**Suppl 1.** The association between NLR, LMR, SII, SIRI and insulin resistance stratified by HOMA-IR, QUICKI and TyG index.

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|   |   |   | By HOMA-IR |   |   |   |   |   |   | By QUICKI |   |   |   |   |   |   | By TyG index |   |   |   |
|  | Model 1 |   | Model 2 |   | Model 3 |   |  | Model 1 |   | Model 2 |   | Model 3 |   |   | Model 1 |   | Model 2 |   | Model 3 |   |
| NLR quartiles | HR (95% CI) | P value | HR (95% CI) | P value | HR (95% CI) | P value |  | HR (95% CI) | P value | HR (95% CI) | P value | HR (95% CI) | P value |  | HR (95% CI) | P value | HR (95% CI) | P value | HR (95% CI) | P value |
| Q1 (＜1.59) | Ref |  | Ref |  | Ref |  |  | Ref |  | Ref |  | Ref |  |  | Ref |  | Ref |  | Ref |  |
| Q2 (1.59- 2.19) | 1.18(0.80,1.74) | 0.409  | 1.33(0.89,1.97) | 0.161  | 1.12(0.71,1.76) | 0.623  |  | 1.16(0.79,1.72) | 0.452  | 1.30(0.87,1.93) | 0.191  | 1.09(0.69,1.72) | 0.721  |  | 1.05(0.71,1.55) | 0.805  | 1.05(0.71,1.56) | 0.810  | 1.20(0.78,1.82) | 0.405  |
| Q3 (2.19- 3.18) | 1.01(0.69,1.49) | 0.948  | 1.08(0.73,1.61) | 0.689  | 0.92(0.59,1.42) | 0.705  |  | 0.99(0.67,1.46) | 0.967  | 1.07(0.72,1.59) | 0.739  | 0.89(0.58,1.37) | 0.598  |  | 0.83(0.56,1.22) | 0.336  | 0.90(0.61,1.35) | 0.618  | 0.99(0.63,1.55) | 0.968  |
| Q4 (≥3.18) | 1.44(0.98,2.13) | 0.064  | 1.63(1.07,2.46) | 0.022  | 1.52(0.97,2.38) | 0.068  |  | 1.23(0.83,1.82) | 0.296  | 1.40(0.92,2.12) | 0.113  | 1.24(0.78,1.97) | 0.361  |  | 1.12(0.76,1.64) | 0.581  | 1.23(0.82,1.85) | 0.308  | 1.44(0.92,2.24) | 0.112  |
| P for trend | 1.10(0.97,1.24) | 0.139  | 1.13(0.99,1.29) | 0.067  | 1.11(0.96, 1.28) | 0.153  |   | 1.05(0.92,1.18) | 0.477  | 1.08(0.95,1.23) | 0.241  | 1.04(0.90,1.20) | 0.566  |   | 1.01(0.89,1.13) | 0.915  | 1.05(0.92,1.12) | 0.482  | 1.09(0.95,1.26) | 0.228  |
| LMR quartiles | HR (95% CI) | P value | HR (95% CI) | P value | HR (95% CI) | P value |  | HR (95% CI) | P value | HR (95% CI) | P value | HR (95% CI) | P value |  | HR (95% CI) | P value | HR (95% CI) | P value | HR (95% CI) | P value |
| Q1 (＜2.43) | Ref |  | Ref |  | Ref |  |  | Ref |  | Ref |  | Ref |  |  | Ref |  | Ref |  | Ref |  |
| Q2 (2.43- 3.33) | 0.91(0.61,1.34) | 0.621  | 0.95(0.64,1.43) | 0.821  | 0.85(0.56,1.30) | 0.458  |  | 0.90(0.61,1.33) | 0.595  | 0.91(0.61,1.38) | 0.668  | 0.80(0.51,1.25) | 0.331  |  | 0.99(0.67,1.47) | 0.970  | 1.18(0.79,1.79) | 0.420  | 1.15(0.70,1.87) | 0.579  |
| Q3 (3.33- 4.40) | 1.01(0.69,1.48) | 0.954  | 1.03(0.68,1.55) | 0.905  | 1.02(0.64,1062) | 0.925  |  | 1.00(0.68,1.47) | 0.990  | 0.98(0.65,1.49) | 0.925  | 0.95(0.59,1.53) | 0.830  |  | 1.05(0.71,1.54) | 0.816  | 1.26(0.82,1.92) | 0.291  | 1.28(0.79,2.05) | 0.311  |
| Q4 (≥4.40) | 1.19(0.81,1.74) | 0.376  | 1.23(0.80,1.91) | 0.349  | 1.17(0.73,1.87) | 0.518  |  | 1.28(0.87,1.87) | 0.212  | 1.29(0.83,2.00) | 0.258  | 1.17(0.72,1.92) | 0.528  |  | 1.74(1.18,2.55) | 0.005  | 2.27(1.45,3.55) | ＜0.001 | 2.27(1.35,3.80) | 0.002  |
| P for trend | 1.07(0.59,1.16) | 0.283  | 1.08(0.94,1.24) | 0.299  | 1.08(0.55,1.14) | 0.351  |   | 1.09(0.97,1.24) | 0.155  | 0.91(0.79,1.05) | 0.213  | 1.10(0.94,1.29) | 0.223  |   | 1.19(1.05,1.35) | 0.005  | 1.29(1.12,1.49) | ＜0.001 | 1.30(1.11,1.52) | 0.001  |
