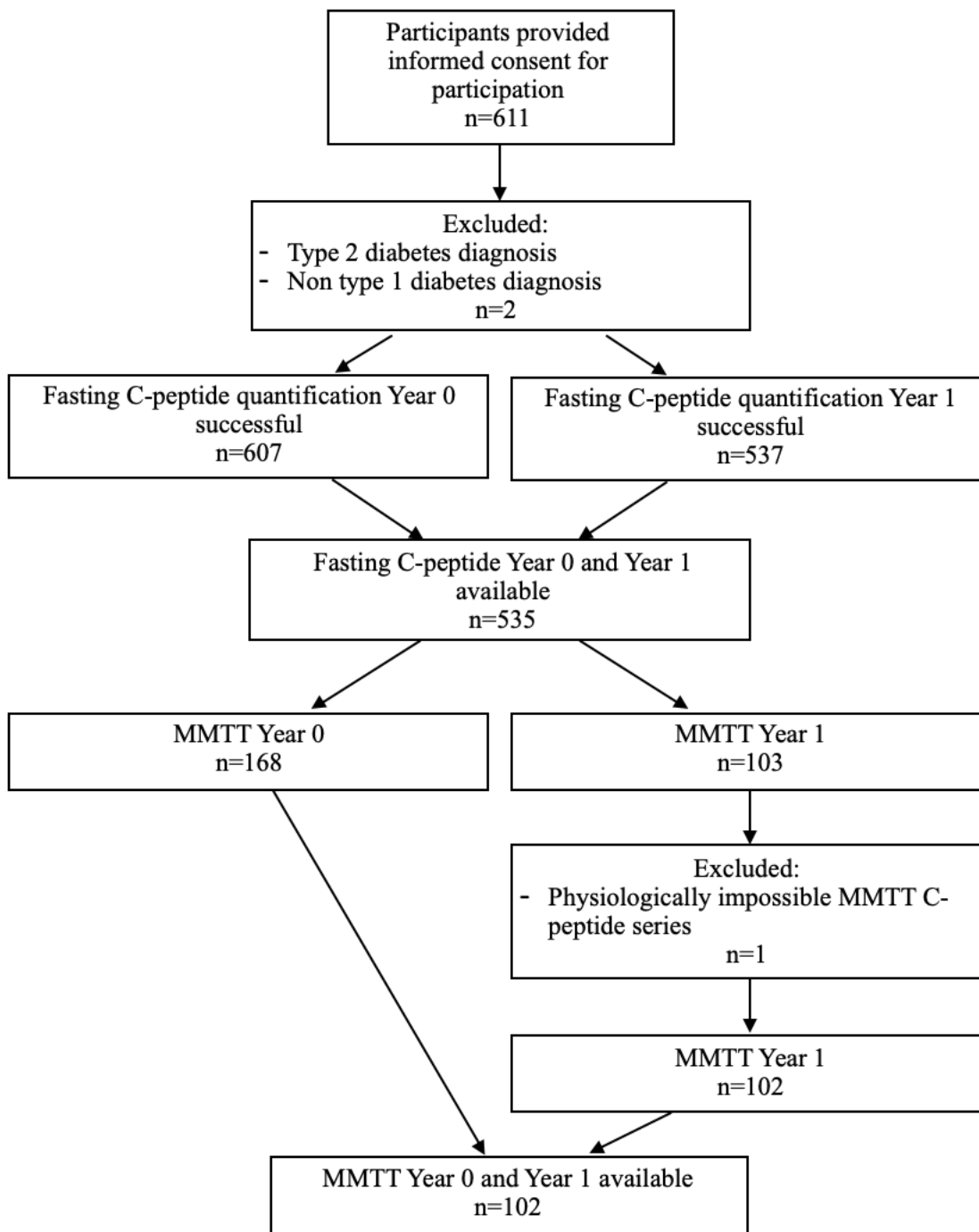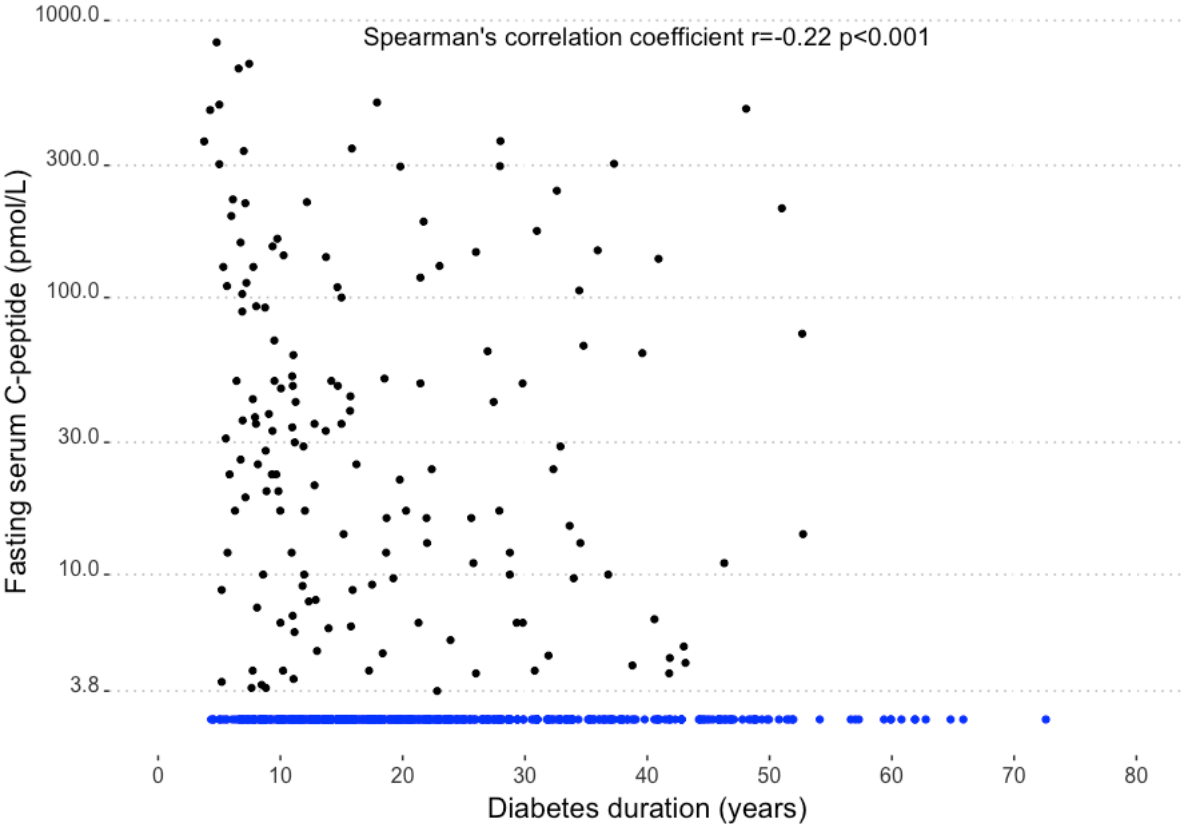**Supplemental Figure 1. Flowchart of excluded participant