

# NIH: A Vision for the Future

2008 Budget Hearings  
Senate Appropriations Subcommittee  
on Labor/HHS/Education

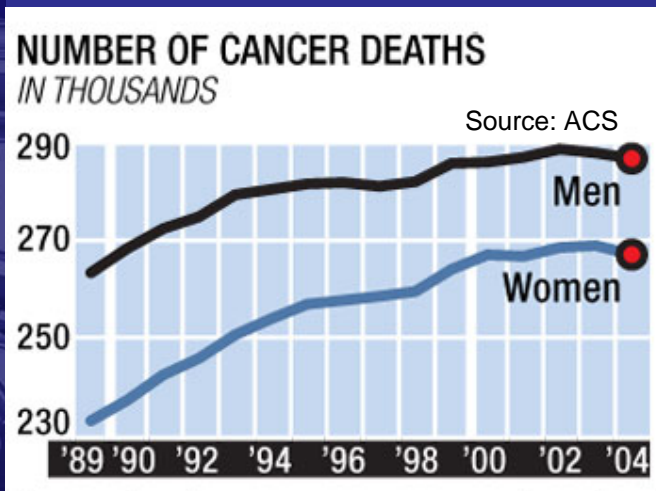
Elias A. Zerhouni, M.D.  
Director



NATIONAL INSTITUTES OF HEALTH



# Due to Advances of Past 30 Years *Americans are Living Longer and Healthier*

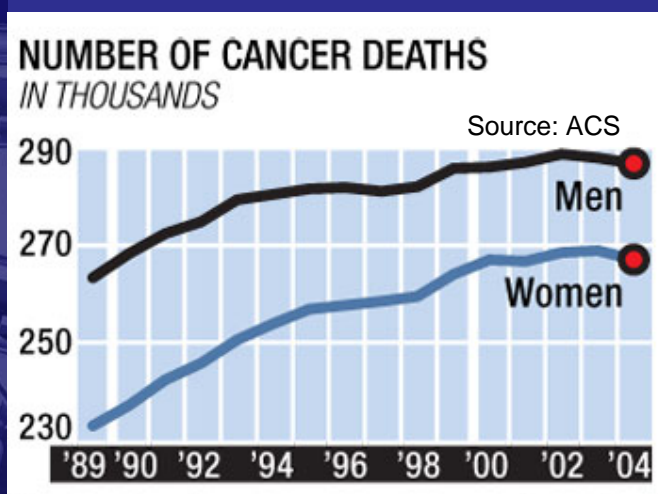


- For the second consecutive year, annual cancer deaths in the United States have fallen

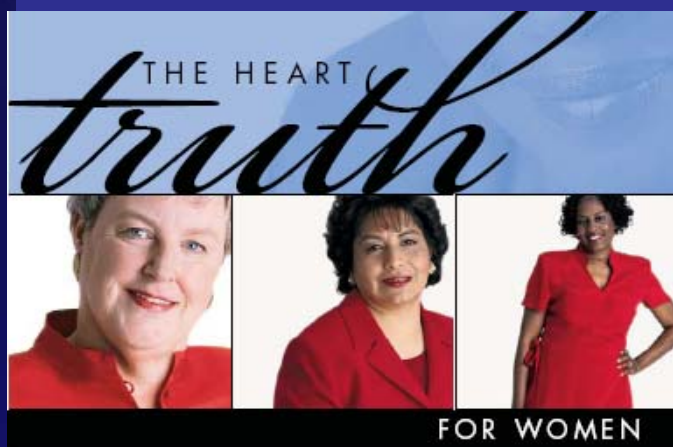
Cancer investment  
per American  
**~\$9/yr**  
1974-2004



