

New US CRC Guidelines: Prevention vs. Early Detection

IDCA

Sunday 5/18/08

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Colorectal Cancer: Facts

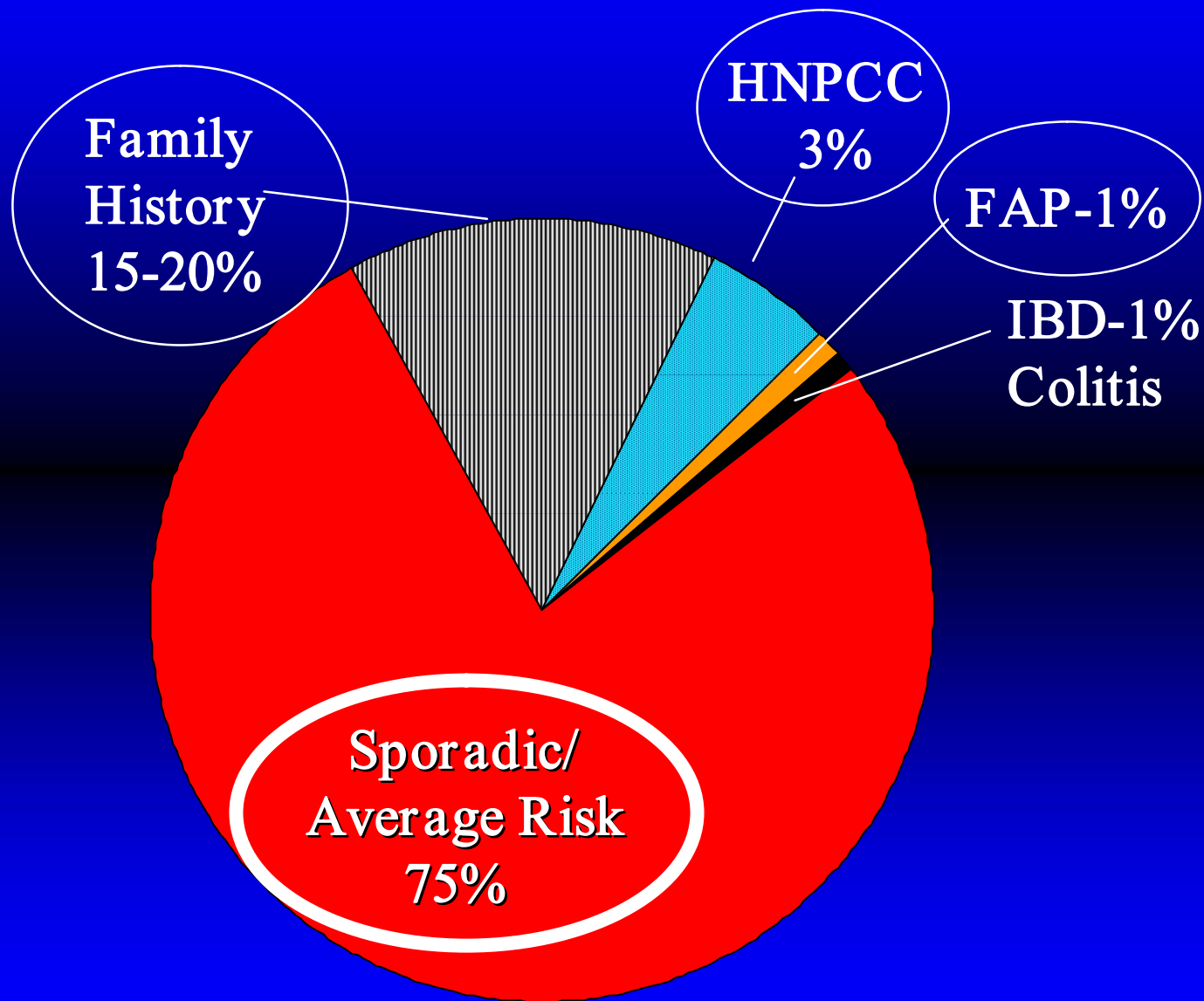
- Lifetime risk: 5-6%
- Lifetime risk of death: 2.5%
- 2nd leading cause of Cancer death in USA

- Evidence for screening:

- Mortality reduced
- Many colon cancers can be prevented by detecting and removing adenomas

