

# State Cancer Profiles: Cancer Statistics for States and Counties Made Quick and Easy.

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ASK FOR THE AGES
OF ALL SINGLE U.S.
MALES WHO LIVE
IN HOUSES WORTH
\$100,000 OR MORE.

I'M SORRY, SEYMOUR, BUT WE CAN'T RETRIEVE THAT INFORMATION FROM OUR DATA BASE.



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WELL, WHAT'S THE CLOSEST THING TO IT THAT WE CAN RETRIEVE?



THE SERIAL NUMBERS
OF ALL THE WASHING
MACHINES IN
POUGHKEEPSIE.









## **Outline**

- Why the investment?
- What has been provided?
  - CancerControlPLANET.cancer.gov
  - StateCancerProfiles.cancer.gov
  - Behind the Story
- Evolution and Revolution
  - Design Challenges
  - >> Technical Challenges
- What's next?







## Why the investment?

- ▶ ROI Return on Investment
- Bang for the Buck
- NCI Director's Challenge: Eliminate suffering and death due to cancer by 2015







## What has been provided?

- "Dynamic views of cancer statistics for prioritizing cancer control efforts in the nation, states, and counties"
- Cancer sites include All Sites, Bladder, Breast (female), Cervix, Colon & Rectum, Lung & Bronchus, Melanoma, Oral & Pharynx, and Prostate
- Targeted Audiences include health planners, policy-makers, cancer information providers







## What was the design vision?

- Quick and Easy Decision Support
  - graphical and statistical summaries over geography, over time, and over demographic subgroups
  - » measures of statistical stability for the layman
- Standard characterization of cancer burden
  - >> illuminate disparities so they can be addressed
  - » support planning and analysis
- Synthesize data from existing Public Health Surveillance Systems
- Make Seductive fun, interactive, exploratory





## CancerControlPLANET.cancer.gov



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#### Cancer Control PLANET

Links to resources for comprehensive cancer control

Follow 5 planning steps to develop cancer control programs





Find information by cancer control topic

Home

Contact Us

About This Site PLANET Sponsors

- Tobacco control
- Physical activity

#### Coming Soon:

- Sun safety
- Breast cancer screening
- Cervical cancer screening
- Colorectal cancer screening
- Informed decision making for cancer screening
- 5 A Dav
- Diet

#### **PLANET Sponsors**



Note: This web site is best viewed in Internet Explorer (version 5.0) or higher) or Netscape (version 7.0 or higher) at a screen resolution of 1024 by 768 or more.

We welcome your feedback on the Cancer Control PLANET and its satellite Web sites. To submit feedback, please contact us. Thank you for helping to improve this site for the cancer control. community.

Learn why these steps are important

- Step 1 Assess program priorities
  - ➤ State Cancer Profiles (NCI & CDC Web site)
    - Mortality, incidence, screening & risk factors data
- Identify potential partners
  - Regional and state contact information for cancer control partners
- Determine effectiveness of different intervention approaches
  - ➤ Guide to Community Preventive Services (Federally-sponsored Web site). Example:
    - Increasing cessation (media campaigns, provider reminder systems)
- Step 4 Find examples of research-tested intervention programs and products
  - Research-tested Intervention Programs (NCI & SAMHSA Web site), Example:
    - "Guía Para Dejar de Fumar" A Spanish language self-help guide for smokers who want to guit
- Step 5 Plan and evaluate your program
  - Guidance for comprehensive cancer control planning (CDC Web site)
    - Guidance for planning and evaluation







## StateCancerProfiles.cancer.gov



### cancer.gov



#### **State Cancer Profiles**

Dynamic views of cancer statistics for prioritizing cancer control efforts in the nation, states, and counties

Help us improve! Contact us with feedback.



**Profiles Home** 

#### **Quick Profiles**

Area	Choose a State	•
Cancer	Choose a Cancer Site	•
	Generate Profile	

#### **Comparison Tables**



#### Rate/Trend Comparisons

set higher priority for cancer control when rates are high or rising learn more...

- by State/County prioritize cancer sites
- by Cancer prioritize states or counties in a state



#### **Death Rates**

for states or for counties in a state learn more...



#### **Incidence Rates**

for states with high quality cancer registries learn more...

