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637.MYELODYSPLASTIC SYNDROMES - CLINICAL AND EPIDEMIOLOGICAL

Clinical Application of the IPSS-M Prognostic Score in Myelodysplastic Syndrome

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Objectives: Patients with myelodysplastic syndrome (MDS) currently get therapy in accordance with their prognosis scores. The newest MDS risk-stratified score, the IPSS-M, isn't still being extensively used in clinical practice and is based on clinical and molecular data. Comparing the IPSS-M score to the current IPSS-R score will enable us to assess the clinical relevance of the IPSS-M score, especially for low-risk MDS patients.
Methods: In order to determine the IPSS-R and IPSS-M scores, we gathered clinical, cytogenetic, and molecular information from 210 MDS patients who were diagnosed between 2016 and 2023 and followed up until April 2023. Harrell's c index and Kaplan-Meier survival analysis were used to examine the impact of the two scores on overall survival (OS).The lower-risk group included patients with IPSS-R≤3.5 and IPSS-M≤0, whereas the higher-risk group included the remaining patients. Analysis was done on the differences in gene mutations between the two risk groups based on the two scoring standards, as well as the impact of IPSS-M reclassification on the choice of therapeutic treatments.
Results: At least one genetic mutation was identified in 77.1% of patients. The genes ASXL1 (21.4%), TET2 (19.0%), TP53 (14.8%), and DNMT3A (13.3%) have the highest frequency of mutations. According to IPSS-R score, the higher-risk group's TP53 gene mutation rate was significantly higher than that of the lower-risk group; According to IPSS-M score, the higher-risk group had more instances of TP53 and ASXL1 gene mutations than the lower-risk group did, while the lower-risk group had a relatively higher incidence of SF3B1 gene mutations than the higher-risk group did. The difference in survival between IPSS-M groups was more prominent than that between IPSS-R groups under Kaplan-Meier survival analysis, which was used to assess the prognostic prediction power of IPSS-R and IPSS-M. When t 50 months, the Harrell's c index of OS predicted by IPSS-M exceeded that of IPSS-R (IPSS-R vs IPSS-M c-index: 0.710vs0.747, 0.692vs0.707, 0.705vs0.726, 0.752vs0.759, 0.743vs0.773, t=10, 20, 30, 40, 50 months), demonstrating that IPSS-M enhanced the outcome prediction.87 patients (41.4%) were re-stratified by IPSS-M, with 65 (30.9%) being upgraded and 22 (10.5%) being degraded. 64 patients (30.5%) who had changes in their IPSS-M scores qualified for reduced therapy, whereas 48 (22.9%) qualified for intensive treatment, including 32 patients who were reclassified as being in the lower risk category based on their IPSS-R scores.
Conclusions: The research shows that IPSS-M offers a more thorough prognostic evaluation than IPSS-R. Certain patients' treatment modalities may need to be changed as a result of modifying IPSS-M in clinical settings, especially those who were previously classified as low-risk.

Disclosures No relevant conflicts of interest to declare.

Table 1: Frequency of gene mutations in 210 MDS patients

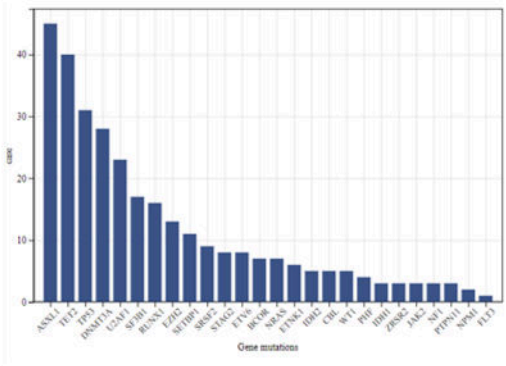
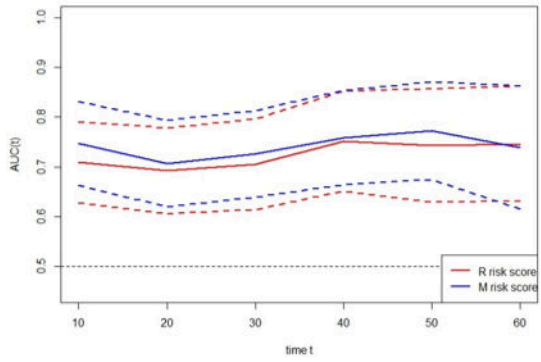


Table 2: Harrell's c-index of OS predicted by IPSS-R/IPSS-M over time.



Note: The dashed area indicates the confidence interval; t unit is month.

Figure 1

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