

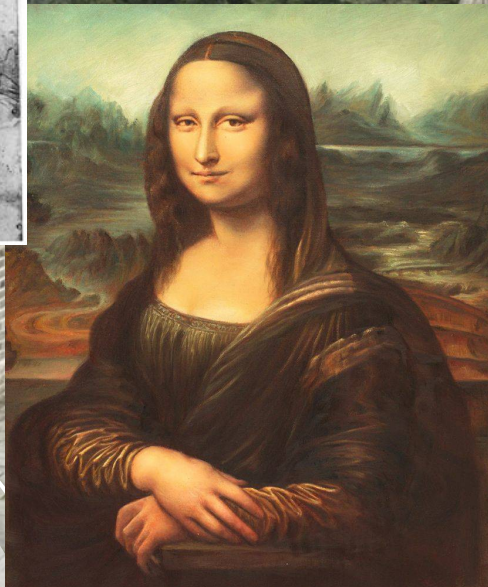
CITOLOGIA LIQUIDA TIROIDES



Dra Sonsoles Aso

@MansoAso

NO CONFLICTOS DE INTERES



**A LO LARGO DE
LA HISTORIA**

Equipo multidisciplinar

Funciones específicas y responsabilidades



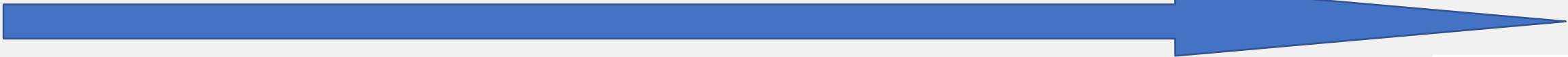
Endocrino
Patologo
Biologo
Med Nuclear
Rayos

Cirugía
Endocrino

Endocrino
Medicina nuclear
Oncología/RDT
Cirugía
Otras

Endocrino
Medicina nuclear
Oncología/RDT
Cirugía
Radiodiagnostico
Laboratorio
Biólogo
Patologo

Endocrino
Medicina nuclear
Oncología
Otras



“Varios, ven y piensan, más y mejor”

HISTORIA PAAF TIROIDES

-Albucasis, siglo XI.

-1927: Dudgeon y Patrick

. 1950-1960: Soderström y Zajicek
(Karoliska) y Franzen y Cardoso
(Holanda)

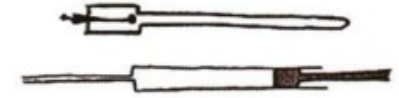


Figura 2.1. Esquema del instrumental utilizado por Albucasis en el siglo XI para las punciones de tiroides

Thyroid nodule management remains an art as well as science

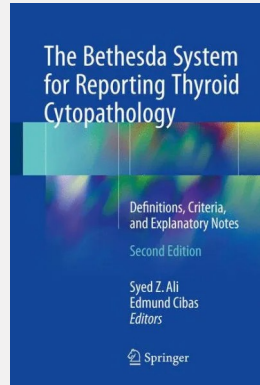
ERA PRE-BETHESDA



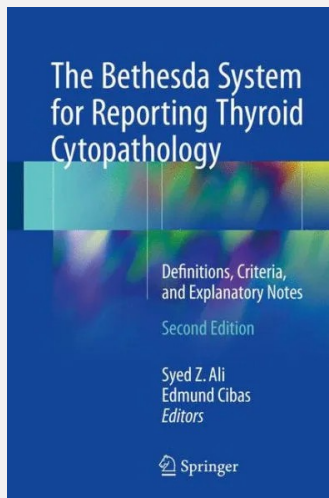
Punción Aspiración Aguja Fina

BETHESDA

Diagnostic category	Risk of Malignancy if NIFTP ≠ CA (%)	Risk of Malignancy if NIFTP = CA (%)	Usual management
Non diagnostic or unsatisfactory	5-10	5-10	Repeat FNA with ultrasound guidance
Benign	0-3	0-3	Clinical and sonographic follow-up
Atypia of undetermined significance (AUS) or follicular lesion of undetermined significance (FLUS)	6-18	10-30	Repeat FNA, molecular testing, or lobectomy
Follicular neoplasm or suspicious for a follicular neoplasm	10-40	25-40	Molecular testing, lobectomy
Suspicious for malignancy	45-60	50-75	Near-total thyroidectomy or lobectomy
Malignant	94-96	97-99	Near-total thyroidectomy or lobectomy



2017



2023

- Non diagnostic
- Benign
- AUS : repetición, molecular, lobectomía
- Follicular neoplasm: molecular, lobectomía
- Suspicious for malignancy: tiroidectomía, molecular
- Malignant: Tiroidectomía, molecular

Manejo distinto en niños





2022 WHO Classification of Thyroid Neoplasms

Follicular cell-derived neoplasms

Benign tumours

- Thyroid follicular nodular disease
- Follicular thyroid adenoma
- Follicular thyroid adenoma with papillary architecture
- Oncocytic adenoma of the thyroid

Low risk neoplasms

- Non-invasive follicular thyroid neoplasm with papillary-like nuclear features (NIFTP)
- Thyroid tumours of uncertain malignant potential
- Hyalinizing trabecular tumour of thyroid

Malignant neoplasms

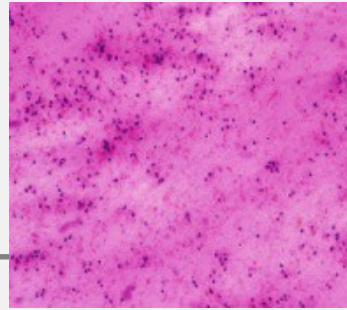
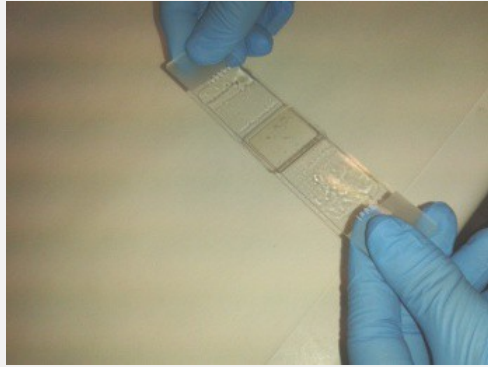
- Follicular thyroid carcinoma
- Invasive encapsulated follicular variant papillary carcinoma
- Papillary thyroid carcinoma
- Oncocytic carcinoma of the thyroid
- Follicular-derived carcinomas, high-grade
- Anaplastic follicular cell derived thyroid carcinoma

TÉCNICA: METODOLOGÍA PAAF

- Localización del nódulo (palpación / eco)
- No necesaria la anestesia local
- Paciente con cuello extendido
- Pistola / jeringa o aguja sola (CAMECO)
- Aguja fina de 23 o 25
- Dos - tres pases

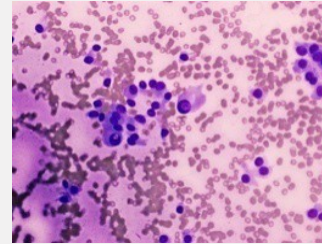


FASE PREANALITICA:TINCIÓN



• Papanicolau,hematoxilina eosina

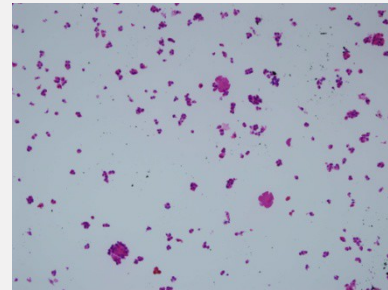
- 1. EXTENSIONES
- 2. METODO DOBLE O SPLIT (ROSE)
- 3. DIRECTO AL VIAL (CYTOLYT)



Diff-Quick, May Grunwald

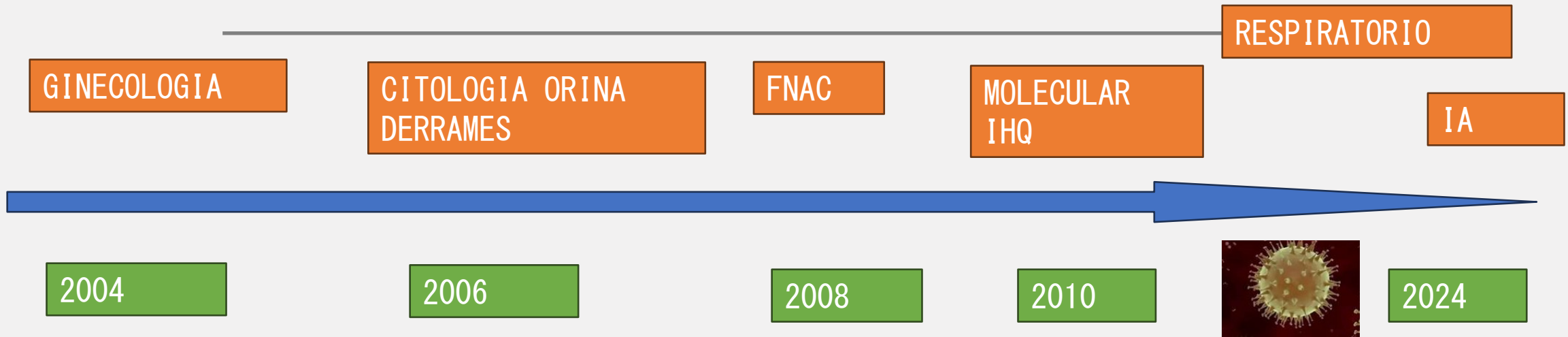


Cytol it, preservecyt



Citología líquida (Papanicolau, HE)

CRONOLOGIA CITOLOGIA LIQUIDA



Advances in diagnostic liquid-based cytology

Hideyuki Abe¹ | Akihiko Kawahara¹  | Jun Akiba¹ | Rin Yamaguchi²

Cytopathology. 2024;35:682–694.

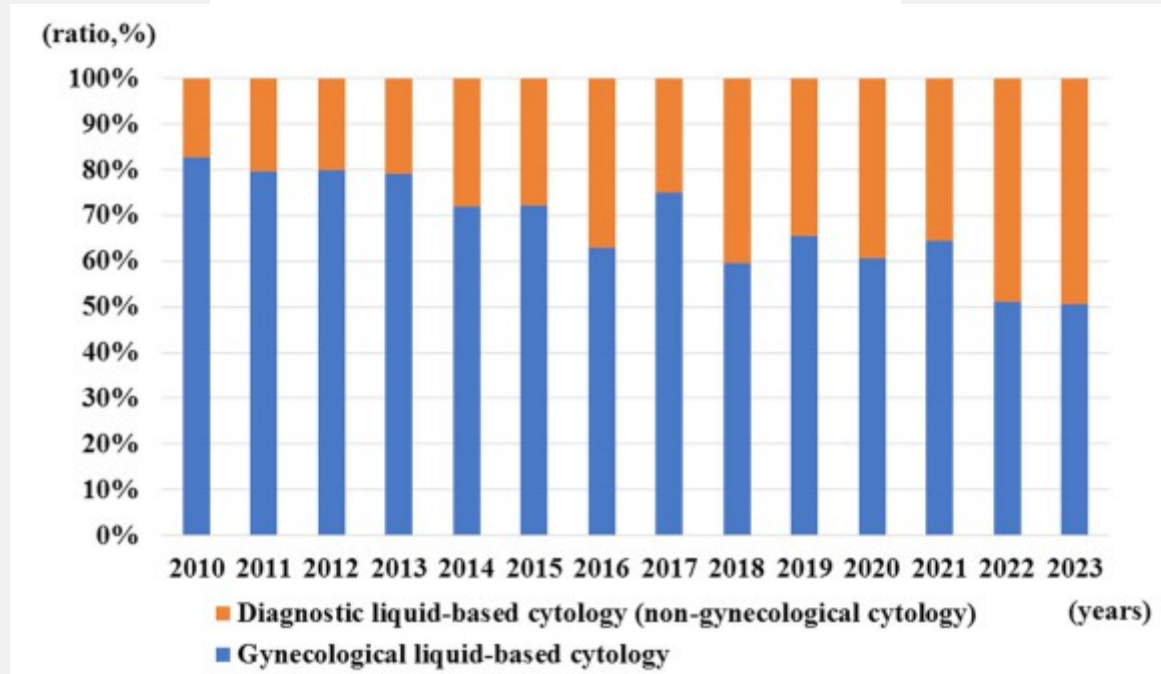
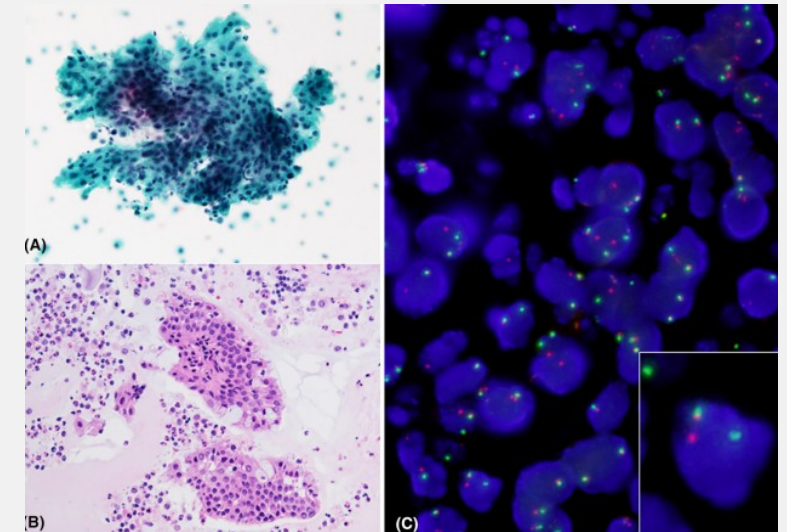
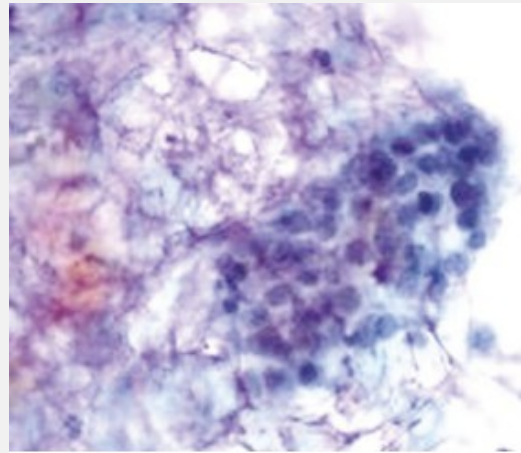
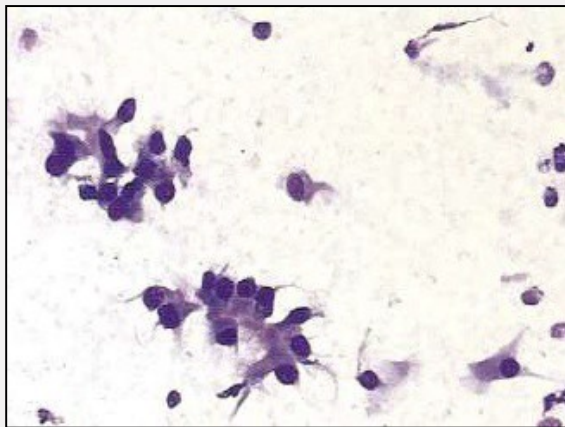
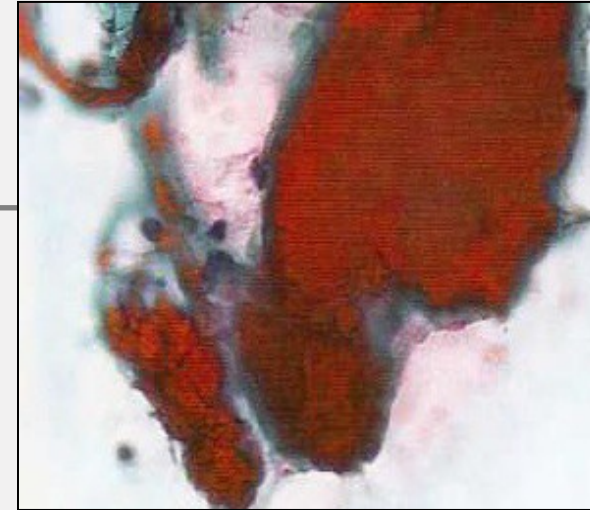
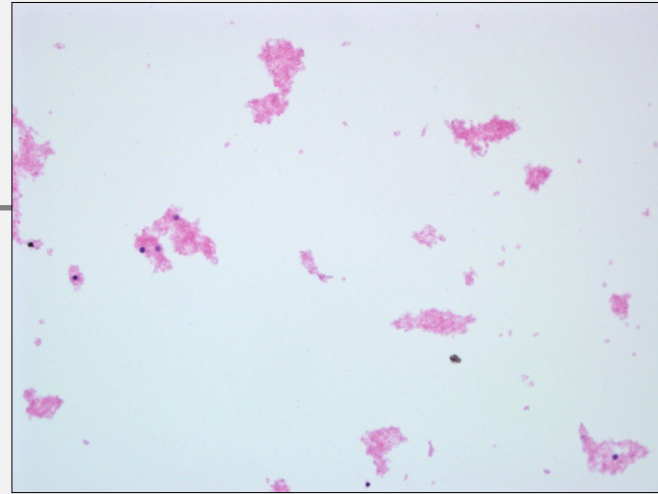
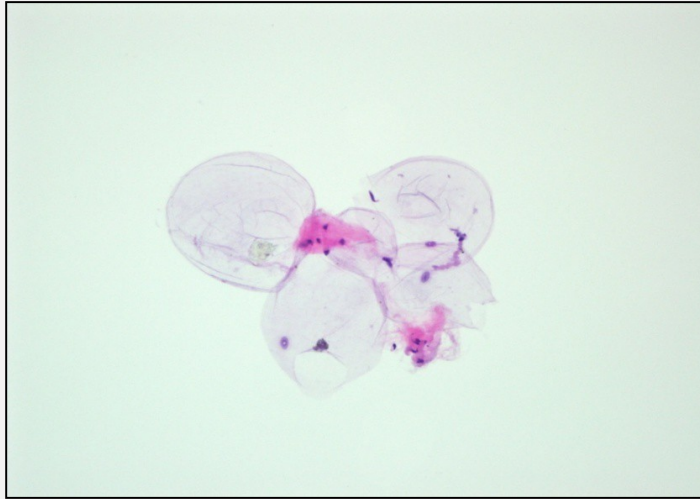


FIGURE 3 Trends in study reports using diagnostic liquid-based cytology (LBC). Study reports on diagnostic LBC are gradually increasing.



