**Supplemental Material 1. Clinical characteristics of the patients with ST segment elevation myocardial infarction**

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|  | Control group(N=180) | Season 1(N=200) | Season 2(N=301) | Season 3(N=480) |
| Male sex (n, %)  | 126 (70.0) | 167 (83.5) | 242 (80.4) | 374 (77.9) |
| Age (years) | 62 [53 ─ 72] | 63 [52 ─ 72] | 61 [52 ─ 73] | 65 [56 ─ 79] |
| Body mass index (kg/m2) | 23.5 [21.5 ─ 25.3] | 24.2 [22.0 ─ 26.0] | 23.8 [22.0 ─ 25.6] | 23.8 [21.9 ─ 25.6] |
| Systolic blood pressure (mmHg) | 110 [100 ─ 130] | 123 [110 ─ 140] | 120 [104 ─ 133] | 120 [105 ─ 133] |
| Diastolic blood pressure (mmHg) | 70 [60 ─ 80] | 72 [62 ─ 81] | 71 [62 ─ 80] | 70 [61 ─ 78] |
| Previous PCI (n, %) | 22 (12.2) | 33 (16.5) | 30 (10.0) | 55 (11.5) |
| Prior myocardial infarction (n, %) | 19 (10.6) | 29 (14.5) | 29 (9.6) | 46 (9.6) |
| Comorbid diseases (n, %) |  |  |  |  |
| Hypertension  | 92 (51.1) | 119 (59.5) | 151 (50.2) | 249 (51.9) |
| Diabetes mellitus  | 66 (36.7) | 70 (35.0) | 106 (35.2) | 176 (36.7) |
| Dyslipidemia  | 16 (8.9) | 77 (38.5) | 135 (44.9) | 151 (31.5) |
| Smoking  | 93 (51.7) | 92 (46.0) | 167 (55.5) | 199 (41.5) |
| Prior stroke  | 12 (6.7) | 20 (10.0) | 34 (11.3) | 45 (9.4) |
| COPD / bronchial asthma  | 7 (3.9) | 4 (2.0) | 10 (3.3) | 18 (3.8) |
| Chronic kidney disease, stage 4 or 5  | 5 (2.8) | 10 (5.0) | 14 (4.7) | 15 (3.1) |
| Symptom-to-balloon time (min) | 256 [180 ─ 407] | 196 [120 ─ 351] | 190 [118 ─ 302] | 188 [118 ─ 288] |
| Door-to-balloon time (min) | 86 [64 ─ 116] | 52 [40 ─ 63] | 50 [41 ─ 58] | 57 [48 ─ 64] |
| FMC-to-balloon time (min) | 134 [85 ─ 188] | 74 [51 ─ 131] | 85 [51 ─ 147] | 81 [56 ─ 138] |
| Location of referral hospital (n, %) |  |  |  |  |
| Busan Metropolitan City | 86 (47.8) | 98 (49.0) | 107 (35.5) | 193 (40.2) |
| Gyeongnam Province  | 33 (18.3) | 38 (19.0) | 108 (35.9) | 104 (21.7) |
| Culprit artery (n, %)  |  |  |  |  |
| Left main  | 1 (0.6) | 7 (3.5) | 4 (1.3) | 16 (3.3) |
| Left anterior descending  | 97 (53.9) | 108 (54.0) | 166 (55.1) | 259 (54.0) |
| Left circumflex  | 15 (8.3) | 22 (11.0) | 27 (9.0) | 44 (9.2) |
| Right coronary  | 67 (37.2) | 63 (31.5) | 104 (34.6) | 161 (33.5) |
| Cardiogenic shock (n, %) | 45 (25.0) | 79 (39.5) | 134 (26.2) | 214 (44.6) |
| ECMO  | 5 (2.8) | 6 (3.0) | 6 (2.0) | 9 (1.9) |
| CCU admission duration (days) | 3 [2 ─ 4] | 3 [2 ─ 4] | 3 [2 ─ 4] | 3 [2 ─ 4] |
| LVEF at discharge (%) | 47.5 [42.5 ─ 52.0] | 47.0 [42.5 ─ 57.5] | 47.0 [42.5 ─ 57.5] | 47.0 [42.0 ─ 57.0] |
| LVEF ≤ 35% at discharge (n, %) | 15 (8.7) | 15 (8.2) | 18 (6.3) | 33 (7.5) |
| LV end diastolic dimension (mm) | 48 [45 ─ 51] | 48 [46 ─ 50] | 49 [46 ─ 50] | 49 [46 ─ 51] |
| Survival discharge rate (%) | 168 (93.3) | 180 (90.0) | 285 (94.7) | 431 (89.8) |
| Survival rate at 1 year (%) | 167 (93.3) | 178 (89.0) | 283 (94.0) | 424 (88.3) |

Data are listed as numbers (percentage of group), median and interquartile range.

PCI = percutaneous coronary artery intervention; COPD = chronic obstructive lung disease; FMC = first medical contact; ECMO = extracorporeal membrane oxygenation; CCU = coronary care unit; LVEF = left ventricular ejection fraction, LV = left ventricle