

Colorectal Cancer Screening Update 2008

Maryland Dept. of Health and Mental Hygiene
Center for Cancer Surveillance and Control
Cigarette Restitution Fund Program

Diane Dwyer, MD

CRC Incidence, Mortality, and Survival in U.S.

Annual age-adjusted cancer incidence rates, US, 1975-2004

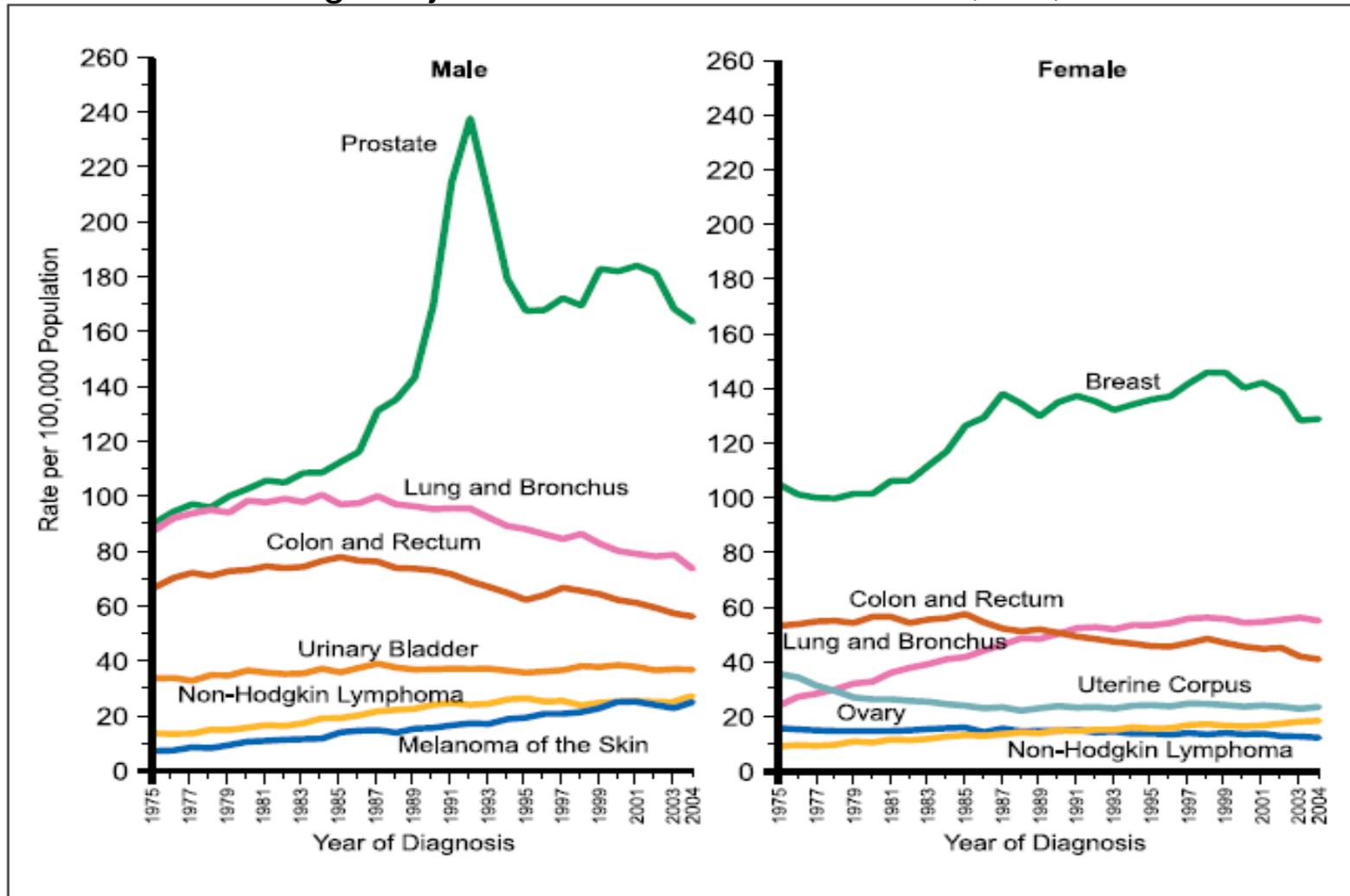


FIGURE 3 Annual Age-adjusted Cancer Incidence Rates* for Selected Cancers by Sex, United States, 1975 to 2004.

*Rates are age-adjusted to the 2000 US standard population and adjusted for delays in reporting.

Source: Surveillance, Epidemiology, and End Results (SEER) Program (www.seer.cancer.gov). Delay-Adjusted Incidence database:

"SEER Incidence Delay-Adjusted Rates, 9 Registries, 1975–2004." National Cancer Institute, DCCPS, Surveillance Research Program, Statistical Research and Applications Branch, released April 2007, based on the November 2006 SEER data submission.

Annual age-adjusted cancer death rates--Males, US, 1930-2004

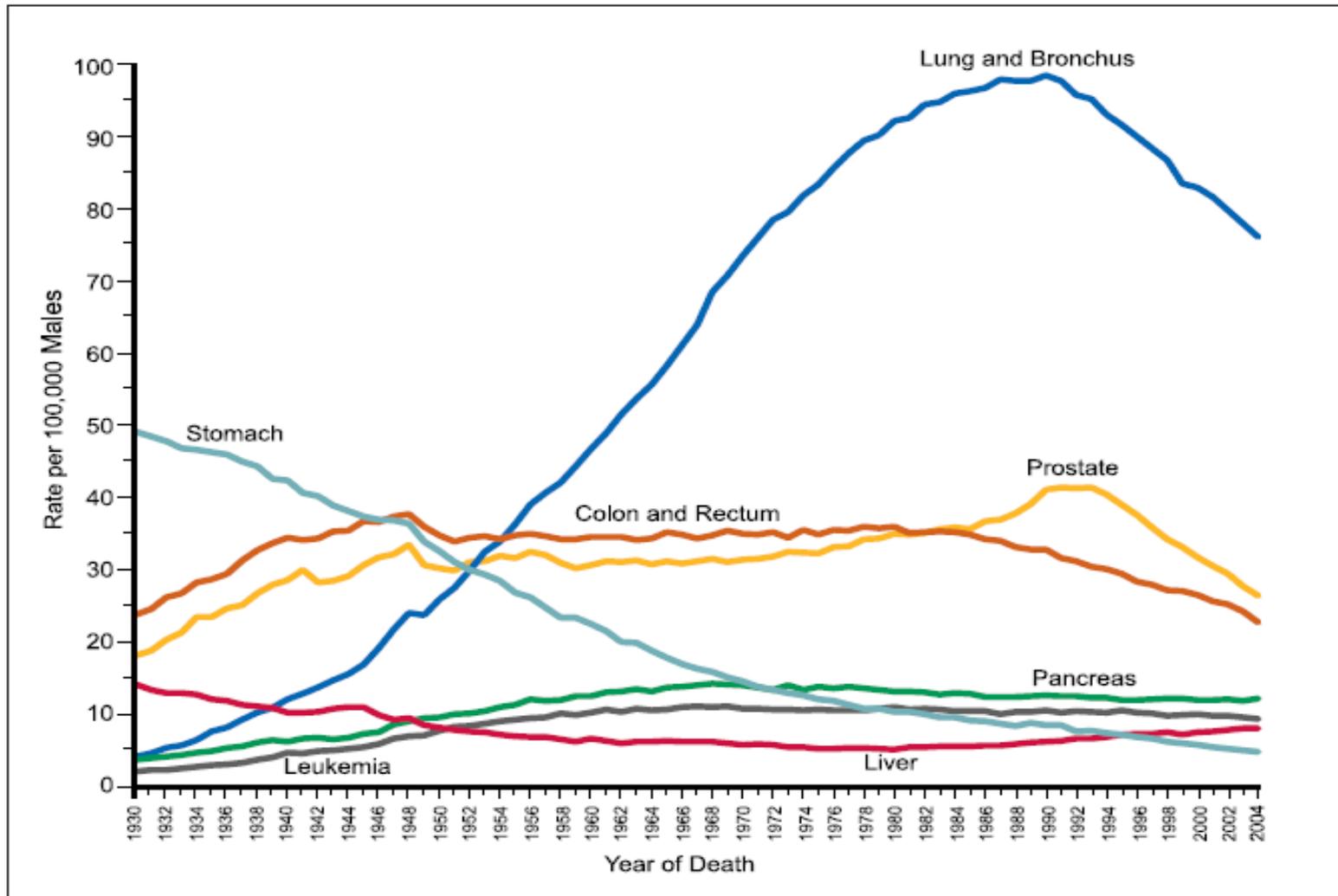


FIGURE 4 Annual Age-adjusted Cancer Death Rates* Among Males for Selected Cancers, United States, 1930 to 2004.
 *Rates are age-adjusted to the 2000 US standard population.
 Note: Due to changes in ICD coding, numerator information has changed over time. Rates for cancers of the lung and bronchus, colon and rectum, and liver are affected by these changes.
 Source: US Mortality Data, 1960 to 2004, US Mortality Volumes, 1930 to 1959, National Center for Health Statistics, Centers for Disease Control and Prevention, 2006.

