



SeAP-IAP

[Sociedad Española de Anatomía Patológica]

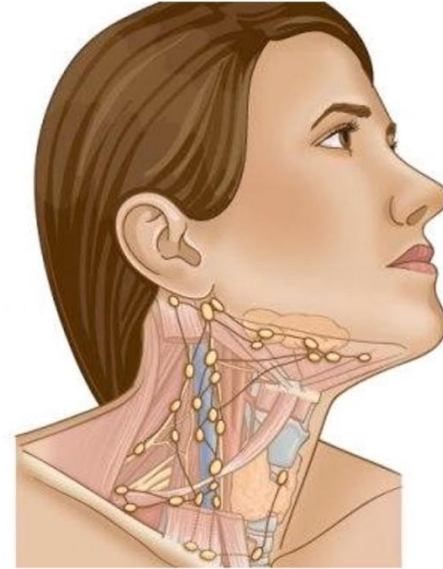
[International Academy of Pathology]



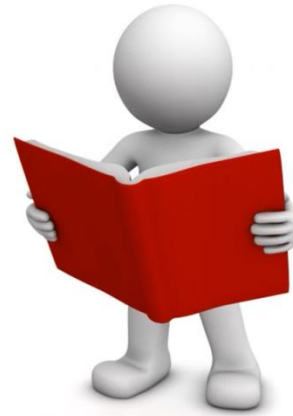
Joana Carolina Gómez Adrián; Lorena Alarcón Molero; Carlos Fernández Sellers
Hospital Clínico Universitario de Valencia

HISTORIA CLÍNICA

- Paciente de 12 años
- Sin antecedentes médicos personales ni familiares de interés
- Exploración física:
 - Se palpa adenopatía laterocervical izquierda de 4 cm y otra adenopatía en lado derecho de 1 cm (3-4 meses de evolución sin clínica acompañante).
 - No se evidencia hepato-esplenomegalia.
 - Resto de la exploración sin otros hallazgos.



Exéresis de la adenopatía laterocervical izquierda con sospecha
diagnóstica de Linfoma de Hodgkin
ESTUDIO ANATOMOPATOLÓGICO

