|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Development  (N = 54080, 11.3% died) |  | Validation  (N = 43942, 10.7% died) |  |
|  | Median (IQR) | % Missing | Median (IQR) | % Missing |
| Age (years) | 81 (72 - 87) | 0 | 80 (71 - 87) | 0 |
| Creatinine (μmol/L) | 107 (82 - 146) | 0.3 | 106 (82 - 146) | 0.3 |
| Sodium (mmol/L) | 138 (135 - 141) | 0.6 | 138 (135 - 141) | 0.4 |
| Potassium (mmol/L) | 4.2 (3.9 - 4.6) | 2.1 | 4.2 (3.8 - 4.6) | 2.2 |
| Urea (mmol/L) | 9.7 (6.8 - 15.1) | 2.6 | 9.7 (6.8 - 5.4) | 3.3 |
| SBP at admission (mmHg) | 131 (115 - 151) | 4.1 | 131 (115 - 150) | 4.7 |
| Heart rate at admission (/min) | 84 (70 - 100) | 4.0 | 83 (70 - 100) | 4.1 |
| Haemoglobin (g/dL) | 11.9 (10.5- 13.4) | 1.4 | 11.9 (10.5 - 13.4) | 2.5 |
|  |  |  |  |  |
|  | N (%) | % Missing | N (%) | % Missing |
| Female | 24728 (45.7%) | 0 | 19879 (45.2%) | 0 |
| Male | 29352 (54.3%) |  | 24063 (54.8%) |  |
| Previous diagnosis of diabetes |  | 0.6 |  | 0.5 |
| Yes | 18277 (34.0%) |  | 15131 (34.6%) |  |
| No | 35469 (66.0%) |  | 28575 (65.4%) |  |
| Previous diagnosis of COPD |  | 1.0 |  | 1.2 |
| Yes | 9924 (18.5%) |  | 8004 (18.4%) |  |
| No | 43598 (81.5%) |  | 35429 (81.6%) |  |
| Previous diagnosis of valve disease |  | 2.0 |  | 2.6 |
| Yes | 13891 (26.2%) |  | 12463 (29.1%) |  |
| No | 39098 (73.8%) |  | 30350 (70.9%) |  |
| Previous ischaemic heart disease |  | 1.8 |  | 1.8 |
| Yes | 21348 (40.2%) |  | 17290 (40.1%) |  |
| No | 31749 (59.8%) |  | 25841 (59.9%) |  |
| NYHA |  | 4.4 |  | 4.4 |
| I/II | 10895 (21.1%) |  | 8712 (20.7%) |  |
| III/IV | 40781 (78.9%) |  | 33287 (79.3%) |  |
| Peripheral oedema |  | 5.2 |  | 5.5 |
| No/mild | 23618 (46.1%) |  | 18781 (45.2%) |  |
| Moderate/severe | 27662 (53.9%) |  | 22760 (54.8%) |  |
| Atrial fibrillation |  | 5.8 |  | 6.1 |
| Yes | 23122 (45.4%) |  | 18969 (46.0%) |  |
| No | 27808 (54.6%) |  | 22309 (54.0%) |  |
| Echocardiogram |  | 0.6 |  | 0.7 |
| LV systolic dysfunction | 26918 (50.1%) |  | 21725 (49.8%) |  |
| Valve disease | 7784 (14.5%) |  | 6927 (15.9%) |  |
| Others | 7614 (14.2%) |  | 6511 (14.9%) |  |
| No abnormality | 2238 (4.2%) |  | 1790 (4.1%) |  |
| No echo | 9215 (17.1%) |  | 6681 (15.3%) |  |

Table 1. Baseline characteristics of the patients in the derivation (1st April 2017 and 31st March 2018) and validation (1st April 2018 and 31st March 2019) cohorts of patients. SBP is systolic blood pressure; COPD is chronic obstructive airways disease; NYHA is New York Heart Association class of symptoms.