Table 3. Multivariable predictive Lasso model of hospital admission for COVID 19 patients

|  |  |  |  |
| --- | --- | --- | --- |
| **Variables** | **OR (99% CI)** | **p** | **Score** |
| *Sociodemographic variables* |  |  |  |
| **Gender** |  |  |  |
| Female | Ref | - | - |
| Male | 1.66 (1.59-1.73) | <0.0001 | 4 |
| **Age (years) categorized** |  |  |  |
| < 30 | Ref | - | - |
| 30-39 | 3 (2.62-3.44) | <0.0001 | 8 |
| 40-49 | 4.02 (3.54-4.56) | <0.0001 | 11 |
| 50-59 | 6.4 (5.66-7.24) | <0.0001 | 14 |
| 60-69 | 10.51 (9.27-11.9) | <0.0001 | 18 |
| 70-79 | 16.34 (14.36-18.59) | <0.0001 | 21 |
| 80-89 | 20.3 (17.75-23.22) | <0.0001 | 23 |
| >= 90 | 18.49 (15.88-21.53) | <0.0001 | 22 |
| *Comorbidities* |  |  |  |
| **Cerebrovascular disease** | 1.19 (1.12-1.27) | <0.0001 | 1 |
| **Liver disease** |  |  |  |
| No | Ref | - | - |
| Mild | 1.34 (1.23-1.46) | <0.0001 | 2 |
| Moderate/Severe | 1.74 (1.38-2.21) | <0.0001 | 4 |
| **Diabetes** |  |  |  |
| No | Ref | - | - |
| Yes, without organ damage | 1.34 (1.25-1.42) | <0.0001 | 2 |
| Yes, with organ damage | 1.7 (1.5-1.93) | <0.0001 | 4 |
| **Kidney** | 1.33 (1.25-1.43) | <0.0001 | 2 |
| **HIV** | 2.66 (1.73-4.09) | <0.0001 | 7 |
| **Arterial hypertension** | 1.22 (1.16-1.28) | <0.0001 | 1 |
| **Dyslipidemia** | 1.19 (1.14-1.25) | <0.0001 | 1 |
| **Cystic fibrosis** | 1.24 (1.08-1.43) | 0.0027 | 2 |
| **Interstitial lung disease** | 1.91 (1.4-2.6) | <0.0001 | 5 |
| **Tumor** | 1.33 (1.23-1.44) | <0.0001 | 2 |
| **Heart disease1** | 1.35 (1.24-1.46) | <0.0001 | 2 |
| **Heart failure2** | 1.52 (1.4-1.65) | <0.0001 | 3 |
| *Basic treatments* |  |  |  |
| **Diuretics** | 1.14 (1.06-1.23) | 7e-04 | 1 |
| **NSAIDs** | 1.27 (1.2-1.34) | <0.0001 | 2 |
| **Heparin** | 1.56 (1.38-1.76) | <0.0001 | 3 |
| **Broncodilators** | 1.42 (1.34-1.51) | <0.0001 | 3 |
| **Immunosuppressants** | 1.52 (1.3-1.79) | <0.0001 | 3 |
| **Chronic systemic steroids** | 1.68 (1.52-1.86) | <0.0001 | 4 |
|  | **Train (99%CI)** | **Test (99%CI)** | **Omicron (99%CI)** |
| **AUC** | 0.8064 (0.8010 – 0.8118) | 0.8045 (0.7991 – 0.8099) | 0.8125 (0.7993 – 0.8256) |
| **AUC\_score\_cont** | 0.8060 (0.8005 – 0.8114) | 0.8042 (0.7988 – 0.8096) | 0.8121 (0.7990 – 0.8253) |
| **AUC\_score\_cate (13, 19, 26)** | 0.7879 (0.7823 – 0.7935) | 0.7852 (0.7796 – 0.7907) | 0.7968 (0.7836 – 0.8100) |