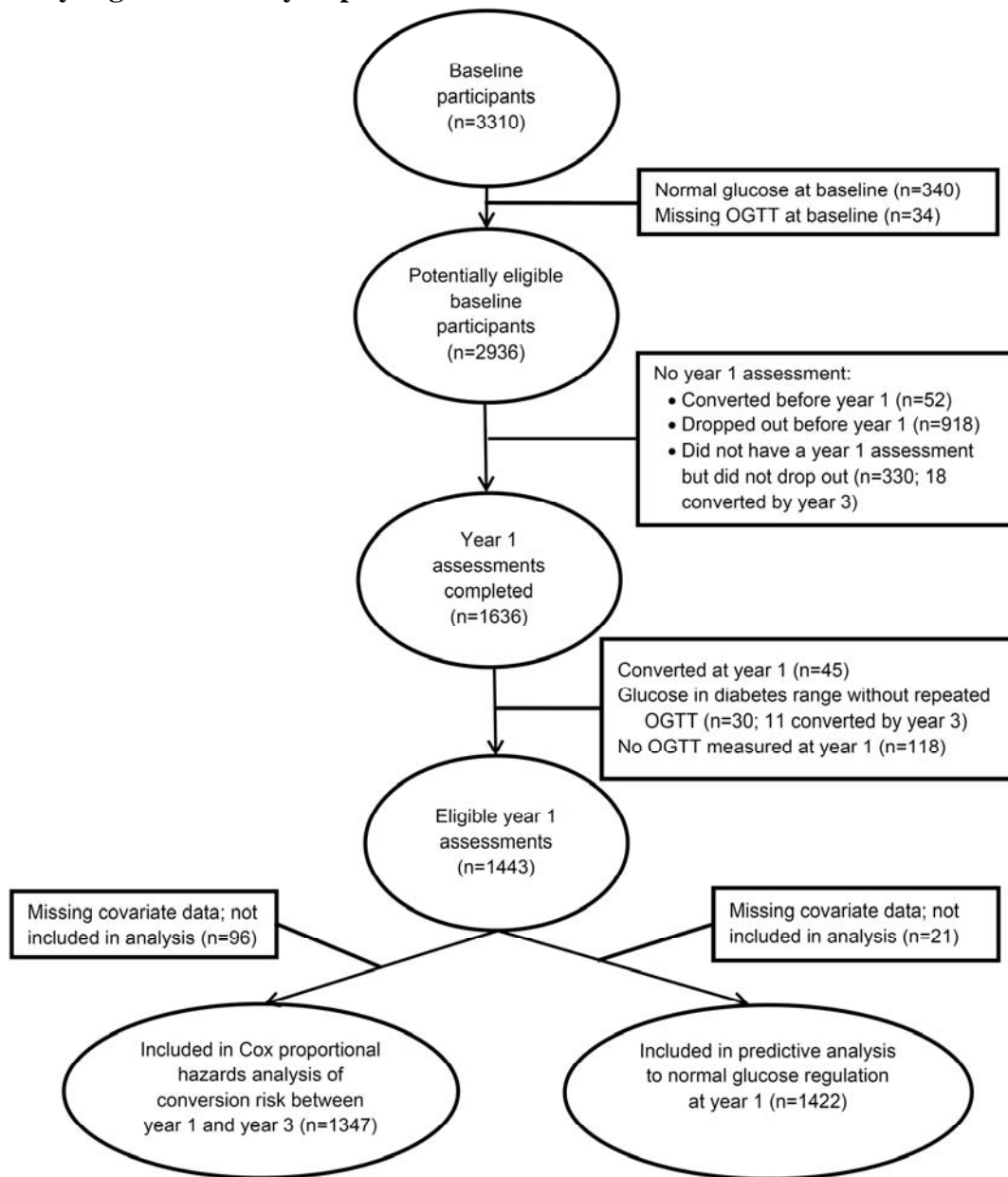


SUPPLEMENTARY DATA

Supplementary Figure S1. Study Population Selection



SUPPLEMENTARY DATA

Supplementary Table 1. Hazard ratios of glucose status at year 1 for diabetes incidence between year 1 and year 3

