| Fasting insulin (µU/ml) | Number of participants | Cases/person-year | Crude HR (95% CI) | Adjusted HR (95% CI)[a] |
|---|---|---|---|---|
| | | Colorectal cancer | | |
| Overall | | | | |
| Quartile 1 (<3.32) | 276 | 8/3,407 | 1.00 | 1.00 |
| Quartile 2 (≥3.32~<5.84) | 279 | 5/3,624 | 0.59 (0.19, 1.80) | 0.54 (0.17, 1.69) |
| Quartile 3 (≥5.84~<9.09) | 278 | 6/3,559 | 0.71 (0.25, 2.06) | 0.57 (0.18, 1.80) |
| Quartile 4 (≥9.09) | 278 | 7/3,586 | 0.83 (0.30, 2.29) | 0.69 (0.21, 2.28) |
| per unit increment | | | 1.01 (0.96, 1.06) | 1.00 (0.96, 1.05) |
| Men | | | | |
| Quartile 1 (<2.95) | 147 | 4/1,735 | 1.00 | 1.00 |
| Quartile 2 (≥2.95~<5.27) | 147 | 2/1,905 | 0.46 (0.08, 2.50) | 0.31 (0.05, 1.79) |
| Quartile 3 (≥5.27~<8.47) | 147 | 4/1,862 | 0.94 (0.23, 3.75) | 0.45 (0.09, 2.19) |
| Quartile 4 (≥8.47) | 147 | 5/1,839 | 1.17 (0.32, 4.37) | 0.79 (0.15, 4.15) |
| per unit increment | | | 1.00 (0.92, 1.09) | 0.98 (0.87, 1.11) |
| Women | | | | |
| Quartile 1 (<3.89) | 131 | 4/1,686 | 1.00 | 1.00 |
| Quartile 2 (≥3.89~<6.51) | 129 | 2/1,736 | 0.48 (0.09, 2.64) | 0.50 (0.09, 2.85) |
| Quartile 3 (≥6.51~<9.61) | 132 | 3/1,681 | 0.75 (0.17, 3.37) | 0.70 (0.14, 3.34) |
| Quartile 4 (≥9.61) | 131 | 2/1,731 | 0.49 (0.09, 2.66) | 0.54 (0.09, 3.38) |
| per unit increment | | | 1.01 (0.96, 1.06) | 1.01 (0.96, 1.06) |
| | | Stratified by cancer sub-sites | | |
| Colon cancer | | | | |
| Quartile 1 (<3.32) | 276 | 4/3,407 | 1.00 | 1.00 |
| Quartile 2 (≥3.32~<5.84) | 279 | 3/3,624 | 0.71 (0.16, 3.16) | 0.66 (0.14, 3.11) |
| Quartile 3 (≥5.84~<9.09) | 278 | 5/3,559 | 1.19 (0.32, 4.44) | 0.81 (0.19, 3.46) |
| Quartile 4 (≥9.09) | 278 | 4/3,586 | 0.95 (0.24, 3.80) | 0.60 (0.11, 3.13) |
| per unit increment | | | 0.99 (0.91, 1.08) | 0.95 (0.84, 1.08) |
| Rectal cancer | | | | |
| Quartile 1 (<3.32) | 276 | 4/3,407 | 1.00 | 1.00 |
| Quartile 2 (≥3.32~<5.84) | 279 | 2/3,624 | 0.47 (0.09, 2.56) | 0.44 (0.08, 2.58) |
| Quartile 3 (≥5.84~<9.09) | 278 | 1/3,559 | 0.24 (0.03, 2.13) | 0.20 (0.02, 1.96) |
| Quartile 4 (≥9.09) | 278 | 3/3,586 | 0.71 (0.16, 3.16) | 0.91 (0.15, 5.51) |
| per unit increment | | | 1.02 (0.97, 1.07) | 1.02 (0.98, 1.07) |



0   1   2   3
Low risk  High risk

**Supplementary Fig. 9.** Association of baseline fasting plasma insulin with the risk of colorectal cancer on 1,111 participants followed up from 2006–2008 (baseline) to April 2021 in the Guangzhou Biobank Cohort Study. The squares indicate the adjusted hazard ratios (HRs) and the horizontal lines represent 95% confidence interval (CI). [a]Adjusting for age, sex, waist circumference, smoking, alcohol drinking, household annual income, education, physical activity, intake of vegetable and red meat.