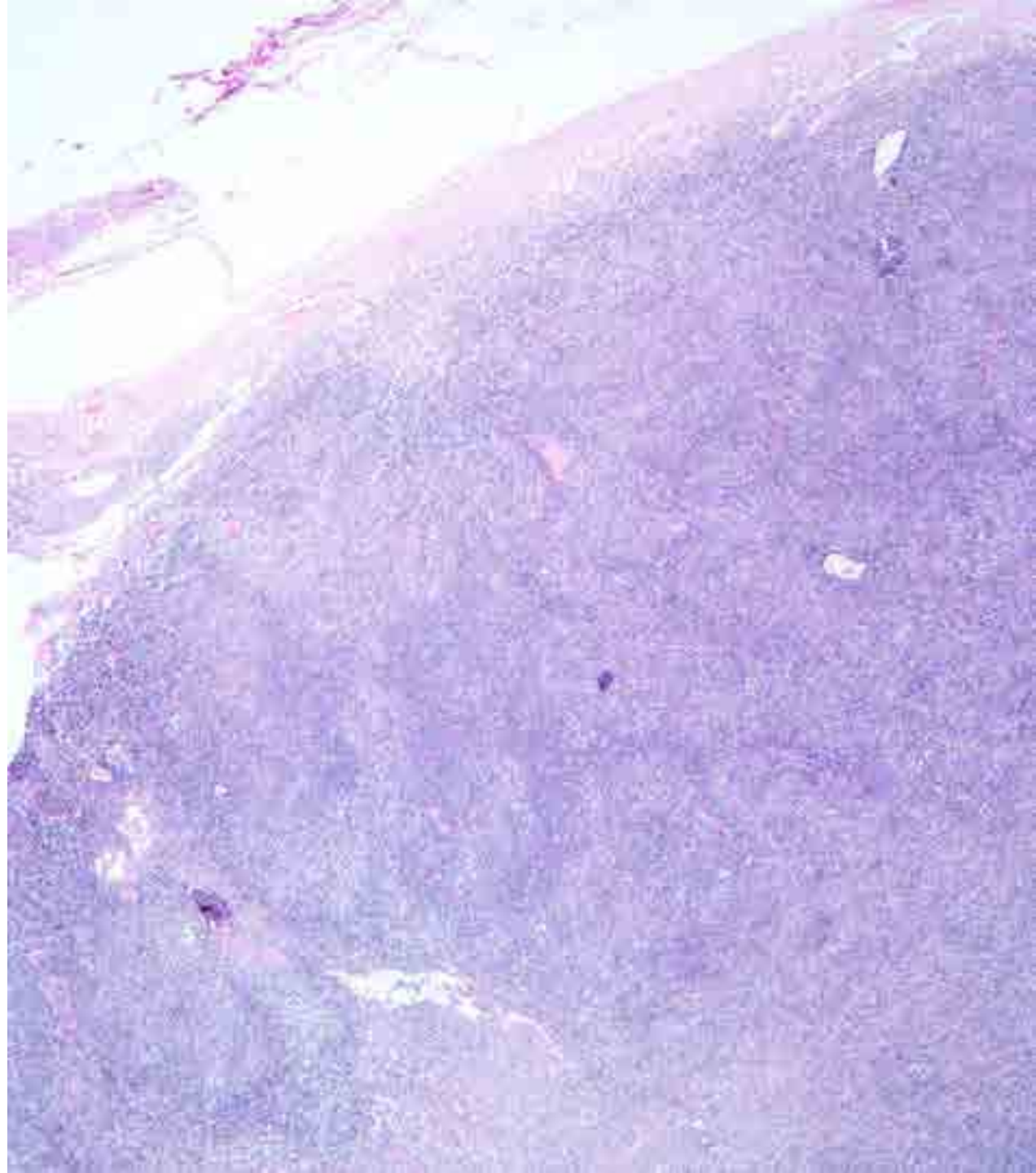


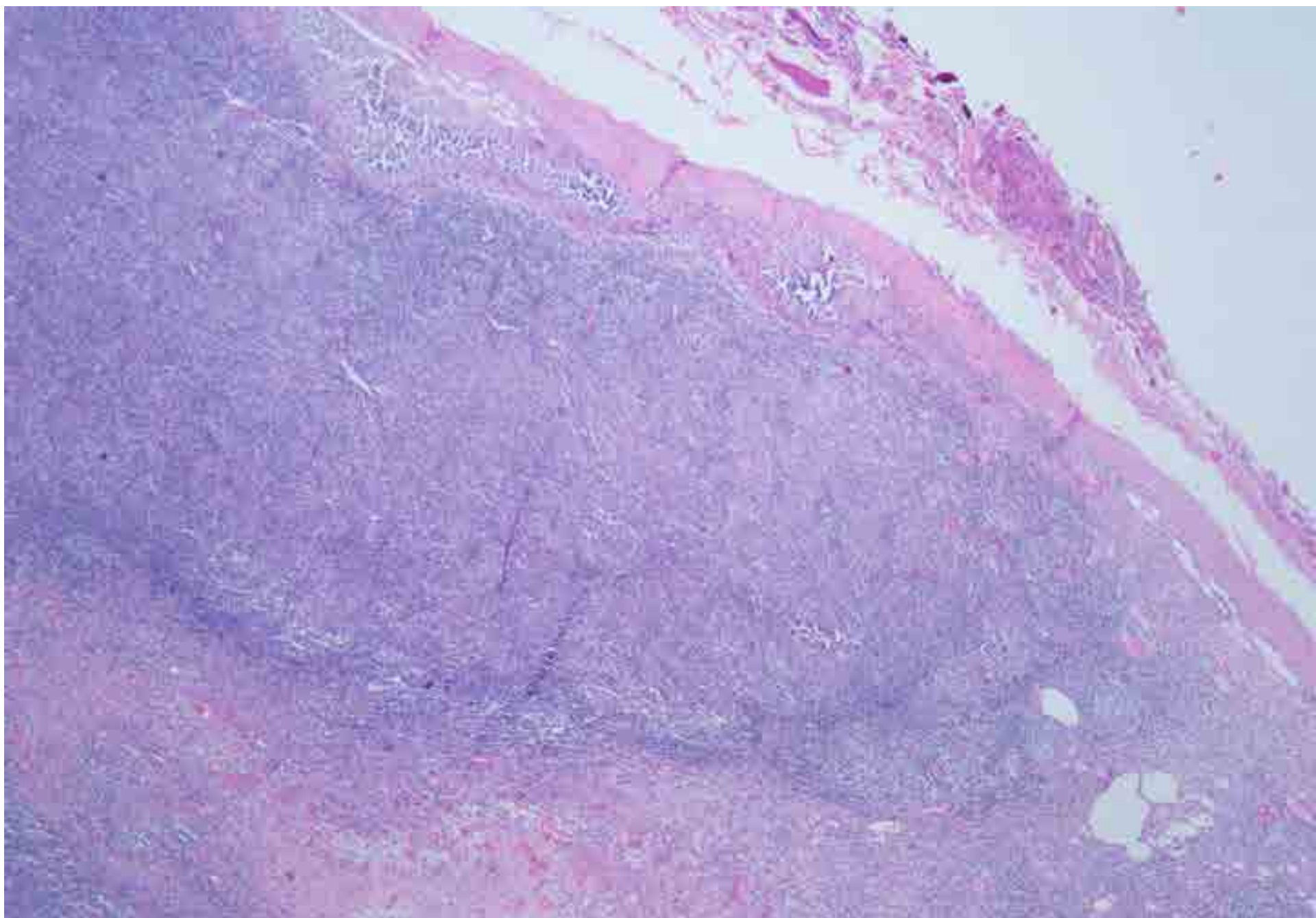


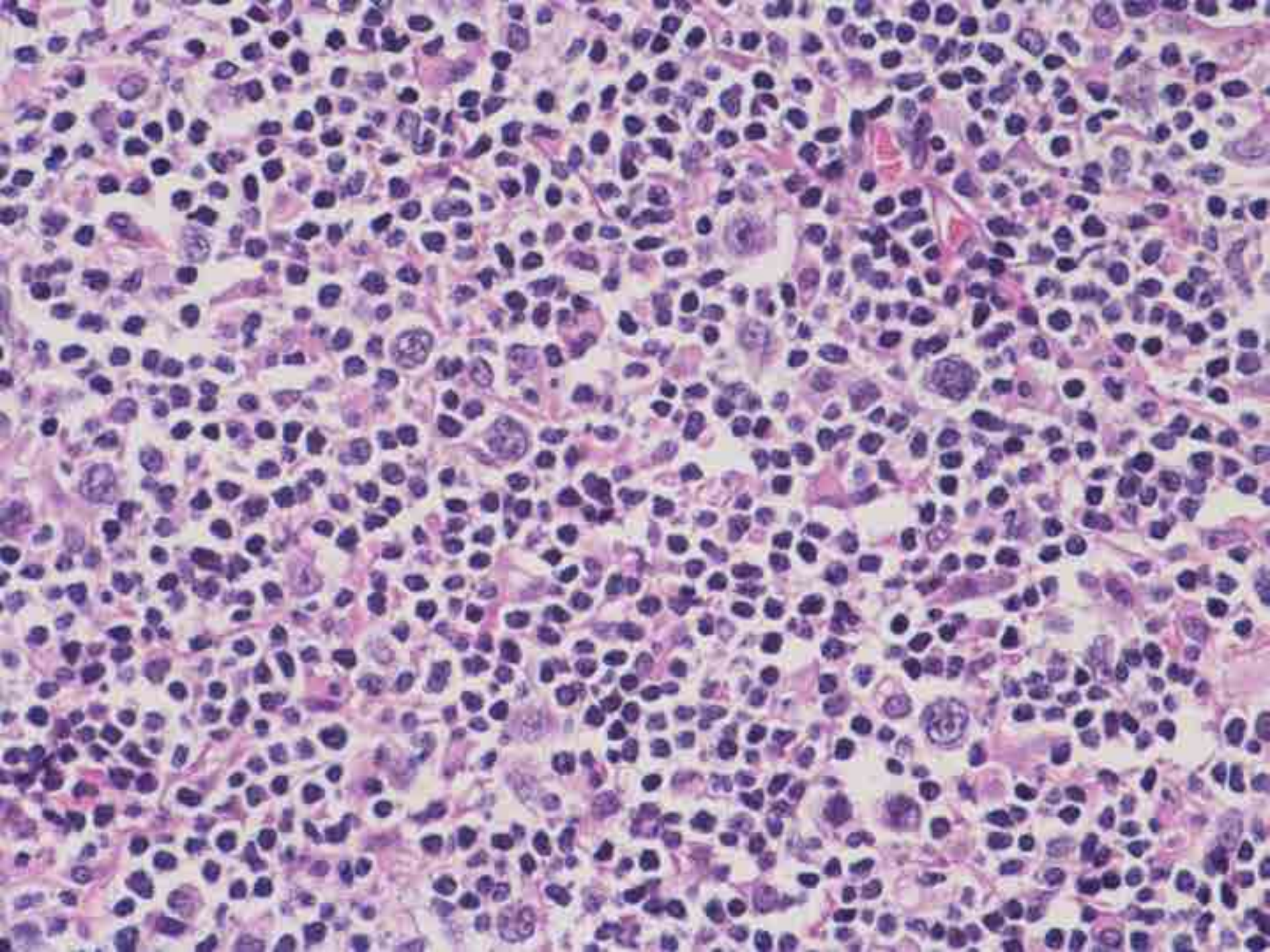
PRESENTACIÓN DE MINI-CASOS
