**Table 1: Demographic data and outcomes regarding to mortality in COPD patients**

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| --- | --- | --- | --- | --- |
| Variable | Total  (N=1,358) | Dead  (N=310) | Survive  (N=1048) | P value |
| Age | 72.0 (63.0-80.0) | 75.0 (67.0-82.0) | 70.0 (62.0-79.0) | 0.0192\* |
| Sex (Male) c | 748 (55.1) | 163 (52.6%) | 585 (55.8%) | 0.3137 |
| Comorbidity Status (Elixhausr>0) | 145 (10.7%) | 37 (11.9%) | 108 (10.3%) | 0.2405 |
| Major Comorbidity |  |  |  |  |
| CAD | 539 (39.7%) | 118 (38.1%) | 421 (40.2%) | 0.5053 |
| HTN | 755 (55.6%) | 150 (48.4%) | 605 (57.7%) | 0.0036\*\* |
| CKD | 354 (26.1%) | 109 (35.2%) | 245 (23.4%) | <0.0001\*\* |
| Cancer | 083 (06.1%) | 030 (9.7%) | 53 (5.1%) | 0.0029\*\* |
| DM | 350 (25.8%) | 80 (25.8%) | 270 (25.8%) | 0.9878 |
| Clinical Values |  |  |  |  |
| BMI | 027.2 (22.7-32.5) | 25.8 (21.1-30.8) | 27.7 (23.4-33.1) | <0.0001\*\* |
| HbA1c | 6.4 (6.4-6.4) | 6.4 (6.4-6.4) | 6.4 (6.4-6.4) | 0.1954 |
| FPG | 139.4 (119.0-139.4) | 139.4 (121.0-150.0) | 139.4 (118.0-139.4) | 0.0026\*\* |
| SBP | 116.0 (102.0-133.0) | 110.0 (97.0-126.0) | 117.0 (104.0-135.0) | <0.0001\*\* |
| ~~Ventilation~~ | ~~8.8 (7.0-10.8)~~ | ~~9.8 (7.4-12.6)~~ | ~~8.5 (6.8-10.4)~~ | ~~<0.0001\*\*~~ |
| ~~SPO~~~~2~~ | ~~97.0 (95.0-99.0)~~ | ~~97.0 (95.0-99.0)~~ | ~~97.0 (95.0-99.0)~~ | ~~0.8087~~ |
| PIP (N=1335) | 19.8 (16.0-24.0) | 20.0 (16.0-27.0) | 19.8 (16.0-23.0) | 0.0001\*\* |
| MAPS (N=1332) | 9.0 (8.0-11.0) | 9.5 (8.0-12.0) | 9.0 (7.0-10.0) | <0.0001\*\* |
| WBC | 10.7 (8.0-14.6) | 11.3 (8.0-16.3) | 10.6 (8.1-14.3) | 0.0424\* |
| Neutrophil (N=1,199) | 81.4 (73.4-88.0) | 84.9 (75.9-90.4) | 80.4 (73.0-87.0) | <0.0001\*\* |
| Lactate | 1.5 (1.0-2.1) | 1.7 (1.1-2.6) | 1.4 (1.0-2.0) | <0.0001\*\* |
| CREAT | 1.0 (0.7-1.4) | 1.2 (0.7-2.0) | 1.0 (0.7-1.4) | <0.0001\*\* |
| SOFA Score | 5.0 (3.0-7.0) | 5.5 (3.0-9.0) | 4.0 (3.0-6.0) | <0.0001\*\* |
| Medication |  |  |  |  |
| Norepinephrine | 463 (34.1%) | 184 (059.4%) | 279 (26.6%) | <0.0001\*\* |
| Epinephrine | 140 (10.3%) | 035 (11.3%) | 105 (10.0%) | 0.5179 |
| Vasopressin | 150 (11.1%) | 91 (29.4%) | 059 (05.6%) | <0.0001\*\* |
| Outcomes |  |  |  |  |
| ~~# of hospital admissions~~ | ~~1.0 (1.0-2.0)~~ | ~~1.0 (1.0-3.0)~~ | ~~1.0 (1.0-2.0)~~ | ~~0.0156\*~~ |
| ~~# of ICU admissions~~ | ~~1.0 (1.0-2.0)~~ | ~~2.0 (1.0-3.0)~~ | ~~1.0 (1.0-2.0)~~ | ~~0.0031\*~~ |
| ICU length of stay | 3.6 (2.0-6.5) | 5.0 (2.5-8.5) | 3.4 (2.0-6.0) | <0.0001\*\* |
| Respiratory failure | 1040 (76.6%) | 260 (83.9%) | 780 (74.4%) | 0.0006\*\* |
| Renal replacement  therapy | 69 (05.1%) | 25 (8.1%) | 44 (4.2%) | 0.0065\*\* |

