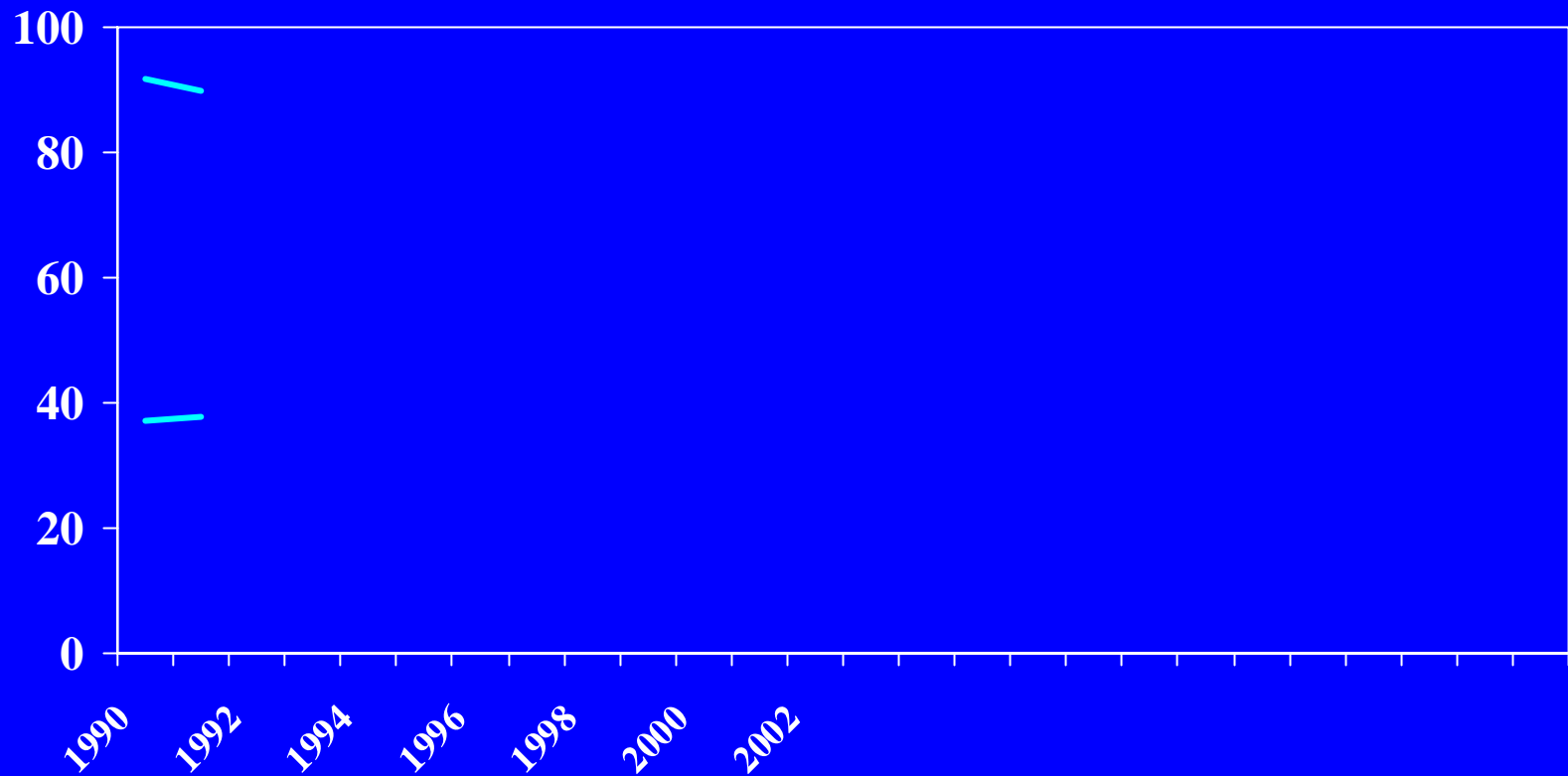
Lung Cancer



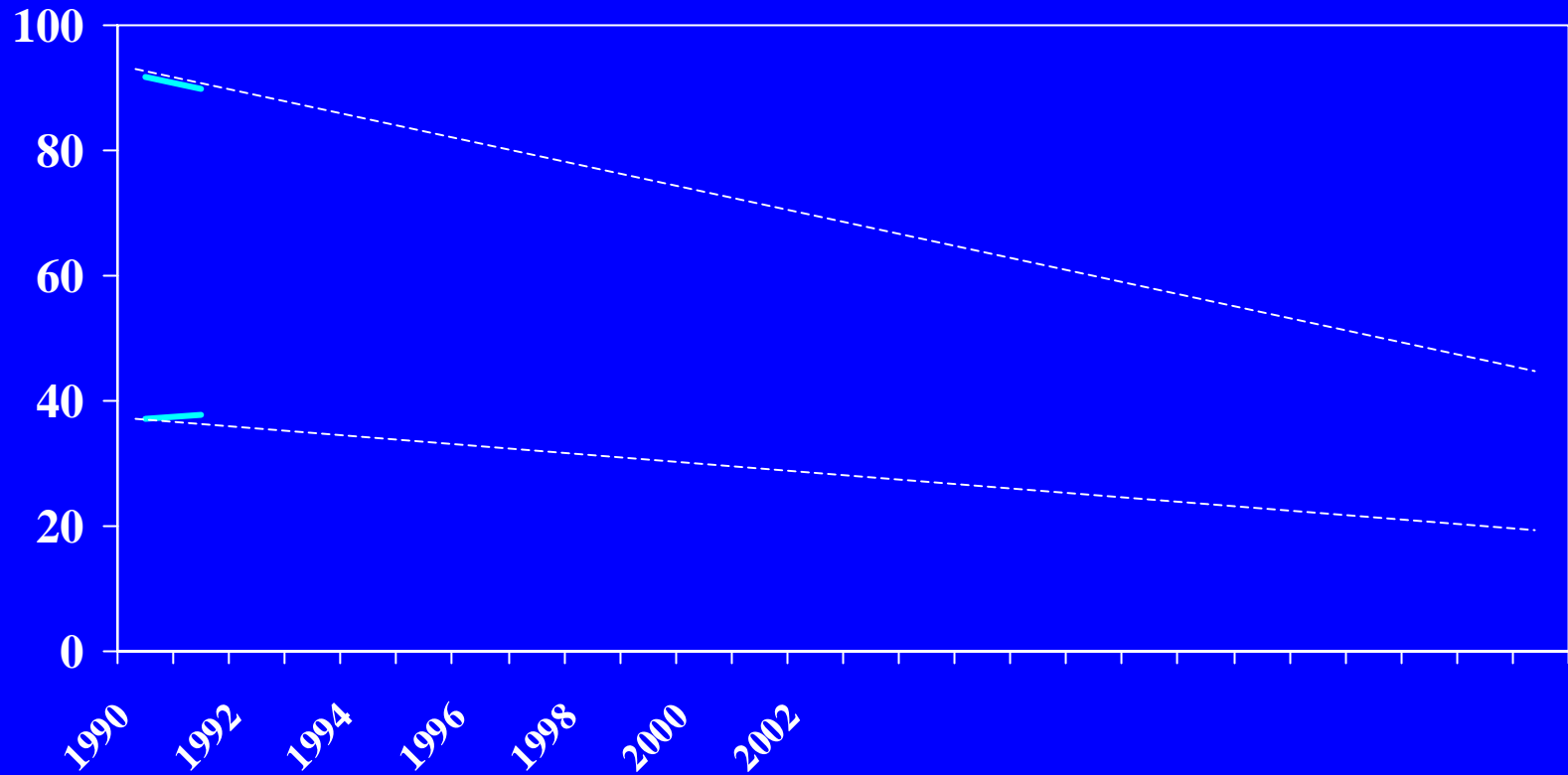