# Due to Advances of Past 30 Years *Americans are Living Longer and Healthier*



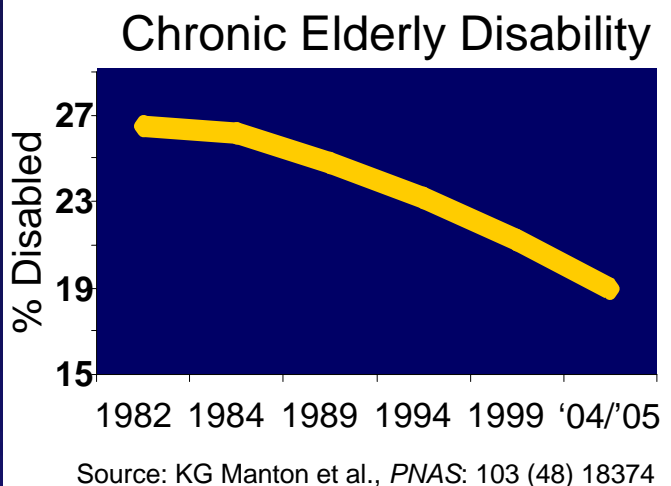
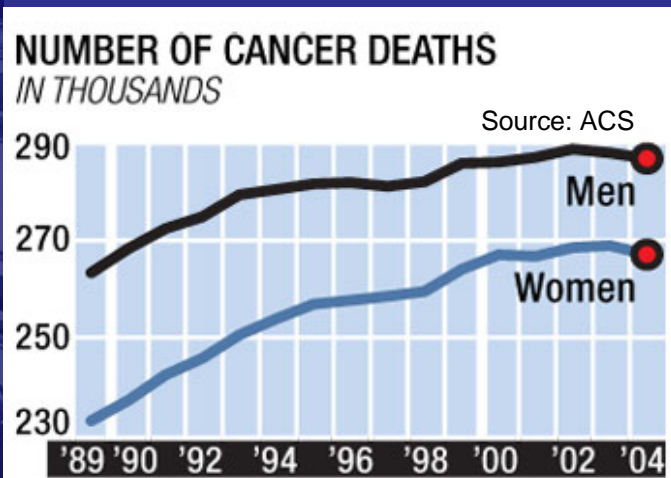
- For the second consecutive year, annual cancer deaths in the United States have fallen
- Over 60% drop in mortality for heart disease and stroke – in 2004, drop in deaths of women from Heart Disease from 1/3 to 1/4 reported



Heart disease investment  
per American  
**~\$4/yr**  
1974-2004



# Due to Advances of Past 30 Years *Americans are Living Longer and Healthier*



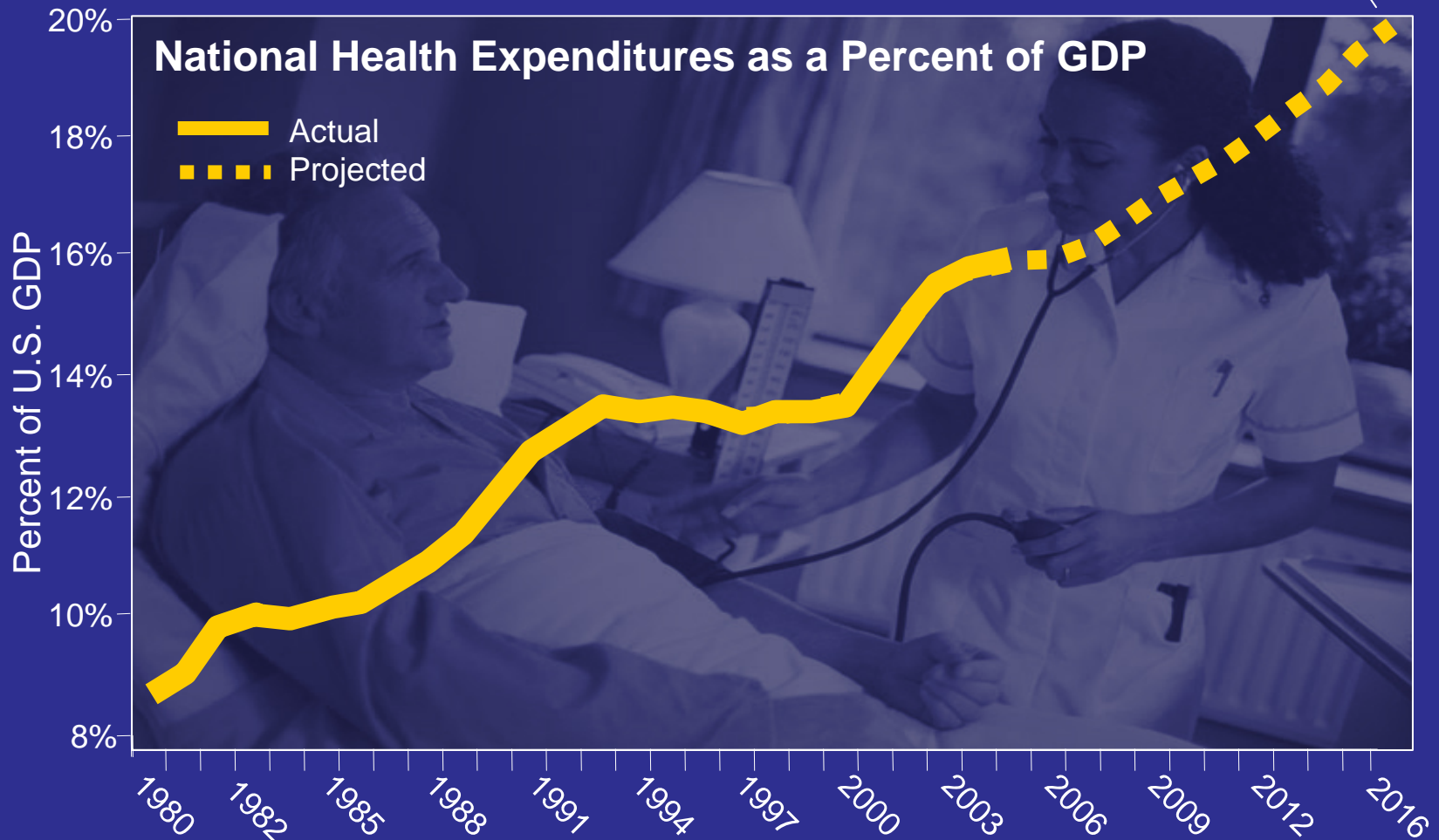
- For the second consecutive year, annual cancer deaths in the United States increased
- Over the past 30 years, total NIH investment per American ~\$44/yr 1974-2004
- Overall mortality for heart disease has dropped 50% – in 2004, drop in deaths of women from Heart Disease from 1/3 to 1/4 reported
- Chronic disability among older Americans has dropped by 30% in the past 2 decades, and the rate of decline is accelerating
- Life expectancy rises to 78 years, up 6 years since 1974