c Chi-square test. Mann-Whitney U test. \*p<0.05, \*\*p<0.01. CAD: Coronary artery disease; HTN: Hypertension; CKD: Chronic kidney disease; DM: diabetes mellitus; BMI: Body mass index; HbA1c: hemoglobin A1c; FPG: Fasting plasma glucose; SBP: Systolic blood pressure; SPO2: oxygen saturation; PIP: Peak inspiratory pressure; MAPS: Mean airway pressure; WBC: White blood cell; CREAT: Creatinine; ICU: intensive care unit

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| Table 2: Univariable and Multivariable Regression Analyses of Mortality | | | | | |
| Variable | **Univariable** | | **Multivariable Model 1** | |
|  | **OR (95% CI)** | **P value** | **OR (95% CI)** | **P value** |
| Age | 1.03 (1.02-1.04) | <0.0001\* | 1.04 (1.03-1.06) | <0.0001\* |
| Sex (Male) | 0.88 (0.68-1.13) | 0.3139 | 0.76 (0.55-1.07) | 0.1164 |
| DM | 1.00 (0.75-1.34) | 0.9878 | 1.06 (0.72-1.57) | 0.7638 |
| HTN | 0.69 (0.53-0.89) | 0.0037\* | 0.73 (0.52-1.03) | 0.0722 |
| CKD | 1.78 (1.35-2.34) | <0.0001\* | 1.36 (0.89-2.09) | 0.1562 |
| Cancer | 2.01 (1.26-3.21) | 0.0034\* | 2.35 (1.28-4.30) | 0.0057\* |
| BMI | 0.97 (0.95-0.99) | 0.0002\* | 0.95 (0.93-0.97) | <0.0001\* |
| FPG | 1.01 (1.00-1.01) | 0.0002\* | 1.01 (1.00-1.01) | 0.0009\* |
| SBP | 0.98 (0.98-0.99) | <0.0001\* | 0.99 (0.99-1.00) | 0.0369\* |
| ~~Ventilation~~ | ~~1.12 (1.08-1.17)~~ | ~~<0.0001\*~~ | ~~1.14 (1.08-1.20)~~ | ~~<0.0001\*~~ |
| PIP | 1.05 (1.03-1.06) | <0.0001\* | 1.03 (1.01-1.05) | 0.0145\* |
| MAPS | 1.14 (1.10-1.18) | <0.0001\* | 1.10 (1.05-1.16) | 0.0002\* |
| WBC | 1.03 (1.01-1.05) | 0.0005\* | 1.02 (0.99-1.04) | 0.2249 |
| Neutrophil | 1.01 (1.00-1.02) | 0.3334 |  |  |
| LACTATE | 1.36 (1.25-1.48) | <0.0001\* | 1.20 (1.08-1.35) | 0.0012\* |
| CREAT | 1.28 (1.16-1.42) | <0.0001\* | 1.11 (0.95-1.30) | 0.1861 |
| SOFA Score | 1.14 (1.10-1.19) | <0.0001\* | 1.00 (0.95-1.06) | 0.9498 |
| Norepinephrine | 4.03 (3.09-5.25) | <0.0001\* | 2.12 (1.46-3.09) | <0.0001\* |
| Vasopressin | 6.96 (4.86-9.97) | <0.0001\* | 2.25 (1.39-3.63) | 0.0009\* |
| ~~# of hospital admissions~~ | ~~1.02 (0.96-1.09)~~ | ~~0.4810~~ |  |  |
| ~~# of ICU admissions~~ | ~~1.04 (0.98-1.10)~~ | ~~0.1834~~ |  |  |
| ICU length of stay | 1.06 (1.03-1.08) | <0.0001\* | 1.03 (1.00-1.06) | 0.1072 |
| Respiratory failure | 1.79 (1.28-2.49) | 0.0006\* | 1.66 (0.94- 2.91) | 0.0797 |
| Renal replacement | 2.00 (1.20-3.33) | 0.0074\* | 1.20 (0.58-2.47) | 0.6301 |