Lung cancer death rates in the US



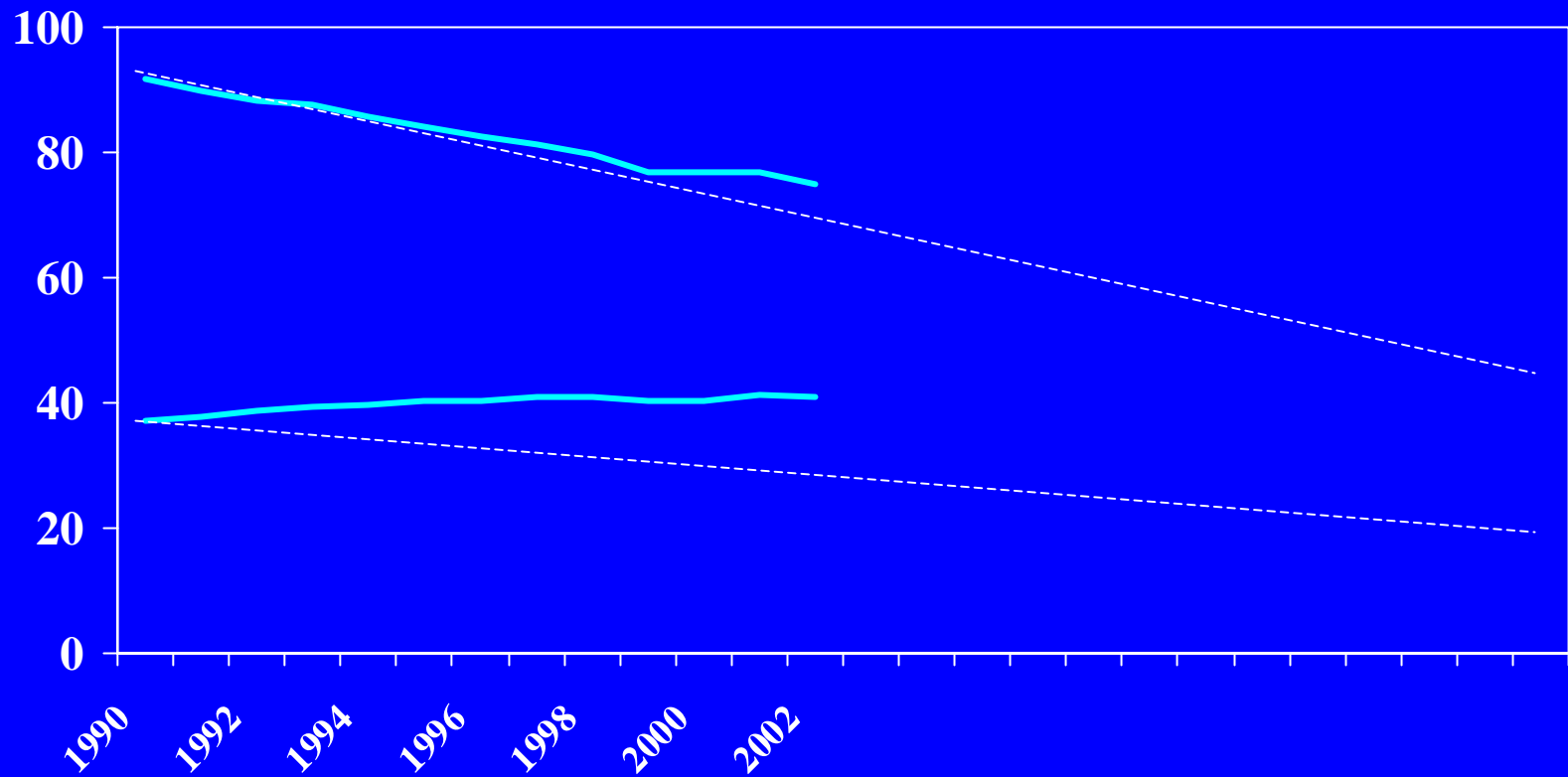
Lung cancer mortality trends, men and women