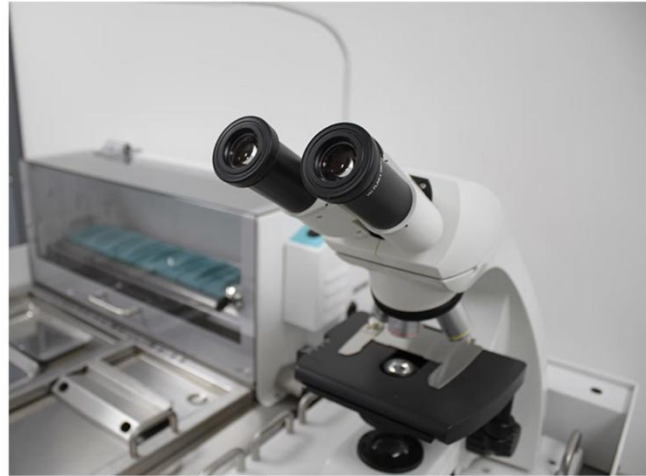


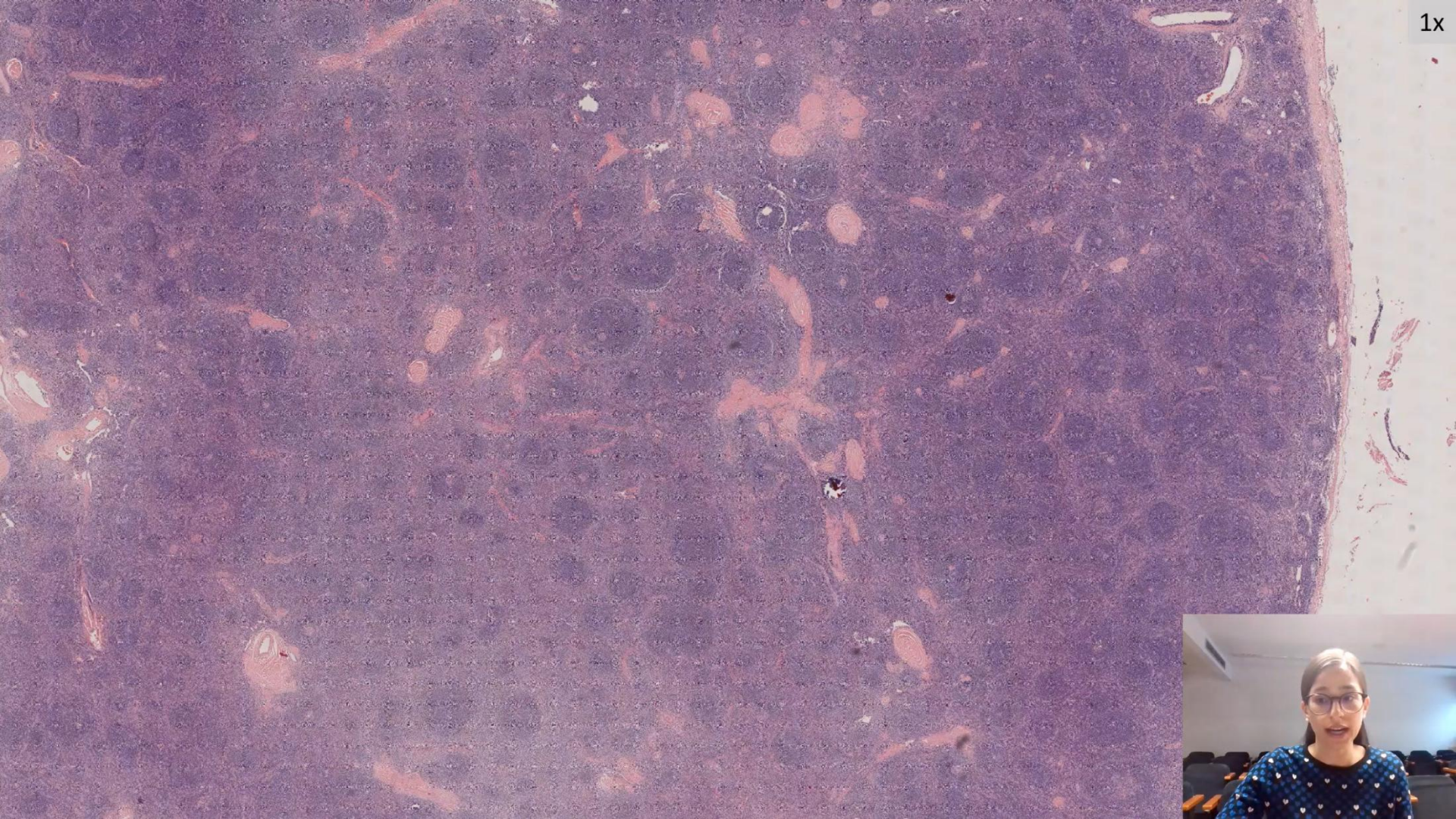
DESCRIPCIÓN MACROSCÓPICA

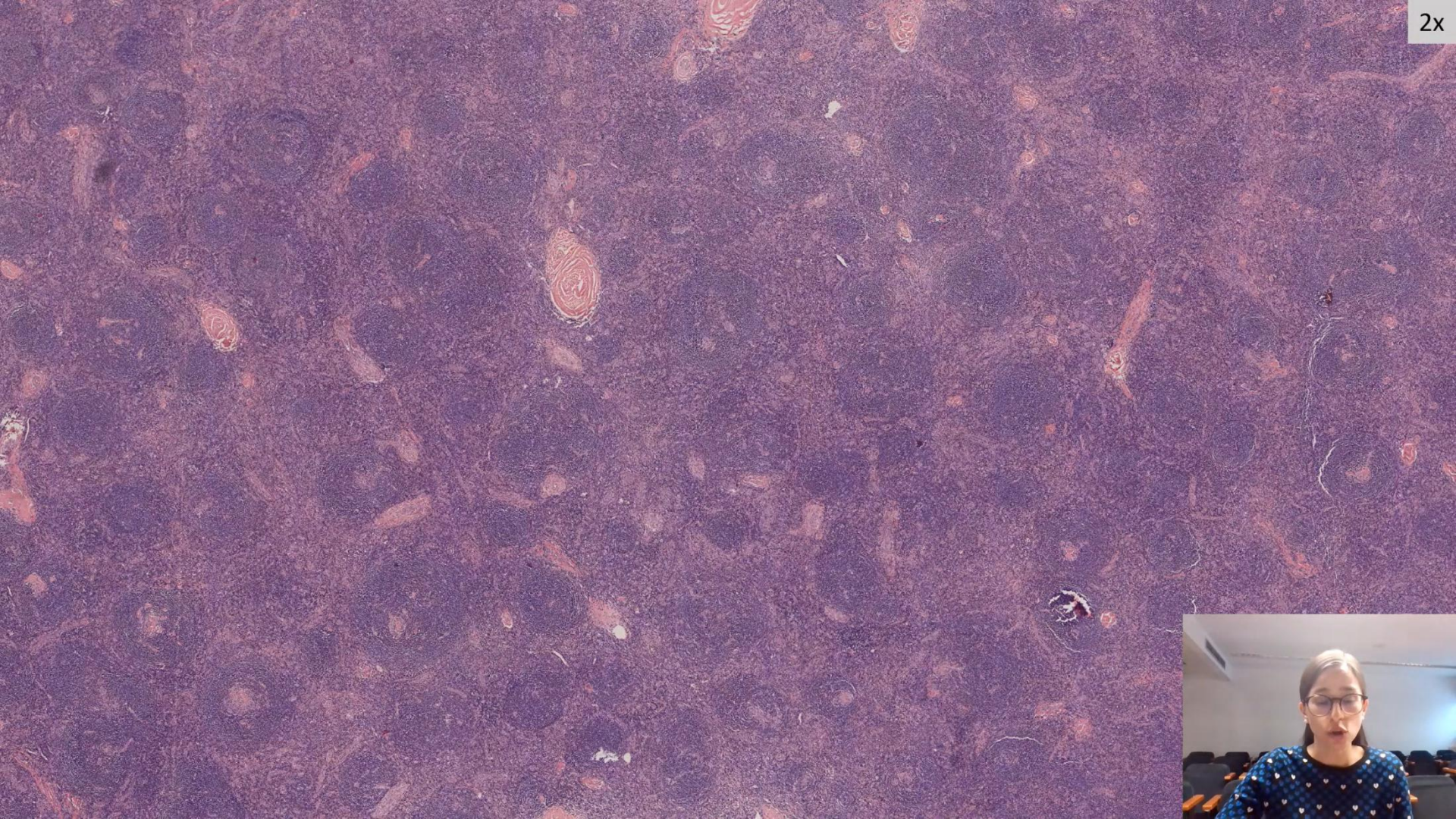
Fragmento carnoso de aspecto adenopático, morfología ovoide/cilíndrica y consistencia fibroelástica que mide 2,5 x 1,7 x 1,2 cm. A la sección no se observan alteraciones macroscópicas.

