**eTable 1.** Number and proportion of missing values for non-Japanese and Japanese patients at TMDU’s emergency department from 2010–2019 (except 2012)

| Covariates                      | Non-Japanese (N=373) n (%) | Japanese (N=16,231) n (%) |
|---------------------------------|-----------------------------|---------------------------|
| Sex                             | 8 (2.1%)                    | 233 (1.4%)                |
| Age                             | 1 (0.3%)                    | 31 (0.2%)                 |
| Survival/Mortality              | 33 (8.8%)                   | 1,368 (8.4%)              |
| Visit or Admission/Discharge dates | 37 (9.9%)                   | 1,845 (11.4%)             |
| GCS                             | 16 (4.3%)                   | 802 (4.9%)                |
| Diagnosis                       | 5 (1.3%)                    | 231 (1.4%)                |

GCS, Glasgow Coma Scale.
Note: Some were duplicates
| Ethnicity       | Categorization                                                                 | Examples\(^a\)                  | n   | %   |
|----------------|--------------------------------------------------------------------------------|----------------------------------|-----|-----|
| East Asian     | Chinese or Korean Names that are written in Katakana or Kanji, are included in the last name. | Chu, Chen                        | 189 | 58.2|
| South Asian    | Names that are of Asian descent, but not East Asian                            | Nguyen, Huong, Patel, Singh      | 50  | 15.4|
| South East Asian Middle East |                                                                                       |                                   |     |      |
| Caucasian Hispanic | Western names for both first and last names and names with Spanish connotation | Robert Johnson, Phillip Smith, Carlos Sanchez | 68  | 20.9|
| Unspecified    | Non-Japanese names with Japanese last names (as this may be due to marriage)    | Alexander Kawaguchi              | 18  | 5.5 |

\(^a\) All example names do not reflect actual patient names
**eTable 3.** Disease diagnosis breakdown (*Eleventh Edition of the Principal Diagnosis Short List for Emergency Medicine*)
CPA, cardiopulmonary arrest; CPAOA, cardiopulmonary arrest on arrival; ICD, International

| Diagnosis          | WHO ICD-11 Name                                                                 |
|--------------------|---------------------------------------------------------------------------------|
| Injury             | Injury, poisoning or certain other consequences of external causes: injuries     |
| Gastrointestinal   | Diseases of the digestive system (gastrointestinal; including liver, gallbladder disease) |
| Cerebrovascular    | Diseases of the nervous system: cerebrovascular diseases                         |
| Cardiovascular     | Diseases of the circulatory system                                              |
| Overdose/Toxin     | Injury, poisoning or certain other consequences of external causes: harmful effects of substances including poisons, toxins |
| CPAOA              | Symptoms, signs or clinical findings, not elsewhere classified: cardiopulmonary arrest on arrival |
| Neurological       | Diseases of the nervous system                                                  |
| Pulmonary          | Diseases of the respiratory system                                              |
| Infectious         | Certain infectious or parasitic diseases                                         |
| Endocrine          | Endocrine, nutritional, or metabolic diseases                                   |
| CPA                | Symptoms, signs or clinical findings, not elsewhere classified: cardiopulmonary arrest at hospital/after arrival |
| Anaphylaxis        | Diseases of the immune system: allergic or hypersensitivity conditions: anaphylaxis |
| Burns              | Injury, poisoning or certain other consequences of external causes: burns        |
| Self-Harm          | External causes of morbidity or mortality: self-harm                            |
| Hemo-Immuno        | Diseases of the blood or blood forming organs and diseases of the immune system |
| Psychiatry         | Mental, behavioral or neurodevelopmental disorders                               |
| Genitourinary      | Any disease characterized by pathological changes to the genitourinary system    |
| Other              | Unclassified                                                                     |
Classification of Diseases; WHO, World Health Organization;
* Incorporates the WHO’s International Classification of Diseases
**eTable 4.** Length of stay stratified by age for patients diagnosed with cardiovascular disease, anaphylaxis, burns, or infectious disease