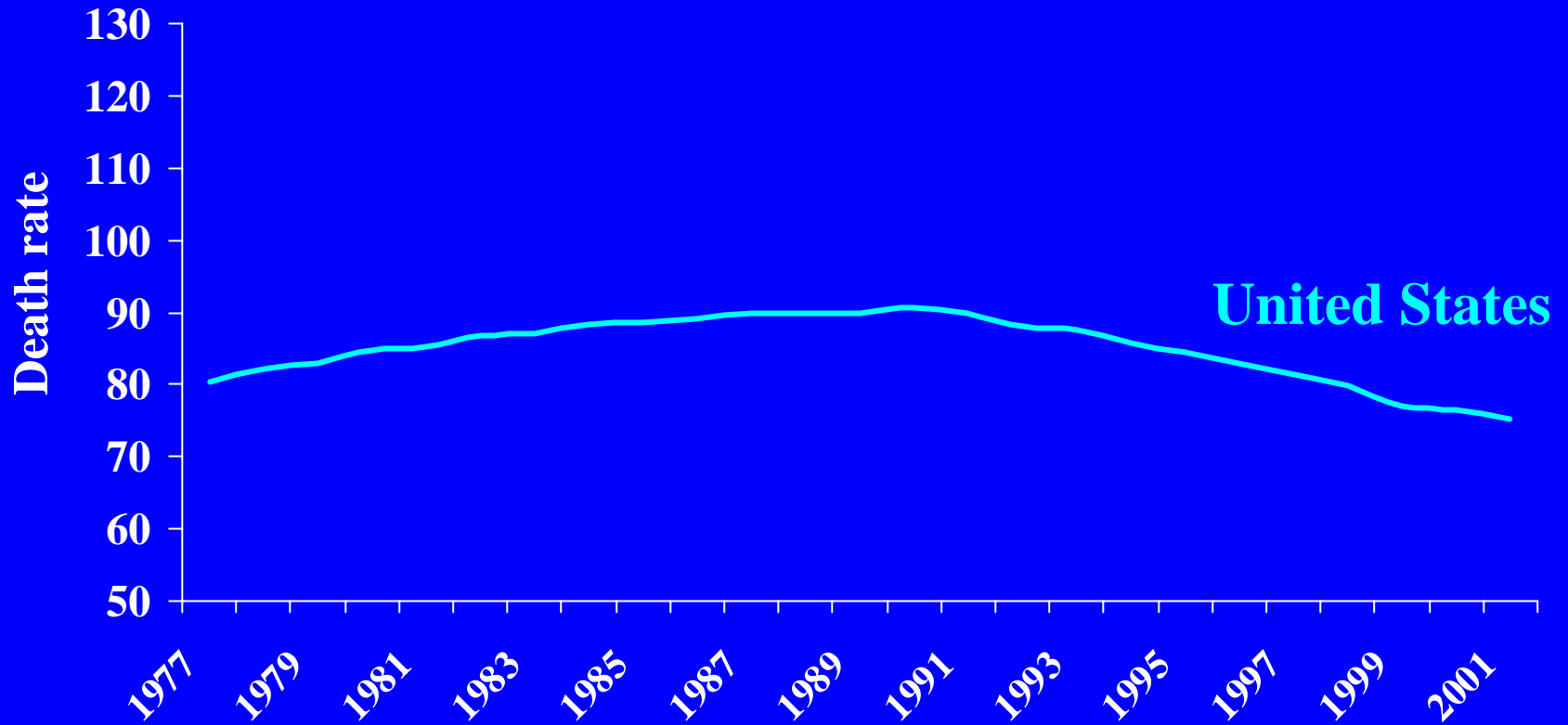
Lung cancer mortality trends, men and women



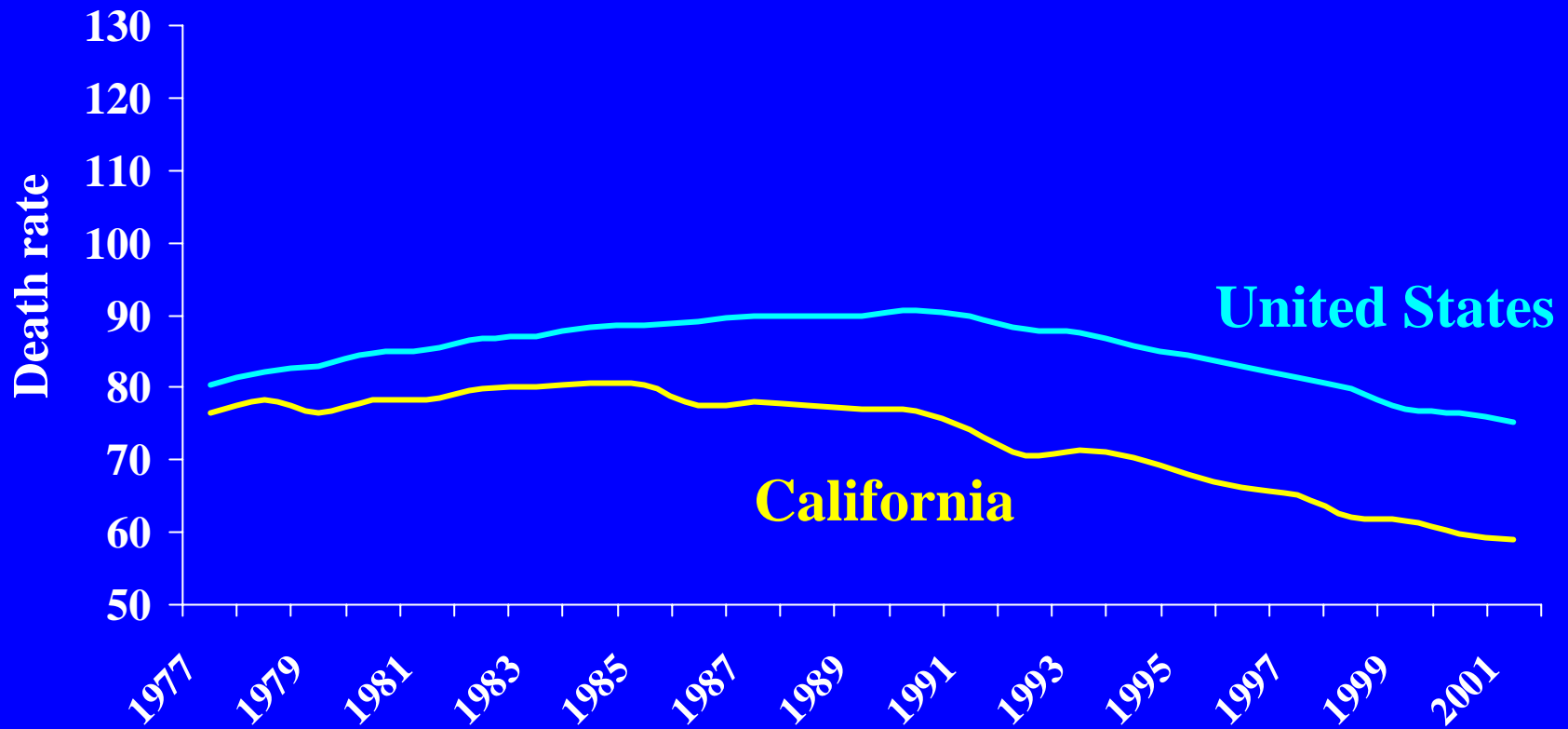
Lung cancer mortality trends, men and women