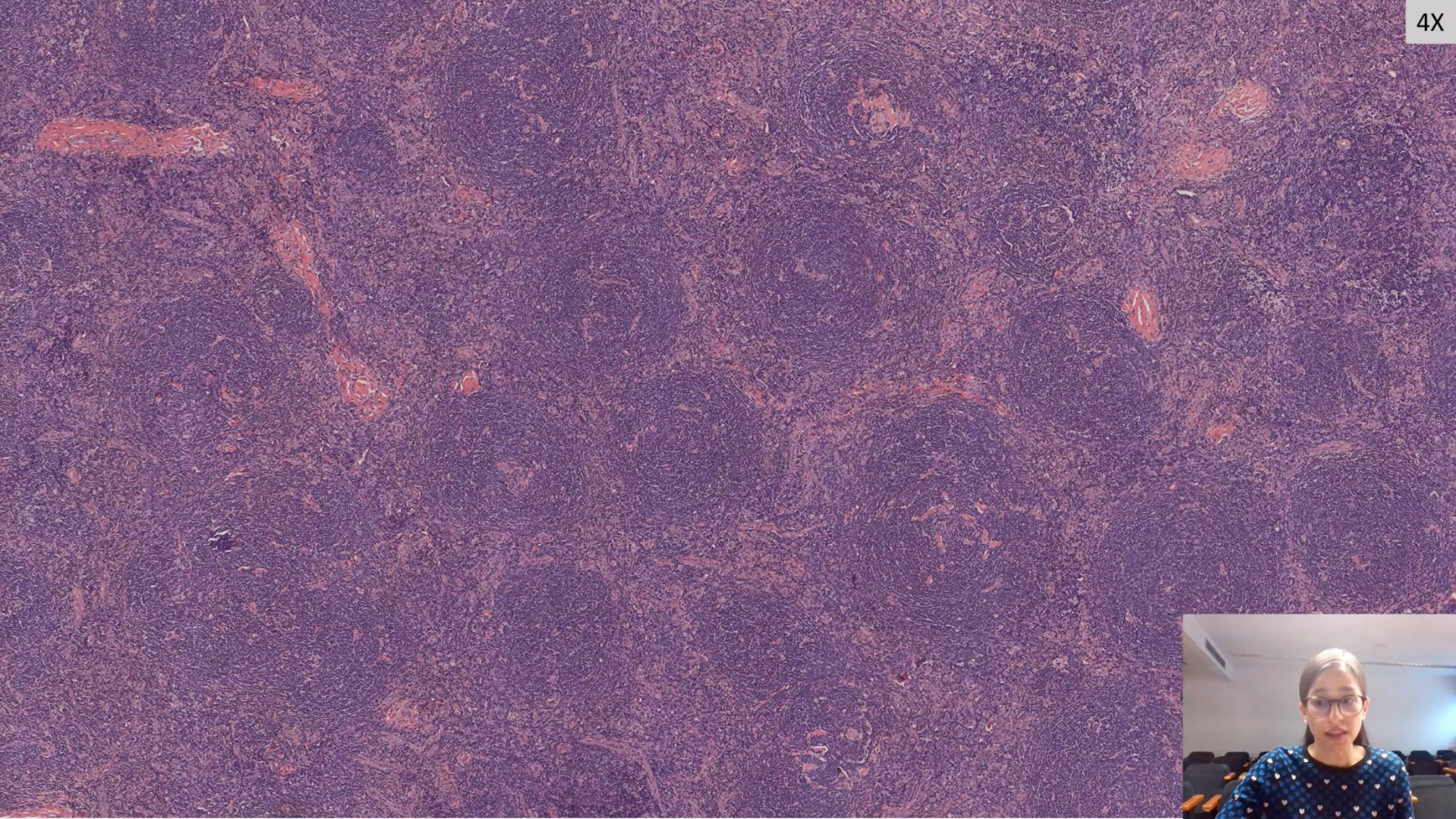


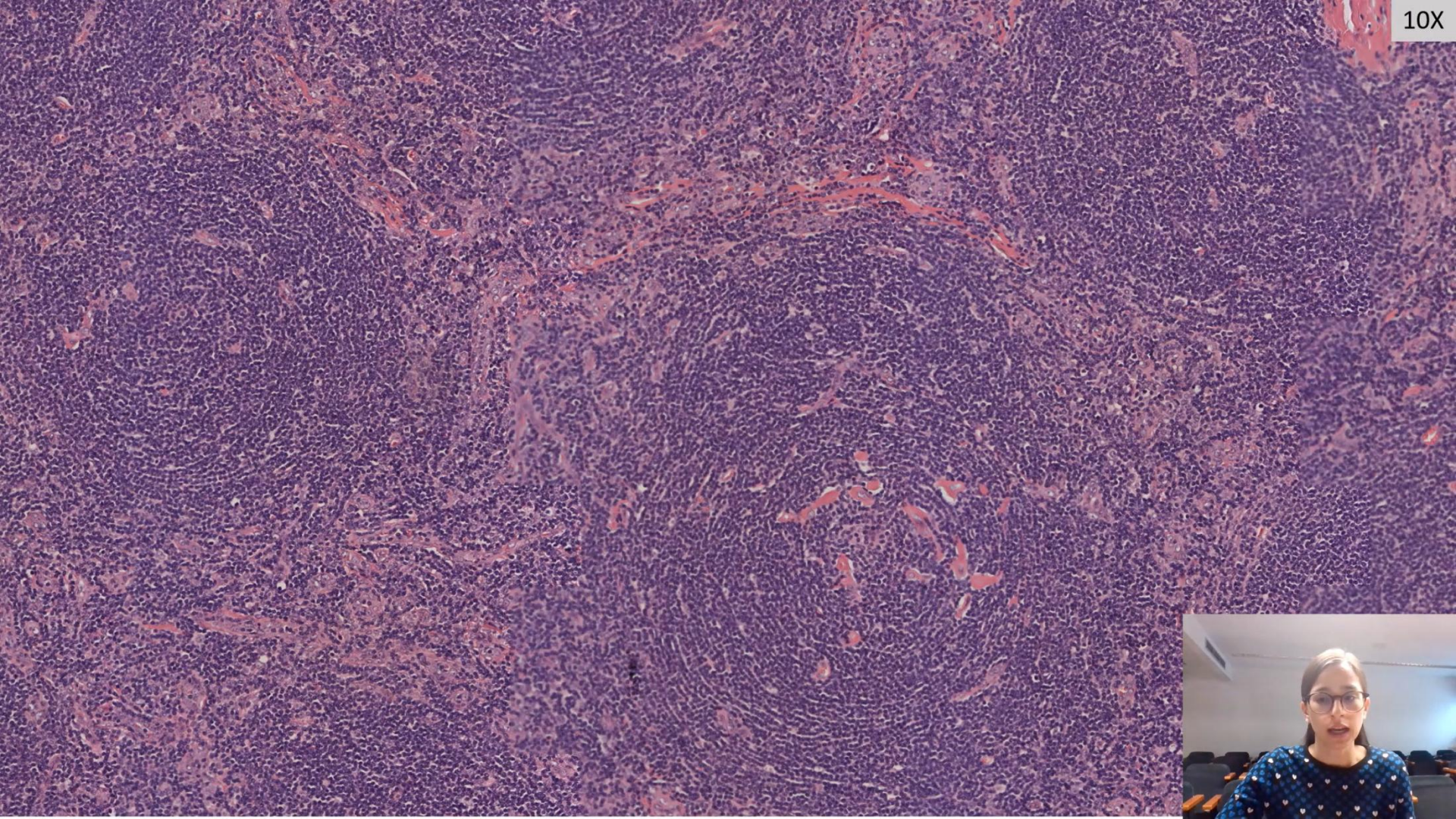
