From: **Longitudinal Continuous Glucose Monitoring Study in Young Children With Presymptomatic Type 1 Diabetes Followed in the Environmental Determinants of Islet Autoimmunity (ENDIA) At-Risk Cohort Study**

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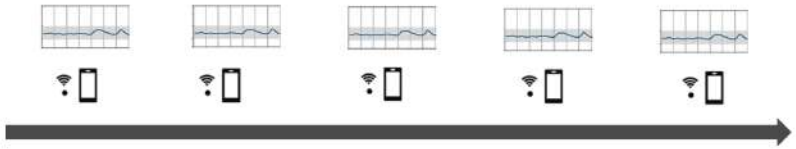
A prospective longitudinal study of repeated continuous glucose monitoring (CGM) in children with persistent multiple islet autoimmunity followed in the **Australian population-based ENDIA study cohort of very young children risk of type 1 diabetes (T1D)** being followed from pregnancy/early-life to 10 years of age.

Study design

36 persistent multiple islet autoantibody positive children.



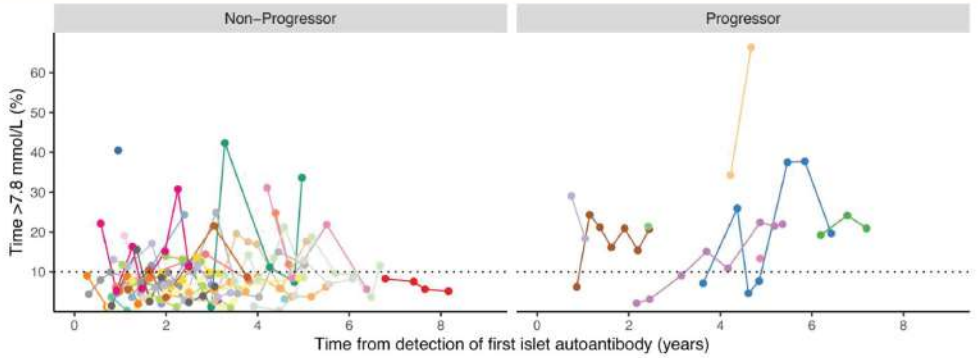
Serial CGM assessments using blinded Dexcom G6 conducted every 3 to 6 months between 1 January 2021 and 31 December 2024.

CGM metrics derived for each assessment and presented for each participant by duration of islet autoimmunity, stratified by those who had and had not progressed to clinical (stage3) T1D during the study period.

Results

A total of 178 CGM assessments were available for 36 children (median [Q1, Q3] age 4.5 [3.5, 6.0] years at first CGM assessment) conducted over a median 2.0 [0.9, 2.7] years. Overall, participants underwent a median of 5.5 [2.0, 7.0] CGM assessments with a median sensor wear period of 11 [9, 15] days. Serial CGM assessments were available for six of eight children who progressed to clinical (stage 3) T1D during the study period.

Heterogeneity in within-person serial measurements of CGM metrics was observed, including for percent CGM time spent >7.8 mmol/L (140 mg/dL).



Further research is required to understand the observed within-person variability in CGM-derived metrics in this population at risk.