SUPPLEMENTARY DATA

Supplementary Table 1. Univariate Analysis of Race/Ethnicity on Antibody Status

Ethnicity	n	GADA % pos	OR	CI	IA-2A % pos	OR	CI	Aby+ % pos	OR	CI
non-Hispanic White/Caucasian	4596	47.5	1		46.3	1		67.7	1	
Asian	191	37.7	0.67‡	0.48-0.92	27.7	0.45*	0.31-0.64	50.8	0.49*	0.36-0.67
Black/African American	80	46.3	0.95	0.57-1.57	46.3	1.00	0.61-1.64	61.3	0.75	0.45-1.27
Pacific Islander	13	38.5	0.69	0.25-1.88	30.8	0.52	0.13-2.11	46.2	0.41	0.12-1.38
Hispanic	140	38.6	0.69	0.47-1.01	57.1	1.55	1.04-2.29	70.7	1.15	0.75-1.76

Shown are the results of three separate univariate analysis. Dependent variables are GADA, IA-2A or Aby+, and independent variables are self-reported race. Subjects could choose up the three races, though the first choice (primary race) was used to classify subjects in these analyses. Hispanic ethnicity was an additional question on study forms, and thus not mutually exclusive from other races (i.e. Caucasian). We choose to make Hispanics a separate category. Of 141 self-identified Hispanic individuals, 140 were Caucasian, and one was Black, the later of whom we classified as Black given the relatively smaller numbers of Black participants. Aby+ indicates those who are GADA and/or IA-2A positive. n – number of subjects, % pos – percent of antibody positive subjects, OR – odds ratio, CI – 95% confidence interval, X ≠ DR3 or DR4, * p<0.0001, † p<0.001, ‡ p<0.05
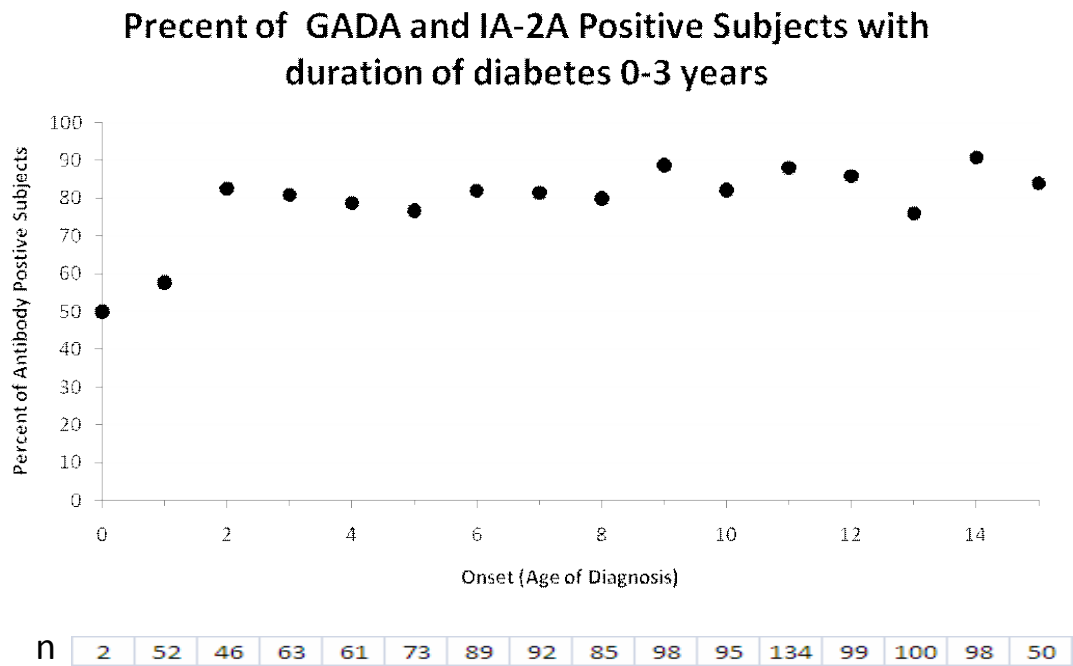
SUPPLEMENTARY DATA

Supplementary Table 2. Multivariate Analysis of Onset and Duration, HLA type and Race/Ethnicity on Antibody Status