Annual age-adjusted cancer death rates--Females, US, 1930-2004

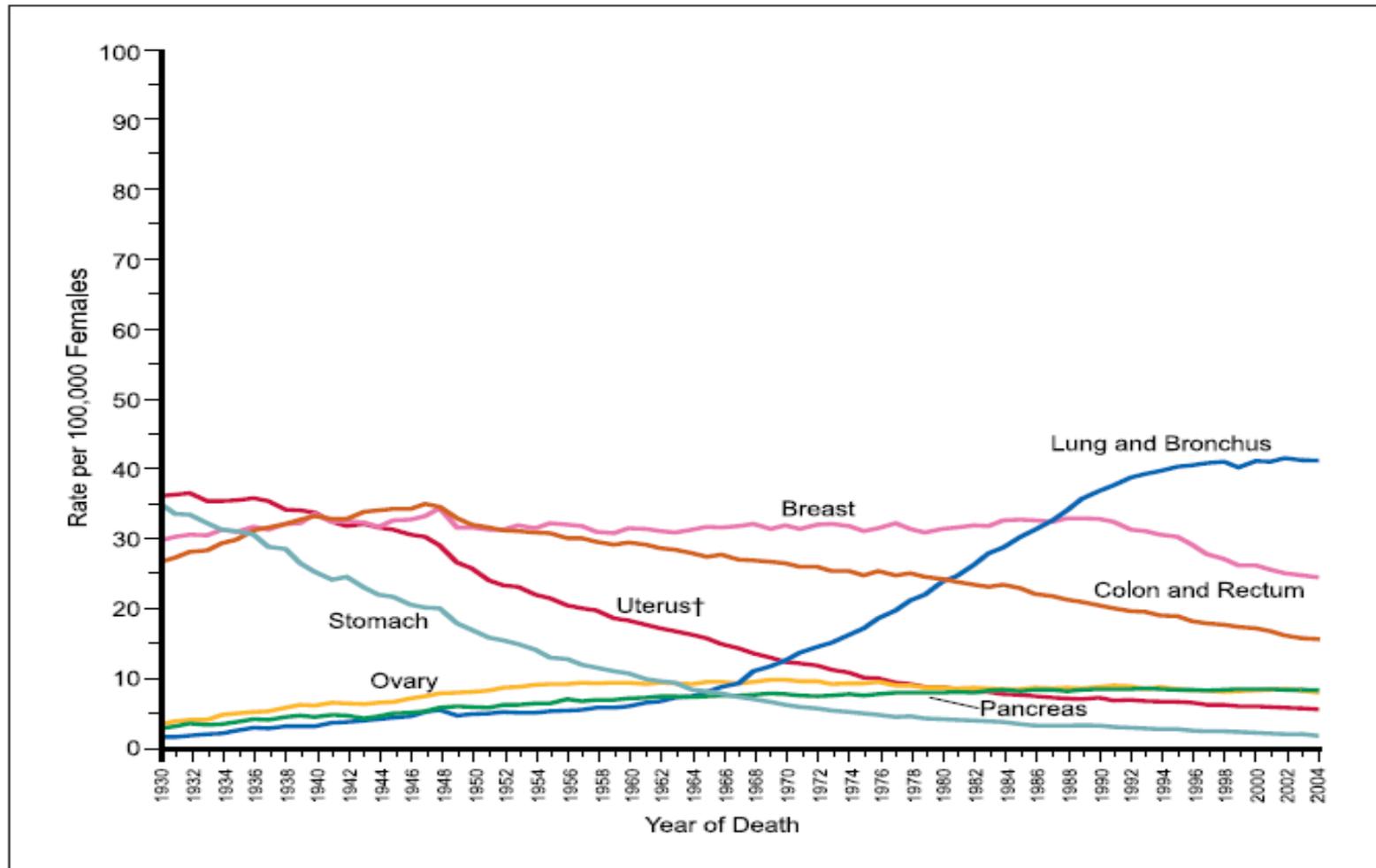


FIGURE 5 Annual Age-adjusted Cancer Death Rates* Among Females for Selected Cancers, United States, 1930 to 2004.

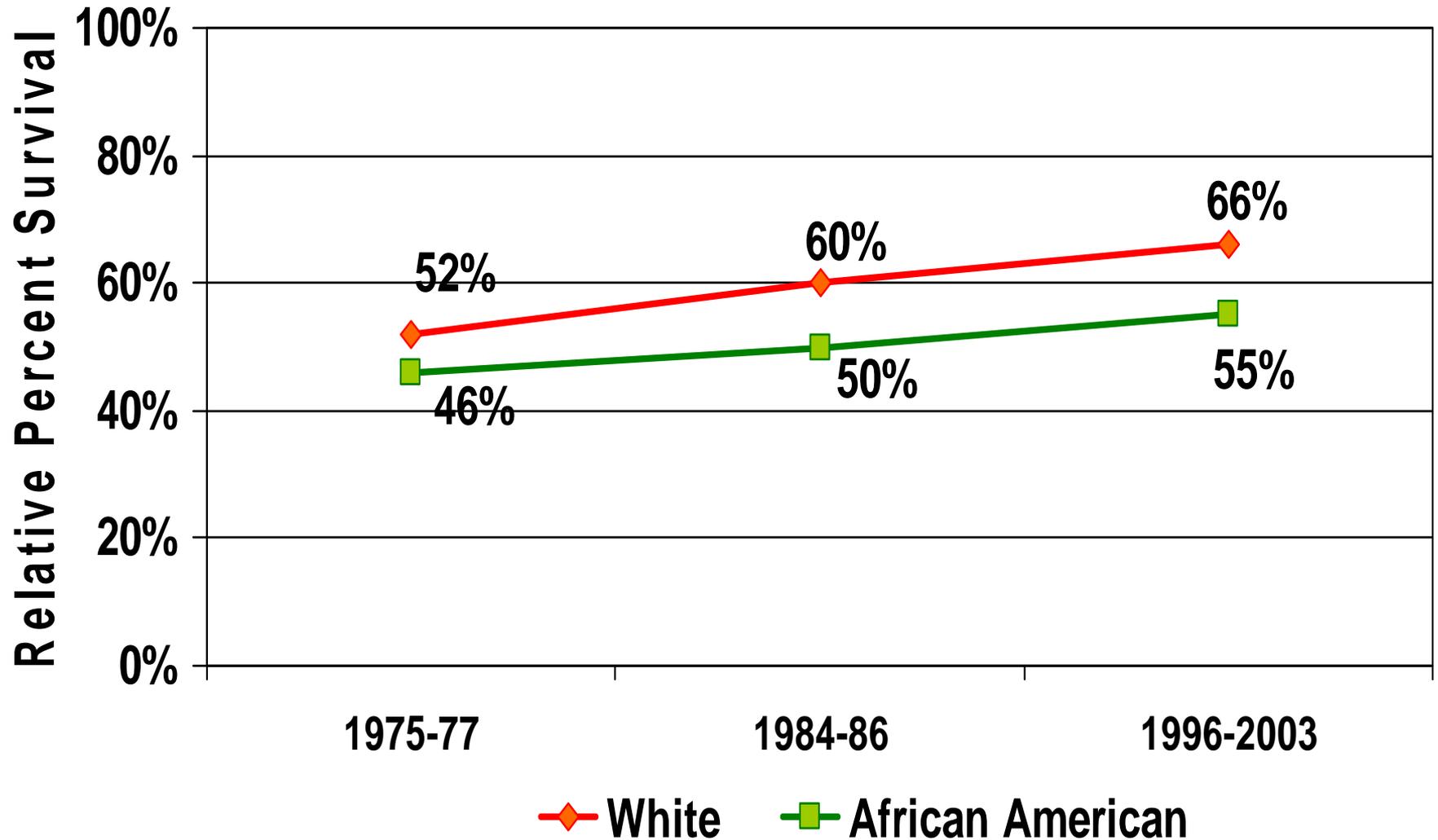
*Rates are age-adjusted to the 2000 US standard population.

†Uterus includes uterine cervix and uterine corpus.

Note: Due to changes in ICD coding, numerator information has changed over time. Rates for cancers of the uterus, ovary, lung and bronchus, and colon and rectum are affected by these changes.

Source: US Mortality Data, 1960 to 2004, US Mortality Volumes 1930 to 1959, National Center for Health Statistics, Centers for Disease Control and Prevention, 2006.

