What’s new in GI— Homayon Iraninezhad
Objectives

Know importance of changing epidemiology of Colorectal Cancer (CRC)
Learn the TIER system for CRC screening
Know how to avoid may pitfalls of screening
Objectives

PCP’s role in family history, knowing importance of colon polyp types
Expose attendee’s to quality issues
Discuss new advance now and to come
Criteria for Disease Screening Suitability

Must be common

Must have serious consequences

Must have detectable asymptomatic phase

Early detection and treatment decreases morbidity and improves survival

Acceptable, safe, affordable screening procedures must be available
Epidemiology of Colorectal cancer

In 2017: 135,000 diagnosed (USA)
In 2017: 50,000 deaths (USA)
In 2017: 8,000 deaths (Texas)
30% decrease in CRC past decade
Increase from 40-60% screening in past decade
Only group with increase are those under 50 years
Significant increase in CRC in millennials
Second most common cancer in USA
Soon cancer will take over as #1 cause of death in USA over CV
Major Public Concern

Incidence of CRC in persons under age 50 is increasing
Relative incidence is low
Reasons are unclear
Diet is #1 suspect
Millennials are most concern
CRC Screening

A process of detection of early stage CRC in asymptomatic people with no previous history of CRC or precancerous lesions
US Multi-Society Task Force (MSTF)

AGA
ACG
ASGE

Most recent CRC screening guidelines June 2017
Rex, Johnson, Levin, Robertson
Approaches to Screening

Multiple options

Sequential

- 1. Stool based testing
- 2. Visual (Structural) examination

Risk Stratification
Risk Factors

Obese
Male
DM
Cigarettes, EtOH
Age
Prevention

Primary
Secondary
Tertiary
Primary

Avoid risks

Diet
Diet

High Fiber
Heart healthy
Cancer prevention foods
Regular bowel habits
Foods that prevent cancer

Apples: polyphenols
Berries: fiber, vitamins, minerals
Cruciferous veggies: vitamins, sulfuraphane
Carrots: vitamins, B carotenes, antioxidants
Fatty fresh water fish
Walnuts
Legumes
Polyp Preventers

Coffee

ASA

Statins

NSAIDs
Secondary Screening Surveillance
Tertiary
Chemotherapy
Radiation
Surgery
TIER 1

Colonoscopy every 10 years

Fecal Immunochemical Testing (FIT) every year
That's not quite the stool sample we had in mind.
TIER 2
CT Colonography every 5 yrs
FIT-Fecal DNA every 3 yrs
Sigmoidoscopy every 5-10 yrs
TIER 3

Capsule Colonoscopy every 5 years
The “Colon Capsule”

Colonoscopy images

PillCam COLON images

**ColonCam is not cleared for marketing or useable for commercial distributions in the USA. (FDA pending). This presentation is for educational purposes only.**
NOT RECOMMENDED

Septin9

gFecal occult blood testing
gFOBT

- Non-steroidal anti-inflammatory drugs (NSAIDs)
- Vitamin C
- Red meats (beef, lamb, or liver)
CRC Screening

Offer at age 50 for average risk patients
Offer African Americans at age 45 (limited evidence supports)

Controversy: ACS recommends 45 for all
When to screen < 50

Family history

Concerning Symptoms
Concerning Symptoms

Iron deficiency anemia
Hematochezia
Melena unexplained
Symptoms not to ignore
Symptoms Not to Ignore

Unintentional weight loss
Rectal bleeding
Abdominal pain
Change in bowel habits
Increasing fatigue
Increased Risk for CRC

IBD

Family History of CRC

Hereditary symptoms

Personal Hx of CRC

Personal HX of adenomas
Increased Risk Continued

1st degree relative with advanced polyps

Personal history of advanced polyps
Family History

1st degree relative <60 yrs with CRC or advanced polyp or 2 first degree relatives any age, colonoscopy every 5 years starting 10 years before index case or age 40, whichever is 1st
Family History

Persons with a single first degree relative with CRC or advanced polyp $\geq 60$, can be offered average risk screening starting age 40
When To Stop

Consider stopping at age 75 if screening up to date and has been negative or < 10yrs life left (especially if colonoscopy)

If no screening previous, consider up to age 85 (depends on comorbidities and age)
Most Important Slide

Colonoscopy prevents cancer by precursor removal (polyps)

Other methods detect cancer

But anything is better than nothing
Risks with Colonoscopy

Bleeding
Perforation
Missed polyps
Death
Polyps to Colon Cancer

Conventional adenomas: 70%
Serrated polyps: up to 30%
Lynch syndrome: 5%
Histologic polyp classified

Conventional adenomas

Serrated lesions
Miscellaneous

Hyperplastic polyps are not precancerous
2 second degree relative = 1 first degree
Surveillance is not screening
Use genetic counselors
Types of Polyps

Conventional Adenomas
- Dysplasia (High, Low)
- Villousity (Tubular, Villous, TV)
- Serrated Lesions
- Hyperplastic
- Sessile Serrated (+/- Dysplasia)
- Traditional Serrated Adenoma
Advanced Polyps

10 or more adenomas
Large - one centimeter or more
Dysplasia
Serrated
Villous component
Colonoscopy

FOR

DUMMIES

Learn:
- What a colonoscopy is and why you might need to get one
- The best ways to prepare for and recover from a colonoscopy
- Answers to common and specific questions
Quality Measures

