Supplemental Figure 1
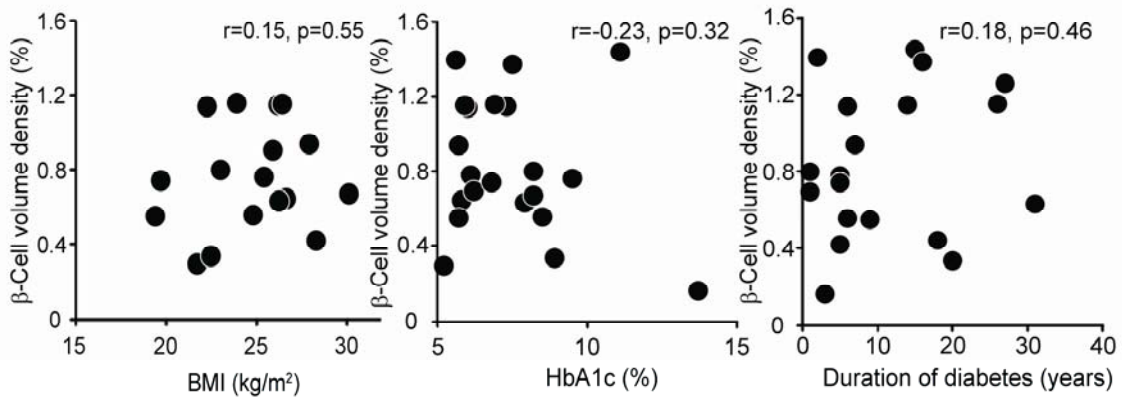
Correlation of β-cell volume density with BMI, HbA1c and duration of diabetes in amyloid-rich diabetic group (DA+). There was no correlation between β-cell volume density and BMI (n=17), HbA1c (n=21), or duration of diabetes (n=19).

Supplemental Figure 1

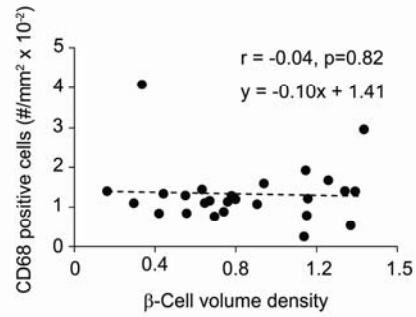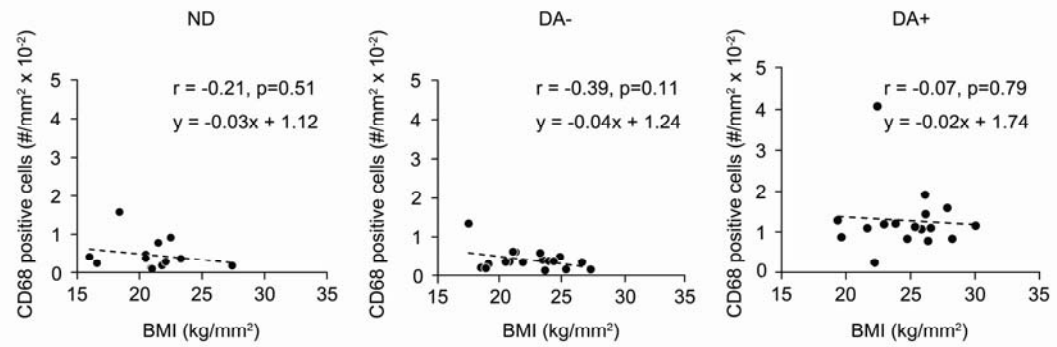**Supplemental Figure 2**

Relationship between macrophage infiltration in the islet and β-cell volume density or

BMI. There was no significant correlation between the number of CD68 cells and β-cell

volume density (Figure A) or BMI (Figure B) in amyloid-rich diabetic group (DA+).

