

The necessity of colorectal cancer screening for elderly patients

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Comment on: García-Albéniz X, Hsu J, Bretthauer M, *et al.* Effectiveness of Screening Colonoscopy to Prevent Colorectal Cancer Among Medicare Beneficiaries Aged 70 to 79 Years: A Prospective Observational Study. *Ann Intern Med* 2017;166:18-26.

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In association with the growing elderly population, the rates of colorectal cancer are increasing worldwide. Thus, the need for total colonoscopy in the elderly can be expected to increase accordingly with this trend. The World Health Organization defines the “elderly” as people ≥ 65 years of age. Meanwhile, the global life expectancy is approximately 70 years of age, and it is closer to 80 years in certain countries. However, even among the elderly, it is difficult to imagine that patients 65–74 years of age and those ≥ 75 years of age are similar in terms of their physical function. Furthermore, the incidence of various underlying diseases is much higher in the elderly than that in younger individuals. This must be considered while performing highly invasive total colonoscopy. A procedural accident during this type of treatment may be fatal in the elderly, as they have reduced organ reserve capacities. As such, the use of total colonoscopy remains a subject of debate and requires further investigation. In particular, we need to evaluate whether an endoscopy for colorectal cancer screening should be performed for all elderly individuals.

Recently, García-Albéniz *et al.* (1) reported results from their prospective randomized study on the effectiveness of colonoscopy for colorectal cancer screening in the elderly. The subjects were beneficiaries of the Medical Preventive Services in the United States and were between 70 and 79 years of age without previous diagnostic or surveillance colonoscopies over the previous 5 years. The patients were divided into a screening colonoscopy group and a non-screening group and were evaluated for a maximum of 8 years. In patients 70–74 years of age in the screening colonoscopy group, the risk of colorectal cancer was 2.19%

[95% confidence interval (CI): 2.00%–2.37%], while the risk was 2.62% (CI: 2.56–2.67%) in the non-screening group [absolute risk difference, –0.42% (CI: –0.24% to –0.63%)]. However, among patients 75–79 years of age, the risk of colorectal cancer in the screening colonoscopy group was 2.84% (95% CI: 2.54%–3.13%) compared with 2.97% (CI: 2.92%–3.03%) in the non-screening group [absolute risk difference, –0.14% (CI: –0.41%–0.16%)]. Furthermore, there were 5.6 events per 1000 hospitalizations, and urgent visits were required for adverse events in the 30 days following endoscopy in the screening colonoscopy group among patients 70–74 (CI: 4.4–6.8) years of age compared with 10.3 events per 1000 beneficiaries 75–79 (CI: 8.6–11.1) years of age. Thus, there was an increasing trend for medical attention in older patients.

The guidelines for colorectal cancer screening published by the U.S. Preventive Service Task Force (USPSTF) (2) were considered in the design of the present study. According to the USPSTF, some types of screening [fecal occult blood testing (FOBT), sigmoidoscopy, or total colonoscopy] are recommended for persons 50–75 years of age; however, the decision to screen patients 76–85 years of age is based on individual judgement. Furthermore, screening is not recommended for persons ≥ 85 years of age. Globally, most, if not all, ongoing prospective randomized studies related to screening colonoscopy focus on subjects ≤ 75 years of age (3,4). Consequently, there have been no discussions on the utility of screening in patients ≥ 76 years of age.

García-Albéniz *et al.* (1) used their study results to rate the effectiveness of screening colonoscopy in individuals 70–74 years of age as “modest,” while the rate for individuals

75–79 years of age was lower. These authors stated that their findings generally supported the USPSTF guidelines, which recommend routine screening colonoscopy for patients up to the age of 75 years and that screening should be based on personal discretion in patients ≥ 75 years of age. Their present study indicated that the rate of adverse events caused by colonoscopy, which required hospitalization in patients 75–79 years of age, was almost twice the rate of patients 70–74 years of age. This also highlights the important role played by individual judgement in considering the advantages and disadvantages of screening colonoscopy in the elderly, who are likely to have decreased organ reserve capacities. García-Albéniz *et al.* (1) reported arrhythmia to be the most common adverse event in their results and reported that the risk was 6.8 per 1,000 (CI: 6.0–7.6) in beneficiaries 70–74 years of age and 12.0 per 1000 (CI: 10.8–13.3) in those 75–79 years of age in the screening colonoscopy group. Antispasmodic and sedative drugs are frequently used in colonoscopy. We consider that these drugs should be administered with caution in the elderly because they have more complex pharmacokinetic characteristics and are also more likely to be taking multiple drugs than their younger counterparts (5).

In the report by García-Albéniz *et al.*, the onset risk of colorectal cancer in the elderly was considered as the primary endpoint. However, what we must determine in the future is whether screening colonoscopy for colorectal cancer is effective in controlling the mortality among the elderly. In their previous research, Ko *et al.* (6) reported that even in the elderly, the risk of colorectal cancer mortality remains high in healthy groups (75th percentile of the average life expectancy for each age group); thus, such patients benefit from screening colonoscopy. However, in unhealthy groups (25th percentile of life expectancy for each age group), the risk of colorectal cancer mortality was low, and the likelihood of patients benefiting from screening colonoscopy was even lower. Results from multiple randomized controlled trials (RCTs) using the FOBT, which is currently used for colon cancer screening, have demonstrated the effects of controlling the mortality (7–13). However, only a few large-scale RCTs conducted worldwide have investigated the effectiveness of controlling the mortality by screening colonoscopy; this is probably because of the ethical limitations and time constraints. Several RCTs are ongoing, and their results will soon be available (3,4).

Colonoscopy for colorectal cancer screening is currently thought to be unnecessary in the oldest populations who

are considered to be in generally poor physical condition and whose remaining lifespans are presumed to be short. However, elderly patients who are in good health and can be expected to have longer remaining lifespans, but are not being screened, should benefit greatly from screening colonoscopy. Although colonoscopy is not an easily tolerated test for the elderly, the early detection of colorectal cancer is considered to be just as beneficial for the elderly as it is for younger patients. It is therefore not ideal to avoid colonoscopy just because a person is older; instead, this procedure should be conducted as much as possible if colorectal cancer is suspected, with due consideration of the patient's general physical condition. It is essential that the treatment of elderly patients is performed cautiously, accounting for potential risks and advantages on an individual basis. The report by García-Albéniz *et al.* is extremely valuable in this sense and suggests the need for further discussion on the significance of screening tests in the elderly.

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Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

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