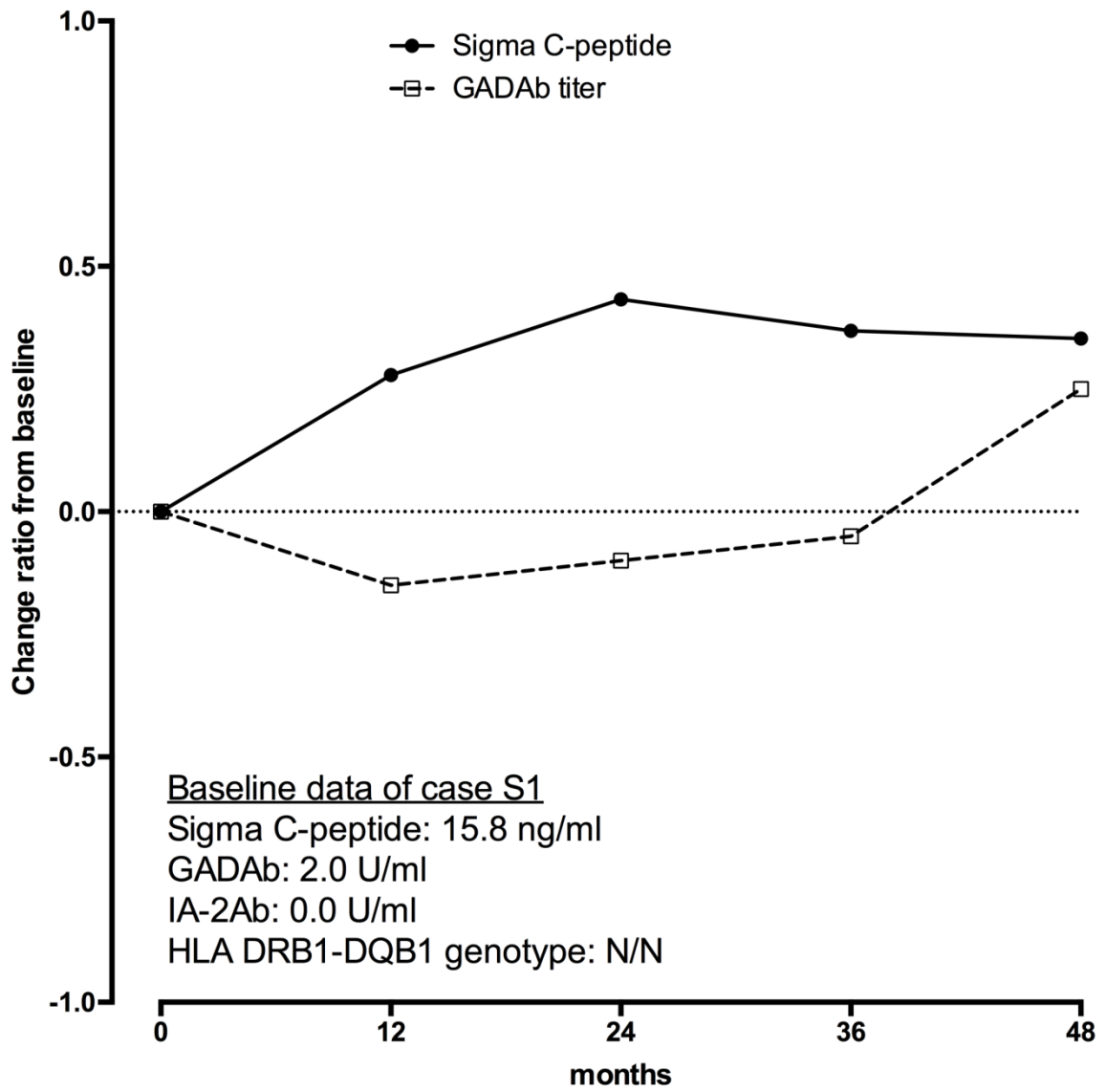
