**Training set & Test set**

| name | levels | 0 (N=180) | 1 (N=58) | p |
| --- | --- | --- | --- | --- |
| sex | 0 | 76 (42.2%) | 36 (62.1%) | .013 |
|  | 1 | 104 (57.8%) | 22 (37.9%) |  |
| age | Mean ± SD | 59.8 ± 15.7 | 67.8 ± 13.7 | <.001 |
| Cre | 1 | 25 (13.9%) | 9 (15.5%) | .926 |
|  | 2 | 155 (86.1%) | 49 (84.5%) |  |
| eGFR | 1 | 84 (46.7%) | 22 (37.9%) | .311 |
|  | 2 | 38 (21.1%) | 14 (24.1%) |  |
|  | 3 | 32 (17.8%) | 16 (27.6%) |  |
|  | 4 | 26 (14.4%) | 6 (10.3%) |  |
| Urea | 1 | 25 (13.9%) | 8 (13.8%) | 1.000 |
|  | 2 | 155 (86.1%) | 50 (86.2%) |  |
| CysC | 1 | 13 (7.2%) | 5 (8.6%) | .948 |
|  | 2 | 167 (92.8%) | 53 (91.4%) |  |
| ALP | 1 | 166 (92.2%) | 50 (86.2%) | .054 |
|  | 2 | 13 (7.2%) | 5 (8.6%) |  |
|  | 3 | 1 (0.6%) | 3 (5.2%) |  |
| VD | 1 | 32 (17.8%) | 13 (22.4%) | .332 |
|  | 2 | 76 (42.2%) | 28 (48.3%) |  |
|  | 3 | 72 (40%) | 17 (29.3%) |  |
| PTH | 1 | 2 (1.1%) | 0 (0%) | .722 |
|  | 2 | 77 (42.8%) | 25 (43.1%) |  |
|  | 3 | 101 (56.1%) | 33 (56.9%) |  |
| Ca | 1 | 47 (26.1%) | 9 (15.5%) | .171 |
|  | 2 | 131 (72.8%) | 49 (84.5%) |  |
|  | 3 | 2 (1.1%) | 0 (0%) |  |
| P | 1 | 11 (6.1%) | 8 (13.8%) | .143 |
|  | 2 | 100 (55.6%) | 32 (55.2%) |  |
|  | 3 | 69 (38.3%) | 18 (31%) |  |
| BMI | 0 | 116 (64.4%) | 36 (62.1%) | .944 |
|  | 1 | 50 (27.8%) | 17 (29.3%) |  |
|  | 2 | 14 (7.8%) | 5 (8.6%) |  |
| BMD | Mean ± SD | 1.1 ± 0.2 | 1.1 ± 0.3 | .965 |
| TBS | 0 | 101 (56.1%) | 39 (67.2%) | .179 |
|  | 1 | 79 (43.9%) | 19 (32.8%) |  |
| TscoreL1L4 | Mean ± SD | -0.1 ± 1.8 | -0.1 ± 2.5 | .844 |
| Dialysis\_duration | 0 | 106 (58.9%) | 37 (63.8%) | .611 |
|  | 1 | 74 (41.1%) | 21 (36.2%) |  |
| Smoking | 0 | 155 (86.1%) | 50 (86.2%) | 1.000 |
|  | 1 | 25 (13.9%) | 8 (13.8%) |  |
| Drinking | 0 | 165 (91.7%) | 52 (89.7%) | .839 |
|  | 1 | 15 (8.3%) | 6 (10.3%) |  |
| DM | 0 | 76 (42.2%) | 19 (32.8%) | .260 |
|  | 1 | 104 (57.8%) | 39 (67.2%) |  |
| Drugs | 0 | 91 (50.6%) | 31 (53.4%) | .641 |
|  | 1 | 53 (29.4%) | 17 (29.3%) |  |
|  | 2 | 31 (17.2%) | 10 (17.2%) |  |
