# NPM1 Mutation Detection by RT-PCR, Quantitative

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Testing for *NPM1* mutations may be useful in the evaluation of acute myeloid leukemia (AML) to aid in classification, inform prognosis, and guide therapeutic decision-making. *NPM1* testing may be used to monitor for minimal residual disease (MRD).[1] This test uses reverse transcription polymerase chain reaction (RT-PCR) to detect if a mutant transcript is present.


## Featured ARUP Testing

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**Method:** Quantitative Reverse Transcription Polymerase Chain Reaction

- Use to detect and quantitate *NPM1* mutant transcripts (type A, B, or D)
- Use to monitor for MRD in patients with a known history of *NPM1* mutation (type A, B, or D) and assess the risk of disease relapse


## Genetics

*NPM1* mutant type A, type B, and type D variant

## Test Interpretation

### Analytic Sensitivity/Specificity

Limit of detection: 1/100,000 *NPM1*-mutated cells (type A)

### Limitations

- This assay does not identify which transcript is detected.
- A negative result does not exclude *NPM1* mutations other than types A, B, and D.
- Levels can only be reliably compared if the same laboratory and same sample type are used.

## References


1. National Comprehensive Cancer Network. NCCN Clinical Practice Guidelines in Oncology: acute myeloid leukemia. Version 5.2026. Updated Jul 2026; accessed Sep 2026.



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