

## Online-Only Supplemental Material

**Suppl. Table 1: Characteristics of autoantibody positive participants**

|   | Ab+* non-progressors<br>(n=75) | Ab+ progressors<br>(N=16)  | P-value |
|---|--------------------------------|----------------------------|---------|
| <b>Age at baseline (yrs), median (IQR)</b>  | 11.7 (8.1-14.5)                | 10.5 (6.8-13.2)            | 0.40    |
| <b>Age at first Ab+ (yrs), median (IQR)</b>   | 10.8 (7.7-13.4)                | 10.0 (5.9-13.0)            | 0.59    |
| <b>Female, N (%)</b>  | 44 (58.7)                      | 8 (50)                     | 0.52    |
| <b>Non-Hispanic white, N (%)</b>  | 35 (46.7)                      | 9 (56.3)                   | 0.49    |
| <b>First-degree relative, N (%)</b>   | 14 (20.9)                      | 4 (25.0)                   | 0.74    |
| <b>Antibody status, n (%):</b><br>Single Ab+<br>Single by both (RBA and ECL) <sup>†</sup><br>Multiple Ab+ | 0 (0)<br>23 (31)<br>52 (69)    | 1 (6)<br>2 (13)<br>13 (81) | 0.048   |
| <b>BMI z-score, median (IQR) <sup>‡</sup></b>   | 0.63 (-0.64-1.3)               | 0.28 (-0.27-0.97)          | 0.86    |
| <b>HbA1c, %</b>   | 5.2 (5.1-5.4)                  | 5.6 (5.2-5.9)              |         |
| <b>HbA1c, mmol/mol</b>  | 33 (32-36)                     | 38 (33-41)                 | 0.005   |
| <b>HbA1c ≥ 5.7% (39 mmol/mol), n (%)</b>  | 4 (5.5)                        | 6 (46.2)                   | 0.0006  |
| <b>OGTT, n (%)<sup>§</sup>:</b><br>Abnormal/impaired OGTT<br>Normal OGTT                                  | 0 (0)<br>14 (100)              | 1 (33)<br>2 (67)           | 0.18    |
| <b>Follow-up time<sup>  </sup> (months), median (IQR)</b>   | 6.6 (2.6-11.9)                 | 4.5 (0.9-9.7)              | 0.56    |

\*Ab+: autoantibody positive

<sup>†</sup> RBA: radiobinding and ECL: electrochemiluminescence (ECL) assays

<sup>‡</sup> IQR: interquartile range

<sup>§</sup> only 17 subjects had an OGTT at baseline, ie within 3 weeks of the start or end of CGM wear

<sup>||</sup> Follow-up time since baseline CGM

**Suppl. Table 2: Baseline CGM Measures of glycemic control and variability**

|                                  | Non-progressors (n=75) |               | Progressors (N=16) |               | P value       | Adjusted P value <sup>†</sup> |
|----------------------------------|------------------------|---------------|--------------------|---------------|---------------|-------------------------------|
| Variable                         | Median                 | IQR *         | Median             | IQR           |               |                               |
| Sensor glucose (mg/dL)           | 105                    | 100-111       | 119                | 110-133       | <b>0.0005</b> |                               |
| Sensor glucose (mmol/L)          | 5.8                    | 5.6-6.2       | 6.6                | 6.1-7.4       |               |                               |
| SD ‡ (mg/dL)                     | 15.8                   | 13.3-19.3     | 26.7               | 20.6-30.3     | <0.0001       | <0.0001                       |
| SD (mmol/L)                      | 0.9                    | 0.7-1.1       | 1.5                | 1.1-1.7       |               |                               |
| CV § (%)                         | 14.7                   | 12.8-18.4     | 21.1               | 17.0-28.9     | <0.0001       | <0.0001                       |
| Range (mg/dL)                    | 108                    | 90-123        | 151                | 125-186       | <b>0.0002</b> | <b>0.0017</b>                 |
| Range (mmol/L)                   | 6.0                    | 5.0-6.8       | 8.4                | 6.9-10.3      |               |                               |
| % time ≥ 120 mg/dL (6.7 mmol/L)  | 0.2                    | 0.09-0.25     | 0.4                | 0.25-0.65     | <b>0.0002</b> | 0.83                          |
| % time ≥ 140 mg/dL (7.8 mmol/L)  | 0.03                   | 0.01-0.07     | 0.21               | 0.13-0.33     | <0.0001       | <b>0.0013</b>                 |
| % time ≥ 160 mg/dL (8.9 mmol/L)  | 0.01                   | 0.0-0.02      | 0.08               | 0.04-0.17     | <0.0001       | <b>0.004</b>                  |
| % time ≥ 180 mg/dL (10 mmol/L)   | 0                      | 0.0-0.0       | 0.03               | 0.01-0.07     | <0.0001       | <b>0.0024</b>                 |
| % time ≥ 200 mg/dL (11.1 mmol/L) | 0                      | 0.0-0.0       | 0.01               | 0.0-0.03      | <0.0001       | <b>0.025</b>                  |
| MAGE    (mg/dL)                  | 25.8                   | 20.5-32.2     | 43.3               | 36.8-56.8     | <0.0001       | <0.0001                       |
| MAGE (mmol/L)                    | 1.4                    | 1.1-1.8       | 2.4                | 2.0-3.2       |               |                               |
| MODD # (mg/dL)                   | 15.6                   | 12.4-18.3     | 23.5               | 20.0-29.3     | <0.0001       | <b>0.0009</b>                 |
| MODD (mmol/L)                    | 0.9                    | 0.7-1.0       | 1.3                | 1.1-1.6       |               |                               |
| AUC** overall (mg/min/dL)        | 593838                 | 566260-636693 | 683126             | 605966-754143 |               |                               |
| AUC overall (mmol/min/L)         | 32991                  | 31459-35372   | 37951              | 33665-41897   | <b>0.0013</b> | 0.79                          |
| AUC day †† (mg/min/dL)           | 451815                 | 427905-474158 | 530291             | 453558-580438 |               |                               |
| AUC day (mmol/min/L)             | 25101                  | 23773-26342   | 29461              | 25198-32247   | <b>0.0006</b> | 0.39                          |
| AUC night (mg/min/dL)            | 144578                 | 134705-158060 | 163228             | 140050-186950 |               |                               |
| AUC night (mmol/min/L)           | 8032                   | 7484-8781     | 9068               | 7781-10386    | <b>0.029</b>  | 0.08                          |

