ONLINE APPENDIX – Supplementary Data

Analyses using cut-off values for HOMA-IR based on the top tertile and top quartile of the non-diabetic subjects of the Cremona study cohort.

The choice to use a cut-off value of 2.5 for HOMA-IR was based on the willing to compare our data to those of Cuk et la (7). To put our data in the specific context of our laboratory assessments, we repeated the analyses using cut-off values for HOMA-IR generated by the determination of its distribution in the non-diabetic individuals of the Cremona study. The cut off value of HOMA-IR for upper tertile of insulin sensitivity was 2.26. Using this approach the number of obese insulin sensitive subjects was 27 with a total number of events = 3 (2 CVD events and 1 cancer). This is similar to the number of obese without insulin resistance by Arnlov et al (8).

Supplementary Table 1.

All-cause mortality using upper tertile of insulin sensitivity			
	HR	**95% CI**	**p value**
Obese insulin sensitive	0.56	0.18 – 1.75	0.32
Non obese insulin resistant	1.03	0.83 – 1.29	0.77
Obese insulin resistant	1.34	1.03 – 1.74	0.03
CVD mortality using upper tertile of insulin sensitivity			
Obese insulin sensitive	1.03	0.25 – 4.24	0.97
Non obese insulin resistant	1.25	0.88 – 1.77	0.21
Obese insulin resistant	1.57	1.04 – 2.24	0.03
Cancer mortality using upper tertile of insulin sensitivity			
Obese insulin sensitive	0.44	0.06 – 0.18	0.42
Non obese insulin resistant	0.95	0.68 – 1.34	0.77
Obese insulin resistant	1.42	0.95 – 2.13	0.09

The cut off value of HOMA-IR for upper quartile of insulin sensitivity 1.999. Using this approach the number of obese insulin sensitive subjects was 18 with a total number of events = 3 (2 CVD events and 1 cancer).

Supplementary Table 2.

All-cause mortality using upper quartile of insulin sensitivity			
	HR	**95% CI**	**p value**
Obese insulin sensitive	1.00	0.32 – 3.17	0.99
Non obese insulin resistant	1.07	0.83 – 1.36	0.63
Obese insulin resistant	1.33	1.00 – 1.77	0.0493
CVD mortality using upper quartile of insulin sensitivity			
Obese insulin sensitive	2.00	0.48 – 8.39	0.34
Non obese insulin resistant	1.19	0.81 – 1.76	0.37
Obese insulin resistant	1.49	0.95 – 2.33	0.0823
Cancer mortality using upper quartile of insulin sensitivity			
Obese insulin sensitive	0.71	0.10 – 5.23	0.75
Non obese insulin resistant	0.98	0.67 – 1.43	0.92
Obese insulin resistant	1.42	0.91 – 2.19	0.12

Based on this outcome, we concluded that also using this approach no increased risk (nor a trend for an increased risk) was detectable in the obese but insulin sensitive individuals, confirming the findings detected using the cut off of HOMA-IR value of 2.5 with respect to the all-cause mortality. Also mortality for CVD and cancer maintained the same trend.