

# Social Usefulness of "TOKYO CORONA PASS," a Smartphone-based System for Certifying Qualitative Antigen Test Results with Face Recognition

: a verification experiment aimed at simultaneous achievement of preventing the spread of infection and stimulating socioeconomic activities

Haruo Ozaki\*, MD, PhD and Iwao Kurose\*\*, MD, PhD

\*President and \*\*Director of Tokyo Medical Association, JAPAN

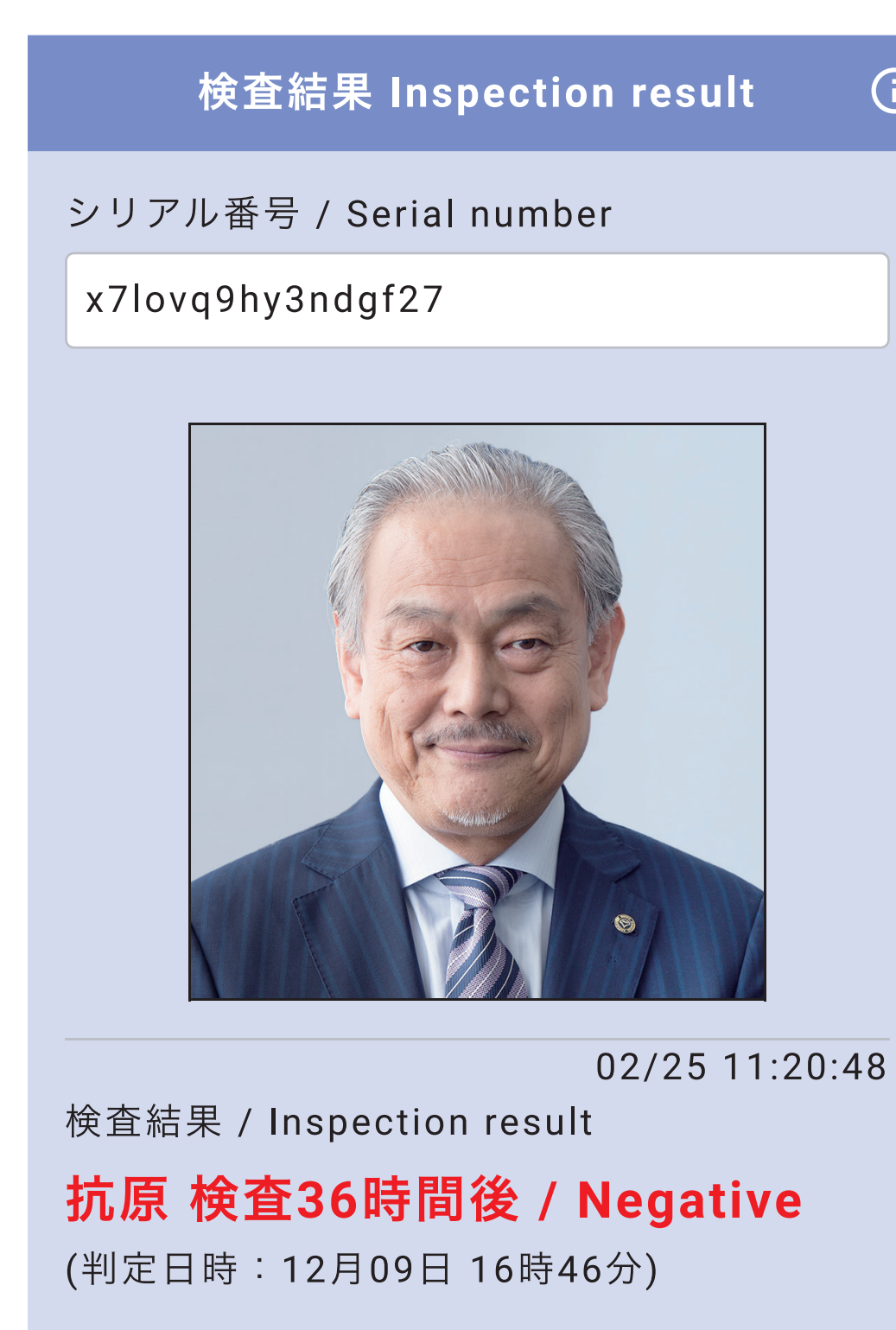


Figure 1. Smartphone screen