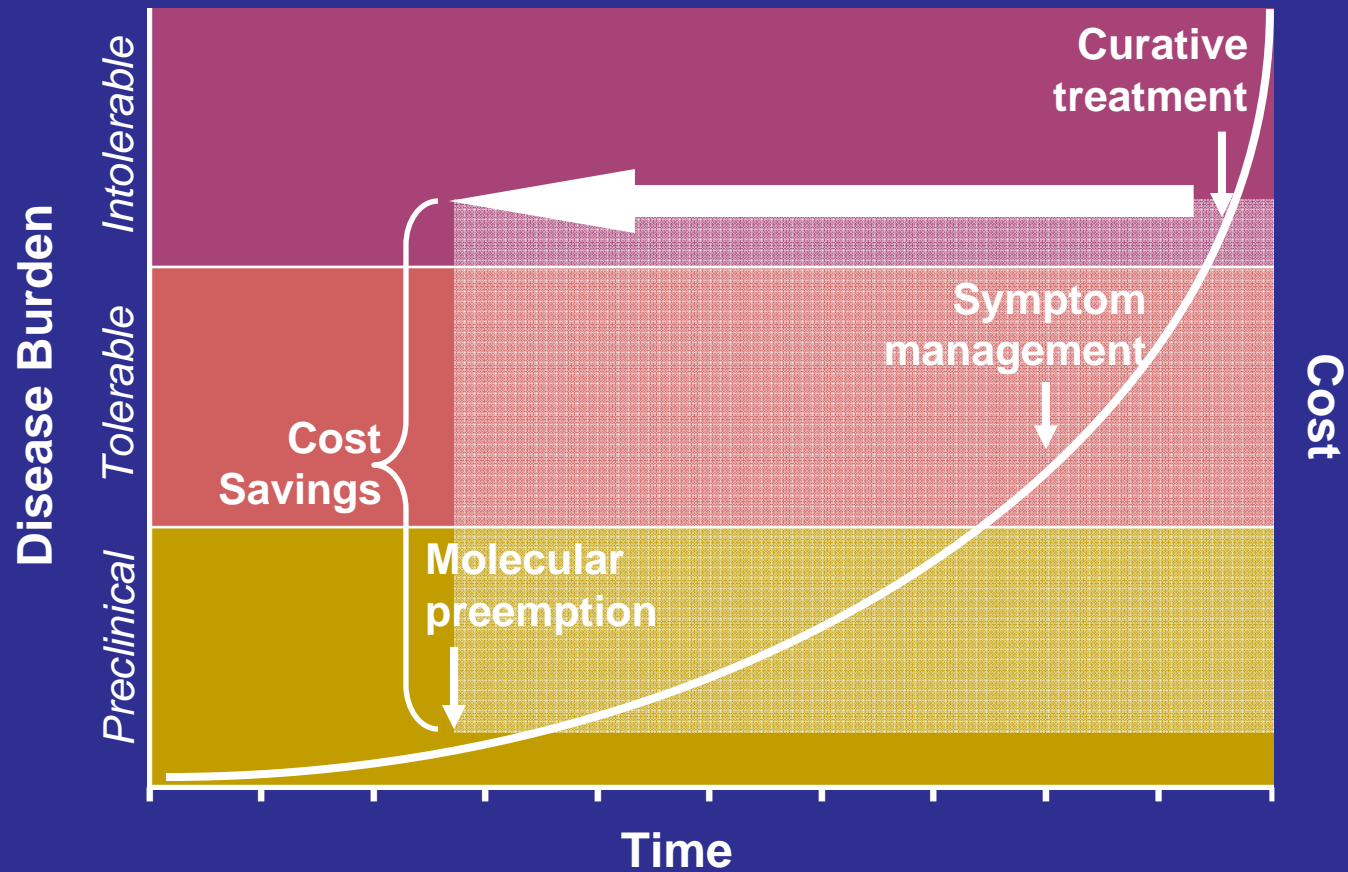
# Challenge of Rising U.S. Health Expenditures

