

**Supplemental Table 1. Index60 in Characterizing Individuals at Risk for Type 1 Diabetes**

<b>Author (Year)</b>	<b>Database</b>	<b>Participants</b>	<b>Key Groups Studied</b>	<b>Key Findings</b>
Sosenko (2015) <sup>6</sup>	DPT-1 TNPTP	Ab+ family members	Incident (not at baseline): Index60 $\geq$ 2.00 and 2-hr glucose $\geq$ 200 mg/dL	Index60 $\geq$ 2.00 identified younger individuals earlier in stage 3.
Nathan (2017) <sup>7</sup>	TNPTP	Ab+ family members	Incident (not at baseline): Index60 $\geq$ 1.00 and 2-hr glucose 140-199 mg/dL	Index60 better identified individuals with type 1 diabetes associated characteristics and with increased risk of stage 3.
Redondo (2021) <sup>8</sup>	TNPTP	Ab+ family members	Prevalent (at baseline): Index60 $\geq$ 2.00 and 2-hr glucose $\geq$ 200 mg/dL	Index60 better identified individuals with type 1 diabetes associated characteristics and with similar 4-year stage 3 risk

**Supplemental Table 2. Quantile Data for 2-hour Glucose Measures by Group**

Cohort	2-hour glucose quantiles				
	10 <sup>th</sup> percentile	25 <sup>th</sup> percentile	50 <sup>th</sup> percentile (median)	75 <sup>th</sup> percentile	90 <sup>th</sup> percentile
All participants	80	93	106	118	129
LO-BOTH	75	87	99	108	114
HI-2HGLU	120	122	127	132	136
HI-IND60	84	93	103	110	115
HI-BOTH	119.4	122	127	133	137

**Supplemental Table 3. Quantile Data for Index60 Measures by Group**

Cohort	Index60 quantiles				
	10 <sup>th</sup> percentile	25 <sup>th</sup> percentile	50 <sup>th</sup> percentile (median)	75 <sup>th</sup> percentile	90 <sup>th</sup> percentile
All participants	-1.70	-0.91	-0.23	0.32	0.67
LO-BOTH	-1.93	-1.21	-0.56	-0.11	0.15
HI-2HGLU	-1.84	-1.09	-0.41	-0.017	0.17
HI-IND60	0.37	0.44	0.58	0.75	0.90
HI-BOTH	0.37	0.45	0.63	0.79	0.92

**Supplemental Table 4. C-peptide and glucose values during OGTT time points within each cohort**

Measure mean±sd	Time point (min)	LO- BOTH N=1761	HI- 2HGLU N=533	HI- IND60 N=539	HI- BOTH N=225	Overall cohort N=3058
<b>C-peptide (ng/ml)</b>	Fasting*	1.8±0.8	2.0±0.9	1.1±0.5	1.2±0.6	1.7±0.8
	0	1.8±0.8	2.0±0.9	1.1±0.5	1.2±0.6	1.7±0.8
	30	6.8±2.8	7.4±2.9	3.6±1.3	4.0±1.4	6.1±2.9
	60	8.0±3.2	8.9±3.3	4.3±1.5	5.1±1.7	7.3±3.4
	90	7.2±3.1	8.6±3.6	4.4±1.8	5.4±2.1	6.8±3.2
	120	6.3±2.6	8.9±3.2	3.7±1.5	5.5±1.9	6.2±3.0
<b>Glucose (mg/dL)</b>	Fasting*	89.5±10.3	91.6±8.0	87.6±8.2	89.4±9.3	89.5±9.6
	0	89.7±16.0	91.8±9.0	87.5±8.5	89.3±10.8	89.6±13.6
	30	138.8±23.9	149.2±23.8	139.4±25.9	147.0±26.5	141.3±24.8
	60	119.0±27.3	143.1±26.9	131.6±28.6	149.9±28.5	127.7±29.7
	90	105.2±21.1	128.8±21.8	114.8±19.9	134.3±20.2	112.6±23.7
	120	96.3±15.1	127.5±5.8	100.7±12.3	127.9±6.2	104.9±18.4