numbers and participants excluded from the analyses**
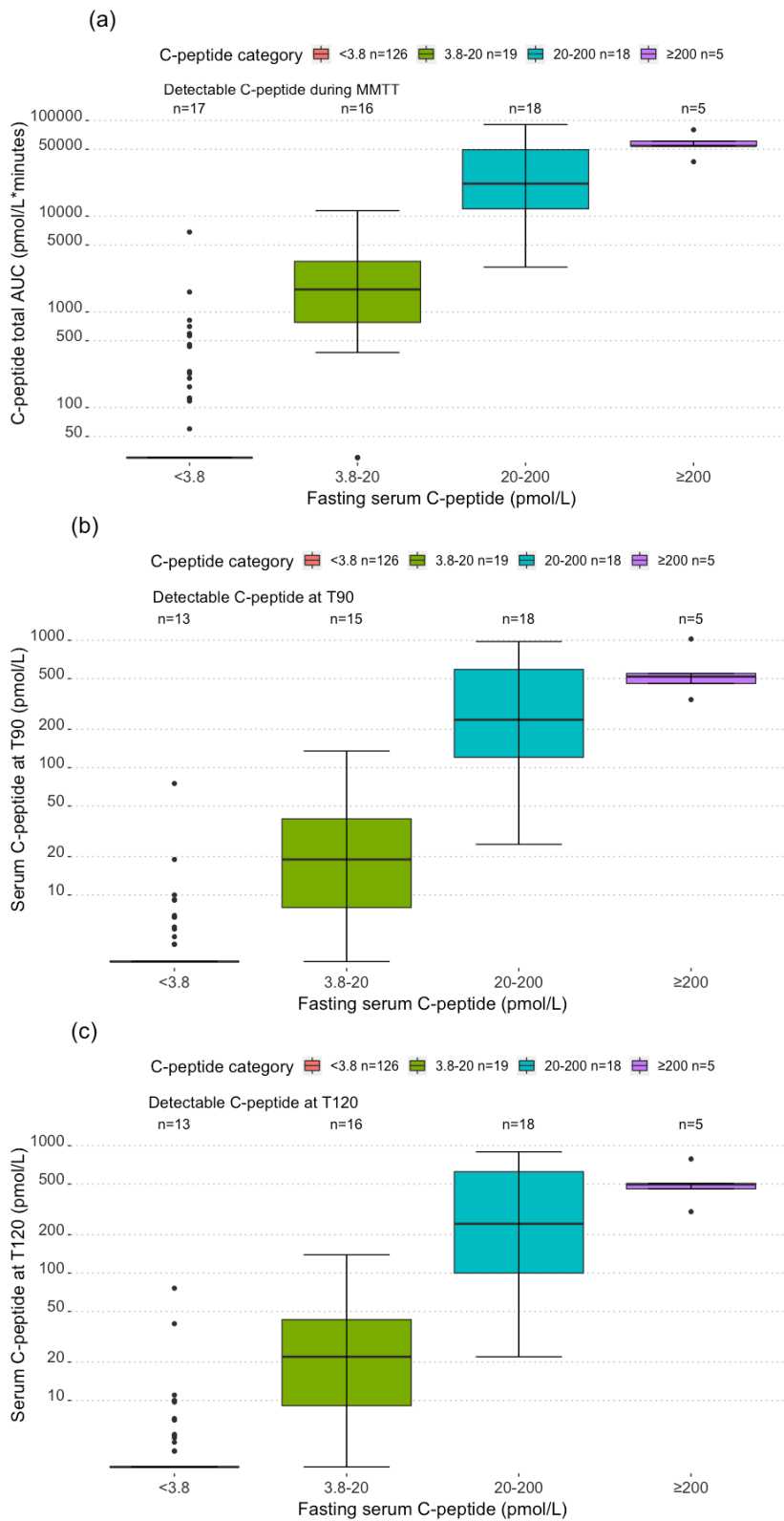
MMTT: Mixed-Meal Tolerance Test