Cecal intubation rate (95%)
Extraction time 6 minutes
Prep score adequate (85%)
Adenoma Detection Rate (ADR) in screening 25% or more (men 30% and women 20%)
Endoscopy report

Landmark photos (appendiceal orifice, ICV or terminal ileum, cecum)

Extraction time 6 minutes (soon 8-9 minutes)

Bowel prep comment
Adenoma Detection Rate
Calculated only for screening
Men 30%
Women 20%
Combined 25%
Tools to enhance colonoscopy quality

Questions for patients and referring physicians to help ensure high quality colonoscopies

Checks endoscopy report after the procedure
Questions

What is your cecal intubation % (95 or greater)
What is adequate prep score (85% or greater)
What is your adenoma detection rate
Use of split dosing
Enhance ADR
Double look right side
Cecal retroflex
Rectal retroflex
Flattening devices
Increase time of extraction
YOUR FAMILY MEDICAL HISTORY

For each blood relative that has had cancer, mark in the box the type and age that they had it. This will help you and your health care professional decide which cancer screenings you may need and when to begin them.

FATHER’S FAMILY

Your Father's Father
Your Father's Mother
Your Aunts/ Uncles
Your Father

MOTHER’S FAMILY

Your Mother's Father
Your Mother's Mother
Your Aunts/ Uncles
Your Mother

YOUR SIBLINGS

Your Brother/ Sister
Your Brother/ Sister

YOU & YOUR FAMILY

YOU
Your Children

YOUR SIBLINGS

Your Brother/ Sister
Your Brother/ Sister

You may be at greater risk for some cancers if you have a personal or family history of cancer or certain diseases. To help determine your risk, complete this family history chart and share it with your health care professional and other family members.

For more information, visit www.PreventCancer.org
<table>
<thead>
<tr>
<th>Table 1</th>
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<tbody>
<tr>
<td><strong>Red flags for hereditary colorectal cancer syndromes in the personal or family history</strong></td>
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<tr>
<td>Early age of onset of cancer (e.g., colorectal cancer before age 50)</td>
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<tr>
<td>More than 10 colorectal adenomas</td>
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<tr>
<td>Synchronous or metachronous primary cancers</td>
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<tr>
<td>Multiple relatives in successive generations with the same or related cancers</td>
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<td>Family member with a known hereditary colorectal cancer syndrome</td>
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## Recommended Postpolypectomy Surveillance Intervals

<table>
<thead>
<tr>
<th>RISK FACTOR</th>
<th>SURVEILLANCE INTERVAL</th>
<th>COMMENT</th>
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<tr>
<td>1-2 tubular adenoma &lt; 10 mm</td>
<td>5-10 years</td>
<td>Base interval on other risk factors (prior findings, family hx, smoking, obesity)</td>
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<tr>
<td>3-10 adenoma &gt; 10 mm, villous histology or high grade dysplasia</td>
<td>3 years</td>
<td>If polyp removed piecemeal, then sooner</td>
</tr>
<tr>
<td>More than 10 adenoma are on one exam</td>
<td>&lt; 3 years</td>
<td></td>
</tr>
<tr>
<td>Rectosigmoid hyperplastic polyp &lt; 10 mm</td>
<td>10 years</td>
<td></td>
</tr>
<tr>
<td>Sessile serrated polyps (SSP) without dysplasia &lt; 10 mm</td>
<td>5 years</td>
<td></td>
</tr>
<tr>
<td>SSP &gt; 10 mm or with dysplasia or traditional serrated adenoma</td>
<td>3 years</td>
<td></td>
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Colon Cancer Family Syndromes

Familial Adenomatous Polyposis
Lynch Syndrome: Hereditary Non Polyposis
Colon Cancer
Colon Cancer syndrome X
Others
Amsterdam Criteria

3 relatives with cancers linked to Lynch syndrome
2 successive generations
1 is 1\textsuperscript{st} degree relative of other 2 and one is before 50
0 FAP
Lynch syndrome cancers

Colon
Endometrial/ovary
Biliary
Renal: pelvis, ureter
Stomach
Small bowel
Brain
More Improvements
Magnification
Narrow Band Imaging
Chromendoscopy
Others to come
“You don’t need a colonoscopy, but I'm sending you for one because, quite frankly, I don’t like you.”
Other GI Issues

Helicobacter pylori (Hp) serology is no longer recommended

HP testing that is recommended are stool antigen and breath testing
Other issues continued

Endoscopy now for Zenker’s, achalasia, pyloric stenosis, hiatal hernia repair.
Even More Issues/NAFLD

Non Alcoholic Fatty Liver Disease (Fatty Liver) soon may be most common liver disease

Must be monitored

Fibrosis assessment essential
NAFLD

No treatment except wt loss
This is soon to change
May have increased risk of Hepatocellular Carcinoma
More Issues/ HCV

Curable

New strains found

Rate increasing again – opiates

Baby Boomer (1945-1965) test all

I think all should be tested

Some need yearly testing
A 29 y/o obese man presents to ED for melana. He has no significant past medical history other than Type 2 Diabetes. He smokes 1 pack of cigarettes per day for greater than 10 years. He takes no medications including no OTCs. He was admitted, transfused and had an EGD done that was normal. What should be done next?

A) Pill Camera
B) Barium Enema
C) Colonoscopy
D) Small Bowel Enteroscopy
E) Small Bowel Barium Follow Thru
References


Wolf A et al. CA Cancer J Clin May 2018: 250-281

Livertox.gov
References

hcvguidelines.org
aasld.org
PreventCancer.org