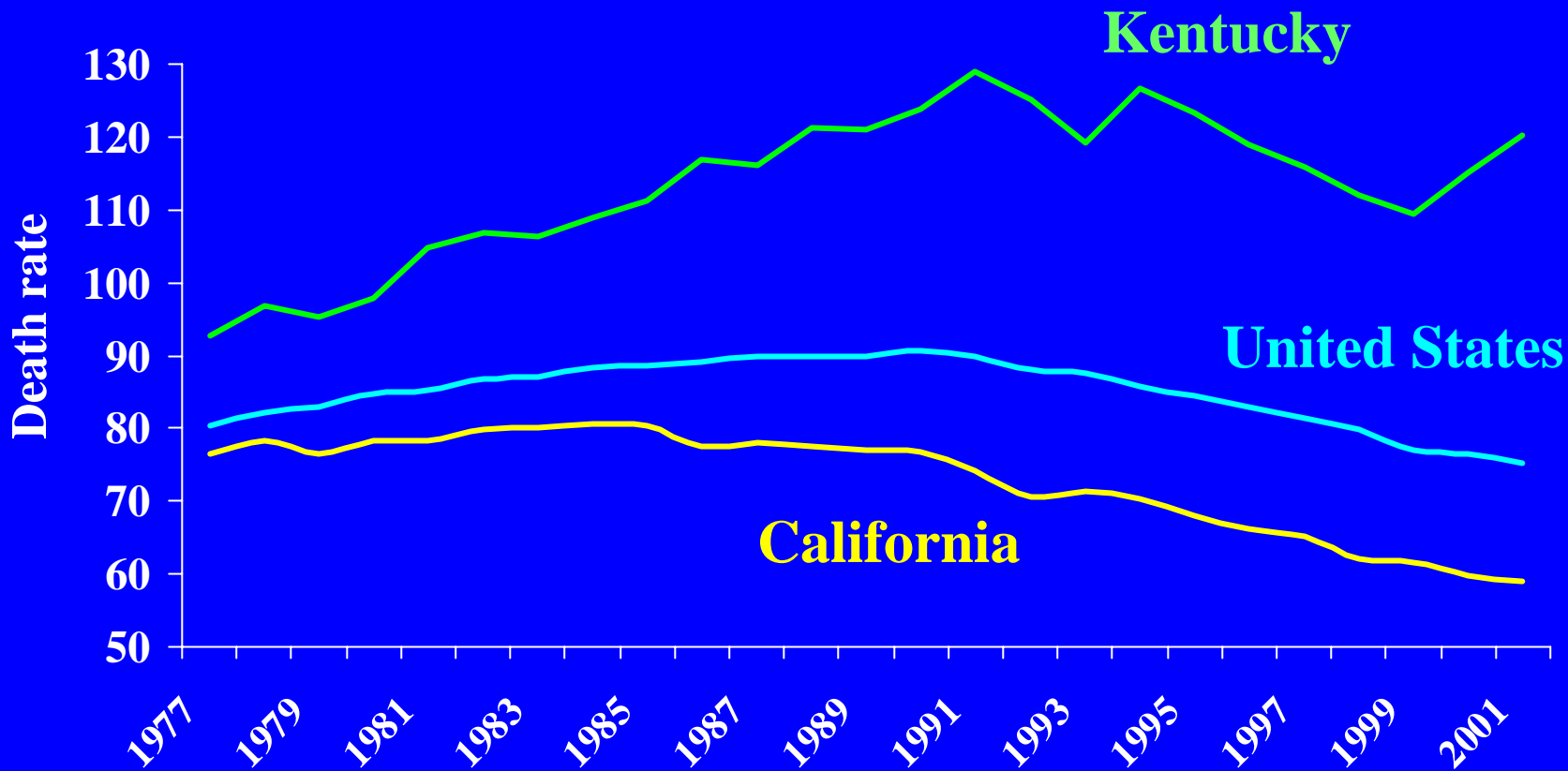
Male Lung Cancer Death Rates



Male Lung Cancer Death Rates

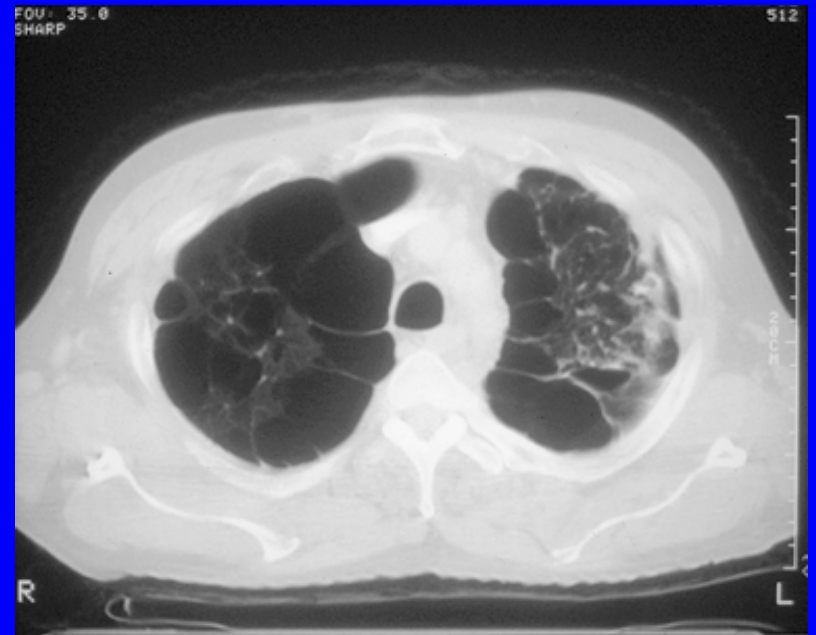


Male Lung Cancer Death Rates



Future factors for lung cancer

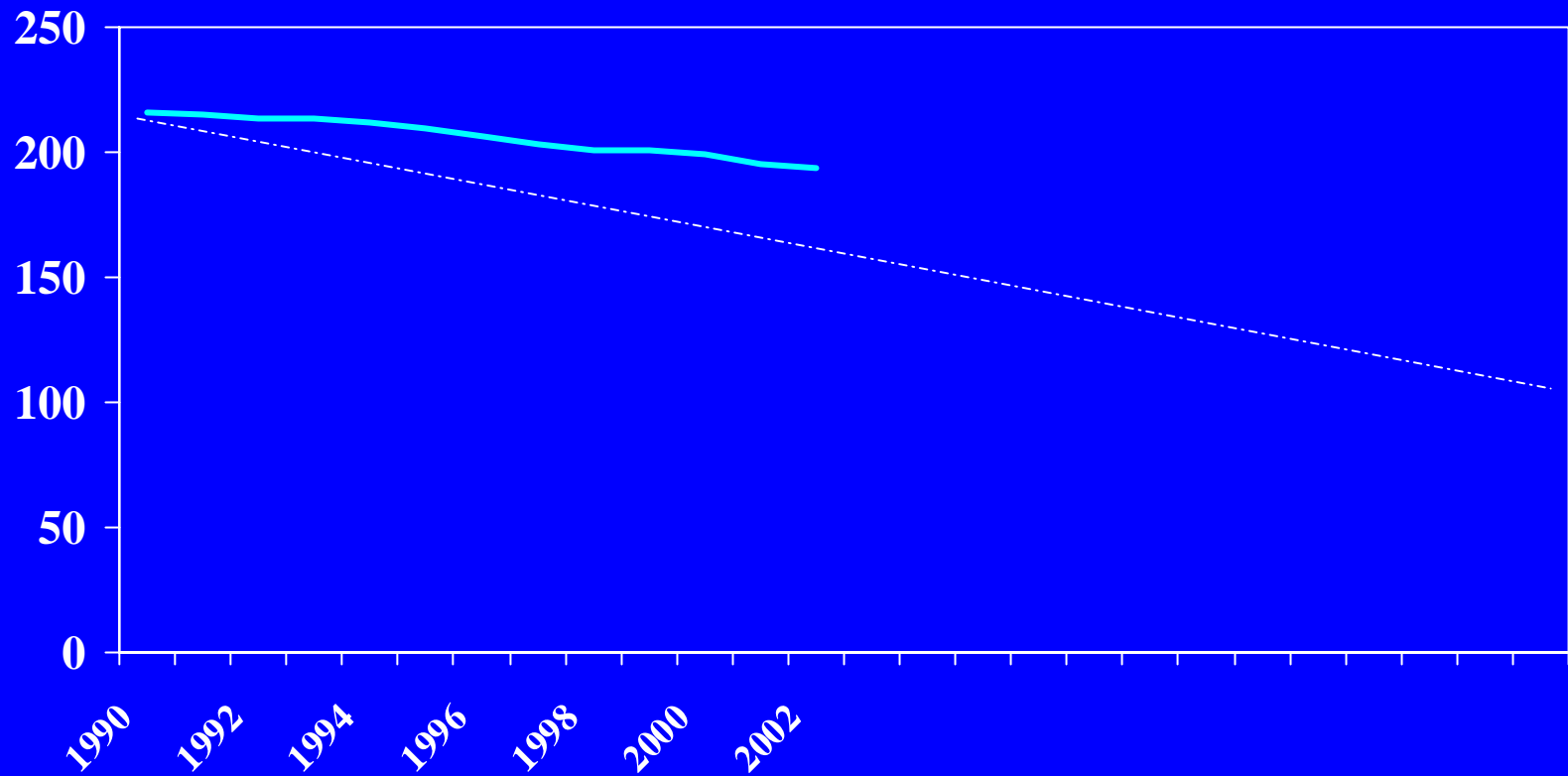
- Tobacco
 - Tobacco
 - Tobacco
- 5 year latency
- Early detection
 - Chemoprevention
 - selenium
 - Treatment