DE HEMATOPATOLOGÍA
B16-2611

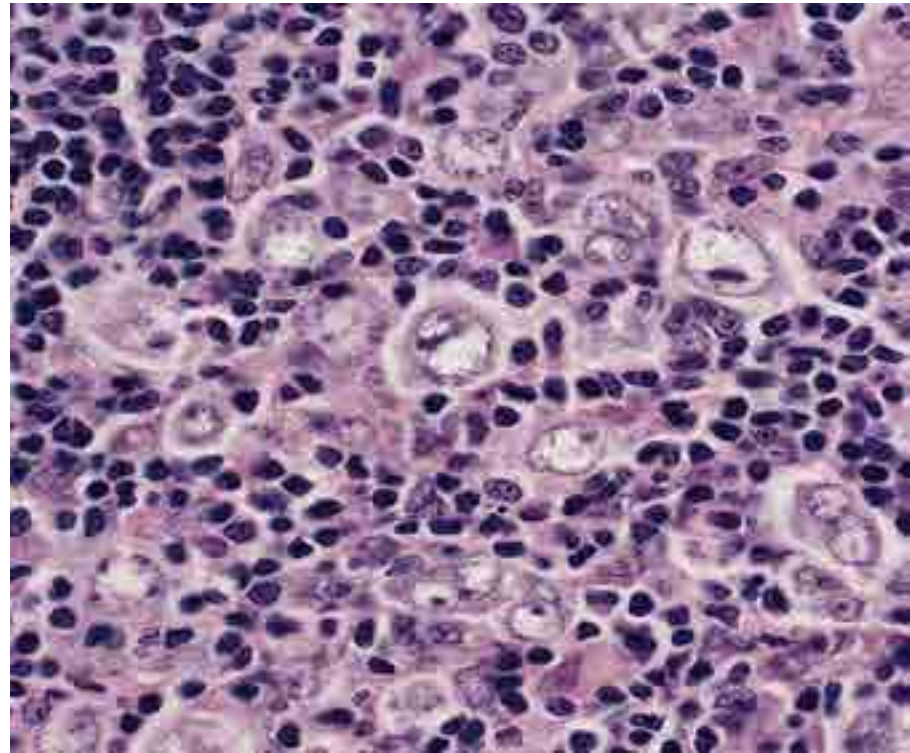
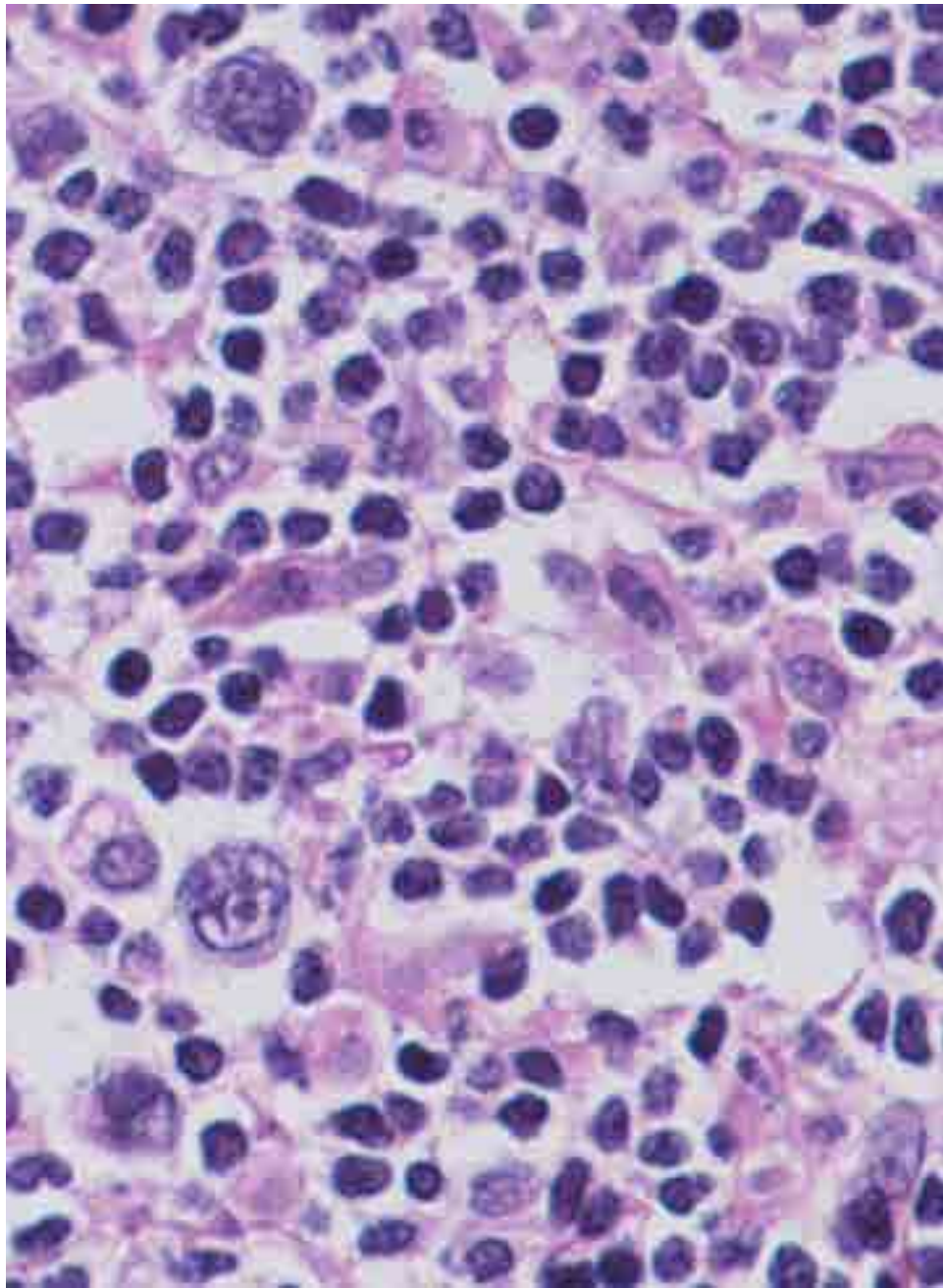
INFORMACIÓN CLÍNICA

