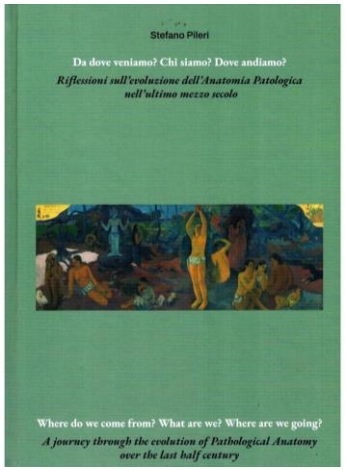
VII CORSO del GRUPPO ITALIANO DI EMATOPATOLOGIA

La **DIAGNOSTICA EMATOPATOLOGICA** nell'**ERA** della **MEDICINA** di **PRECISIONE**



Bologna, Aula Prodi | 11-12 maggio 2026

Disclosures of Stefano Pileri

Company name	Research support	Employee	Consultant	Stockholder	Speakers bureau	Advisory board	Other
Eli Lilly					+		
BeiGene					+		
Stemline					+		
Takeda					+		
Roche					+		
Pfizer						+	
Diatech						+	

Rappaport's Classification

1956 and 1966

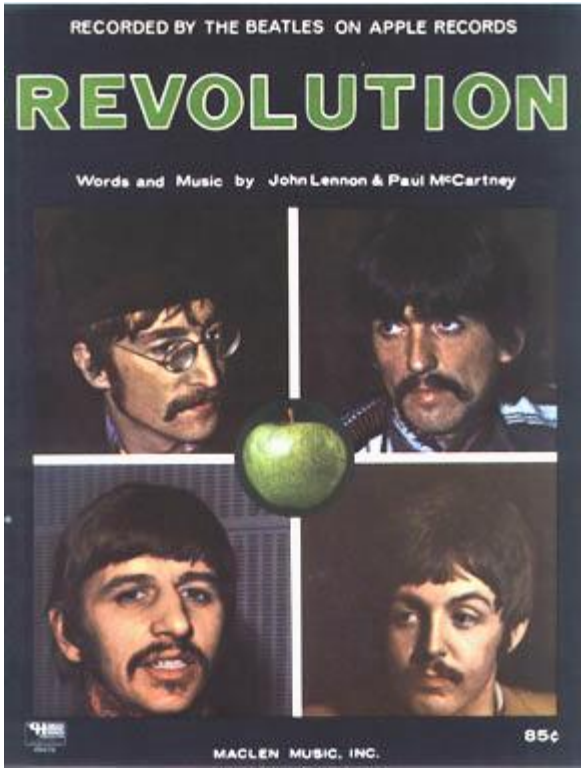
Very simple with some clinical impact

One-man vision

Histogenetically incorrect:

Well and poorly differentiated

Histiocytic



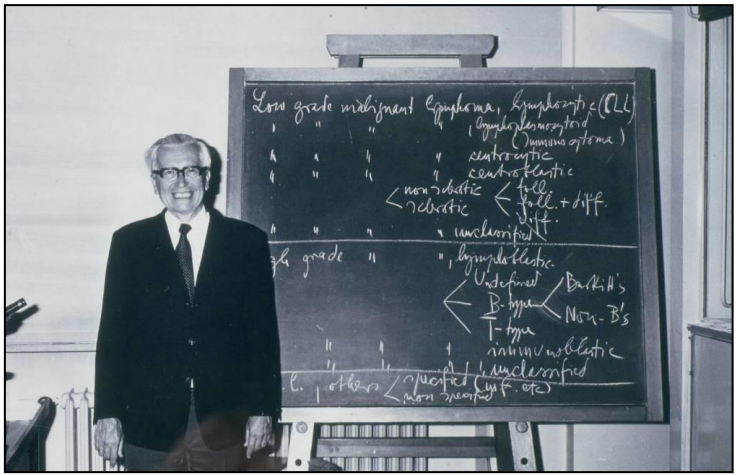
You say you want a revolution
Well, you know We all want to change the world
You tell me that it's evolution
Well, you know We all want to change the world .....

In 1974, after the London Conference in 1973, several new classification proposals were published in The Lancet. In fact, it was felt that the Rappaports' one was inadequate in the light of new immunology data.