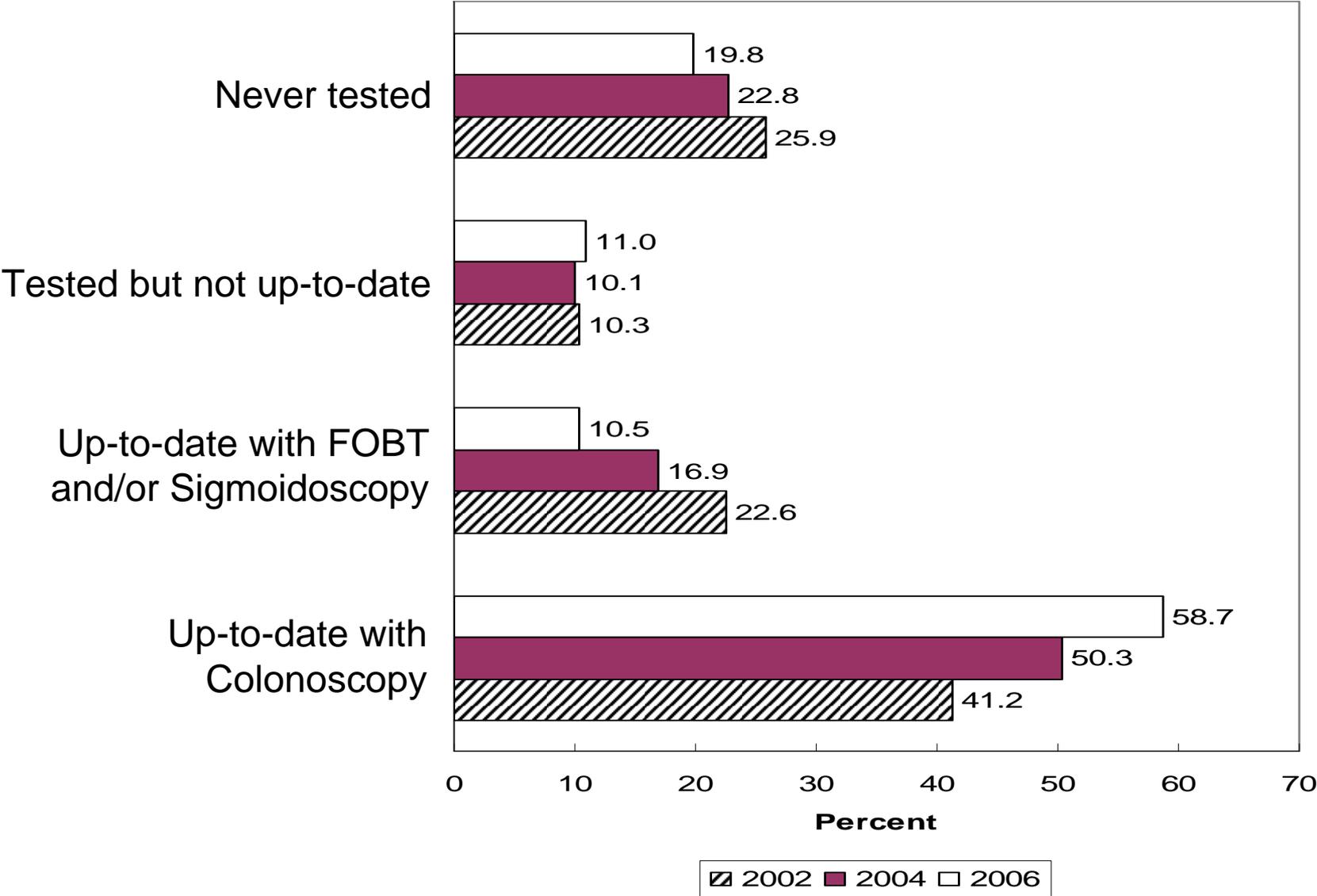
Five Year Relative Survival Rates by Race Colorectal Cancer



Source: 9 SEER Registries, US

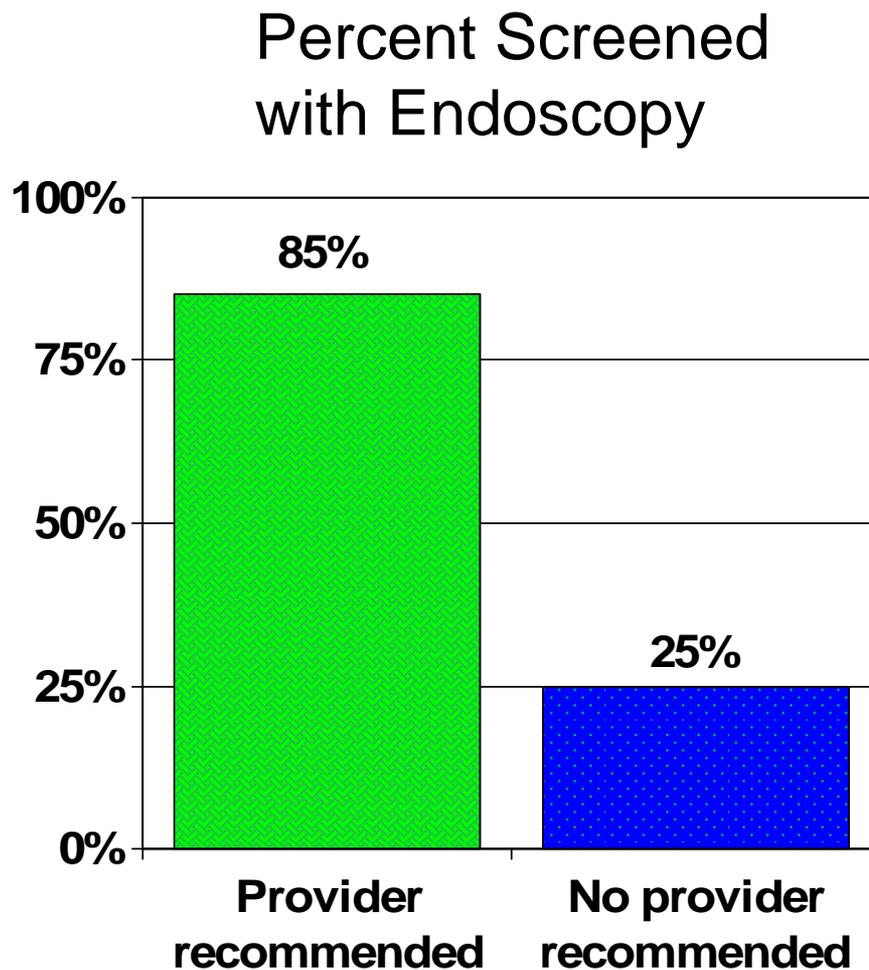
CRC Screening

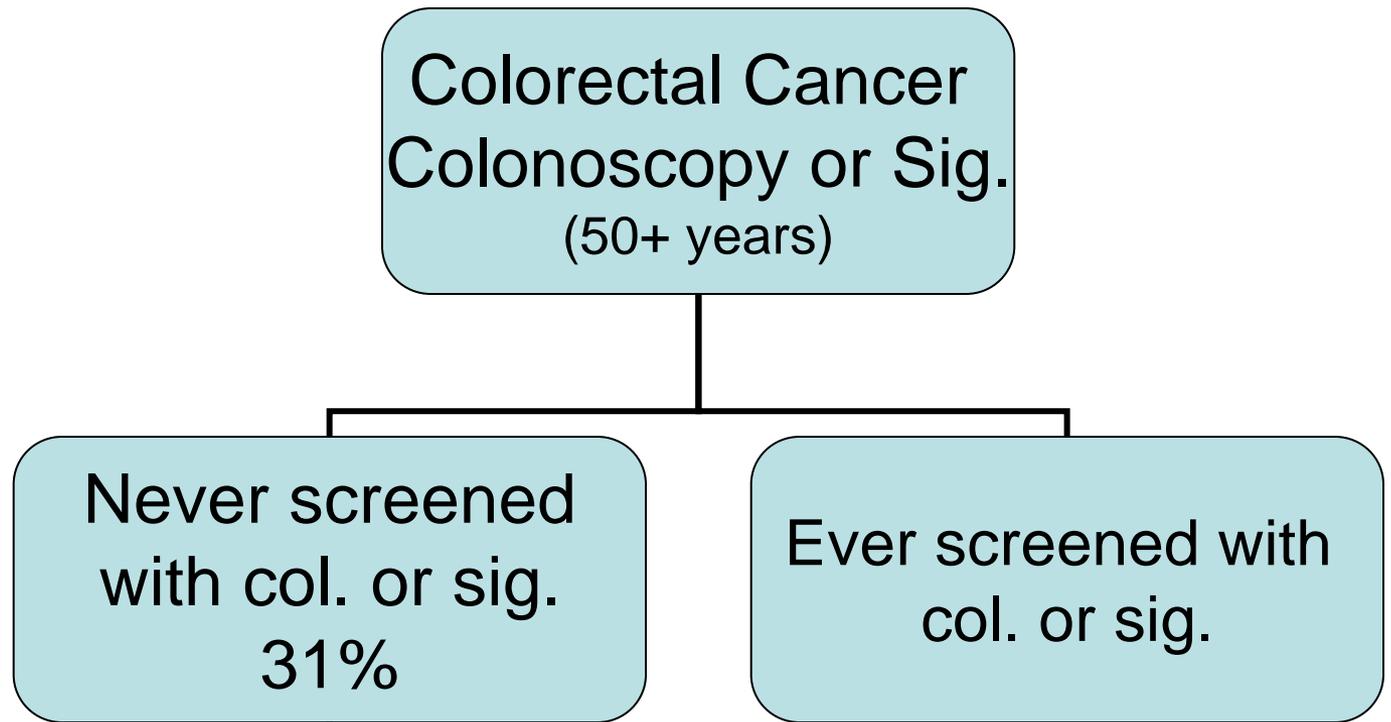
Colorectal Cancer Screening Status of People 50+ Years of Age Maryland Cancer Surveys, 2002-2006



Provider Recommendation is KEY to Screening

- **73% of people 50+ in Maryland reported having a provider recommend endoscopy.....**
of those, 85% got screened
vs. those who did not report a provider recommendation....
only 25% got screened





Source: Maryland Cancer Survey, 2006

Colorectal Cancer
Colonoscopy or Sig.
(50+ years)

Never screened
with col. or sig.
31%

Ever screened with
col. or sig.