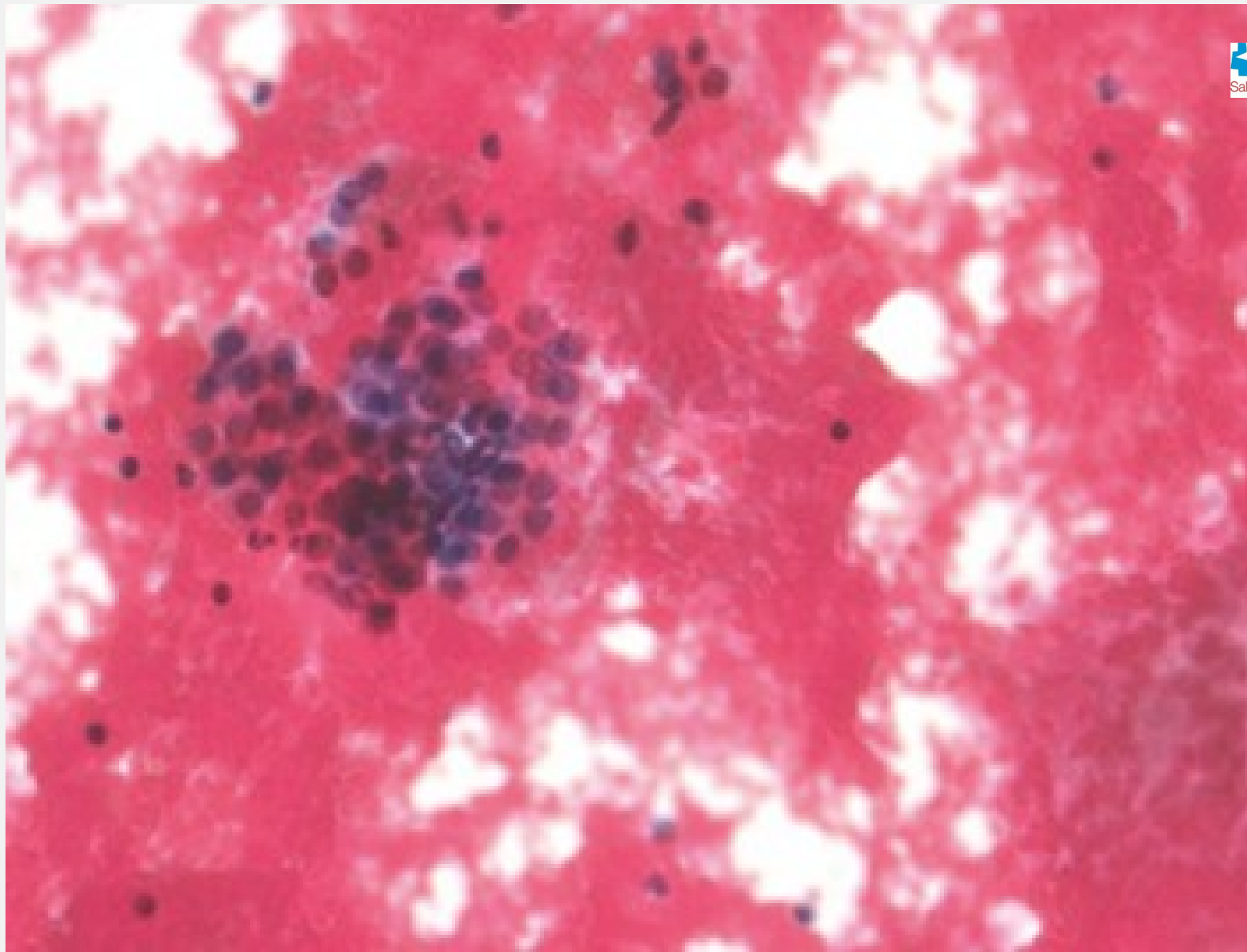
REPRESENTATIVIDAD DE LA MUESTRA



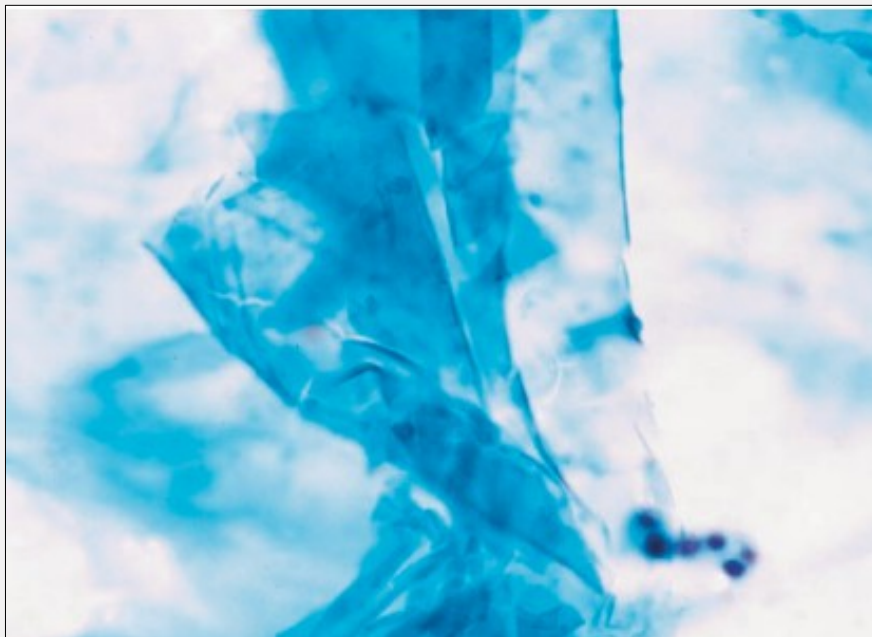
CATEGORIA 1

10 grupos de células foliculares con al menos 6 células cada grupo

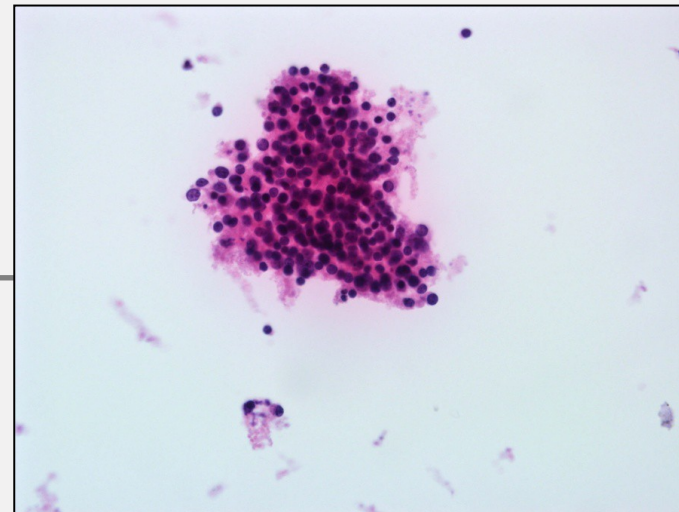
RM: 5-10%



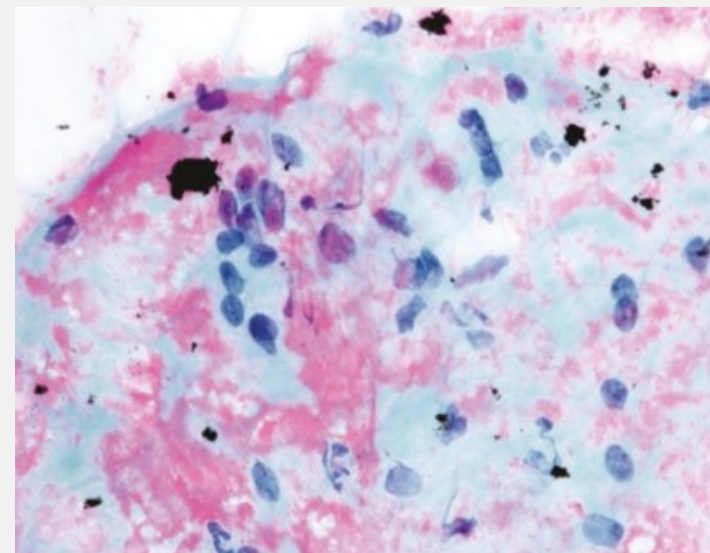
EXCEPCIONES CATEGORIA I



COLOIDE SIN CELULAS





TIROIDITIS

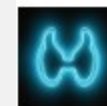
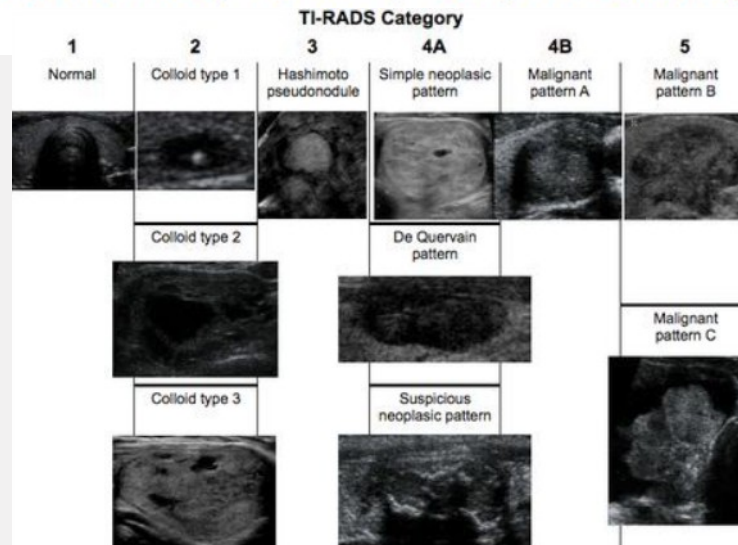


ATIPIA

ORIGINAL ARTICLE

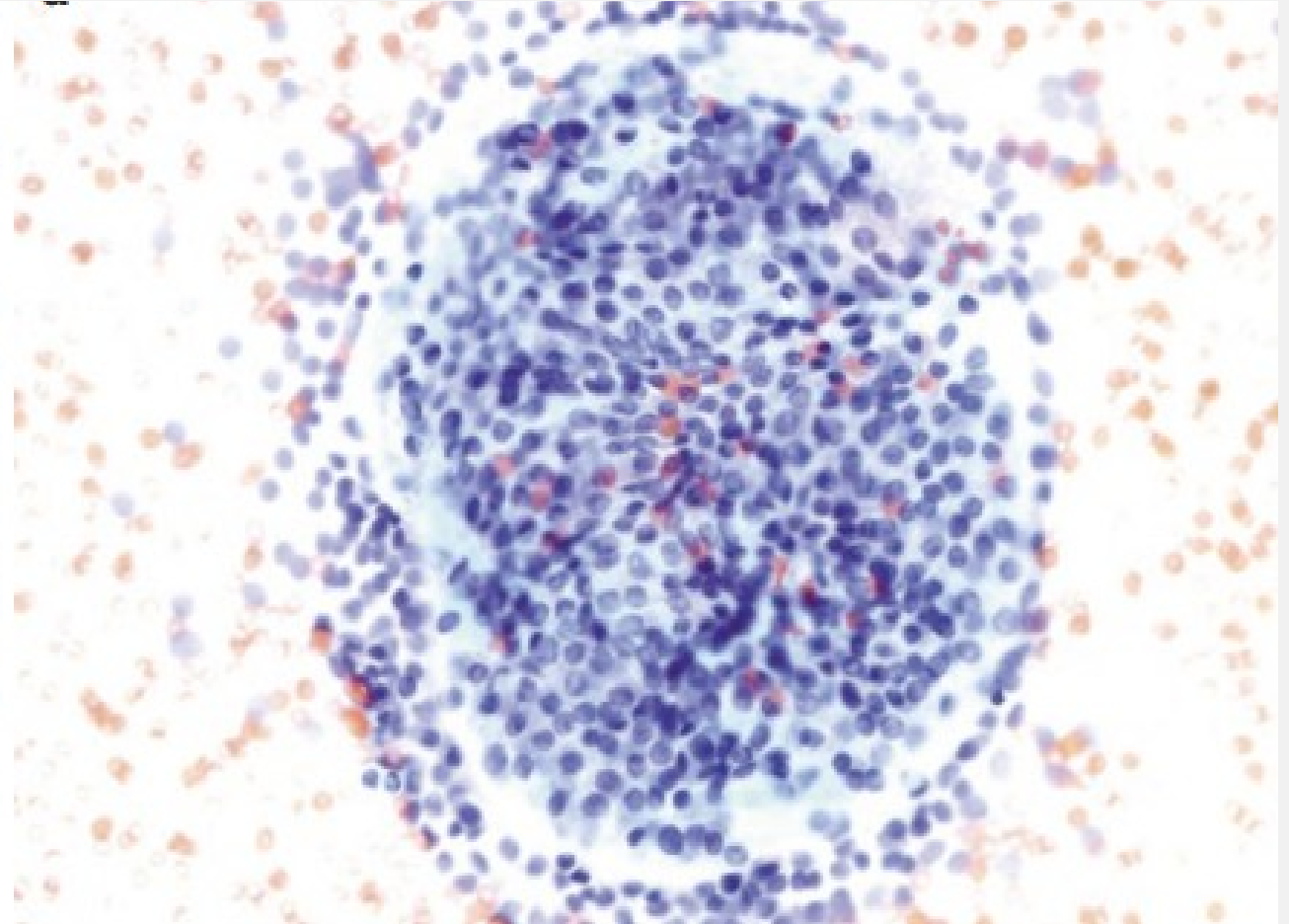
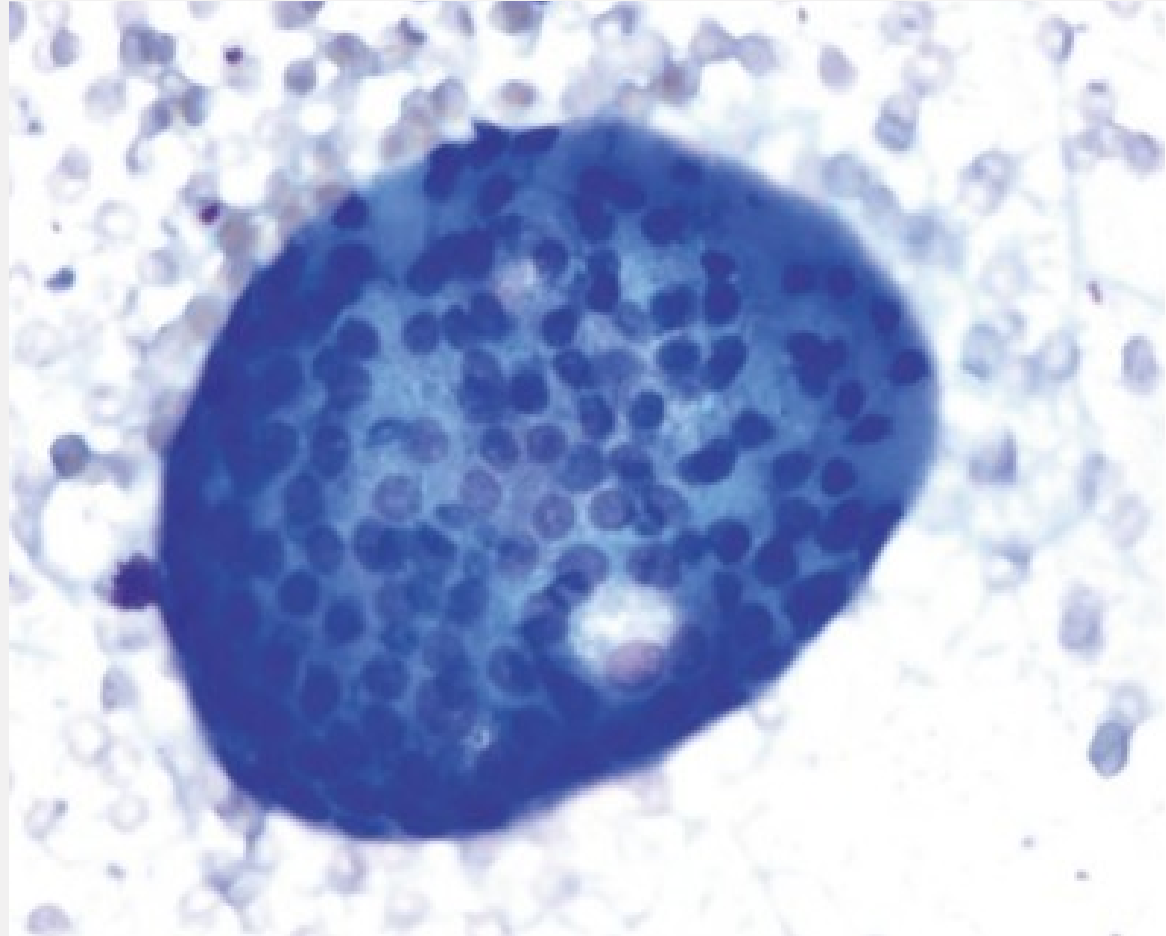
Utility of ACR TI-RADS to determine need for repeat FNA in thyroid nodules with nondiagnostic cytology

Lauren Waters DO¹ | Tiffany M. Cullen DO¹ | Michael B. Goldstein MD¹ |
Sheila Sheth MD² | Chrystia Slywotzky MD² | Shahidul Islam DrPH³ |
Tamar C. Brandler MD, MS⁴  | Gary D. Rothberger MD¹ 