Variable	Unadjusted (n=1443)	Adding Baseline Covariates (N=1366)	Adding Post-baseline Covariates (N=1347)
Year 1 Glucose Status (Binary)^a			
Regressed to NGR (Yes/No)	0.16 (0.07-0.34)***	0.20 (0.09-0.47)***	0.28 (0.12-0.67)**
Year 1 Glucose Status (4 categories)			
IFG/IGT ^b	12.11 (5.29-27.72)***	8.09 (3.20-20.44)***	4.72 (1.84-12.07)***
iIGT ^b	5.30 (1.68-16.69)*	3.95 (1.16-13.44)*	3.26 (0.96-11.12) [£]
iIFG ^b	4.59 (2.03-10.41)***	4.24 (1.74-10.32)*	3.13 (1.27- 7.31)*
NGR (Ref)	1.00	1.00	1.00
Baseline Covariates^c			
Baseline age (per 12.57 years)		1.62 (1.23-2.14)***	1.79 (1.34-2.40)***
Baseline weight (per 52.57 pounds)		1.36 (1.06-1.73)*	1.44 (1.12-1.85)**
Baseline log-transformed TG (per 0.49 mg/dl)		1.26 (1.00-1.58)*	1.37 (1.07-1.74)*
Baseline FBG (per 9.56 mg/dl)		1.11 (0.84-1.47)	1.28 (0.96-1.71)
Baseline 2-h glucose (per 34.71 mg/dl)		1.32 (1.01-1.73)*	1.55 (1.18-2.04)**
Baseline hypertension		0.64 (0.38-1.08)	0.68 (0.40-1.14)
Family history of diabetes		2.39 (1.08-5.30)*	2.25 (1.01-5.02)*
Baseline healthy diet score (per 0.82)		0.74 (0.58-0.94)*	0.78 (0.61-0.98)*
Post-baseline Covariates^c			
Change in weight (per 5.97%) from baseline			1.84 (1.44-2.36)***
Change in log-transformed TG (per 0.37 mg/dl) from baseline.			1.23 (0.94-1.61)

^aHazard ratios when replacing the 4-categorical year 1 glucose status variable by binary year 1 glucose status variable in the following models.

^bHazard ratio is compared to NGR at year 1, overall Wald *P* value for the final model (last column) is 0.0138.

^cHazard ratios for continuous variables are the hazard ratios per standard deviation (STD).

* p<0.05, ** p< 0.01, *** p<0.001

[£]p=0.059

NGR = normal glucose regulation, IFG/IGT = both impaired fasting glucose and impaired glucose tolerance, iIGT = isolated impaired glucose tolerance, iIFG = isolated impaired fasting glucose, TG = triglycerides, FBG = fasting blood glucose.

SUPPLEMENTARY DATA

Supplementary Table 2. Proportion of future diabetes risk (diagnosis between year 1 and year 3) explained by risk factors for diabetes, comparing year 1 glucose status groups

Factor explaining future diabetes risk	Glucose Status at Year 1 Compared to NGR		
	iIFG (n= 601)	iIGT (n= 76)	IFG/IGT (n= 215)
Baseline age (years)	11.4% (4.1%-27.6%)**	6.0% (1.2%-24.3%)*	7.1% (2.6%-18.4%)**
Baseline weight (pounds)	5.1% (1.1%-20.2%)*	2.2% (0.1%-34.1%)*	2.2% (0.2%-19.30%)*
Baseline log-transformed TG (mg/dl)	<1.0%	10.6% (5.2%-20.4%****)	6.9% (3.7%-12.6%****)
Baseline FBG (mg/dl)	11.7% (3.0%-36.1%)**	0%	8.8% (2.5%-26.7%)**
Baseline 2-h glucose (mg/dl)	0%	27.1% (14.1%-45.9%****)	16.2% (9.0%-27.6%****)
Family history of diabetes	1.7% (0.1%-22.3%)*	8.0% (3.1%-19.3%****)	2.1% (0.3%-12.9%)*
Baseline healthy diet score	0%	0%	0%
Change in weight (%)	20.6% (8.7%-41.5%****)	11.7% (3.4%-33.6%)**	20.1% (10.6%-34.8%****)

Analyses were conducted on the final Cox proportional hazard model using the SAS macro %mediate. Each variable was estimated while controlling for the rest of the covariates: age, baseline weight, baseline TG, baseline FBG and 2-h glucose, family history of diabetes, baseline healthy diet score, baseline hypertension, change in weight, change in TG.

*p>0.05-0.10, ** p<0.05, *** p< 0.01, **** p<0.001 SAS %mediate documentation indicates that the p-value is a more accurate measurement of significance than the confidence interval.

NGR = normal glucose regulation, iIFG = isolated impaired fasting glucose, iIGT = isolated impaired glucose tolerance, IFG/IGT = both impaired fasting glucose and impaired glucose tolerance, TG = triglycerides, FBG = fasting blood glucose.