

Evidence Based Practice Critically Appraised Topic

Diagnostic Colonoscopy in > 75 Year Old Patients

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Case Study

An 80 year old female comes to the clinic for her annual check-up and wants to know when she will need a colonoscopy. According to the American Cancer Society men and women should have their first colonoscopy at the age of 50, if negative, they should continue every 10 years. At the age of 75 we may discontinue colonoscopy in patients who have had regular colon cancer screenings since age 50 and with consistently negative findings. (Picco, 2011).

Clinical Question

In comparison of the risk of colorectal cancer as the result of performing diagnostic colonoscopy screenings or discontinue diagnostic colonoscopy screening procedures in patients over the age of 75 years.

Comparison of the risk of colorectal cancer as the result of performing diagnostic colonoscopies or discontinuing diagnostic colonoscopies in patients over the age of 75 years.

Articles

Day, L. W., Kwon, A., Inadomi, J. M., Walter, L. C., & Somsouk, M. (2011). Adverse events in older patients undergoing colonoscopy: a systematic review and meta-analysis. *Gastrointestinal Endoscopy*, 74(4), 885-896.

Walter, L., Velayos, F., & Day, L. (2011). Colorectal cancer screening and surveillance in the elderly patient. *The American Journal Of Gastroenterology*, 106(7), 1197-1206.

Summary and Appraisal of Key Evidence

Study 1. Day et al, (2011) conducted a systematic review and meta-analysis on the adverse events in elderly patients undergoing a colonoscopy providing a Level 1, Grade A level of evidence. The main adverse events looked at in this study were perforation, bleeding, cardiovascular/pulmonary complication, and mortality. The population included all patients over the age of 65 years of age with 3,328 articles meeting the criteria of which 20 studies met the inclusion criteria.

In the studies that met the criteria the adverse results found per 1000 colonoscopies in patients 65-79 years of age included 26.0 for cumulative GI adverse events, 1.0 for perforation, 6.3 for GI bleeding, 19.1 for cardiovascular/pulmonary complication, and 1.0 for mortality. In patients greater than 79 years of age adverse results found per 1000 colonoscopies included cumulative

GI adverse events at 34.9, 1.5 for perforation, 2.4 for GI bleeding, 28.9 for cardiovascular/pulmonary complication, and 0.5 for mortality. Here are the results in table form

Per 1000 colonoscopies	65 – <80 years of age	>80 years of age
Cumulative GI Adverse Events	26.0	34.9
Perforation	1.0	1.5
GI Bleed	6.3	2.4
Cardiovascular/Pulmonary	19.1	28.9
Mortality	1.0	0.5

Study 2. Walter et al, (2011) conducted a clinical and systematic review in colorectal cancer screening and surveillance in the elderly population providing a Level 1, Grade A level of evidence. The literature review addressed pertinent questions related to colonoscopies in the elderly. These questions addressed included prevalence of colorectal cancer and adenomas in elderly, recurrence of new polyps, modifying recommendations by patient's age, at what age should we stop colorectal screening, patient's comorbid medical conditions influence the benefit/risk of colonoscopy, adverse event rate within the elderly, and the ability to adequately perform bowel preparation in the elderly. These are all great questions that providers should be aware of, but we will use the question that shares the closest relationship with the above PICO question.

So what is the magical number of a patient's age when colorectal screenings cease to provide a benefit to the overall outcome for a patient? There have been numerous studies trying to define what they think this magical number is. Controversial results were found in this section, but the one thing that is true is that colorectal cancer incidence increases with age and the gain in life years achieved by colorectal screening is reduced as one ages. The 2008 United States Preventive Services Task Force is recommending the discontinuation of colorectal screenings in patients aged 76-85 years of age but consider the each patient's individual health statuses. They also recommend against performing any type of colorectal screening in any one who is older than 85 years of age regardless of health status.

Clinical Bottom Line

According to these two studies we have found relevant and controversial information. What can be taken from these studies is that colorectal cancer screening in patients should be determined by the patient's age, health status, and risk factors. As our patients age the risk factors increase making them more susceptible to unwarranted complications. Further research will be needed to

gain a better understanding of the risk factors associated with screening compared to age and the possible advantages/disadvantages to that can be obtained in colorectal cancer screening.

Implications for Practice

As we age the prevalence of colorectal cancer increases. Determining the decision about colorectal screening and surveillance in older adults is a complex and challenging process. There are many associated factors that need to be considered such as benefit versus risk, health status, and overall outcome from findings. All of these factors are critical in determining whether or not to pursue colonoscopy in the elderly, but more importantly we need to educate our patients and family members of the factors associated with colorectal screening.

References

- Day, L. W., Kwon, A., Inadomi, J. M., Walter, L. C., & Somsouk, M. (2011). Adverse events in older patients undergoing colonoscopy: a systematic review and meta-analysis. *Gastrointestinal Endoscopy*, 74(4), 885-896.
- Picco, M. (2011). Colon Cancer. Retrieved from: <http://www.mayoclinic.com/health/colon-cancer-screening/AN01970>
- Walter, L., Velayos, F., & Day, L. (2011). Colorectal cancer screening and surveillance in the elderly patient. *The American Journal Of Gastroenterology*, 106(7), 1197-1206.