When BMI was matched in the subjects less than 23 among non-diabetic (red square)

(ND, n=11), amyloid-free diabetic (blue rhombus) (DA-, n=10) and amyloid-rich diabetic

groups (black triangle) (DA+, n=4), population of CD68 cells was still the highest in
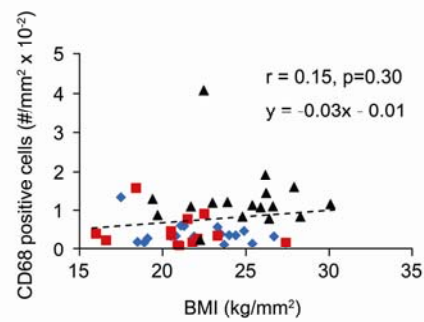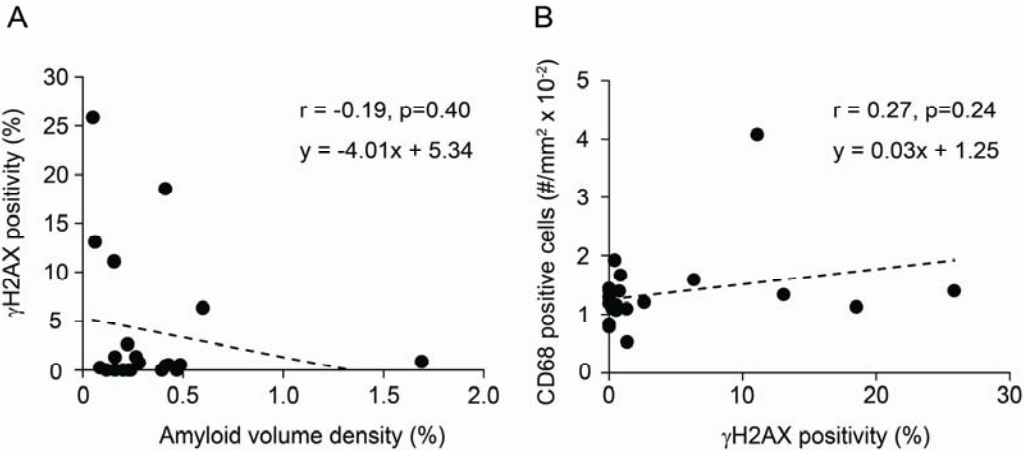
DA+ (Figure C).

Supplemental Figure 2

A

B

ND

DA-

DA+

C

Supplemental Figure 3

Relationships between γH2AX-positivity and amyloid volume density (A) or CD68 cell

population (B). There was no significant correlation in either relationship.

Supplemental Figure 3

A

r = -0.19, p=0.40
y = -4.01x + 5.34

B

r = 0.27, p=0.24
y = 0.03x + 1.25

Supplemental table 1 Detailed contents of investigated subjects

Diabetic with amyloid

No.	Sex (M/F)	Age (years)	BMI (kg/m^2)	Major cause of death	Pancreatic weight (g)	Duration of Diabetes (years)	HbA1c (%, NGSP)	Treatment
1	M	38	-	Fistula cancer	120	-	-	diet
2	M	40	-	Bronchopneumonia	-	2	5.6	insulin
3	M	45	25.9	Dilated cardiomyopathy	200	-	-	-
4	M	50	-	Hyperosmolar hyperglycemic syndrome	-	3	13.7	-
5	M	62	-	Lung cancer	70	5	6.1	OHA
6	M	63	21.7	Bronchopneumonia	170	-	5.2	OHA
7	M	64	27.9	Hepatocellular carcinoma	175	7	5.7	OHA + insulin
8	M	65	23.0	Bronchopneumonia	80	1	8.2	OHA
9	F	66	26.2	Bronchopneumonia	82	14	7.3	OHA + insulin
10	F	66	22.5	Systemic MRSA infection, sepsis	-	20	8.9	insulin
11	M	67	22.3	Gastric cancer	120	6	6.0	-
12	M	67	26.4	Acute circulatory failure	205	26	5.9	insulin
13	F	69	26.6	Hepatocellular carcinoma	195	-	5.8	insulin
14	M	70	-	Suffocation	-	15	11.1	diet
15	F	71	26.2	Acute myocardial infarction	-	31	7.9	insulin
16	M	74	-	Hemorrhagic bronchopneumonia	200	1	6.2	OHA
17	M	74	19.7	Hepatocellular carcinoma	150	5	6.8	OHA
18	M	76	-	Heart failure	-	18	-	OHA
19	M	76	30.1	Gastrointestinal bleeding	135	-	8.2	diet
20	F	77	23.9	Lung cancer	90	-	6.9	diet
21	M	77	19.4	Heart failure	105	9	5.7	diet