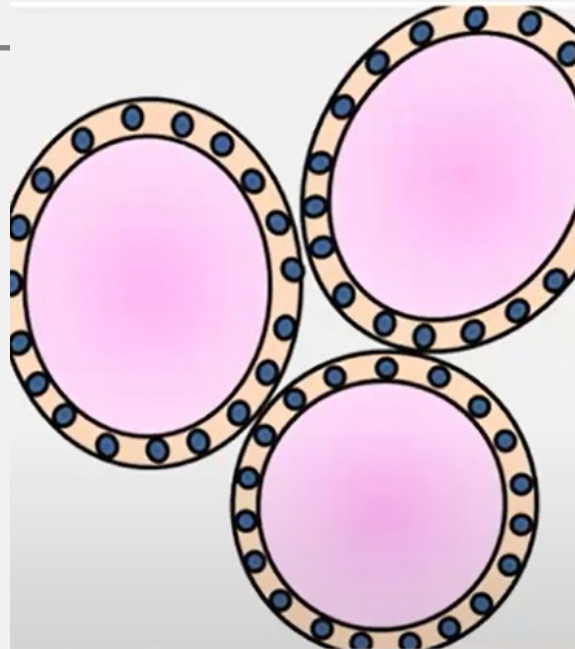


TIRADS Calculator

ACR Thyroid Imaging Reporting and Data System



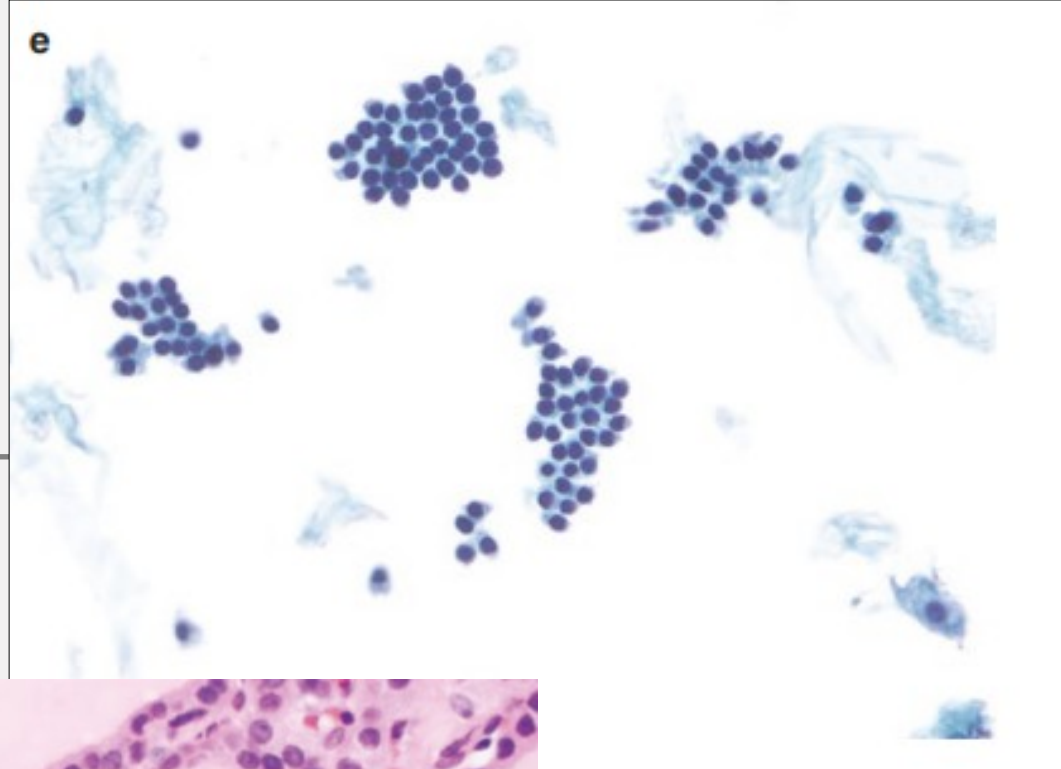
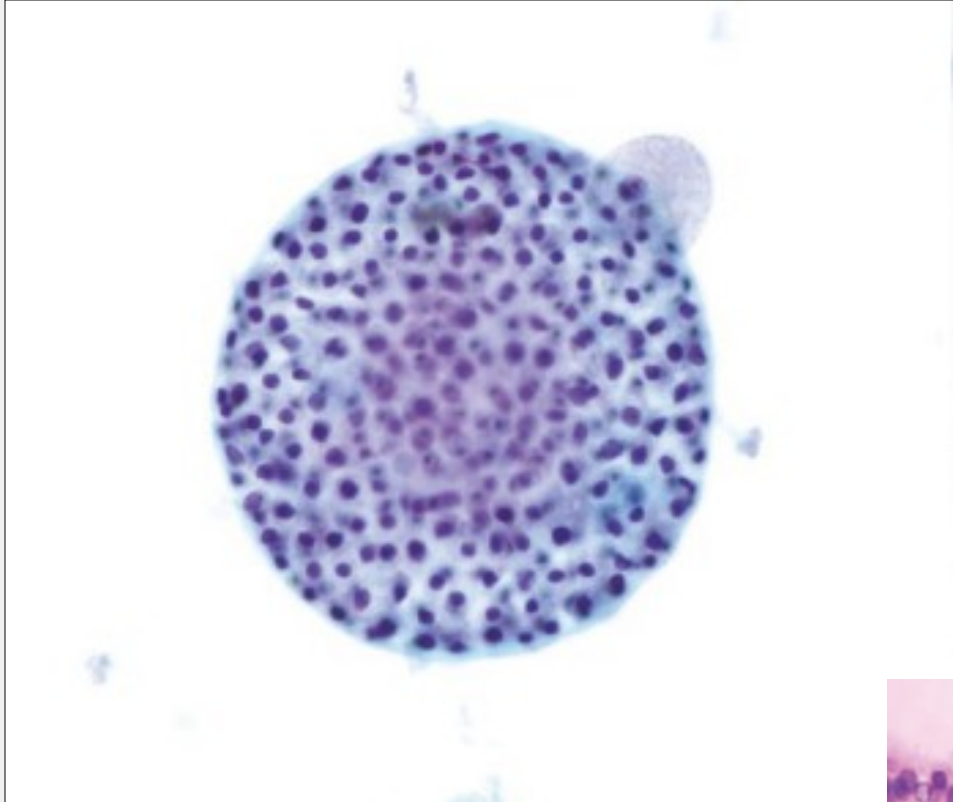
MACROFOLICULOS



REALIDAD

Cortes de Hematosilina
eosina

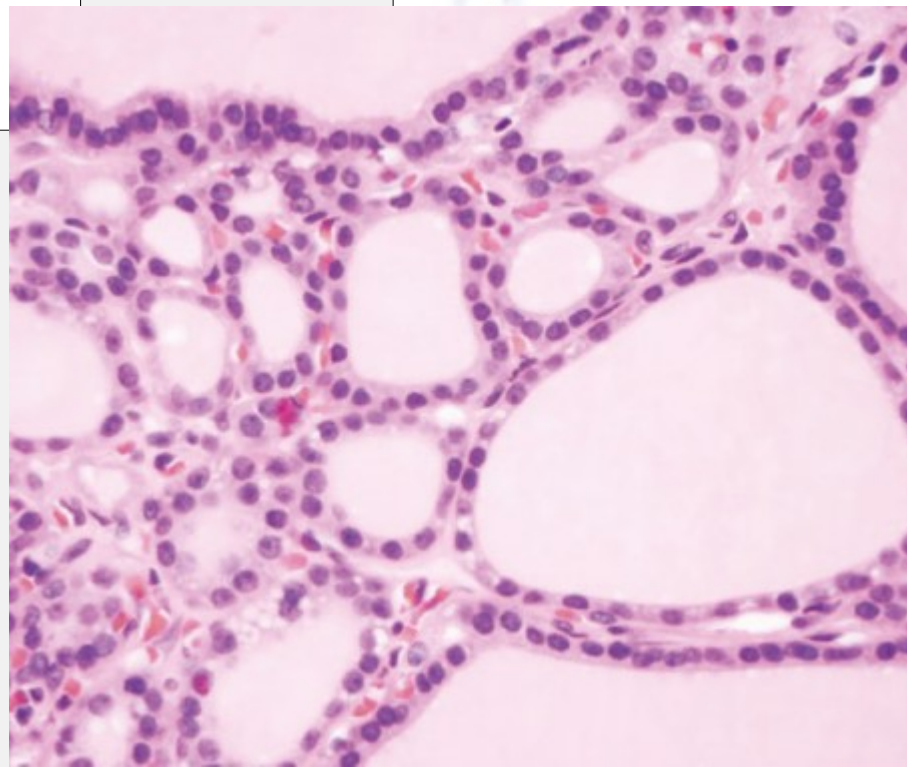
FNAC

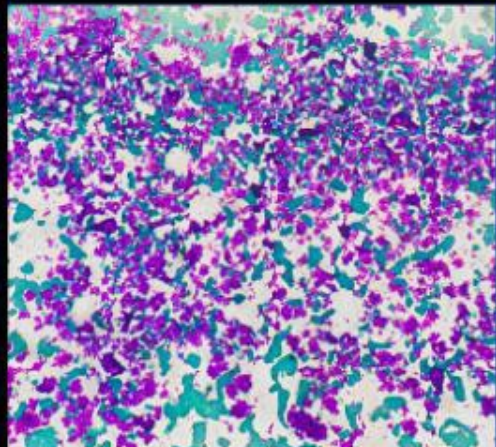
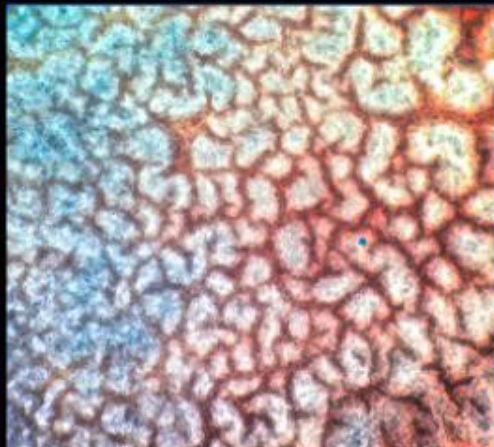
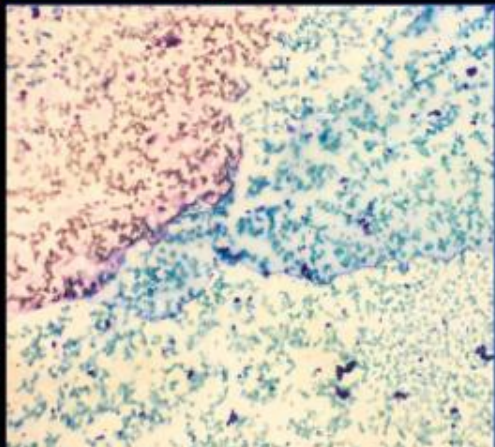
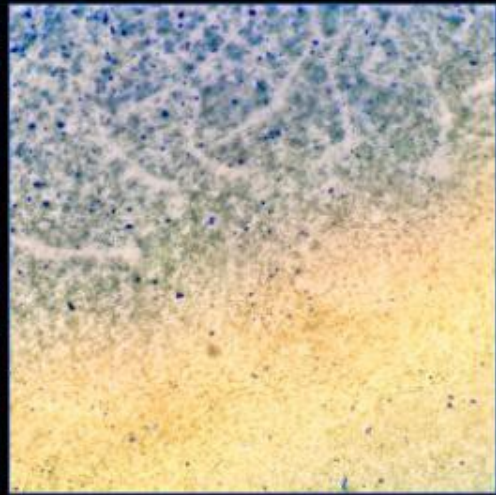
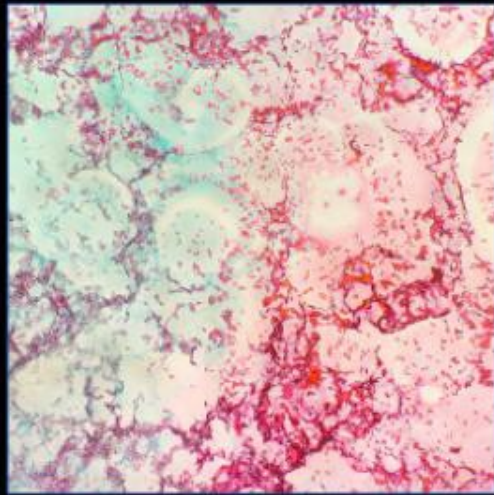
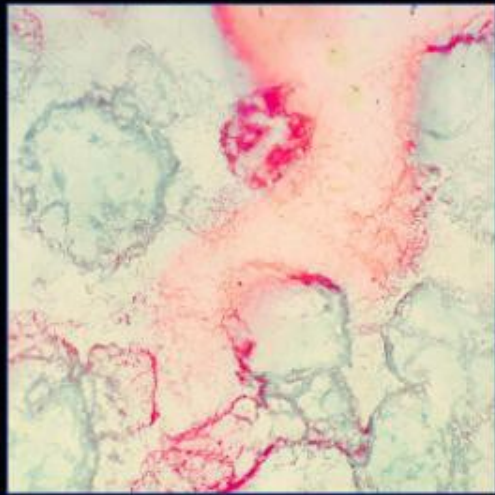
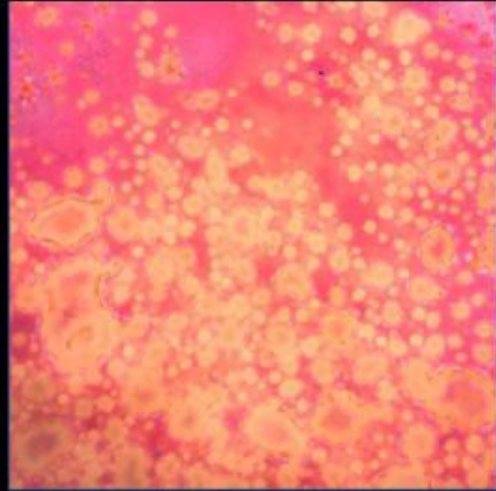
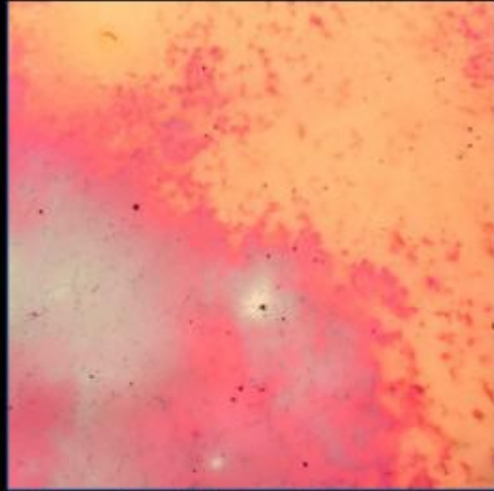
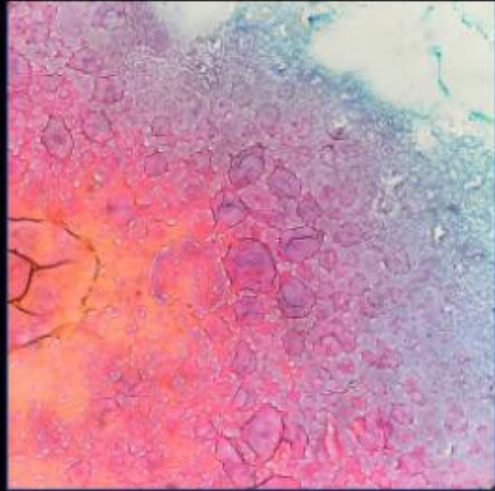
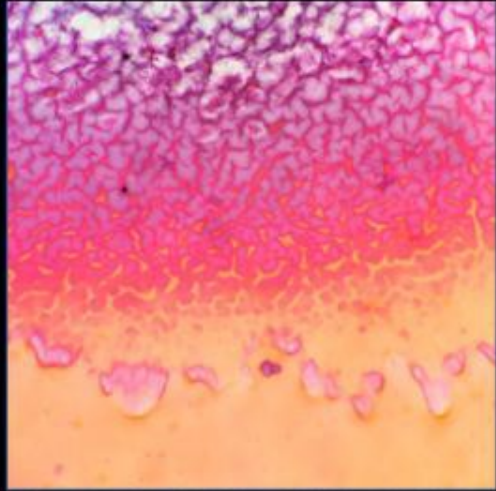


6 grupos/10 células

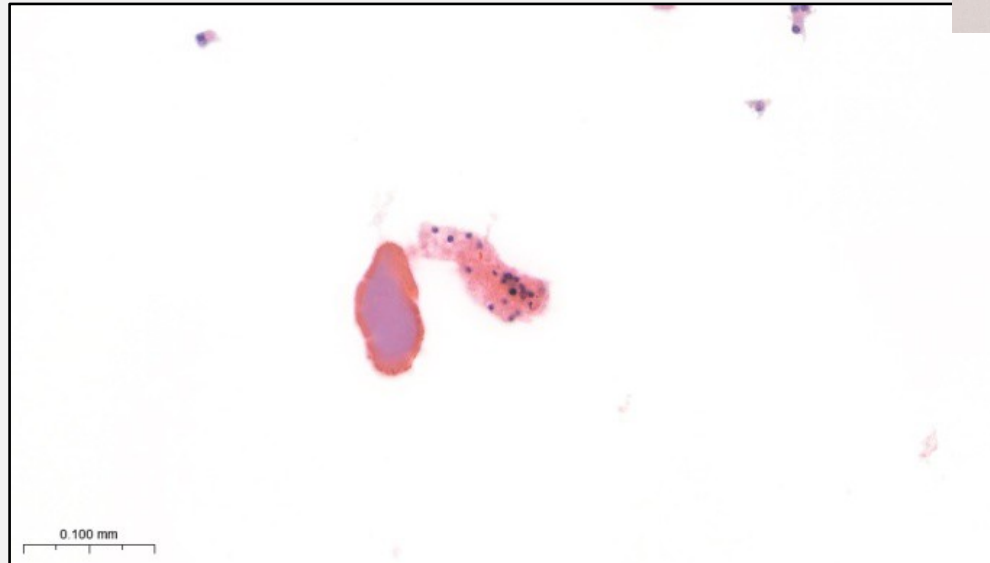
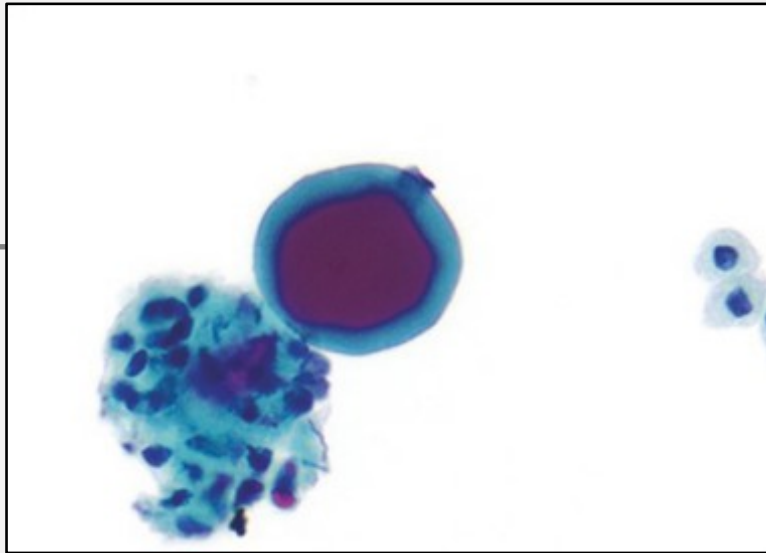
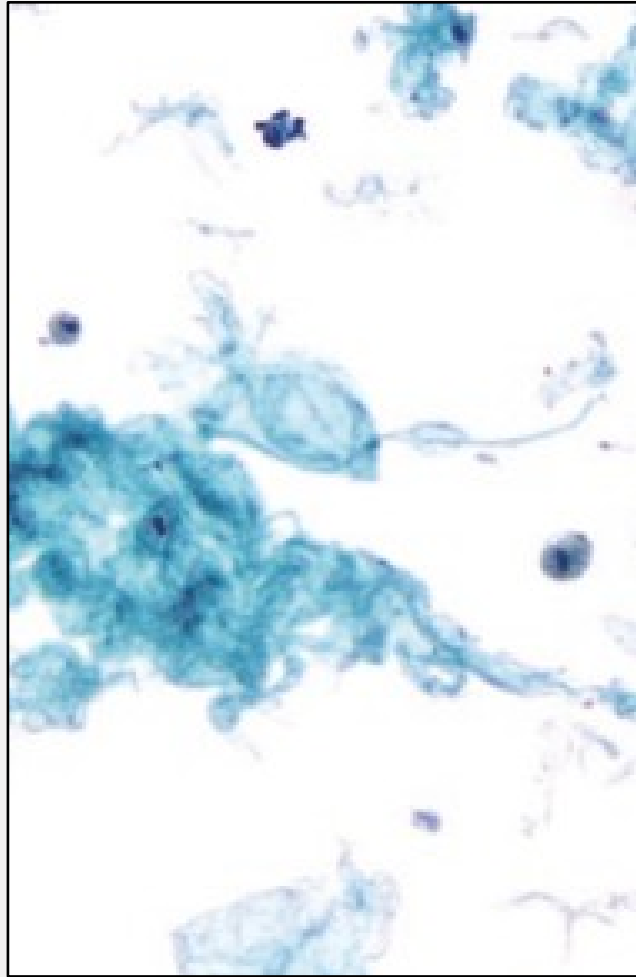
ó