Supplemental Figure 2. Fasting serum C-peptide by diabetes duration at Year 0 n=607

Spearman's correlation coefficient r=-0.22 p<0.001

The blue dots represent undetectable C-peptide concentrations.

Supplemental Figure 3. Relationship between C-peptide during the mixed meal and fasting serum C-peptide

(a)

(b)

(c)

(a) C-peptide total AUC vs fasting serum C-peptide (b) Serum C-peptide at T90 vs fasting serum C-peptide (c) Serum C-peptide at T120 vs fasting serum C-peptide

Supplemental Table 1. Tobit regression of fasting serum C-peptide Year 0 n=607

	Univariate			Multivariable		
	B	SE	*P*-value	B	SE	*P*-value
Age, years	1.0	0.6	0.12			
Age at diagnosis, years	6.0	0.9	<0.001	5.1	0.8	<0.001
Diabetes duration, years	-4.0	0.9	<0.001	-3.8	0.9	<0.001
Female sex	-5.3	21.9	0.81			
Body mass index, kg/m^2	1.2	2.9	0.68			
Total daily insulin dose, U/day	-0.7	0.5	0.20			
Insulin pump use (vs MDI)	-85.6	21.8	<0.001	-51.6	21.3	0.02

Fasting serum C-peptide is in pmol/L.
Number of missing values: BMI – 42, Daily insulin dose – 19, Pump use (vs MDI) – 7, all other covariates no missing values. Number of missing values in multivariable analysis – 19.

Supplemental Table 2. C-peptide response after the mixed meal at first and second MMTT

		C-peptide response after mixed meal		Detectable C-peptide at T90/T120	C-peptide AUC of MMTT responders (AUC > 0)
		no	yes	yes	
First MMTT (Year 0) n = 168	Fasting C-peptide < 3.8 pmol/l	109	17	13/13	435 [165, 594]
	Fasting C-peptide ≥ 3.8 pmol/l	5	37	38/39	11,160 [2,702, 42,773]
Second MMTT (Year 1) n = 102	Fasting C-peptide < 3.8 pmol/l	64	8	7/6	356 [172, 472]
	Fasting C-peptide ≥ 3.8 pmol/l	2	28	29/29	6,870 [2,507, 26,850]

C-peptide response after mixed-meal is categorized based on the peak C-peptide value, yes indicates the peak C-peptide after MMTT was similar to or higher than the fasting C-peptide concentration. The discrepant fasting and stimulated C-peptides are highlighted in red, total n = 22 (13%) at first MMTT, at second MMTT n = 10 (10%). At Year 0 MMTT T0 C-peptide corresponds to fasting C-peptide in n=52 (31%). At Year 1 MMTT T0 C-peptide corresponds to fasting C-peptide in n=81 (79%).

Supplemental Table 3. Tobit regression of C-peptide total AUC of MMTT Year 0 n=168

	Univariate			Multivariable		
	B	SE	*P*-value	B	SE	*P*-value
Age, years	-42	202	0.83			
Age at diagnosis, years	1064	297	<0.001	1123	285	<0.001
Diabetes duration, years	-911	301	0.002	-759	278	0.006
Female sex	-2021	6365	0.75			
Body mass index, kg/m^2	-2231	944	0.02	-1815	870	0.03
Total daily insulin dose, U/ day	161	166	0.33			
Insulin pump use (vs MDI)	-19112	6425	0.003	-16900	5990	0.005

C-peptide AUC of MMTT is in pmol/L*minutes
Number of missing values: BMI – 5, Daily insulin dose – 4, Pump use (vs MDI) – 1, all other covariates no missing values. Number of missing values in multivariable analysis – 5.
MDI: multiple daily injections
MMTT: Mixed-Meal Tolerance Test