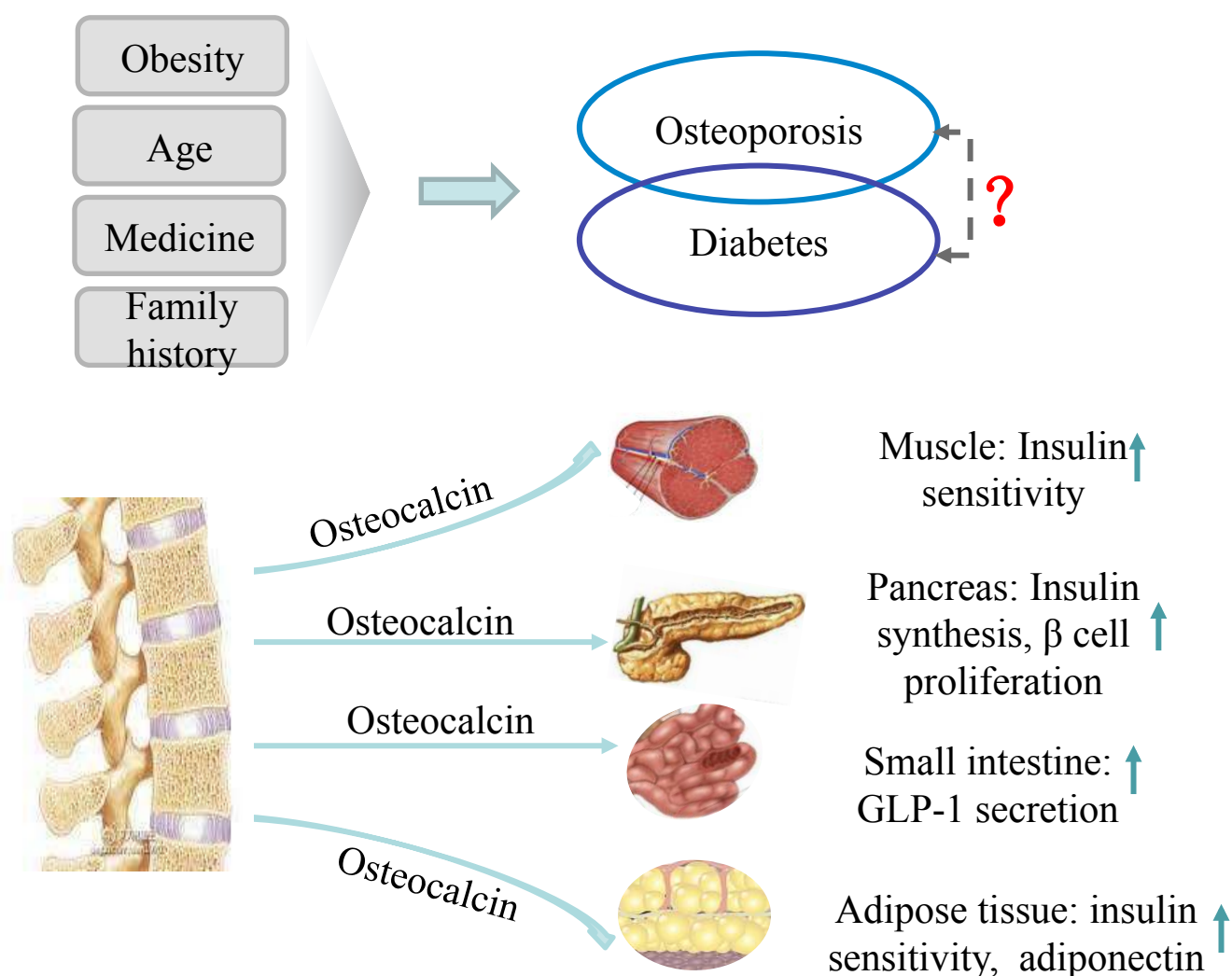


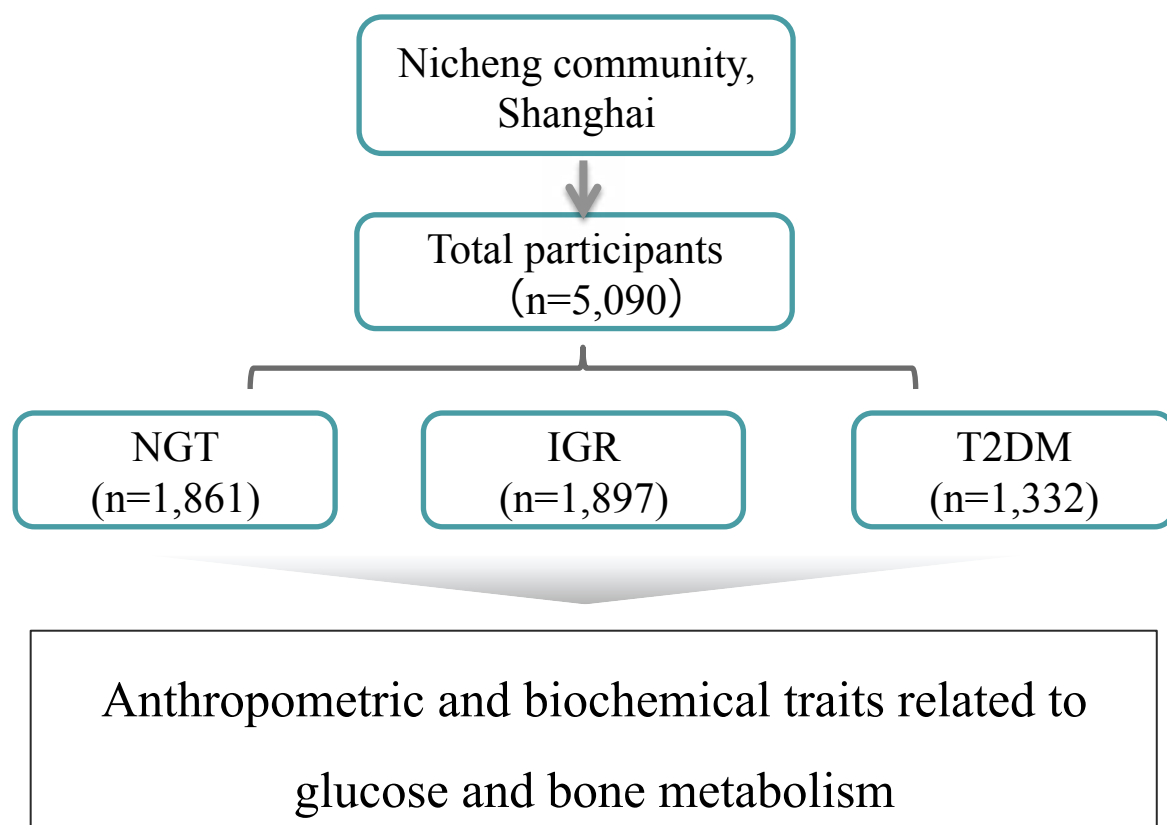
Aims



Recent evidence suggests a complex interaction between bone metabolism and glucose metabolism

Our study aimed to evaluate the association of osteocalcin with glucose metabolism.