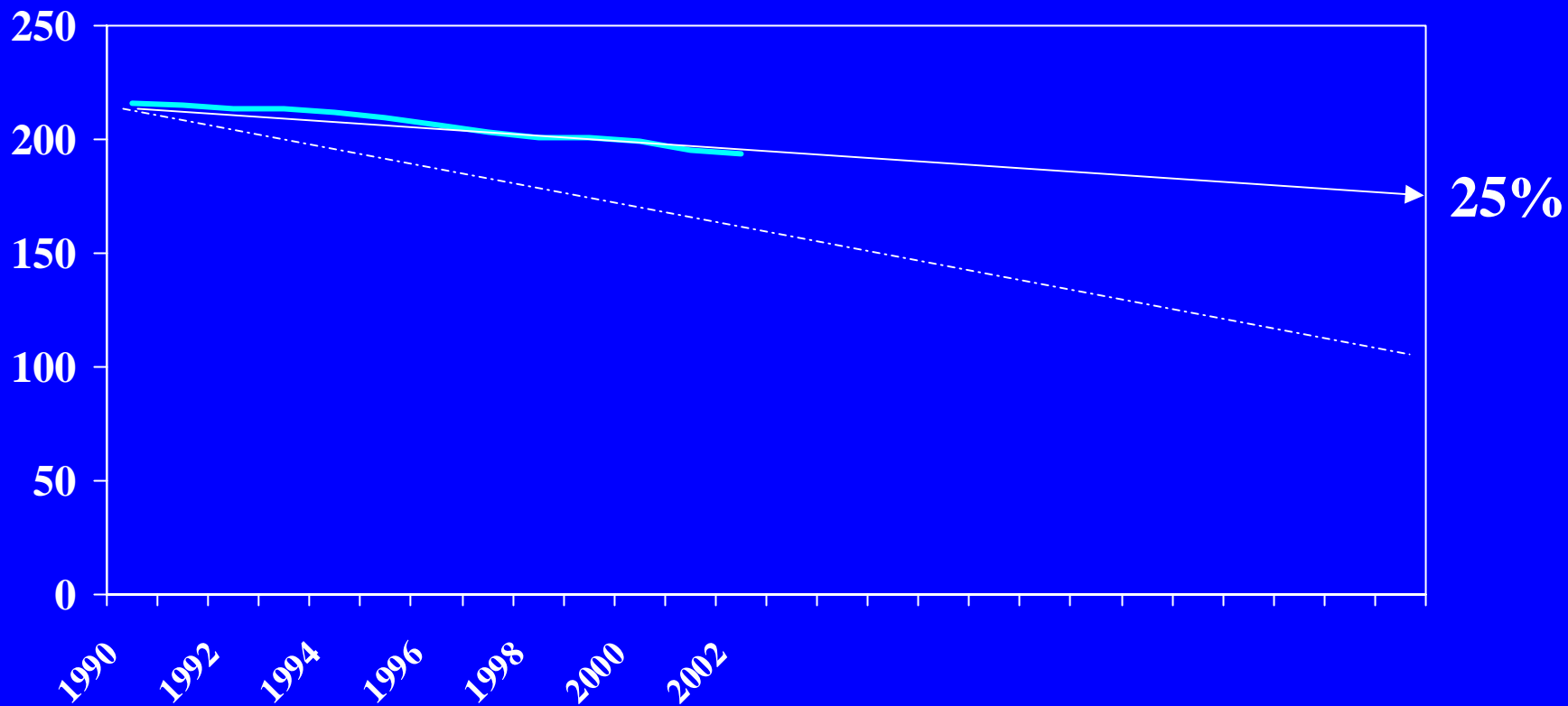
All cancer sites mortality trends



All cancer sites mortality trends



All cancer sites mortality trends



US Cancer Mortality Trends

- Nearly a 2% decline per year for 4 major sites
 - 50% reduction possible by 2015 for these sites
- Little change for other sites
- Only about a 1% decline per year overall
 - Therefore, about 25% less by 2015
 - Therefore, 50% less by about 2040
- Decline will need to increase to about 3% per year until 2015 if ACS goal is to be reached

Deaths from cancer

- **556,000 per year in US**
- **1523 per day, approximately one per minute**
- **name your own assumptions**
 - **reducing tobacco use by 50% = 90,000 lives**
 - **doubling current crc screening rates = 16,000**
 - **modest assumptions total approx 60,000**