#### **Interactive Graphs and Maps**



#### 5-Year Rate Changes

in cancer mortality or incidence for all major cancer sites by user selectable criteria learn more...



#### Historical Trends

compare trends in cancer mortality and incidence by user selectable criteria learn more...



#### Latest Rates, Percents, and Counts

explore relationships across geography of mortality, incidence, demographics, or risk factors learn more...

#### **Support Data**



#### Screening and Risk Factors

prevalence percents by state from behavioral surveys learn more...



#### **Peer Counties**

identify counties that are comparable based on a user specified criteria learn more...



#### Age Distribution

male and female population sizes by age groups by user selectable criteria learn more...



#### **Help & About**

- About this Site
- · Quick Reference Guides
- Tutorials
- Interpret Rankings
- Low Vision/Accessibility
- Note: This web site is best viewed in Internet Explorer (version 5.0 or higher) or Netscape (version 7.0 or higher) at a screen resolution of 1024 by 768 or more.

#### Links

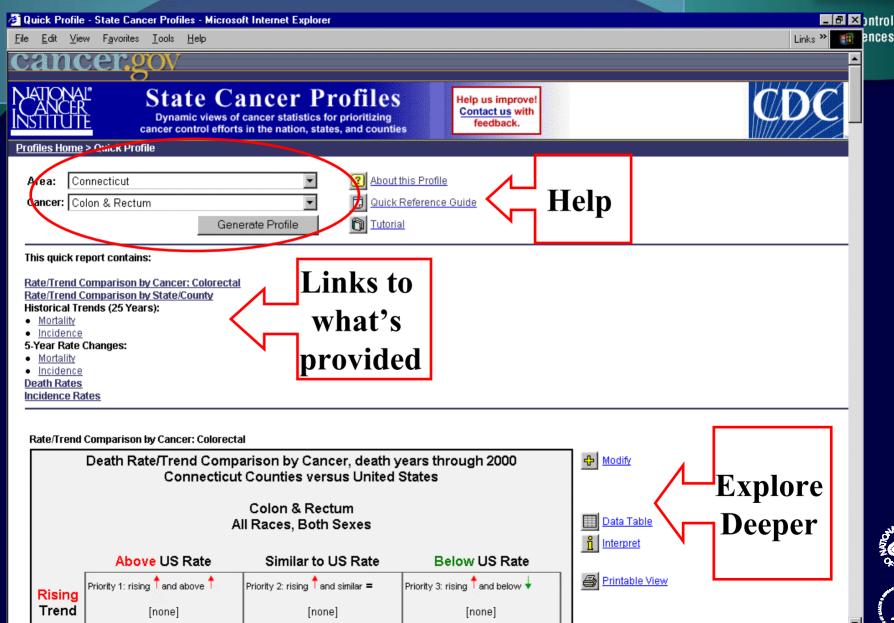
- State Registry Contacts
- US Cancer Statistics: 1999 Incidence
- Resources for Cancer Control: Cancercontrolplanet.cancer.gov
- Cancer Progress Report 2001
- · Annual Report to the Nation
- CDC's National Program of Cancer Registries
- NCI's SEER Surveillance,
   Epidemiology, and End Results
- Cancer Facts and Figures (American Cancer Society)
- Finding Cancer Statistics
- more...





## **Quick Profile**









## **Behind the Story:**



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## How many? How much above?

Death Rate/Trend Comparison by State/County, death years through 2000 Maryland versus United States

All Races, Both Sexes

	Above US Rate	Similar to US Rate	Below US Rate				
Rising	Priority 1: rising ↑ and above ↑	Priority 2: rising † and similar =	Priority 3: rising <sup>↑</sup> and below <del>↓</del>				
Trend	[none]	Melanoma of the Skin (Males)	[none]				
	Priority 4: stable ─▶ and above ↑	Priority 6: stable ─▶ and similar =	Priority 7: stable → and below ↓				
Stable Trend	[none]	Bladder (Females) Lung & Bronchus (Females) Melanoma of the Skin (Females)	Oral cavity & pharynx (Females)				
	Priority 5: falling	Priority 8: falling ▼ and similar =	Priority 9: falling				
Falling Trend	Colon & Rectum (Females) Colon & Rectum (Males) Oral cavity & pharynx (Males)	Bladder (Males) Breast (Females) Lung & Bronchus (Males) Prostate (Males)	Cervix (Females)				
	Created by statecancerprofiles.cancer.gov on 06/05/2003 7:55 am.						