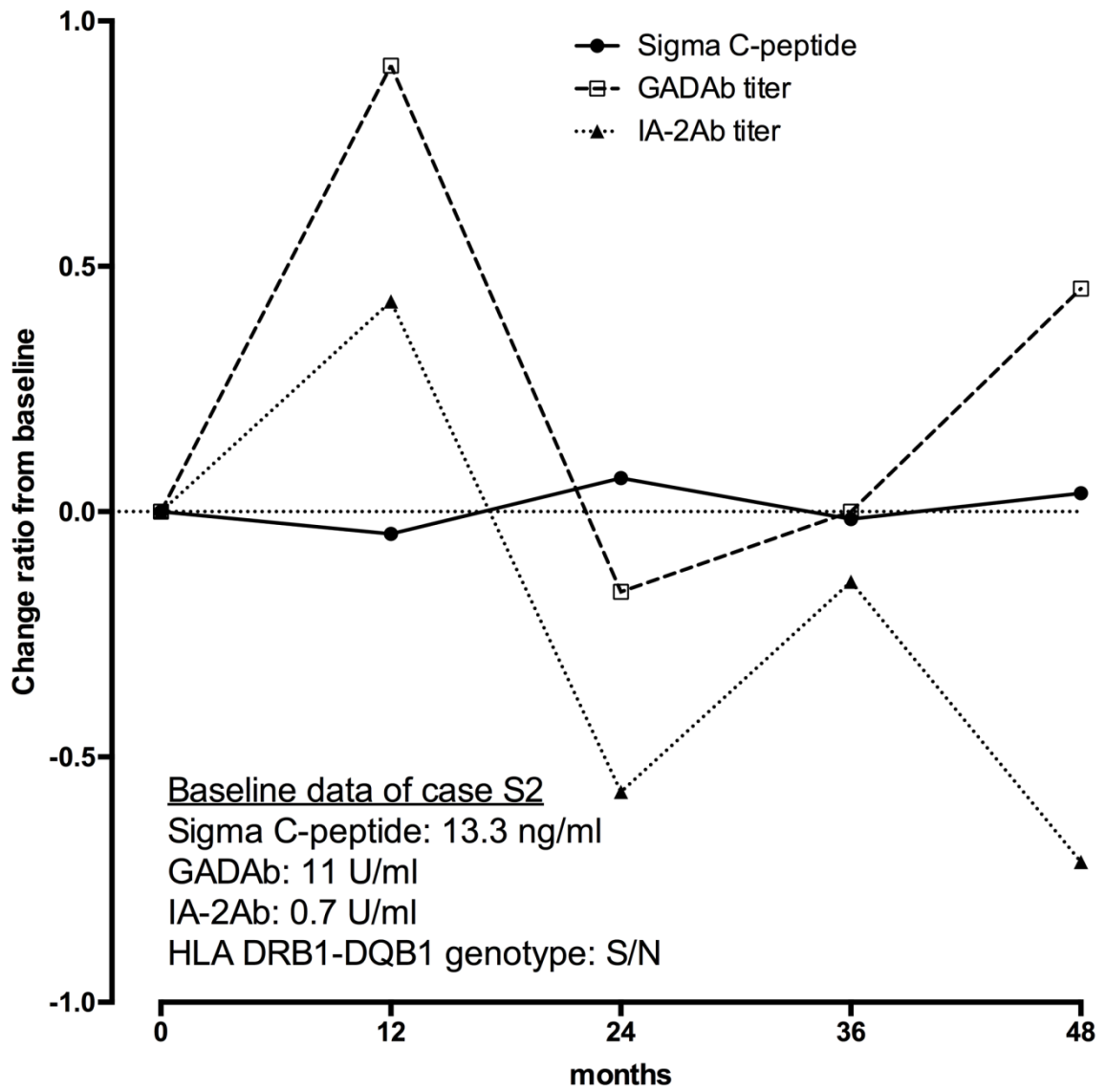


