

## LETTER TO THE EDITOR

# How to preserve information equity for COVID-19 vaccination among severely immunocompromised populations: Challenges among heart transplant recipients in Japan

Vaccination is a mainstay of the global strategy to control the COVID-19 pandemic and rebuild vibrant daily lives and economies. It lowers the likelihood of developing serious illnesses resulting in death and is especially essential for immunocompromised patients, including heart and other solid organ transplant recipients. Although both humoral and cellular responses to vaccines are less robust in transplant recipients,<sup>1</sup> world-leading academic societies for transplantation, including the International Society for Heart and Lung Transplantation (ISHLT) and the American Society of Transplantation (AST), have issued statements strongly recommending all transplant recipients be vaccinated for COVID-19.<sup>2</sup>

However, a certain number of heart transplant (HTx) recipients in Japan abstain from COVID-19 vaccination by choice or are instructed “not to get vaccinated” by local physicians/healthcare professionals, because mRNA vaccines are falsely accused of provoking rejections or alloimmune responses of CD8-positive T cells. Such misinformation provided by medical professionals in their language describing vaccination-derived allograft rejection is problematic. Barriers also exist to sharing other scientifically sound information among HTx recipients. Why does this happen?

First, paternalism is still predominant in clinical settings in East Asia, including Japan,<sup>3</sup> sometimes hindering patients’ independent or active information-gathering behavior. Second, both transplant recipients and physicians in Japan are highly sensitized to events/behaviors with the risk of rejection because of the country’s unique, tragic background. In 1968, the first HTx surgery in Japan raised concerns about the criminal liability of the surgical team,<sup>4</sup> causing 30 subsequent years of domestic stagnation in transplant medicine. Since the restart of HTx, recipients have been expected to be disciplined, avoiding all behaviors that increase the risk of rejection, so that transplant medicine will never again be criticized. Third, partially due to this background, few HTx occur in Japan, with about one-seventieth of the cases performed in the US per year. This low rate further reduces patients’ and physicians’ opportunities to contribute scientifically sound information. Finally, Japan is a “low English proficiency” country. According to a 2021 English proficiency index survey, Japan is 78th among 112 countries, whereas South Korea and China are 37th and 49th, respectively.<sup>5</sup> Academic information

about COVID-19 and its vaccines is updated frequently, but mostly in English.

The factors that cause essential vaccine-related information not to reach minority groups and non-English speakers exist not only in Japanese transplant recipients but elsewhere in the world. World-leading academic societies need to recognize language, social, and cultural barriers and provide direct, convenient, up-to-date information in multiple languages, especially to high-risk populations.

## CONFLICT OF INTEREST

None of the authors has any financial relationship with any commercial entity that has an interest in the subject of the presented manuscript or any other conflicts of interest to disclose.

## DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no datasets were generated or analyzed in this letter.

Tomoko S. Kato MD, PhD<sup>1</sup> 

Harumi Gomi MD, PhD<sup>2</sup>

Howard J. Eisen MD<sup>3</sup>

Sharon A. Hunt MD<sup>4</sup>

<sup>1</sup>Department of Cardiology, International University of Health and Welfare School of Medicine, Chiba, Japan

<sup>2</sup>Office of Medical Education and Center for Infectious Diseases, International University of Health and Welfare School of Medicine, Chiba, Japan

<sup>3</sup>Department of Medicine, Division of Cardiology, Penn State Heart and Vascular Institute, Pennsylvania, USA

<sup>4</sup>Department of Medicine, Division of Cardiology, Stanford University, California, USA

## Correspondence

Tomoko S. Kato, MD, PhD, Department of Cardiology, International University of Health and Welfare, 852 Hatakeda Narita, Chiba 286-8520, Japan.

Email: [rinnko@r.sannet.ne.jp](mailto:rinnko@r.sannet.ne.jp)

**ORCID**

Tomoko S. Kato MD, PhD  <https://orcid.org/0000-0002-1469-0685>

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