DESCRIPCIÓN MICROSCÓPICA

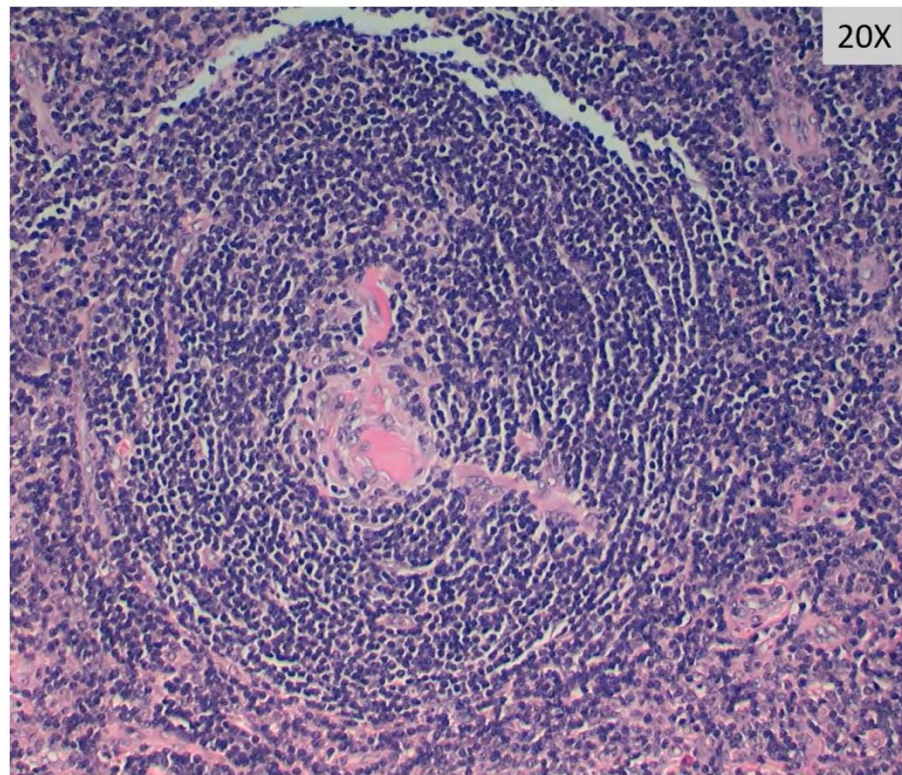
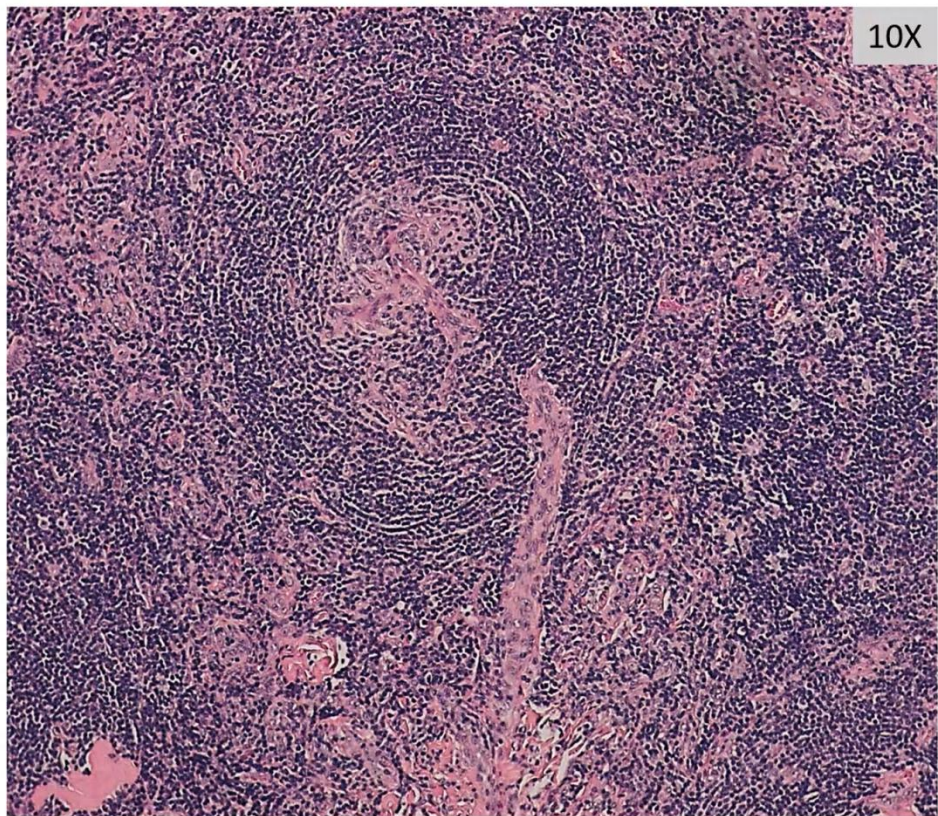