 - **60,000 = one every 10 minutes**

Numbers of deaths prevented or delayed due to cancer mortality reductions since 1990

- 1990 0
- 2000 195,000
- 2010 1.1 million
- 2015 1.7 million (current trends)
- 2015 2.4 million (ACS goal)

Fulfilling the Potential of Cancer Prevention and Early Detection

National Cancer Policy Board, 2003

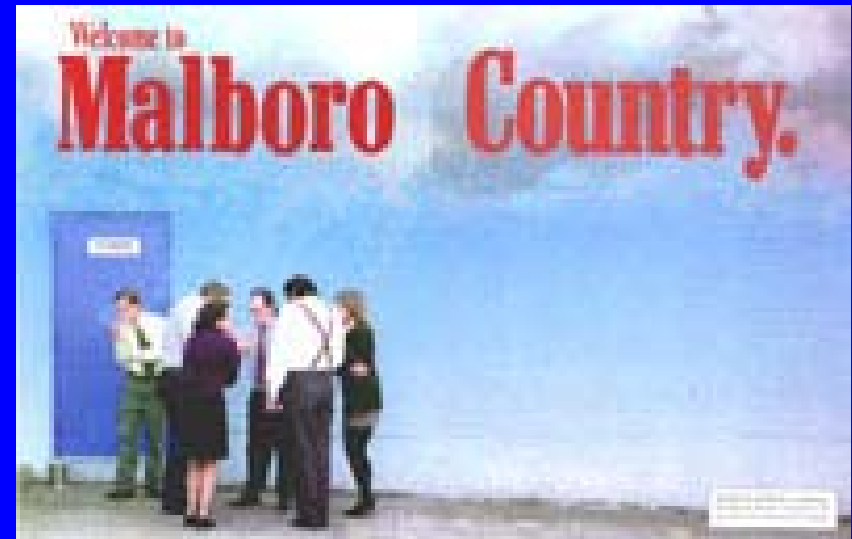
Susan J. Curry, Tim Byers, Maria Hewitt, Editors

Recommendation 1

- Federal & state laws to promote cessation and prevent initiation of tobacco use

Tobacco

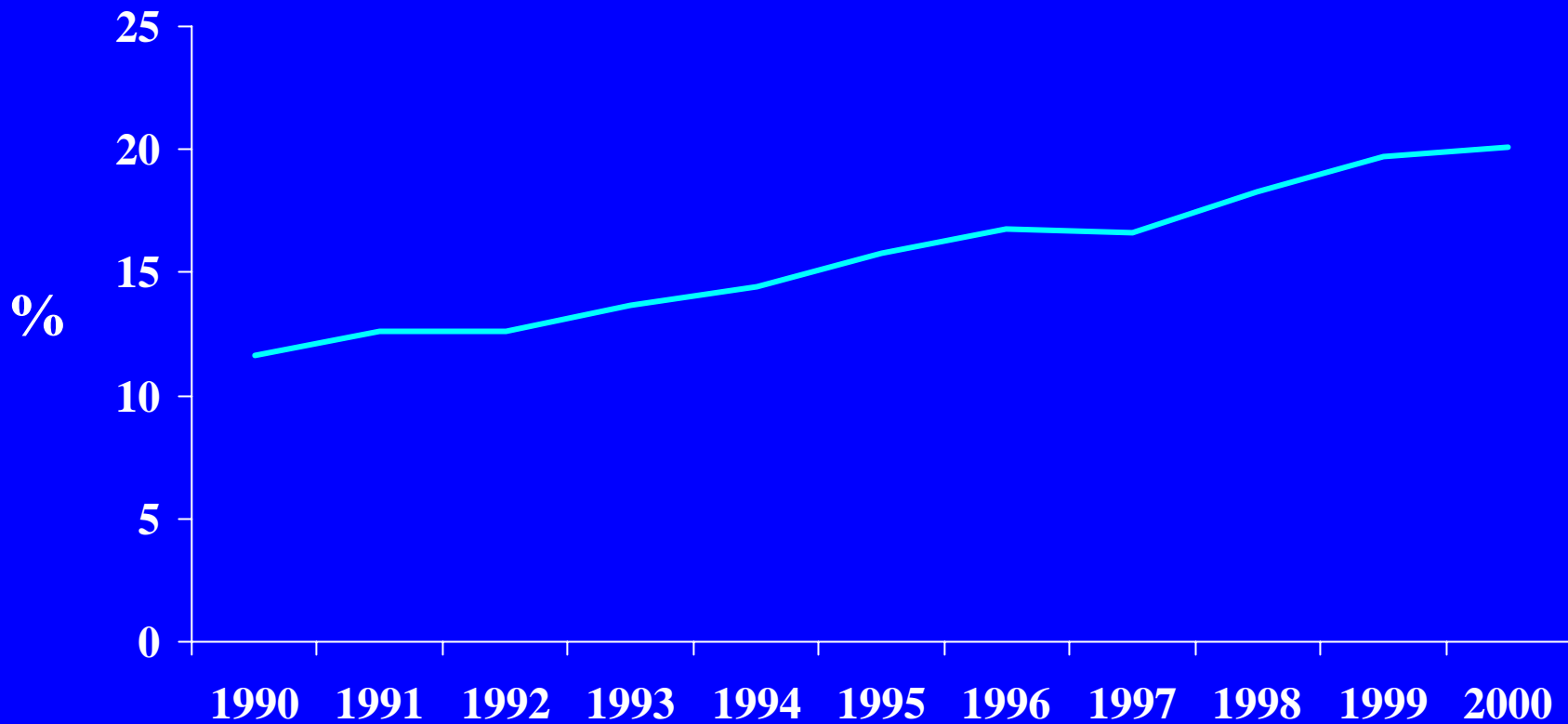
- 161,000 deaths per year from cancer of the lung, larynx
- 80% due to tobacco
- 125,000 deaths per year caused by tobacco from these two cancer sites alone
- 5 year latency
- Any reductions in tobacco will yield large reductions in disease