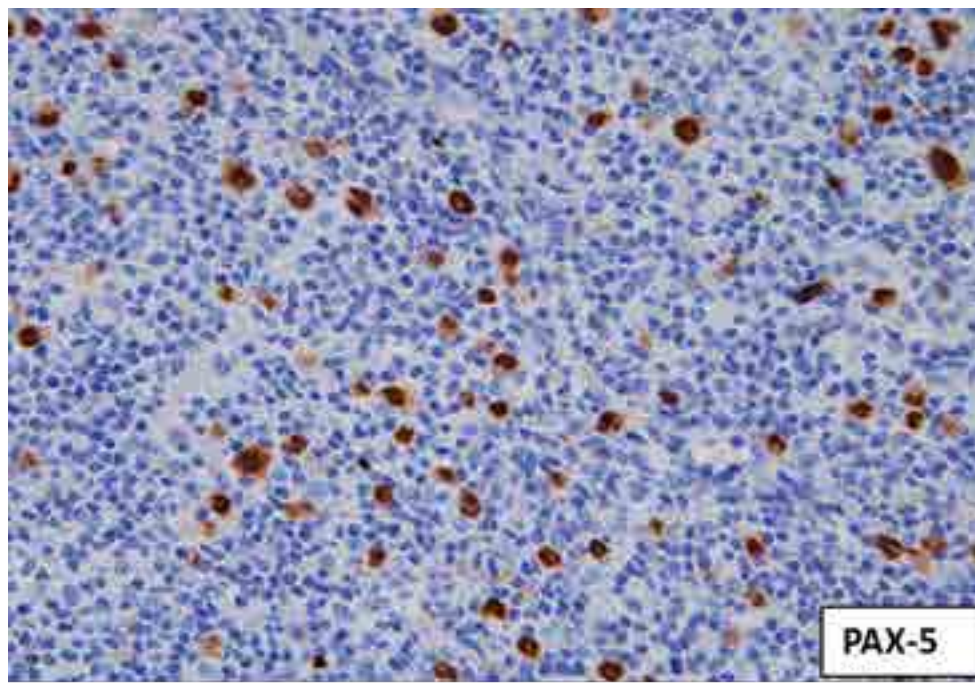
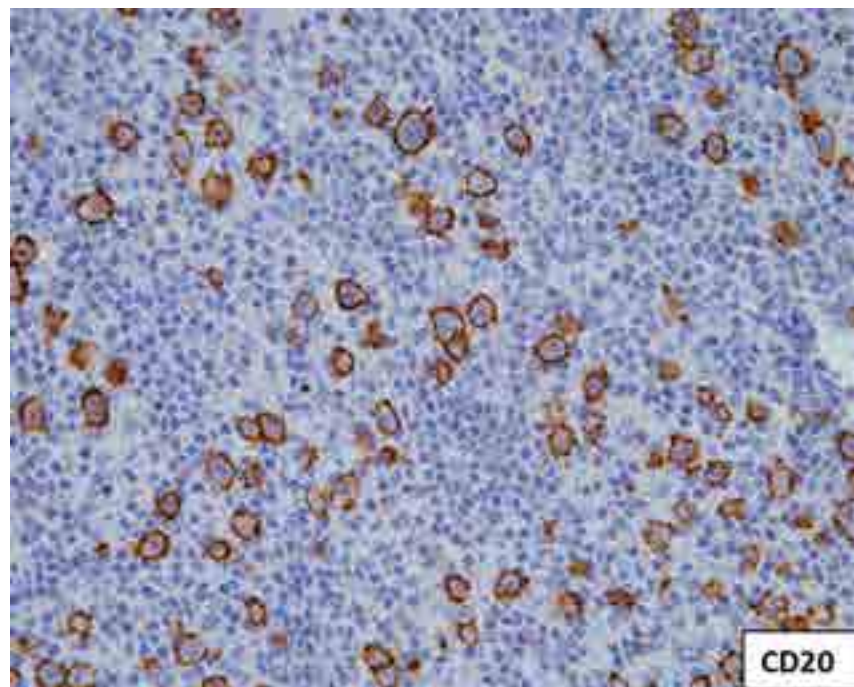
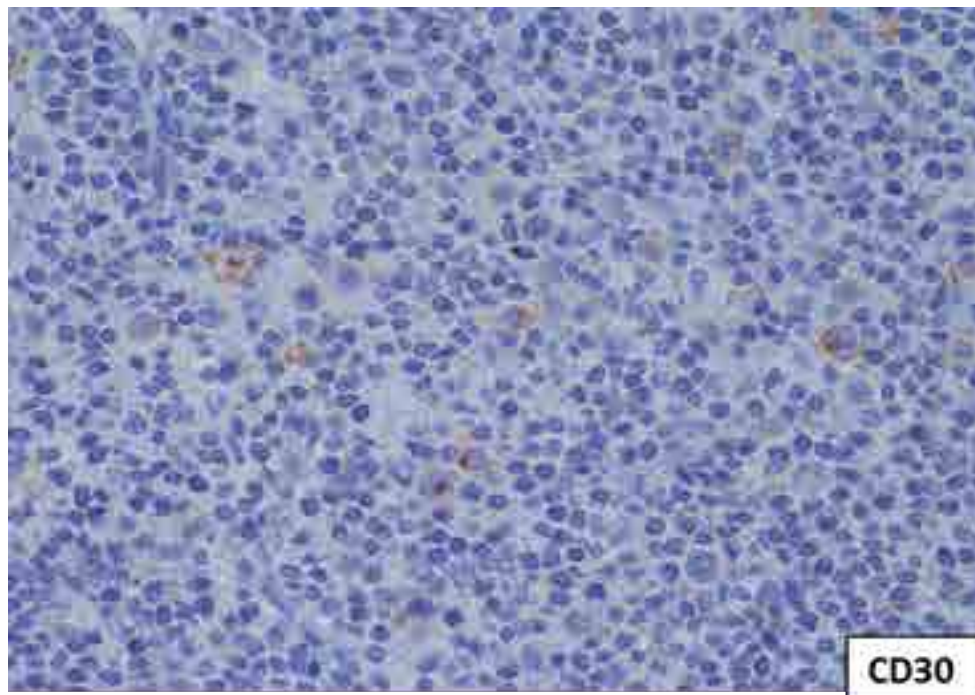
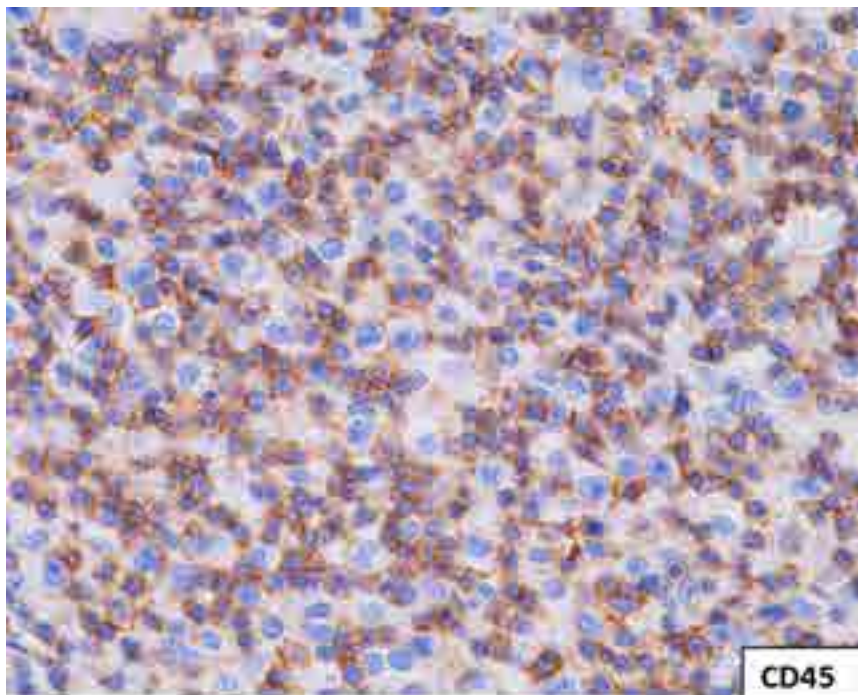
- Masculino
- Edad: 24 años
- Biopsia de ganglio linfático axilar

