

Monitoring Guidance for Early-Stage Type 1 Diabetes (T1D)

Why Monitor: Manage Progression in Early Stage T1D

International consensus guidance initiated by Breakthrough T1D™ (formerly JDRF)

Monitoring and Education Goals for Islet Autoantibody (AAb)–Positive Early-Stage T1D¹

- ✓

Prevent diabetic ketoacidosis (DKA) and reduce risk of emergency care or hospital admission
- ✓

Provide diabetes-related education, including education on medication, lifestyle, and mental wellness
- ✓

Avoid misdiagnosis of type 2 diabetes (T2D) and delayed initiation of insulin therapy
- ✓

Identify persons eligible for interventions to delay Stage 3 onset and/or for research study participation

Who to Monitor¹

Any child, adolescent, or adult who has tested positive for islet autoantibodies (AABs) in early-stage T1D

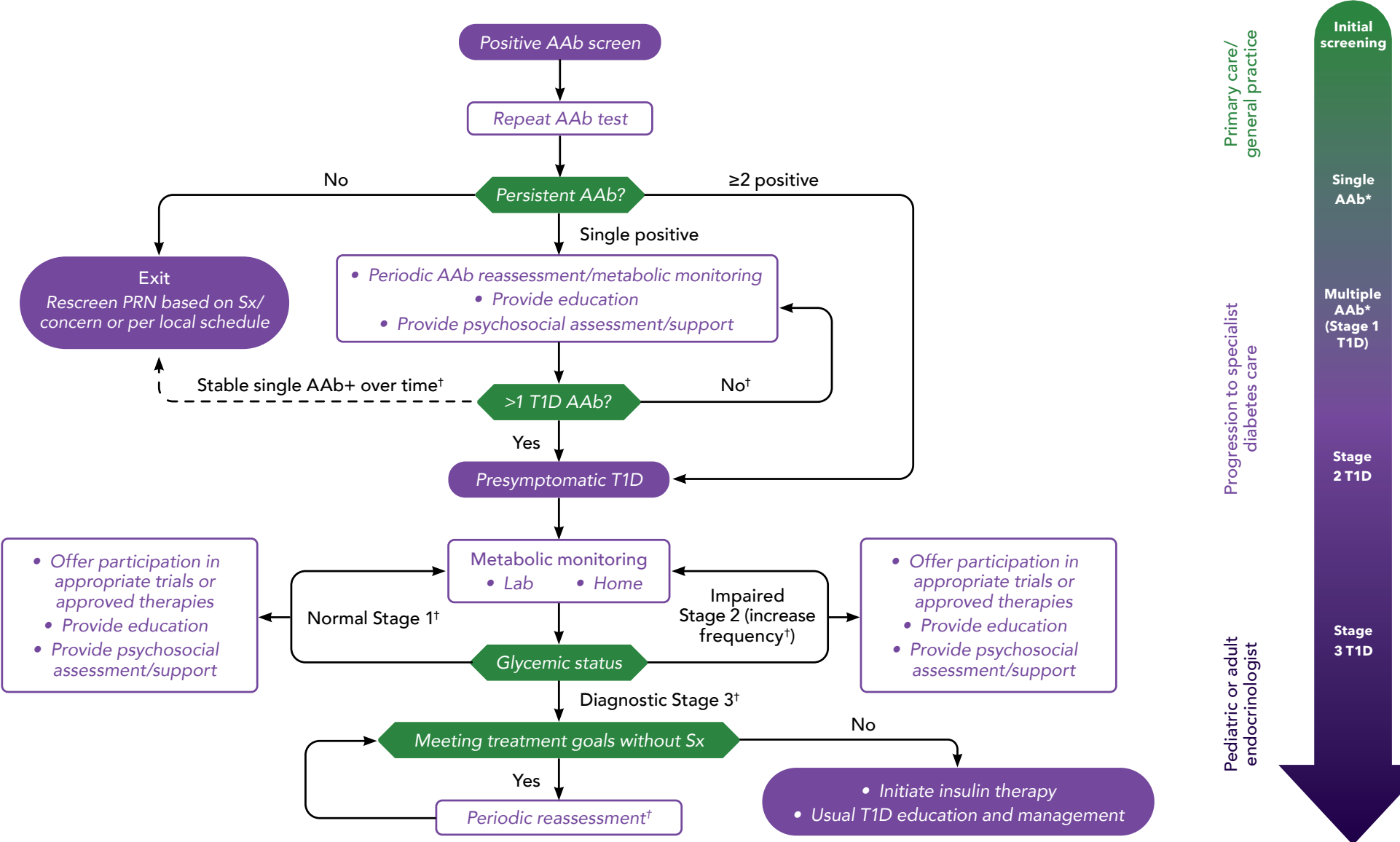
Nearly 100% of individuals in early-stage T1D with ≥2 persistent AABs* will progress to a Stage 3 (clinical) diagnosis

Who Should Be Involved in Monitoring¹

- Primary care healthcare professionals
 - Pediatric and adult endocrinologists
 - Advanced practice partners
 - Diabetologists
 - Behavioral health professionals
- General pediatricians
 - Diabetes education specialists
 - Allied healthcare professionals
 - Individuals with early-stage T1D and families

Monitoring Throughout the Care Continuum^{1†}

Partnerships should be fostered between PCPs and specialists to care for persons with AAb-positive early-stage T1D



*Islet autoantibodies include IAA, GADA, IA-2A, ZnT8A.†Monitoring frequency and methodology depends on age, length of time since first detection of AAb, number of AABs detected, and presence of symptoms of T1D.

