

**Supplementary Table 1:** The correlation between RAR and various cardiovascular diseases

| Characteristic         | Model 1                                   |        | Model 2                                   |        | Model 3                                   |        |
|------------------------|-------------------------------------------|--------|-------------------------------------------|--------|-------------------------------------------|--------|
|                        | OR <sup>1</sup><br>(95% CI <sup>2</sup> ) | P      | OR <sup>1</sup><br>(95% CI <sup>2</sup> ) | P      | OR <sup>1</sup><br>(95% CI <sup>2</sup> ) | P      |
| <b>CAD</b>             |                                           |        |                                           |        |                                           |        |
| RAR                    | 1.96(1.64, 2.34)                          | <0.001 | 1.70(1.41, 2.05)                          | <0.001 | 1.56(1.18, 2.06)                          | 0.002  |
| RAR level              |                                           |        |                                           |        |                                           |        |
| Low level              | ref                                       |        | ref                                       |        | ref                                       |        |
| High level             | 1.88(1.50, 2.36)                          | <0.001 | 1.53(1.21, 1.94)                          | <0.001 | 1.32(1.02, 1.69)                          | 0.034  |
| <b>Stroke</b>          |                                           |        |                                           |        |                                           |        |
| RAR                    | 1.71(1.20, 2.45)                          | 0.003  | 1.49(1.13, 1.97)                          | 0.005  | 1.30(1.02, 1.65)                          | 0.031  |
| RAR level              |                                           |        |                                           |        |                                           |        |
| Low level              | ref                                       |        | ref                                       |        | ref                                       |        |
| High level             | 2.10(1.64, 2.69)                          | <0.001 | 1.66(1.30, 2.13)                          | <0.001 | 1.41(1.08, 1.83)                          | 0.012  |
| P for trend            |                                           | ***    |                                           | ***    |                                           | ***    |
| <b>Heart Failure</b>   |                                           |        |                                           |        |                                           |        |
| RAR                    | 2.73(1.64, 4.55)                          | <0.001 | 2.15(1.26, 3.65)                          | 0.006  | 1.77(1.14, 2.74)                          | 0.012  |
| RAR level              |                                           |        |                                           |        |                                           |        |
| Low level              | ref                                       |        | ref                                       |        | ref                                       |        |
| High level             | 3.46(2.61, 4.59)                          | <0.001 | 2.52(1.89, 3.36)                          | <0.001 | 2.09(1.54, 2.85)                          | <0.001 |
| <b>Heart Attack</b>    |                                           |        |                                           |        |                                           |        |
| RAR                    | 1.80(1.32, 2.45)                          | <0.001 | 1.48(1.21, 1.82)                          | <0.001 | 1.31(1.10, 1.56)                          | 0.003  |
| RAR level              |                                           |        |                                           |        |                                           |        |
| Low level              | ref                                       |        | ref                                       |        | ref                                       |        |
| High level             | 2.24(1.76, 2.86)                          | <0.001 | 1.68(1.31, 2.15)                          | <0.001 | 1.46(1.13, 1.89)                          | 0.005  |
| <b>Angina Pectoris</b> |                                           |        |                                           |        |                                           |        |
| RAR                    | 1.55(1.22, 1.98)                          | <0.001 | 1.30(1.07, 1.57)                          | 0.008  | 1.19(0.97, 1.46)                          | 0.086  |

| Characteristic | Model 1                                   |        | Model 2                                   |       | Model 3                                   |       |
|----------------|-------------------------------------------|--------|-------------------------------------------|-------|-------------------------------------------|-------|
|                | OR <sup>1</sup><br>(95% CI <sup>2</sup> ) | P      | OR <sup>1</sup><br>(95% CI <sup>2</sup> ) | P     | OR <sup>1</sup><br>(95% CI <sup>2</sup> ) | P     |
| RAR level      |                                           |        |                                           |       |                                           |       |
| Low level      | ref                                       |        | ref                                       |       | ref                                       |       |
| High level     | 1.99(1.49, 2.65)                          | <0.001 | 1.53(1.14, 2.05)                          | 0.006 | 1.36(1.00, 1.85)                          | 0.051 |

<sup>1</sup>OR = Odds Ratio, <sup>2</sup>CI = Confidence Interval

Model1:adjusts for Age,Gender,Race

Model2:adjusts for Age,Gender,Race ,Education level,PIR,BMI,Smoking,Alcohol

Model3:adjusts for Age,Gender,Race ,Education level,PIR,BMI,Smoking,Alcohol,Activity,Marital Status,HDL-C,LDL-C,DM,Triglycerides,WBC,eGFR,HbA1c

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