86%
have been to doctor
for “routine checkup”
in past 2 years

Only 14%
have NOT had checkup

Source: Maryland Cancer Survey, 2006

Patient:

Family and personal history
Past screening
Symptoms



Primary Doctor:

Referral



**Case
Management and
Communication**

Colonoscopist:

Risk history
Medication changes
Prep instructions
Post colonoscopy instructions
Colonoscopy report
Findings
Recommendations



Pathologist:

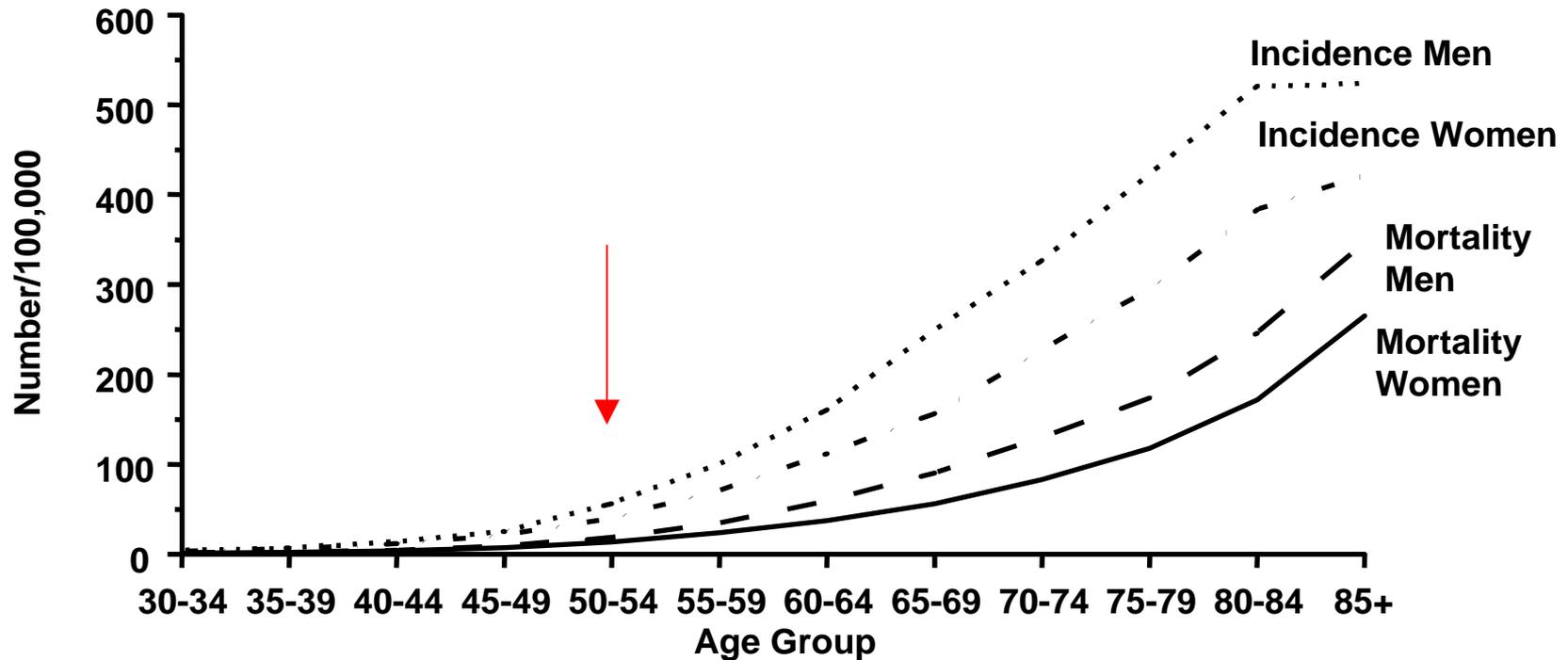
Pathology report



Who needs screening?

Colorectal Cancer Rates by Age and Sex

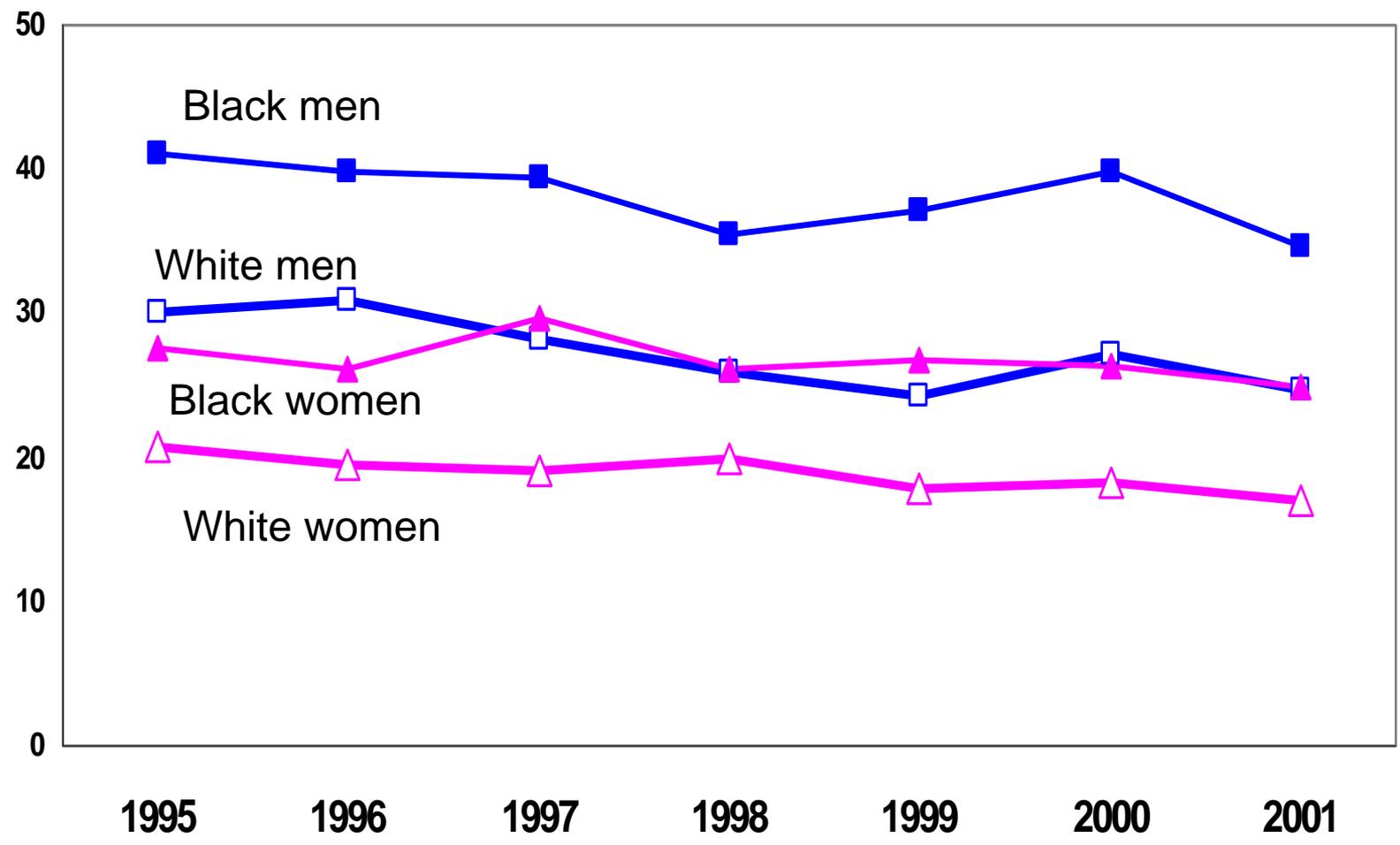
**Cancers of the Colon and Rectum:
Average Annual Age-Specific SEER Incidence
and U.S. Mortality Rates By Gender, 1992-1996**



Source: Cancer Statistics Review, 1973-1996, SEER, NCI.