Fig. S1 Individual long-term C-peptide response to the OGTT, GADAb and IA-2Ab titers for 48 months in the patients with sitagliptin treatment. Individual longitudinal change ratios of Σ C-peptide values, GADAb and IA-2Ab titers from baseline are shown in the 5 patients followed for 48 months in the S group, with the HLA DRB1-DQB1 genotypes represented (Fig. S1A, S1B, S1C, S1D and S1E are cases S1, S2, S3, S4 and S5, respectively, in Table S1). In cases S1, S4 and S5, the IA-2Ab were negative during 48 months of follow-up. Susceptible HLA DRB1-DQB1 haplotypes (S) = DRB1*04:05-DQB1*04:01, DRB1*09:01-DQB1*03:03, DRB1*08:02-DQB1*03:02; Protective HLA DRB1-DQB1 haplotypes = DRB1*15:01-DQB1*06:02, DRB1*15:02-DQB1*06:01; Neutral HLA DRB1-DQB1 haplotypes (N) = other haplotypes.

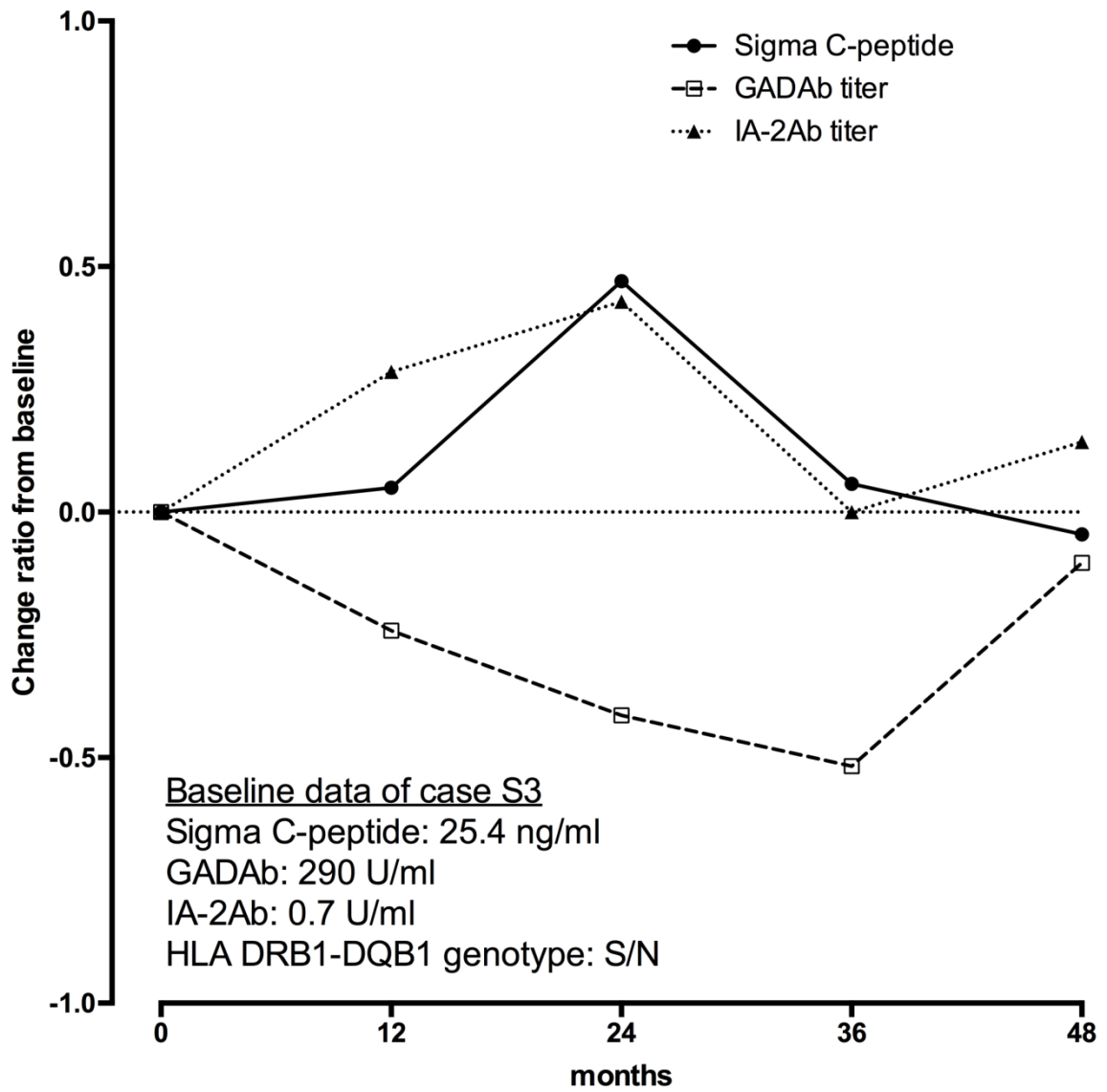
S1A



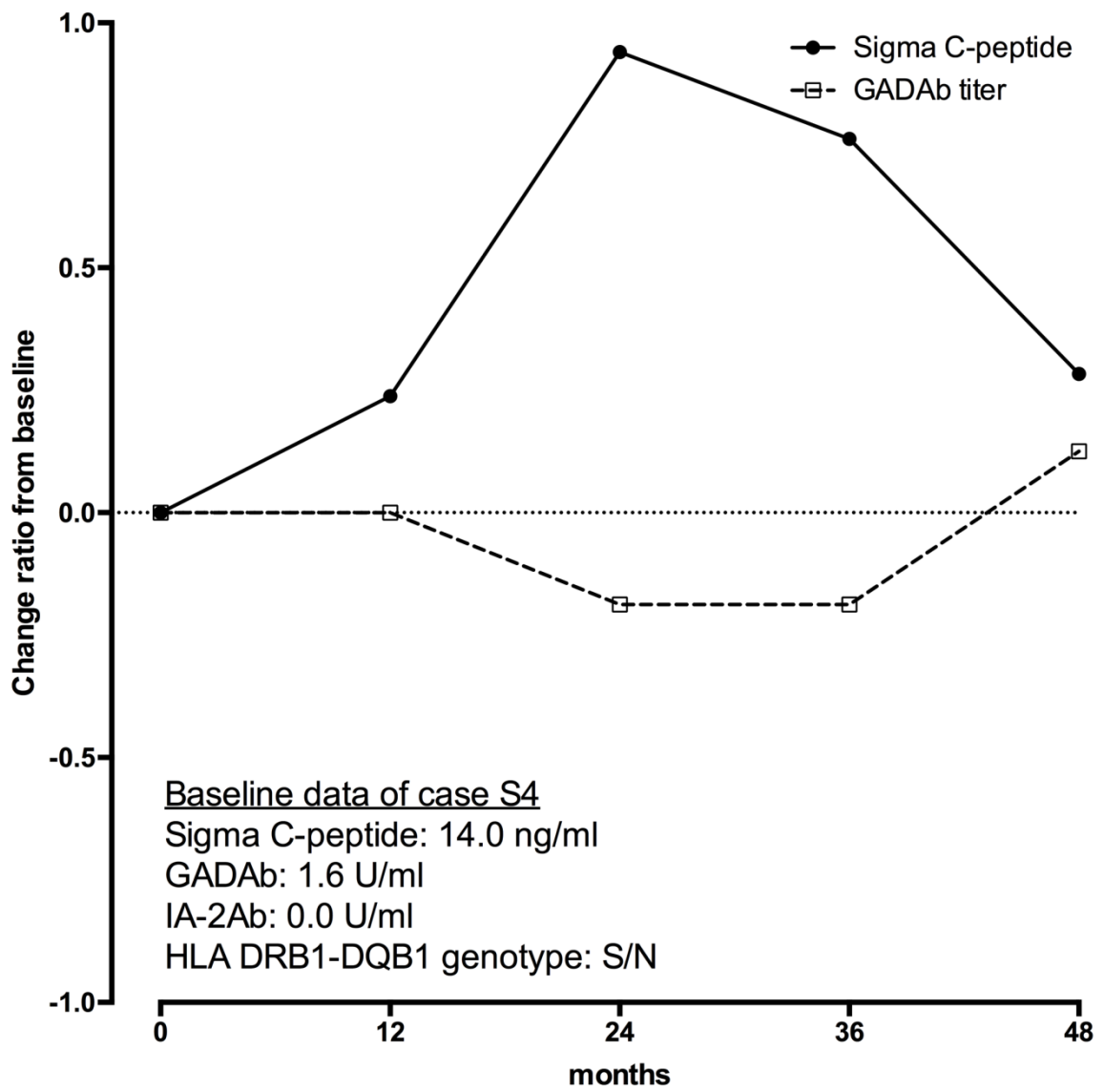
S1B



S1C



S1D



S1E

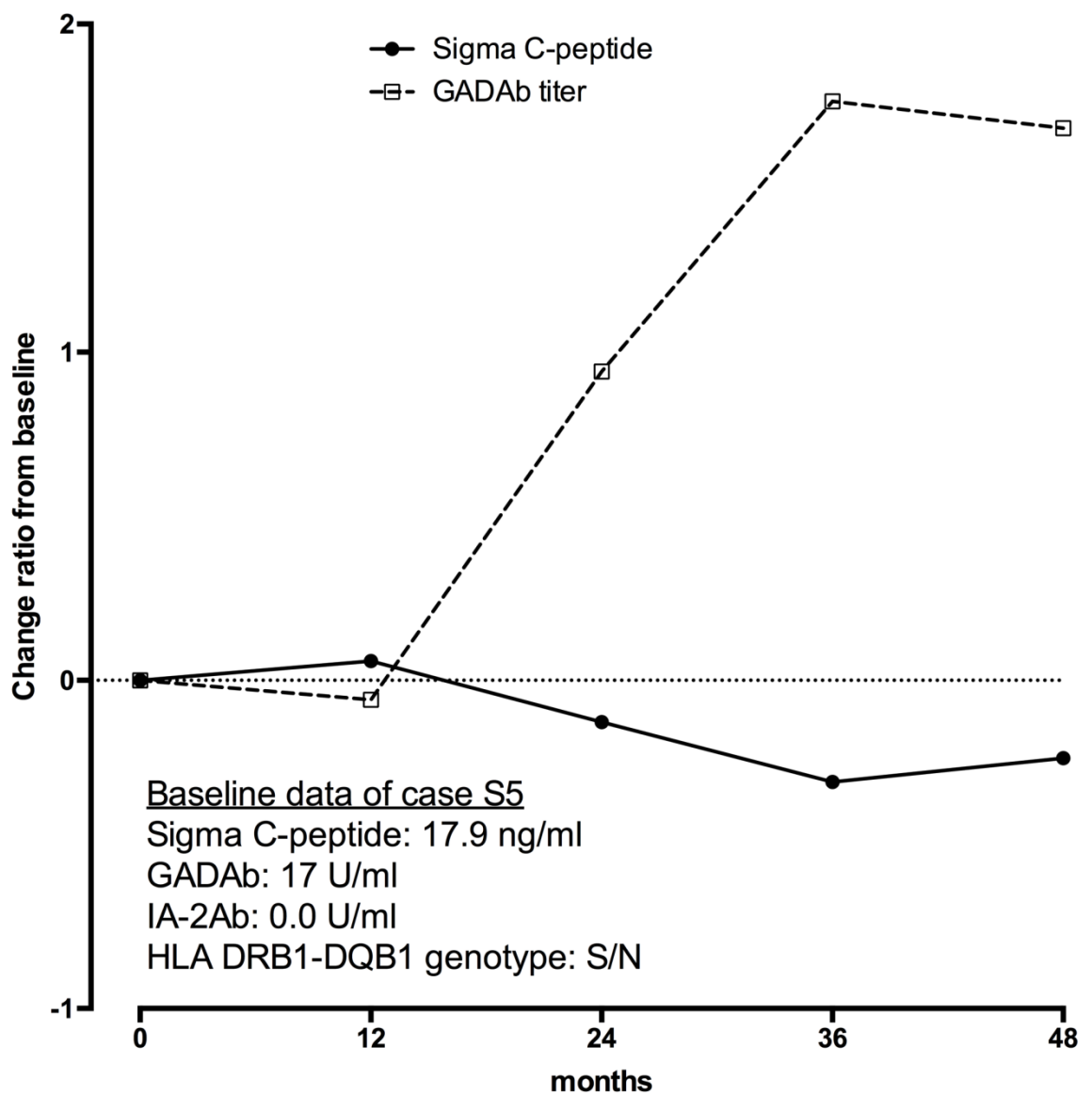


Fig. S2 The correlation between the change ratios of the GADAb titers and of the Σ C-peptide values from baseline in the P group. A nonsignificant inverse correlation was observed (Spearman's rank correlation coefficient = -0.478, $p = 0.101$).