| Condition          | Percentage | Length of Stay |
|--------------------|------------|----------------|
|                    | Non-Japanese | Japanese | Non-Japanese | Japanese |
|                    | n (%)       | n (%)   | Median (IQR) | Median (IQR) |
| Cardiovascular     | Total       | 14 (4.3%)  | 1,097 (8.2%) | 3.5 (5.0) | 3.0 (11.0) |
|                    | 0–14        | 0 (0.0%)   | 4 (0.03%)    | - (-)  | 2.5 (5.5) |
|                    | 15–64       | 10 (3.1%)  | 377 (2.8%)   | 3.5 (1.8) | 4.0 (10.0) |
|                    | ≥64         | 4 (1.2%)   | 715 (5.3%)   | 5.0 (6.5) | 3.0 (12.0) |
| Anaphylaxis        | Total       | 21 (6.5%)  | 176 (1.3%)   | 2.0 (0.0) | 2.0 (1.0) |
|                    | 0–14        | 4 (1.2%)   | 10 (0.1%)    | 2.0 (0.3) | 2.0 (1.0) |
|                    | 15–64       | 17 (5.2%)  | 139 (1.0%)   | 2.0 (1.0) | 2.0 (1.0) |
|                    | ≥64         | 0 (0.0%)   | 27 (0.2%)    | - (-)  | 2.0 (1.0) |
| Burns              | Total       | 6 (1.8%)   | 76 (0.6%)    | 1.5 (1.0) | 3.0 (9.3) |
|                    | 0–14        | 1 (0.3%)   | 9 (0.1%)     | 2.0 (0.0) | 1.0 (8.0) |
|                    | 15–64       | 5 (1.5%)   | 42 (0.3%)    | 1.0 (1.0) | 2.0 (6.0) |
|                    | ≥64         | 0 (0.0%)   | 25 (0.2%)    | - (-)  | 8.0 (12.0) |
| Infectious         | Total       | 17 (5.2%)  | 486 (3.6%)   | 4.0 (5.0) | 7.0 (11.0) |
|                    | 0–14        | 1 (0.3%)   | 2 (0.01%)    | 1.0 (0.0) | 7.5 (3.5) |
|                    | 15–64       | 12 (3.7%)  | 158 (1.2%)   | 4.0 (5.8) | 6.0 (13.8) |
|                    | ≥64         | 4 (1.2%)   | 326 (2.4%)   | 4.0 (1.5) | 7.0 (10.8) |

IQR, interquartile range.

“-” denotes n=0 or 1 for either the Non-Japanese or Japanese sample, and thus cannot be computed.

TMDU’s emergency department from 2010–2019 (except 2012, N=13,695)
### Table 5. Percentage of diagnosis by ethnicity at TMDU’s emergency department from 2010–2019 (except 2012)

| Diagnosis          | Japanese (N=13,370) | Caucasian/Hispanic (N=68) | East Asian (N=189) | South/Southeast Asian/Middle Eastern (N=50) | Unspecified (N=18) |
|--------------------|---------------------|---------------------------|--------------------|---------------------------------------------|-------------------|
|                    | n (%)               | n (%)                     | n (%)              | n (%)                                       | n (%)             |
| Injury             | 2,892 (21.6%)       | 15 (22.1%)                | 37 (19.6%)         | 8 (16.0%)                                   | 3 (16.7%)         |
| Gastrointestinal   | 2,000 (15.0%)       | 7 (10.3%)                 | 38 (20.1%)         | 10 (20.0%)                                  | 1 (5.6%)          |
| Cerebrovascular    | 1,423 (10.6%)       | 9 (13.2%)                 | 20 (10.6%)         | 6 (12.0%)                                   | 2 (11.1%)         |
| Cardiovascular     | 1,097 (8.2%)        | 3 (4.4%)                  | 10 (5.3%)          | 0 (0.0%)                                    | 1 (5.6%)          |
| Overdose/Toxin     | 965 (7.2%)          | 3 (4.4%)                  | 12 (6.3%)          | **8 (16.0%)**                               | **5 (27.8%)**     |
| CPAOA              | 803 (6.0%)          | 5 (7.4%)                  | 9 (4.8%)           | 3 (6.0%)                                    | 0 (0.0%)          |
| Neurological       | 806 (6.0%)          | 8 (11.8%)                 | 5 (2.6%)           | 0 (0.0%)                                    | 1 (5.6%)          |
| Pulmonary          | 612 (4.6%)          | 1 (1.5%)                  | 9 (4.8%)           | 4 (8.0%)                                    | 2 (11.1%)         |
| Infectious         | 486 (3.6%)          | 4 (5.9%)                  | 11 (5.8%)          | 2 (4.0%)                                    | 0 (0.0%)          |
| Endocrine          | 286 (2.1%)          | 3 (4.4%)                  | 2 (1.1%)           | 1 (2.0%)                                    | 0 (0.0%)          |
| CPA                | 270 (2.0%)          | 1 (1.5%)                  | 4 (2.1%)           | 0 (0.0%)                                    | 0 (0.0%)          |
| Anaphylaxis        | 176 (1.3%)          | **6 (8.8%)**              | **12 (6.3%)**      | 1 (2.0%)                                    | **2 (11.1%)**     |
| Burns              | 76 (0.6%)           | 1 (1.5%)                  | 2 (1.1%)           | **3 (6.0%)**                                | 0 (0.0%)          |
| Self-Harm          | 66 (0.5%)           | 0 (0.0%)                  | 0 (0.0%)           | 1 (2.0%)                                    | 1 (5.6%)          |
| Hemo-Immuno        | 59 (0.4%)           | 0 (0.0%)                  | 1 (0.5%)           | 0 (0.0%)                                    | 0 (0.0%)          |
| Psychiatry         | 76 (0.6%)           | 0 (0.0%)                  | 2 (1.1%)           | 0 (0.0%)                                    | 0 (0.0%)          |
| Genitourinary      | 25 (0.2%)           | 0 (0.0%)                  | 0 (0.0%)           | 0 (0.0%)                                    | 0 (0.0%)          |
| Other              | 1,252 (9.4%)        | 2 (2.9%)                  | 15 (7.9%)          | 3 (6.0%)                                    | 0 (0.0%)          |

