### eTable 1. Application of the automated multiple-pass method (AMPM) for the AWARDJP

| Step | Purpose |
|------|---------|
| (1) Log in and select a date | The participant logs into the system with a survey ID and password, followed by selecting the date of the meal consume. |
| (2) Mealtime and occasion | Select scene(s) of the meal taken, which can be breakfast, lunch, dinner, and (or) snacks. A question regarding the meal scene is prompted to answer about mealtime, place, and people who were eating with. |
| (2) Mealtime and occasion (Corresponding to time and occasion in AMPM) | |
| (3) Dish name selection | Search for meal names taken from a list of major categories or enter a search keyword. Dishes that correspond to the search contents are displayed from the dish database, and the respondent makes entries for each meal taken. The AWARDJP carries meal names composed of traditional dish names and name of main ingredients (for example, miso soup with tofu and seaweed). Corresponding meal names can be searched by entering the name of the dish or the main ingredients as keywords. If the dish name is not on the list, respondents can choose a similar dish. In the interviewer-administered 24HR, the investigator explains to the respondent that the dish name is not on the list and reflects the respondent's intentions to choose a similar dish. |
| (3) Dish name selection (Corresponding to quicklist in AMPM) | |
| (4) Entering cooking details | Enter the amount for each food and its details regarding the food composition. First, select the portion size (selectable portion sizes are 0.1 to 5.0 times with 0.1 times increments). A list of standard food weights per portion size selected is displayed on the next screen. Here, it is possible to edit the food composition and change the weight of each food by adding or deleting foods (including seasonings for seasoning). Also, on the next screen, a question about the presence or absence of additional seasonings such as table soy sauce will be displayed. If added, select the seasoning, and enter the amount used (select the number of tablespoons or teaspoons). |
| (4) Entering cooking details (Corresponding to detail cycle in AMPM) | |
| (5) Final confirmation screen | Dishes entered are listed in chronological order and by meal. If corrections need to be made, the respondent can return to the edit screen and make corrections to edit the details of the meal. Finally, check whether you are eating or drinking food that makes it easy to forget to enter drinks and sweets. |
| (5) Final confirmation screen (Corresponding to forgotten food list and final probe in AMPM) | |
| (6) Other | Habitual intake confirmation (whether the amount of meal consumed was more than usual or less than usual) |

24HR, 24-hour dietary recall; AMPM, Automated Multiple-Pass Method, developed by the United States Department of Agriculture.

AWARDJP, the Automated Web-based assessment System Using Recipe-Data for Japanese.
### eTable 2. Questionnaire on AWARDJP acceptability

|                                | Self-administered a | Interviewer-administered b |
|--------------------------------|----------------------|----------------------------|
| **Ease of entry** c            | How did you feel about entering your meals using this system? | How did you feel about the telephone-base assessment? |
| **Difficult part to enter** d   | Answer only if you selected "Somewhat difficult" or "Difficult" in the above question: What did you find particularly difficult? Please select all from the following items. | Answer only if you selected "Somewhat difficult" or "Difficult" in the above question: What did you find particularly difficult to tell the investigators? Please select all from the following items. |
|                                | Log in and select a date | — |
|                                | Meal time and occasion | Dish name selection |
|                                | Dish name selection | Telling cooking details |
|                                | Entering cooking details | Final confirmation screen |
|                                | Final confirmation screen | Others |
|                                | Others | |
| **Ease of food selection** c    | How did you feel about the food choices you made when entering your meal? | Did you tell the telephone investigator exactly what kind of food you ate? |
| **Availability of dish options** c | Was the dish you wanted to enter mostly included in the options? | Was the dish respondent wanted to enter mostly included in the options? (Interviewer answered) |
| **Alternative options when dishes were not available** e | Answer only if you selected "somewhat disagree" or "disagree" in the above question: How did you enter the recipes that were not included in the options? | Answer only if you selected "somewhat disagree" or "disagree" in the above question: (Interviewer answered) |
|                                | I was able to add it myself as a new dish | Respondent was able to add it myself as a new dish |
|                                | I chose a similar dish | Respondent chose a similar dish |
|                                | I added/deleted foods of similar recipes | Respondent added/deleted foods of similar recipes |
|                                | I did not make an entry | Respondent did not make an entry |
|                                | Others | Others |
| **Identification of the amount you consumed** e | Were you able to make roughly accurate entries of the amount you consumed? | Were you able to accurately tell the telephone investigators of the amount you consumed? |

AWARDJP, Automated Web-based assessment System Using Recipe-Data for Japanese.