Lukes and Collins Classification, 1974

Histogenetically sound

No immediate clinical-prognostic impact



THE LANCET, AUGUST 17, 1974

PROPOSED CLASSIFICATION OF NON-HODGKIN'S LYMPHOM

Kiel classification

Low-grade malignancy

Malignant lymphoma (M.L.)—lymphocytic (C.L.L. and others)

M.L.—lymphoplasmacytoid (immunocytic)

M.L.—centrocytic

M.L.—centroblastic-centrocytic — follicular* / follicular* and diffuse / diffuse*

High-grade malignancy

M.L.—centroblastic

M.L.—lymphoblastic
Burkitt type
Convoluted-cell type
Others

M.L.—immunoblastic

Institut Gustave-Roussy, 94800 Villejuif (Val-de-Marne), France. — R. GERARD-MARCHANT.

Royal Marsden Hospital, London SW3. — IRIS HAMLIN.

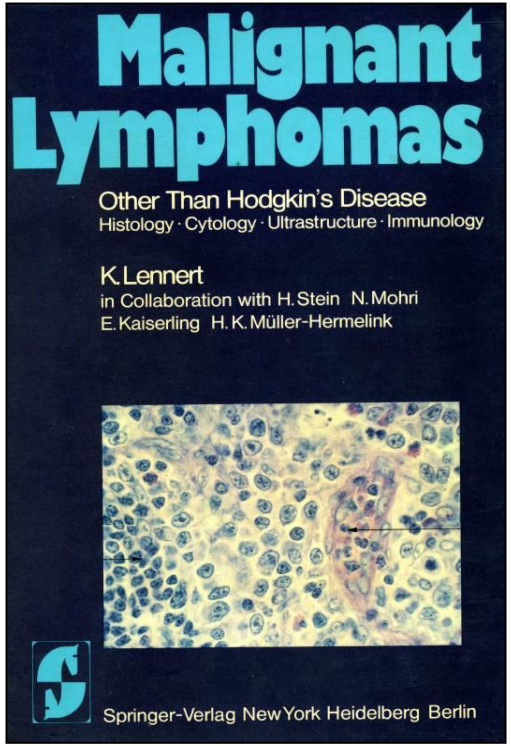
University of Kiel, 2300, Kiel, Germany. — K. LENNERT.

Instituto Nazionale per lo Studio e la Cura dei Tumori, Milan, Italy. — F. RILKE.

St. Bartholomew's Hospital, London EC1A 7BE. — A. G. STANSFELD.

Antoni Van Leeuwenhoekhuis, Het Nederlands Kankerinstituut, Amsterdam, Netherlands. — J. A. M. VAN UNNIK.

1978: Malignant Lymphomas Other Than Hodgkin's Disease.



National Cancer Institute Sponsored Study of Classifications of Non-Hodgkin's Lymphomas

Summary and Description of a Working Formulation for Clinical Usage

THE NON-HODGKIN'S LYMPHOMA PATHOLOGIC CLASSIFICATION PROJECT*

An international multi-institutional clinicopathologic study of 1175 cases of non-Hodgkin's lymphoma sponsored by the National Cancer Institute has been completed. Histologic slides and clinical records were examined from previously untreated patients seen during the period between July 1971 and December 1975 at four institutions, three in the United States and one in Italy. The reproducibility and clinical relevance of the six major classifications of the non-Hodgkin's lymphomas was tested by six "expert" pathologists, each a proponent of a major classification, and six very experienced pathologists not identified with one of the major classifications. Immunologic methods were not employed in the study design. A summary of the methods employed and the conclusions of the study is described. The major conclusion was that all six classifications were valuable and comparable in reproducibility and clinical correlations. The clinical significance of a follicular architecture, independent of cell type was confirmed. A working formulation of non-Hodgkin's lymphomas is described which separates the disease into ten major types utilizing morphologic criteria only. Subtypes are also described which allow translation of all of the major classifications into comparable groups. Histologic criteria are presented for each major type and equivalent terms are given for each type in the six major classifications. The formulation is not proposed as a new classification but a means of translation among the various systems and to facilitate clinical comparisons of case reports and therapeutic trials. The report contains commentaries by five of the "expert" pathologists on the value and conclusions of this unique study.

