

# Humanistic burden and mental conditions among cancer patients before and during the COVID-19 pandemic in Japan and China

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an Oracle company

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## Introduction

- The COVID-19 pandemic has caused considerable disruptions in various aspects of daily life, from delaying diagnoses and treatment to halting clinical trials, and diminishing access to psychosocial support.
- Due to the need for regular access to treatment and care, cancer patients may be at risk of increased burden during the COVID-19 pandemic

## Objective

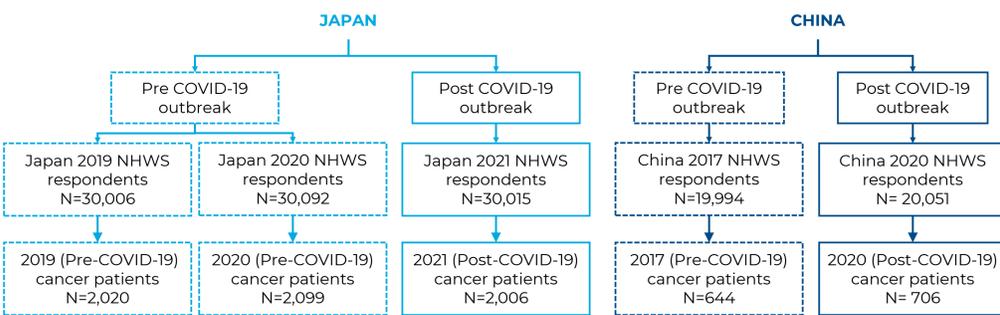
- Using a population-based survey to assess the impact of COVID-19 on the humanistic burden and mental condition prevalence among cancer patients in Japan and China.

## Methods

### Study design:

- Using existing data from the internet-based National Health and Wellness Survey (NHWS) from Japan and China.
- Inclusion criteria of cancer patients: (a) aged ≥18 years; (b) self-reported physician diagnosis of cancer of any solid tumors and hematologic cancers

Figure 1. Study population flow chart in Japan (left) and China (right)



## Results

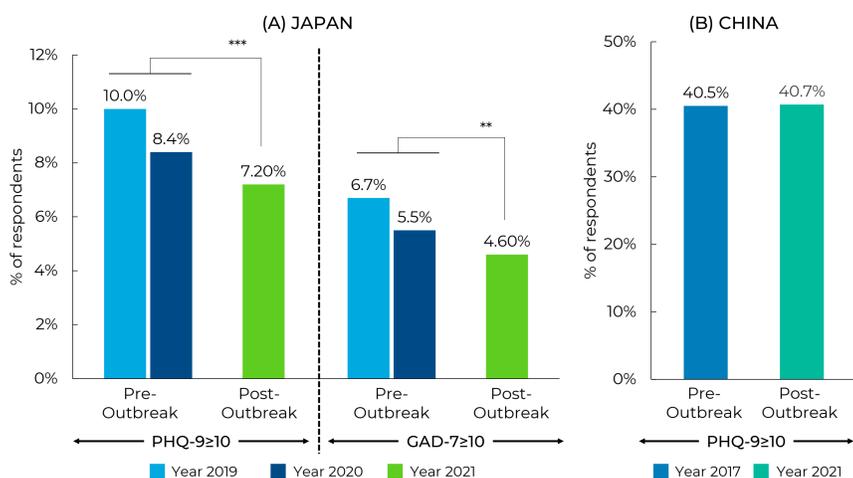
### Patient demographics and health characteristics

Table 1. Demographics and health characteristics of patients during pre- and post-COVID-19 outbreak