CPA, cardiopulmonary arrest; CPAOA, cardiopulmonary arrest on arrival.

Analyzed using Chi-square

“-” denotes n= 0 or 1 for either the Non-Japanese or Japanese sample, and thus cannot be computed

*p-values < 0.05 are shown in bold
| Diagnosis               | Japanese n (%) | Caucasian/Hispanic n (%) | East Asian n (%) | South Asian/Southeast Asian/Middle Eastern n (%) | Unspecified n (%) |
|------------------------|----------------|--------------------------|------------------|-----------------------------------------------|------------------|
| Total                  | 1,539 (11.5%)  | 8 (11.8%)                | 21 (11.1%)       | 5 (10.0%)                                      | 0 (0.0%)         |
| Injury                 | 111 (0.8%)     | 1 (1.5%)                 | 5 (2.6%)         | 1 (2.0%)                                       | 0 (0.0%)         |
| Gastrointestinal       | 82 (0.6%)      | 0 (0.0%)                 | 0 (0.0%)         | 0 (0.0%)                                       | 0 (0.0%)         |
| Cerebrovascular        | 142 (1.1%)     | 1 (1.5%)                 | 2 (1.1%)         | 1 (2.0%)                                       | 0 (0.0%)         |
| Cardiovascular         | 96 (0.7%)      | 0 (0.0%)                 | 0 (0.0%)         | - (-)                                          | 0 (0.0%)         |
| Overdose/Toxin         | 11 (0.1%)      | 0 (0.0%)                 | 0 (0.0%)         | 0 (0.0%)                                       | 0 (0.0%)         |
| CPAOA                  | 740 (5.5%)     | 4 (5.9%)                 | 6 (3.2%)         | 3 (6.0%)                                       | - (-)            |
| Neurological           | 11 (0.1%)      | 0 (0.0%)                 | 0 (0.0%)         | - (-)                                          | 0 (0.0%)         |
| Pulmonary              | 57 (0.4%)      | 0 (0.0%)                 | 1 (0.5%)         | 0 (0.0%)                                       | 0 (0.0%)         |
| Infectious             | 52 (0.4%)      | 0 (0.0%)                 | 1 (0.5%)         | 0 (0.0%)                                       | - (-)            |
| Endocrine              | 13 (0.1%)      | 0 (0.0%)                 | 0 (0.0%)         | 0 (0.0%)                                       | - (-)            |
| CPA                    | 101 (0.8%)     | 1 (1.5%)                 | 0 (0.0%)         | - (-)                                          | - (-)            |
| Anaphylaxis            | 3 (0.02%)      | 0 (0.0%)                 | 0 (0.0%)         | 0 (0.0%)                                       | 0 (0.0%)         |
| Burns                  | 3 (0.02%)      | 0 (0.0%)                 | 0 (0.0%)         | 0 (0.0%)                                       | - (-)            |
| Self-Harm              | 37 (0.3%)      | - (-)                    | - (-)            | 0 (0.0%)                                       | 0 (0.0%)         |
| Hemo-Immuno            | 5 (0.04%)      | - (-)                    | 0 (0.0%)         | - (-)                                          | - (-)            |
| Psychiatry             | 0 (0.0%)       | - (-)                    | 0 (0.0%)         | - (-)                                          | - (-)            |
| Genitourinary          | 0 (0.0%)       | - (-)                    | - (-)            | - (-)                                          | - (-)            |
| Other                  | 75 (0.6%)      | 0 (0.0%)                 | 0 (0.0%)         | 0 (0.0%)                                       | - (-)            |

CPA, cardiopulmonary arrest; CPAOA, cardiopulmonary arrest on arrival.