60 células



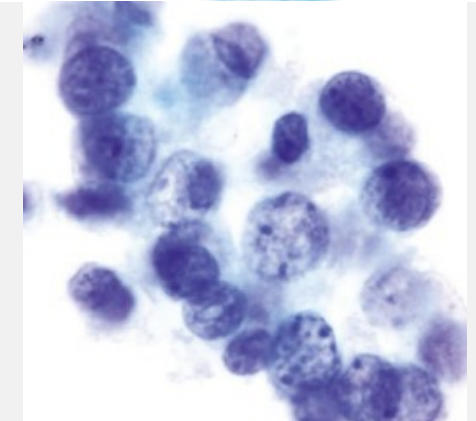
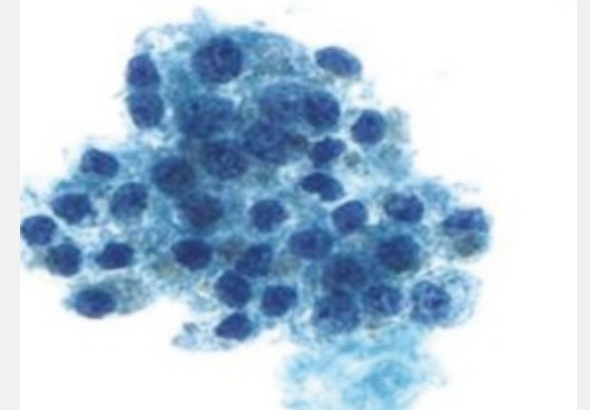
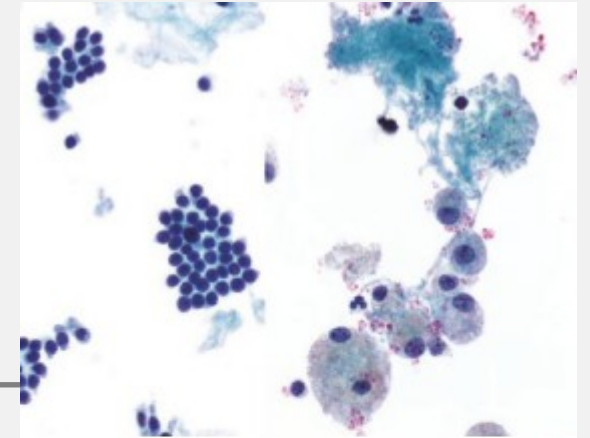


COLOIDE EN CITOLOGIA LIQUIDA



CARACTERISTICAS MORFOLOGICAS CITOLOGIA LIQUIDA

- ✓ Disminución de fondo celular
- ✓ Preservación celular
- ✓ Grupos de células pequeñas y células sueltas
- ✓ Células mas pequeñas, a veces alargadas
- ✓ Cromatina atenuada
- ✓ Nucleolo prominente.
- ✓ Reducciones de pseudoinclusiones intranucleres



HERRAMIENTAS EN CITOLOGIA TIROIDEA

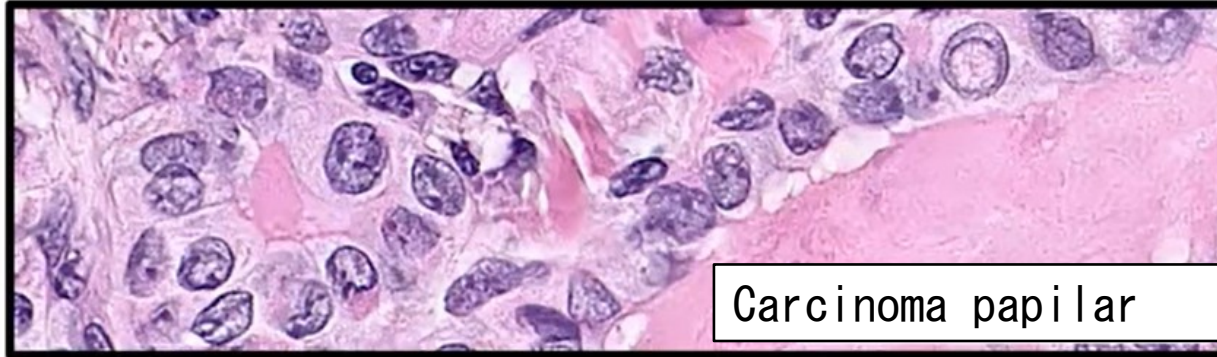
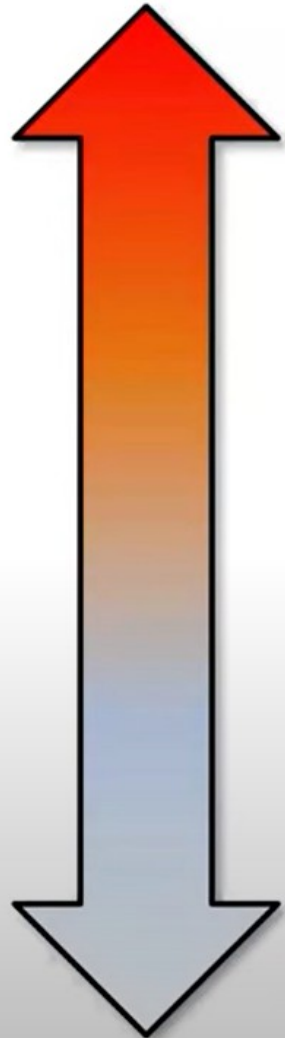
**ATIPIA
NUCLEAR**



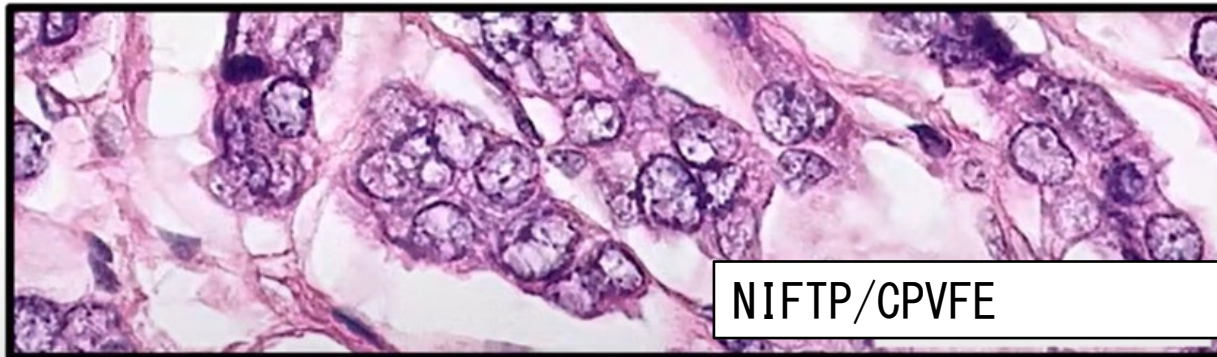
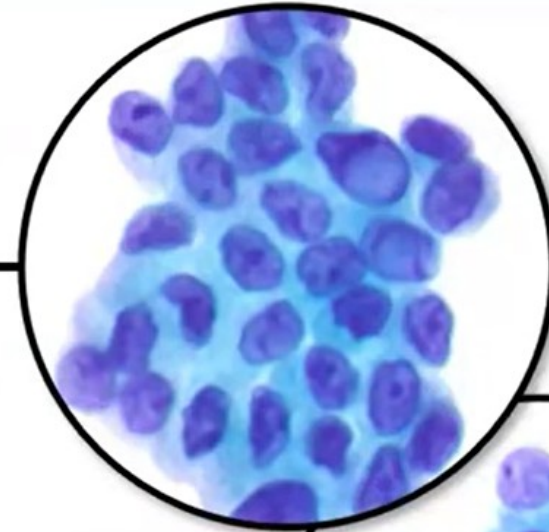
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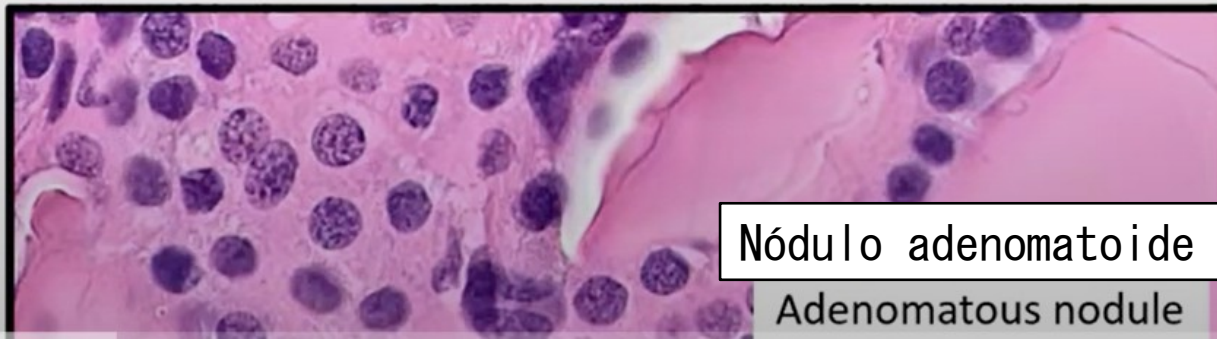
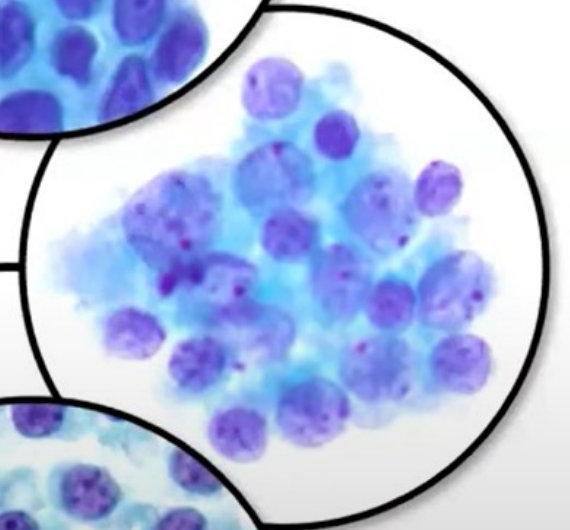
ATIPIA NUCLEAR



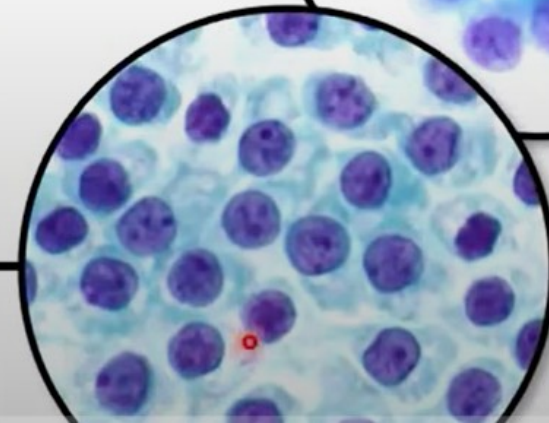
Carcinoma papilar



NIFTP/CPVFE



Nódulo adenomatoide
Adenomatous nodule

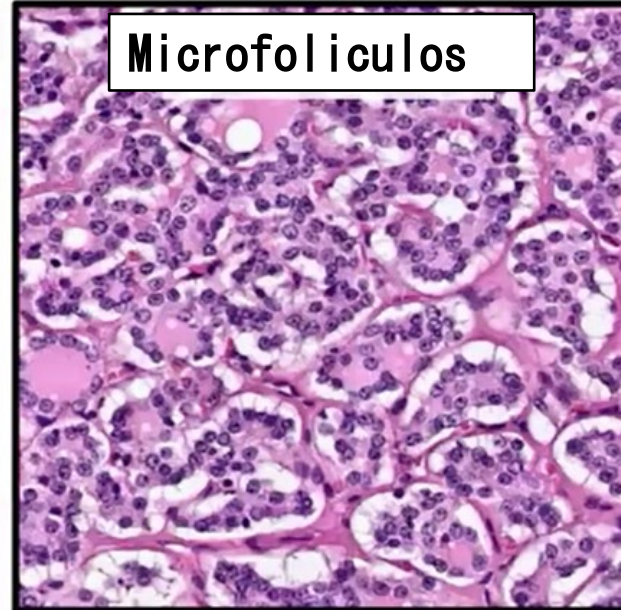


ARQUITECTURA

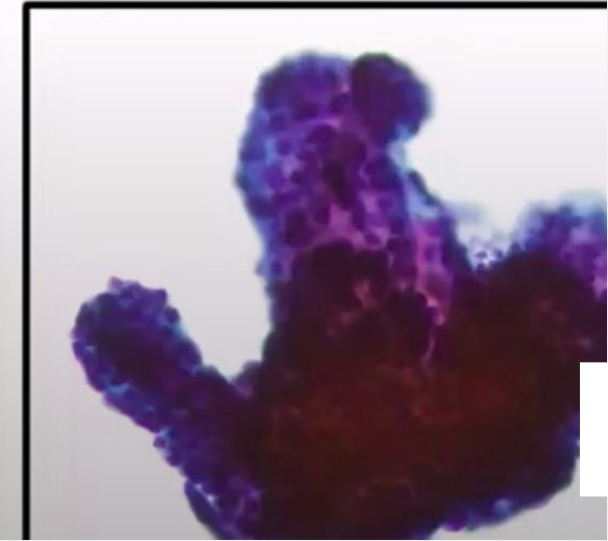
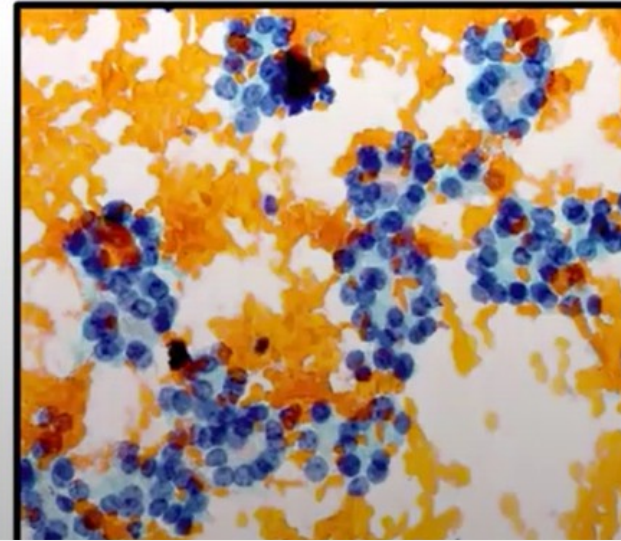
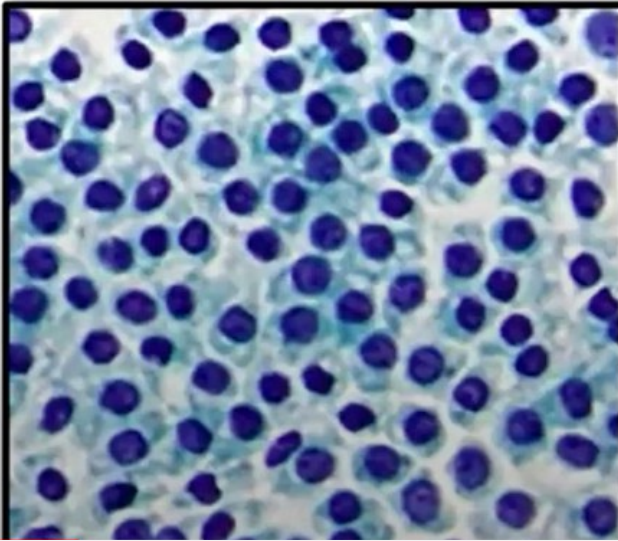
Macrofolículos



