

## Overview

### Useful For

Evaluation of multiple myeloma at the time of diagnosis, for prognostic and potential therapeutic indications

### Method Name

Only orderable as a reflex. For more information see NGSMM / NGSMM Multiple Myeloma Gene Panel, Next-Generation Sequencing, Bone Marrow.

Flow Cytometric Cell Selection

### NY State Available

No

## Specimen

### Specimen Type

Bone Marrow

### Specimen Required

Only orderable as a reflex. For more information see NGSMM / NGSMM Multiple Myeloma Gene Panel, Next-Generation Sequencing, Bone Marrow.

### Specimen Minimum Volume

2 mL

### Reject Due To

Gross hemo lysis	Reject
Gross lipemia	OK
Other	Bone marrow biopsies, slides, paraffin shavings, frozen tissues, paraffin-embedded tissues, paraffin-embedded bone marrow aspirates, extracted DNA, or bone marrow aspirate samples with <15% plasma cells by cytologic differential count.

### Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Bone Marrow	Ambient (preferred)	4 days	

## Clinical & Interpretive

### Clinical Information

Testing allows for further risk categorization of the multiple myeloma (MM) through the identification of additional abnormalities of prognostic and potentially therapeutic value. Application of targeted next-generation sequencing-based analysis is a useful adjunct to the standard evaluation of MM patients at diagnosis and relapse.

### Reference Values

Only orderable as a reflex. For more information see NGSMM / NGSMM Multiple Myeloma Gene Panel, Next-Generation Sequencing, Bone Marrow.

### Interpretation

Correlation with clinical, histopathologic and additional laboratory findings is required for final interpretation of these results. The final interpretation of results for clinical management of the patient is the responsibility of the managing physician.

### Cautions

No significant cautionary statements

### Clinical Reference

1. Walker BA, Boyle, EM, Wardell CP, et al: Mutational spectrum, copy number changes, and outcome: results of a sequencing study of patients with newly diagnosed myeloma. *J Clin Oncol* 2015;33:3911-3920
2. Morgan GJ, Walker BA, Davies FE: The genetic architecture of multiple myeloma. *Nat RevCancer*. 2012;12(5):335-348
3. Kortuem KM, Braggio E, Bruins L, et al: Panel sequencing for clinically oriented variant screening and copy number detection in 142 untreated multiple myeloma patients. *Blood Cancer J*. 2016;6:e397
4. Kortuem KM, Mai EK, Hanafiah NH, et al: Targeted sequencing of refractory myeloma reveals a high incidence of mutations in CRBN and Ras pathway genes. *Blood* 2016;128:1226-1233

## Performance

### Method Description

Selection of plasma cells using fluorescence activated cell sorting is the most direct and robust method of obtaining relatively pure plasma cell populations for molecular assessment. This in turn augments the ability to identify key mutations, as well as sub clonal variants of possible clinical value, without dilution effects from non-tumor cell DNA.(Operator's Guide: Cell Sorter, Sony Corporation. LE-SH800, 2015)

### PDF Report

No

**Day(s) Performed**

Monday through Friday

**Report Available**

14 days

**Specimen Retention Time**

DNA 3 months

**Performing Laboratory Location**

Rochester

**Fees & Codes****Fees**

- Authorized users can sign in to [Test Prices](#) for detailed fee information.
- Clients without access to Test Prices can contact [Customer Service](#) 24 hours a day, seven days a week.
- Prospective clients should contact their Regional Manager. For assistance, contact [Customer Service](#).

**Test Classification**

This test was developed, and its performance characteristics determined by Mayo Clinic in a manner consistent with CLIA requirements. This test has not been cleared or approved by the US Food and Drug Administration.

**CPT Code Information**

88184-Flow Cytometry; first cell surface, cytoplasmic or nuclear marker

88185 x 5-Flow Cytometry, additional cell surface, cytoplasmic or nuclear marker (each)

**LOINC® Information**

Test ID	Test Order Name	Order LOINC® Value
CSNMM	NGSMM Pre-Analysis Cell Sorting, BM	No LOINC Needed

Result ID	Test Result Name	Result LOINC® Value
607671	NGSMM Pre-Analysis Cell Sort	No LOINC Needed
607686	Final Diagnosis	22637-3