

Take 3 – Practical Practice Pointers[®] April 1, 2019 Edition
Colon CA Screening, GI Pearls, “Dirty Dozen” Produce 2019

From the Literature

1) Use of Fecal Immunochemical Tests for Colorectal CA Screening

The US Preventive Services Task Force currently recommends screening for colorectal cancer (CRC) for persons aged 50-75 years using any of several options: colonoscopy, FIT for occult blood, gFOBT, sigmoidoscopy alone, sigmoidoscopy plus FIT, the FIT-DNA test, and computed tomographic colonography. It does not recommend one screening modality over another. All have varying levels of evidence supporting their effectiveness.

While colonoscopy is considered to be the "gold standard" for CRC screening, only 60% to 65% of the eligible American population is current with screening. Several other countries, especially those in which healthcare finances are limited, use annual or biennial stool blood tests or a combination of stool testing and lower endoscopy for screening, they note. In 2017, the US Multi-Society Task Force on Colorectal Cancer published a consensus statement presenting strong evidence that fecal immunochemical testing (FIT) is an excellent alternative to colonoscopy for CRC screening for the average risk patient and is recommended over the guaiac fecal occult blood test (gFOBT) (strong recommendation; high-quality evidence).

The purpose of this study was to summarize performance characteristics of FITs for CRC and advanced adenomas in average-risk persons undergoing screening colonoscopy. In reviewing the literature, the authors noted appropriately that performance characteristics depended on the threshold for a positive result. A threshold of 10 µg/g resulted in sensitivity of 0.91 and a negative likelihood ratio of 0.10 for CRC, whereas a threshold of greater than 20 µg/g resulted in specificity of 0.95 and a positive likelihood ratio of 15.49. For advanced adenomas, sensitivity was 0.40 and the negative likelihood ratio was 0.67, and specificity was 0.95 and the positive likelihood ratio was 5.86 at greater than 20 µg/g.

The authors concluded that single-application FITs have moderate to high sensitivity and specificity for CRC, depending on the positivity threshold and these findings support the recommendations that FIT testing is a safe and more convenient option for many patients. Sensitivity of 1-time testing for advanced adenomas is low, regardless of the threshold.

In the USPSTF recommendation, the sensitivity for CRC and advanced adenomas for different FIT products varied widely. Given the heterogeneity among FITs and their test performance, focus was placed on the performance characteristics of tests that were evaluated in more than 1 study. These tests included the OC-Sensor (Eiken Chemical), which was used in 14 (58%) of the studies, OC FIT-CHEK (Eiken Chemical), OC-Light (Eiken Chemical), OC-Hemodia (Eiken Chemical), and FOB Gold (Sentinel Diagnostics).

My Comment:

As has been pointed out numerous times in Take 3, it is difficult to break old clinical practice patterns. Despite numerous guidelines indicating that FIT testing is an acceptable alternative to colonoscopy, my observation is this has been difficult for some clinicians to embrace. Many people do not want a colonoscopy for various reasons, and if they are not given any other options, some will not pursue screening at all. If a patient does want an opinion about which test is preferable, the two tests are not that simple to compare. Remember that the goal of colonoscopy is to not only detect but also to prevent colon cancer by finding precancerous polyps and removing them. The goal of the FIT test is to detect cancer at an early and treatable stage. The goals of both tests are to reduce mortality, but the pathways to get there are different.

Carilion Clinic uses the InSure ONE FIT test, which has been shown to be a comparatively high-performing test to those noted in the USPSTF recommendation in some head-to-head studies, though the head-to-head data is not plentiful.

References:

- Imperiale T, et al. Performance Characteristics of Fecal Immunochemical Tests for Colorectal Cancer and Advanced Adenomatous Polyps: A Systematic Review and Meta-analysis. *Ann Intern Med.* 2019;170(5):319-329. [Abstract](#)
- Robertson D, et al. Recommendations on Fecal Immunochemical Testing to Screen for Colorectal Neoplasia: *Gastroenterology.* 2017 Apr;152(5):1217-1237. [Article](#)
- USPSTF – Colorectal Cancer: Screening. June 2016. [Guideline](#)

From the American College of Gastroenterology Annual Meeting

2) Two GI Pearls

Gluten-Free Restaurant Foods Often Contain Gluten

This study looked at gluten contamination in “gluten free” restaurant food using a portable gluten detector over an 18-month period throughout the US. They then analyzed these data by region, restaurant, food types, and other relevant factors. They found that 32% of foods labeled as gluten-free actually contain gluten. This varied by meal, with a little lower rate of mislabeling for breakfast meals and a higher rate for dinner meals. Labeling was more likely to be accurate in the Pacific Northwest than in the Northeast. Gluten-free pizza and pasta were also more likely to contain gluten than other foods.

