**Supplemental table 13: Joint model of the risk of incident diabetes mellitus by time-updated eGFR and BUN category additionally controlled for number of eGFR and BUN measurements**

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|  | **BUN ≤25 mg/dL**  Hazard Ratio  (95% confidence interval) | **BUN >25 mg/dL**  Hazard Ratio  (95% confidence interval) |
| **eGFR≥60 ml/min/1.73m2** | 1.00 | 1.27  (1.23, 1.31) |
| **60>eGFR≥45 ml/min/1.73 m2** | 1.01  (1.00, 1.03) | 1.23  (1.20, 1.26) |
| **45>eGFR≥30 ml/min/1.73 m2** | 0.99  (0.96, 1.02) | 1.18  (1.15, 1.21) |
| **30>eGFR≥15 ml/min/1.73 m2** | 0.96  (0.85, 1.09) | 1.20  (1.15, 1.26) |
| **eGFR<15 ml/min/1.73 m2** | 1.42  (0.82, 2.44) | 1.22  (1.08, 1.38) |
| The primary predictor was time-varying combination of BUN and eGFR categories. BUN≤25 mg/dL and eGFR≥ 60 ml/min/1.73m2 served as the reference category.  Survival model controlled for time independent variables age, race and gender and time-varying variables carbon dioxide, BMI, 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 number of eGFR and BUN measurements | | |