Colorectal Cancer Mortality Rates by Race and Sex in Maryland, 1995-1999

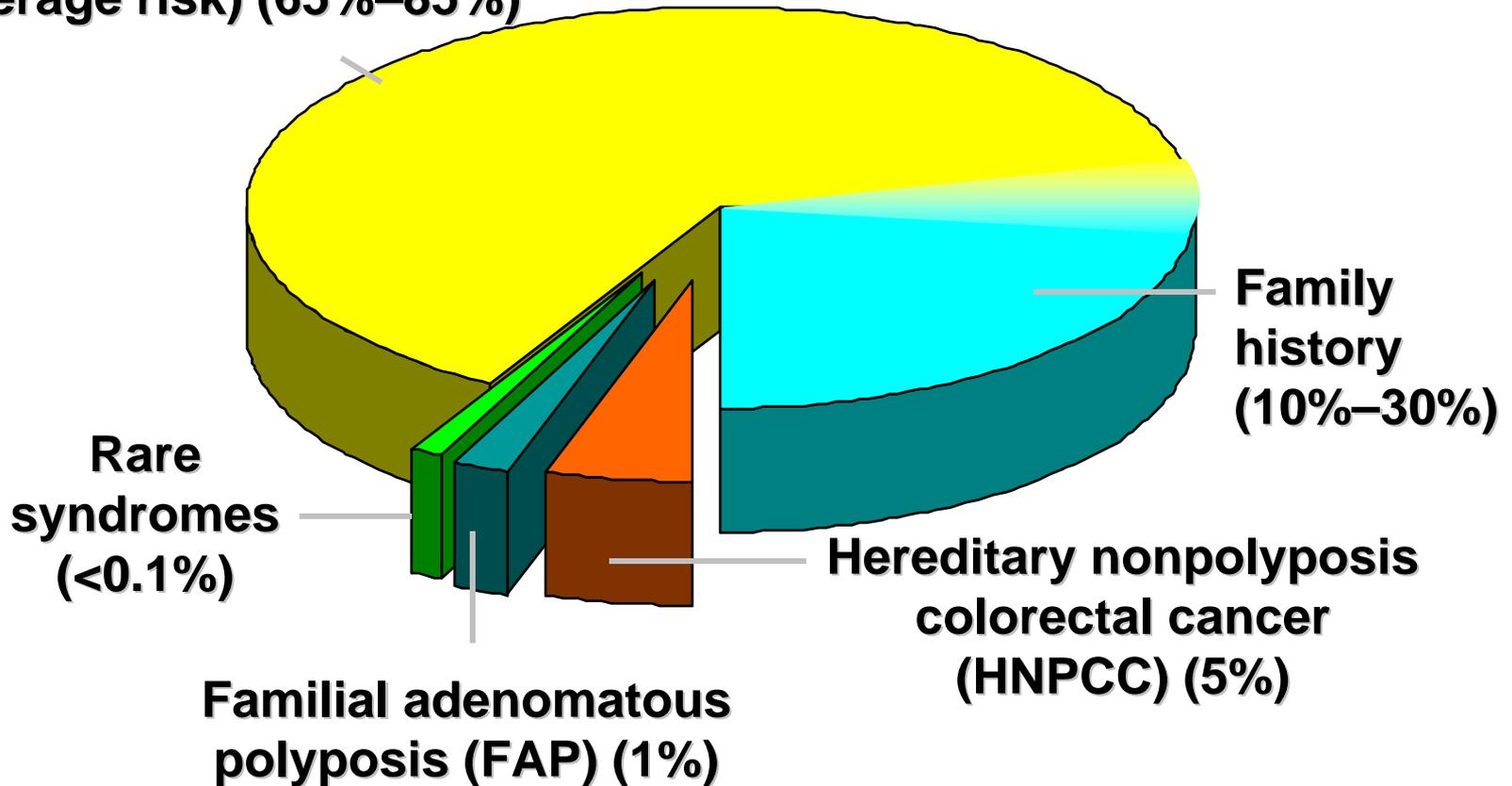
Age-adjusted rate per 100,000 population



Source: Maryland DHMH Vital Statistics

Colorectal Cancer Cases by Risk History

**Sporadic (84,600-110,670 cases/yr.)
(average risk) (65%–85%)**



Risk of CRC

Group	Approx. lifetime risk of CRC
General Population	5-6%
One first degree relative (FDR) with CRC	2--3-fold increased over general population
Two FDRs with CRC	3--4-fold increased
FDR with CRC diagnosed ≤ 50	3--4-fold increased
One second or third degree relative	About 1.5-fold increased
Two second degree relatives	About 2--3-fold increased
One FDR with adenoma	About 2-fold increased
Inflammatory Bowel Disease (ulcerative colitis and Crohn colitis)	[7-10% have CRC after having ulcerative colitis for 20 years; then ~1%/year]
Familial Adenomatous Polyposis	~100%
Hereditary Non-polyposis Colorectal Cancer	~80+%

Burt. Gastroenterology 2000;119:837-53

Winawer et al. Gastroenterology 203;124:544-560

Risk Category	Age to Begin Screening
Average risk	50 years
Increased risk	
Family history (first degree relative with CRC or adenoma)	40 years old or 10 years before the youngest case in the family
Genetic syndrome: FAP HNPCC	Puberty 21 years old
Inflammatory bowel disease	8 years after start of pancolitis; 12-15 years after start of left sided colitis

Average Risk

- Colonoscopy, every 10 years
or
- FOBT annually, plus
Flex sig., every 5 years
- FOBT if refuse endoscopy

Increased Risk

- Colonoscopy
(interval depends on risk and
history)

Maryland Screening Recommendations: Medical Advisory Committee on CRC

New Guidelines

American Cancer Society, May 2008

Colon and rectal cancer

Beginning at age 50, both men and women at *average risk* for developing colorectal cancer should use one of the screening tests below.

The **tests that are designed to find both early cancer and polyps are preferred** if these tests are available to you and you are willing to have one of these more invasive tests.

Talk to your doctor about which test is best for you.

Bernard Levin, David A. Lieberman, Beth McFarland, Robert A. Smith, Durado Brooks, Kimberly S. Andrews, Chiranjeev Dash, Francis M. Giardiello, Seth Glick, Theodore R. Levin, Perry Pickhardt, Douglas K. Rex, Alan Thorson, Sidney J. Winawer, and for the American Cancer Society Colorectal Cancer Advisory Group, the US Multi-Society Task Force, and the American College of Radiology Colon Cancer Committee

Screening and Surveillance for the Early Detection of Colorectal Cancer and Adenomatous Polyps, 2008: A Joint Guideline from the American Cancer Society, the US Multi-Society Task Force on Colorectal Cancer, and the American College of Radiology

CA Cancer J Clin, published online before print March 5, 2008, as doi:10.3322/CA.2007.0018

Tests that Find Both Polyps and Cancer

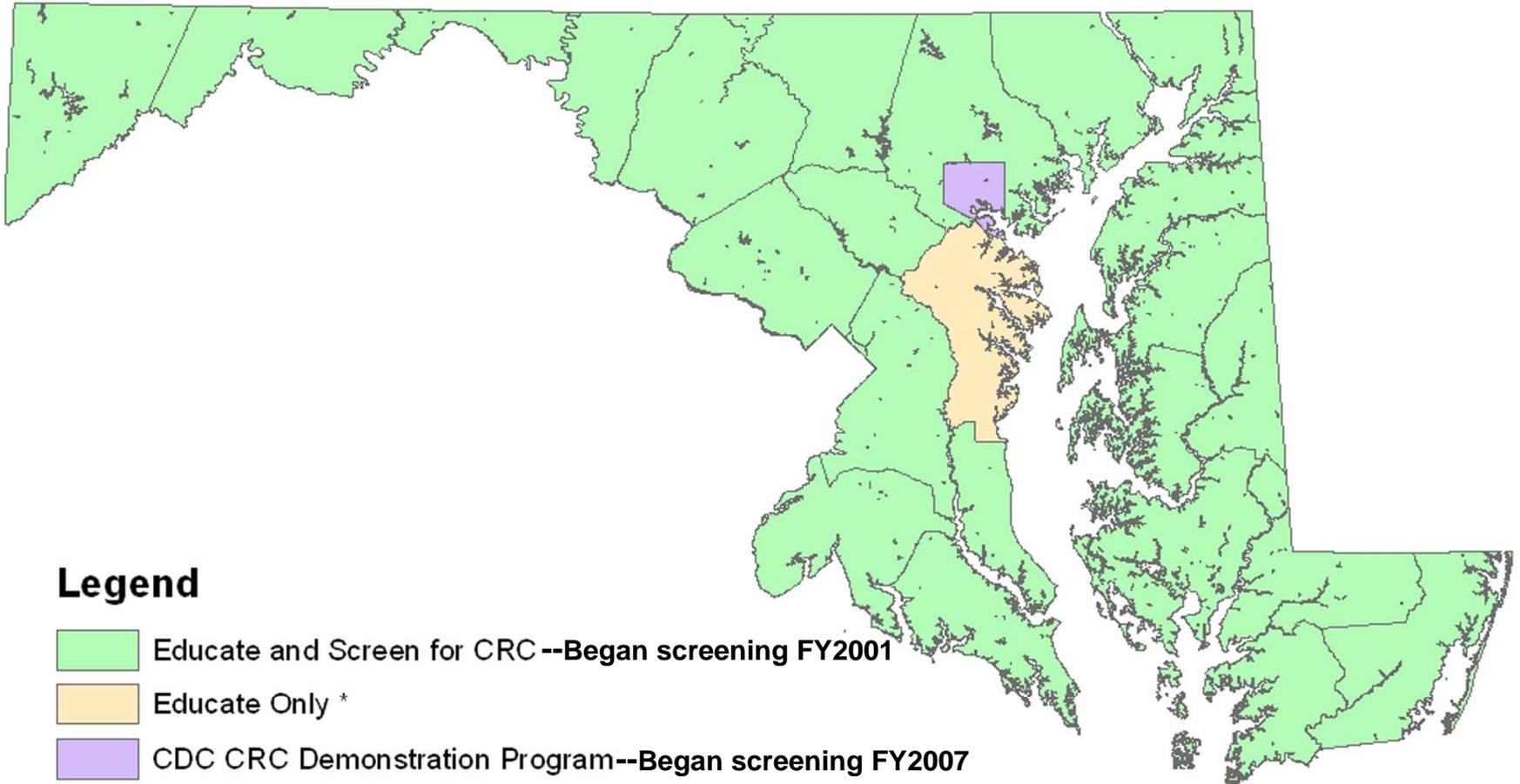
- Flexible sigmoidoscopy every 5 years
- Colonoscopy every 10 years
- Double contrast barium enema every 5 years
- CT colonography (virtual colonoscopy) every 5 years