Cancer **49:2112–2135, 1982.**

Low-grade

A. Small lymphocytic (consisted with CLL, plasmacytoid)

B. Follicular (predominantly small cleaved, diffuse areas, sclerosis)

C. Follicular (small cleaved and large cell, diffuse areas, sclerosis)

Intermediate-grade

D. Follicular (predominantly large cell)

E. Diffuse (small cleaved cell, sclerosis)

F. Diffuse (mixed, small and large cell, sclerosis, epithelioid component)

G. Diffuse (large cell, cleaved and non-cleaved)

High grade

H. Large cell (immunoblastic: plasmacytoid, clear cell, polymorphous, epithelioid component)

I. Lymphoblastic (convoluted, non-convoluted)

J. Small non-cleaved cell (Burkitt's, follicular areas)

Commentary

Karl Lennert

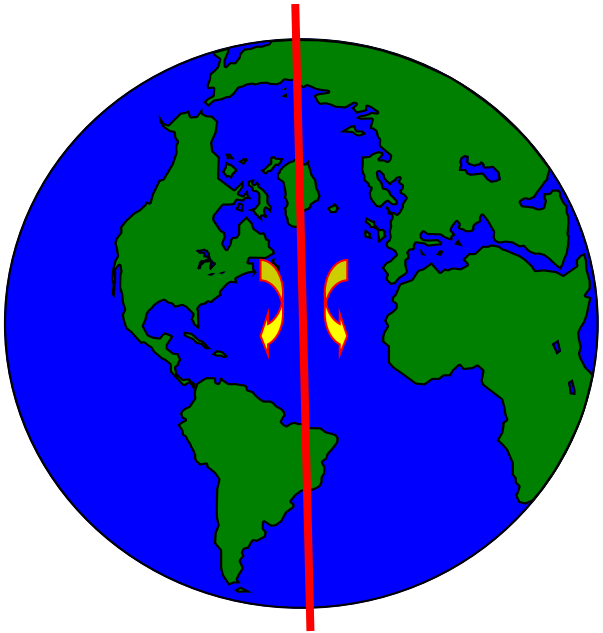
This NCI-sponsored study has proved successful in attaining one of its main goals, namely, determination of the clinical relevance of the proposed classifications.

The "Working Formulation" presented herein represents only a simplified, skeletized method for histologically subdividing non-Hodgkin's lymphomas into categories which carry prognostic implication in relation to recent therapeutic modalities. While recognizing the practical value of such a compromise measure, I must express certain reservations. Firstly, within this Formulation lymphoma entities which are biologically closely related are separated and entities biologically unrelated are grouped together. Secondly, all considerations regarding immunologic identities of lymphomas have been excluded. It would mean a great setback for lymphoma research if the purpose of this Formulation is generally misunderstood, and if there results an attitude of resignation towards further and more profound characterization of these tumors.

B	T
Low-grade malignant lymphomas	
Lymphocytic (CLL, PLL, HCL)	Lymphocytic (CLL, PLL) Small cerebriform (MF, SS)
Lymphoplasmacytic/-cytoid (immunocytoma) Plasmacytic	Lympho-epithelioid (Lennert's) Angioimmunoblastic
Centroblastic-centrocytic follicular ± diffuse diffuse	T-zone lymphoma
Centrocytic (mantle cell)	Pleomorphic, small cell (HTLV-1±)
Monocytoid, including MZL	
High-grade malignant lymphomas	
Centroblastic	Pleomorpihc, medium-sized and large cell (HTLV-1±)
Immunoblastic Burkitt's lymphoma	Immunoblastic (HTLV-1±)
Large Anaplastic (Ki-1+)	Large Anaplastic (Ki-1+)
Lymphoblastic Lymphoblastic	
Rare types	***Rare types***

No communication between Europe and USA with detriment for patients and science

WF
(Kiel)



Kiel
(WF)

International Lymphoma Study Group (ILSG)

(Royal College of Pathologists, London, April 30th, 1991)

A Revised European-American Classification of Lymphoid Neoplasms: A Proposal From the International Lymphoma Study Group

By Nancy Lee Harris, Elaine S. Jaffe, Harald Stein, Peter M. Banks, John K.C. Chan, Michael L. Cleary, Georges Delsol, Christine De Wolf-Peeters, Brunangelo Falini, Kevin C. Gatter, Thomas M. Grogan, Peter G. Isaacson, Daniel M. Knowles, David Y. Mason, Hans-Konrad Muller-Hermelink, Stefano A. Pileri, Miguel A. Piris, Elisabeth Ralfkiaer, and Roger A. Warnke

- Produced by consensus at two meetings held in Berlin, April 1993 and Boston, May 1994,

  by haematopathologists not authors of previous classifications.