Microfolículos

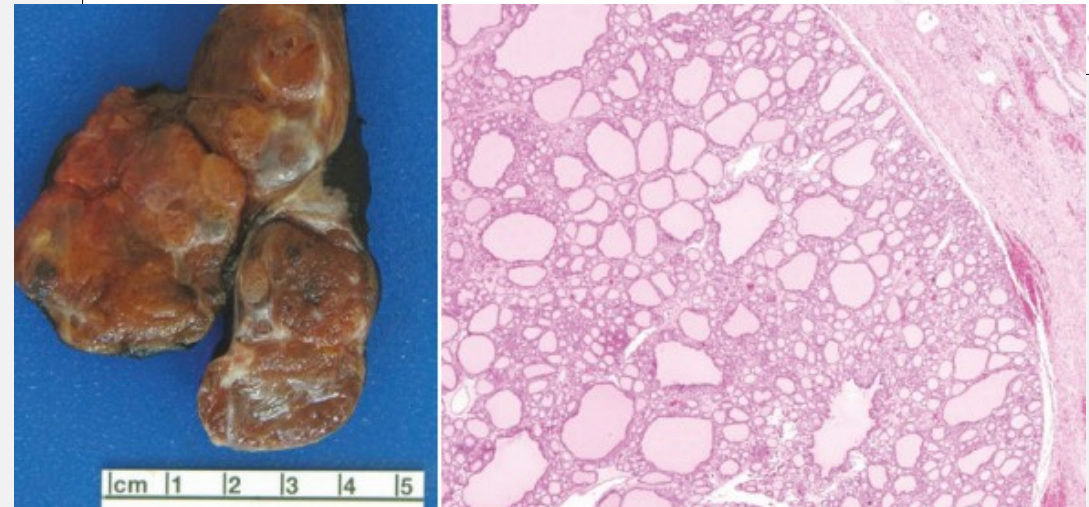
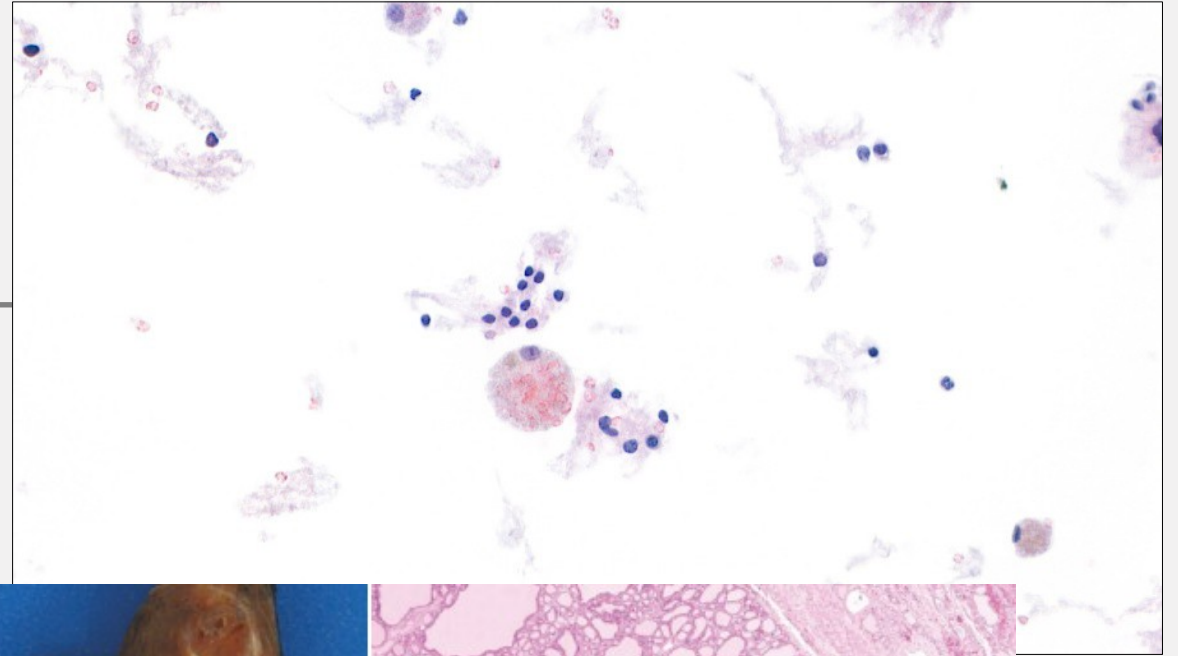


Papilas

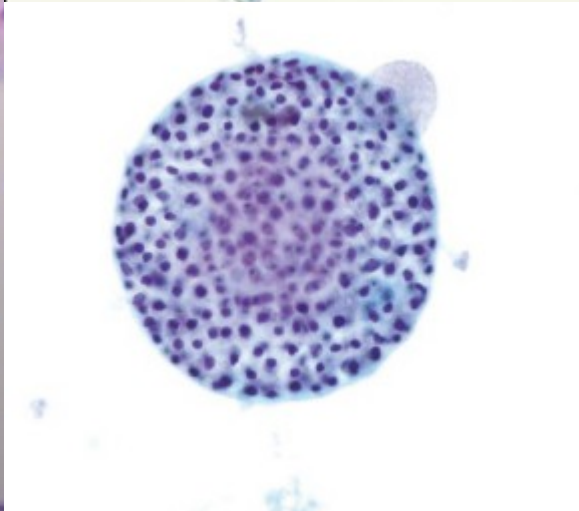
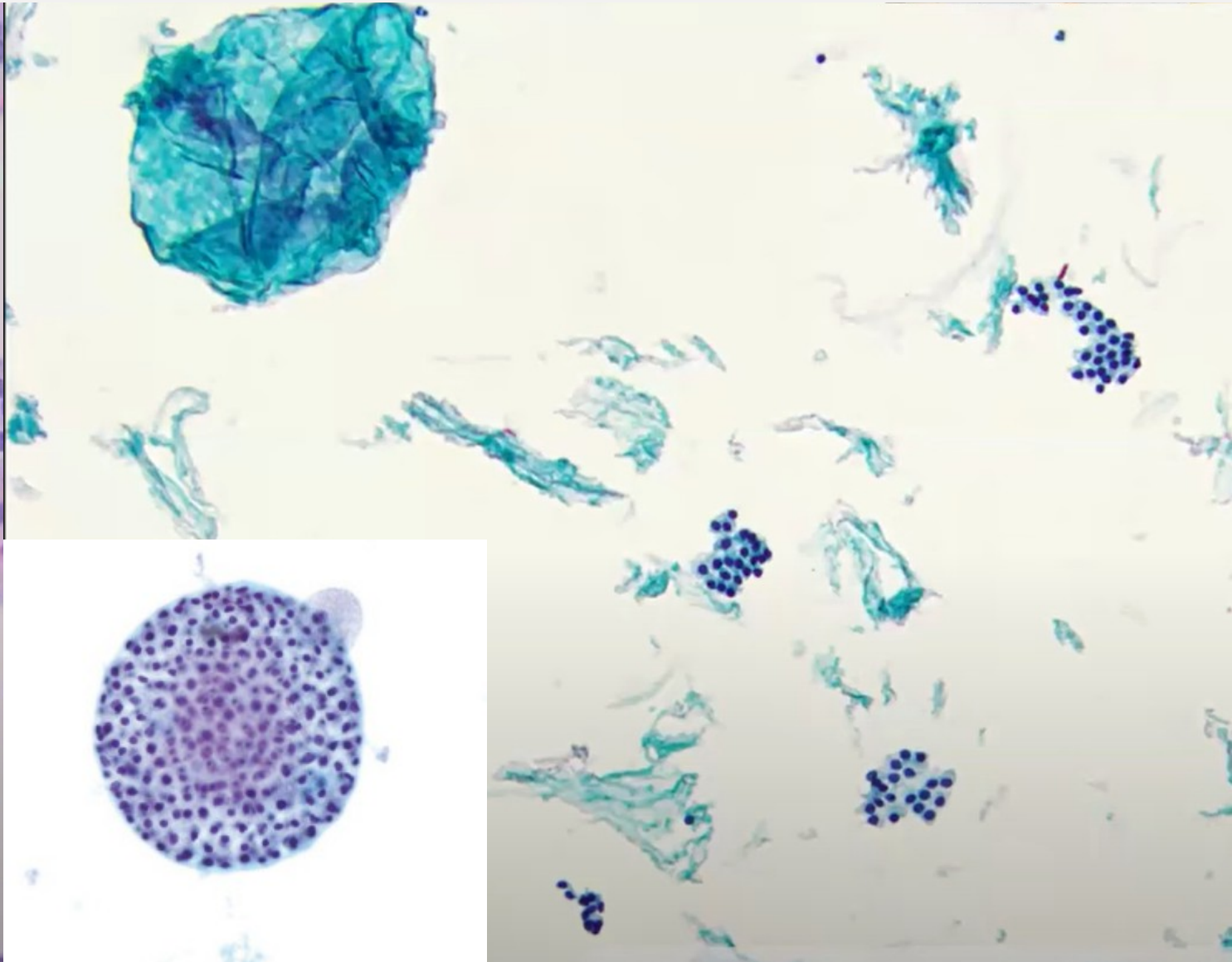
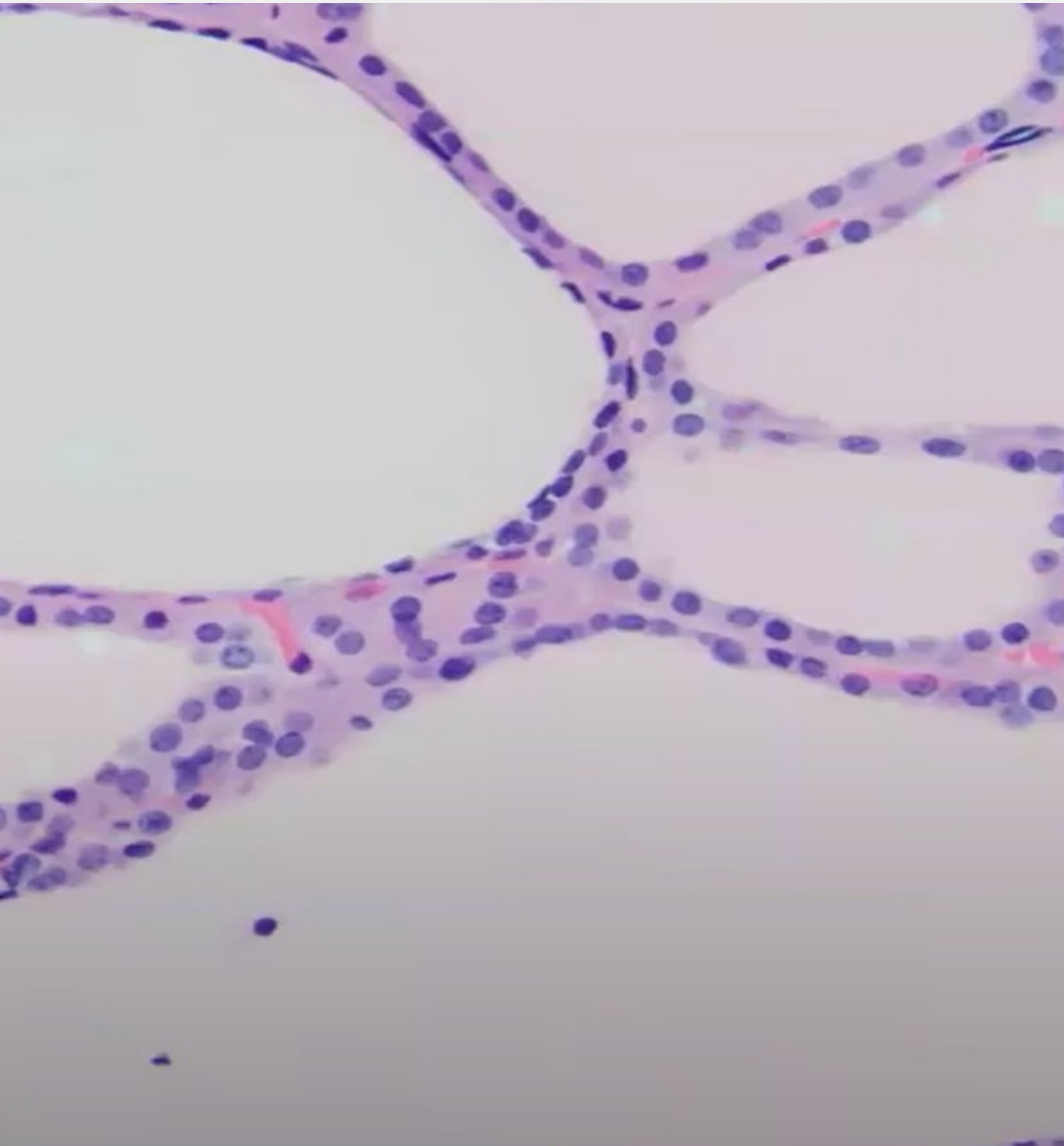


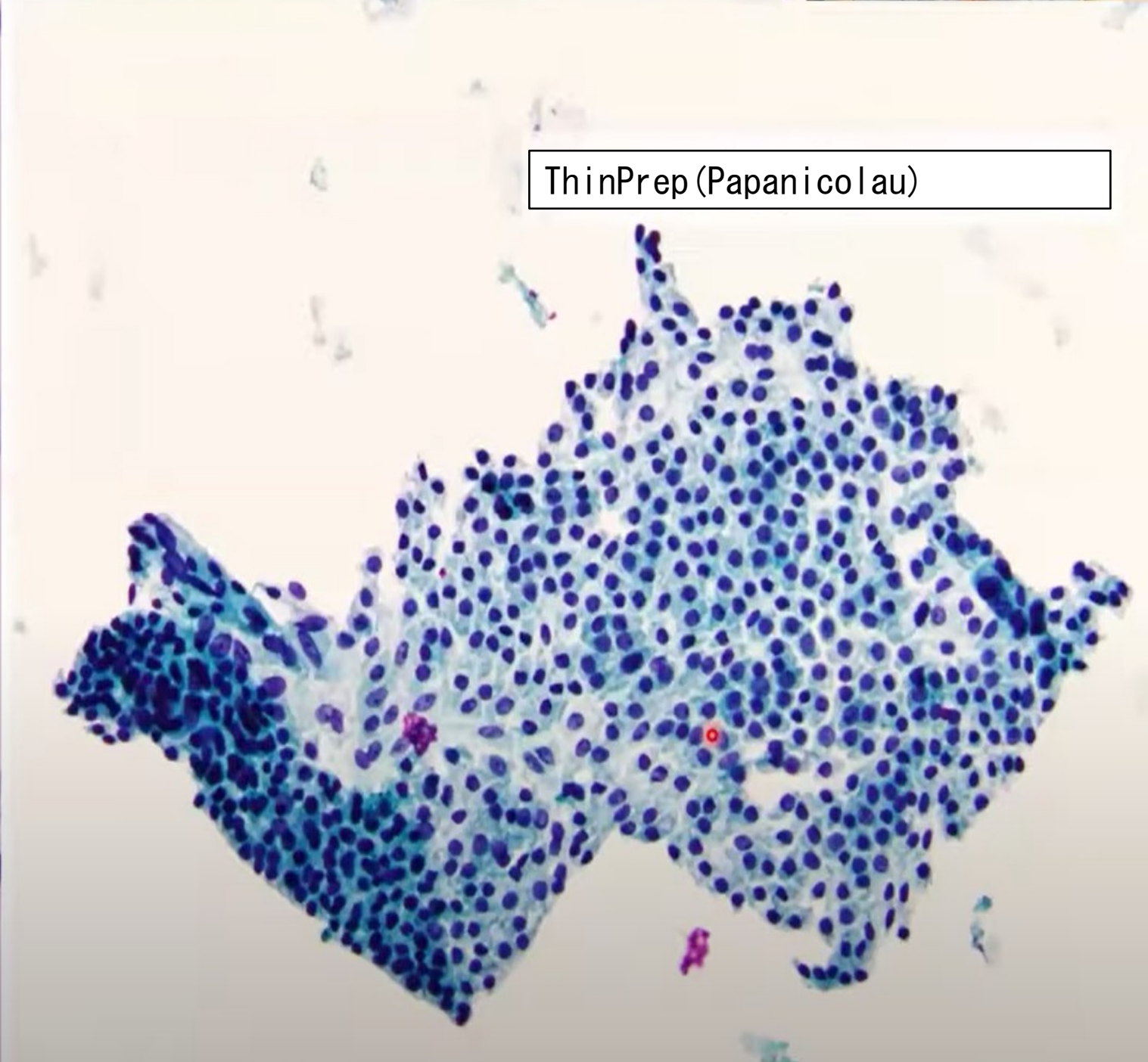
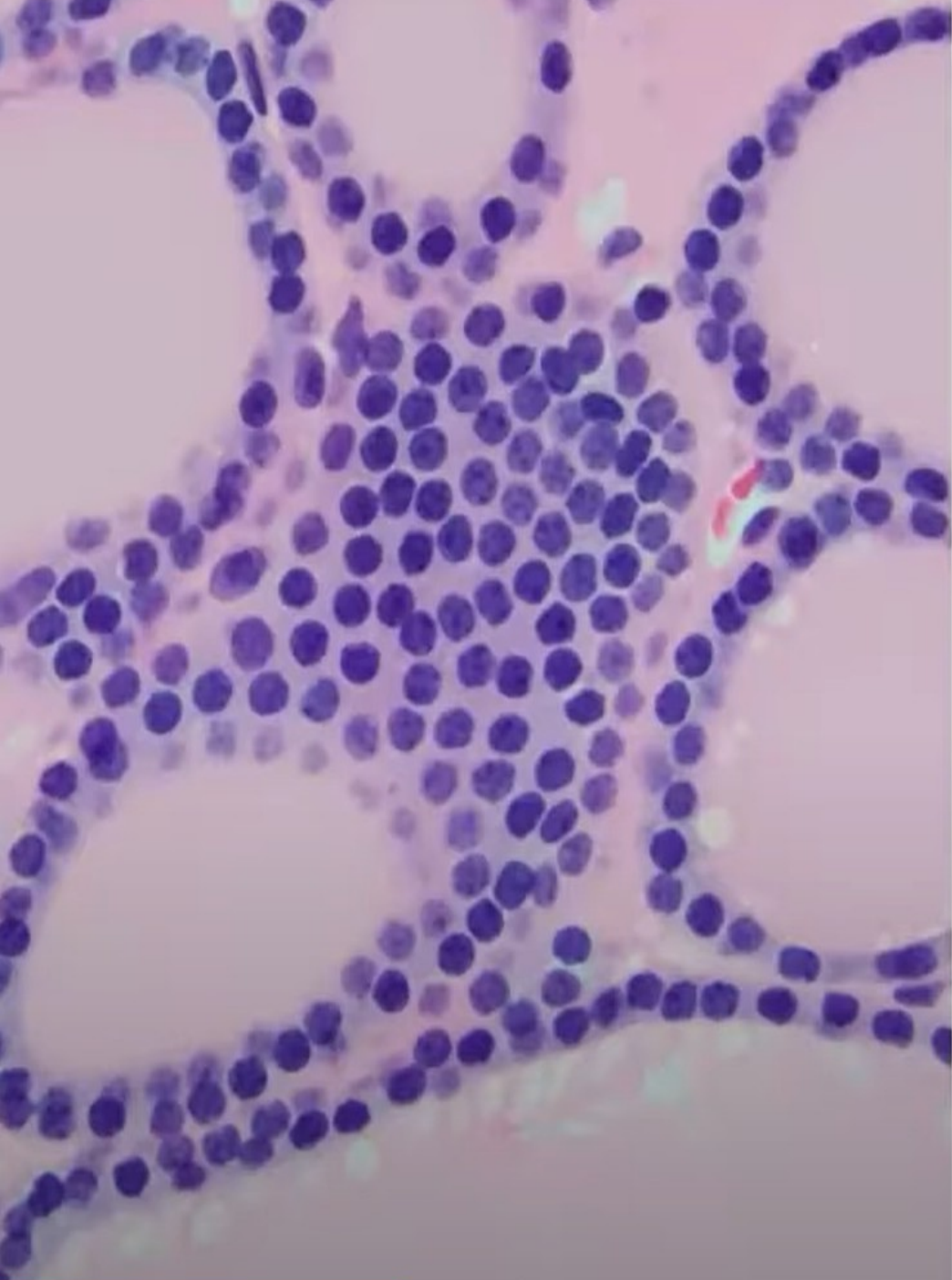
LESIONES BENIGNAS