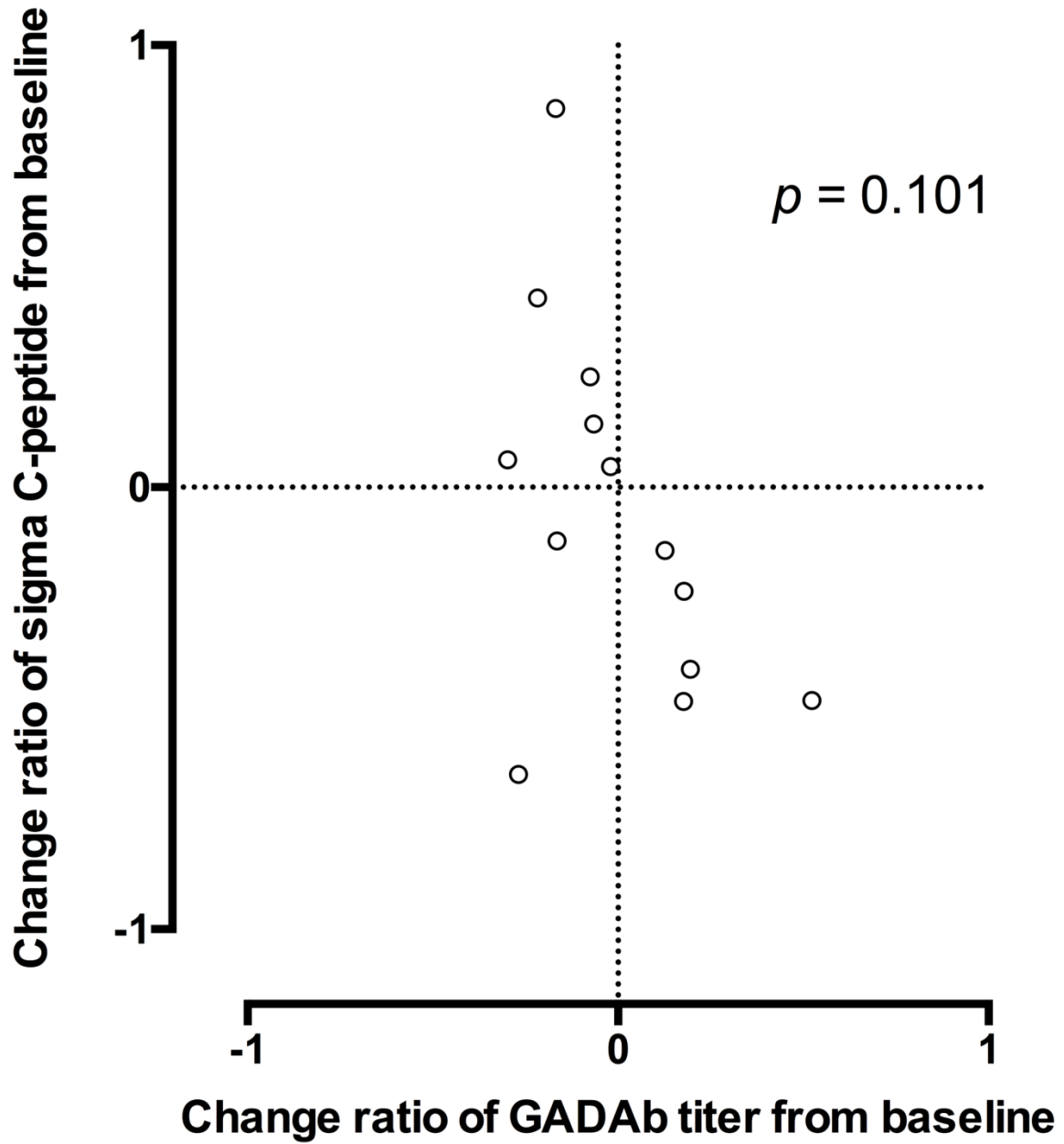


Table S1 Longitudinal changes in BMI, HbA1c, beta-cell function and GADAb titers of patients with 12, 24, 36 and 48 months of follow-up