- Published in: Blood 1994, 84:1361-92.


Bethesda, March 1994

The Diagnosis of Haemato-Lymphoid Neoplasms is an Integrated Process

Clinical Information

Cell of origin

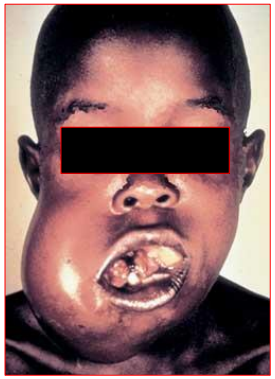
Phenotype

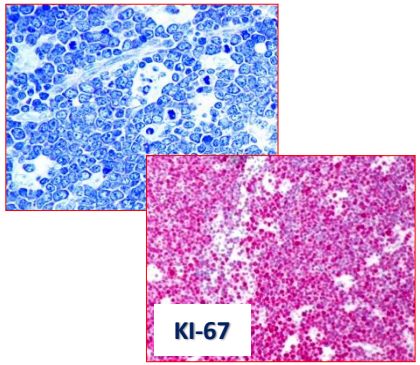
Sample
- Tissue
- Cytology

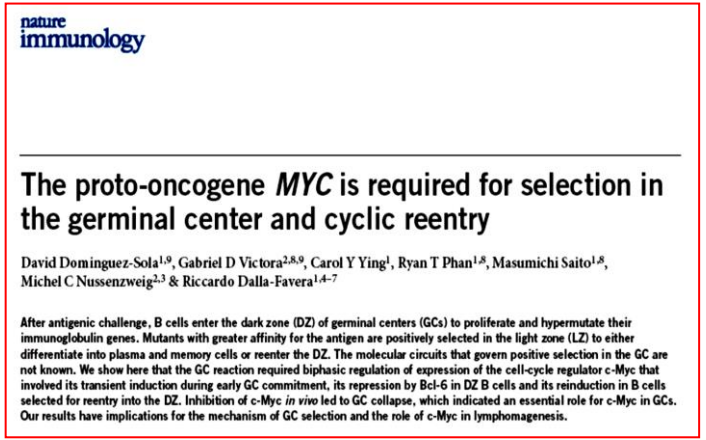
Morphological Patterns
- Architecture
- Cytology

Cytogenetics

DIAGNOSIS
- Specific Entity
- Prognosis
- Therapeutic Targets





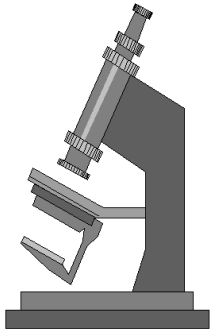


nature immunology

The proto-oncogene *MYC* is required for selection in the germinal center and cyclic reentry

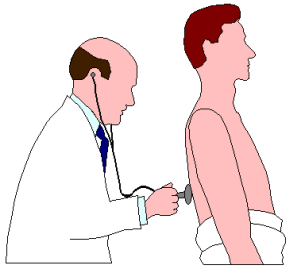
David Dominguez-Sola[1,9], Gabriel D Victora[2,8,9], Carol Y Ying[1], Ryan T Phan[1,8], Masumichi Saito[1,8], Michel C Nussenzweig[2,3] & Riccardo Dalla-Favera[1,4–7]

After antigenic challenge, B cells enter the dark zone (DZ) of germinal centers (GCs) to proliferate and hypermutate their immunoglobulin genes. Mutants with greater affinity for the antigen are positively selected in the light zone (LZ) to either differentiate into plasma and memory cells or reenter the DZ. The molecular circuits that govern positive selection in the GC are not known. We show here that the GC reaction required biphasic regulation of expression of the cell-cycle regulator c-Myc that involved its transient induction during early GC commitment, its repression by Bcl-6 in DZ B cells and its reinduction in B cells selected for reentry into the DZ. Inhibition of c-Myc *in vivo* led to GC collapse, which indicated an essential role for c-Myc in GCs. Our results have implications for the mechanism of GC selection and the role of c-Myc in lymphomagenesis.



