

Correspondence

From Myelodysplastic Syndrome to Myelodysplastic Neoplasm: The Impact of WHO's Reclassification on MDS Research

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Abstract: This letter addresses the challenges posed by the recent reclassification of Myelodysplastic Syndromes (MDS) to Myelodysplastic Neoplasm (maintaining the acronym MDS) by the World Health Organization (WHO). Despite the clinical and scientific justification for this change, the adoption of the new terminology in the research community has been slow, leading to decreased visibility and citation of studies using the updated nomenclature. Here, it was proposed a gradual transition where both terminologies are used simultaneously in research articles to maintain research visibility while educating the medical community about the new terminology. Furthermore, it is suggested that major databases and search engines update their algorithms to link both terms, ensuring comprehensive search results. The role of international medical societies and scientific journals in promoting the use of the new terminology is also emphasized.

Keywords: Myelodysplastic Neoplasm, Myelodysplastic Syndrome, Nomenclature Transition, Research Visibility.

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1. Introduction

To the Editor,

I write to you regarding an issue affecting both the visibility and the dissemination of research concerning a group of hematopoietic disorders previously known as Myelodysplastic Syndromes (MDS). Myelodysplastic Syndromes have been characterized by ineffective hematopoiesis leading to blood cytopenias, with an inherent risk of progression to acute myeloid leukemia [1]. The term "myelodysplastic syndromes" was first introduced in the study by Bennett et al. in 1976 when the FAB cooperative group published a widely adopted classification for acute leukemias, distinguishing them from less acute disorders like "myelodysplastic syndromes", which typically affect those over 50 and do not require immediate treatment [2]. Clinically, the diagnostic criteria for the classification of myelodysplastic syndromes subtypes are proposed in 1982 also by the FAB cooperative group [3]. However, in 2022, the World Health Organization (WHO) updated the classification of these disorders to 'Myelodysplastic Neoplasm' (maintaining the acronym MDS), intending to emphasize their neoplastic, or cancer-like, nature and align the terminology with that used for myeloproliferative neoplasms (MPN) [4].

The new clinical classification now uses a uniform dysplasia threshold of 10% across all lineages, categorizes MDS into genetically and morphologically defined types, and moves away from risk-based grouping to more comprehensive risk stratification methods like the IPSS-R. Genetic specifics such as the significant prognostic impact of TP53 mutations are emphasized, with particular attention to MDS with biallelic TP53 inactivation noted for its aggressive nature. Additionally, a new subtype, hypoplastic MDS,

has been introduced, highlighting its unique immunological features, and suggesting tailored therapeutic approaches. These updates aim to enhance diagnostic precision and better reflect the biological complexity of MDS, ultimately leading to improved patient outcomes [4]. This change, endorsed by the WHO's revised classification of tumors of haematolymphoid tumours, reflects both an evolution in the pathological understanding and an effort to standardize the oncological terminology. However, this terminological shift poses a significant challenge for researchers: the risk of their studies becoming obscured in the vast medical literature due to the underuse of the new nomenclature.

Despite the clinical justification for this nomenclature update, a search conducted on PubMed (on the date of 04/21/2024) highlights a significant issue: since the update in 2022, only 42 articles have adopted the term "Myelodysplastic Neoplasm". In contrast, the term "Myelodysplastic Syndrome" yields 1,560 articles, underscoring a substantial discrepancy in the adoption of the new terminology by the research community. About this, our research group recently published a study to assess and validate the gene expression profile of Sirtuins (SIRTs) (SIRT1, SIRT2, SIRT3, SIRT4, SIRT5, SIRT6, and SIRT7) in relation to the pathogenesis and prognostic progression of "Myelodysplastic neoplasm" [5]. In relation to our publication, we verified that when searching for "Myelodysplastic syndrome" and reviewing the latest 100 articles resulting from this search, our publication doesn't even appear on the list in the PubMed database. This issue has been encountered with other publications from our group as well [6, 7]. This raises an important question: is the confusion of clinical terms causing confusion in PubMed's own search algorithm?. This scenario suggests that the indexing and search algorithms might not yet be fully adapted to link the new and old nomenclature effectively, potentially impacting the accessibility and citation of recent research under the clinical updated classification of this disease.

The risk of non-citation and decreased visibility for articles using the new nomenclature cannot be overstated. Research visibility is crucial not only for career advancement but also for the evolution of medical practice, patient care and the advent of new scientific research. Studies that are not readily discoverable through routine search terms are less likely to contribute to systematic reviews or influence clinical guidelines, thereby diminishing their impact. Given this scenario, it is imperative to consider the implications of rapidly transitioning to a new nomenclature that has not yet been widely accepted or recognized. While it is essential to align with the latest scientific standards and nomenclature, we must also ensure that such changes do not inadvertently hinder the reach and impact of valuable research.

In this context, the role of international medical societies, such as the American Society of Hematology and the European Hematology Association, becomes crucial. These organizations, along with major scientific journals in the field, particularly *Leukemia Research*, the official journal of the Myelodysplastic Syndromes Foundation, have a significant responsibility to promote and facilitate the widespread adoption of the updated terminology. By endorsing and advocating for the use of "Myelodysplastic Neoplasm" in future studies, these organizations can help ensure that the transition does not disrupt the continuity and visibility of research. This endorsement should be complemented by targeted educational initiatives and updates to publication guidelines that emphasize the importance of the new terminology, thereby fostering its integration into everyday medical and research practice.

Therefore, I propose a gradual transition where both terminologies are used simultaneously in research articles. This dual terminology approach will serve multiple purposes: it will facilitate the research's discoverability and citation while gradually educating and familiarizing the medical community with the new terminology. Moreover, major databases and search engines should be updated to reflect this change, linking both terms to ensure comprehensive search results. In summary, while we acknowledge the need for and the scientific basis behind the new classification of Myelodysplastic Neoplasm, a strategy that maintains the balance between scientific accuracy and research

visibility is essential. Adopting a phased approach to this terminological transition will safeguard the dissemination and impact of research in this field until the new term gains broader acceptance within the medical and research communities.

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