Tests that Primarily Find Cancer

- Guaiac-based fecal occult blood testing (gFOBT) every year
- Fecal immunochemical test (FIT) every year
- Stool DNA test (unclear how often this is needed)

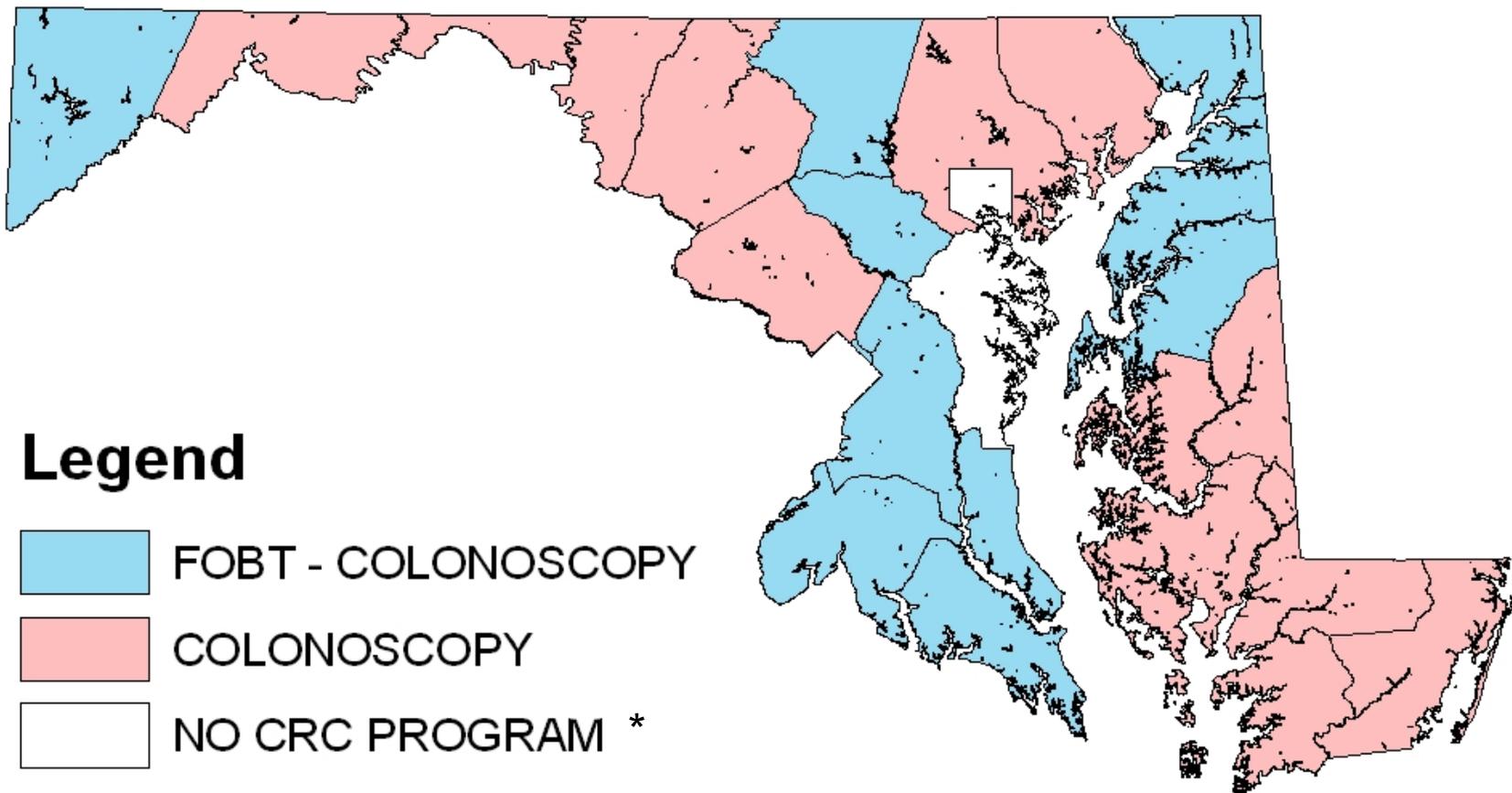
CRC Screening Program in Maryland

Colorectal Cancer Programs in Maryland, FY 2008



* Screened for CRC in FY 2001-2003

Colorectal Cancer Screening for Average Risk Clients by Type of Initial Screening Test - FY 2004



*Anne Arundel County does CRC education without screening as of 2004; Baltimore City began screening with colonoscopy in FY 2007 under funding from the CDC

Summary of Cigarette Restitution Fund Colorectal Cancer Screening

As of December 31, 2007:

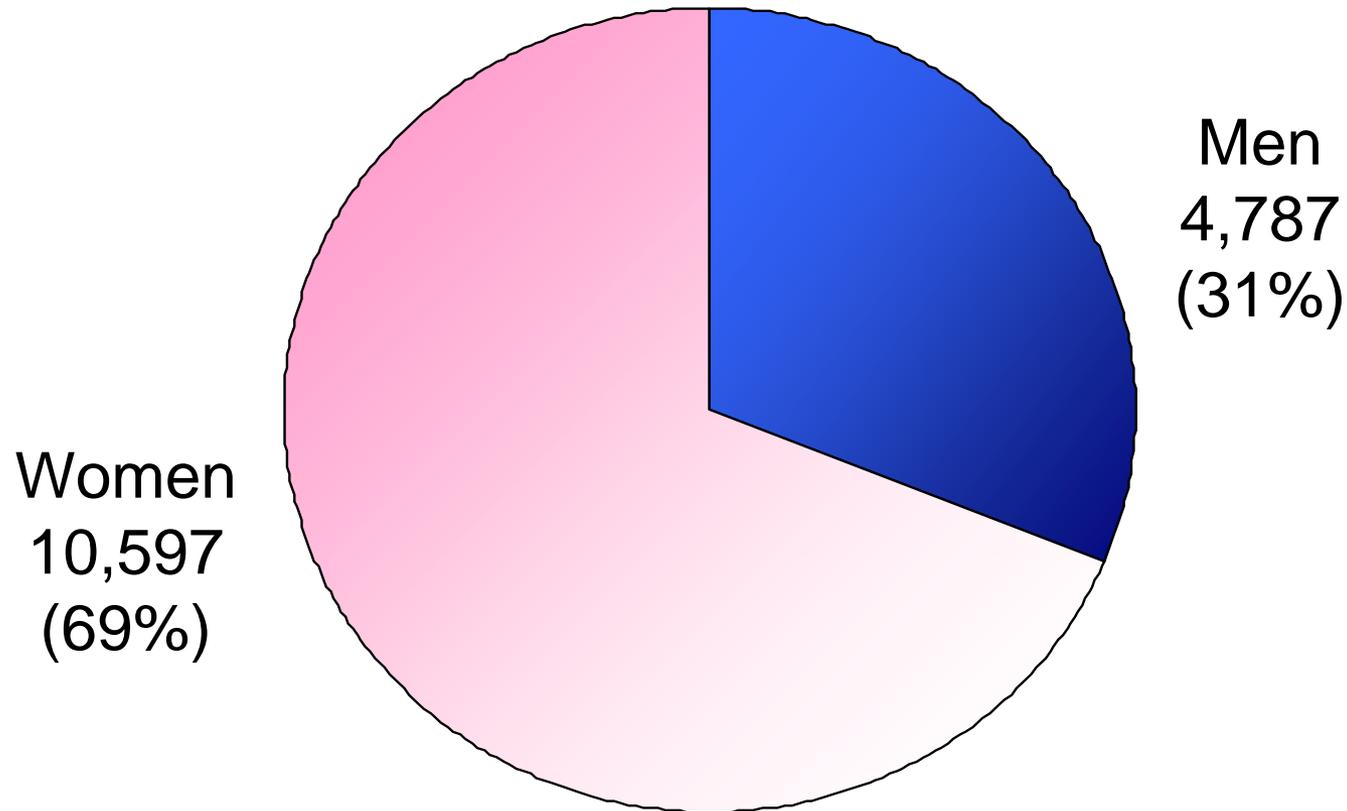
15,416 People with one or more screening
procedures