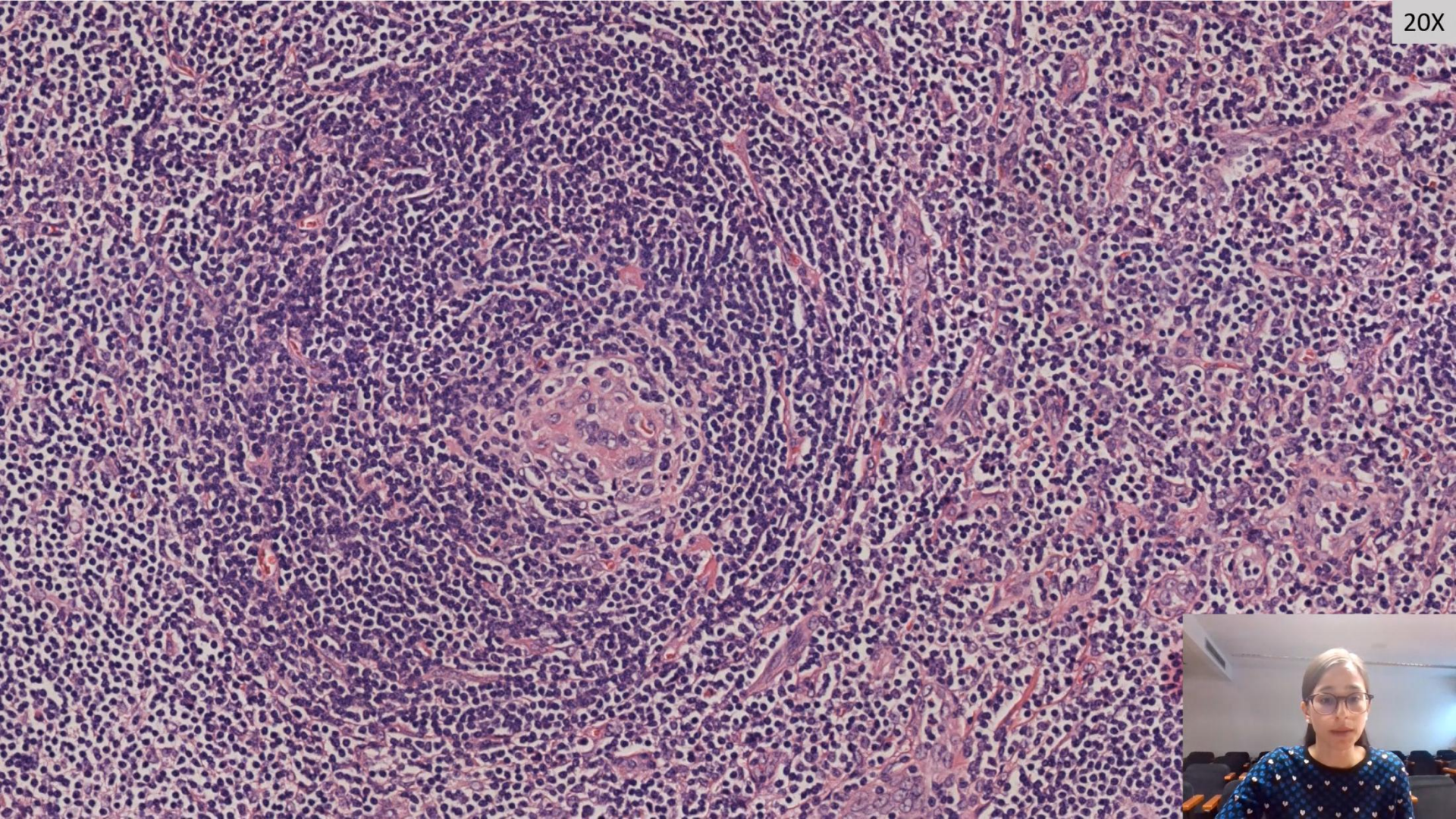












CD20

CD4

CD8



CD15

This immunohistochemistry slide shows a tissue section stained with hematoxylin and eosin (H&E). The tissue exhibits a dense cellular population with numerous small, dark-staining nuclei. There are several larger, pale-staining areas that appear to be glandular or cystic structures. The overall architecture suggests a complex tissue, possibly from a glandular organ. The CD15 marker is indicated in the top right corner.



CD30

This immunohistochemistry slide shows a tissue section stained with hematoxylin and eosin (H&E). The tissue exhibits a dense cellular population with numerous small, dark-staining nuclei. There are several larger, pale-staining areas that appear to be glandular or cystic structures. The overall architecture suggests a complex tissue, possibly from a glandular organ. The CD30 marker is indicated in the top right corner.

DIAGNÓSTICO ANATOMOPATOLÓGICO

ADENOPATÍA CON CAMBIOS CASTLEMAN-LIKE DE TIPO HIALINO-VASCULAR



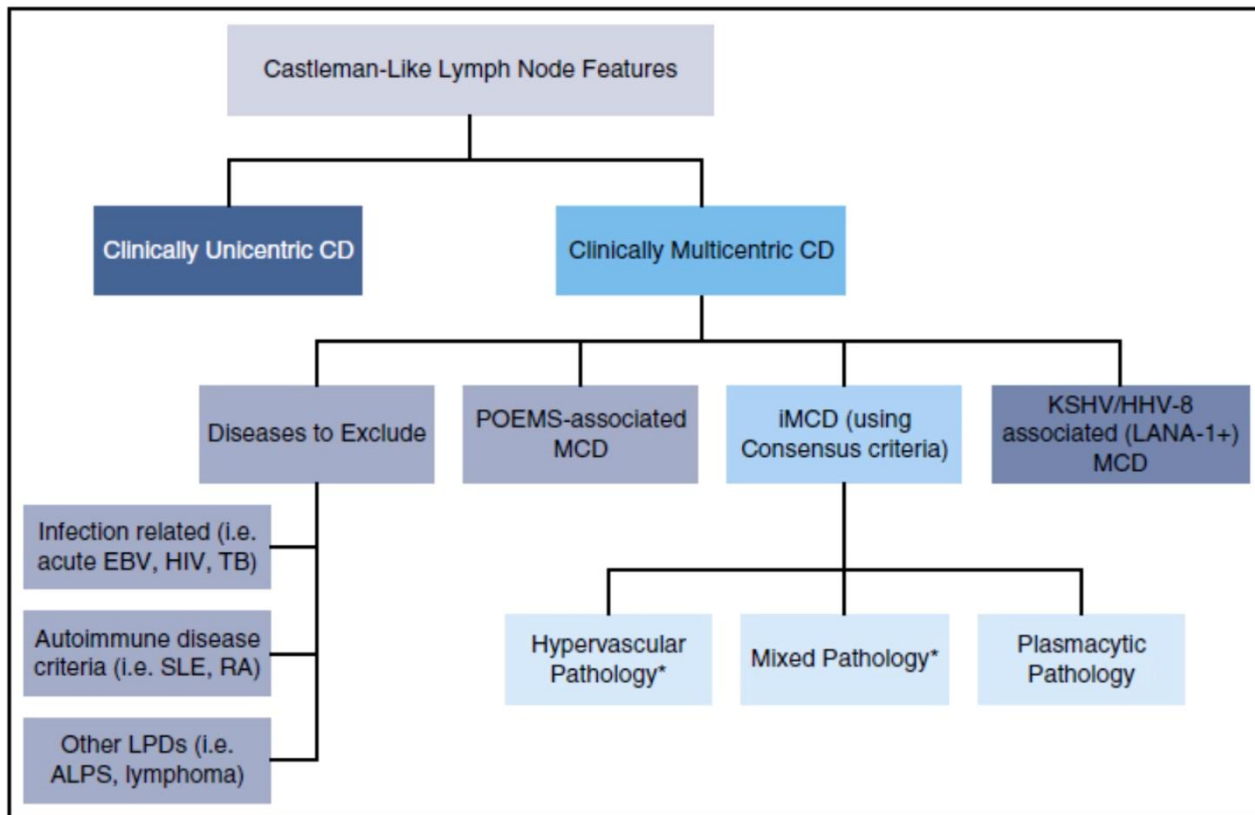


Figure 4. Algorithmic approach for assessment of lymph node with features of CD. Patients with lymph nodes with histologic features suggestive of CD should be evaluated for sites of involvement. If lymph node involvement is restricted to one site, the lesion most likely represents unicentric CD. If multiple sites are involved, patients should be evaluated for HHV-8, POEMS, and other infectious, malignant, and autoimmune disorders listed in Table 2 Exclusion Criteria. If these conditions are excluded, a diagnosis of iMCD should be considered. There are 3 major histopathologic subtypes of iMCD: hypervascular (formerly hyaline-vascular), mixed, and plasmacytic pathology. *iMCD patients with TAFRO syndrome frequently demonstrate hypervascular or mixed pathology.