Methods



Results

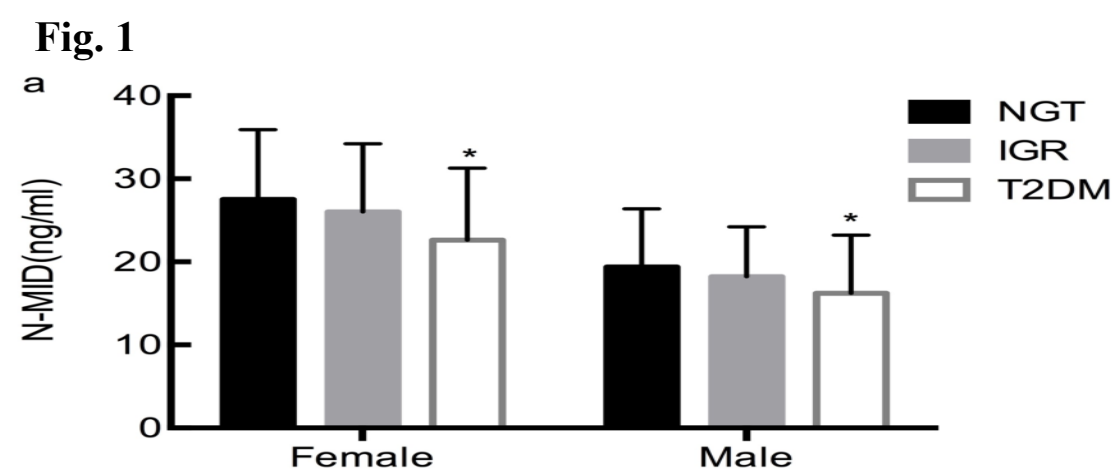


Fig. 1 Levels of osteocalcin in the different glucose tolerance groups.

Participants were classified according to their glucose tolerance as normal glucose tolerance (NGT), impaired glucose regulation (IGR) and type 2 diabetes (T2DM)

Table. 1 Associations of osteocalcin with T2DM

	Male		Female	
	OR [95%CI]	P value	OR [95%CI]	P value
Model I	0.946 [0.920; 0.974]	0.0002	0.942 [0.932; 0.952]	1.51E-30
Model II	0.926 [0.889; 0.964]	0.0002	0.957 [0.945; 0.969]	7.94E-12

Model I: Multivariable logistic regression adjusted for age and BMI.

Model II: Multivariable logistic regression adjusted for age, BMI, fat percentage, VFA, SFA, serum lipids and anti-diabetic medicines

Osteocalcin was significantly associated with T2DM in both males and post-menopausal females

