Complement diseases

THE GENOMIC INSTITUTE

Step 1

Document the following clinical information to assist in phenotyping:

- Kidney function
- Blood biochemistry
- Haematological parameters
- Complement studies
- ADAMSTS13 % activity
- Urine analysis
- Kidney biopsy
- Family history of kidney disease, including kidney phenotype

For patients with a positive family history:
If a family member has had genetic testing and a disease-causing variant has been identified:

- Do not proceed to genomic testing
- Refer to Genetic Health Queensland to discuss targeted confirmatory genetic testing.

Consider genomic testing if there are any of the following indications for testing:

- Diagnostic uncertainty
- Guiding Eculizumab therapy
- Genotype-specific management
- Family planning
- Risk clarification for family
- Transplant planning (particularly if donor is a blood relative)

Step 2

The following pathway guides genomic testing based on suspected clinical diagnosis. Key clinical features for each diagnosis are listed.

Atypical Haemolytic Uraemic Syndrome	• Thrombotic microangiopathy/ microangiopathic haemolytic anaemia • ADAMTS13 % activity normal • Acute, multisystem, catastrophic, impact on kidneys > neurological • Often associated with a trigger or complement amplifying event
Congenital Thrombotic Thrombocytopenic Purpura (Upshaw-Schulman syndrome)	• Thrombotic microangiopathy/ microangiopathic haemolytic anaemia • ADAMTS13 % activity low • Acute, multisystem, impact on neurological > kidney
C3 Glomerulopathy	• Chronic with acute flares • Membranoproliferative glomerulonephritis phenotype
***CFHR5*-nephropathy**	• Chronic with acute flares • Can behave in a synpharyngitic manner • Can have membranoproliferative glomerulonephritis phenotype • Greek-Cypriot background predominance

Request
'Atypical Haemolytic Uraemic Syndrome_MPGN' panel

Although the same genomic test is requested for these diseases, detailed phenotype information is crucial for analysing and interpreting the genomic test.

v1 Effective: June 2022

For further specialist advice, email Renal Genetics MDT at Renal_Genetics_MDT@health.qld.gov.au