**Supplemental Table 5. Background Demographics for the Overall Cohort**

Characteristic	All participants N=3058
<i>Age at Ab+ (yrs.)</i>	
Median (range)	12.3 (1.1 – 51.1)
Mean±SD	17.4±12.8
Not reported	6
<i>Number Ab+ (based on mIAA, GADA, and IA-2A)</i>	
Single (confirmed)	2022 (66%)
≥2	1029 (34%)
<i>Sex</i>	
Female	1584
Male	1461 (48%)
Not reported	13
<i>BMI percentile</i>	
Median (IQR*)	69.0 (89.3 – 42.0)
Mean±SD	63.7±28.5
Not reported	15

\*IQR (interquartile range = Q3 – Q1) was used since the range was not very informative for this variable; nearly all groups had ranges from 0 to nearly 100. Thus, the IQR for this variable was a better measure of spread.

**Supplemental Table 6. Autoantibody Percentages for 2-hour Glucose and Index60 groups**

Autoantibody	HI-2HGLU (A) n=533	HI-IND60 (B) n=539	HI-BOTH (C) n=225	LO-BOTH (D) n=1761	A vs. D	B vs. D	C vs. D	A vs. B	A vs. C	B vs. C
<b>mIAA</b> negative positive not reported	354 177 (33%) 2	262 275 (51%) 2	125 100 (44%) 0	1189 569 (32%) 3	NS	<0.001	0.004	<0.001	0.005	NS
<b>GADA</b> negative positive not reported	108 423 (80%) 2	98 439 (82%) 2	43 182 (81%) 0	328 1431 (81%) 2	NS	NS	NS	NS	NS	NS
<b>IA-2</b> negative positive not reported	419 112 (21%) 2	367 170 (32%) 2	128 97 (43%) 0	1379 380 (22%) 2	NS	<0.001	<0.001	0.001	<0.001	0.003
<b>ZnT8</b> negative positive not tested	296 90 (23%) 145	240 145 (38%) 152	90 70 (44%) 65	986 281 (22%) 492	NS	<0.001	<0.001	<0.001	<0.001	NS
<b>ICA</b> negative positive not reported	369 155 (30%) 9	307 224 (42%) 8	128 90 (41%) 7	1245 492 (28%) 24	NS	<0.001	0.001	<0.001	0.003	NS
<b># Ab+*</b> <b>&lt;2</b> <b>≥2</b>	386 145 (27%)	273 264 (49%)	106 119 (53%)	1257 501 (28%)	NS	<0.001	<0.001	<0.001	<0.001	NS

\* mIAA, GADA, and/or IA-2A

**Supplemental Table 7. Presence of DR3-DQ2 and DR4-DQ8 among 2-hour Glucose and Index60 Groups**

	<b>HI- 2HGLU (A) n=533</b>	<b>HI- IND60 (B) n=539</b>	<b>HI- BOTH (C) n=225</b>	<b>LO- BOTH (D) N=1761</b>	<b>A vs. D</b>	<b>B vs. D</b>	<b>C vs. D</b>	<b>A vs. B</b>	<b>A vs. C</b>	<b>B vs. C</b>
<b><i>DR3-DQ2 and DR4-DQ8 (%)</i></b>	16.9	20.3	21.8	14.6	NS	0.002	0.005	NS	NS	NS