<u>USA 2007</u>	<u>World</u>
152,000	1M
Deaths	
54,000	530,000

Risk Factors for CRC

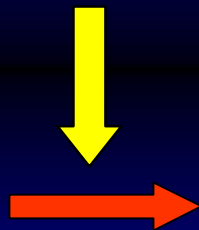


Colorectal Cancer

Genetic
Environmental
Lifestyle

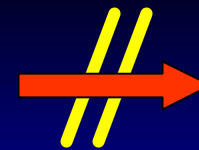


Normal Colon



Advanced
Adenoma

10-20%
Lifetime Risk

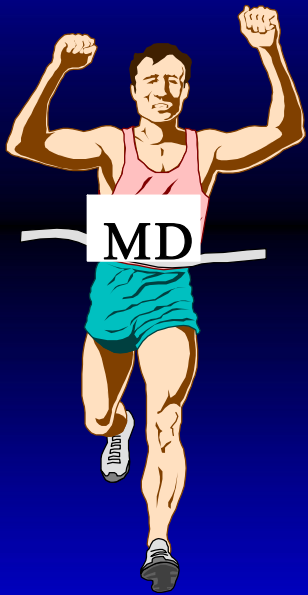


Cancer

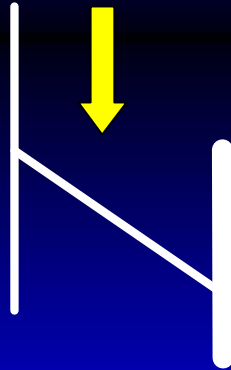
5-6% Lifetime Risk

National Polyp Study:
76-90% reduction in
Cancer incidence
after polypectomy

Raising the bar



Early Colon
Cancer
Detection



Colon Cancer
Prevention

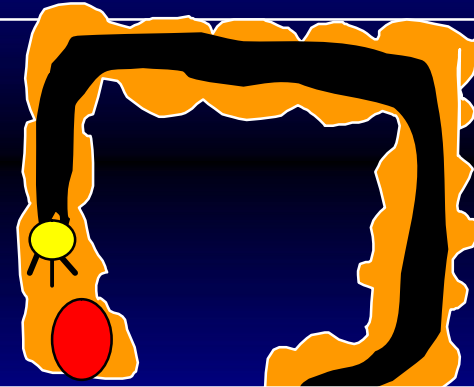


Average-Risk CRC Screening

Tests which primarily detect early cancer

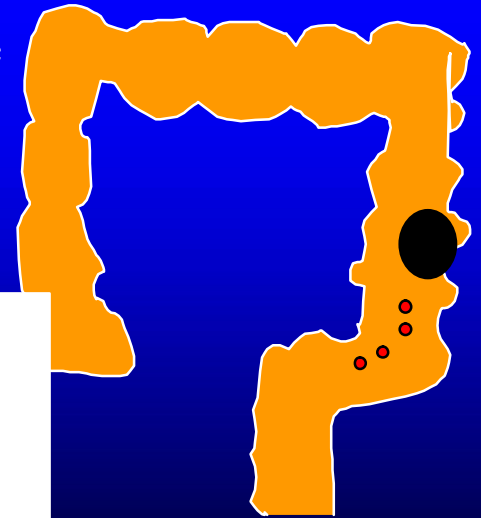
New Guideline:
Tests which detect both early cancer and adenomas are preferred

Tests which detect both cancer and adenomas



- Advantage:
 - Potential for cancer prevention
 - Infrequent: 5-10 yrs
- Limitations:
 - Bowel prep
 - Office/hospital visit

FOBT



	<u>gFOBT</u>
Positivity Rate	2-4%
Sensitivity for	
- Cancer	33-50%
- Advanced Neoplasia	11-24%
One-time digital test	5%



