

FLT3 AND NPM1 PCR TESTING IN ACUTE MYELOID LEUKAEMIA

Genetic mutations involving the *FLT3* and *NPM1* genes have well-recognised diagnostic, prognostic and therapeutic implications in patients with acute myeloid leukaemia (AML).

To better align with the latest international AML management guidelines, Ampath Genetics is now offering targeted PCR-based testing for *FLT3*-ITD/TKD, as well as common *NPM1* variants, at a markedly reduced turnaround time. Test details are outlined in Table 1.

TABLE 1: FLT3 AND NPM1 TEST DETAILS

PCR tests	<i>FLT3</i> -ITD and TKD (D835) detection	<i>NPM1</i> detection and quantification
Mnemonic	FLT3PCR	NPM1PCR
Indication	AML diagnosis and prognostication	MRD monitoring in <i>NPM1</i> -positive AML
Method	Qualitative allele-specific PCR amplification and fragment analysis	Quantitative PCR specifically targeting the most common (A, B and D) <i>NPM1</i> variants
Important limitations/ additional information	The FLT3PCR test can detect <i>FLT3</i> -ITDs up to ~500 base pairs (bp) in length and is therefore more sensitive than NGS testing. Only the most common TKD (D835) variant will be detectable using this assay.	The NPM1PCR test can only detect and quantify the three common <i>NPM1</i> variants (A, B and D) and should therefore (ideally) not be used for diagnostic purposes.
Turnaround time*	4 working days	3 working days
Sample requirements	Blood/bone marrow in EDTA tube (minimum 1 mL)	Blood/bone marrow in EDTA tube (minimum 3 mL)
Sample stability	1 week	72 hours
Cash price (2023)**	R3 631.20	R4 212.80

* Once received at the National Reference Laboratory.

** This price is valid until 31 December 2023 and is for upfront payment only. For medical aid reimbursement, medical aid scheme rates apply.

For more information, contact the Molecular Genetics Laboratory at geneticismolecular@ampath.co.za.