12 months of follow-up										
	Sitagliptin group (n=6)					Pioglitazone group (n=5)				
Time (months)	BMI (kg/m ²)	HbA1c (%)	ΣPG (mg/dl)	ΣC-peptide (ng/ml)	GADAb (U/ml)	BMI (kg/m ²)	HbA1c (%)	ΣPG (mg/dl)	ΣC-peptide (ng/ml)	GADAb (U/ml)
0	23.2 +- 6.2	7.5 +- 0.6	1333 +- 325	18.4 +- 5.1	7.7 (1.6-290)	23.9 +- 3.9	7.3 +- 0.6	1301 +- 202	16.5 +- 6.8	8.5 (1.4-12000)
12	23.3 +- 5.8	6.7 +- 0.9 ^a	1232 +- 303	21.0 +- 6.3 ^a	10.5 (1.7-220)	24.6 +- 5.2	7.1 +- 0.6	1182 +- 107	15.7 +- 5.9	5.0 (1.2-15000)
24 months of follow-up										
	Sitagliptin group (n=6)					Pioglitazone group (n=4)				
Time (months)	BMI (kg/m ²)	HbA1c (%)	ΣPG (mg/dl)	ΣC-peptide (ng/ml)	GADAb (U/ml)	BMI (kg/m ²)	HbA1c (%)	ΣPG (mg/dl)	ΣC-peptide (ng/ml)	GADAb (U/ml)
0	23.2 +- 6.2	7.5 +- 0.6	1333 +- 325	18.4 +- 5.1	7.7 (1.6-290)	24.9 +- 3.7	7.5 +- 0.5	1368 +- 158	18.4 +- 6.3	5.9 (1.4-12000)
12	23.3 +- 5.8	6.7 +- 0.9 ^a	1232 +- 303	21.0 +- 6.3 ^a	10.5 (1.7-220)	25.8 +- 5.1	7.2 +- 0.7	1160 +- 111	18.0 +- 3.1	3.95 (1.2-15000)
24	23.3 +- 6.3	6.9 +- 0.8	1334 +- 203	23.3 +- 8.4	7.75 (1.8-170)	25.4 +- 4.9	6.8 +- 0.2	1091 +- 169	19.9 +- 8.8	3.05 (1.36-4200)
48 months of follow-up										
	Sitagliptin group (n=5)					Pioglitazone group (n=2)				
Time (months)	BMI (kg/m ²)	HbA1c (%)	ΣPG (mg/dl)	ΣC-peptide (ng/ml)	GADAb (U/ml)	BMI (kg/m ²)	HbA1c (%)	ΣPG (mg/dl)	ΣC-peptide (ng/ml)	GADAb (U/ml)
0	21.7 +- 5.5	7.4 +- 0.6	1367 +- 350	17.3 +- 4.9	11 (1.6-290)	25.0 +- 0.8	7.8 +- 0.6	1357 +- 271	13.8 +- 0.2	4.95 (1.4-8.5)
12	21.9 +- 5.2	6.9 +- 0.9 ^a	1279 +- 315	19.2 +- 5.1	16 (1.7-220)	25.0 +- 0.7	7.7 +- 0.8	1170 +- 56	16.1 +- 0.4	3.1 (1.2-5)
24	23.3 +- 6.3	7.0 +- 0.9	1362 +- 214	23.4 +- 9.4	9.2 (1.3-170)	25.1 +- 0.9	6.8 +- 0.1	1196 +- 199	17.0 +- 5.5	3.0 (1.6-4.4)
36	21.7 +- 5.5	6.6 +- 0.7 ^a	1350 +- 174	19.7 +- 6.6	11 (1.3-140)	25.9 +- 1.0	7.1 +- 0.1	1177 +- 151	13.9 +- 3.2	4.55 (2.6-6.5)
48	21.4 +- 4.9	6.9 +- 0.7	1365 +- 391	18.2 +- 4.7	16 (1.8-260)	25.5 +- 0.6	7.2 +- 0.6	1122 +- 228	12.2 +- 1.7	5.45 (2-8.9)

Data are n (%), mean+-SD or median (range)

BMI, body mass index; PG, plasma glucose; GADAb, glutamic acid decarboxylase autoantibodies

Multiply by 0.331 to convert C-peptide values to nanomoles per liter. The values of BMI, HbA1c, ΣPG, ΣC-peptide and GADAb titers were not significantly different between the sitagliptin and pioglitazone groups at any time point in any of the follow-up periods