**Supplemental Table 8. C-peptide Values (mean±SD) among 2-hour Glucose and Index60 Groups**

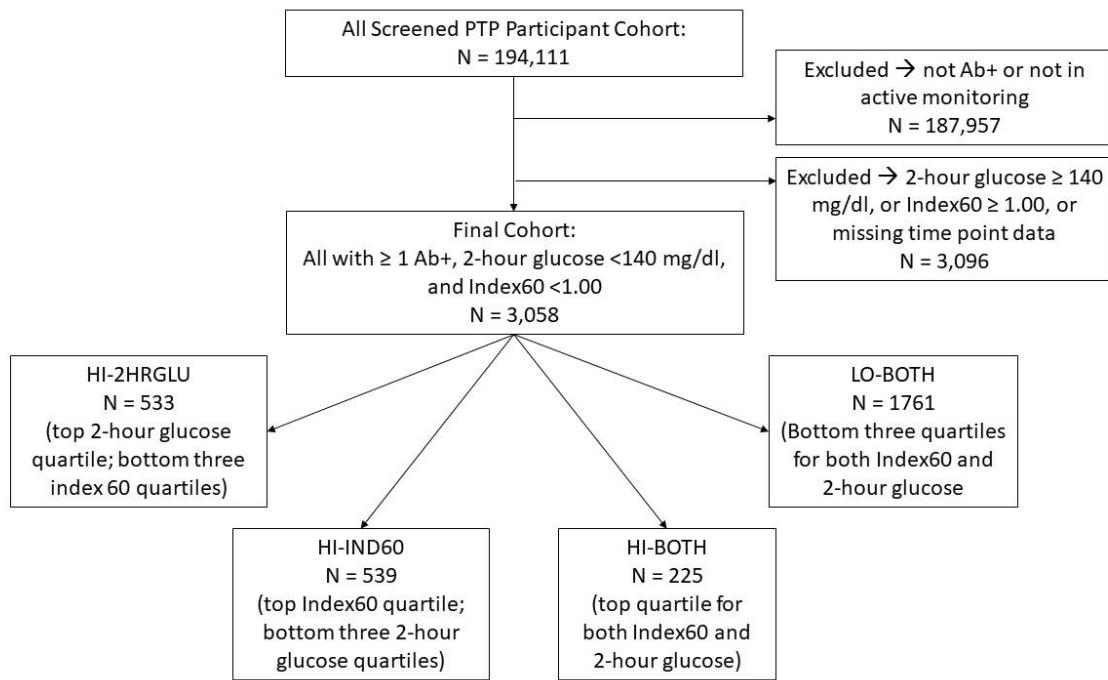
	<b>HI- 2HGLU (A) n=533</b>	<b>HI- IND60 (B) n=539</b>	<b>HI- BOTH (C) n=225</b>	<b>LO- BOTH (D) n=1761</b>	<b>A vs. D</b>	<b>B vs. D</b>	<b>C vs. D</b>	<b>A vs. B</b>	<b>A vs. C</b>	<b>B vs. C</b>
<b><i>AUC C-peptide (ng/ml)</i></b>	7.7±2.7	3.8±1.2	4.6±1.4	6.7±2.4	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
<b><i>30-0 C-peptide (ng/ml)</i></b>	5.4±2.5	2.5±1.1	2.8±1.1	5.0±2.4	<0.001	<0.001	0.022	<0.001	<0.001	0.002

**Supplemental Table 9. Autoantibody Positivity by Index60 and 2-hour Glucose Status Stratified by Medians for the Cohort**

Autoantibody	2-hour glucose ≤median N=1568	2-hour glucose >median N=1490	p-value	Index60 ≤median N=1530	Index60 >median N=1528	p-value
<b>mIAA</b> negative positive not reported	1006 562 (36%) 0	924 559 (38%) 7	NS	1082 444 (29%) 4	848 677 (44%) 3	<0.001
<b>GADA</b> Negative positive not reported	292 1276 (81%) 0	285 1199 (81%) 7	NS	286 1241 (81%) 3	291 1234 (81%) 3	NS
<b>IA-2</b> Negative positive not reported	1185 383 (24%) 0	1108 376 (25%) 6	NS	1224 303 (20%) 3	1069 456 (30%) 3	<0.001
<b>ZnT8</b> Negative positive not tested	841 292 (26%) 435	771 294 (28%) 425	NS	912 212 (19%) 406	700 374 (35%) 454	<0.001
<b>ICA</b> Negative positive not reported	1040 506 (33%) 22	1009 455 (31%) 26	NS	1100 410 (27%) 20	949 551 (37%) 28	<0.001
<b># of Ab+*</b> <b>&lt;2</b> <b>≥2</b>	1054 514 (33%)	968 515 (35%)	NS	1154 372 (24%)	868 657 (43%)	<0.001

\* mIAA, GADA, and/or IA-2A

## Supplemental Figure 1. Inclusion Flow Diagram and Cohort Distribution



**Supplemental Figure 2: Associations of Type 1 Characteristics within the Distribution of 2-Hour Blood Glucose <140 mg/dL Cohort and Index60 <1.0 Cohort**