Covariates	n	GADA % pos	OR	CI	IA-2A % pos	OR	CI	Aby+ % pos	OR	CI
Duration 0-5 years	530	45.5	1		61.3	1		76.6	1	
Duration 6-13 years	644	34.8	0.62†	0.48-0.79	44.6	0.46*	0.36-0.58	62.3	0.46*	0.36-0.61
Duration ? 14 years	565	27.6	0.43*	0.33-0.56	24.2	0.16*	0.12-0.21	42.7	0.19*	0.14-0.25
Duration 0-5 years	745	58.8	1.75*	1.39-2.22	65.1	1.19	0.93-1.53	82.1	1.43‡	1.07-1.91
Duration 6-13 years	508	41.9	0.85	0.65-1.10	53.9	0.66‡	0.51-0.87	71.9	0.72‡	0.54-0.97
Duration ? 14 years	514	37.0	0.65‡	0.50-0.85	35.0	0.29*	0.22-0.38	56.2	0.34*	0.26-0.46
Duration 0-5 years	567	70.5	2.96*	2.27-3.85	53.4	0.73‡	0.56-0.96	82.2	1.49‡	1.09-2.04
Duration 6-13 years	389	65.3	2.22*	1.67-2.95	42.7	0.42*	0.31-0.56	73.8	0.81	0.59-1.11
Duration ? 14 years	558	42.5	0.86	0.67-1.11	26.2	0.19*	0.15-0.26	53.4	0.32*	0.24-0.43
X/X	374	36.6	1		30.2	1		50.0	1	
DR3/X	627	49.6	1.85†	1.36-2.53	26.0	0.82	0.59-1.12	57.3	1.43‡	1.05-1.94
DR3/DR3	374	57.0	2.47*	1.74-3.51	22.7	0.64‡	0.44-0.94	65.2	1.97†	1.38-2.80
DR3/DR4	1847	47.9	1.88*	1.42-2.49	49.1	2.55*	1.94-3.36	70.2	2.85*	2.16-3.76
DR4/X	1278	41.8	1.31	0.98-1.73	56.7	3.34*	2.52-4.44	69.0	2.44*	1.84-3.24
DR4/DR4	520	52.5	1.98*	1.43-2.74	59.8	3.88*	2.81-5.34	76.3	3.58*	2.58-4.98
non-Hispanic White/Caucasian	4595	47.5	1		46.3	1		67.8	1	
Asian	191	37.7	0.55†	0.39-0.78	27.7	0.43†	0.28-0.65	50.8	0.43*	0.31-0.60
Black	80	46.3	0.93	0.56-1.55	46.3	0.92	0.52-1.60	61.3	0.70	0.40-1.21
Pacific Islander	13	38.5	0.64	0.20-2.00	30.8	0.32	0.06-1.77	46.2	0.28	0.06-1.27
Hispanic	140	38.6	0.68	0.45-1.02	57.1	1.22	0.80-1.86	70.7	0.96	0.62-1.48

Shown are the results of three separate multivariate analysis. Dependent variables are GADA, IA-2A or Aby+, and independent variables (covariates) are age of onset (split into tertiles), duration of disease (split into tertiles), HLA type and race. Subjects could choose up the three races, though the first choice (primary race) was used to classify subjects in these analyses. Hispanic ethnicity was an additional question on study forms, and thus not mutually exclusive from other races (i.e. Caucasian). We choose to make Hispanics a separate category. Of 141 self-identified Hispanic individuals, 140 were Caucasian, and one was Black, the later of whom we classified as Black given the relatively smaller numbers of Black participants. Aby+ indicates those who are GADA and/or IA-2A positive. n – number of subjects, % pos – percent of antibody positive subjects, OR – odds ratio, CI – 95% confidence interval, X ≠ DR3 or DR4, * $p<0.0001$, † $p<0.001$, ‡ $p<0.05$

Supplementary Table 3. Multivariate Analysis of Onset and Duration on Antibody Status

Model	Covariates	n	GADA			IA-2A			Aby+		
			% pos	OR	CI	% pos	OR	CI	% pos	OR	CI
Onset	Duration 0-5 years	530	45.5	1		61.3	1		76.6	1	
2-7	Duration 6-13 years	644	34.8	0.64†	0.50-0.81	44.6	0.51*	0.40-0.64	62.3	0.50*	0.39-0.65
Years	Duration ? 14 years	565	27.6	0.46*	0.35-0.59	24.2	0.20*	0.16-0.26	42.7	0.23*	0.17-0.30
Onset	Duration 0-5 years	745	58.8	1.71*	1.36-2.15	65.1	1.18	0.93-1.49	82.1	1.41‡	1.06-1.86
8-13	Duration 6-13 years	508	41.9	0.87	0.67-1.12	53.9	0.74‡	0.57-0.95	71.9	0.78	0.59-1.04
Years	Duration ? 14 years	514	37.0	0.70‡	0.54-0.91	35.0	0.34*	0.26-0.44	56.2	0.39*	0.30-0.52
Onset	Duration 0-5 years	567	70.5	2.87*	2.22-3.72	53.4	0.72‡	0.56-0.93	82.2	1.41‡	1.04-1.91
? 14	Duration 6-13 years	389	65.3	2.26*	1.71-2.98	42.7	0.47*	0.36-0.62	73.8	0.86	0.63-1.17
Years	Duration ? 14 years	558	42.5	0.89	0.69-1.14	26.2	0.22*	0.17-0.29	53.4	0.35*	0.27-0.46

Shown are the results of three separate univariate analysis. Dependent variables are GADA, IA-2A or Aby+, and independent variables (covariate) are age of onset (split into tertiles) and duration of disease (split into tertiles). Aby+ indicates those who are GADA and/or IA-2A positive). n – number of subjects, % pos – percent of antibody positive subjects, OR – odds ratio, CI – 95% confidence interval, X ≠ DR3 or DR4, * p<0.0001, † p<0.001, ‡ p<0.05

Supplementary Figure 1. Percent GADA and IA-2A Positive Subjects with duration Diabetes 0-3 years.

Precent of GADA and IA-2A Positive Subjects with duration of diabetes 0-3 years

| n | 2 | 52 | 46 | 63 | 61 | 73 | 89 | 92 | 85 | 98 | 95 | 134 | 99 | 100 | 98 | 50 |

Onset: age of diagnosis. Numbers at bottom represent the number of subjects (n) per each year of onset.

Supplementary Figure 2. A modified spline, similar to Figure 3A, was used to model the percentage of GADA positive subjects. We limited duration to 30 years in this model. The p-value represents the significance of the interaction of onset and duration.

GADA, p=0.002