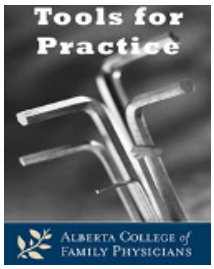
Tools for Practice is proudly sponsored by the Alberta College of Family Physicians (ACFP). ACFP is a provincial, professional voluntary organization, representing more than 4,800 family physicians, family medicine residents, and medical students in Alberta. Established over sixty years ago, the ACFP strives for excellence in family practice through advocacy, continuing medical education and primary care research. www.acfp.ca

June 29, 2020



Is 45 really the new 50 in colorectal cancer screening?

Clinical Question: Should we lower the age that average risk patients commence colorectal cancer screening from 50 to 45?

Bottom Line: In developed countries, the incidence of colorectal cancer in persons under 50 years old has increased by 20-30% in the last 20 years. However, the absolute risk increase is only 1-4 per 100,000 persons. Screening average risk patients under age 50 should not be encouraged at this time.

Evidence:

- Population based data on colorectal cancer (CRC) incidence among those under 50 years old in developed countries. No randomized controlled trials examining commencing screening at 45 years versus 50 years available.
    - Canada: <50 years old; comparing 2015 with 1971 found:[1]
        - Incidence increased 1-2 per 100,000 (from 10-11 to ~12/100,000): relative risk increase (RRI) ~20%.
    - Alberta, Canada:
        - 35-49 year-old's; comparing 2014 and 1995 found:[2]
            - Incidence increased 4 per 100,000 (from 13 to 17): RRI ~30%.
        - <50 year-old's; comparing 2017 and 2010 found:[3]
            - Incidence increased 1 per 100,000 (from 6 to 7): RRI ~20%.
        - Alberta number differences are due to different ages and time frames studied.
    - United States: 40-49 year-old's; comparing 2013 to 1992 found:[4]
        - Incidence increased 4 per 100,000 (18 to 22): RRI ~25%.
- Many other developed countries also report small annual increases in CRC rates in patients under 50 years.[5]

Context:

- Screening for CRC (between 50 and 75 years old) decreases CRC mortality but not overall mortality.[6]

- Improving 50-75 year-old's screening compliance to 80% (currently 55% in Canada[7]) would prevent ~3 times as many CRCs at a third of the cost of early-age screening.[8]
- 88-92% of CRCs occur in patients over 50 years.[3,9]
    - Median age of CRC diagnosis has decreased from 72 years (2002) to 66 years (2016).[9]
- In the US, rectal cancer is the most common CRC sub-type in individuals under 50 years old.[9]
- Most guidelines recommend screening for 50-75 years old.[10-12]
- Options for screening with randomized controlled trial evidence include:[6]
    - FOBT/fecal immunochemical testing every 1-2 years.
    - Sigmoidoscopy every 10 years.

Authors:

Paul Fritsch MD CCFP, Clarence Wong MD, FRCPC, Michael R. Kolber MD CCFP MSc

Disclosures:

Authors do not have any conflicts of interest to declare.

References:

1. Brenner DR, Heer E, Sutherland RL, *et al*. JAMA network open. 2019; Jul 3; 2(7):e198090.
2. Alberta Health, Health Standards, Quality and Performance Division, Analytics and Performance Reporting Branch. Health Trends Alberta: Colorectal Cancer Incidence Time Trends. April 11, 2017.
3. Liu EY, Wong CK. J Can Assoc Gastroenterol. 2020; 3(Supp 1):33-34.
4. Murphy CC, Lund JL, Sandler RS. Gastroenterol. 2017; 152(8):1809-12.
5. Araghi M, Soerjomataram I, Bardot A, *et al*. Lancet Gastroenterol Hepatol. 2019; 4(7):511-8.
6. Canadian Task Force on Preventive Health Care. Recommendations on screening for colorectal cancer in primary care. CMAJ. 2016;188(5):340-8.
7. Singh H, Bernstein CN, Samadder JN, *et al*. CMAJ open. 2015; 3(2):E149.
8. Ladabaum U, Mannalithara A, Meester RG, et al. Gastroenterol. 2019; 157(1):137-148.
9. Siegel RL, Miller KD, Sauer AG, *et al*. CA Cancer J Clin 2020 Mar 5. doi: 10.3322/caac.21601. [Epub ahead of print].
10. Qaseem A, Crandall CJ, Mustafa RA, *et al*. Ann Intern Med. 2019; 171:643-654. doi:10.7326/M19-0642.
11. US Preventative Services Task Force. JAMA. 2016; 315(23):2564 - 2575.
12. Helsingen LM, Vandvik PO, Jodal HC *et al*. BMJ. 2019; 367:l5515.