Making Sense of the Colorectal Cancer Screening Guidelines

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Disclosure

• The views expressed are solely those of the presenter and do not necessarily reflect the view of the US Navy, Walter Reed National Military Medical Center, or the Department of Defense.
Case #1

• 50 year old woman
  – Mild hypertension
  – Hypothyroidism
  – No family history of colon or Lynch related cancers

• Wants to know what screening test she should get for colon cancer
“The” Guidelines...

• US Preventive Services Task Force -2016

• American College of OB/GYN-2014

• American College of Physicians-2012

• US Multi-Society Task Force-2008

• National Comprehensive Cancer Network-continuous

http://www.highachieversnetwork.com/high-achievers-network/indecision
America, We Are Confused: The Updated U.S. Preventive Services Task Force Recommendation on Colorectal Cancer Screening

Michael Brethauer, MD, PhD; Michal F. Kaminski, MD, PhD; Cesare Hassan, MD; Mette Kalager, MD, PhD; Øyvind Holme, MD, PhD; Geir Hoff, MD, PhD; Magnus Løberg, MD, PhD; Jaroslav Regula, MD, PhD; Antoni Castells, MD, PhD; Hans-Olov Adami, MD, PhD
USPSTF

• Numerous tests listed
  – Colonoscopy - FOBT/FIT
  – CT Colonography - Fecal DNA-FIT
  – Flexible Sigmoidoscopy - FS + FIT
  – Methylated septin 9

• No rank order for test preference

Efficacy Data

- Randomized controlled data for mortality
  - Flexible sigmoidoscopy
  - FOBT

- Other methods - cohort or case-control

Inadomi JM. NEJM 2017;376:149-56.
Colonscopy

• Direct mucosal inspection
• Remove precancerous lesions
• 95% sensitive, 100% specific for adenoma
• 68% decrease in CRC mortality
• 10 year interval if normal
• Requires prep, invasive, 1/3,000 perforation risk

Next Case

• 67 year old man
• On oral anticoagulant for atrial fibrillation
• Wants to hear about non-invasive options
• Preferably without prep
• Willing to undergo colonoscopy if positive
Fecal Immunochemical Test

- Tests for human globin

- 80% sensitive, 94% specific for CRC
  - ~25% sensitive for advanced neoplasia
  - PPV ~50% for advanced neoplasia

- Twice as good as guaiac based test
FIT Compared to...

• **Fecal DNA**
  – Tests for 4 mutations plus FIT
  – Currently recommended every 3 years

• **FIT is...**
  – Less sensitive (74% vs. 92%)
  – More specific (95% vs. 87%)
  – Potentially less long term adherence

FIT Compared to...

- Sigmoidoscopy
  - Equivalent cancer detection
  - Less advanced adenoma detection (6% vs 2%)
  - Higher uptake (62% vs. 32%)
FIT Compared to Colonoscopy

• Three randomized trials ongoing

• Interim analysis
  – Lower advanced neoplasia detection (0.9% vs 1.9%)
  – Higher participation (34% vs. 27%)
  – TREND toward lower cancer detection

Inadomi JM. NEJM 2017;376:149-56
Caveat

• CAVEAT: None of the trials use sequential, opportunistic screening
FIT Adherence

FIT Pearls

• No adjustment in
  – Diet
  – Anticoagulants or antiplatelets
• Single test is enough
• Quantitative test is best (cutoff < 20 μg/g)
• Colonoscopy required for (+) test
• No need for upper scope if colonoscopy negative

Lee JK. Ann Intern Med 2014;160:171
CT Colonography

- Comparable to colonoscopy for polyps > 6mm
- Not as good for flat polyps
- Low dose radiation
- Extracolonic findings = double edged sword
- 5 year interval
Flexible Sigmoidoscopy

• Reduces both incidence and mortality
  – 20% and 27% respectively

• More impact on left sided cancers

• May not benefit women over 60

Flexible Sigmoidoscopy plus FIT

- No trials using serial FIT
- One trial with single FIT
- No difference in FS with or without FIT
- Utility:???
Other Concerns

• When to START screening
  – USMSTF recommends age 45 for African Americans

• When to STOP screening
  – < 10 year life expectancy
  – Age > 75 and negative prior screening
  – Age >85 and never screened
  – **Benefit from 75-85 for “never screened”!!**

What Predicts Success?

• For non-invasive testing
  – Dedicated funding source for the program
  – Structured policy for (+) results
  – Outreach program to educate
  – Plan in place for rescreening.

• Limited choice with professional guidance

Cyhaniuk A. *Am J Manag Care. 2016;22(2):105-111*
What Can Be Done?

• Primary Care Specialists
  – Offer several screening options
  – Automated reminder systems

• Gastroenterologists (& other colonoscopists)
  – Appropriate colonoscopy indication
  – Partner with PCM as part of medical neighborhood
Detection of Increased CRC Risk

• First degree relative with X before age 50?
  – CRC
  – Lynch related cancer

• Personal history of either before age 50?
  – CRC
  – Adenomatous polyp

• Three or more relatives with CRC?
far, far away...

finish line
Take Away Points

• Start average risk patients at 50 (45 for AA)

• Do not repeat screening too early

• Opportunity to screen elderly unscreened

• Tailor screening from 76-85, stop after 85

• Best strategy = that to which patient can consistently adhere