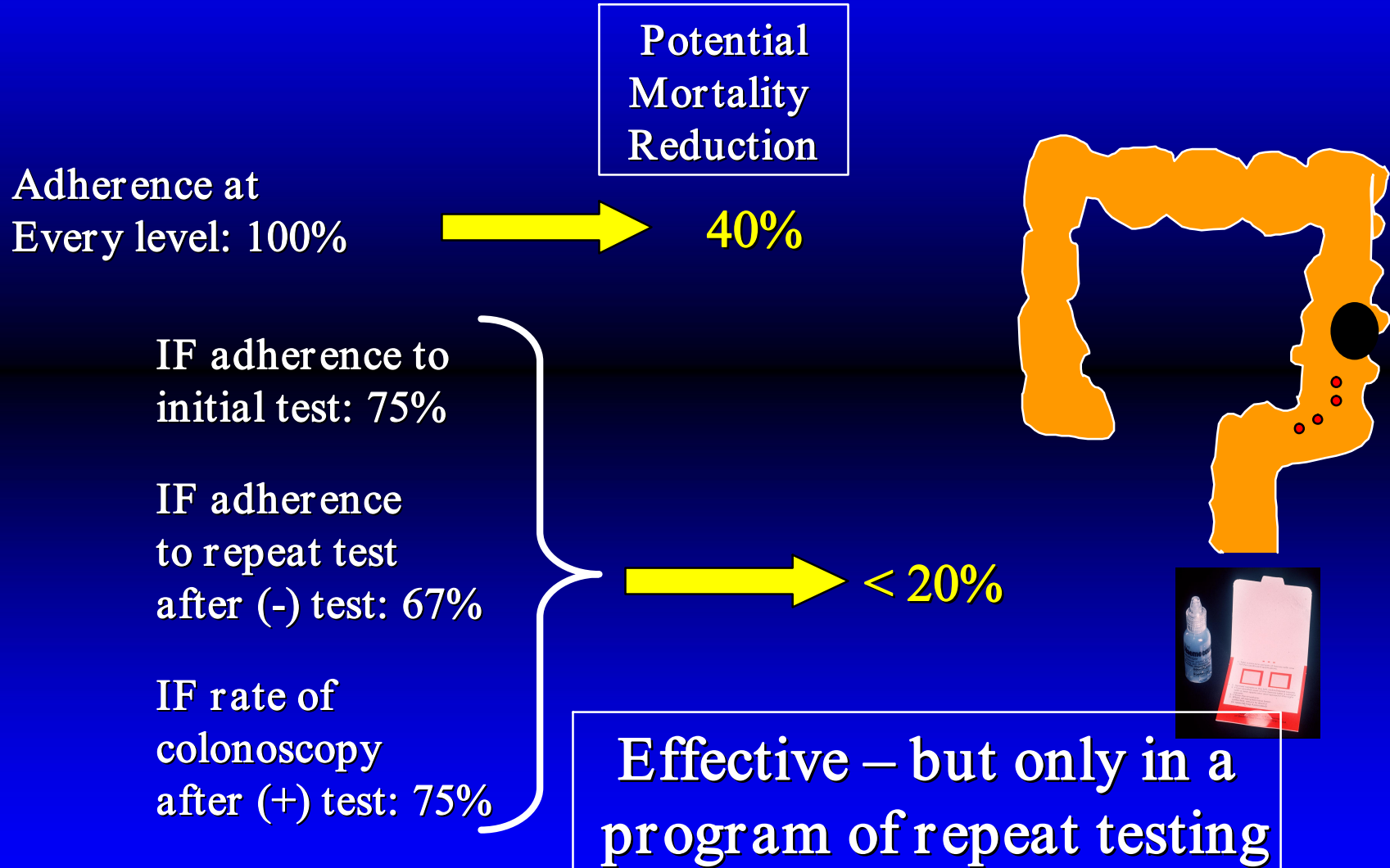
	<u>iFOBT</u>
	3-6%
	60-87%
	20-50%



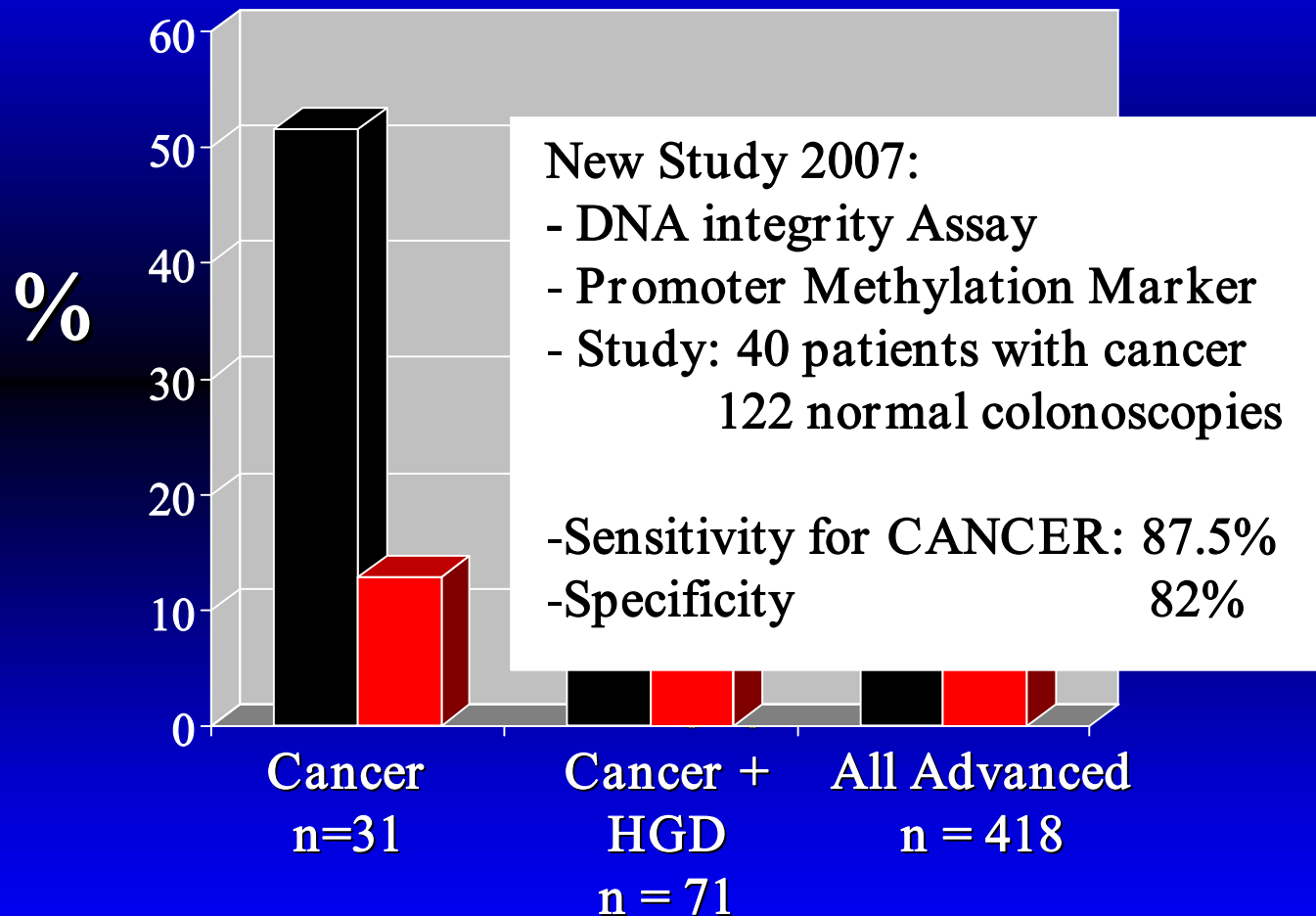
Lieberman et al; NEJM 2001; 345:555-60
Imperiale et al; NEJM 2004; 351:2704-14
Collins, Lieberman et al; Ann Intern Med 2005; 142:8
Imperiale et al; NEJM 2004; 351:2704-14
Young et al; Am J Med 2002; 97: 2499-2507
Morikawa et al; Gastroenterology 2005; 129: 422-8
Levi et al; Ann Intern Med 2007; 146:244-55

New Guideline:
**Any recommended
test must detect >50%
of cancers with one test**

FOBT: Mortality Reduction

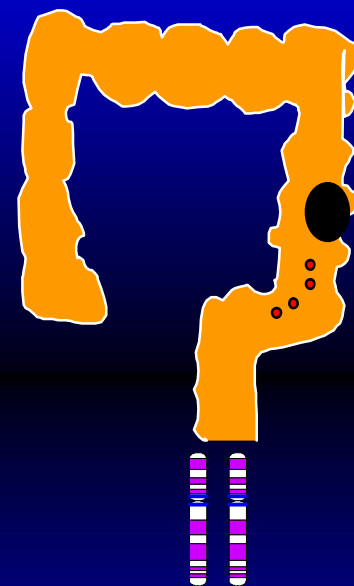


Stool Genetic Tests



Stool Genetic Tests - Issues

- How will new versions of the test perform in clinical practice ?
- How often should the test be repeated to be effective ?
- If a test is positive, and colonoscopy is negative, what then ?
- Cost