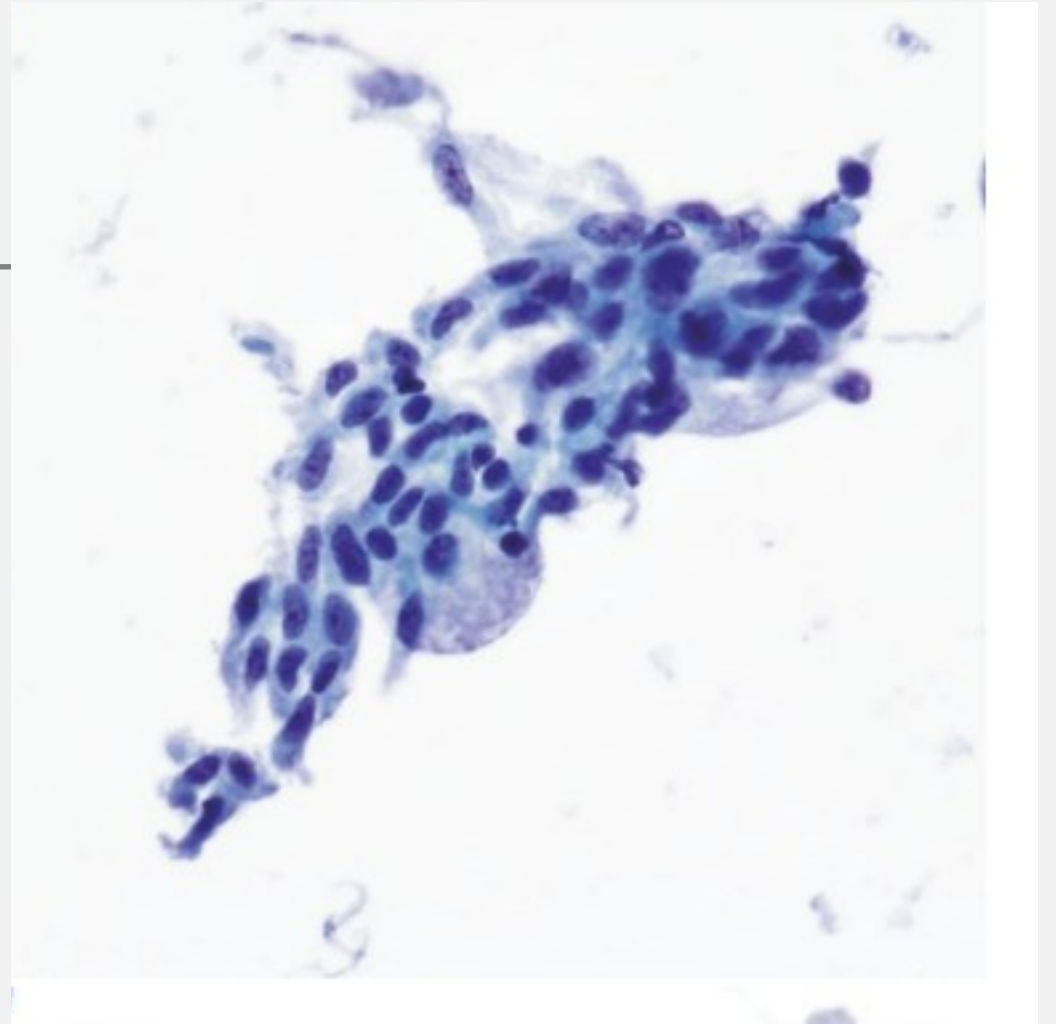
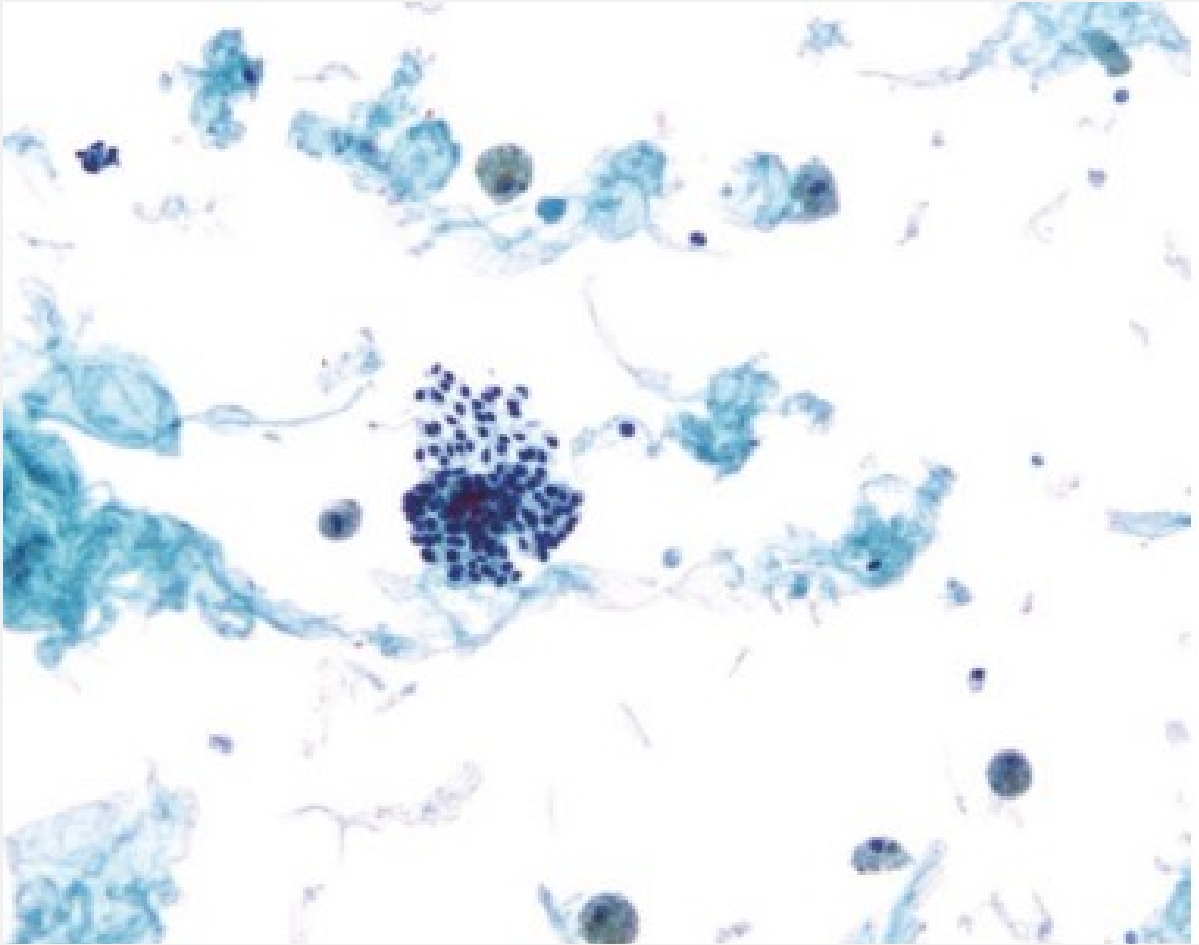
- Bocio coloide / nodular
(Enfermedad nodular tiroidea)
- Bocio tireotóxico
- Tiroiditis subaguda de células gigantes
- Tiroiditis linfocítica crónica
(Hashimoto)

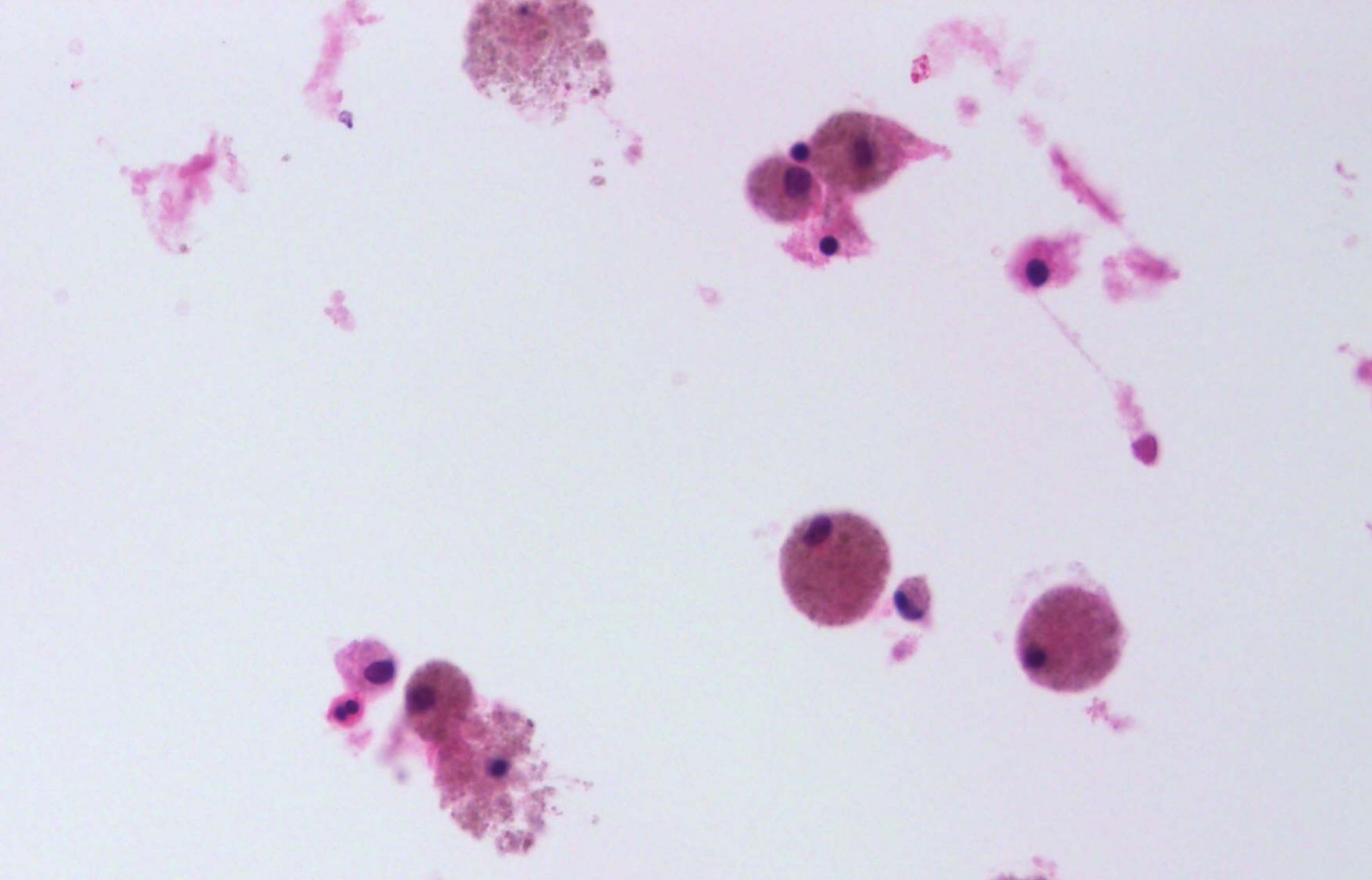


LA MAYORIA DE LAS LESIONES TIROIDEAS BENIGNAS SON BNM









- **Secundario a degeneración, necrosis, hemorragia en nódulos adenomatosos (pseudoquistes)**
- **La mayoría son benignos**
- **Celularidad variable**
- **Histiocitos**
- **Cristales de colesterol**
- **Células gigantes**
- **10% carcinomas papilares**

UNICAMENTE CONTENIDO QUISTICO

CATEGORIAS INDETERMINADAS (3 y 4)

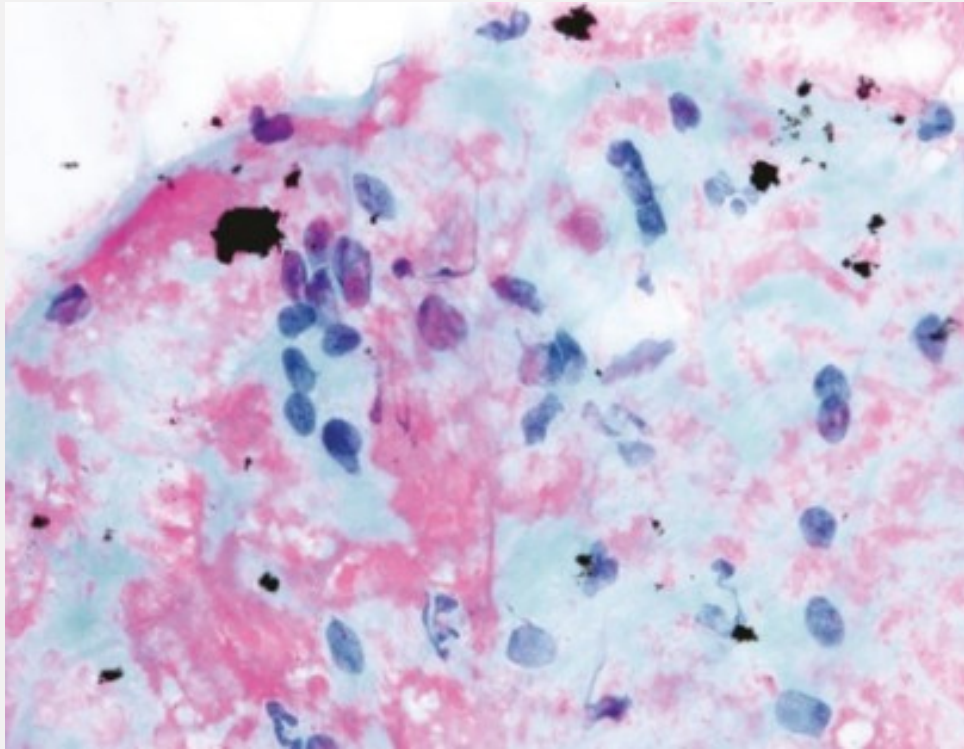
FNA Diagnosis	Risk of CA or NIFTP (%)	Suggested Management
I. Nondiagnostic	13	Repeat FNA with U/S
II. Benign	4	Clinical & U/S follow-up
III. Atypia of Undetermined Significance	22	Repeat FNA, MT, diagnostic lobectomy, surveillance
IV. Follicular Neoplasm / Oncocytic Neoplasm	30	MT or diagnostic lobectomy
V. Suspicious for Malignancy	74	MT, lobectomy, near-total thyroidectomy
VI. Malignant	97	Lobectomy, near-total thyroidectomy