|  | 3 | 5 (2.8%) | 0 (0%) |  |

| name | levels | 0 (N=85) | 1 (N=18) | p |
| --- | --- | --- | --- | --- |
| sex | 0 | 40 (47.1%) | 8 (44.4%) | 1.000 |
|  | 1 | 45 (52.9%) | 10 (55.6%) |  |
| age | Mean ± SD | 58.1 ± 15.7 | 66.1 ± 13.1 | .045 |
| Cre | 1 | 9 (10.6%) | 3 (16.7%) | .745 |
|  | 2 | 76 (89.4%) | 15 (83.3%) |  |
| eGFR | 1 | 37 (43.5%) | 7 (38.9%) | .889 |
|  | 2 | 24 (28.2%) | 5 (27.8%) |  |
|  | 3 | 17 (20%) | 5 (27.8%) |  |
|  | 4 | 7 (8.2%) | 1 (5.6%) |  |
| Urea | 1 | 8 (9.4%) | 4 (22.2%) | .257 |
|  | 2 | 77 (90.6%) | 14 (77.8%) |  |
| CysC | 1 | 4 (4.7%) | 1 (5.6%) | 1.000 |
|  | 2 | 81 (95.3%) | 17 (94.4%) |  |
| ALP | 1 | 79 (92.9%) | 16 (88.9%) | .751 |
|  | 2 | 2 (2.4%) | 1 (5.6%) |  |
|  | 3 | 4 (4.7%) | 1 (5.6%) |  |
| VD | 1 | 20 (23.5%) | 3 (16.7%) | .373 |
|  | 2 | 33 (38.8%) | 5 (27.8%) |  |
|  | 3 | 32 (37.6%) | 10 (55.6%) |  |
| PTH | 1 | 2 (2.4%) | 0 (0%) | .779 |
|  | 2 | 35 (41.2%) | 7 (38.9%) |  |
|  | 3 | 48 (56.5%) | 11 (61.1%) |  |
| Ca | 1 | 25 (29.4%) | 3 (16.7%) | .472 |
|  | 2 | 59 (69.4%) | 15 (83.3%) |  |
|  | 3 | 1 (1.2%) | 0 (0%) |  |
| P | 1 | 4 (4.7%) | 2 (11.1%) | .265 |
|  | 2 | 47 (55.3%) | 12 (66.7%) |  |
|  | 3 | 34 (40%) | 4 (22.2%) |  |
| BMI | 0 | 51 (60%) | 8 (44.4%) | .218 |
|  | 1 | 30 (35.3%) | 10 (55.6%) |  |
|  | 2 | 4 (4.7%) | 0 (0%) |  |
| BMD | Mean ± SD | 1.0 ± 0.2 | 1.1 ± 0.2 | .700 |
| TBS | 0 | 49 (57.6%) | 12 (66.7%) | .657 |
|  | 1 | 36 (42.4%) | 6 (33.3%) |  |
| TscoreL1L4 | Mean ± SD | -0.6 ± 1.7 | -0.4 ± 1.9 | .659 |
| Dialysis\_duration | 0 | 54 (63.5%) | 9 (50%) | .422 |
|  | 1 | 31 (36.5%) | 9 (50%) |  |
| Smoking | 0 | 70 (82.4%) | 14 (77.8%) | .904 |
|  | 1 | 15 (17.6%) | 4 (22.2%) |  |
| Drinking | 0 | 76 (89.4%) | 14 (77.8%) | .337 |
|  | 1 | 9 (10.6%) | 4 (22.2%) |  |
| DM | 0 | 37 (43.5%) | 6 (33.3%) | .593 |
|  | 1 | 48 (56.5%) | 12 (66.7%) |  |
| Drugs | 0 | 43 (50.6%) | 9 (50%) | .862 |
|  | 1 | 20 (23.5%) | 5 (27.8%) |  |
|  | 2 | 19 (22.4%) | 4 (22.2%) |  |
|  | 3 | 3 (3.5%) | 0 (0%) |  |