a Self-administered web-based dietary 24-hour recall.
b Interviewer-administered telephone-based 24-hour recall.
c Select one option
d Select multiple options
### eTable 3A. Questionnaire on AWARDJP acceptability: comparison by sex and age group in self-administered 24HR\(^b\) (n=457)

|                       | Total | <50 years | 50–59 years | 60–69 years | ≥70 years |
|-----------------------|-------|-----------|-------------|-------------|-----------|
|                       | n    | %         | n     | %         | n    | %       | n    | %       | n    | %       | n    | %       |
| **Ease of entry**     |      |           |       |           |      |         |       |         |      |         |      |         |
| Easy                  | 27   | 10.8      | 11   | 14.7      | 10   | 10.4    | 6    | 9.7     | 6    | 10.3    | 0    | 0.0     |
| Relatively easy       | 60   | 24.1      | 25   | 33.3      | 25   | 26.0    | 9    | 14.5    | 10   | 17.2    | 5    | 22.7    |
| Somewhat difficult    | 124  | 49.8      | 33   | 44.0      | 50   | 52.1    | 38   | 61.3    | 31   | 53.5    | 11   | 50.0    |
| Difficult             | 38   | 15.3      | 6    | 8.0       | 11   | 11.5    | 9    | 14.5    | 11   | 19.0    | 6    | 27.3    |
| **Difficult part to enter** |      |           |       |           |      |         |       |         |      |         |      |         |
| Log in and select a date | 11  | 6.8       | 3    | 7.7       | 1    | 1.6     | 4    | 8.5     | 3    | 7.1     | 0    | 0.0     |
| Mealt ime and occasion | 17   | 10.5      | 8    | 20.5      | 3    | 4.9     | 4    | 8.5     | 2    | 4.8     | 2    | 11.8    |
| Dish name selection   | 116  | 71.6      | 28   | 71.8      | 44   | 72.1    | 38   | 80.9    | 34   | 81.0    | 14   | 82.4    |
| Entering cooking details | 91  | 56.2      | 17   | 43.6      | 40   | 65.6    | 31   | 66.0    | 24   | 57.1    | 12   | 70.6    |
| Final confirmation screen | 10  | 6.2       | 1    | 2.6       | 4    | 6.6     | 2    | 4.3     | 3    | 7.1     | 1    | 5.9     |
| Others                | 12   | 7.4       | 3    | 7.7       | 5    | 6.6     | 1    | 3.2     | 1    | 3.9     | 1    | 7.7     |
| **Ease of food selection** |      |           |       |           |      |         |       |         |      |         |      |         |
| Easy                  | 30   | 22.1      | 14   | 31.8      | 11   | 18.0    | 8    | 19.5    | 5    | 19.2    | 1    | 7.7     |
| Relatively easy       | 57   | 41.9      | 19   | 43.2      | 28   | 45.9    | 18   | 43.9    | 9    | 34.6    | 7    | 53.9    |
| Somewhat difficult    | 40   | 29.4      | 8    | 18.2      | 18   | 29.5    | 15   | 36.6    | 11   | 42.3    | 4    | 30.8    |
| Difficult             | 9    | 6.6       | 4    | 6.8       | 6    | 6.6     | 0    | 0.0     | 1    | 3.9     | 1    | 7.7     |
| **Availability of dish options** |      |           |       |           |      |         |       |         |      |         |      |         |
| Agree                 | 47   | 35.1      | 19   | 43.2      | 21   | 35.0    | 11   | 28.2    | 7    | 26.9    | 3    | 25.0    |
| Somewhat agree        | 59   | 44.0      | 18   | 40.9      | 29   | 48.3    | 14   | 35.9    | 10   | 38.5    | 7    | 58.3    |
| Somewhat disagree     | 22   | 16.4      | 6    | 13.6      | 8    | 13.3    | 14   | 35.9    | 7    | 26.9    | 2    | 16.7    |
| Disagree              | 6    | 4.5       | 1    | 2.3       | 2    | 3.3     | 0    | 0.0     | 2    | 7.7     | 0    | 0.0     |
| **Identification of the amount you consumed** |      |           |       |           |      |         |       |         |      |         |      |         |
| Agree                 | 57   | 48.3      | 20   | 47.6      | 26   | 51.0    | 20   | 54.1    | 8    | 38.1    | 5    | 41.7    |
| Somewhat agree        | 44   | 37.3      | 17   | 40.5      | 19   | 37.3    | 10   | 27.0    | 8    | 38.1    | 5    | 41.7    |
| Somewhat disagree     | 16   | 13.6      | 4    | 9.5       | 6    | 11.8    | 7    | 18.9    | 5    | 23.8    | 2    | 16.7    |
| Disagree              | 1    | 0.9       | 1    | 2.4       | 0    | 0.0     | 0    | 0.0     | 0    | 0.0     | 0    | 0.0     |

\(\chi^2\) test: Fisher's exact test (direct method) is used when the number of cells with expected values less than 5 exceeded 20% of the total.

\(P\) value: \(P\) value of \(\chi^2\) test or Fisher's exact test (direct method, \(P\) value is not shown when the sample is too small to calculate a \(\chi^2\) test).