➢tailored therapy
(from bench to the bedside)

From rigid protocols applied to all patients….

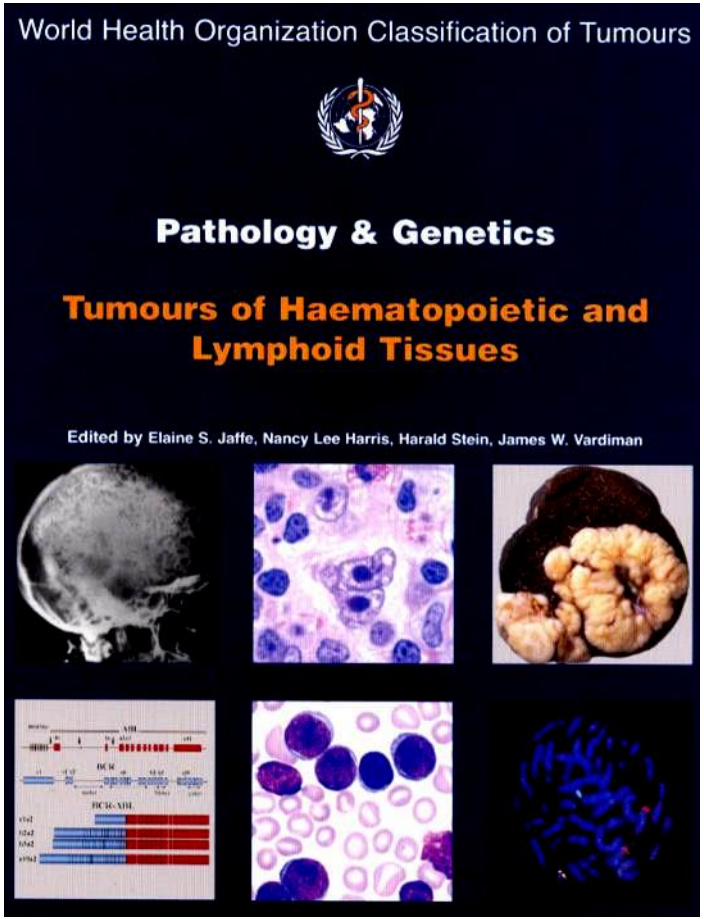


Blood, 89:3909-18, 1997

Omaha Conference, September 1997

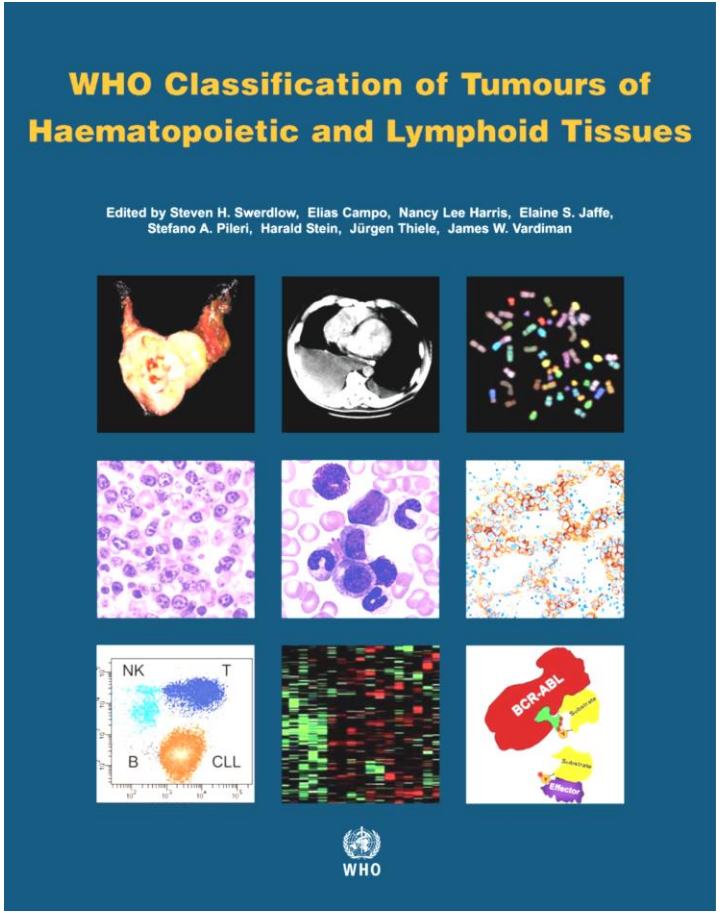
With the direct involvement of SH and EAHP, which were asked to find the economic support for the CAC Meeting thanks to unrestricted donations.

