**Supplementary Table 4. Multivariable Multinomial Logistic Regression of Multiple Symptoms- Dependent Variable: Frailty (ORs, 95% CI)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Number of symptoms** | **Model 1§** | | **Model 2§** | | **Model 3§** | |
| **Pre-frail** | **frail** | **Pre-frail** | **frail** | **Pre-frail** | **frail** |
| All symptoms |  |  |  |  |  |  |
| 0 | Ref (1) | Ref (1) | Ref (1) | Ref (1) | Ref (1) | Ref (1) |
| 1 | 1.09(0.68-1.76) | 1.49(0.60-3.71) | 1.08(0.67-1.74) | 1.44(0.58-3.59) | 1.07(0.67-1.74) | 1.53(0.60-3.88) |
| 2-5 | 0.99(0.81-1.20) | 1.10(0.70-1.72) | 0.98(0.81-1.20) | 1.07(0.69-1.68) | 0.89(0.80-1.19) | 0.99(0.63-1.57) |
| >5 | 1.24(1.06-1.45)**\*\*** | 2.35(1.73-3.19)**\*\*\*** | 1.15(0.98-1.35) | 2.01(1.46-2.77)**\*\*\*** | 1.11(0.95-1.31) | 1.78(1.28-2.47)**\*\*** |
| MS |  |  |  |  |  |  |
| 0 | Ref (1) | Ref (1) | Ref (1) | Ref (1) | Ref (1) | Ref (1) |
| 1 | 1.03(0.79-1.34) | 1.35(0.78-2.35) | 1.03(0.79-1.34) | 1.33(0.77-2.33) | 1.02(0.78-1.34) | 1.17(0.66-2.09) |
| >=2 | 1.18(0.92-1.50) | 2.34(1.44-3.80)\*\* | 1.15(0.90-1.47) | 2.14(1.31-3.51)\*\* | 1.14(0.89-1.46) | 2.06(1.24-3.42)\*\* |
| NR |  |  |  |  |  |  |
| 0 | Ref (1) | Ref (1) | Ref (1) | Ref (1) | Ref (1) | Ref (1) |
| 1 | 0.87(0.67-1.14) | 0.82(0.49-1.38) | 0.88(0.68-1.15) | 0.85(0.50-1.42) | 0.88(0.67-1.15) | 0.82(0.48-1.39) |
| >=2 | 1.00(0.77-1.30) | 0.86(0.52-1.44) | 1.00(0.77-1.30) | 0.86(0.52-1.44) | 0.98(0.75-1.28) | 0.80(0.47-1.36） |
| GI |  |  |  |  |  |  |
| 0 | Ref (1) | Ref (1) | Ref (1) | Ref (1) | Ref (1) | Ref (1) |
| 1 | 0.79(0.62-1.00) | 0.66(0.42-1.04) | 0.80(0.63-1.02) | 0.67(0.43-1.05) | 0.81(0.64-1.03) | 0.69（0.43-1.10） |
| >=2 | 1.00(0.74-1.35) | 0.88(0.52-1.50) | 1.00(0.74-1.36) | 0.88(0.52-1.51) | 0.98(0.72-1.34) | 0.80(0.46-1.39) |
| CP |  |  |  |  |  |  |
| 0 | Ref (1) | Ref (1) | Ref (1) | Ref (1) | Ref (1) | Ref (1) |
| 1 | 1.14(0.89-1.47) | 1.02(0.59-1.77) | 1.13(0.88-1.46) | 1.09(0.63-1.88) | 1.11(0.86-1.44) | 1.05(0.60-1.85) |
| >=2 | 1.43(1.10-1.86)\*\* | 2.44(1.49-3.98)\*\*\* | 1.35(1.04-1.76)\* | 2.333(1.42-3.83)\*\* | 1.30(1.00-1.69) | 2.10(1.26-3.49)\*\* |
| OS |  |  |  |  |  |  |
| 0 | Ref (1) | Ref (1) | Ref (1) | Ref (1) | Ref (1) | Ref (1) |
| 1 | 0.92(0.71-1.20) | 0.65(0.39-1.11) | 0.90(0.69-1.17) | 0.62(0.36-1.05) | 0.93(0.71-1.21) | 0.65(0.37-1.12) |
| >=2 | 1.02(0.78-1.33) | 1.00(0.61-1.64) | 0.99(0.75-1.30) | 0.94(0.57-1.56) | 1.01(0.77-1.32) | 1.03(0.62-1.73) |

\*<0.05, \*\*<0.01, \*\*\*<0.001

§Logistic regression; Model1: adjusted for age, sex, ethnicity, education, marital status, smoking status; Model2: model1 +chronic diseases (hypertension, diabetes, coronary heart diseases, arthritis, gastrointestinal diseases, stroke, COPD); Model3: model2 + cognitive impairment, depressive symptoms, MS, NR, GI, CP, OS (in logistic regression analysis of all symptoms, model3 did not adjust multiple symptoms of each organ system)

CI: Confidence Interval; MS: Musculoskeletal symptoms (including 3 symptoms); NR: Neurological symptoms (including 4 symptoms); GI: Gastrointestinal symptoms (including 3 symptoms); CP: Cardiopulmonary symptoms (including 6 symptoms); OS: Other non-specific symptoms (including 5 symptoms)