*Biomedical Research Must Deliver*

**\$4.1 trillion**



# The Future Paradigm: *Preempt Disease*



# The Value of Molecular Preemption

Early  
Rheumatoid Arthritis



Intermediate  
Rheumatoid Arthritis



Late  
Rheumatoid Arthritis



Courtesy of J. Cush, 2002



# The Value of Molecular Preemption

Early  
Rheumatoid Arthritis

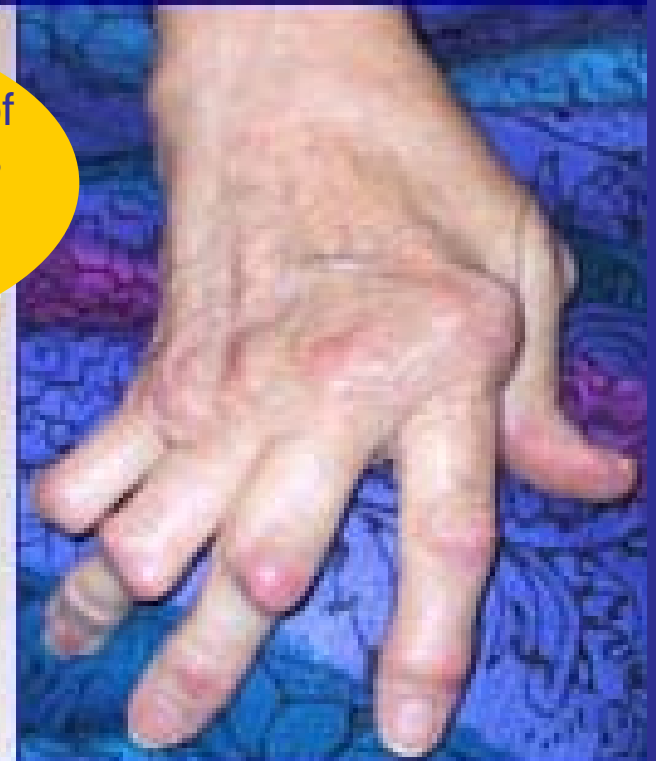


Intermediate  
Rheumatoid Arthritis



Today, a new class of anti-rheumatic drugs dramatically slows disease progression

Late  
Rheumatoid Arthritis



Courtesy of J. Cush, 2002



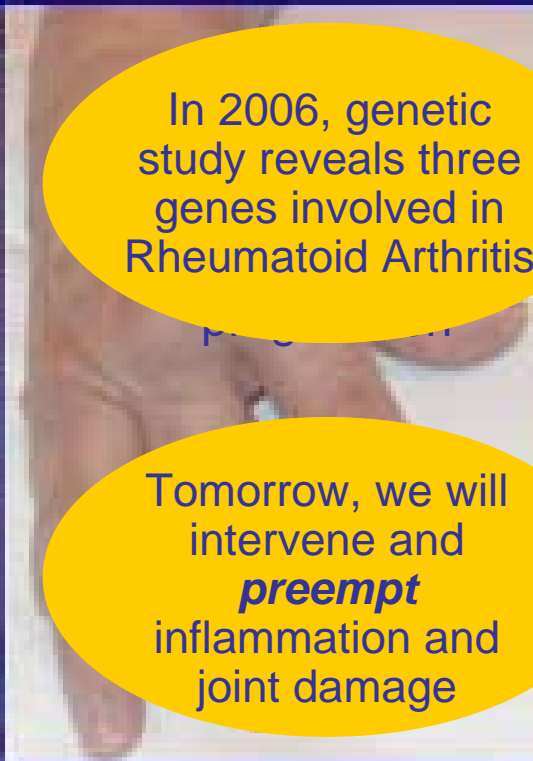


# The Value of Molecular Preemption

Early  
Rheumatoid Arthritis



Intermediate  
Rheumatoid Arthritis



Late  
Rheumatoid Arthritis



Courtesy of J. Cush, 2002



# The Future Paradigm: The 4 P's

*Transform Medicine from Curative to Preemptive*



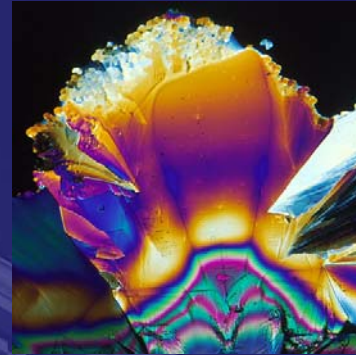
Predictive ↔ Personalized ↔ Preemptive



**Participatory**

Era of Precision Medicine





# NIH *Transforming medicine and health through discovery*