WHO Clinical Advisory Meeting November 3-5, 1997


World Health Organization Classification of Tumours
Pathology & Genetics
Tumours of Haematopoietic and Lymphoid Tissues
Edited by Elaine S. Jaffe, Nancy Lee Harris, Harald Stein, James W. Vardiman

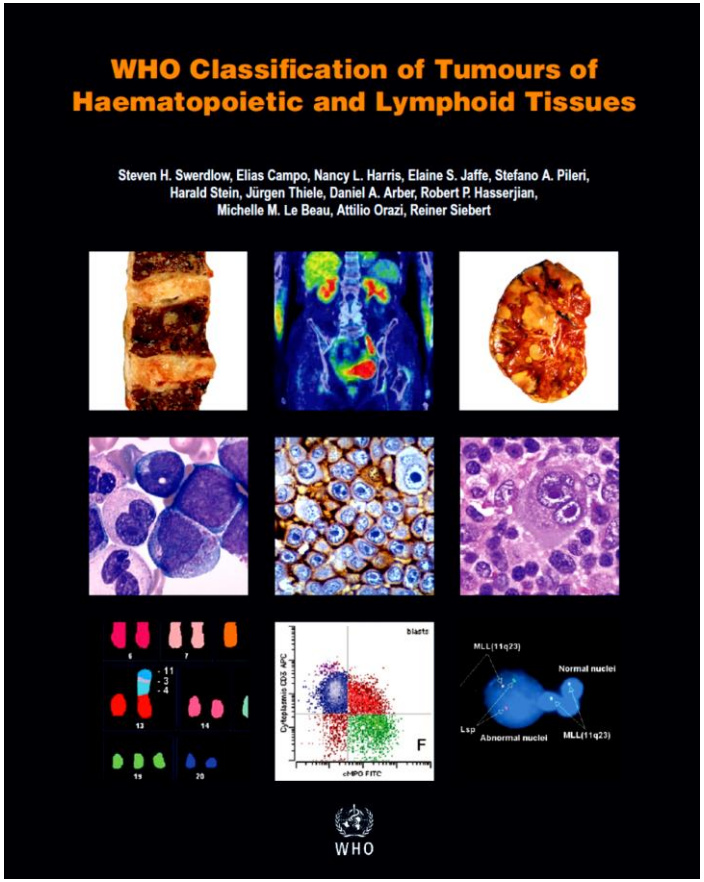
2001

WHO CAC Meeting - Airlie House - March 8-9, 2007


WHO Classification of Tumours of Haematopoietic and Lymphoid Tissues
Edited by Steven H. Swerdlow, Elias Campo, Nancy Lee Harris, Elaine S. Jaffe, Stefano A. Pileri, Harald Stein, Jürgen Thiele, James W. Vardiman
NK
T
B
CLL
BCR-ABL
WHO

