SPECIAL ARTICLE

World Health Organization Classification of Neoplastic Diseases of the Hematopoietic and Lymphoid Tissues: Report of the Clinical Advisory Committee Meeting—Airlie House, Virginia, November 1997

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Purpose: **The European Association of Hematopathologists and the Society for Hematopathology have developed a new World Health Organization (WHO) classification of hematologic malignancies, including lymphoid, myeloid, histiocytic, and mast cell neoplasms.**

Design: **Ten committees of pathologists developed lists and definitions of disease entities. A clinical advisory committee (CAC) of international hematologists and oncologists was formed to ensure that the classification would be useful to clinicians. The CAC met in November 1997 to discuss clinical issues related to the classification.**

Results: **The WHO uses the Revised European-American Lymphoma (REAL) classification, published in 1994 by the International Lymphoma Study Group, to categorize lymphoid neoplasms. The REAL classification is based on the principle that a classification is a list of "real" disease entities, which are defined by a combination of morphology, immunophenotype, genetic features, and clinical features. The relative importance of each of these features varies among diseases, and there is no one gold standard. The WHO classification applies the principles of the REAL classification to myeloid and histiocytic neoplasms. The classification of myeloid neoplasms recognizes distinct entities defined by a combination of morphology and cytogenetic abnormalities. At the CAC meeting, which was organized around a series of clinical questions, participants reached a consensus on most of the questions posed. They concluded that clinical groupings of lymphoid neoplasms were neither necessary nor desirable. Patient treatment is determined by the specific type of lymphoma, with the addition of grade within the tumor type, if applicable, and clinical prognostic factors, such as the International Prognostic Index.**

Conclusion: **The WHO classification has produced a new and exciting degree of cooperation and communication between oncologists and pathologists from around the world, which should facilitate progress in the understanding and treatment of hematologic malignancies.**

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THE SOCIETY FOR Hematopathology and the European Association of Hematopathologists jointly developed a classification of hematologic neoplasms for the World Health Organization (WHO). A steering committee composed of members of both societies was formed, and 10 committees were assigned the task of arriving at a consensus list of myeloid, lymphoid, and histiocytic neoplasms, with descriptions and criteria for diagnosis. A new classification for lymphoid neoplasms was recently proposed,[1] and the goals of the WHO project were to update and revise that classification, with input from additional experts in order to broaden the consensus, and to extend the principles of disease definition and consensus building to the myeloid and histiocytic neoplasms. More than 50 pathologists from around the world were involved in the project, which began in 1995. Proponents of all major lymphoma and leukemia classifications agreed that if a reasonable consensus emerged from this effort, they would accept the WHO classification of hematologic malignancies as the standard.

The proposed WHO classification of hematologic malignancies stratifies neoplasms primarily according to their lineage: myeloid neoplasms (Table 1), lymphoid neoplasms (Tables 2 and 3), mast cell disorders (Table 4), and histiocytic neoplasms (Table 5). Variants and subtypes of selected neoplasms are listed in Tables 6 through 15. Within each category, distinct diseases are defined according to a

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