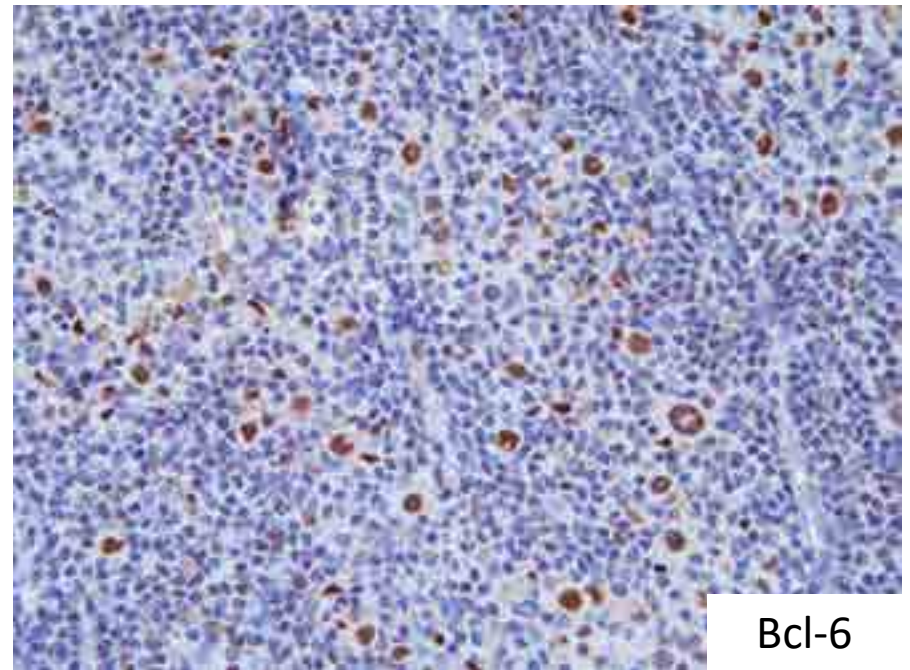
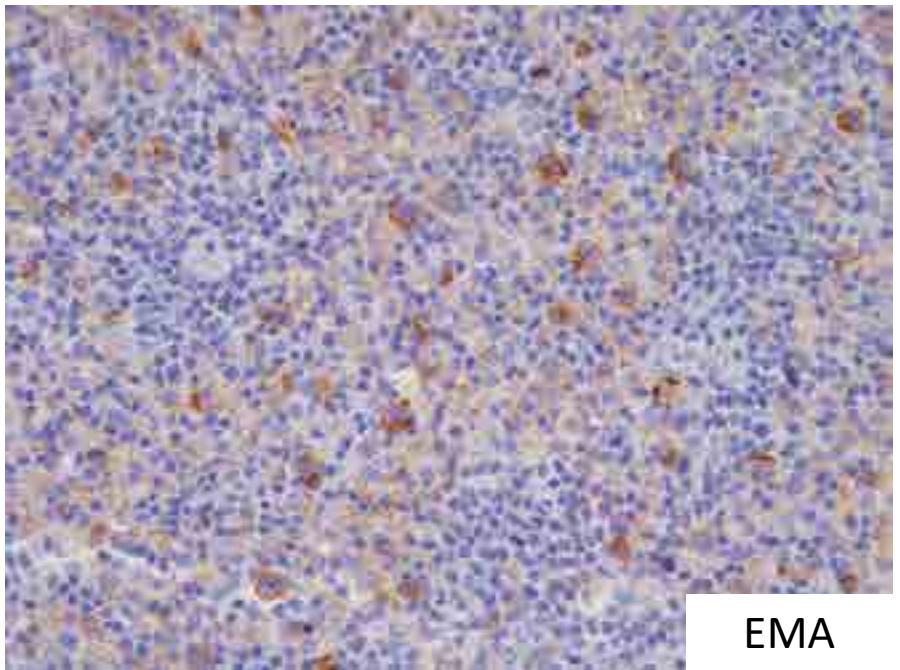
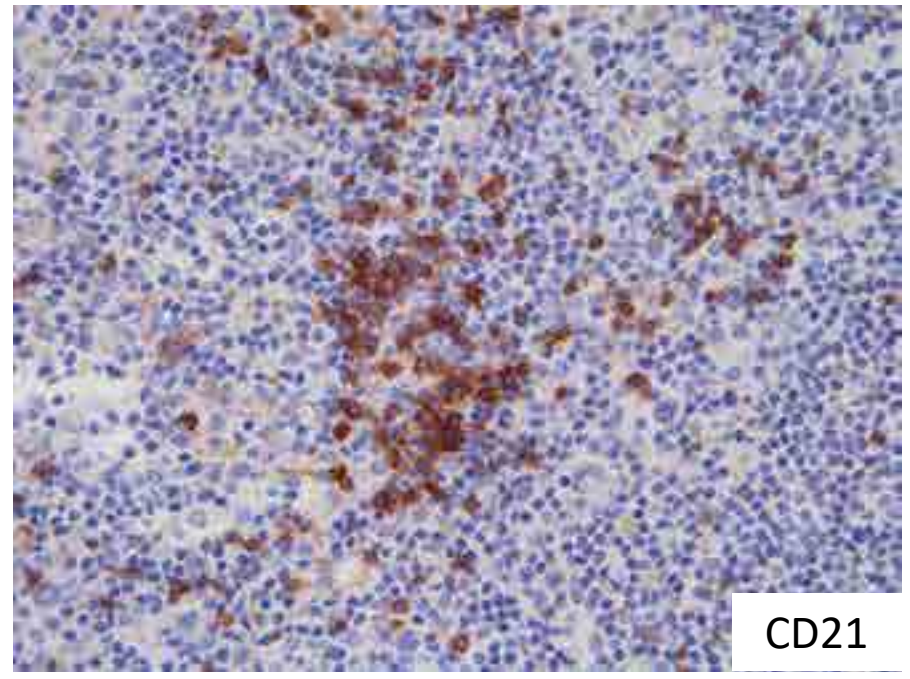
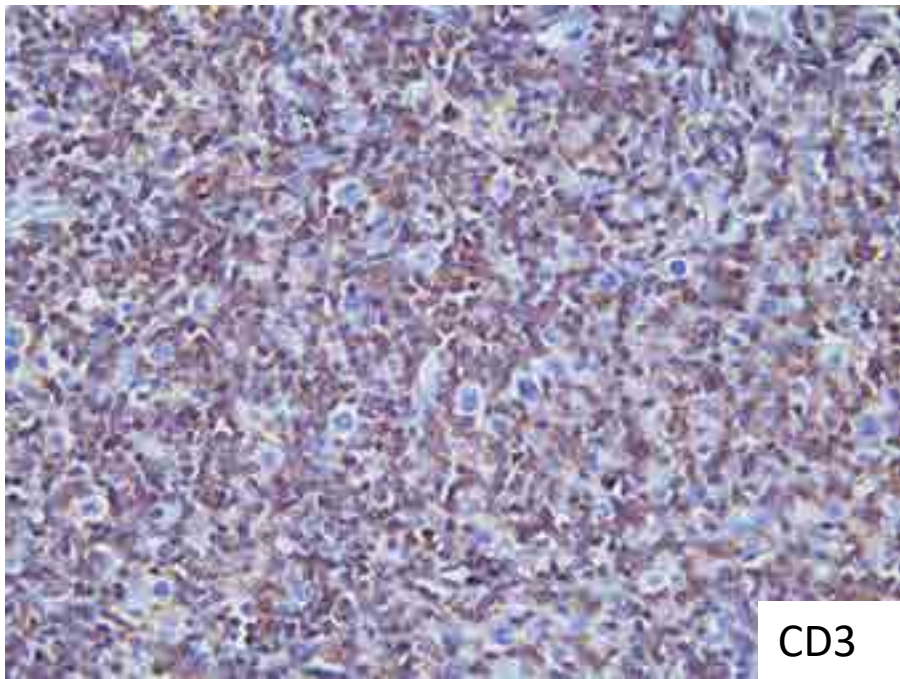