2008

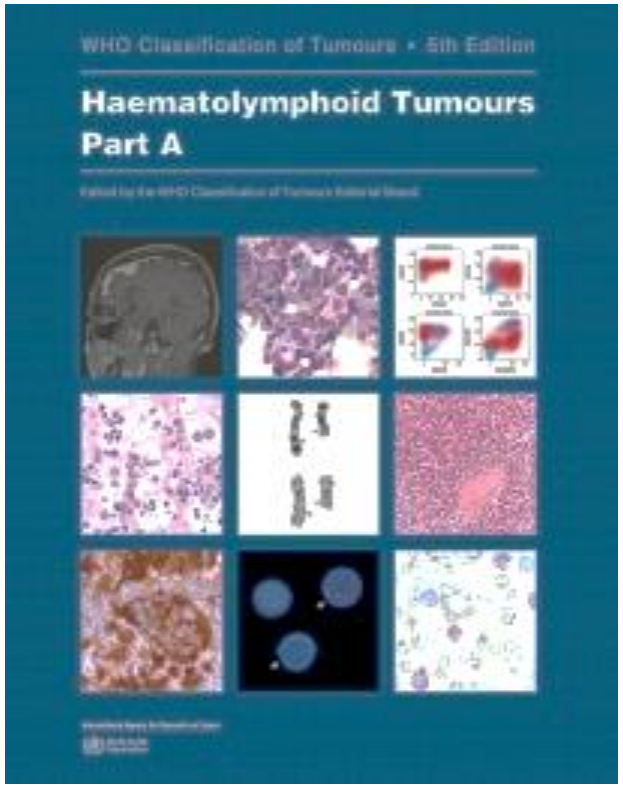
Chicago, CAC – Myeloid. 3/31 – 4/2, 2014

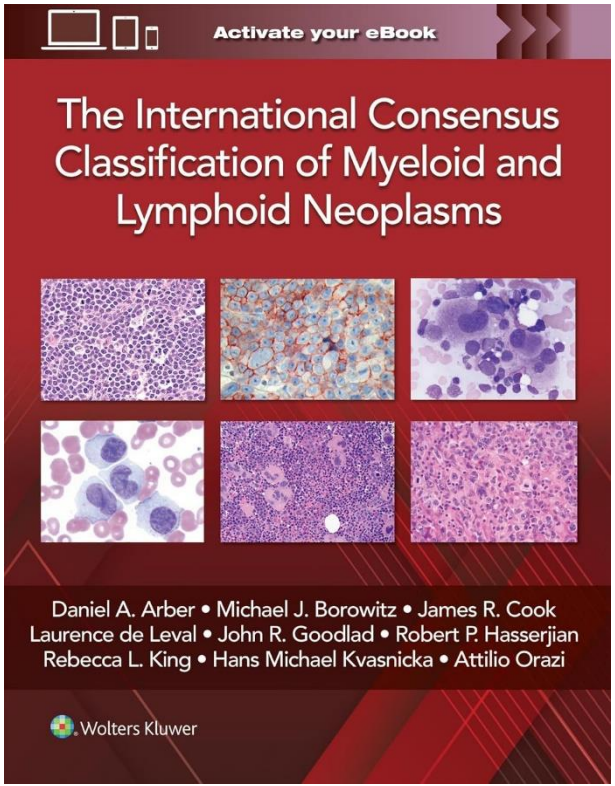

WHO Classification of Tumours of Haematopoietic and Lymphoid Tissues
Steven H. Swerdlow, Elias Campo, Nancy L. Harris, Elaine S. Jaffe, Stefano A. Pileri, Harald Stein, Jürgen Thiele, Daniel A. Arber, Robert P. Hasserjian, Michelle M. Le Beau, Attilio Orazi, Reiner Siebert
blasts
F
MLL(11q23)
Normal nuclei
Lsp
Abnormal nuclei
MLL(11q23)
WHO

2017

Director of IARC in 2021 (no longer in office)

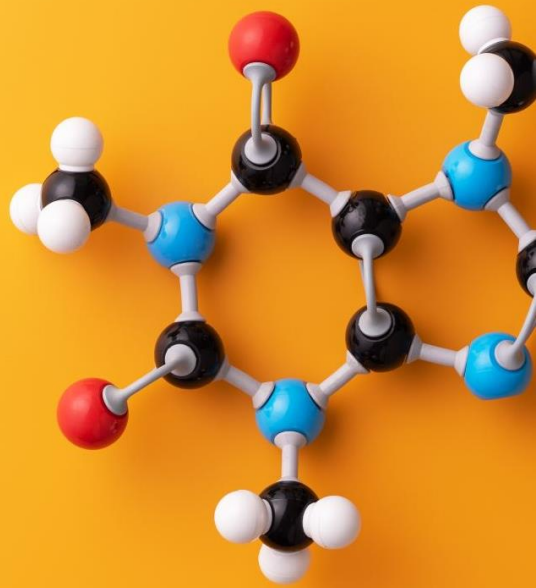
- No involvement of SH and EAHP.
- NO CAC Meeting.
- Direct recruitment of panelists.
- No provisional entities