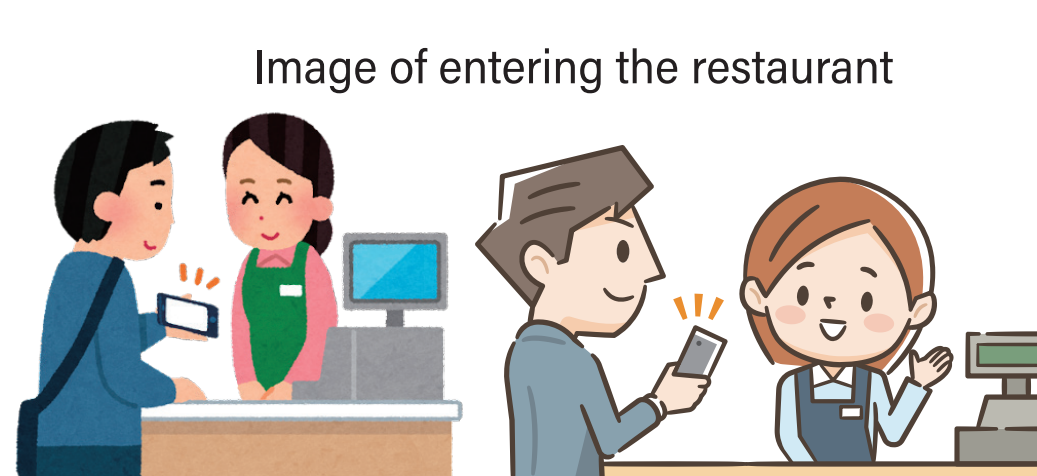


Image of Smartphone Screen

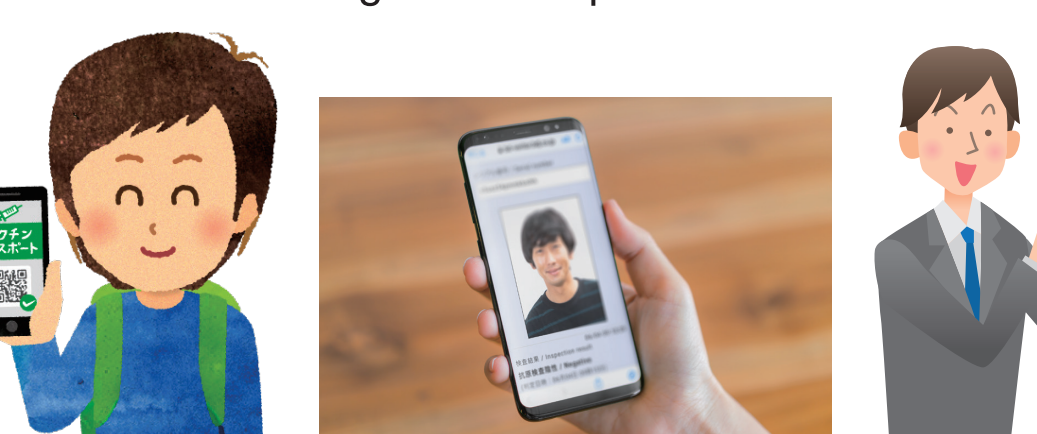


Figure 2. Image of a person entering the restaurant

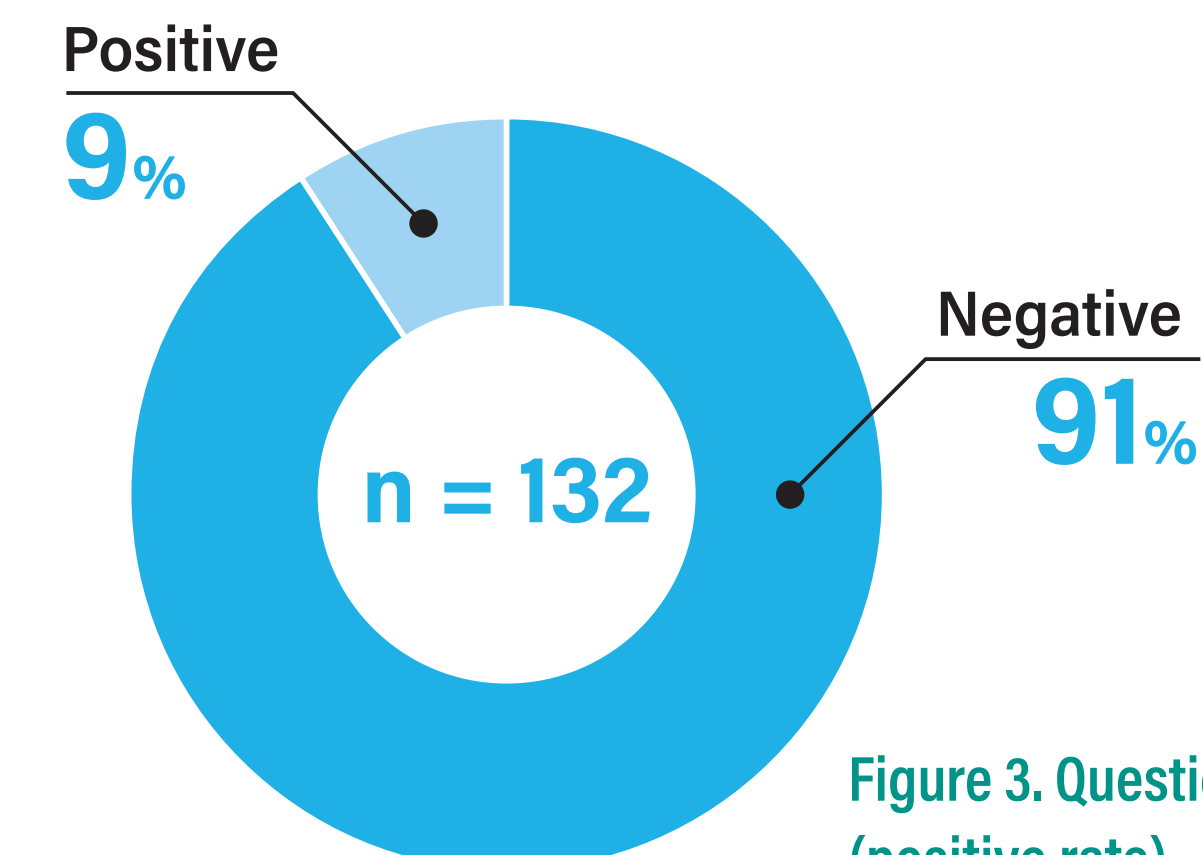


Figure 3. Questionnaire results 1 (positive rate)