Recommendation 2

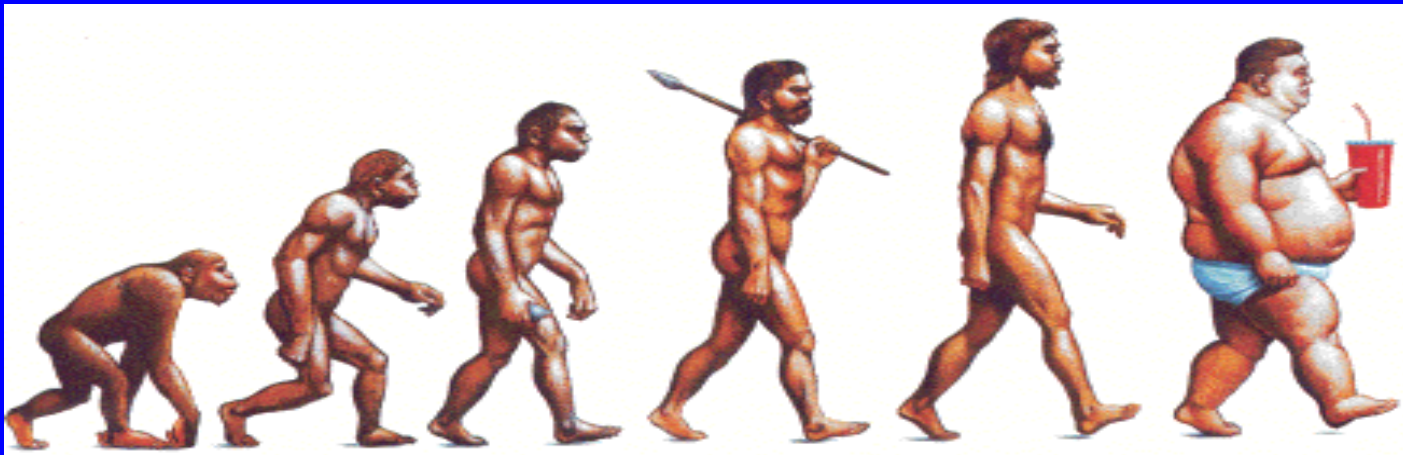
- DHHS-coordinated national strategy to address obesity, unhealthy diet and physical inactivity

Obesity Epidemic in the US from 1990 to 2000



Obesity, Physical Activity

IARC estimates 20% of cancers caused by obesity, pa



Recommendation 3

- Resources to CDC to support innovative public-private partnerships for comprehensive cancer control plans