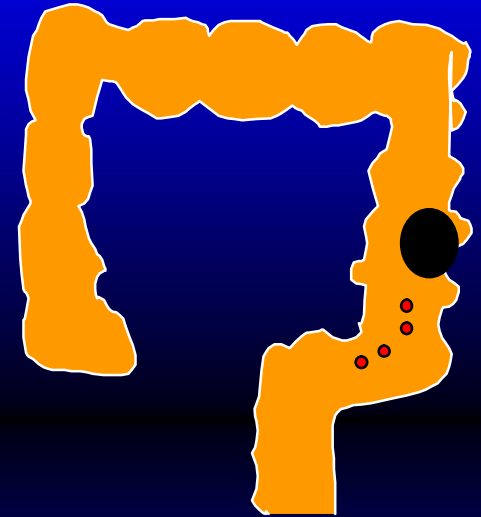


Early Cancer Detection Tests

- Requires programmatic adherence with (+) and (-) tests
- Programmatic performance:

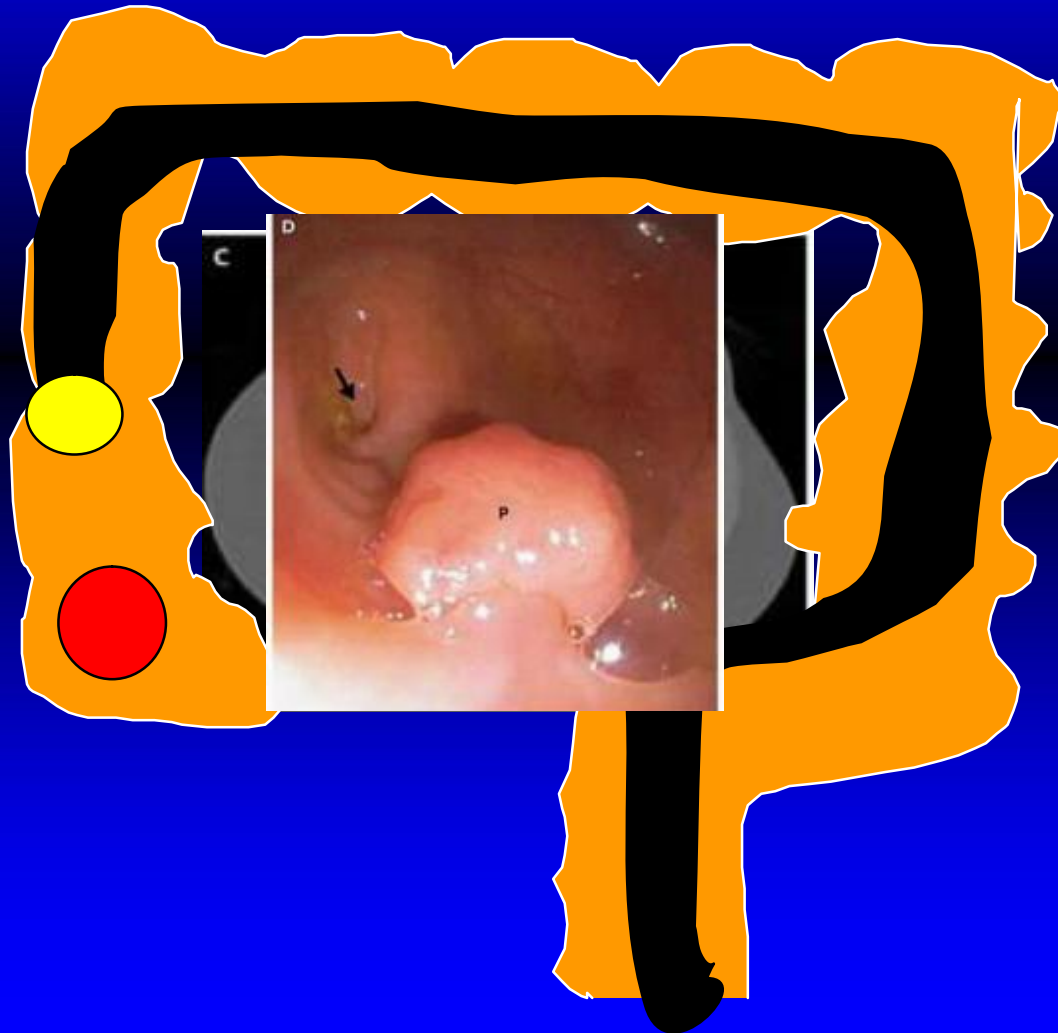
UNKNOWN

- Unlikely to result in much cancer prevention

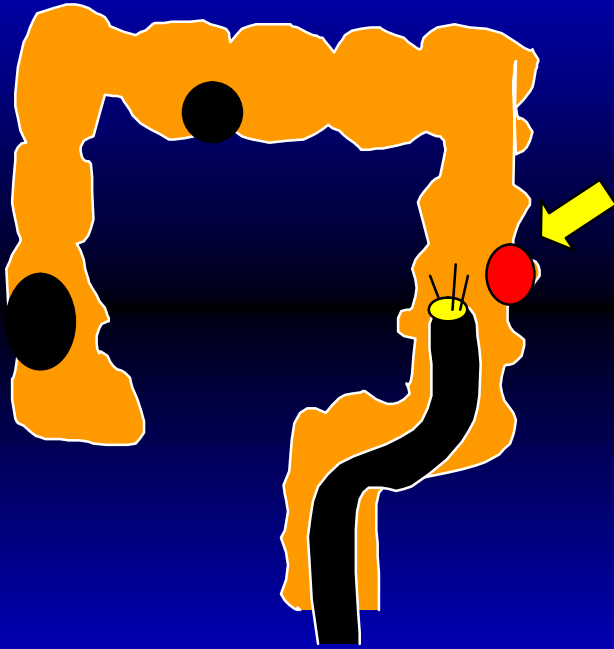


gFOBT
FIT

Structural Exam of Colon



Adenoma and Cancer Detection Tests



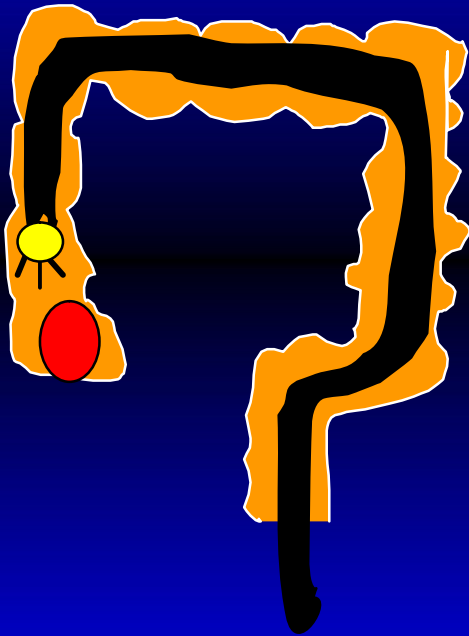