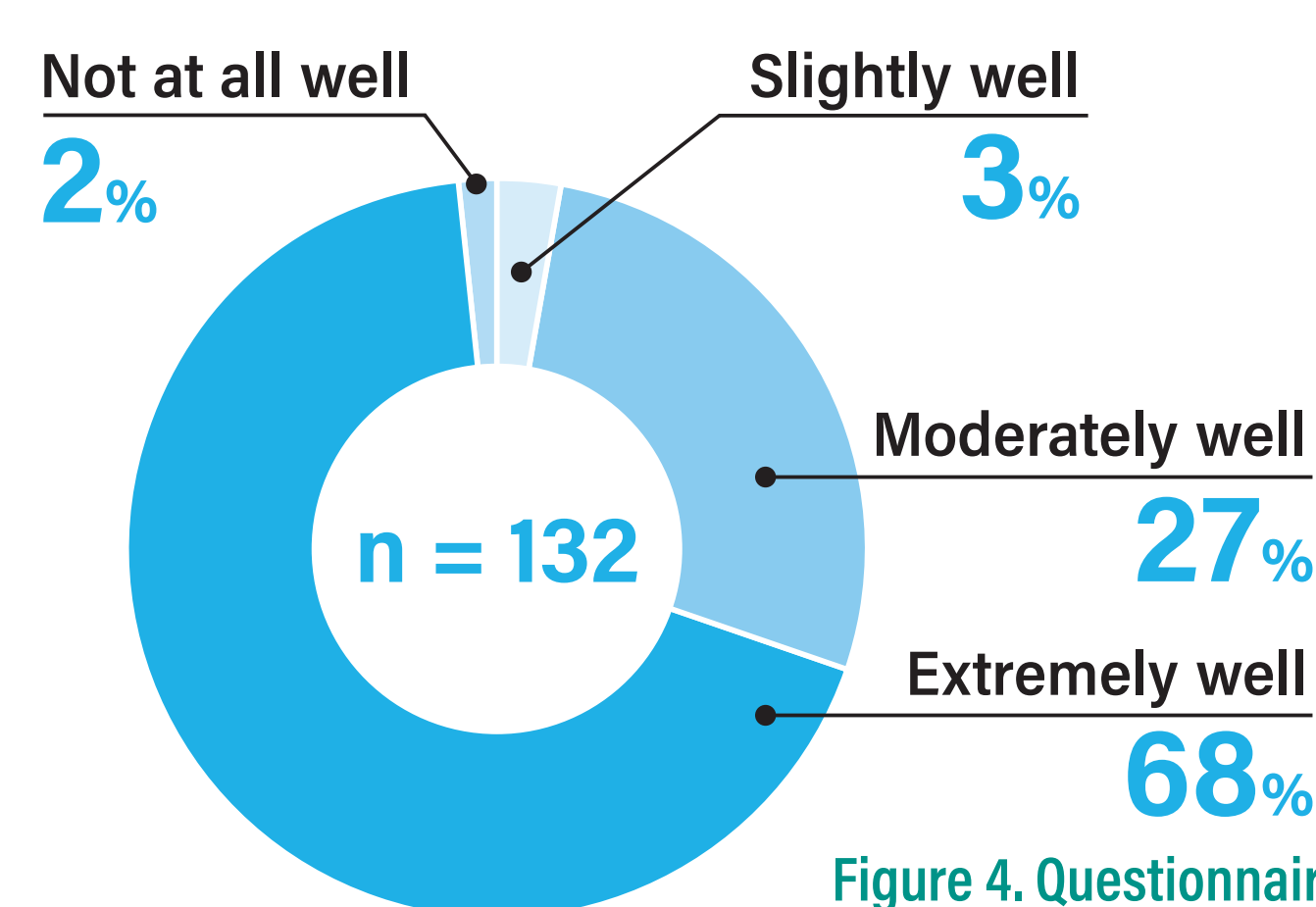


Figure 4. Questionnaire results 2 (Impression from using the test kit)

