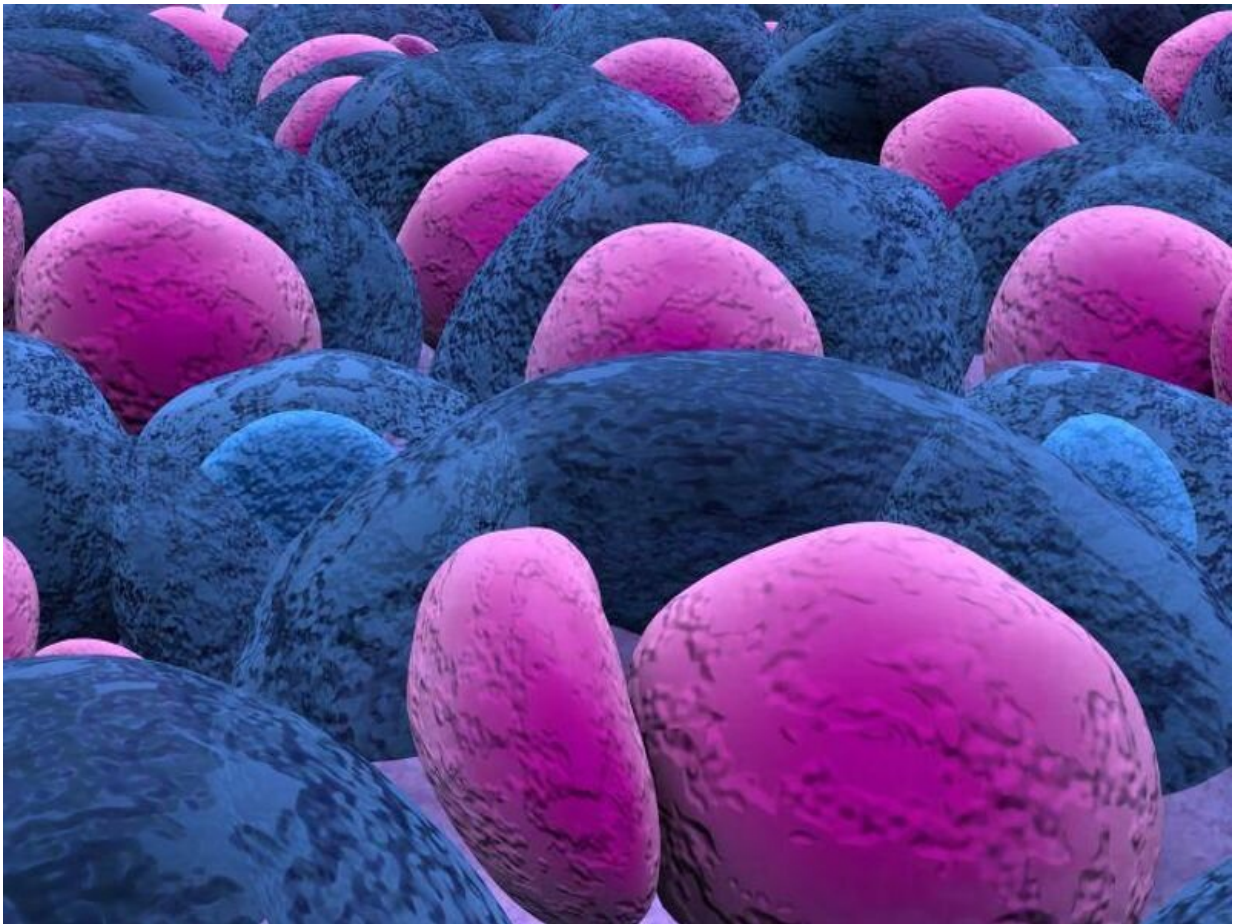


Mass spectrometry can monitor treatment response in multiple myeloma

January 19 2023, by Elana Gotkine



For patients with newly diagnosed multiple myeloma (MM), mass

spectrometry (MS) can monitor treatment response, according to a study published online Jan. 4 in *Blood Cancer Journal*.

Elias K. Mai, M.D., from Heidelberg University Hospital in Germany, and colleagues performed a retrospective MS analysis at baseline in 480 transplant-eligible newly diagnosed MM patients and at the predefined consecutive time points after induction, prior to maintenance, and after one year of maintenance therapy (444, 305, and 227 patients, respectively).

The researchers found that even in patients with complete response at all investigated follow-up time points, MS negativity was significantly associated with improved [progression-free survival](#) (PFS); the prognostic impact was independent of established [risk factors](#). Prediction of outcome was improved by combining MS and baseline cytogenetics: MS-positive patients with high-risk cytogenetics had a PFS of 1.9 years from the start of maintenance.

Patients converting from MS positivity to negativity prior to and after one year of maintenance had excellent PFS (median not reached), while those converting from negativity to positivity progressed early (median, 0.6 years). The baseline high-risk cytogenetic status had a significant impact and defined poor PFS among patients with sustained MS positivity. Double-negative patients with a favorable PFS (median, 3.33 years) and no overall survival events were identified by combining minimal residual disease in the [bone marrow](#) and MS.

"Further studies are warranted to determine the optimal time for testing and the utility of this novel approach in combination with minimal residual disease testing from the bone marrow or imaging-based techniques and whether MS can guide therapeutic decisions," the authors write.

More information: Elias K. Mai et al, Implications and prognostic impact of mass spectrometry in patients with newly-diagnosed multiple myeloma, *Blood Cancer Journal* (2023). [DOI: 10.1038/s41408-022-00772-9](https://doi.org/10.1038/s41408-022-00772-9)

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