| SII quartiles | HR (95% CI) | P value | HR (95% CI) | P value | HR (95% CI) | P value |  | HR (95% CI) | P value | HR (95% CI) | P value | HR (95% CI) | P value |  | HR (95% CI) | P value | HR (95% CI) | P value | HR (95% CI) | P value |
| Q1 (＜342.6) | Ref |  | Ref |  | Ref |  |  | Ref |  | Ref |  | Ref |  |  | Ref |  | Ref |  | Ref |  |
| Q2 (342.6- 495.2) | 0.99(0.67,1.47) | 0.973  | 1.05(0.71,1.56) | 0.795  | 0.96(0.62,1.49) | 0.864  |  | 1.05(0.71,1.56) | 0.801  | 1.11(0.75,1.65) | 0.590  | 1.02(0.66,1.59) | 0.899  |  | 0.82(0.55,1.22) | 0.331  | 1.27(0.85,1.89) | 0.237  | 1.38(0.89,2.13) | 0.144  |
| Q3 (495.2- 730.0) | 0.85(0.58,1.26) | 0.428  | 0.90(0.60,1.34) | 0.603  | 0.77(0.49,1.23) | 0.274  |  | 0.81(0.55,1.19) | 0.290  | 0.85(0.57,1.27) | 0.429  | 0.70(0.44,1.11) | 0.130  |  | 0.97(0.65,1.43) | 0.851  | 1.10(0.74,1.65) | 0.626  | 1.18(0.77,1.81) | 0.444  |
| Q4 (≥730.0) | 1.82(1.22,2.70) | 0.003  | 1.99(1.32,2.99) | 0.001  | 1.73(1.11,2.72) | 0.016  |  | 1.56(1.05,2.32) | 0.027  | 1.72(1.14,2.58) | 0.009  | 1.43(0.91,2.25) | 0.124  |  | 1.25(0.83,1.86) | 0.282  | 1.00(0.58,1.31) | 0.510  | 1.07,0.67,1.69) | 0.778  |
| P for trend | 1.17(1.03,1.33) | 0.013  | 1.20(1.06,1.37) | 0.005  | 1.15(0.99,1.32) | 0.063  |   | 1.11(0.97,1.26) | 0.103  | 1.14(1.00,1.30) | 0.047  | 1.06(0.92,1.23) | 0.417  |   | 1.08(0.96,1.23) | 0.199  | 1.06(0.93,1.20) | 0.146  | 1.00(0.75,1.48) | 0.765  |
| SIRI quartiles | HR (95% CI) | P value | HR (95% CI) | P value | HR (95% CI) | P value |  | HR (95% CI) | P value | HR (95% CI) | P value | HR (95% CI) | P value |  | HR (95% CI) | P value | HR (95% CI) | P value | HR (95% CI) | P value |
| Q1 (＜0.75) | Ref |  | Ref |  | Ref |  |  | Ref |  | Ref |  | Ref |  |  | Ref |  | Ref |  | Ref |  |
| Q2 (0.75- 1.15) | 1.11(0.75,1.64) | 0.610  | 1.20(0.80,1.79) | 0.370  | 1.06(0.67,1.68) | 0.815  |  | 1.09(0.73,1.62) | 0.671  | 1.17(0.78,1.75) | 0.442  | 1.00(0.63,1.59) | 0.984  |  | 0.91(0.61,1.35) | 0.649  | 1.12(0.75,1.68) | 0.568  | 1.26(0.82,1.95) | 0.295  |
| Q3 (1.15- 1.75) | 1.07(0.72,1.58) | 0.742  | 1.13(0.75,1.70) | 0.566  | 0.96(0.59,1.55) | 0.870  |  | 1.00(0.67,1.48) | 0.987  | 1.05(0.70,1.58) | 0.808  | 0.86(0.54,1.38) | 0.538  |  | 0.97(0.65,1.44) | 0.879  | 1.14(0.76,1.73) | 0.526  | 1.26(0.81,1.98) | 0.306  |
| Q4 (≥1.75) | 1.92(1.29,2.85) | 0.001  | 2.15(1.40,3.29) | ＜0.001 | 1.64(1.01,2.69) | 0.051  |  | 1.68(1.13,2.48) | 0.010  | 1.89(1.24,2.90) | 0.003  | 1.31(0.79,2.18) | 0.287  |  | 1.15(0.77,1.71) | 0.491  | 1.02(0.67,1.58) | 0.902  | 1.46(0.92,2.33) | 0.111  |
| P for trend | 1.21(1.07,1.37) | 0.003  | 1.24(1.08,1.42) | 0.002  | 1.14(0.97,1.34) | 0.100  |   | 1.15(1.01,1.30) | 0.024  | 1.19(1.04,1.37) | 0.011  | 1.06(0.91,1.25) | 0.448  |   | 1.05(0.59,1.18) | 0.463  | 1.01(0.88,1.16) | 0.870  | 1.12(0.96,1.30) | 0.137  |

Model 1: non-adjusted model; Model 2: adjusted for age, sex, race/ethnicity, marital status, and family PRI; Model 3: adjusted for model 2 covariates plus smoking status, alcohol use, sleep duration, physical activity, BMI, CVD and hypertension.