^a $p < 0.05$ vs 0 months (paired *t*-test)

Table S2 Individual longitudinal changes in BMI, HbA1c, ΣC-peptide values and GADAb titers

Time (months)	Sitagliptin group							Time (months)	Pioglitazone group						
	Sitagliptin dosage (mg)	Metformin dosage (mg)	BMI (kg/m ²)	HbA1c (%)	ΣPG (mg/dl)	ΣC-peptide (ng/ml)	GADAb (U/ml)		Pioglitazone dosage (mg)	Metformin dosage (mg)	BMI (kg/m ²)	HbA1c (%)	ΣPG (mg/dl)	ΣC-peptide (ng/ml)	GADAb (U/ml)
Case S1 (56-year-old male)								Case P1 (60-year-old female)							
0	50	750	24.0	8.2	1750	15.8	2.0	0	15	0	20.2	7.1	1403	27.1	3.3
12	50	750	24.7	7.6	1514	20.2	1.7	12	15	0	20.6	6.9	1022	22.6	2.9
24	50	750	24.1	6.9	1577	22.6	1.8	24	15	0	19.7	6.7	960	31.9	1.7
36	50	750	23.9	6.6	1363	21.6	1.9	Case P2 (57-year-old female)							
48	50	750	24.5	6.7	1593	21.4	2.5	0	15	750	25.5	8.2	1548	13.7	8.5
Case S2 (64-year-old female)								12	30	750	24.5	8.2	1130	16.4	5.0
0	50	500	17.9	7.8	1723	13.3	11	24	30	750	24.4	6.7	1055	20.9	4.4
12	50	500	19.1	7.9	1505	12.7	21	36	30	750	26.6	7.0	1070	16.1	6.5
24	50	500	18.8	7.6	1545	14.2	9.2	48	30	750	25	6.8	961	13.4	8.9
36	50	1000	18.3	7.8	1608	13.1	11	Case P3 (61-year-old male)							
48	50	1000	18.3	7.8	1851	13.8	16	0	15	750	24.4	7.3	1165	14	1.4
Case S3 (56-year-old female)								12	15	750	25.4	7.1	1209	15.8	1.2
0	50	750	15.6	7.1	968	25.4	290	24	15	750	25.8	6.9	1337	13.1	1.6
12	50	750	15.7	6.3	766	26.7	220	36	15	750	25.1	7.2	1283	11.6	2.6
24	50	750	15.2	6.6	1064	37.4	170	48	15	1000	25.9	7.6	1283	11.0	2.0
36	50	750	15.9	6.3	1365	26.9	140	Case P4 (56-year-old female)							
48	50	750	15.9	6.7	807	24.3	260	0	15	750	29.4	7.5	1354	18.7	12000
Case S4 ^a (58-year-old male)								12	30	750	32.8	6.5	1280	17.3	15000
0	50	750	21.1	6.8	1216	14.0	1.6	24	30	1500	31.6	7.0	1011	13.7	4200
12	50	750	20.7	5.9	1417	17.3	1.6	Case P5 (45-year-old male)							
24	50	1500	20.5	5.8	1242	27.1	1.3	0	15	0	19.9	6.6	1037	9.1	160
36	50	1500	20.2	6	1290	24.6	1.3	12	30	1500	19.7	7.0	1269	6.4	170
48	50	1500	20.1	5.9	1285	17.9	1.8								
Case S5 (27-year-old female)															
0	50	0	29.6	7.1	1178	17.9	17								
12	50	0	29.2	6.6	1191	19	16								
24	50	0	30.0	8.0	1380	15.6	33								
36	50	0	27.9	6.4	1125	12.4	47								
48	50	500	28.0	7.4	1290	13.7	46								
Case S6 (74-year-old female)															
0	50	750	30.9	7.9	1160	23.7	4.4								
12	50	750	30.3	5.9	1001	29.8	5.0								
24	50	750	31.0	6.4	1198	22.7	6.3								

BMI, body mass index; PG, plasma glucose; GADAb, glutamic acid decarboxylase autoantibodies

Age at baseline and gender are shown in parentheses

^a An alpha-glucosidase inhibitor was only added in case S4 (voglibose 0.9 mg from 4 months)