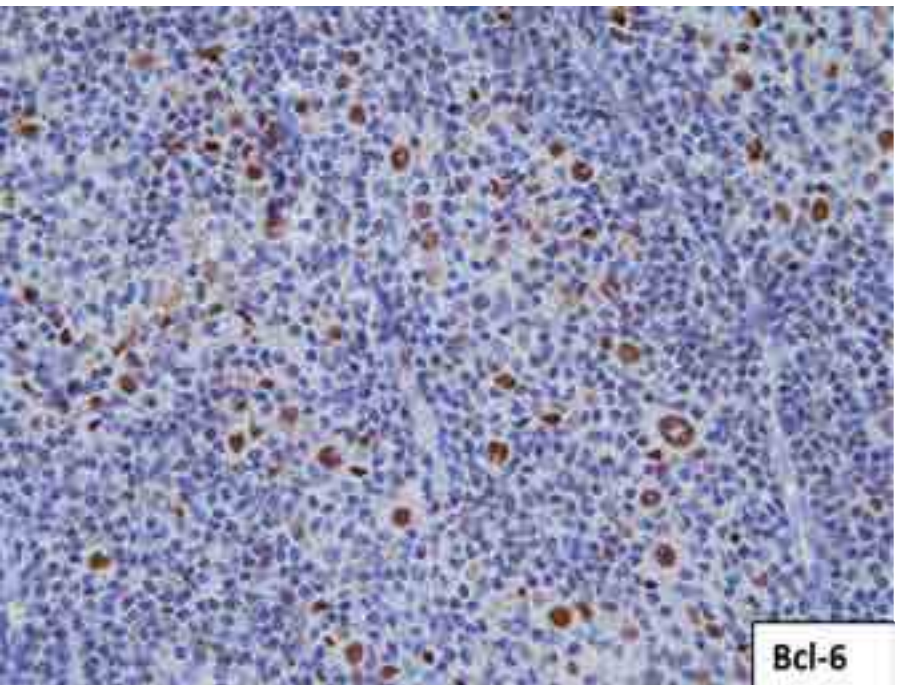
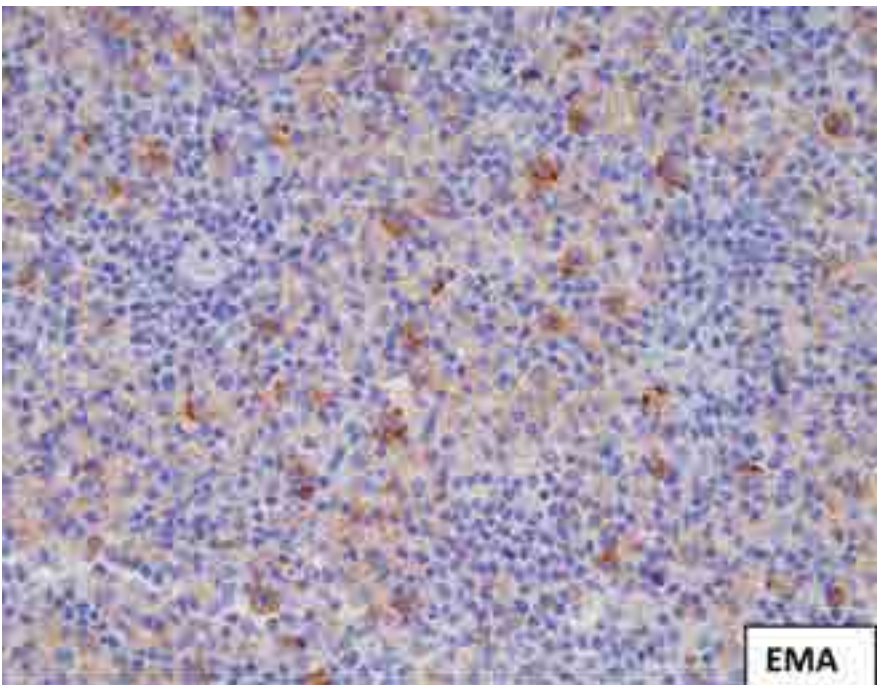
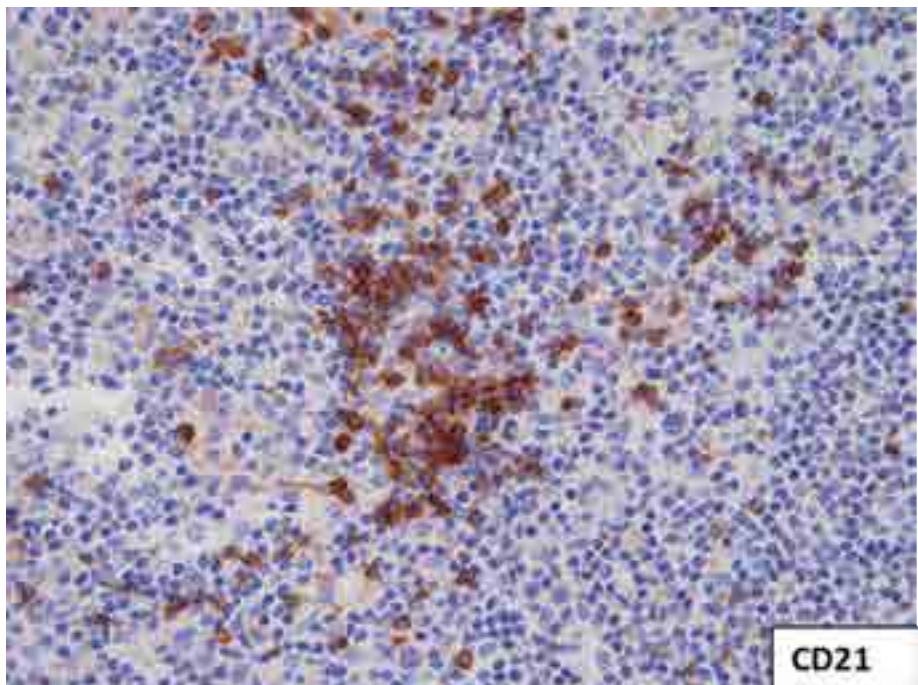
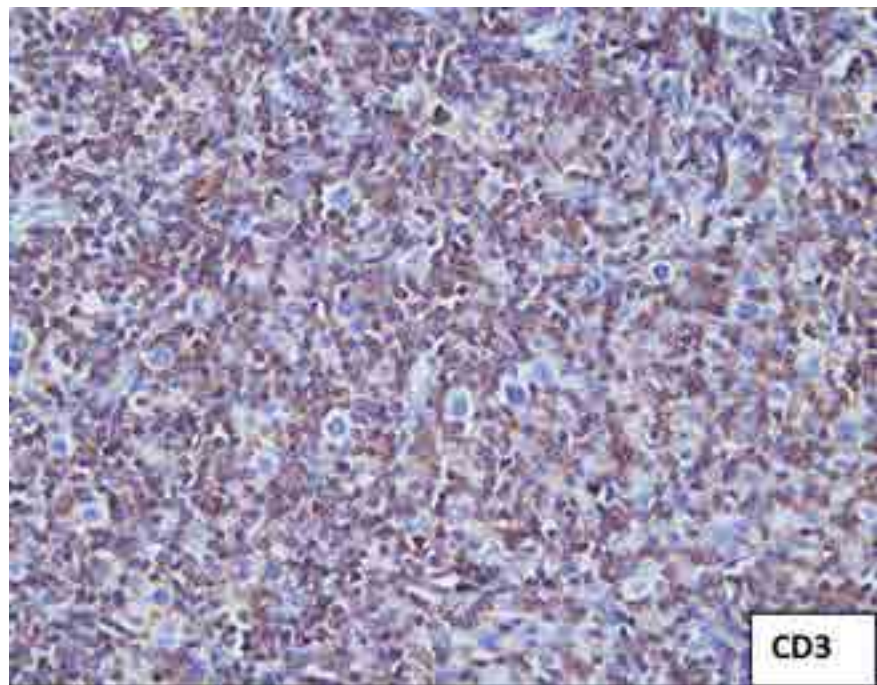












