**Supplemental table 4:** **Joint risk model of the risk of incident diabetes mellitus by time-updated BMI and BUN (>25, and ≤25 mg/dl) category**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Underweight**  Hazard Ratio  (95% confidence interval) | **Normal**  Hazard Ratio  (95% confidence interval) | **Overweight**  Hazard Ratio  (95% confidence interval) | **Obesity**  Hazard Ratio  (95% confidence interval) |
| **BUN ≤25 mg/dL** | 1.12  (1.09, 1.15) | 1.00 | 1.53  (1.51, 1.54) | 3.20  (3.17, 3.22) |
| **BUN >25 mg/dL** | 1.75  (1.66, 1.85) | 1.54  (1.51, 1.57) | 1.99  (1.96, 2.02) | 3.41  (3.36, 3.44) |
| Underweight: BMI<18.5 kg/m2; Normal: 18.5 kg/m2 ≤BMI<25 kg/m2; Overweight: 25 kg/m2 ≤BMI<30 kg/m2; Obesity: BMI≥30 kg/m2.  The primary predictor was time-varying combination of BMI and BUN categories. Normal BMI and BUN ≤25 mg/dL served as the reference category.  Survival model controlling for time independent variables age, race and gender and time-varying variables carbon dioxide, eGFR, albuminuria, frequency of outpatient encounters, frequency of hospitalizations, chronic lung disease, peripheral artery disease, cardiovascular disease, cerebrovascular disease, dementia, hyperlipidemia, hepatitis C, HIV, cancer and use of medications that increase risk of diabetes mellitus | | | | |