*Missing values are excluded for each item.*

\(\text{AHR}: \text{24-hour dietary recall; AWARDJP: Automated Web-based assessment System Using Recipe-Data for Japanese; N/A: not applicable.}

The "total" percentage is expressed as a percentage of the total number of participants. The percentage of men/women responses is expressed as the percentage of the total number of those who used each method.

The denominator is the number of subjects who selected "Somehow difficult" or "Difficult" in the above question.

The denominator is the number of subjects who selected "Somewhat disagree" or "Disagree" in the above question.

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\(\text{24HR: 24-hour dietary recall; AWARDJP: Automated Web-based assessment System Using Recipe-Data for Japanese; N/A: not applicable.}

The "total" percentage is expressed as a percentage of the total number of participants. The percentage of men/women responses is expressed as the percentage of the total number of those who used each method.

Missing values are excluded for each item.

* Self-administered web-based dietary 24-hour recall.

* Interviewer-administered telephone-based 24-hour recall.

* \(\text{J2 test: Fisher's exact test (direct method) is used when the number of cells with expected values less than 5 exceeded 20% of the total.}

* The denominator is the number of subjects who selected "Somehow difficult" or "Difficult" in the above question.

* The denominator is the number of subjects who selected "Somewhat disagree" or "Disagree" in the above question.
### eTable 3B. Questionnaire on AWARDJP acceptability: comparison by sex and age group in interviewer-administered 24HR (n=518)

|                              | Total | <50 years | 50–59 years | 60–69 years | ≥70 years |
|------------------------------|-------|-----------|-------------|-------------|----------|
| **Ease of entry**            |       |           |             |             |          |
| Easy                         | 103   | 62.4      | 210         | 67.1        | 0.277    |
| Relatively easy              | 41    | 24.9      | 77          | 24.6        |          |
| Somewhat difficult           | 16    | 9.7       | 23          | 7.4         |          |
| Difficult                    | 5     | 3.0       | 3           | 1.0         |          |
| **Difficult part to enter**  |       |           |             |             |          |
| Log in and select a date     |       |           |             |             |          |
| N/A                          | 0     | 0.0       | 1           | 3.8         | 1.000    |
| Meal time and occasion       | 9     | 42.9      | 4           | 15.4        | 0.063    |
| Dish name selection          | 7     | 33.3      | 12          | 46.2        | 0.373    |
| Telling cooking details      | 0     | 0.0       | 0           | 0.0         |          |
| Final confirmation screen    | 5     | 23.8      | 7           | 26.9        | 0.808    |
| Others                       | 120   | 80.5      | 234         | 78.8        | 0.577    |
| **Ease of food selection**   |       |           |             |             |          |
| Agree                        | 109   | 68.6      | 182         | 61.7        | 0.388    |
| Somewhat agree               | 42    | 26.4      | 92          | 31.2        |          |
| Somewhat disagree            | 7     | 4.4       | 20          | 6.8         |          |
| **Availability of dish options** |      |          |             |             |          |
| Agree                        | 128   | 78.5      | 249         | 80.1        | 0.735    |
| Somewhat agree               | 31    | 19.0      | 52          | 16.7        |          |
| Somewhat disagree            | 3     | 1.8       | 9           | 2.9         |          |
| **Alternative options when dishes were not available** | | | | | |
| I was able to add it myself as a new dish | 0 | 0.0 | 0 | 0.0 | 0.753 |
| I chose a similar dish       | 2     | 25.0      | 4           | 19.0        |          |
| I added/deleted foods of similar recipes | 2 | 25.0 | 9 | 42.9 |          |
| I did not make an entry      | 0     | 0.0       | 0           | 0.0         |          |
| **Identification of the amount you consumed** | | | | | |
| Agree                        | 128   | 78.5      | 249         | 80.1        | 0.735    |
| Somewhat agree               | 31    | 19.0      | 52          | 16.7        |          |
| Somewhat disagree            | 3     | 1.8       | 9           | 2.9         |          |
| Disagree                     | 1     | 0.6       | 1           | 0.3         |          |

24HR: 24-hour dietary recall; AWARDJP: Automated Web-based assessment System Using Recipe-Data for Japanese; N/A: not applicable.

The "total" percentage is expressed as a percentage of the total number of participants. The percentage of men/women responses is expressed as the percentage of the total number of those who used each method.

Missing values are excluded for each item.

* Self-administered web-based dietary 24-hour recall.

[1] k2 test: Fisher's exact test (direct method) is used when the number of cells with expected values less than 5 exceed 20% of the total.

[2] The denominator is the number of subjects who selected "Somewhat difficult" or "Difficult" in the above question.

[3] The denominator is the number of subjects who selected "Somewhat disagree" or "Disagree" in the above question.