Investigator Perspectives on the Prevalence and Clinical Implications of Inaccurate or Misclassified Lymphoma Diagnoses in Community Oncology Practice *(Video Program)*

CME Information

TARGET AUDIENCE

This activity is intended for medical oncologists, hematologists, hematology-oncology fellows and other healthcare providers involved in the treatment of hematologic cancers.

OVERVIEW OF ACTIVITY

The misclassification of lymphoma is a common clinical reality that can impede effective therapeutic decision-making and compromise outcomes for patients. A number of factors can lead to misdiagnosis in these cases. However, many may be mitigated through multidisciplinary collaboration and awareness. To this end, this CME activity encourages exchange between medical oncologists and hematopathologists, reviews available information and helps better define strategies to improve diagnostic accuracy.

LEARNING OBJECTIVES

- Recognize common practical impediments (eg, inadequate sample size) to the accurate diagnostic assessment of lymphoid tissue, and use this information to improve internal and external processes and procedures.
- Empower oncologists to more actively assess pathologic reporting to identify factors that could lead to misinterpretation.
- Promote interdisciplinary collaboration between oncologists and pathologists to improve the accuracy of lymphoma subclassification.
- Highlight the importance of immunohistochemistry (IHC) for lymphoma classification, and alert oncologists to the challenges associated with its interpretation.
- Appreciate the specific IHC markers that should be included in a standard lymphoma panel, and discern how the selection and use of these markers differ in lymphoma subclassification.
- Increase awareness of the incidence and relevance of CD30 overexpression in patients with T-cell lymphoma, Hodgkin lymphoma and diffuse large B-cell lymphoma, and develop strategies to appropriately determine CD30 positivity.
- Formulate an evidence-based approach to biomarker analysis (cytogenetics, mutation status, et cetera) for patients with newly diagnosed and relapsed/refractory chronic lymphocytic leukemia, and appreciate the therapeutic implications of relevant findings.

ACCREDITATION STATEMENT

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AMERICAN BOARD OF INTERNAL MEDICINE (ABIM) — MAINTENANCE OF CERTIFICATION (MOC)

Successful completion of this CME activity, which includes participation in the evaluation component, enables the participant to earn up to 3.75 Medical Knowledge MOC points in the American Board of Internal Medicine's (ABIM) Maintenance of Certification (MOC) program. Participants will earn MOC points equivalent to the amount of CME credits claimed for the activity. It is the CME activity provider's responsibility to submit participant completion information to ACCME for the purpose of granting ABIM MOC credit.

Please note, this program has been specifically designed for the following ABIM specialty: **medical oncology**.

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HOW TO USE THIS CME ACTIVITY

This CME activity consists of a video component. To receive credit, the participant should review the CME information, watch the video, complete the Post-test with a score of 80% or better and fill out the Educational Assessment and Credit Form located at **ResearchToPractice.com/LymphomaMisclassification18/Video/CME**. The corresponding audio program is available as an alternative at **ResearchToPractice.com/LymphomaMisclassification18**.

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FACULTY — The following faculty (and their spouses/partners) reported relevant conflicts of interest, which have been resolved through a conflict of interest resolution process:

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No relevant conflicts of interest to disclose.

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Hardware/Software Requirements:
A high-speed Internet connection
A monitor set to 1280 x 1024 pixels or more
Internet Explorer 11 or later, Firefox 56 or later, Chrome 61 or later, Safari 11 or later, Opera 48 or later
Adobe Flash Player 27 plug-in or later
Adobe Acrobat Reader
(Optional) Sound card and speakers for audio

Last review date: February 2018

Expiration date: February 2019

Select Publications

Bartlett NL et al. **Brentuximab vedotin activity in diffuse large B-cell lymphoma with CD30 undetectable by visual assessment of conventional immunohistochemistry.** *Leuk Lymphoma* 2017;58(7):1607-16.

Bowen JM et al. **Lymphoma diagnosis at an academic centre: Rate of revision and impact on patient care.** *Br J Haematol* 2014;166(2):202-8.

Cabanillas F, Rivera N. **Check this checkpoint inhibitor in lymphoma.** *Blood* 2017;130(3):234-5.

Cabanillas F et al. **Indolent lymphomas that present with clinically aggressive features: A subset of low-grade lymphomas with a behavior inconsistent with the histologic diagnosis.** *Clin Lymphoma Myeloma Leuk* 2016;16(10):550-7.