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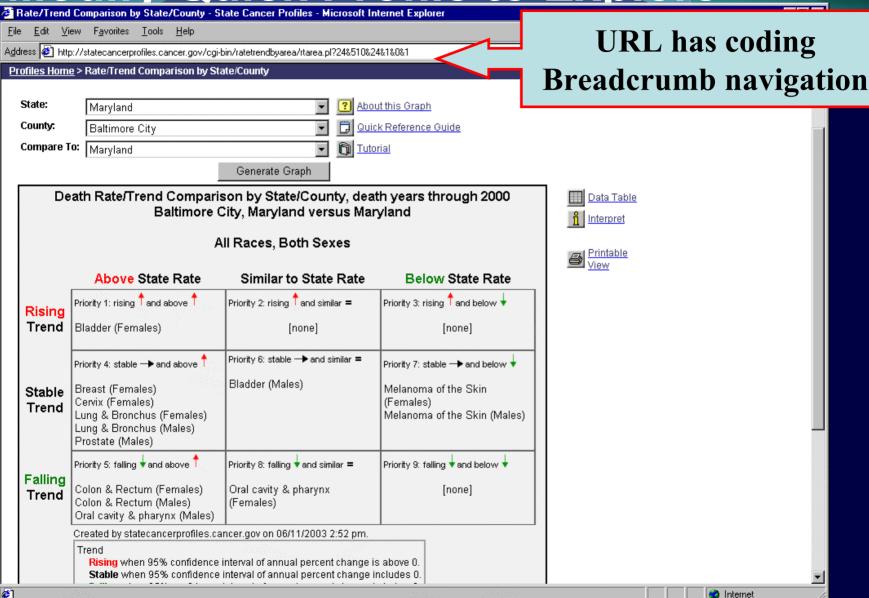
## Data Table:

How many died? How much above?

Cancer Site △	Priority Index <sup>1</sup> 1=highest 9=lowest △	Recent Trend <sup>2</sup>	State Death Rate Compared to US Rate	Deaths per year 2000	Annual Death Rate 2000 deaths per 100,000 (95% Confidence Interval)	Rate Ratio <sup>3</sup> State to US	Annual Percent Change <sup>2</sup> in Death Rates  (95% Confidence Interval)	Recent Trend Period <sup>2</sup>
Lung & Bronchus (Males)	8	falling <b>↓</b>	similar =	1,623	79.2 (75.3, 83.3)	1.0	-1.9 (-2.3, -1.5)	1987 - 2000
Lung & Bronchus (Females)	6	stable →	similar =	1,302	46.1 (43.6, 48.7)	1.1	0.4 (-0.3, 1.1)	1990 - 2000
Breast (Females)	8	falling 븆	similar =	795	27.7 (25.8, 29.7)	1.0	-4.0 (-6.0, -1.9)	1995 - 2000
Colon & Rectum (Females)	5	falling <b>↓</b>	above 🕇	587	20.3 (18.7, 22.1)	1.2	-1.8 (-2.0, -1.6)	1976 - 2000
Colon & Rectum (Males)	5	falling <b>↓</b>	above 🕇	577	29.6 (27.1, 32.2)	1.2	-1.9 (-2.3, -1.5)	1981 - 2000
Prostate (Males)	8	falling 🗸	similar =	546	32.2 (29.5, 35.1)	1.1	-4.2 (-5.0, -3.4)	1991 - 2000
Bladder (Males)	8	falling <b>↓</b>	similar =	122	6.7 (5.5, 8.0)	0.9	-1.5 (-2.0, -0.9)	1976 - 2000