CLINICAL TRIALS AND OBSERVATIONS

International, evidence-based consensus diagnostic criteria for HHV-8–negative/idiopathic multicentric Castleman disease

David C. Fajgenbaum,¹ Thomas S. Uldrick,² Adam Bagg,³ Dale Frank,³ David Wu,⁴ Gordan Srkalovic,⁵ David Simpson,⁶ Amy Y. Liu,¹ David Menke,⁷ Shanmuganathan Chandrakasan,⁸ Mary Jo Lechowicz,⁸ Raymond S. M. Wong,⁹ Sheila Pierson,¹ Michele Paessler,¹⁰ Jean-François Rossi,¹¹ Makoto Ide,¹² Jason Ruth,¹³ Michael Croglia,¹⁴ Alexander Suarez,¹ Vera Krymskaya,¹⁵ Amy Chadburn,¹⁶ Gisele Colleoni,¹⁷ Sunita Nasta,¹⁸ Raj Jayanthan,¹⁹ Christopher S. Nabel,²⁰ Corey Casper,²¹ Angela Dispenzieri,²² Alexander Fosså,²³ Dermot Kelleher,²⁴ Razelle Kurzrock,²⁵ Peter Voorhees,²⁶ Ahmet Dogan,²⁷ Kazuyuki Yoshizaki,²⁸ Frits van Rhee,²⁹ Eric Oksenhendler,³⁰ Elaine S. Jaffe,² Kojo S. J. Elenitoba-Johnson,³ and Megan S. Lim³

Table 2. Consensus diagnostic criteria for iMCD**I. Major Criteria (need both):**

1. Histopathologic lymph node features consistent with the iMCD spectrum (Figure 5). Features along the iMCD spectrum include (need grade 2-3 for either regressive GCs or plasmacytosis at minimum):

Regressed/atrophic/atretic germinal centers, often with expanded mantle zones composed of concentric rings of lymphocytes in an "onion skinning" appearance
FDC prominence

Vascularity, often with prominent endothelium in the interfollicular space and vessels penetrating into the GCs with a "lollipop" appearance

Sheetlike, polytypic plasmacytosis in the interfollicular space

Hyperplastic GCs

2. Enlarged lymph nodes (≥ 1 cm in short-axis diameter) in ≥ 2 lymph node stations

II. Minor Criteria (need at least 2 of 11 criteria with at least 1 laboratory criterion)**Laboratory***

1. Elevated CRP (>10 mg/L) or ESR (>15 mm/h)†

2. Anemia (hemoglobin <12.5 g/dL for males, hemoglobin <11.5 g/dL for females)

3. Thrombocytopenia (platelet count <150 k/ μ L) or thrombocytosis (platelet count >400 k/ μ L)

4. Hypoalbuminemia (albumin <3.5 g/dL)

5. Renal dysfunction (eGFR <60 mL/min/1.73m²) or proteinuria (total protein 150 mg/24 h or 10 mg/100 ml)

6. Polyclonal hypergammaglobulinemia (total γ globulin or immunoglobulin G >1700 mg/dL)

Clinical

1. Constitutional symptoms: night sweats, fever ($>38^{\circ}\text{C}$), weight loss, or fatigue (≥ 2 CTCAE lymphoma score for B-symptoms)

2. Large spleen and/or liver

3. Fluid accumulation: edema, anasarca, ascites, or pleural effusion

4. Eruptive cherry hemangiomatosis or violaceous papules

5. Lymphocytic interstitial pneumonitis

III. Exclusion Criteria (must rule out each of these diseases that can mimic iMCD)**Infection-related disorders**

1. HHV-8 (infection can be documented by blood PCR, diagnosis of HHV-8–associated MCD requires positive LANA-1 staining by IHC, which excludes iMCD)

2. Clinical EBV-lymphoproliferative disorders such as infectious mononucleosis or chronic active EBV (detectable EBV viral load not necessarily exclusionary)

3. Inflammation and adenopathy caused by other uncontrolled infections (eg, acute or uncontrolled CMV, toxoplasmosis, HIV, active tuberculosis)

Autoimmune/autoinflammatory diseases (requires full clinical criteria, detection of autoimmune antibodies alone is not exclusionary)

1. Systemic lupus erythematosus

2. Rheumatoid arthritis

3. Adult-onset Still disease

4. Juvenile idiopathic arthritis

5. Autoimmune lymphoproliferative syndrome

Malignant/lymphoproliferative disorders (these disorders must be diagnosed before or at the same time as iMCD to be exclusionary):

1. Lymphoma (Hodgkin and non-Hodgkin)

2. Multiple myeloma

3. Primary lymph node plasmacytoma

4. FDC sarcoma

5. POEMS syndrome‡

Select additional features supportive of, but not required for diagnosis

Elevated IL-6, sIL-2R, VEGF, IgA, IgE, LDH, and/or B2M

Reticulin fibrosis of bone marrow (particularly in patients with TAFRO syndrome)

Diagnosis of disorders that have been associated with iMCD: paraneoplastic pemphigus, bronchiolitis obliterans organizing pneumonia, autoimmune cytopenias, polyneuropathy (without diagnosing POEMS‡), glomerular nephropathy, inflammatory myofibroblastic tumor

I. Major Criteria (need both):

1. Histopathologic lymph node features consistent with the iMCD spectrum (Figure 5). Features along the iMCD spectrum include (need grade 2-3 for either regressive GCs or plasmacytosis at minimum):