My Comment:

I continue to be intrigued by the extent of the “gluten-free” diet movement, though if one feels better on this diet even in the absence of a diagnosis of celiac disease, there appears to be no down-sides to following it. As this study shows, however, when it comes to “gluten-free” foods in restaurants, one is not always getting what they ordered.

Reducing Fecal Incontinence Through Dietary Changes

Approximately 15% of patients will experience fecal incontinence by the time they are 80. Though it can be incapacitating in some circumstances, such as urgent diarrhea, it is more commonly experienced as troubling occurrences of fecal leakage and soiling of the underwear.

This study looked at treating fecal incontinence with a low fermentable oligo-, di-, and mono-saccharides, and polyols (FODMAP) diet, a diet that has gained popularity in particular for patients with irritable bowel syndrome. The researchers looked at a group with frequent fecal incontinence, with 35% experiencing it daily and 22% weekly. They hypothesized that applying a low-FODMAP diet may lead to a risk reduction due to decreased gas and diarrhea.

They found that 63% of patients reporting improved symptoms within a short period of time after adopting a low-FODMAP diet and conclude this may be a practical intervention to help these patients.

My Comment:

Given the prevalence of this, particularly in the elderly population, this certainly seems a simple intervention to help address at the least a very embarrassing problem. The last reference provides a good overview of the FODMAP diet.

References

- Lerner BA, et al. Gluten contamination of restaurant food: analysis of crowd-sourced data. Program and abstracts of the American College of Gastroenterology 2018 Annual Scientific Meeting; October 5-10, 2018; Philadelphia, PA. Abstract 8.
- Menees SB, et al. A low FODMAP diet may reduce symptoms in patients with fecal incontinence. Program and abstracts of the American College of Gastroenterology 2018 Annual Scientific Meeting; October 5-10, 2018; Philadelphia, PA. Abstract 9.
- Johnson, D. Annual GI Meeting Offers Plenty for Primary Care Docs to Learn From As Well - Medscape - Jan 11, 2019.
- UVa Nutrition – Low FODMAP Diet: [Link](#)

From the Environmental Working Group

3) The Fresh Produce “Dirty Dozen” 2019

The Environmental Working Group (EWG), a nonprofit organization focused on human health and the environment, issues the “Dirty Dozen” report each year regarding pesticide residue on fresh produce (fruit and vegetables). EWG researchers this year found that more than 98% of samples of strawberries, along with spinach, kale, peaches, nectarines, cherries, and apples, had residue of at least one pesticide. A single sample of strawberries had 20 different pesticides.

This year's "Dirty Dozen" includes the same 12 fruits and vegetables as last year's list, with a few trading places. It should be noted that kale is on the “dirty dozen” list for the first time this year, though that is likely because it had not been tested for the past few years and not because something had suddenly changed with how it is grown.

The 2019 list, in descending order, is:

1. Strawberries;
2. Spinach;
3. Kale;
4. Nectarines;
5. Apples;
6. Grapes;
7. Peaches;
8. Cherries;
9. Pears;
10. Tomatoes;
11. Celery;
12. Potatoes;

The report also includes the EWG's "Clean 15" list, the produce least likely to contain pesticide residue. The 2019 list, in descending order, is:

1. Avocados; 2. Sweet corn; 3. Pineapples; 4. Frozen Sweet Peas; 5. Onions; 6. Papayas; 7. Eggplants; 8. Asparagus; 9. Kiwis; 10. Cabbages; 11. Cauliflower; 12. Cantaloupes; 13. Broccoli; 14. Mushrooms; 15. Honeydew Melons

EWG researchers have published this annual report since 2004, and create the rankings based on laboratory tests done by the FDA and the U.S. Department of Agriculture's Pesticide Testing Program. The analysis for 2019 included nearly 40,000 samples. The tests found 230 different pesticides and pesticide breakdown products on the samples. Breakdown products are substances that form when pesticides mix with the environment. They can also be toxic.

My Comment:

The government labels as “organic” food grown without synthetic chemicals or fertilizers, genetic engineering, radiation, and sewage sludge. In general, organic food is more expensive and not accessible to many.

Critics not involved in the report say they worry the list will discourage people from eating fruits and vegetables. It is difficult to estimate the extent of the health hazard from this, as there are many variables (amount of exposure, type of toxin, etc.). Certainly minimizing exposure as much as possible would seem to be prudent, which may mean avoiding or buying organic for the “dirty dozen.” Unfortunately, there are no cleaning processes that can effectively eliminate toxins, but washing with water has been shown to be beneficial in at least removing some of the pesticide residue.

References:

Dirty Dozen: [Dirty Dozen](#)

Clean Fifteen: [Clean 15 List](#)

Frequently Asked Questions about Produce and Pesticides: [FAQ](#)

Feel free to forward Take 3 to your colleagues. Glad to add them to the distribution list.

Mark

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