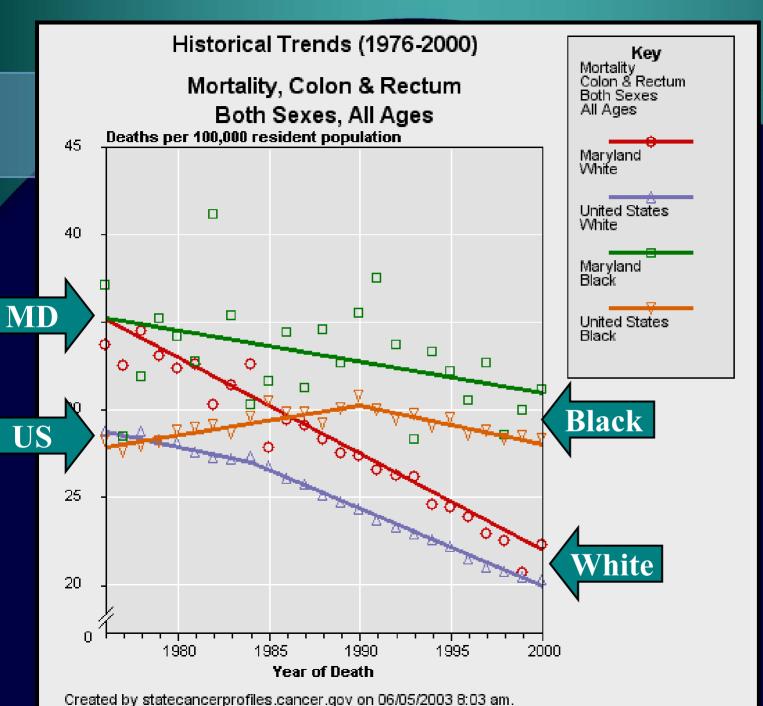
## Modify Quick Profile to Explore













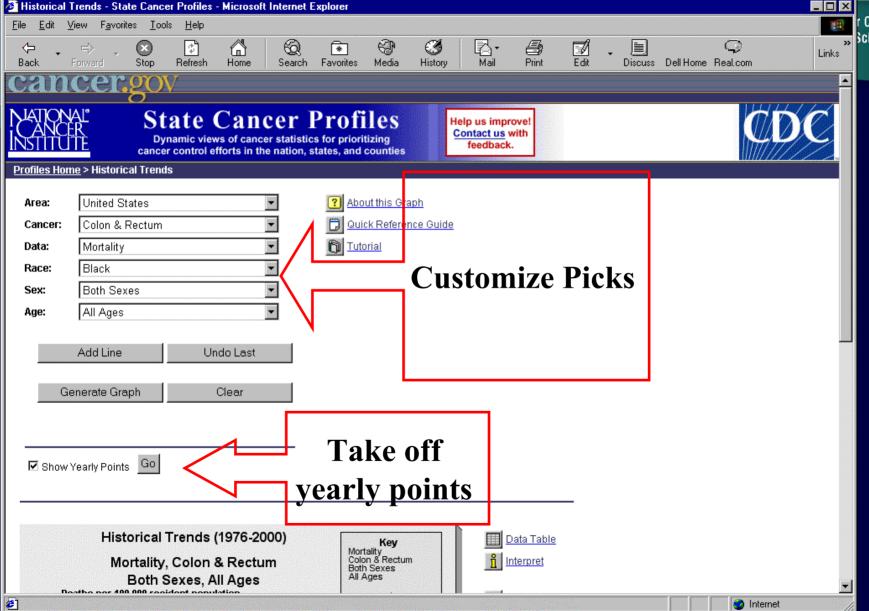
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## **Modify Historical Trends**

