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## Objective

Cancer is the leading cause of death worldwide and the most common cause of death in the disabled. Korea is conducting a national cancer screening project to reduce deaths from cancer by detecting cancer early and inducing treatment for gastric, colon, liver, breast, cervical, and lung cancers. In this study, we tried to find out the rate of cancer screening after disability and the rate of hospital treatment after cancer screening in the disabled and compare them with the non-disabled.

## Materials and Methods

Data from 2004-2010 were obtained from the National Health Information Database (NHID). The disabled who first registered for national registration for disability in 2004-2010 and who were 19 years or older at the time of their first registration for disability were selected as subjects for the study. The non-disabled were selected by performing 1:1 propensity score matching with the disabled. Among the six national cancer screening programs, we investigated the cancer screening rates for stomach, colorectal, liver, breast, and cervical cancer, excluding lung cancer, which was introduced in 2019. The rate of hospital treatment after being reported as 'suspected cancer' in the cancer screening results was also investigated. Differences in distribution of general characteristics between the disabled and non-disabled were tested using chi-square, and cancer screening rates were analyzed using a logistic regression model.

## Results

The cancer screening rate after registration with the disabled was 67.1%, which was 0.76 times (95% CI: 0.751-0.759) lower than that of the non-disabled (73.0%) (Table 1). The rate of suspected cancer in cancer screening was 2.2% for both the disabled and non-disabled, and there was no statistically significant difference (Table 1). The rate of cancer diagnosis after being suspected of cancer in cancer screening was 53.5% of the disabled and 56.3% of the non-disabled. It was confirmed that the cancer diagnosis rate was 0.89 times lower in the disabled than in non-disabled (Table 1).

**Table 1. Cancer screening rate, rate of suspected cancer in cancer screening, and cancer diagnosis rate after being suspected of cancer in the disabled and non-disabled people**

	Disabled, N (%)	Non-disabled, N (%)	Odds ratio	95% Confidence Interval
Cancer screening rate	822,066 (67.1)	894,146 (73.0)	0.755	0.751-0.759
Rate of suspected cancer in cancer screening	17,989 (2.2)	19,958 (2.2)	0.980	0.960-1.000
Cancer diagnosis rate after being suspected of cancer	9,631 (53.5)	11,236 (56.3)	0.894	0.859-0.931

## Conclusion

Compared to the non-disabled, the cancer screening rate was significantly lower in the disabled, and the cancer diagnosis rate after being suspected of cancer in cancer screening was also significantly lower in the disabled. It can be thought that disability can be a factor that can affect not only cancer screening but also the medical service process leading to cancer diagnosis.