Atypia of Undetermined Significance

AUS



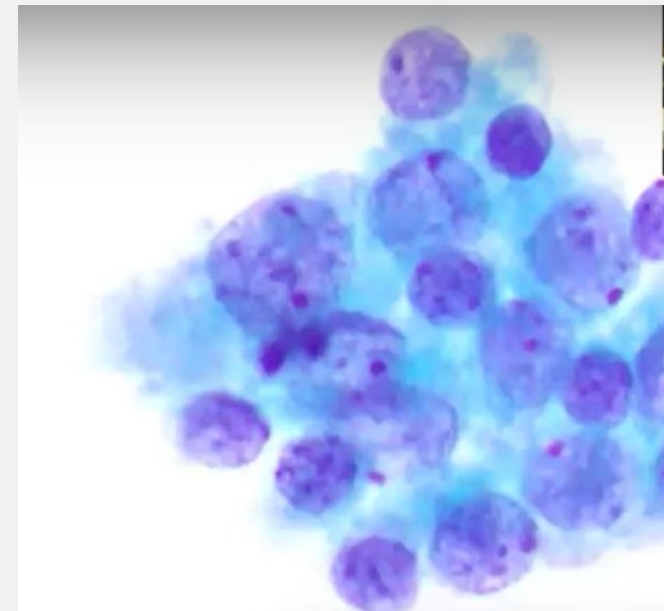
RM: 10–30%



CATEGORIA 3: AUS

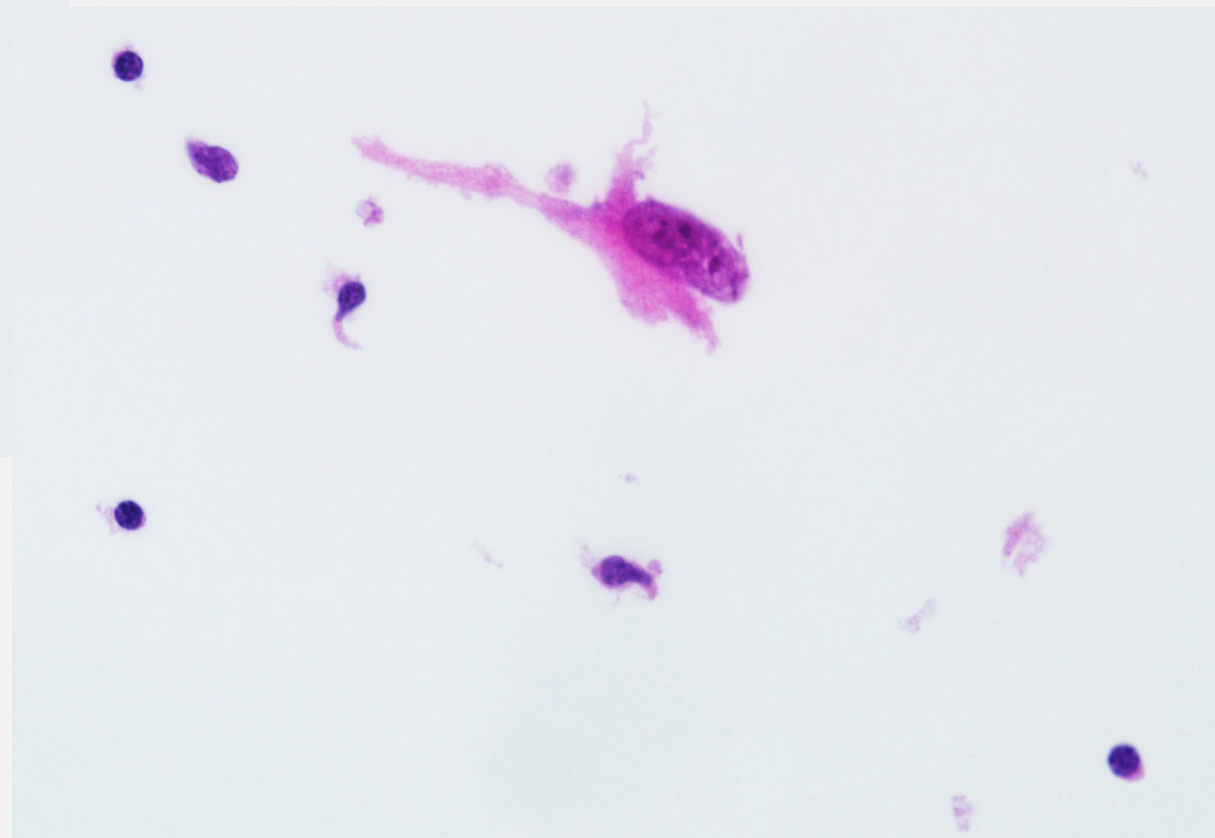
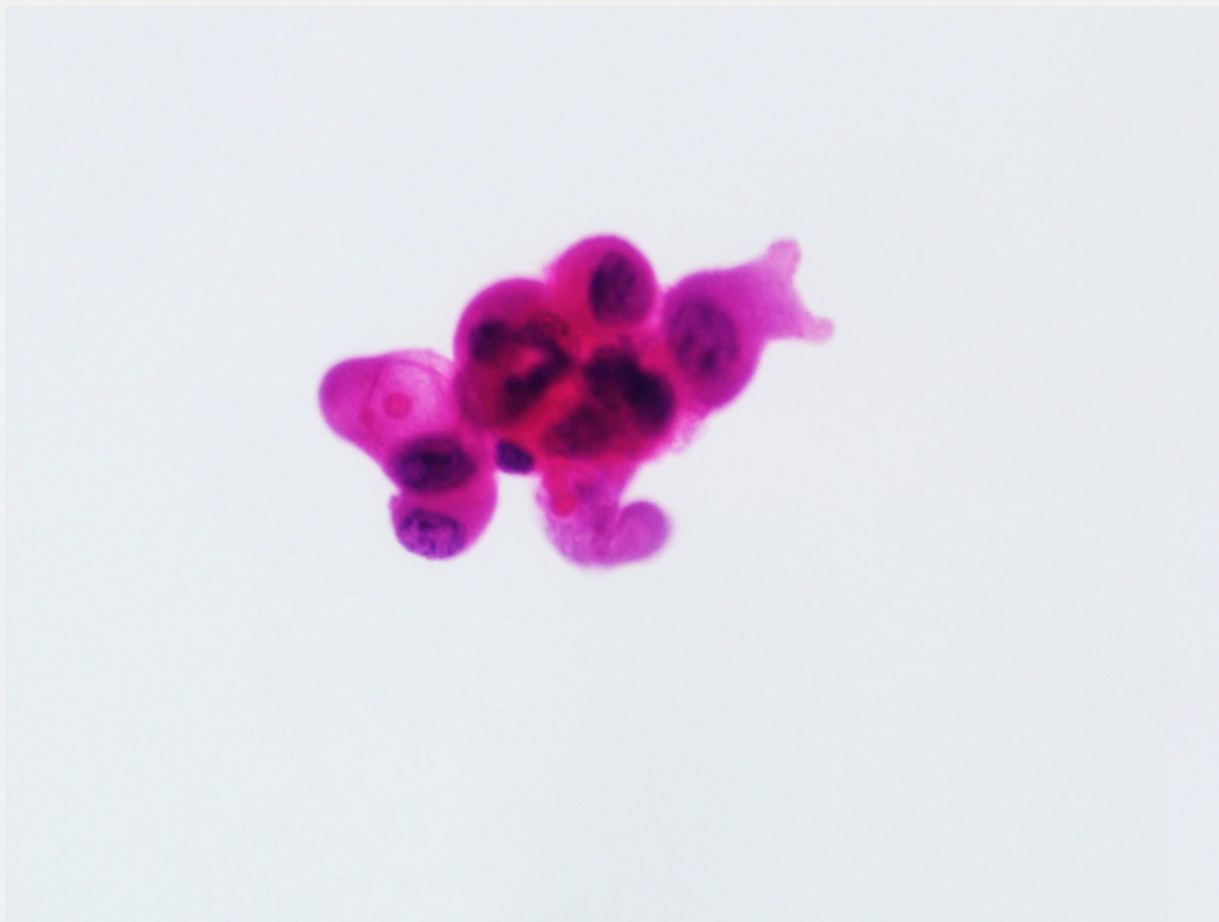
Nuclear

- Núcleos irregulares y/o
- Palidez nuclear y/o
- Aisladas hendiduras

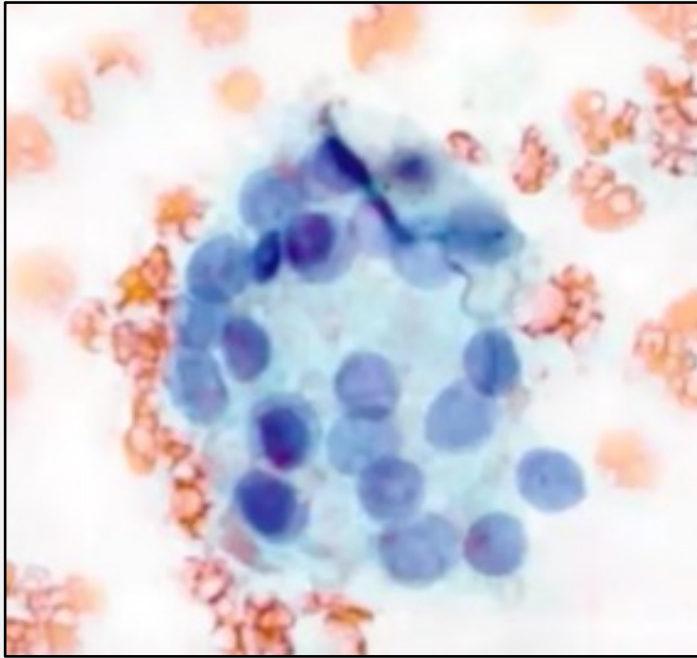


NO ES SUFICIENTE PARA DIAGNOSTICO DE SOSPECHA

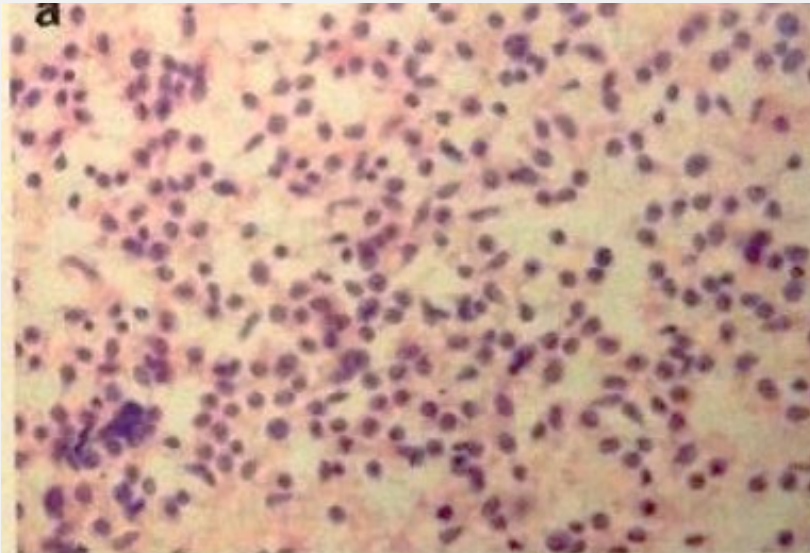
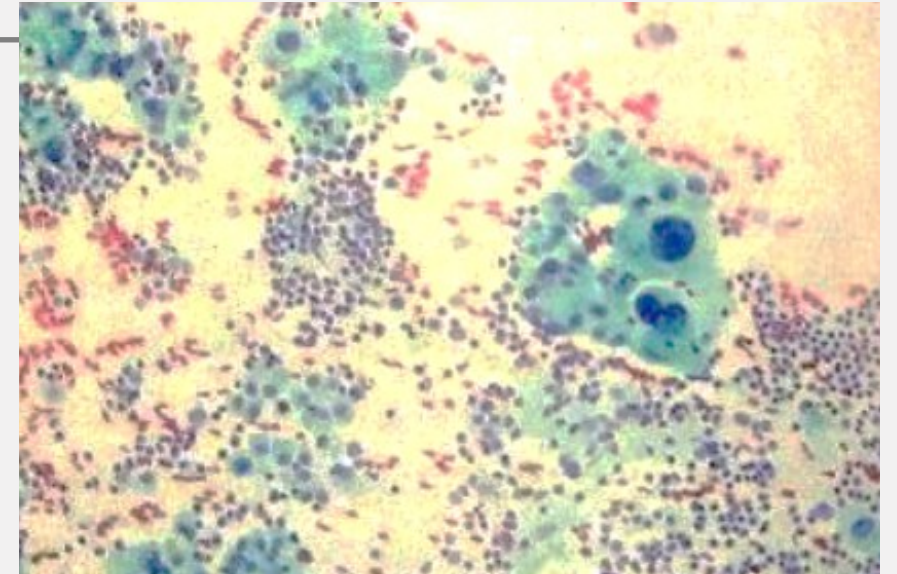




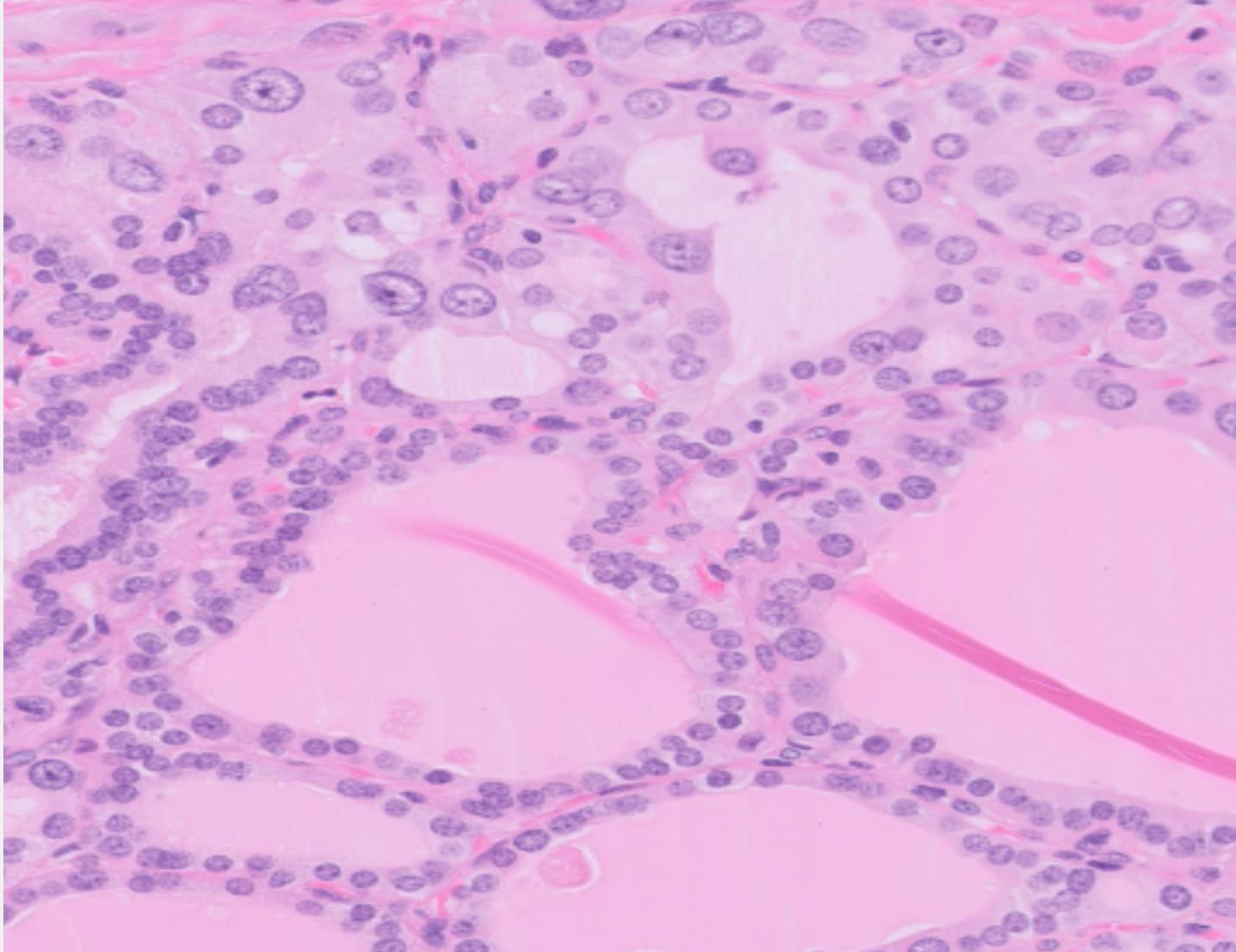
CATEGORIA 3: Atipia otros



- ∅ Patrón microfollicular
- ∅ Atipia oncocítica
- ∅ Atipia linfocitaria
- ∅ Atipia-NOS