\* IQR: interquartile range

† P value adjusted for mean sensor glucose

‡ SD: standard deviation

<sup>§</sup> CV: coefficient of variation

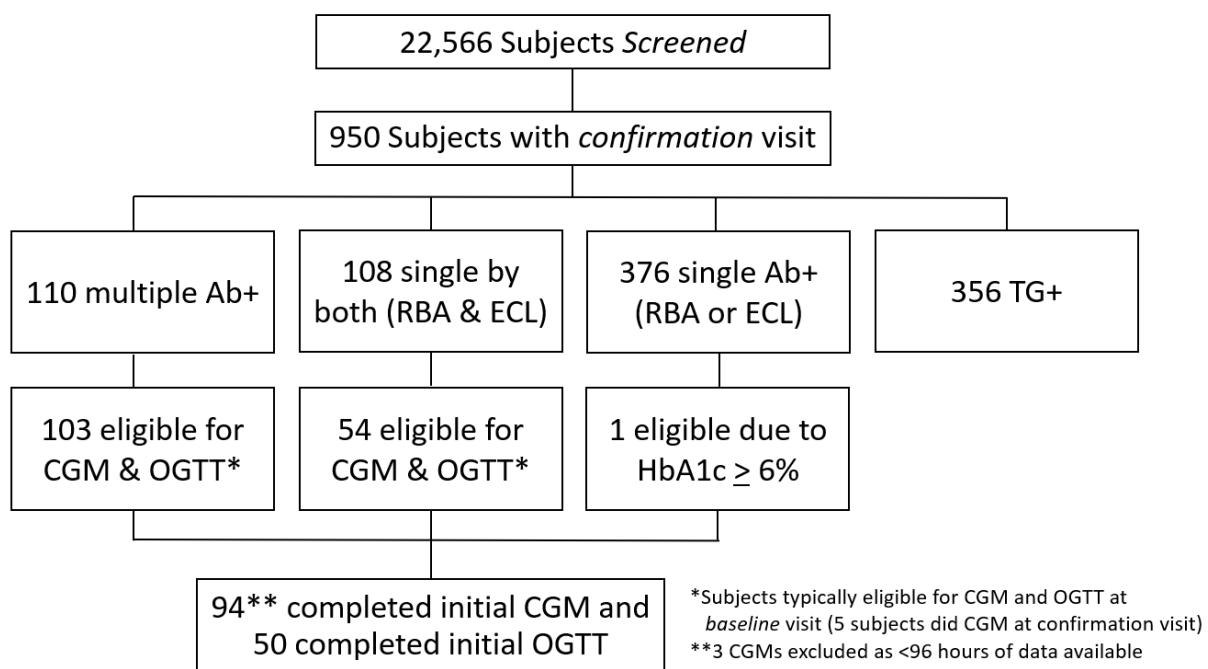
<sup>¶</sup> MAGE: mean amplitude of glycemic excursions

<sup>#</sup> MODD: mean of daily differences

<sup>\*\*</sup> AUC: area under the curve, calculated by the trapezoidal rule

<sup>††</sup> Day: values between 6am and midnight

### Online Figure: ASK screening and monitoring program flowchart



RBA: radiobinding assay

ECL: electrochemiluminescence (ECL) assay

TG+: TTG IgA (celiac) positive

HbA1c  $\geq$  6% (42 mmol/mol)

**ASK Study Group:**

Marian Rewers, MD, PhD, PI, Aaron Barbour, BS, Kimberly Bautista, MPH, Judith Baxter, MPH, Daniel Felipe-Morales, BS, Fran Dong, MS, Paul Dormond-Brooks, BS, Kimberly Driscoll, PhD, Brigitte Frohnert, MD, PhD, Cristy Geno Rasmussen, MPH, PhD, Patricia Gesualdo, RN, MSPH, Michelle Hoffman, RN, Rachel Karban, MPH, Flor Sepulveda, BS, Hanan Shorosh, BS, Kimberly Simmons, MD, Andrea Steck, MD, Iman Taki, MPH, Kathleen Waugh, MS, Liping Yu, MD, Barbara Davis Center for Diabetes, University of Colorado, Anschutz Medical Campus; Edwin Liu, MD, and Marisa Gallant, MD, Pediatric Gastroenterology, Hepatology, and Nutrition, Children's Hospital Colorado, Aurora, CO, United States; R. Brett McQueen, PhD, University of Colorado Anschutz Medical Campus, Skaggs School of Pharmacy and Pharmaceutical Sciences, Aurora, CO, United States; Jill M. Norris, PhD, University of Colorado Anschutz Medical Campus, Colorado School of Public Health, Aurora, CO, United States.