**Additional Table 5.** Hazard ratios and cause-specific hazard ratios (95% CI) of serum bicarbonate concentration as quintiles and as a continuous variable for all-cause mortality, incident coronary heart disease and incident heart failure in patients with type 2 diabetes with age as time scale. (A) unadjusted; (B) adjusted for age and sex; (C) adjusted for (B) plus Aboriginal, current smoking status, any exercise in the past two weeks, not fluent in English, currently married/*de facto* relationship, BMI; (D) adjusted for (C) plus systolic and diastolic blood pressures, HbA1c, total and HDL-cholesterol, ln(serum triglycerides); and (E) adjusted for (D) plus ln(urinary albumin:creatinine ratio), eGFR (CKD-EPI) ≥90 or <30 ml/min/1.73m2, retinopathy, peripheral sensory neuropathy, coronary heart disease and cerebrovascular disease.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Quintile of serumbicarbonate (mmol/L) | Q 1≤23 | Q224-25 | Q326-27 | Q428 | Q5≥29 | AllIncrease of 1 |
| All-cause mortality | (A)  | **1.27****(1.004-1.60)** | 1.07 (0.86-1.33) | 1.02(0.84-1.24) | 1.01(0.80-1.29) | 1.00(reference) | 0.98 (0.96-1.004) |
|  | (B)  | 1.20(0.95-1.52) | 1.09(0.87-1.36) | 0.93(0.77-1.14) | 0.88(0.69-1.12) | 1.00(reference) | 0.98(0.96-1.01) |
|  | (C)  | 1.13(0.88-1.43) | 1.02(0.81-1.29) | 0.95(0.78-1.16) | 0.89(0.69-1.13) | 1.00(reference) | 0.99(0.96-1.02) |
|  | (D)  | 1.06(0.83-1.36) | 1.01(0.80-1.27) | 0.92(0.75-1.13) | 0.90(0.70-1.14) | 1.00(reference) | 1.00(0.97-1.03) |
|  | (E) | 1.11(0.85-1.46) | 0.96(0.74-1.24) | 0.93(0.75-1.15) | 0.99(0.76-1.29) | 1.00(reference) | 0.99(0.97-1.02) |
| Coronary heart disease | (A)  | **1.58****(1.14-2.20)** | **1.53****(1.12-2.10)** | 1.14(0.86-1.53) | 0.97(0.68-1.37) | 1.00(reference) | **0.94****(0.91-0.97)** |
|  | (B)  | 1.38 (0.99-1.92) | **1.39****(1.01-1.90)** | 0.97(0.72-1.30) | 0.83(0.58-1.17) | 1.00(reference) | **0.95****(0.92-0.98)** |
|  | (C)  | 1.34(0.95-1.88) | 1.38(0.99-1.91) | 0.97(0.72-1.31) | 0.85(0.59-1.20) | 1.00(reference) | **0.95****(0.92-0.99)** |
|  | (D)  | 1.29(0.91-1.83) | 1.34(0.96-1.87) | 0.92(0.68-1.25) | 0.85 (0.59-1.22) | 1.00(reference) | **0.96****(0.92-0.99)** |
|  | (E) | 1.23(0.84-1.81) | 1.23(0.86-1.75) | 0.88(0.64-1.22) | 0.90 (0.62-1.30) | 1.00(reference) | 0.96(0.92-1.001) |
| Heart failure | (A)  | **1.54****(1.13-2.09)** | 1.04(0.76-1.43) | 1.05(0.80-1.38) | 0.81(0.57-1.15) | 1.00(reference) | **0.95****(0.92-0.98)** |
|  | (B)  | **1.41****(1.03-1.91)** | 0.99(0.72-1.37) | 0.92(0.70-1.21) | 0.72(0.51-1.03) | 1.00(reference) | **0.95****(0.92-0.99)** |
|  | (C)  | 1.27(0.93-1.75) | 0.87(0.62-1.21) | 0.88(0.66-1.17) | 0.70(0.49-1.17) | 1.00(reference) | 0.97(0.93-1.003) |
|  | (D)  | 1.14(0.82-1.57) | 0.84(0.60-1.18) | 0.85(0.63-1.13) | 0.70(0.49-1.01) | 1.00(reference) | 0.98(0.94-1.02) |
|  | (E) | 1.08(0.76-1.55) | 0.78(0.54-1.13) | 0.87(0.64-1.18) | 0.71(0.48-1.05) | 1.00(reference) | 0.99(0.95-1.03) |