Colorado's experience in comprehensive cancer control



History of Comprehensive Cancer Activities in Colorado

Colorado Cancer Coalition formed in 1993

Four Year Cooperative Agreement

Program and Staff support funded in 1998

Funded 2002, with projects in
Colorectal, Prostate, Skin, and Ovarian

Amendment 35 \$ in

2006

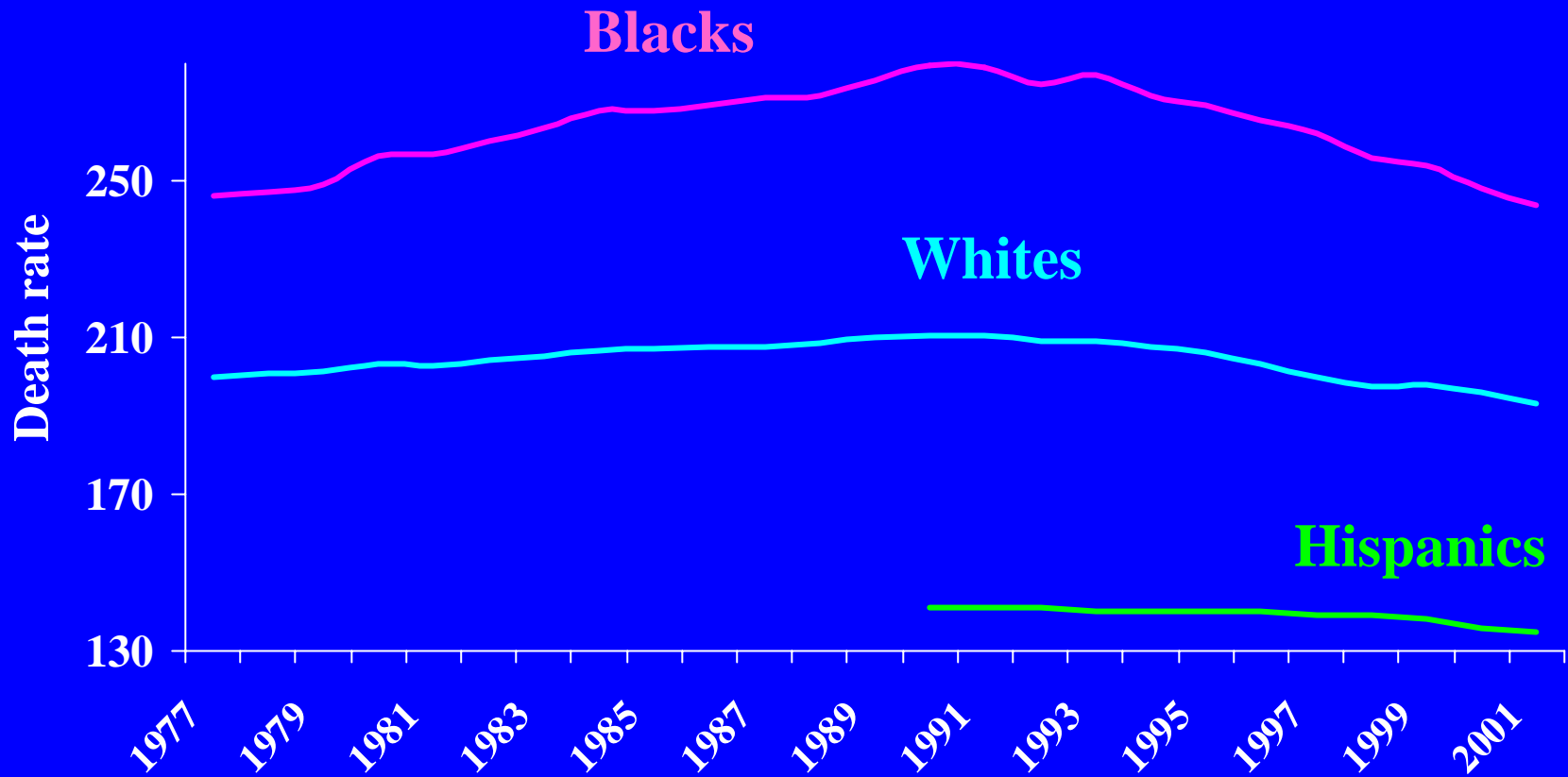
Colorado Projects

- Staff support to the Colorado Cancer Coalition
- Public and Professional Education
- Colorado Cancer Conference
- Women and Tobacco Campaigns
- Sun Safety Programs, Workers and Parks
- Colorectal Cancer Screening Program
- Prostate Cancer Outreach to African American Men
- Regional and Statewide Cancer Reports
- Genetics and Chronic Diseases
- Cancer Resource Guide for Colorado
- Technical Assistance to Community Grantees

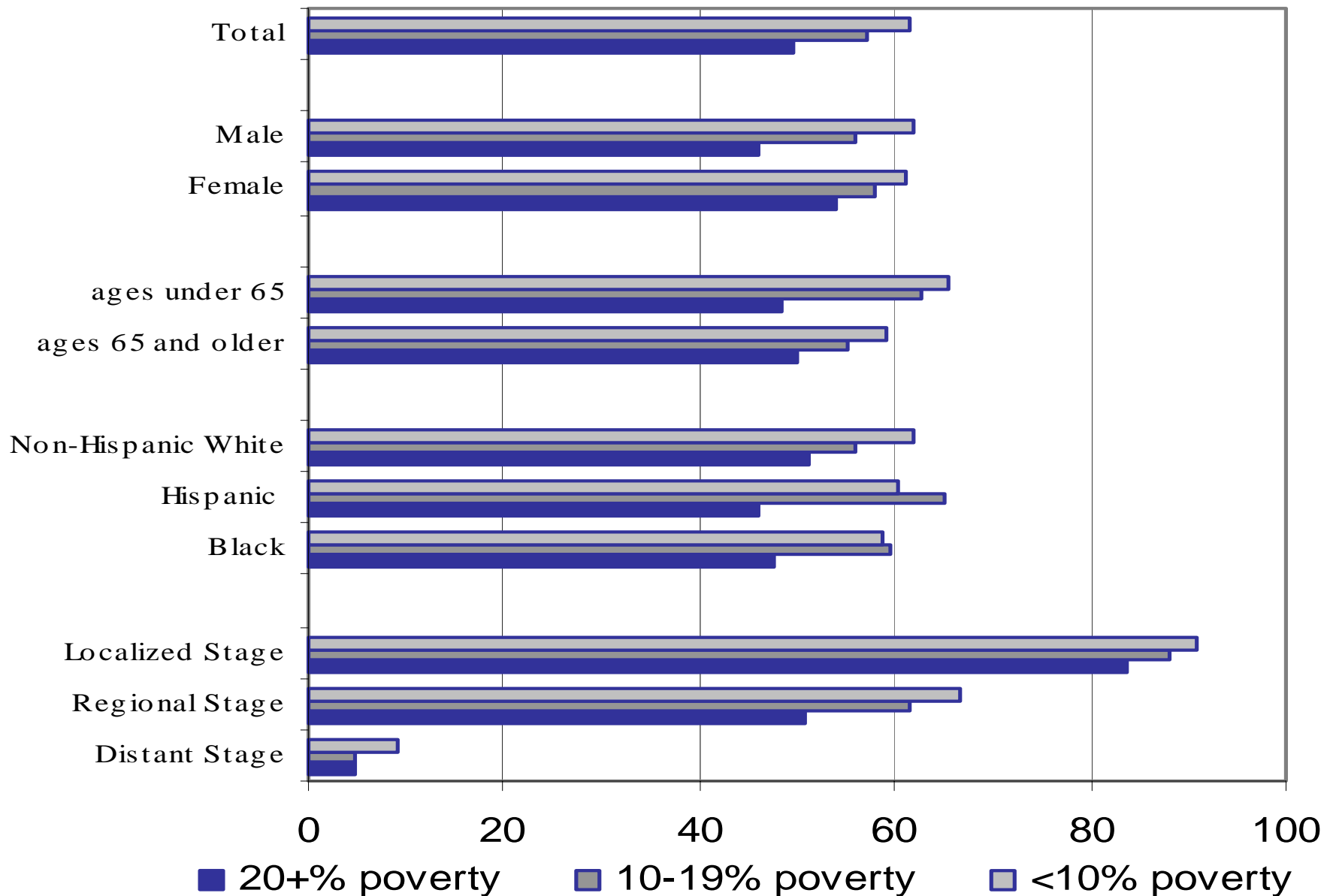
Recommendation 5

- More support to federally funded programs providing primary care to uninsured and low income people

All Cancer Death Rates US – by race



Five-Year Survival for Colorectal Cancer by Area Poverty Level, Age, Gender, Race, and Stage, 1995-2000, Colorado



Recommendation 6

- More support for CDC's National Breast and Cervical Cancer Early Detection Program
- Extend program for colorectal cancer screening

Factors to address after the Plan is on the shelf

- **Plannalgia and Plannopathy**
- **Collaboration**
 - Individuals, organizations, diseases
- **Ageism and classism**
- **Fear**
 - Political, personal
- **Imagination**

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