8,300 FOBTs (all income levels)

142 Sigmoidoscopies

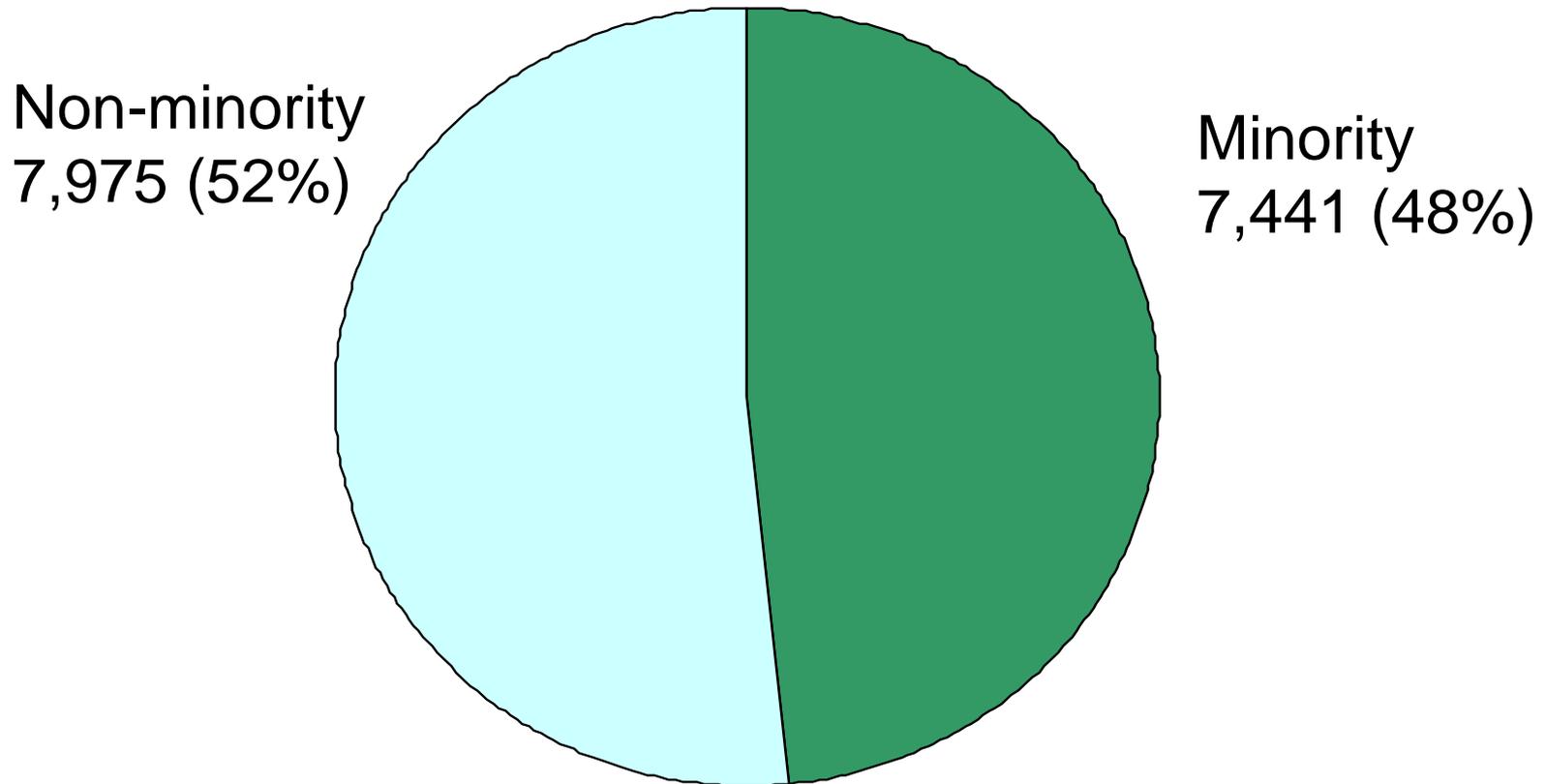
11,763 Colonoscopies

Gender of 15,416 Screened* for CRC Maryland 2000-December 2007



*Of clients screened with one or more of the following:
FBOT, Flex sig, colonoscopy, DCBE

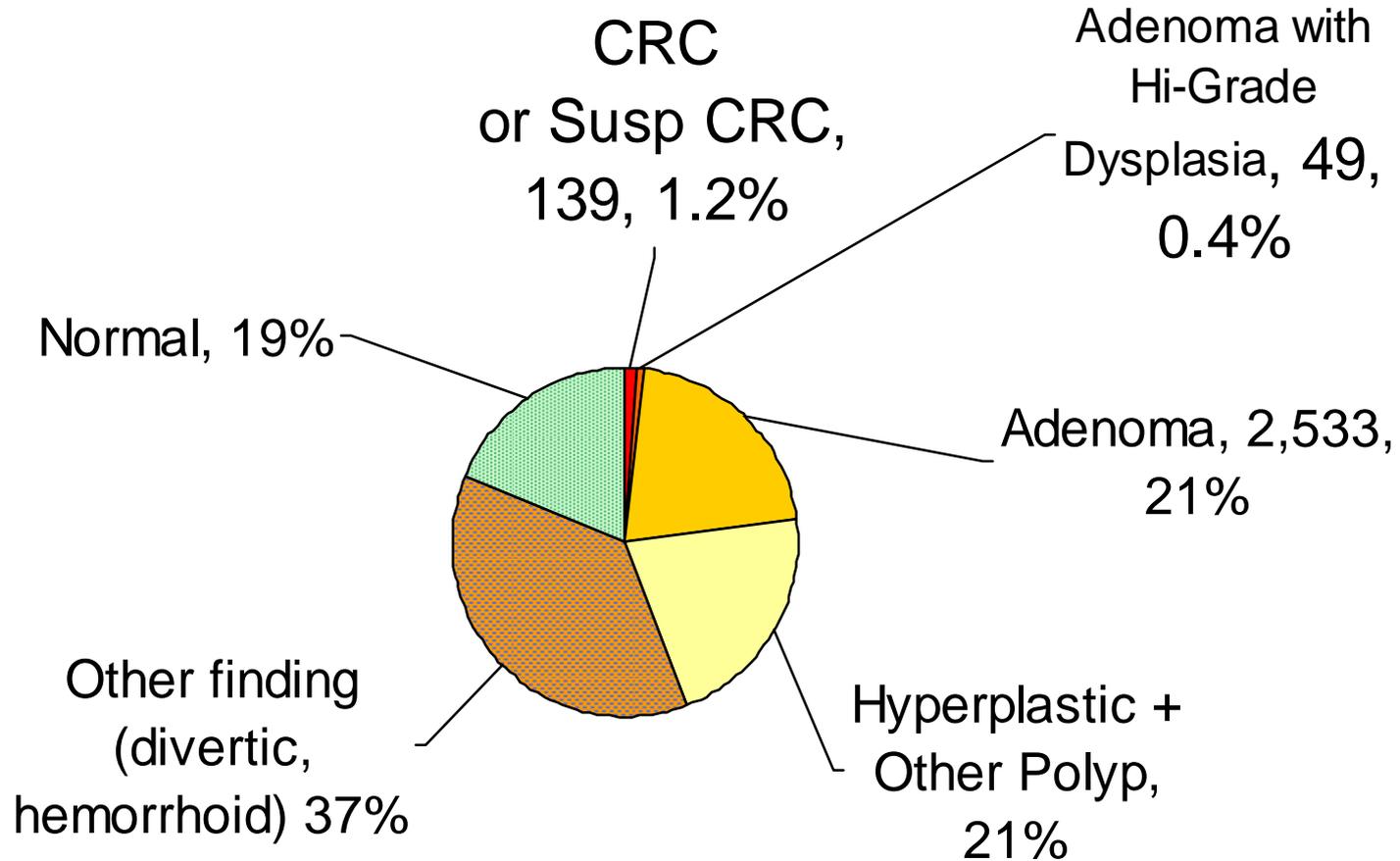
Minority Status of 19,482 Screened* for CRC Maryland 2000-December 2007



