TABLE Four: Recommended Laboratory Investigations for Patients with Acute Stroke or Transient Ischemic Attack*

Note: This list presents the recommended initial laboratory tests for patients with stroke and TIA. Patient presentation, clinical judgment, and local stroke protocols should be considered in selecting appropriate laboratory investigations and the timing of completion.

Initial Recommended Laboratory Investigations for Patients with Stroke and TIA			
Complete Blood Count (CBC)	International Normalized Ratio (INR)	Partial Thromboplastin Time (PTT)	Random Glucose or Hemoglobin A1C
Electrolytes	Creatinine/eGFR	ALT	Troponin
Follow-up Blood work: to be completed as soon as possible after initial bloodwork once patient has fasted for an appropriate amount of time.		Either a fasting plasma glucose, or 2 hour plasma glucose, or glycated hemoglobin (A1C), or 75 g oral glucose tolerance test	Lipid profile (Fasting optional and decision should be based on individual patient factors)

Additional Laboratory Investigations for Consideration in Specific Circumstances
Note: All patients are individual and some may require additional investigations to fully understand their clinical situation. The investigations noted below may not be indicated in many stroke patients and should be considered in selected stroke patients based on clinical presentation and medical history.

Optional Laboratory Investigations		
Calcium, Magnesium, Phosphate	If female less than 50 years of age, consider pregnancy test	Blood cultures x 3 (per individual institutional protocol)
Blood and/or urine drug screen	HIV, syphilis serology	

Coagulopathy Screen – For consideration in selected patients *only if clinically indicated* *Recommend consultation with a specialist in thrombosis to evaluate for hypercoagulable state*			
Anticardiolipin (Antiphospholipid) antibody	Lupus anticoagulant	Sickle cell screen	Homocysteine (fasting serum level)

Special considerations especially in young adults and children with stroke in absence of identified etiology *(Note there is not a strong evidence base for these investigations, and they should be considered only in selected stroke patients based on clinical presentation and medical history*	
Consider LP for CSF analysis (cell count and differential, protein, glucose, bacterial and viral cultures; possibly cytology/flow cytometry if CNS lymphoma is a consideration)	Brain biopsy (if vasculitis of the central nervous system or angiocentric lymphoma is a consideration)
Catheter cerebral angiography	Further genetic tests – CADASIL, Fabry's, MELAS