No	Sex	Age	BMI	Cause of death				
22	M	78	-	Acute myocardial infarction	64	27	-	insulin
23	F	80	25.4	Acute myocardial infarction	75	-	9.5	OHA
24	M	82	24.8	Bronchopneumonia	-	6	8.5	OHA
25	F	82	-	Hepatocellular carcinoma	125	16	7.5	insulin
26	M	85	28.3	Acute subdural hamatoma	-	5	-	OHA
Mean±SE		67.8±2.5	24.7±0.7 (n=17)		131.2±11.7 (n=18)	11.4±2.2 (n=19)	7.46±0.5 (n=21)	

No.	Sex (M/F)	Age (years)	BMI (kg/m^2)	Major cause of death	Pancreatic weight (g)	Duration of Diabetes (years)	HbA1c (%, NGSP)	Treatment
1	F	45	25.4	Fulminant hepatitis	-	2	6.9	OHA
2	M	46	24.9	Pneumonia	120	-	-	untreated
3	M	50	18.9	Pneumonia	110	-	4.9	untreated
4	F	51	20.5	Dilated cardiomyopathy	110	2	6.2	OHA
5	M	56	21.1	Myelodysplastic syndrome	130	-	8.4	insulin
6	M	58	18.5	Lung cancer	120	4	5.5	diet
7	M	63	23.3	Gastric cancer	-	-	7.6	diet
8	M	63	23.7	Combined valvular disease	110	11	4.8	OHA
9	M	65	26.7	Lung cancer	110	-	8.7	Insulin
10	M	66	17.5	Lung abscess, Pneumonia	110	-	6.8	OHA
11	M	69	24.4	Multiple organ failure	120	-	5.7	-
12	M	72	24.0	Acute circulatory failure	110	4	6.8	OHA
13	M	73	20.6	Acute myocardial infarction	100	18	9.6	OHA
14	M	73	21.9	Acute myocardial infarction	170	19	9.0	OHA + insulin
15	M	73	24.3	Lung cancer	120	-	8.1	untreated
16	M	75	21.3	Hepatocellular carcinoma	185	3.3	6.2	insulin
17	F	76	27.4	Ischemic colitis	140	25	6.5	insulin
18	M	77	20.8	Gastric cancer	-	35	-	-
19	F	80	19.1	Acute myocardial infarction	40	10	-	-
20	M	82	23.5	Acute myocardial infarction	150	4	7.4	OHA
Mean±SE		65.7±2.5	22.4±0.6 (n=20)		120.1±7.6 (n=17)	11.4±3.1 (n=12)	7.00±0.3 (n=17)	

No.	Sex (M/F)	Age (years)	BMI (kg/m^2)	Major cause of death	Pancreatic weight (g)	Duration of Diabetes (years)	HbA1c (%, NGSP)	Treatment
1	F	32	-	Malignant lymphoma	140	NA	NA	NA
2	M	44	16.0	Pulmonary tuberculosis	150	NA	NA	NA
3	M	49	23.3	Sarcomatoid carcinoma	130	NA	NA	NA
4	F	53	21.0	Malignant lymphoma	200	NA	NA	NA
5	F	54	20.9	Vulvar cancer	115	NA	NA	NA
6	M	56	20.5	Liver cirrhosis, Heart failure	200	NA	NA	NA
7	F	61	21.5	Angiosarcoma	110	NA	NA	NA
8	F	63	-	Acute respiratory distress syndrome	103	NA	NA	NA
9	F	67	-	Dilated cardiomyopathy	120	NA	NA	NA
10	M	67	18.4	Esophageal cancer	-	NA	NA	NA
11	F	67	16.6	Acute circulatory failure	80	NA	NA	NA
12	F	68	-	Aortic dissection	120	NA	NA	NA
13	M	68	20.15	Liver cirrhosis	100	NA	NA	NA
14	F	69	22.5	Non-occlusive mesenteric ischemia	80	NA	NA	NA
15	F	74	20.5	Drug induced hepatitis	170	NA	NA	NA
16	M	74	24.0	Malignant lymphoma	110	NA	NA	NA
17	F	75	27.4	Gastric cancer	110	NA	NA	NA
18	M	80	18.4	Interstitial pneumonia	90	NA	NA	NA
19	M	81	21.8	Acute myocardial infarction	125	NA	NA	NA
20	M	81	22.1	Acute myocardial infarction	110	NA	NA	NA
Mean±SE		64.2±2.9	21.0±0.7		124.4±7.9			

(n=16)   (n=19)