COVID-19 Outbreak	Japan		China	
	Pre- 2019	Post- 2020	Pre- 2017	Post- 2020
Year of NHWS	2019	2020	2017	2020
Age (years)				
<30	13.8%	13.7%	24.0%	20.9%
30-39	13.8%	13.5%	17.9%	19.5%
40-49	17.0%	16.8%	21.3%	19.3%
50-59	16.0%	15.5%	18.5%	21.1%
≥60	39.4%	40.5%	18.4%	19.2%
Sex				
Male	52.2%	52.1%	50.0%	50.5%
Female	47.8%	47.9%	50.0%	49.5%
Education level				
University degree	46.6%	44.0%	46.9%	49%
Employment status				
Currently employed	57.7%	57.2%	74.5%	68.6%
Body mass index (BMI)				
Underweight (18.5<BMI)	11.2%	11.2%	9.1%	10.3%
Normal (18.5≤BMI<25)	66.0%	66.0%	66.3%	64.9%
Obese (25≤BMI)	18.2%	18.3%	21.4%	21.5%
Decline to answer	4.6%	4.5%	3.2%	3.3%
Smoking status				
Never	59.1%	59.4%	75.1%	75.1%
Former	22.9%	22.6%	7.6%	7.5%
Currently smoking	17.9%	18.0%	17.3%	17.3%
Alcohol use per week				
≤once	64.1%	63.9%	81.4%	83.2%
≥2-3 times	35.9%	36.1%	18.6%	16.8%
Exercise frequency in the past 30 Days				
0-11 times	82.1%	80.4%	73.4%	69.7%
≥12 times	17.9%	19.6%	26.6%	30.3%

### Patients' mental conditions

Figure 1. Proportion of cancer patients experiencing depression (Patient Health Questionnaire-9 [PHQ-9]≥10) and anxiety (Generalized Anxiety Disorder, GAD-7) pre- and post-COVID-19 outbreak in Japan (A) and China (B)

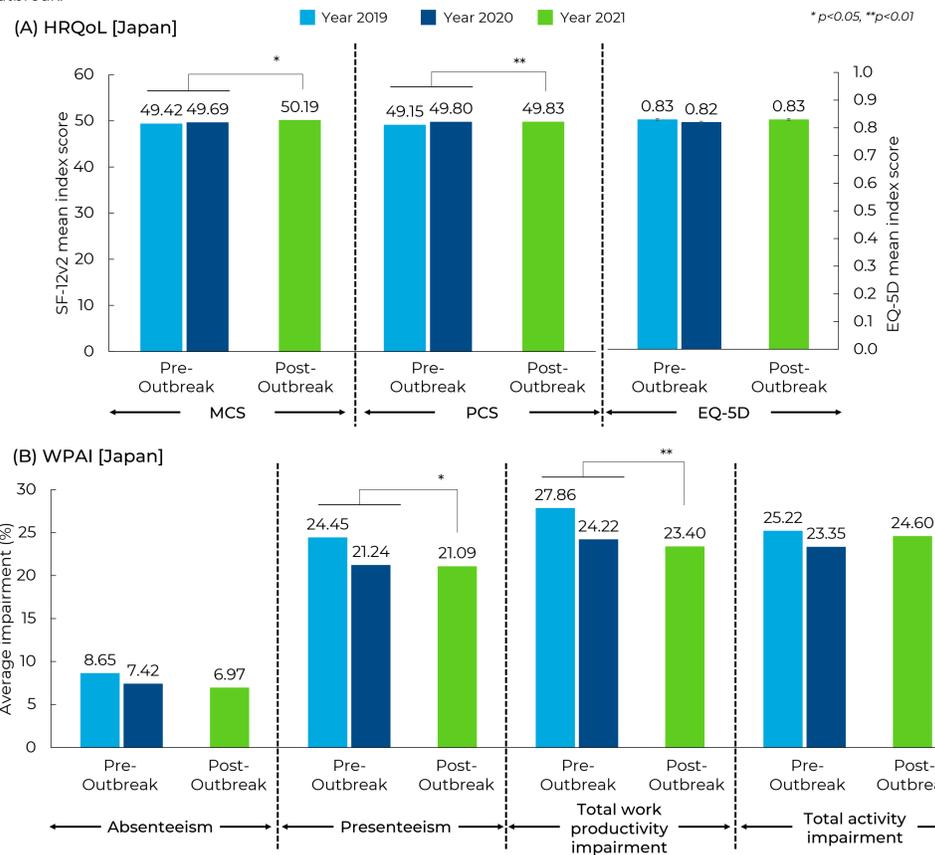


\*\*p<0.01,\*\*\*p<0.001  
Note: GAD-7 was not available in China 2017 NHWS

- Less cancer patients in Japan had depressive (PHQ-9≥10) and anxiety symptoms (GAD-7≥10) post COVID-19 outbreak than pre COVID-19 outbreak (Figure 1A).
- No differences observed in terms of depressive symptoms in China pre-COVID-19 vs. post-COVID outbreak (Figure 1B)