Sigmoidoscopy:

Evidence: Case-Control Studies

Efficacy: Mortality reduction left colon
No benefit right colon

Program performance: under study
PLCO, UK, Italy

Adenoma and Cancer Detection Tests



Colonoscopy

Evidence: Cohort Studies

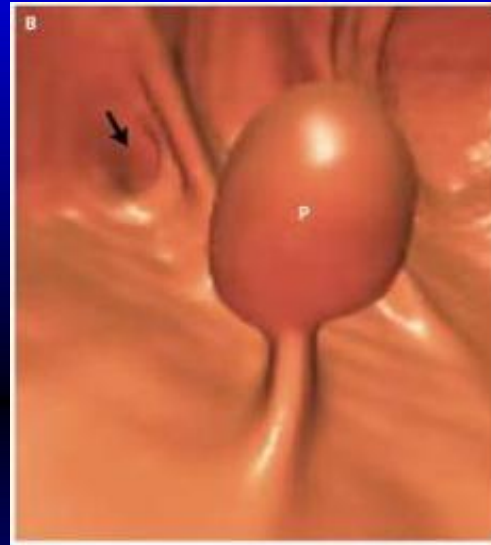
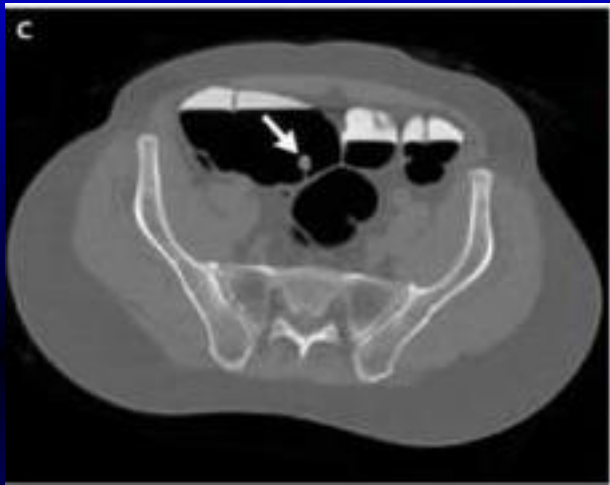
Efficacy: Uncertain, but extrapolated
from FOBT and Sig studies