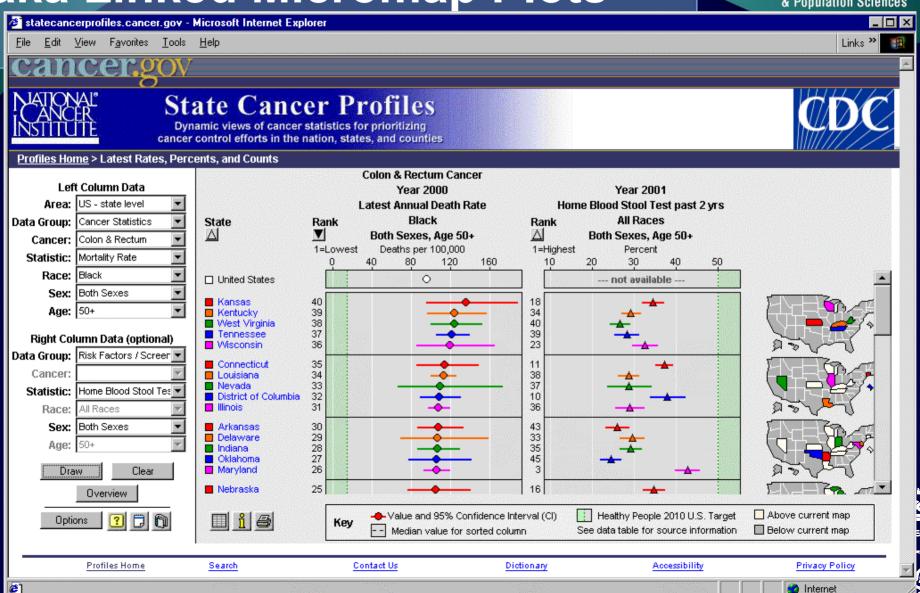




## Latest Rates Percents Counts aka Linked Micromap Plots



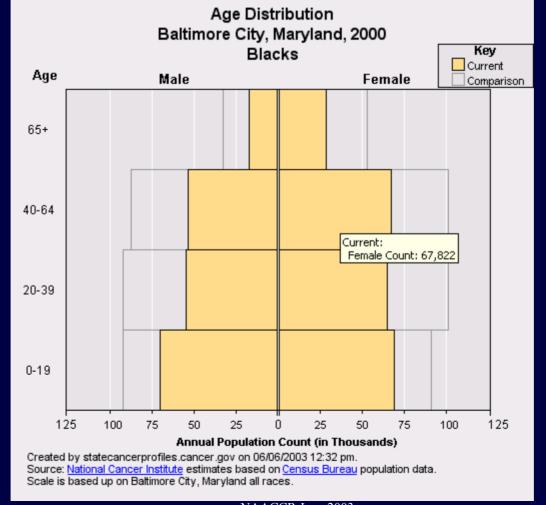
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## Sample Story: What is the age distribution of the population?









# Which research tested intervention programs (RTIPS) target my demographics?



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	Programs (RTIPs)		SAMHSA
RTIPs- Moving Science into Program	ns for People	■Home ■Fr	equently Asked Questions Contact Us
			Cancer Control PLANET Home
Tobacco Control Interven	ition Programs		
Scroll down to find a complete listing	of intervention programs, or refine your search	n below.	
Refine Your Search: Result	s will match any <i>one or more</i> of	your selections.	
Age		Setting  ☐ Community ☐ Religious establishments ☐ Rural ☐ Suburban ☐ Urban/Inner City ☐ School-based ☐ Clinical ☐ Workplace ☐ All Settings (No selection = A	ll records) Go-> Reset
Program Title & Description (12 programs listed)	on	Behavioral Focus	Population Focus
Title: Commit to Quit Delivery Channel: Small Group Education Purpose: Designed to test the efficacy of vigorous-intensity physical activity as an aid for smoking cessation for women.		Behavior Modification	Current Smokers
Title: Enhancing Tobacco Control Policies in Northwest Indian Tribes Delivery Channel: Policy /Advocacy Purpose: Designed to change tobacco-use policies at the community level.		Increase Awareness	Current Smokers
Title: Partnership for Health	· · ·	Smoking	Cancer Survivors







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## **Evolutionary Prototyping**

**Design & Evolve** 







### **Usability Testing**









## **Design Challenges**

- Protecting confidentiality of cancer patients.
- Ensuring that users of the system do not misinterpret the information.
- Providing graphics that support complex decisions yet are easy to understand.
- Complying with Section 508 of the Rehabilitation Act for web accessibility.
- Competing standards for Web design







## **Technical Challenges**

- Screen Resolution
- Netscape at NCI
- Cookie Monster
- ▶ UGBoJ Ugly Gray Box of JAVA
- Firewalls
- Inconsistency in what data is available
- Open Source vs "OTS" (off the shelf)







## What's Next?

- Near Term
  - ▶ Data updated (USCS 2000, BRFSS 2002)
  - Complete features (Export, Show Me)
  - NCHS adopting Linked Micromap Plots
- Longer Term
  - >> Share data across the Internet
  - Additional cancer statistics (stage, YPLL)
  - ➤ County-level historical trends (ie Joinpoint)







## Please, Help us improve!!

- Contact Us
  - >> statecancerprofiles.cancer.gov
  - >> cancercontrolplanet.cancer.gov
- ► Email bellsu@mail.nih.gov Sue Bell

Surveillance Research and Applications Branch SRP, DCCPS, NCI