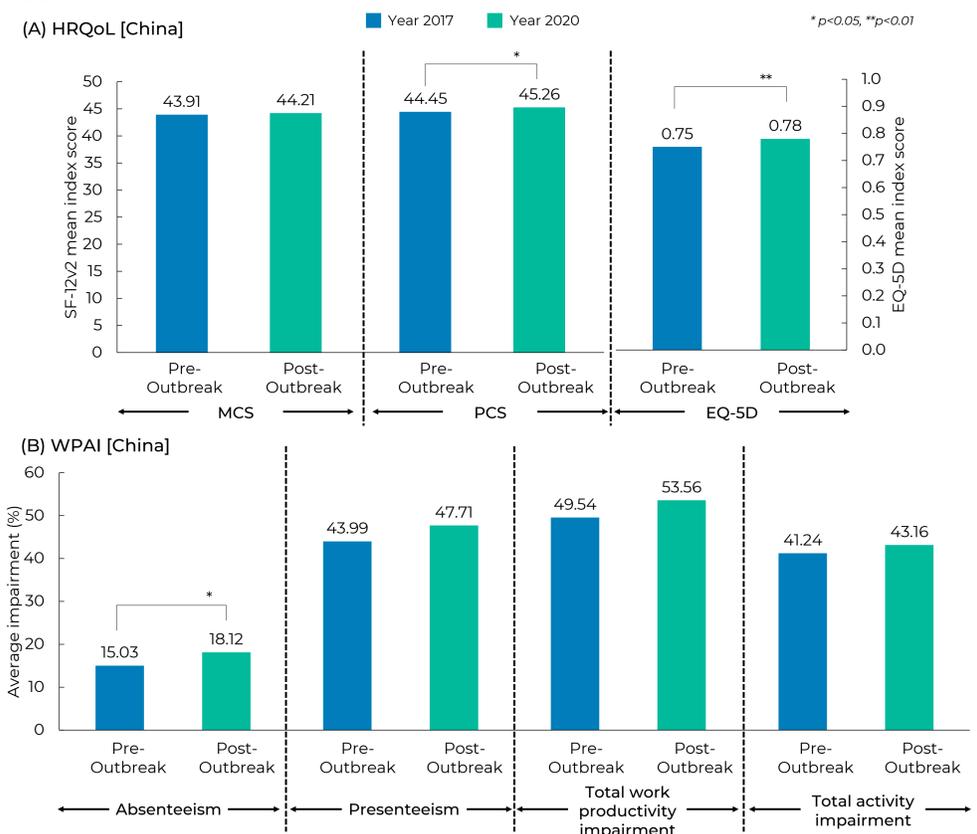
### Patients' Health-related Quality of Life (HRQoL) and Work Productivity and Activity Impairment (WPAI)

Figure 2. HRQoL (A, top) and WPAI (B, below) measures among cancer patients in Japan pre- and post-COVID-19 outbreak.



- Increases in mental component summary (MCS) and physical component summary (PCS) and decreases in presenteeism and WPAI were observed among Japan cancer patients post-COVID-19 outbreak (Figure 2).

Figure 3. HRQoL (A, top) and WPAI (B, below) measures among cancer patients in China pre- and post-COVID-19 outbreak.



- Cancer patients in China have increased PCS and EQ-5D scores, albeit marginal; and have higher absenteeism post-COVID-19 vs pre-COVID-19 outbreak (Figure 3).

## Conclusion

- HRQoL, evidenced by changes in mental and physical aspects and depression improved during the COVID-19 pandemic in Japan and China.
- Work productivity and impairment were different between both countries with decreases observed in Japan while China showed increases.
- The differences observed between Japan and the two countries could be due to the variations in COVID-19-related policies.