WHO Classification of Tumours • 5th Edition
Haematolymphoid Tumours
Part A


Activate your eBook
The International Consensus Classification of Myeloid and Lymphoid Neoplasms
Daniel A. Arber • Michael J. Borowitz • James R. Cook
Laurence de Leval • John R. Goodlad • Robert P. Hasserjian
Rebecca L. King • Hans Michael Kvasnicka • Attilio Orazi
Wolters Kluwer

Short-medium term perspectives

Reconciliation



blood

American Society of Hematology
2021 L Street NW, Suite 900,
Washington, DC 20036
Phone: 202-776-0544 | Fax 202-776-0545
editorial@hematology.org

Advancing the Classification of Hematolymphoid Neoplasms Together: For Patients, Medicine, and Science

Tracking no: BLD-2025-030689-CR1

Robert Hasserjian (Massachusetts General Hospital, United States) Joseph Khoury (University of Nebraska Medical Center, United States) Carlos Bueso-Ramos (University of Texas M.D. Anderson Cancer Center, United States) Stefan Dirnhofer (UNIVERSITY HOSPITAL BASEL, Switzerland) Dilani Lokuhetty (International Agency for Research on Cancer and WHO, France) Maurilio Ponzoni (Vita Salute San Raffaele University and IRCCS San Raffaele Hospital Scientific Institute, Italy)

CAM Steering Committee formed

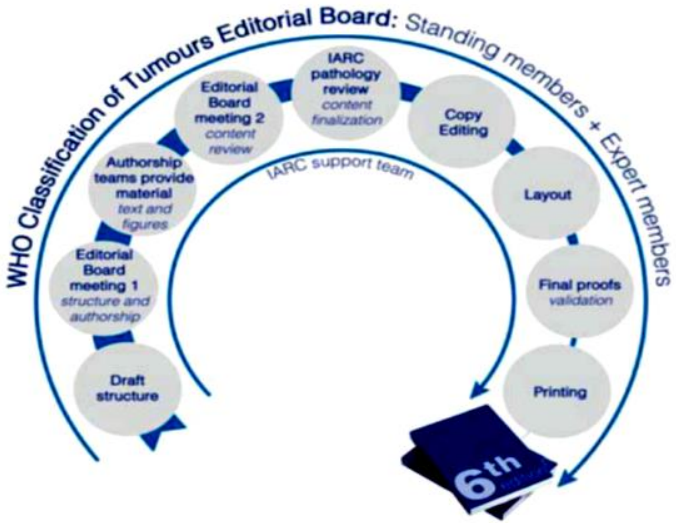
Experts selected to participate in CAM

Disease-specific working groups examine evidence and propose updates to classification

In-person CAM Meeting to develop consensus on proposals

Publication of CAM conclusions

Harmonization Subcommittee reviews CAM recommendations and presents to the editorial board for consideration during formulation of the draft structure.



Classification Advancement Meeting Process

Summer 2025 – Spring 2026

6th Edition WHO Classification of Hematolymphoid Tumors

2026 – 2027


thank you
danke
謝謝
ngiyabonga
teşekkür ederim
gracias
merci
obrigado
bedankt
dziękuję
спасибо
go raibh maith agat
sukriya
kop khun krap
mochchakkeram
arigatô
dakujem
grazie
terima kasih
감사합니다
ありがとう
ευχαριστώ
мерси
хвала
рахмат
Баярлалаа
dank je
tapadh leat
hvala
mauruuru
takk
taiku
sagolun
tack
mersi
barka
paldies
grazzi
mahalo
matondo
misaotra
blagodaram
vinaka
faafetai lava
kiitos
dankie
dhanyavad
nanni
nandri
bayarlalaa
gracie
köszönöm
enkosi
sobodi
dėkuji
mèsi
didi madloba
najis tuke
kam sah hamnida
rahmat
rahmet
tanemirt
xièxie
diolch
dhanyavadagalu
shukriya
merce
trugarez
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tenki
manana
asante
obrigada
mamnun
дякую
djiere dieuf
tau
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chnorakaloutioun
akun dankon aciu
спасибі
kia ora
welalin
spas