# Test Definition: CSPMM

Plasma Cell Myeloma Pre-Analysis Cell Sorting, Bone Marrow (Non-Orderable)

## Overview

### Useful For

**Only orderable as a reflex.** For more information see NGPCM / MayoComplete Plasma Cell Myeloma, Next-Generation Sequencing, Varies.

Pre-analysis cell sorting for the MayoComplete Plasma Cell Myeloma panel

### Method Name

Only orderable as a reflex. For more information see NGPCM / MayoComplete Plasma Cell Myeloma, Next-Generation Sequencing, Varies.

Flow Cytometric Cell Selection

### NY State Available

No

## Specimen

### Specimen Type

Bone Marrow

### Specimen Required

Only orderable as a reflex. For more information see NGPCM / MayoComplete Plasma Cell Myeloma, Next-Generation Sequencing, Varies.

**Container/Tube:** Lavender or pink top (EDTA) or yellow top (ACD)
**Specimen Volume:** 2 mL
**Collection Instructions:**
1. Minimum plasma cell percentage is 1%.
2. Invert several times to mix bone marrow.
3. Send bone marrow specimen in original tube. **Do not aliquot.**
4. Label specimen as bone marrow.
5. **Fresh specimen is required for this test**, as testing is performed on sorted cells.

### Specimen Minimum Volume

2 mL

### Reject Due To

| | |
|---|---|
| Gross hemolysis | Reject |
| Gross lipemia | OK |
| Fully clotted | Reject |
| Bone marrow biopsies | Reject |
| Slides | Reject |
| Paraffin shavings | Reject |
| Frozen tissues | Reject |
| Paraffin-embedded tissues | Reject |
| Paraffin-embedded bone marrow aspirates | Reject |
| Extracted DNA | Reject |

### Specimen Stability Information

| Specimen Type | Temperature | Time | Special Container |
|---|---|---|---|
| Bone Marrow | Ambient | 4 days | |

## Clinical & Interpretive

### Clinical Information

Testing allows for further risk categorization of multiple myeloma (MM) through identifying 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 NGPCM / MayoComplete Plasma Cell Myeloma, Next-Generation Sequencing, Varies.

Not applicable

### 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(33):3911-3920
2. Morgan GJ, Walker BA, Davies FE. The genetic architecture of multiple myeloma. Nat Rev Cancer. 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(2):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(9):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 and subclonal variants of possible clinical value without dilution effects from non-tumor cell DNA.(Instruction manual: BD FACSMelody Cell Sorter User's Guide. Revision 3. BD Biosciences; 03/2020)

### PDF Report

No

### Day(s) Performed

Monday through Saturday

### Report Available

1 to 2 days

### Specimen Retention Time

DNA: 3 months

### Performing Laboratory Location

Mayo Clinic Laboratories - Rochester Main Campus

## 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 account representative. For assistance, contact Customer Service.

### Test Classification

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This test was developed and its performance characteristics determined by Mayo Clinic in a manner consistent with CLIA requirements. It 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 |
|---|---|---|
| CSPMM | NGPCM Pre-Analysis Cell Sorting, BM | No LOINC Needed |

| Result ID | Test Result Name | Result LOINC® Value |
|---|---|---|
| 618627 | NGPCM Pre-Analysis Cell Sort | No LOINC Needed |
| 618630 | Final Diagnosis | 22637-3 |