The Association for Clinical Biochemistry & Laboratory Medicine

Better Science, Better Testing, Better Care

Summary of NICE Guidelines

Title	Type 1 diabetes in adults: diagnosis and management
NICE Reference	NG17
Date of Review:	August 2017
Date of Publication	August 2015 (Updated July 2016)

Summary of Guidance (Max 250 words)	**Diagnosis**
	• C-peptide and auto-antibody measurements are not routinely recommended for the confirmation of Type 1 diabetes (T1DM) diagnosis in adults except in the following situations:
	  ○ Suspected T1DM with atypical clinical presentation
	  ○ T1DM diagnosed and treatment started but clinical suspicion of a monogenic form of diabetes where measurements may guide genetic testing.
	  ○ Uncertain classification where confirming T1DM would have implications for availability of therapy
	• C-peptide has better discriminative value the longer the test is done after diagnosis.
	• The false negative rate for auto-antibody testing is lowest at diagnosis and rises thereafter. Testing for two different auto-antibodies reduces the false negative rate.
	Monitoring blood glucose control
	• Measure HbA1c in T1DM patients every 3-6 months, patients should be kept informed of their results. More frequent HbA1c measurements should be considered following an unexpected rise in HbA1c or if there are rapid changes in blood glucose levels.
	• HbA1c methods should be calibrated according to International Federation of Clinical Chemistry (IFCC) standardisation.
	• If HbA1c monitoring is invalid because of disturbed erythrocyte turnover or abnormal haemoglobin type, estimate trends in blood glucose control using one of the following:
	  ○ Fructosamine estimation
	  ○ Quality-controlled blood glucose profiles
	  ○ Total glycated haemoglobin estimation (if abnormal haemoglobins).
	Monitoring for associated illness/complications
	• Annual review:
	  ○ Urine albumin:creatinine ratio (early morning urine), with serum creatinine, to monitor for diabetic kidney disease.
	  ○ Serum TSH to monitor for thyroid disease.
	  ○ Lipid profile to assess cardiovascular risk
	• Consider coeliac marker testing in T1DM patients with unexplained weight loss/low BMI.

Impact on Lab (See below)	☐ Moderate

Lab professionals to be made aware	✓ Laboratory Manager ✓ Chemical Pathologist ✓ Clinical Scientist
Please detail the impact of this guideline (Max 150 words)	Laboratories should be aware of the following: • Indications for C-peptide and auto-antibody testing in diagnosis of T1DM. • The role of HbA1c testing in monitoring patients with T1DM and of the alternative tests available for patients in whom HbA1c measurements are not indicated. • Tests recommended for annual review in patients with T1DM The guideline may result in increased requesting for HbA1c and TSH measurements.

Impact on Lab

- **None**: This NICE guideline has no impact on the provision of laboratory services
- **Moderate**: This NICE guideline has information that is of relevance to our pathology service and may require review of our current service provision.
- **Important:** This NICE guideline is of direct relevance to our pathology service and will have a direct impact on one or more of the services that we currently offer.

Written by: Anna Robson
Reviewed by: Dr Lance Sandle