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# Non-participation of asymptomatic candidates in screening protocols reduces early diagnosis and worsens prognosis of colorectal cancer

Sergio Pérez-Holanda

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## Abstract

The Agatsuma *et al*'s study shows that despite the evidence of the benefits of an early colorectal cancer (CRC) diagnosis, through screening in asymptomatic subjects, up to 50% of candidates reject this option and many of those affected are diagnosed later, in advanced stages. The efficacy of screening programs has been well-established for several years, which reduces the risk of CRC morbidity and mortality, without taking into account the test used for screening, or other tools. Nevertheless, a significant proportion of patients remain unscreened, so understanding the factors involved, as well as the barriers of the population to adherence is the first step to possibly modify the participation rate. These barriers could include a full range of social and political aspects, especially the type of financial provision of each health service. In Japan, health services are universal, and this advantageous situation makes it easier for citizens to access to these services, contributing to the detection of various diseases, including CRC. Interestingly, the symptomatic CRC group had a lower early-stage diagnosis rate than the patients detected during follow-up for other comorbidities, and symptomatic and cancer screening groups showed similar early-stage diagnosis.

**Key Words:** Colorectal neoplasms; Cancer registry; Diagnostic route; Cancer screening; Stage at diagnosis

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**Core Tip:** Agatsuma *et al*'s study used cancer registries from two Japanese hospitals to identify the subgroups that benefit most from screening programs, and clarified the stage at diagnosis in three groups of colorectal cancer (CRC) patients: CRC screening, follow-up (patients detected during follow-up for other comorbidities), and CRC symptomatic. The proportion of early-stage diagnoses was higher in the follow-up group than in the symptomatic group and was comparable to that in the cancer screening group. Therefore, CRC screening should be recommended, especially in patients without regular hospital visits for comorbidities, to improve population participation.

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## INTRODUCTION

The Agatsuma *et al*'s study[1], the objective of this editorial, shows that despite the evidence of the benefits of an early colorectal cancer (CRC) diagnosis, through screening in asymptomatic subjects, up to 50% of candidates reject this option and many of those affected are diagnosed later, in advanced stages, with a worse prognosis that usually demands increased health expenses, due to the need of using more aggressive, expensive and complicated diagnostic and therapeutic resources.

The efficacy of screening programs has been well-established for several years worldwide[2-9], and these programs reduce the risk of CRC morbidity and mortality[3,4], without taking into account the test used for screening, which could offer different degrees of effectiveness[5], or other tools that may be developed in the future, such as artificial intelligence [6].

## NON-PARTICIPATION OF ASYMPTOMATIC CANDIDATES IN CRC-SCREENING

In Japan, health services are universal, and this advantageous situation makes it easier for citizens to access to these services, contributing to the detection of various diseases, including CRC[10].

In fact, according to Agatsuma *et al*[1], 2083 patients with CRC registered in the Japanese Cancer Registry of two hospitals, between 2016 and 2019, were diagnosed based on three routes, namely: (1) Detection of CRC-related symptoms (51%); (2) hospital consultations for various types of comorbidities in principle not related to CRC (34%); and (3) screening in adults from the general population (15%). As shown above, around 85% of cases were diagnosed by procedures other than screening. Interestingly, the symptomatic CRC group had a lower early-stage diagnosis rate than the patients detected during follow-up for other comorbidities, and symptomatic and cancer screening groups showed similar early-stage diagnosis.

CRC screening is an important public health tool, and its economic implication also has an important impact on society [11,12], however, a significant proportion of Japanese patients may not have been screened, although this service is available and free.

Factors contributing to non-participation are not well known but could include a wide range of personal, social and political aspects, including the type of financial provision of each health service[8,11,12]. Consequently, to gain knowledge of the factors that contribute to the lack of participation of candidates, using the following official protocols should be a priority objective to reverse this situation[7]. One protocol is to establish different tools to inform the general population of the screening[11]. However, this strategy fails in some disadvantaged demographic groups, due to lack of education or resources to access that necessary information.

## CONCLUSION

As the authors[1] propose in their conclusions, although CRC screening is a highly recommended strategy to detect the disease in its initial stages in individuals without signs or symptoms, this strategy is underused by the Japanese population, particularly for those who appear healthy, and generally do not use the available health services.

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