Figure adapted from American Diabetes Association. Consensus Guidance for Monitoring Individuals With Islet Autoantibody–Positive Pre-Stage 3 Type 1 Diabetes, *Diabetes Care*, 2024. Copyright and all rights reserved. Material from this publication has been used with the permission of American Diabetes Association.

Monitoring Considerations in Children and Adults^{1,2}

Please see the full consensus guidelines for additional considerations in pregnant persons

	Children	Adults
Single AAb positive	- Confirm persistent single AAb status^{1‡} [B] - Monitor AAb status, as well as random BG and HbA1c¹: Ages <3 years: every 6 months for 3 years, then once a year for 3 years¹ [B] Ages ≥3 years: once a year for 3 years¹ [C] - Individuals with a single IA-2 AAb should be monitored at the same frequency as multiple-AAb–positive individuals² [B]	- Confirm persistent single AAb status^{1‡} [B] - Consider metabolic monitoring once a year if there are risk factors, including [E]: - First-degree relative with T1D, elevated T1D genetic risk, dysglycemia, or history of stress hyperglycemia¹ - Monitor once every 3 years if no risk factors are present¹ [E]
Multiple AAb positive/ Stage 1 T1D	- Confirm persistent multiple AAb status^{1‡} [B] - Monitor SMBG 2 separate days during a 2-week period, and then once every 1–3 months if recent multiple AAb+¹ [E] - Monitor HbA1c (with random BG) [E]: Ages <3 years: every 3 months¹ Ages 3–9 years: at least every 6 months¹ Ages >9 years: at least every 12 months¹ - If HbA1c changes ≥10%, perform OGTT to assess T1D stage¹ [E]	- Confirm persistent multiple AAb status^{1‡} [B] - Monitor HbA1c every 12 months as part of routine primary care visits¹ [E] - If normoglycemic for 5 years, monitor every 2 years¹ [E] - If HbA1c changes ≥10%, perform OGTT to assess T1D stage¹ [E]
Stage 2 T1D  Refer to specialist	Monitor measures of glucose regulation every 3 months¹ [E]	- Monitor HbA1c every 6 months, plus one other modality: Blinded CGM, higher frequency SMBG, or OGTT¹ [E] - If HbA1c changes ≥10%, perform OGTT to assess T1D stage¹ [E] - Assess C-peptide when T1D vs T2D diagnosis is unclear¹ [B]

[‡]Confirm persistent single AAb or multiple AAb status after first detection, preferably in a laboratory that meets IASP standards, using 2 independent methods. Additionally, for single AAb positive status, confirm negative status for other AABs. [B]

For information on the ADA evidence-grading system for Standards of Care in Diabetes, please visit <https://doi.org/10.2337/figshare.25800055>.

Patient and Family/ Caregiver Education¹

All health professionals involved are responsible for providing education (including potential symptoms and prevention of DKA) [E]:

- At the point of a positive AAb screening
- At diagnosis of each stage
- Annually for review and maintenance
- During life transitions

Psychosocial Support¹

- Persons who learn that they or a loved one are positive for T1D AABs often experience significant stress
- Psychosocial care should be integrated with all routine monitoring visits [E]
- Refer to mental and behavioral health professionals as needed

Monitoring throughout the care continuum can help support patients and their families receive actionable education and psychosocial support throughout their T1D journey¹

The consensus report was endorsed by the European Society for the Study of Diabetes, American Diabetes Association, American Association of Clinical Endocrinology, American College of Diabetology, Association of Diabetes Care and Education Specialists, Australian Diabetes Society, the International Society for Pediatric and Adolescent Diabetes, Advanced Technologies and Treatments for Diabetes, DiaUnion, the Endocrine Society, and JDRF International.

AAb=islet autoantibody; ADA=American Diabetes Association; BG=blood glucose; CGM=continuous glucose monitoring; GADA=glutamic acid decarboxylase 65 autoantibody; HbA1c=hemoglobin A1c; IA-2A=insulinoma-associated antigen 2 autoantibody; IAA=insulin autoantibody; IASP=Islet Autoantibody Standardization Program; OGTT=oral glucose tolerance test; PCP=primary care provider; PRN=pro re nata (as needed); SMBG=self-monitoring blood glucose; Sx=symptoms; ZnT8A=zinc transporter 8 autoantibody.

References: 1. Phillip M, et al. *Diabetes Care* 2024;47(8):1276–1298. 2. American Diabetes Association. *Diabetes Care*. 2026;49(suppl 1):1–S371.

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