Unclassifiable high grade B-cell lymphomas with overlapping features

Jessica A Hemminger
The Ohio State University Wexner Medical Center, USA

The 2008 World Health Organization (WHO) classification of lymphomas include two gray zone categories: B-cell lymphoma, unclassifiable with features intermediate between diffuse large B-cell lymphoma (DLBCL) and classical Hodgkin lymphoma (CHL) (BCLU-DLBCL/CHL) and B-cell lymphoma, unclassifiable with features intermediate between DLBCL and Burkitt lymphoma (BL) (BCLU-DLBCL/BL). BCLU-DLBCL/CHL demonstrates overlapping clinical, morphologic and immunophenotypic features between DLBCL and CHL and are frequently referred to as gray zone lymphomas. Many of these lymphomas occur in the mediastinum and show features intermediate between CHL and the DLBCL subtype primary mediastinal large B-cell lymphoma (PMBL). However, non-mediastinal BCLU-DLBCL/CHL also occurs. Rare instances of composite lymphoma with CHL and PMBL as well as synchronous and metachronous cases are also recognized. Immunophenotypically, the B-cell program is usually preserved but is accompanied by expression of CHL markers. The optimal therapeutic approach has yet to be established; however, studies have suggested treatment regimens used for non-Hodgkin B-cell lymphomas are more effective. BCLU-DLBCL/BL has morphologic, immunophenotypic and molecular features that overlap between DLBCL and BL. High grade B-cell lymphomas that harbor translocations involving MYC and BCL2 and/or BCL6, so-called double-hit and triple-hit lymphomas are commonly classified as BCLU-DLBCL/BL. Similarly, high grade lymphomas with MYC and BCL2 overexpression, as determined by immunohistochemistry (double-expressor large B-cell lymphomas), are also frequently placed in this WHO category. BCLU-DLBCL/BL are typically aggressive lymphomas and many are resistant to current therapies.

Biography

Jessica A Hemminger has received her Medical degree from The Ohio State University (OSU) College of Medicine. She has completed her Residency in Anatomic and Clinical Pathology, Hematopathology Fellowship and Clinical Traineeship in Renal Pathology at OSU Wexner Medical Center (OSUWMC). Her clinical and research interests are in the areas of hematopathology and renal pathology and she serves as the Director of the Immunohistochemistry Lab at OSUWMC.

Jessica.Hemminger@osumc.edu

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