

HSD9 Impact of Participation in Colorectal Cancer Screening during the COVID-19 Pandemic in Japan

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Backgrounds

- The COVID-19 pandemic infection first emerged in 2019 and has subsequently spread worldwide.
- In Japan, the COVID-19 disease has been disseminated since early 2020. Participation in cancer screening has been affected and has decreased due to the dissemination of the COVID-19 infection nationwide.

Colorectal cancer screening in Japan

- In Japan, colorectal cancer (CRC) screening has been provided as a national program, which does not have a defined upper age limit.
- Although all programs have been supplied through mass surveys and GP practices, how cancer screening was provided under the pandemic.

Methods

- Characteristics of participation during the pandemic were compared considering the essential background.
- Cancer screenings are provided based on the fiscal year from April to March annually in Japan. The pandemic was disseminated in early 2020, which included the participants in the fiscal year of 2019. 2020 was the first confusing year affected by the pandemic. Based on the national cancer screening survey, the decrease rates of participants in 2020 were calculated, referred to those in 2018, and compared by a chi-square test.
- Age, sex, and screening supply were considered primary factors for participation patterns, and data could be obtained from a national survey.
- Correlation between decreased rates of participants in CRC screening and cumulative patients with COVID-19 infection was also calculated.

Results

- The total number of participants in colorectal cancer screening was 5,115,993 and 4,404,775 in 2018 and 2020, respectively (Figure 1).
- Total participation in CRC screening decreased by 13.9% in 2020 compared with 2018 (Figure 2). The decrease rate was lower in men than in women (13.2% vs. 13.9%, $P < 0.01$). However, the decrease rates differed among age groups; 19.1%, 14.2%, 24.0%, and 6.6% in those aged 40-49 years, 50-59 years, 60-69 years, and over 70's, respectively.
- In providing CRC screening, rates reported by the mass survey decreased by a greater amount than those reported among GP practices (22.1% vs. 7.3%, $P < 0.01$) (Figure 3).
- Although participants' decrease rates differed among 47 prefectures, these were not correlated with cumulative patients with COVID-19 infection (correlation = -0.0279, $P = 0.8525$) (Figure 4).

Figure 1. What happened to colorectal cancer screening during the pandemic?

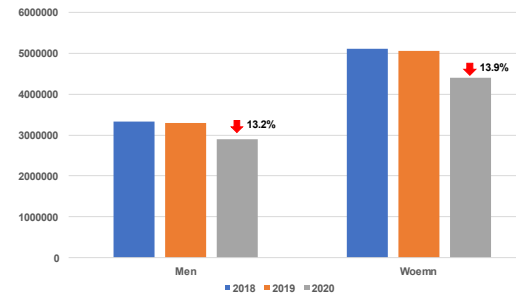


Figure 3. Change of Providers for CRC screening

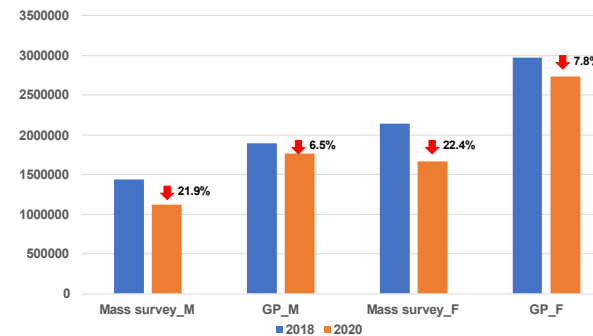


Figure 2. Comparison of participants among age groups

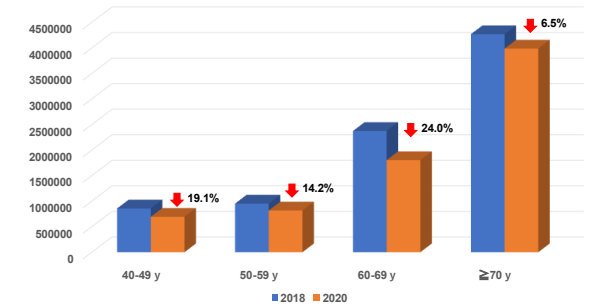
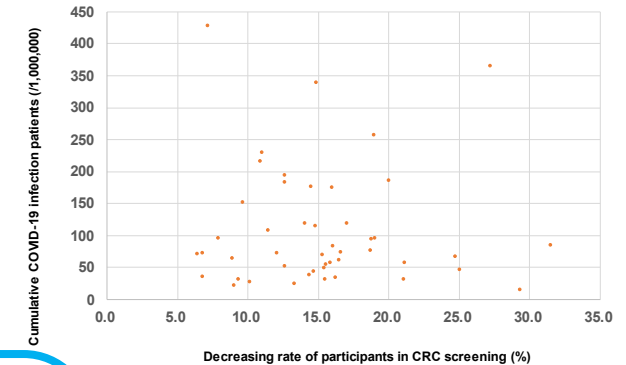


Figure 4. Coefficient between Decreasing rate of participants in CRC screening and cumulative infection rates



Discussion

- The oldest group continued to participate in colorectal cancer screening during the pandemic. Those aged 60-69 years cancelled their screening, regardless of the fact that they were the most suitable target for CRC screening.
- Local governments restricted supplying mass survey programs during the pandemic, and inhabitants lost opportunities for cancer screenings. In most of GP practice were able to continue their regular activities, including cancer screening while avoiding COVID-19 infection.

Conclusion

- Although participation in CRC screening decreased during the pandemic, the impact was different among age groups and providing systems.
- The results suggest a plan for supplying CRC screening in the post-pandemic era.