Quality in practice: unknown

Program performance: unknown

National colonoscopy study
(Winawer)

Adenoma and Cancer Detection Tests

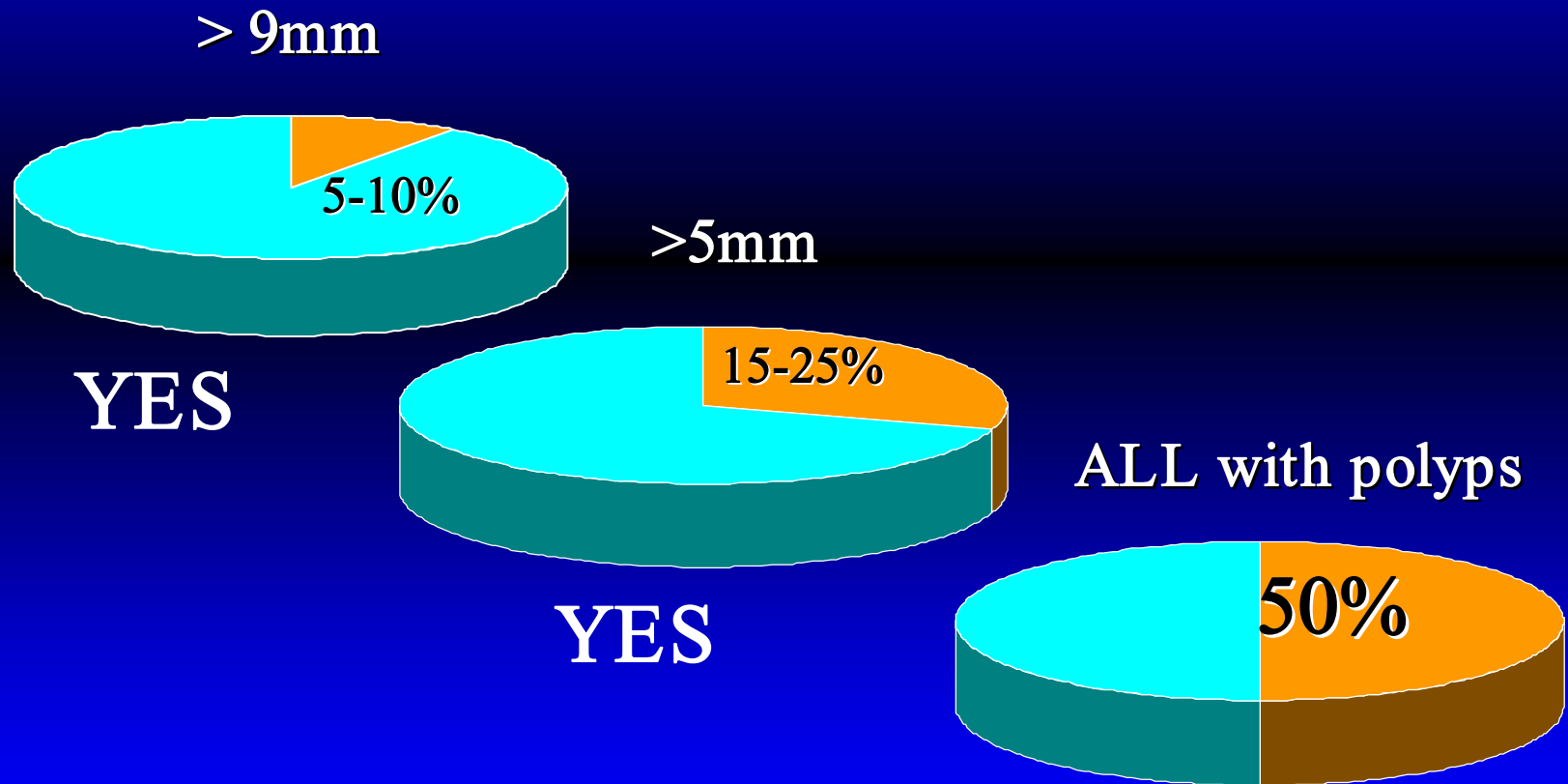


	<u>Sensitivity</u>	<u>Specificity</u>
Pickhardt	94%	96%
Cotton	55	96
Rockey	59	96
ACRIN,2007	90	86