Regressed/atrophic/atretic germinal centers, often with expanded mantle zones composed of concentric rings of lymphocytes in an "onion skinning" appearance
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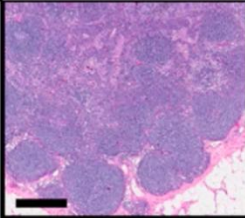
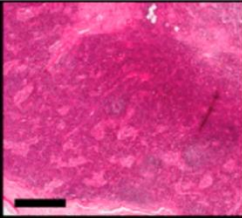
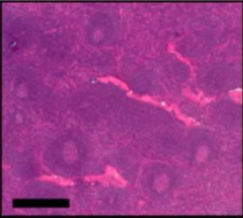
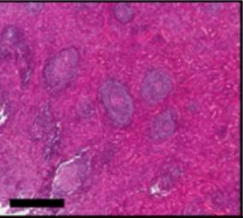
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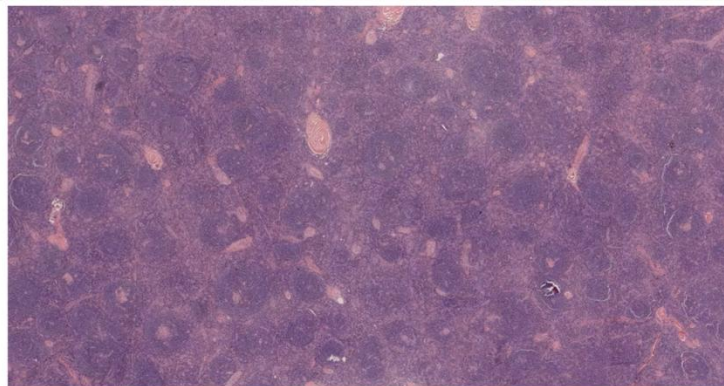
Sheetlike, polytypic plasmacytosis in the interfollicular space

Hyperplastic GCs

2. Enlarged lymph nodes (≥ 1 cm in short-axis diameter) in ≥ 2 lymph node stations

Grade	0	1	2	3
A Regressed Germinal Centers (GCs)				
	No Regressed GCs	Few Regressed GCs	Many Regressed GCs	Most GCs Regressed

GRADO 3



I. Major Criteria (need both):

1. Histopathologic lymph node features consistent with the iMCD spectrum (Figure 5). Features along the iMCD spectrum include (need grade 2-3 for either regressive GCs or plasmacytosis at minimum):

Regressed/atrophic/atretic germinal centers, often with expanded mantle zones composed of concentric rings of lymphocytes in an "onion skinning" appearance

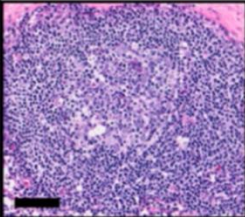
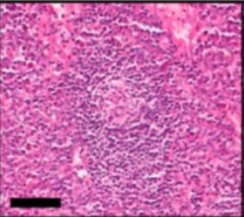
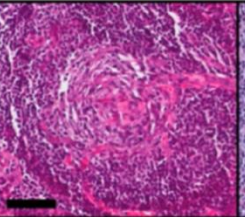
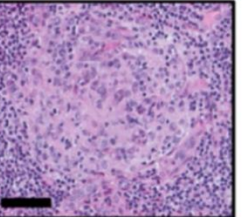
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Vascularity, often with prominent endothelium in the interfollicular space and vessels penetrating into the GCs with a "lollipop" appearance

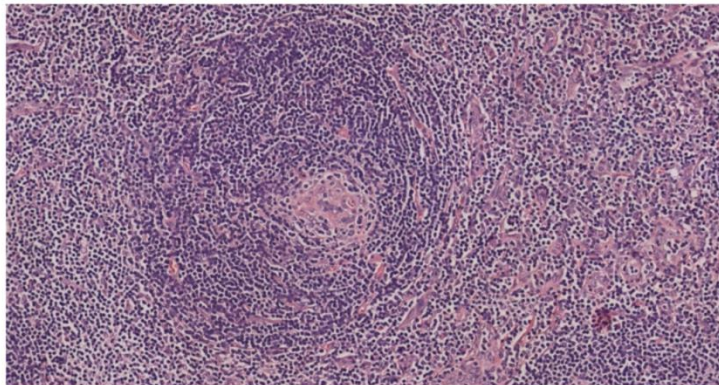
Sheetlike, polytypic plasmacytosis in the interfollicular space

Hyperplastic GCs

2. Enlarged lymph nodes (≥ 1 cm in short-axis diameter) in ≥ 2 lymph node stations

Grade	0	1	2	3
B Follicular Dendritic Cell (FDC) Prominence				
	No FDC Prominence	Mild FDC Prominence	Moderate FDC Prominence	Very Prominent FDCs

GRADO 1



I. Major Criteria (need both):

1. Histopathologic lymph node features consistent with the iMCD spectrum (Figure 5). Features along the iMCD spectrum include (need grade 2-3 for either regressive GCs or plasmacytosis at minimum):

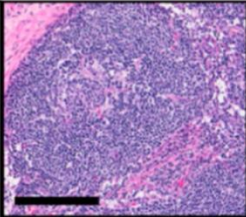
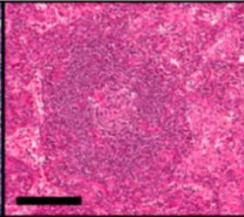
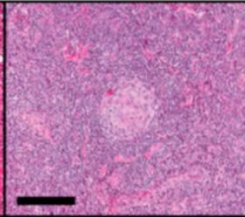
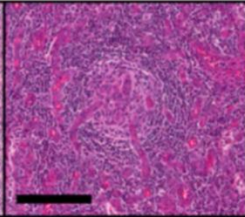
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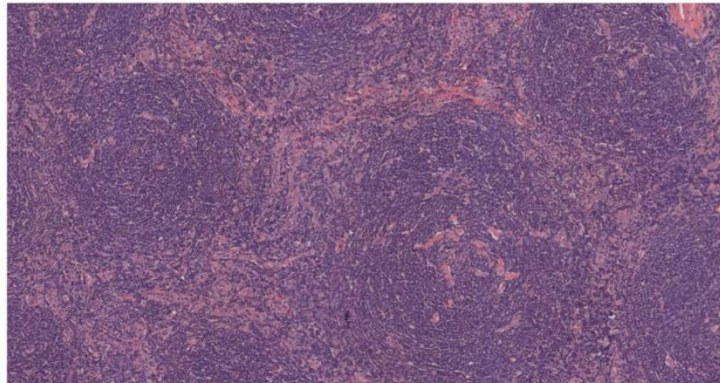
Sheetlike, polytypic plasmacytosis in the interfollicular space