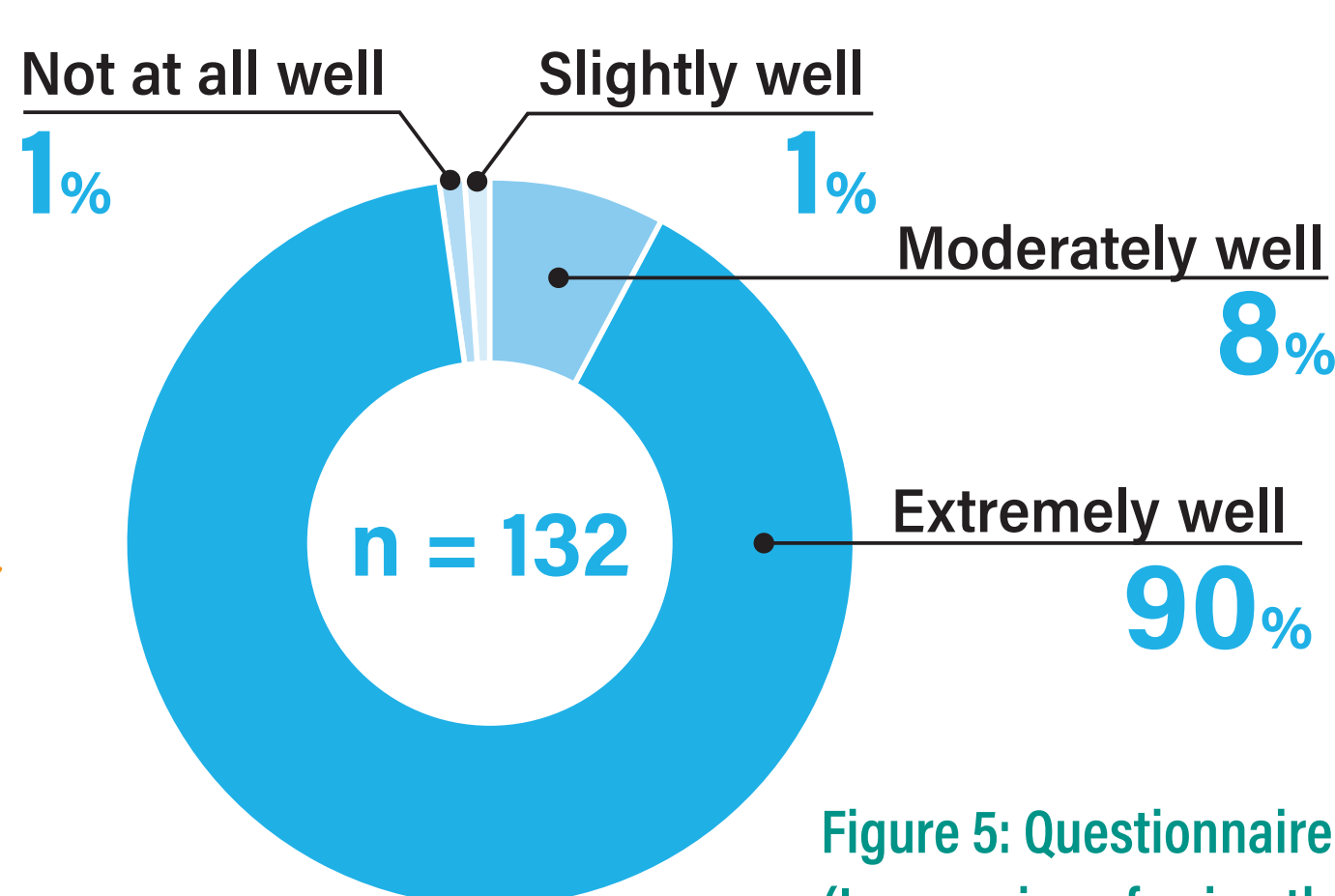


Figure 5. Questionnaire results 3 (Impression of using the TOKYO CORONA PASS)

The poster will be displayed in restaurants to raise awareness of employees to present the TOKYO CORONA PASS (a smartphone-based certificate for negative results of qualitative antigen tests with face recognition) before starting work, and customers before entering the restaurant.

## Key Features of the "TOKYO CORONA PASS" System

1. Qualitative antigen test kits that allow digital (therefore objective) judgment, rather than visual read, and a system that enables easy management of the information on test results are used in combination.
2. Users (event and restaurant operators and their guests) can easily register by reading the QR code with their smartphones and taking a selfie of their face. No personal information such as name or address is required.
3. Identity theft can be prevented as the smartphone screen (with certificate with negative results and the face photo) must be presented at the entrance of an event venue or restaurant.

## Results and Discussion

- (1) The following actions taken by the users verified the applicability of the system to socioeconomic activities.
  - People tested negative (91%): Presented the TOKYO CORONA PASS and entered the restaurant or participated in the event while the spread of infection was prevented.
  - People tested positive (9%): Used the digital version of the high-fever outpatient clinic map and were able to immediately visit a medical institution nearby where patients were accepted.
- (2) More than 95% of the users evaluated the system positively. In particular, the feature displaying the test results on a smartphone with a face photo was highly evaluated.
  - The technical procedure and comfort of using the antigen test kit were generally evaluated positively.
  - The users answered positively about the time needed for the test results. They found that the results came quickly, and no specific problems were reported.
- (3) Among the users, 9% were tested positive. They could have been "silent spreaders."
  - This suggests that the system can effectively prevent community-acquired infections.
  - Meanwhile, it has not been confirmed whether the test-positive users actually received medical care. Linkage with the high-fever outpatient clinic map should be strengthened.
- (4) While no major problems were pointed out for the system, minor improvements may be made on the points below:
  - Some users pointed out that some steps of the registration procedure, such as password settings, were somewhat complicated.
  - The feedback questionnaire response rate was low. The follow-up system needs to be improved.

## Conclusion

While COVID-19 pandemic has been making it difficult to have meetings and events, a simple and quick qualitative antigen test and a smartphone-based certificate of negative results with a face photo enable operation of restaurants and events safely and comfortably.

### ◆ Controlling the spread of infection with the TOKYO CORONA PASS

Those who are contagious to people around them (silent spreaders), including asymptomatic people, can be identified and isolated at an earlier stage, which prevents possible occurrences of clusters in restaurants and at event venues.

### ◆ Stimulating economic activities with the TOKYO CORONA PASS

Stimulation and revitalization of local economies and control of spread of infection are expected to be achieved simultaneously by making the presentation of certificate of negative test results a condition for admission to event venues and other places with a high risk of infection.