Connors JM et al. **Brentuximab vedotin plus doxorubicin, vinblastine, dacarbazine (A + AVD) as frontline therapy demonstrates superior modified progression-free survival versus ABVD in patients with previously untreated stage III or IV Hodgkin lymphoma (HL): The phase 3 Echelon-1 study.** *Proc ASH* 2017;**Abstract 6**.

Federico M et al. **CD30+ expression in peripheral T-cell lymphomas (PTCLs): A subset analysis from the international, prospective T-Cell Project.** *Proc ASCO* 2015;**Abstract 8552**.

Gong Q-X et al. **Prevalence and clinicopathologic features of CD30-positive de novo diffuse large B-cell lymphoma in Chinese patients: A retrospective study of 232 cases.** *Int J Clin Exp Pathol* 2015;8(12):15825-35.

Herrera AF et al. **Comparison of referring and final pathology for patients with T-cell lymphoma in the National Comprehensive Cancer Network.** *Cancer* 2014;120(13):1993-9.

Hillmen P et al. **Initial results of ibrutinib plus venetoclax in relapsed, refractory CLL (Bloodwise TAP CLARITY study): High rates of overall response, complete remission and MRD eradication after 6 months of combination therapy.** *Proc ASH* 2017;**Abstract 428**.

Hillmen P et al. **The initial report of the Bloodwise TAP CLARITY study combining ibrutinib and venetoclax in relapsed, refractory CLL shows acceptable safety and promising early indications of efficacy.** *Proc EHA* 2017;**Abstract S770**.

Hsi ED et al. **Analysis of peripheral T-cell lymphoma diagnostic workup in the United States.** *Clin Lymphoma Myeloma Leuk* 2017;17(4):193-200.

Hu S et al. **CD30 expression defines a novel subgroup of diffuse large B-cell lymphoma with favorable prognosis and distinct gene expression signature: A report from the International DLBCL Rituximab-CHOP Consortium Program Study.** *Blood* 2013;121(14):2715-24.

Jain N et al. **Combined venetoclax and ibrutinib for patients with previously untreated high-risk CLL, and relapsed/refractory CLL: A phase II trial.** *Proc ASH* 2017;**Abstract 429**.

Jain N et al. **Ibrutinib, fludarabine, cyclophosphamide, and obinutuzumab (GA101) (iFCG) for previously untreated patients with chronic lymphocytic leukemia (CLL) with mutated IGHV and non-del (17p).** *Proc ASCO* 2017;**Abstract 7522**.

Laurent C et al. **Impact of expert pathologic review of lymphoma diagnosis: Study of patients from the French Lymphopath Network.** *J Clin Oncol* 2017;35(18):2008-17.

Leonard JP et al. **Practical implications of the 2016 revision of the World Health Organization classification of lymphoid and myeloid neoplasms and acute leukemia.** *J Clin Oncol* 2017;35(23):2708-15.

Levak R, Slack G. **Pathologist survey reveals inadequate awareness of the importance of high quality CD30 staining in accurate diagnosis of T-cell lymphoma.** *Am J Clin Pathol* 2015;144:A196.

Matasar MJ et al. **Expert second-opinion pathology review of lymphoma in the era of the World Health Organization classification.** *Ann Oncol* 2012;23(1):159-66.

Sabattini E et al. **CD30 expression in peripheral T-cell lymphomas.** *Hematologica* 2013;98(8):e81-2.

Seymour J et al. **Venetoclax plus rituximab is superior to bendamustine plus rituximab in patients with relapsed/refractory chronic lymphocytic leukemia — Results from pre-planned interim analysis of the randomized phase 3 Murano study.** *Proc ASH* 2017;**Abstract LBA-2**.

Swerdlow SH et al. **The 2016 revision of the World Health Organization classification of lymphoid neoplasms.** *Blood* 2016;127(20):2375-90.

Wierda W et al. **Venetoclax in relapsed/refractory chronic lymphocytic leukemia (CLL) with 17p deletion: Outcome and minimal residual disease (MRD) from the full population of the pivotal M13-982 trial.** *Proc SOHO* 2017;**Abstract CLL-102**.

Zinzani PL et al. **Safety and tolerability of pembrolizumab in patients with relapsed/refractory primary mediastinal large B-cell lymphoma.** *Blood* 2017;130(3):267-70.