Hyperplastic GCs

2. Enlarged lymph nodes (≥ 1 cm in short-axis diameter) in ≥ 2 lymph node stations

Grade	0	1	2	3
C Vascularity				
	Normal	Mildly Increased	Moderately Increased	Very Prominent

GRADO 3



I. Major Criteria (need both):

1. Histopathologic lymph node features consistent with the iMCD spectrum (Figure 5). Features along the iMCD spectrum include (need grade 2-3 for either regressive GCs or plasmacytosis at minimum):

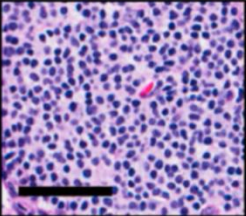
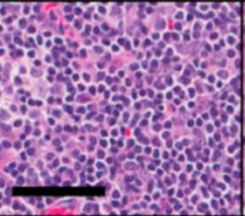
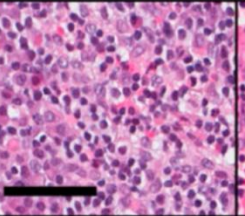
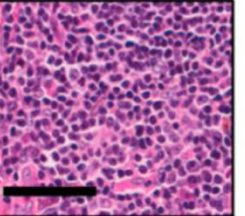
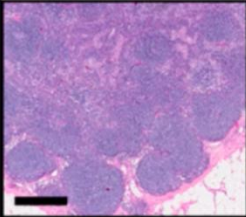
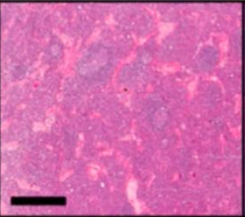
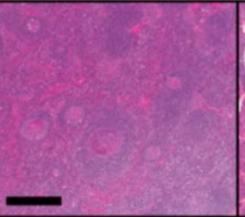
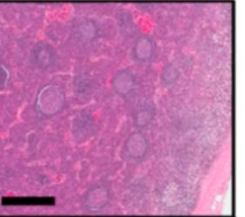
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Hyperplastic GCs

2. Enlarged lymph nodes (≥ 1 cm in short-axis diameter) in ≥ 2 lymph node stations

Grade	0	1	2	3
E Plasmacytosis				
	Normal	Mildly Increased	Moderately Increased	Very Increased ("Sheet-like")
D Hyperplastic Germinal Centers				
	No Hyperplastic GCs	Few Hyperplastic GCs	Many Hyperplastic GCs	Most GCs Hyperplastic

GRADO 0

GRADO 0

I. Major Criteria (need both):

1. Histopathologic lymph node features consistent with the iMCD spectrum (Figure 5). Features along the iMCD spectrum include (need grade 2-3 for either regressive GCs or plasmacytosis at minimum):

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TC PEDIÁTRICO TÓRAX, CON CONTRASTE

Cuerpo 5.0 CE

Se: 2

Im: 10/85

Primario

H. CLINICO DE VALENCIA

Study Date: 29-Sep-2017

Study Time: 10:38:58



TAC CÉRVICO-TÓRACO-ABDOMINAL

Adenopatía espinal accesoria izquierda de **31 x 21 mm** y una longitud craneocaudal de **45 mm**. Hipertrofia adenoidea y amigdalinas. No se observa otras adenopatías. Resto normal.

II. Minor Criteria (need at least 2 of 11 criteria with at least 1 laboratory criterion)

Laboratory*

1. Elevated CRP (>10 mg/L) or ESR (>15 mm/h)†
2. Anemia (hemoglobin <12.5 g/dL for males, hemoglobin <11.5 g/dL for females)
3. Thrombocytopenia (platelet count <150 k/ μ L) or thrombocytosis (platelet count >400 k/ μ L)
4. Hypoalbuminemia (albumin <3.5 g/dL)
5. Renal dysfunction (eGFR <60 mL/min/ 1.73m^2) or proteinuria (total protein 150 mg/24 h or 10 mg/100 ml)
6. Polyclonal hypergammaglobulinemia (total γ globulin or immunoglobulin G >1700 mg/dL)

Clinical

1. Constitutional symptoms: night sweats, fever ($>38^\circ\text{C}$), weight loss, or fatigue (≥ 2 CTCAE lymphoma score for B-symptoms)
2. Large spleen and/or liver
3. Fluid accumulation: edema, anasarca, ascites, or pleural effusion
4. Eruptive cherry hemangiomas or violaceous papules
5. Lymphocytic interstitial pneumonitis

III. Exclusion Criteria (must rule out each of these diseases that can mimic iMCD)

Infection-related disorders

1. HHV-8 (infection can be documented by blood PCR, diagnosis of HHV-8–associated MCD requires positive LANA-1 staining by IHC, which excludes iMCD)
2. Clinical EBV-lymphoproliferative disorders such as infectious mononucleosis or chronic active EBV (detectable EBV viral load not necessarily exclusionary)
3. Inflammation and adenopathy caused by other uncontrolled infections (eg, acute or uncontrolled CMV, toxoplasmosis, HIV, active tuberculosis)

Autoimmune/autoinflammatory diseases (requires full clinical criteria, detection of autoimmune antibodies alone is not exclusionary)

1. Systemic lupus erythematosus
2. Rheumatoid arthritis
3. Adult-onset Still disease
4. Juvenile idiopathic arthritis
5. Autoimmune lymphoproliferative syndrome

Malignant/lymphoproliferative disorders (these disorders must be diagnosed before or at the same time as iMCD to be exclusionary):

1. Lymphoma (Hodgkin and non-Hodgkin)
2. Multiple myeloma
3. Primary lymph node plasmacytoma
4. FDC sarcoma
5. POEMS syndrome‡



II. Minor Criteria (need at least 2 of 11 criteria with at least 1 laboratory criterion)

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DIAGNÓSTICO FINAL

ENFERMEDAD DE CASTLEMAN UNICÉNTRICA DE TIPO HIALINO-VASCULAR



CONCLUSIONES

- ✓ La enfermedad de Castleman puede ser unicéntrica o multicéntrica
- ✓ Existen múltiples patologías que pueden simular la enfermedad de Castleman; son un criterio de exclusión
- ✓ Se han establecido unos criterios diagnósticos para la enfermedad de Castleman multicéntrica idiopática.
- ✓ A nivel anatomopatológico solo podemos hablar de cambios Castleman-like



MUCHAS GRACIAS POR LA ATENCIÓN