Lesions
≥ 10mm

CT Colonography:

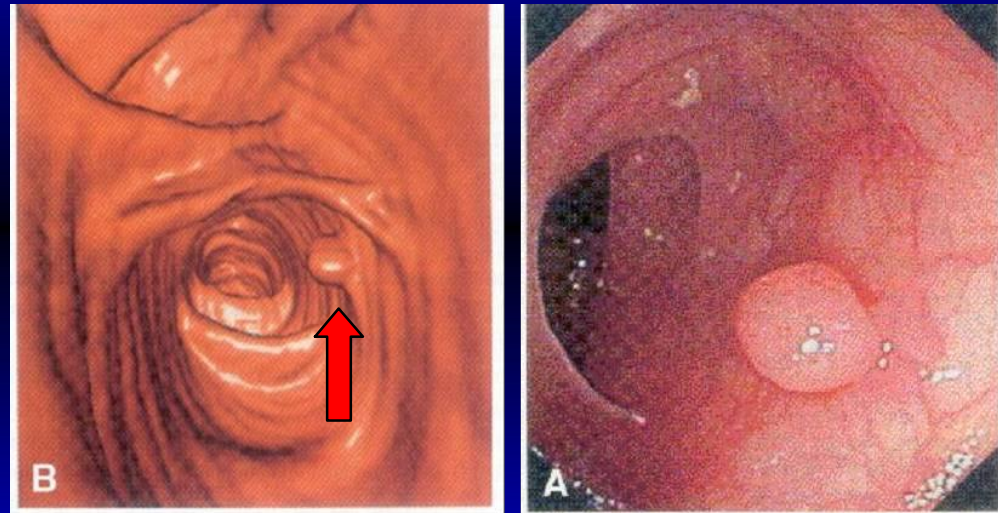
Who should be referred for Colonoscopy ?



If largest polyp < 6mm: ???????

CT Colonography: Issues

- Inter-observer variability
- Detection of flat polyps
- Bowel Prep
- Radiation →
- Extracolonic findings
- Intervals uncertain:
 - After negative exam
 - After exam with small polyps



Low Resolution CTC

Summary of 2008 CRC Screening Guideline

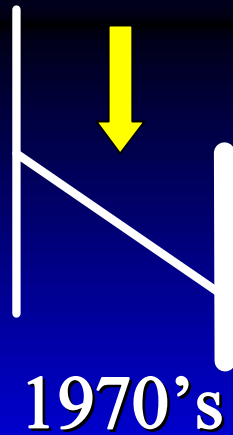
- Distinguishes:
 - Tests which detect early cancer
 - VS
 - Tests which detect both adenomas and cancer
- Recognition that adherence to programmatic testing is a problem
 - Therefore any one-time test should detect more than 50% of cancers
- Emphasis on Quality

**Clear preference
for tests which
may prevent cancer**

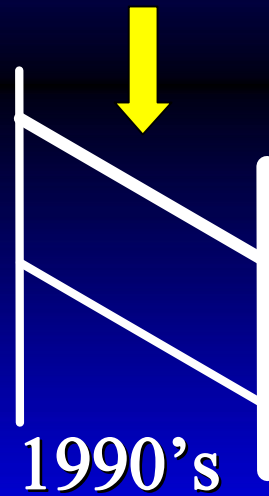
Raising the bar



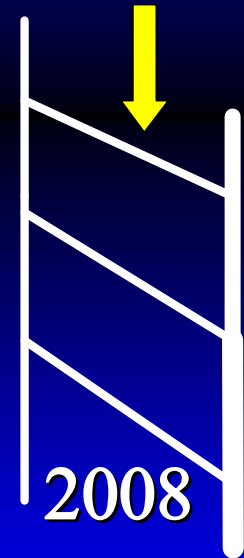
Colon
Cancer
Detection



Colon Cancer
Prevention



Colon Screening
Quality



Screening can prevent
Colon Cancer

...but only if it is done well