RESULTADOS DE INMUNOHISTOQUÍMICA

Anticuerpo	Resultado
CD20	Positivo
CD3	Negativo
CD30	Positivo débil
PAX-5	Positivo
EMA	Positivo
Bcl-6	Positivo
IgD	Positivo
CD45	Positivo
CD15	Negativo
EBER	Negativo
LMP-1	Negativo
CD57	Negativo
CD21	Positivo focal
Ki67	Solo células LP
CD4	Positivo 50%
CD8	Positivo 50%

OPCIONES DIAGNÓSTICAS

- Linfoma Difuso de Células Grandes “B” rico en células T e Histiocitos
- Linfoma de Hodgkin Clásico, subtipo rico en linfocitos
- Linfoma de Hodgkin No Clásico subtipo predominio linfocítico nodular.
- Transformación progresiva de los centros germinales

HALLAZGOS HISTOLÓGICOS

	LH tipo LP	LDCGB rico en linfocitos e histiocitos
Patrón arquitectural	Nodular "B", Nodular "T", Difuso "B", Difuso "T", Serpiginoso, células LP extranodulares.....	Difuso
Porcentaje de células grandes	>10%	<10%
Características de las células grandes	Tipo LP	Centroblásticas Inmunoblásticas Tipo RS (Hodgkin o LP)
Centros germinales residuales	No	No
Fibrosis, Necrosis	Raro	Si
Agregados de neutrófilos y eosinofilos	No	No

- Diagnostic Pathology, Lymph Nodes and Spleen with Extranodal Lymphomas. L Jeffrey Medeiros, MD, Roberto N Miranda, 2011, First Edition, AMYRSIS, Lippincott Williams Wilkins, pg4,2-4,14
- WHO Classification of Tumours of Haematopoietic and Lymphoid Tissues, Steven H. Swerdlow, Elias Campo, Nancy Lee Harris, 2008, International Agency for Research on Cancer, pg 238-240 y 326-326.
- Knowles Neoplastic Hematopathology, Attilio Orazi, Daniel M. Knowles MD, 2014 Third Edition, Lippincott Williams Wilkins, pg 354-385

HALLAZGOS INMUNOHISTOQUÍMICOS

	LH subtipo LP	LDCGB rico en linfocitos e histiocitos
CD45	Positivo	Positivo
CD30	Negativo	Negativo
CD15	Negativo	Negativo
CD20	Positivo	Positivo
CD3	Negativo	Negativo
PAX-5	Positivo, intenso	Positivo intenso
CD57	Rosetas	
EMA	Positivo 50%	Negativo
CD10	Negativo	Positivo
CD21	Células dendríticas foliculares	Ausencia de CDF
LMP-1/EBER	Negativo	Negativo

- Diagnostic Pathology, Lymph Nodes and Spleen with Extranodal Lymphomas. L Jeffrey Medeiros, MD, Roberto N Miranda, 2011, First Edition, AMYRSIS, Lippincott Williams Wilkins, pg4,2-4,14
- WHO Classification of Tumours of Haematopoietic and Lymphoid Tissues, Steven H. Swerdlow, Elias Campo, Nancy Lee Harris, 2008, International Agency for Research on Cancer, pg 238-240 y 326-326.
- Knowles Neoplastic Hematopathology, Attilio Orazi, Daniel M. Knowles MD, 2014 Third Edition, Lippincott Williams Wilkins, pg 354-385