*Of clients screened with one or more of the following:
FBOT, Flex sig, colonoscopy, DCBE

Results of 11,763 Colonoscopies

Maryland Cigarette Restitution Fund Program
2000-December, 2007





“Recall Interval”

Recommended screening
after initial screening--
rescreening or surveillance
colonoscopy

After first colonoscopy, **then what?**

- Interval between colonoscopies will depend on:
 - **findings,**
 - **risk history,** and
 - **symptoms**

Interval between colonoscopies

IF:

Findings on colonoscopy were negative:

- No CRC;
- No adenomas; and
- No or only a few hyperplastic polyps

Average risk

No CRC symptoms

- **Interval will usually be 10 years**
- **See guidelines for recommended interval**

Interval between colonoscopies— based on findings

- Interval will usually be LESS THAN 10 years if these are these findings:
 - Inadequate colonoscopy
 - didn't reached cecum
 - inadequate bowel preparation
 - Cancer
 - Adenomatous polyp(s)—need to know:
 - Number
 - Size
 - Histology
 - Completeness of removal
 - **Many** hyperplastic polyps indicating Hyperplastic Polyposis Syndrome
- **See guidelines for recommended interval**

Interval between colonoscopies— based on **risk history**

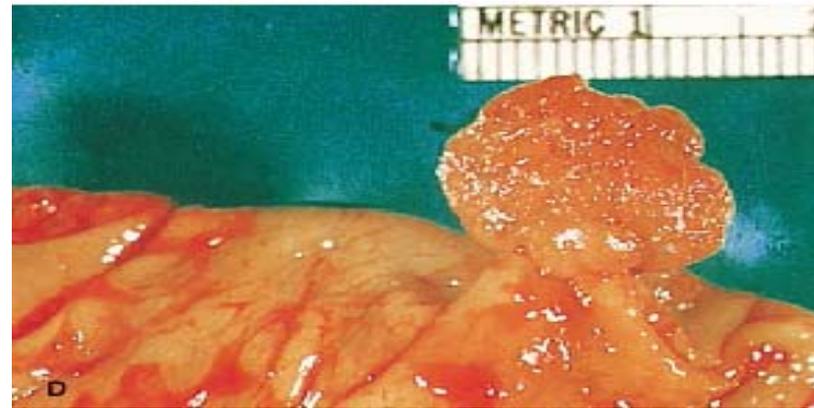
If first colonoscopy was negative BUT person is at **increased risk because of family history**:

- **Interval may be LESS THAN 10 years**
- **See guidelines for recommended interval**

Example

- 53 year old patient had a colonoscopy:

“several adenomas were found”



What is the recommended recall interval?

What else do you need to know to determine the interval?

Who will tell the patient?

Will anyone remind the patient when the next colonoscopy is needed?

Answer: You need to know more about the Risk and Colonoscopy Results before you can set the right recall interval:

- Was the bowel preparation adequate?
- Was the cecum reached?
- How many adenomas were found?
- How big were the adenomas?
- Were they completely removed?
- What was the pathology?
- What is the family and personal risk history of the patient?

<http://caonline.amcancersoc.org/>



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This Article

PDF version of:
Winawer et al. 56 (3): 143. (2006)

▶ [Abstract](#) **FREE**

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[Guidelines for Colonoscopy Surveillance after Polypectomy](#)

Guidelines for Colonoscopy Surveillance after polypectomy--Winawer et al. CA--A Cancer Journal for Clinicians 56 (3) 143. (2006)

Recall Interval Based on Finding of First Colonoscopy

Finding	Interval
“Inadequate” bowel prep (How inadequate was it?)	Repeat right away or do other screening (e.g., DCBE)
Didn't reach or view cecum	Repeat right away or do other screening
“Two adenomas”	Need to know histology and size
Any villous histology (villous, tubulovillous) or high grade dysplasia	If completely removed, repeat in 3 years
One or more adenomas ≥ 1 cm in size	Repeat in 3 years
Incomplete removal of adenomas	Consider short recall interval (2-6 months)
1-2 tubular adenomas, <1 cm size	Repeat in 5-10 years

Keys to the right recall

1. Colonoscopy Report
2. Pathology Report
3. Recommendation based on guidelines
4. Communication

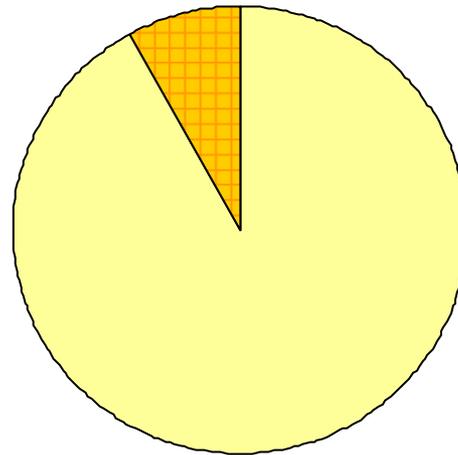
Standards for Colonoscopy Reports--CoRADS*

- Date and Time Procedure
- Patient description
- Risk factors-
- ASA class
- Indications
- Consent signed
- Sedation
- Colonoscope
- Bowel Prep
- Reached cecum
- Colonoscopy withdrawal time
- Findings
- Specimen(s) to path lab
- Impression
- Complications
- Pathology
- Recommendations,
- Follow-up Plan/Recall
- Other

* Standardized colonoscopy reporting and data system (CoRADS): report of the Quality Assurance Task Group of the National Colorectal Cancer Roundtable, Lieberman et al., *Gastrointestinal Endoscopy* 2007; 65: 757-766

Adequacy of First Colonoscopy of 8,767* Colonoscopy Only, Cycle 1's Maryland 2000-December, 2007

Not Adequate
8%



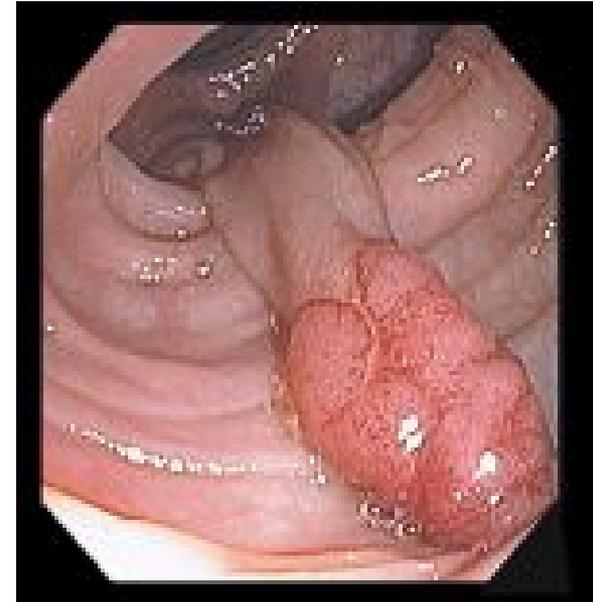
Adequate
92%

*8,767 of the 9,767 first colonoscopies had information on “adequacy” of the col.

Source: Maryland Dept of Health and Mental Hygiene; CRF CRC Screening

Reporting on Colonoscopy Findings:

- Number of masses, polyps, other lesions
 - (try to give actual or estimated number rather than “several” or “multiple”)
- Findings: for EACH mass/polyp/lesion--



- | | |
|--|---|
| ✓ location | ✓ whether there was piecemeal removal |
| ✓ size | ✓ whether specimens retrieved |
| ✓ description | ✓ whether saline lift used |
| ✓ tattoo | ✓ number of specimens sent to pathology |
| ✓ biopsy(ies) taken | |
| ✓ method of each biopsy | |
| ✓ whether lesion completely removed or not | |

How will your patients be reminded about their next colonoscopy?



Patient:

Family and personal history
Past screening
Symptoms



Primary Doctor:
Referral



**Case
Management and
Communication**

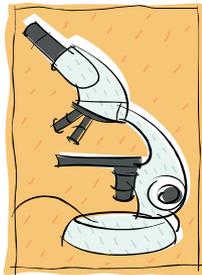
Colonoscopist:

Risk history
Medication changes
Prep instructions
Post colonoscopy instructions
Colonoscopy report
Findings
Recommendations



Pathologist:

Pathology report



Acknowledgements

- Funding from the Maryland Cigarette Restitution Fund
- Staff and partners of Local Public Health Department Programs in MD and their contracted providers

- DHMH Center for Cancer Surveillance and Control (CCSC)
Database and Quality assurance
 - Surveillance and Epidemiology Unit
University of Maryland at Baltimore
Ciber, Inc.
 - CCSC Local PH Component

- DHMH FHA, Information Technology

- Minority Outreach Technical Assistance Partners