Fig. 3

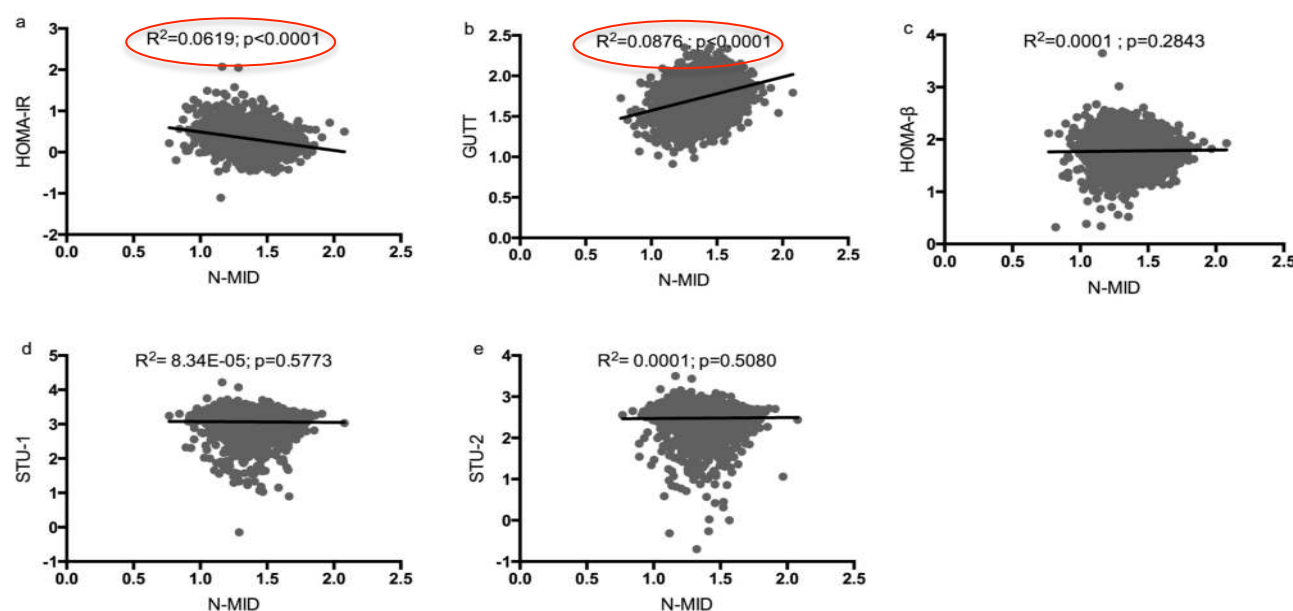


Fig. 3 Associations of osteocalcin with insulin sensitivity and beta cell function in females.

Fig. 4

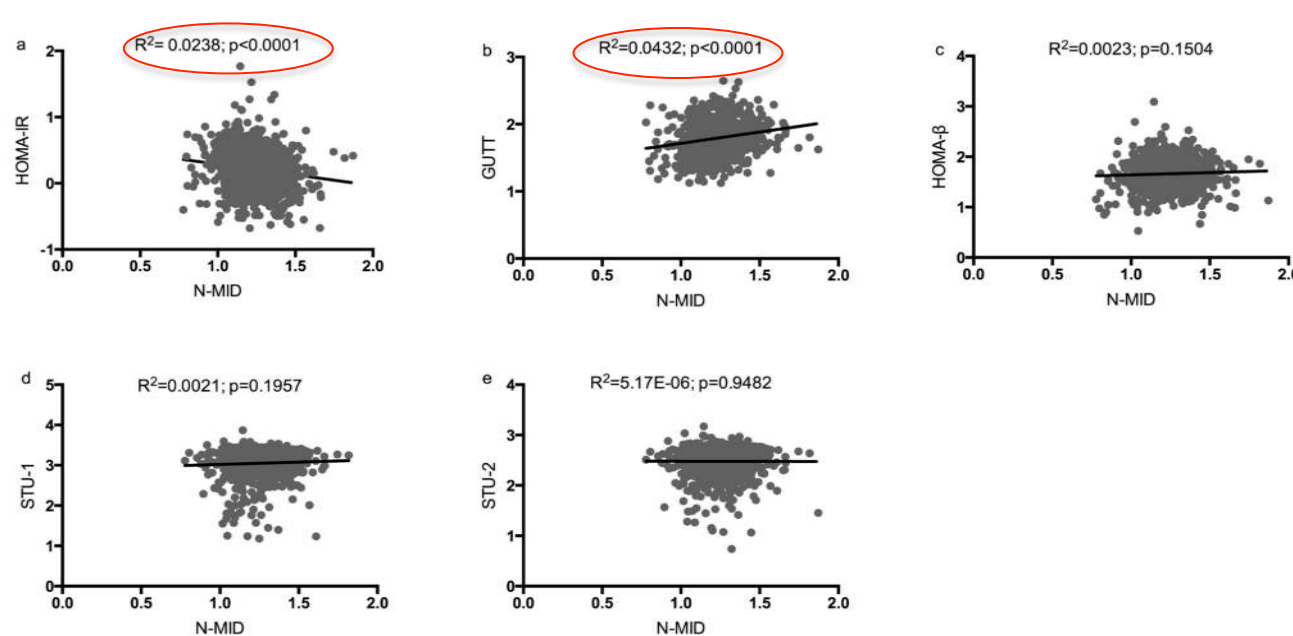


Fig. 4 Associations of osteocalcin with insulin sensitivity and beta cell function in males.

Conclusions

Osteocalcin was highly associated with T2DM, insulin sensitivity and beta cell function in both males and postmenopausal females.

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