DIAGNÓSTICO

**LINFOMA DE HODGKIN, SUBTIPO PREDOMINIO DE
LINFOCITOS, VARIANTE DIFUSA (TIPO E).**

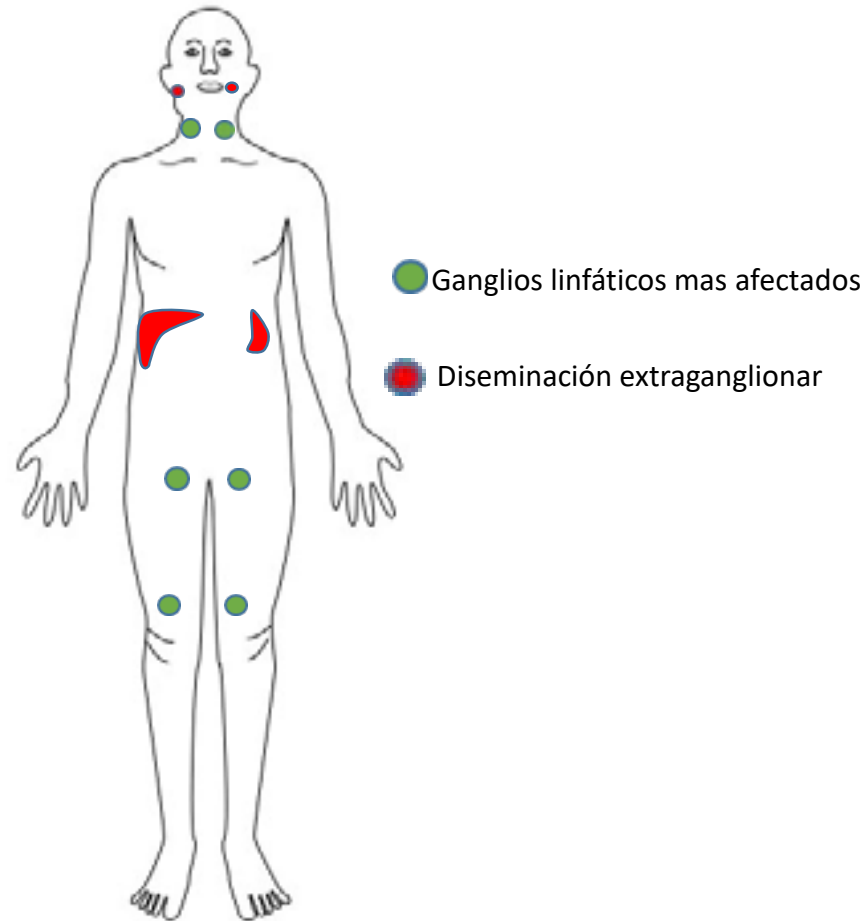
LINFOMA DE HODGKIN SUBTIPO LP

- Proliferación maligna, nodular o difusa/nodular, de células B neoplásicas tipo LP, asociada a numerosos linfocitos e histiocitos.
- Célula de origen: linfocito B del centro germinal.
- Representa el 5% de los LH.
- Hombres entre 30-50 años
- No asociado al VEB, solo ocasionalmente.

- Diagnostic Pathology, Lymph Nodes and Spleen with Extranodal Lymphomas. L Jeffrey Medeiros, MD, Roberto N Miranda, 2011, First Edition, AMYRSIS, Lippincott Williams Wilkins, pg4,2-4,14
- WHO Classification of Tumours of Haematopoietic and Lymphoid Tissues, Steven H. Swerdlow, Elias Campo, Nancy Lee Harris, 2008, International Agency for Research on Cancer, pg 238-240 y 326-326.
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- Nodular Lymphocyte Predominant Hodgkin Lymphoma with clusters of LP cells, acute inflammation and fibrosis. Elias Drakos MD, PhD. George Z. Rassidakis et al. 2009. American Journal Surgical Pathology. Vol 33 Number 11. Pg 1725-1731.

Presentación clínica

- Ganglios linfáticos cervicales axilares e inguinales.
- Diseminación extraganglionar en amígdalas y parótidas.
- Linfoma con alto porcentaje de recurrencias tempranas o tardías.
- Mortalidad del 15%
- Transformación en 5-15% de los casos (LDCGB)



- Diagnostic Pathology, Lymph Nodes and Spleen with Extranodal Lymphomas. L Jeffrey Medeiros, MD, Roberto N Miranda, 2011, First Edition, AMYRSIS, Lippincott Williams Wilkins, pg4,2-4,14
- WHO Classification of Tumours of Haematopoietic and Lymphoid Tissues, Steven H. Swerdlow, Elias Campo, Nancy Lee Harris, 2008, International Agency for Research on Cancer, pg 238-240 y 326-326.
- Nodular Lymphocyte Predominant Hodgkin Lymphoma with clusters of LP cells, acute inflammation and fibrosis. Elias Drakos MD, PhD. George Z. Rassidakis et al. 2009. American Journal Surgical Pathology. Vol 33 Number 11. Pg 1725-1731.
- Transformation to Agressive Lymphoma in Nodular Lymphocyte-Predominant Hodgkin's Lymphoma, Mubarak Al.Mansour, 2010, Journal Clinical Oncology, Vol 28, pg 793-799

Hallazgos histológicos

- Seis distintos patrones inmunoarquitecturales:

- Patrón A: clásico, nódulos ricos en células B.

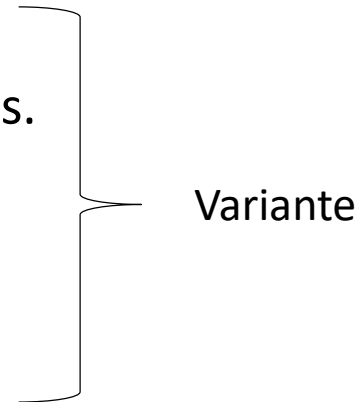
- Patrón B: nodular serpiginoso.

- Patrón C: nodular con células LP extranodulares.

- Patrón D: nodular rico en células “T”.

- Patrón E: difuso.

- Patrón F: difuso, moteado rico en células “B”.



- Characterization of Variant Patterns of Nodular Lymphocyte Predominant Hodgkin Lymphoma with Immunohistologic and Clinical Correlation. Zhen Fan, MD, Yasodha Natkunam, MD. 2003. American Journal Surgical Pathology. Vol 27 pg 1346-1356.
- Nodular Lymphocyte Predominant Hodgkin Lymphoma with clusters of LP cells, acute inflammation and fibrosis. Elias Drakos MD, PhD. George Z. Rassidakis et al. 2009. American Journal Surgical Pathology. Vol 33 Number 11. Pg 1725-1731.
- A simplified scoring system to document variant patterns in Nodular lymphocyte predominant Hodgkin's Lymphoma, Tanuja Shet, Poonam Panjwari, Leukemia and Lymphoma 2014, vol 20 1-8
- Knowles Neoplastic Hematopathology, Attilio Orazi, Daniel M. Knowles MD, 2014 Third Edition, Lippincott Williams Wilkins, pg 354-385

Hallazgos Histológicos

Variant patterns of NLPHL

A: Increased number of LP cells outside typical nodules

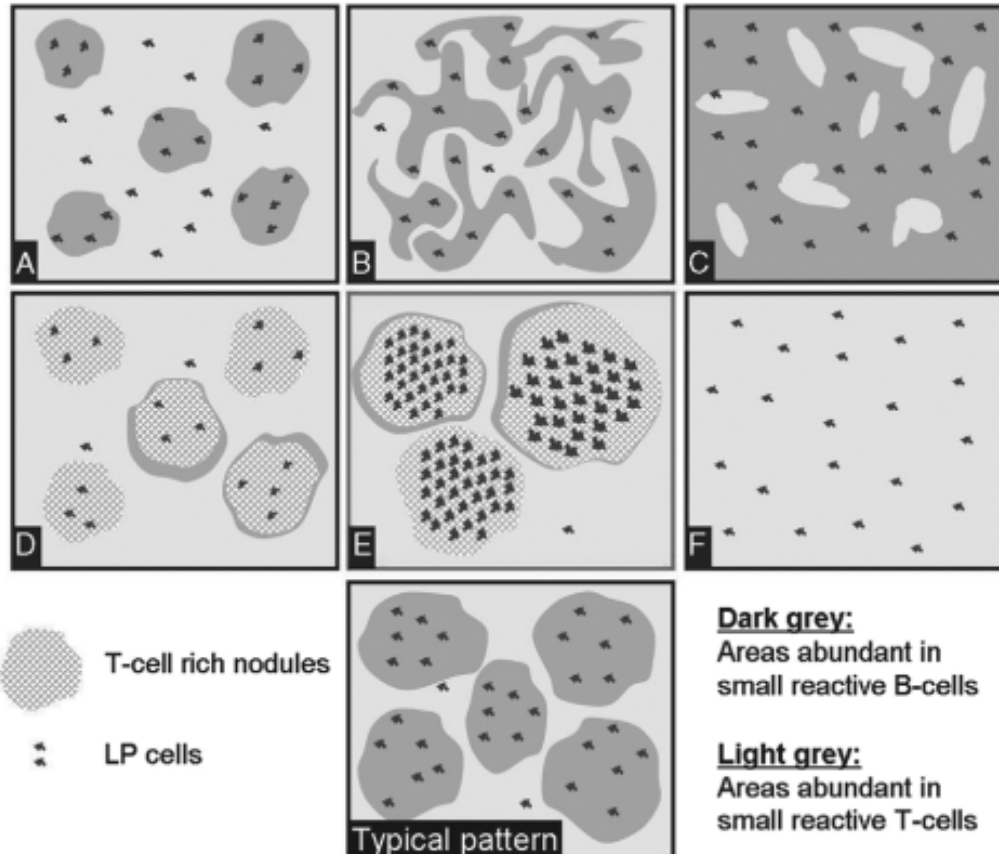
B: Serpiginous, typical otherwise B-cell nodules