“-” denotes n= 0 or 1 for either the Non-Japanese or Japanese sample, and thus cannot be computed.

Analyzed with Fisher test

*p-values < 0.05 are shown in bold
| Diagnosis                  | Japanese Median (IQR) | Caucasian Median (IQR) | East Asian Median (IQR) | South Asian Median (IQR) | Unspecified Median (IQR) |
|---------------------------|-----------------------|------------------------|-------------------------|--------------------------|--------------------------|
| Total                     | 3.0 (8.0)             | 2.0 (6.3)              | 3.0 (4.0)               | 3.0 (7.8)                | 2.0 (1.0)                |
| Injury                    | 3.0 (6.0)             | 3.0 (10.5)             | 2.0 (2.0)               | 2.0 (15.5)               | 3.0 (5.0)                |
| Gastrointestinal          | 6.0 (8.0)             | 7.0 (8.0)              | 5.0 (5.8)               | 5.5 (4.8)                | 2.0 (0.0)                |
| Cerebrovascular           | 6.0 (12.0)            | 5.0 (17.0)             | 4.0 (10.5)              | 4.5 (14.8)               | 1.0 (0.0)                |
| Cardiovascular            | 3.0 (11.0)            | 3.0 (0.5)              | 4.5 (7.0)               | - (-)                    | 3.0 (0.0)                |
| Overdose/Toxin            | 2.0 (2.0)             | 1.0 (0.5)              | 2.0 (1.0)               | 1.5 (1.0)                | 2.0 (1.0)                |
| CPAOAA                    | 1.0 (0.0)             | 1.0 (5.0)              | **2.0 (11.0)**          | **2.0 (1.0)**            | - (-)                    |
| Neurological              | 2.0 (3.0)             | 1.5 (1.0)              | 1.0 (1.0)               | - (-)                    | 1.0 (0.0)                |
| Pulmonary                 | 5.0 (8.0)             | 1.0 (0.0)              | 4.0 (4.0)               | 5.5 (7.5)                | 5.0 (2.0)                |
| Infectious                | 7.0 (11.0)            | 3.0 (3.8)              | 4.0 (4.0)               | 2.0 (1.0)                | - (-)                    |
| Endocrine                 | 4.0 (9.0)             | 5.0 (1.0)              | 4.5 (3.5)               | 7.0 (0.0)                | - (-)                    |
| CPA                       | 4.0 (9.0)             | 2.0 (0.0)              | 4.0 (1.5)               | - (-)                    | - (-)                    |
| Anaphylaxis               | 2.0 (1.0)             | 1.5 (1.0)              | 2.0 (0.0)               | 4.0 (0.0)                | 2.0 (0.0)                |
| Burns                     | 3.0 (9.3)             | 6.0 (0.0)              | 1.5 (0.5)               | 1.0 (0.5)                | - (-)                    |
| Self-Harm                 | 1.0 (1.0)             | - (-)                  | - (-)                   | 8.0 (0.0)                | 1.0 (0.0)                |
| Hemo-Immunoo              | 6.0 (9.5)             | - (-)                  | 2.0 (0.0)               | - (-)                    | - (-)                    |
| Psychiatry                | 2.0 (3.3)             | - (-)                  | 1.0 (0.0)               | - (-)                    | - (-)                    |
| Genitourinary             | 6.0 (12.0)            | - (-)                  | - (-)                   | - (-)                    | - (-)                    |
| Other                     | 3.0 (7.0)             | 3.0 (10.5)             | **2.0 (2.0)**           | 2.0 (15.5)               | - (-)                    |

CPA, cardiopulmonary arrest; CPAOA, cardiopulmonary arrest on arrival; IQR, interquartile range; SD, standard deviation.

Analyzed with Mann-Whitney U Test

“-” denotes n= 0 or 1 for either the Non-Japanese or Japanese sample, and thus cannot be computed

*p-values<0.05 are shown in bold