C: "Moth-eaten type"
(diffuse within B-cell pattern)

D: T-cell rich nodules

E: "Syncytial pattern"
(nodules with clustered LP-cells)

F: Diffuse TC/HRLBCL-like pattern



Hallazgos Histológicos

- Distintos patrones arquitecturales.
- Células de Reed-Sternberg tipo LP.
- Células dentro y fuera de los nódulos.
- Medio ambiente rico en linfocitos e histiocitos epiteloides.
- Capsula no engrosada.
- Fibrosis, necrosis o agregados de neutrófilos extremadamente raros.
- Presencia de red de células dendríticas foliculares.

- Diagnostic Pathology, Lymph Nodes and Spleen with Extranodal Lymphomas. L Jeffrey Medeiros, MD, Roberto N Miranda, 2011, First Edition, AMYRSIS, Lippincott Williams Wilkins, pg4,2-4,14
- WHO Classification of Tumours of Haematopoietic and Lymphoid Tissues, Steven H. Swerdlow, Elias Campo, Nancy Lee Harris, 2008, International Agency for Research on Cancer, pg 238-240 y 326-326.
- Knowles Neoplastic Hematopathology, Attilio Orazi, Daniel M. Knowles MD, 2014 Third Edition, Lippincott Williams Wilkins, pg 354-385
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Variantes y su valor pronóstico

LYMPHOID NEOPLASIA

CME Article

The prognostic impact of variant histology in nodular lymphocyte-predominant Hodgkin lymphoma: a report from the German Hodgkin Study Group (GHSg)

Sylvia Hartmann,¹ Dennis A. Eichenauer,^{2,3} Annette Pfötchow,^{2,3} Anja Moltok,⁴ Roshanak Bob,⁵ Karoline Koch,⁶ Heinz-Wolfram Bernd,⁷ Sergio Cogliatti,⁸ Michael Hummel,⁹ Alfred C. Feller,² Germán Ott,¹⁰ Peter Möller,¹¹ Andreas Rosenwald,⁴ Harald Stein,⁵ Martin-Leo Hansmann,¹ Andreas Engert,^{2,3} and Wolfram Klapper⁶

¹Dr. Senckenberg Institute of Pathology, Goethe University, Frankfurt am Main, Germany; ²First Department of Internal Medicine and ³German Hodgkin Study Group, University Hospital of Cologne, Germany; ⁴Institute of Pathology, University of Würzburg and Comprehensive Cancer Center (CCC) MarFranken, Germany; ⁵Radiodiagnostic Berlin, Berlin Falkenberg Center for Lymphoma and Hematopathology, Berlin, Germany; ⁶Institute of Pathology, Hematopathology Section and Lymph Node Registry, Universitätsklinikum Schleswig-Holstein, Campus Kiel, Germany; ⁷Institute of Pathology, Universitätsklinikum Schleswig-Holstein, Campus Lübeck, Germany; ⁸Institute of Pathology, Kantonsspital St. Gallen, Switzerland; ⁹Institute of Pathology, Charité University Hospital, Berlin, Germany; ¹⁰Department of Clinical Pathology, Robert-Bosch-Krankenhaus and Dr Margarete Fischer-Bosch Institute of Clinical Pharmacology, Stuttgart, Germany; and ¹¹Institute of Pathology, University Hospital Ulm, Germany

Key Points

- Histopathologic variants of nodular lymphocyte-predominant Hodgkin lymphoma are associated with advanced stage and increased relapse rate.
- A prognostic score combining histopathologic and clinical features can allocate patients to 3 defined risk groups.

Nodular lymphocyte-predominant Hodgkin lymphoma (NLPHL) accounts for approximately 5% of all Hodgkin lymphoma cases. The aim of this study was to evaluate the prognostic implication of histopathologic NLPHL variants. Biopsies of 423 NLPHL patients treated within 9 prospective clinical trials performed by the German Hodgkin Study Group were classified as tumor cell-rich cases ($n = 10$), typical NLPHL ($n = 308$), or histopathologic variants ($n = 105$). Histopathologic variants were characterized by the presence of lymphoma cells outside the B-cell nodules or B-cell depletion of the micro-environment. Compared with typical NLPHL, histopathologic variants were associated with advanced disease (29.5% vs 14.6%, $P = .0012$) and a higher relapse rate (18.1% vs 6.5% at 5 years, $P = .0009$). Variant histology represented an independent prognostic factor (odds ratio = 2.955) in a multivariate model of progression/relapse. A prognostic score, including the risk factors variant histopathologic growth pattern, low serum albumin, and male gender, was derived from this model and allowed the definition of 3 distinct risk groups. NLPHL patients presenting with histopathologic variants have

a poorer outcome compared with those showing typical histology. The newly developed prognostic score combining histologic and clinical features allows allocating NLPHL patients to defined risk groups. (*Blood*. 2013;122(26):4246-4252)

Variantes y su importancia diagnóstica

- Identificar las distintas variantes del LH tipo LP tiene impacto pronóstico y predictivo
- Enfermedad avanzada
- Mayor riesgo de recaída (10 veces)
- Periodo libre de enfermedad
- Factor pronóstico independiente
- Afección de la médula ósea
- Se propone que el medio ambiente rico en células T favorece diseminación a distancia
- Deben considerarse datos clínicos y laboratoriales.

- The prognostic impact of variant histology in nodular lymphocyte-predominant Hodgkin lymphoma: a report from the German Hodgkin Study Group (GHSg), Sylvia Hartmann, Dennis A. Eichenauer, Blood, 2013 Vol 26 pg 4246-4252.
- A simplified scoring system to document variant patterns in Nodular lymphocyte predominant Hodgkin's Lymphoma, Tanuja Shet, Poonam Panjwari, Leukemia and Lymphoma 2014, vol 20 1-8

Estudios de Inmunohistoquímica

- CD45, CD20 y PAX-5 positivos
 - CD10, CD3, LMP-1, EBER negativos
 - CD30 y CD15 negativos (90%)
 - EMA y MUM-1 positivos (50%)
 - IgD positivo (15-25%)
 - BOB1 OCT2 y bcl-6 positivos
 - CD21 (células dendríticas foliculares)
-
- Diagnostic Pathology, Lymph Nodes and Spleen with Extranodal Lymphomas. L Jeffrey Medeiros, MD, Roberto N Miranda, 2011, First Edition, AMYRSIS, Lippincott Williams Wilkins, pg4,2-4,14
 - WHO Classification of Tumours of Haematopoietic and Lymphoid Tissues, Steven H. Swerdlow, Elias Campo, Nancy Lee Harris, 2008, International Agency for Research on Cancer, pg 238-240 y 326-326.
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