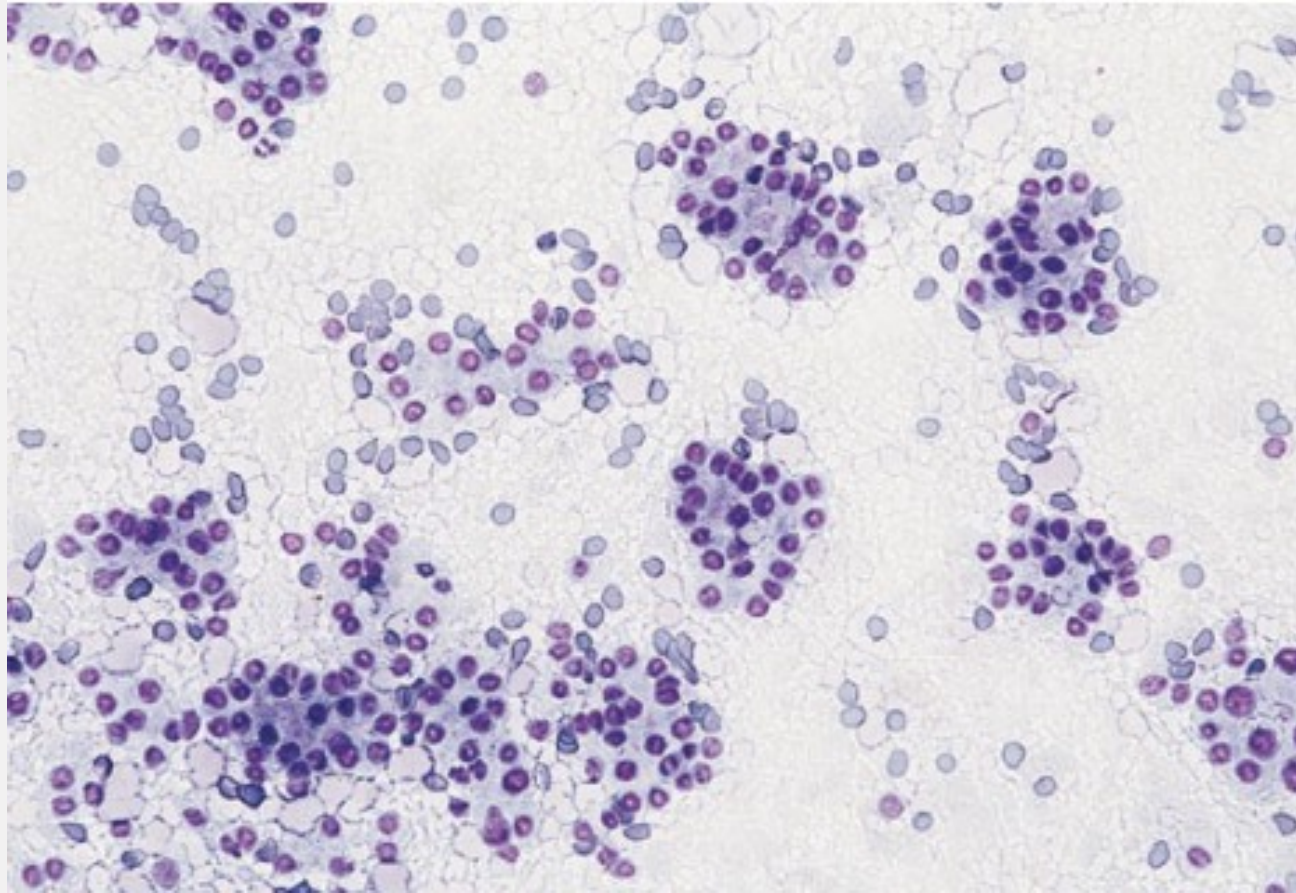


NO ES SUFICIENTE PARA DIAGNOSTICO DE NEOPLASIA
FOLICULAR



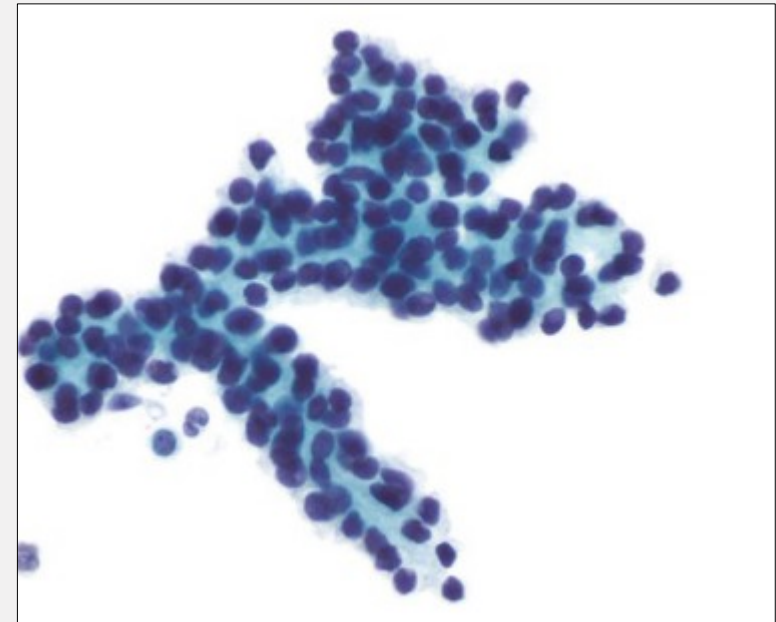
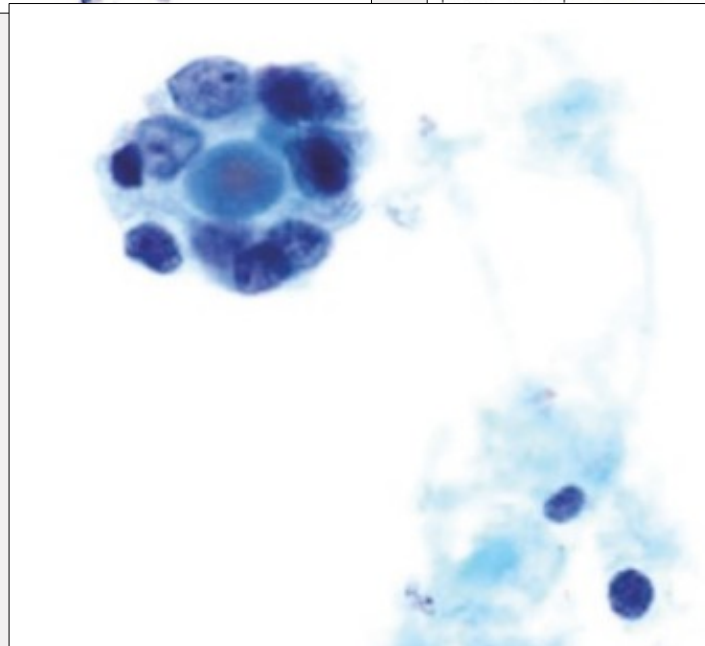
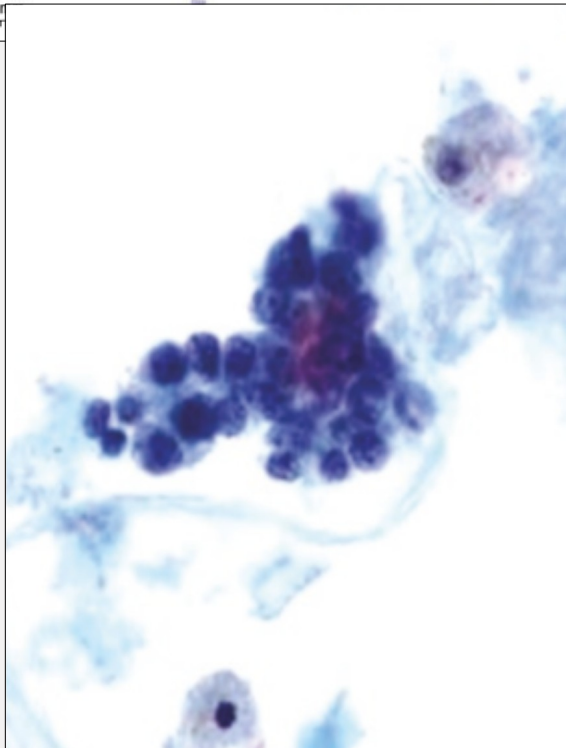
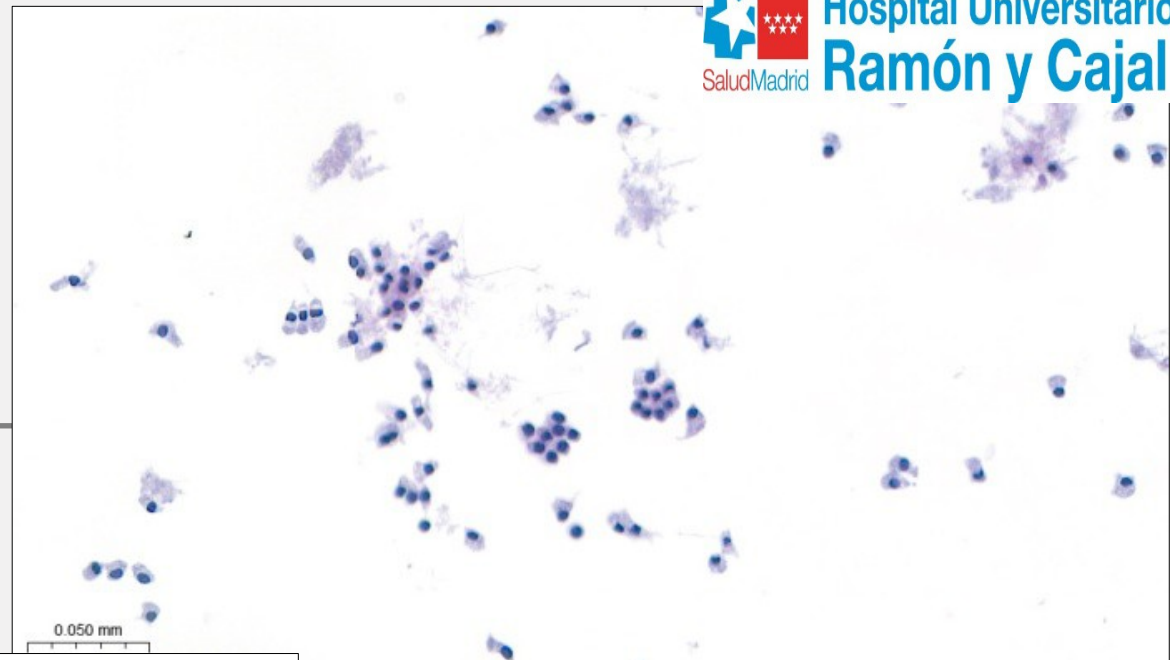
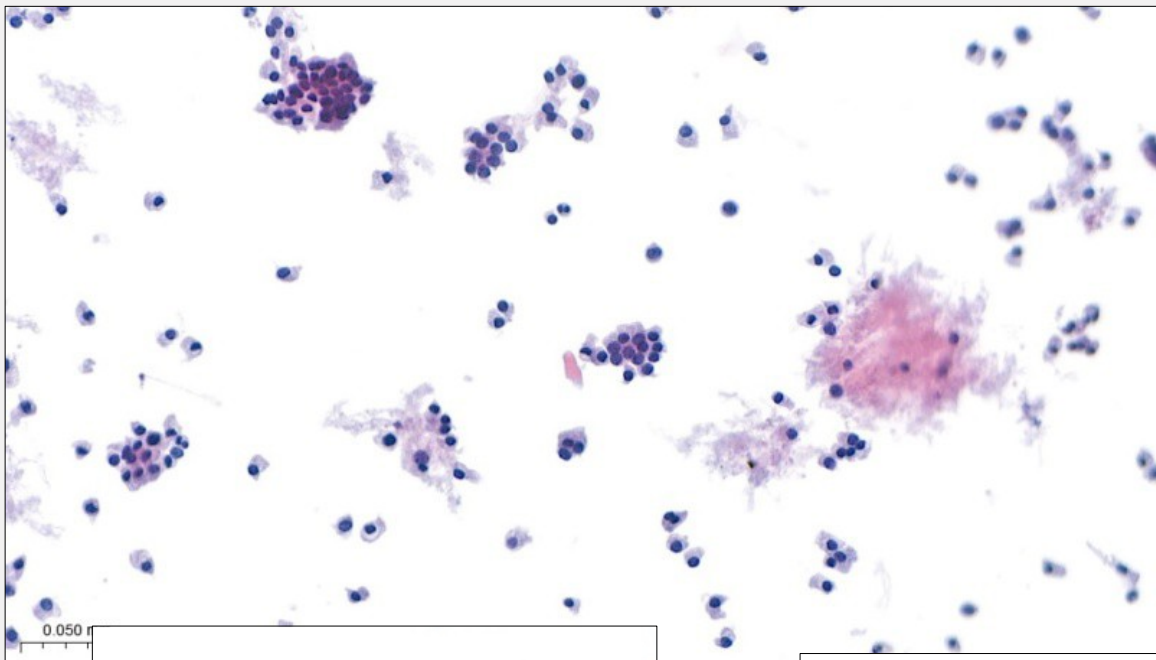
CARBIMAZOL

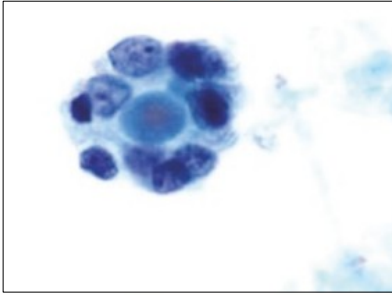
Categoría 4. Neoplasia folicular



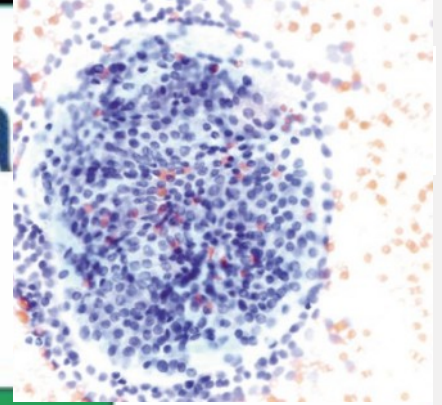
- Atipia arquitectónica
- Patrón microfollicular y trabéculas
- Ligera modificación de criterios al incluir NIFTP
- Lesiones con patrón folicular y cambios nucleares sutiles son permitidos (NO INCLUSIONES, NO PAPILAS)

RM: 10-30%





Características Citomorfológicas Microfolículos vs Esférulas

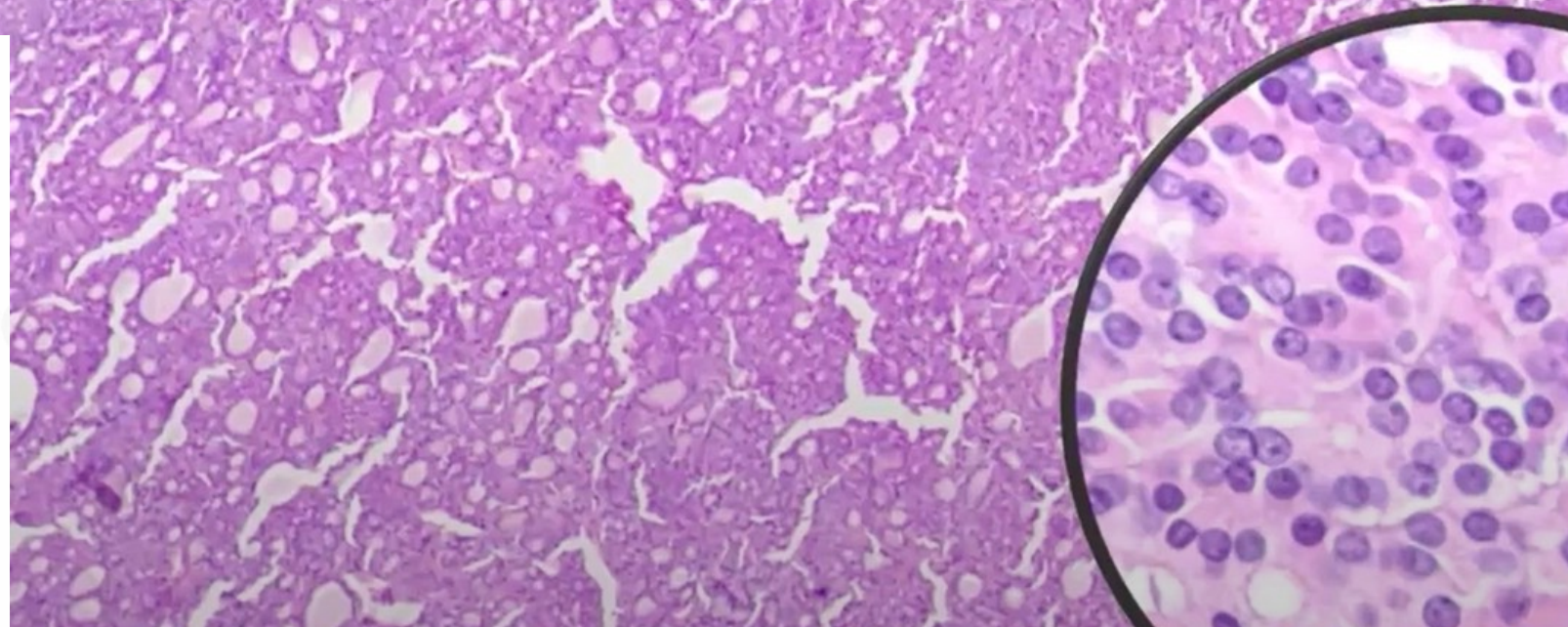
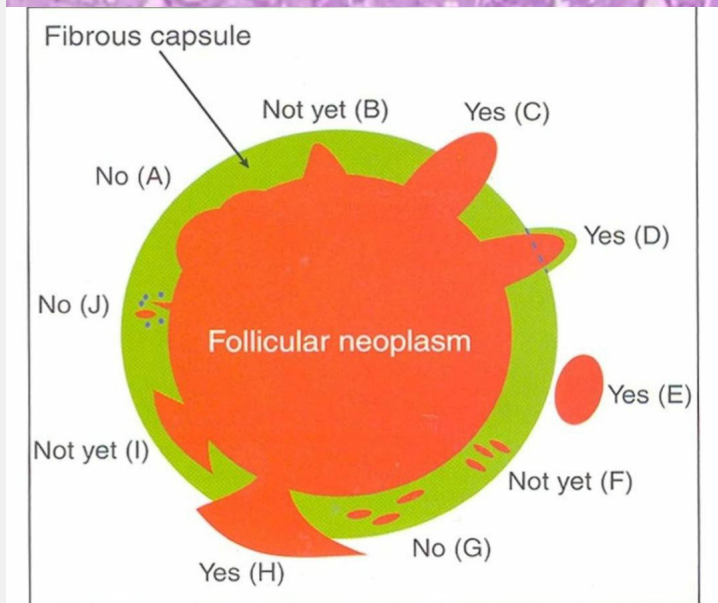
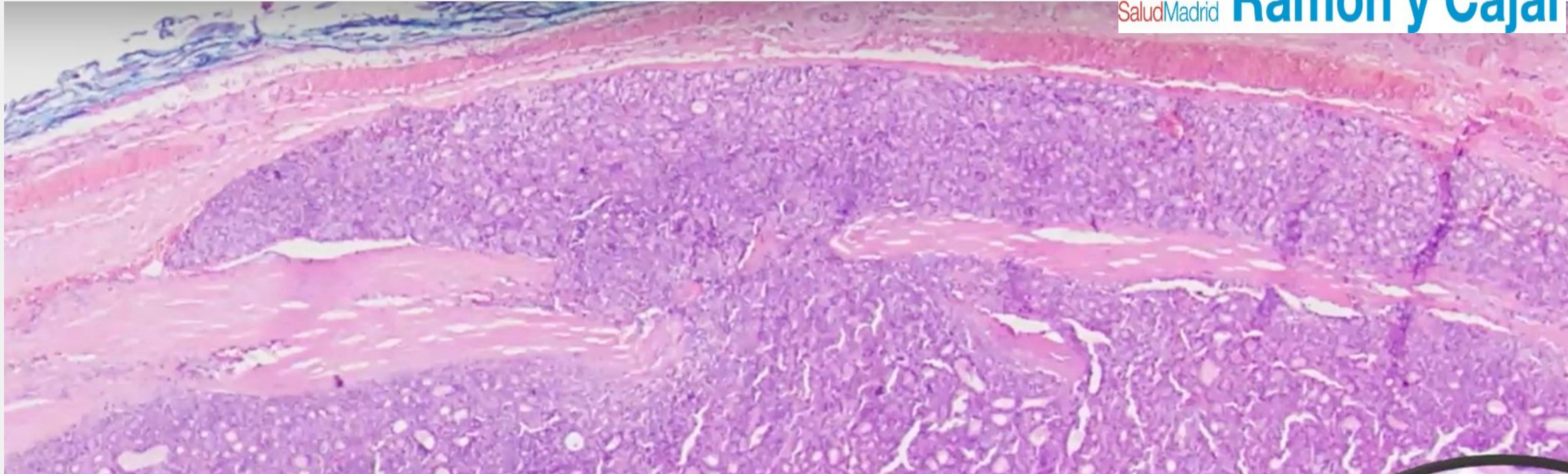


Característica	Microfolículo	Esférula
Contorno	⚠ Irregular, menos definido	✅ <u>Liso, redondo</u>
Espaciado Nuclear	⚠ Superpuesto	✅ <u>Uniforme</u>
Dimensión	2D (plano)	<u>3D</u>
Arquitectura	Desordenada	<u>Ordenada</u>
Bethesda	⚠ III-IV (Indeterminado)	✅ II (Benigno)

🎯 Clave Diagnóstica:

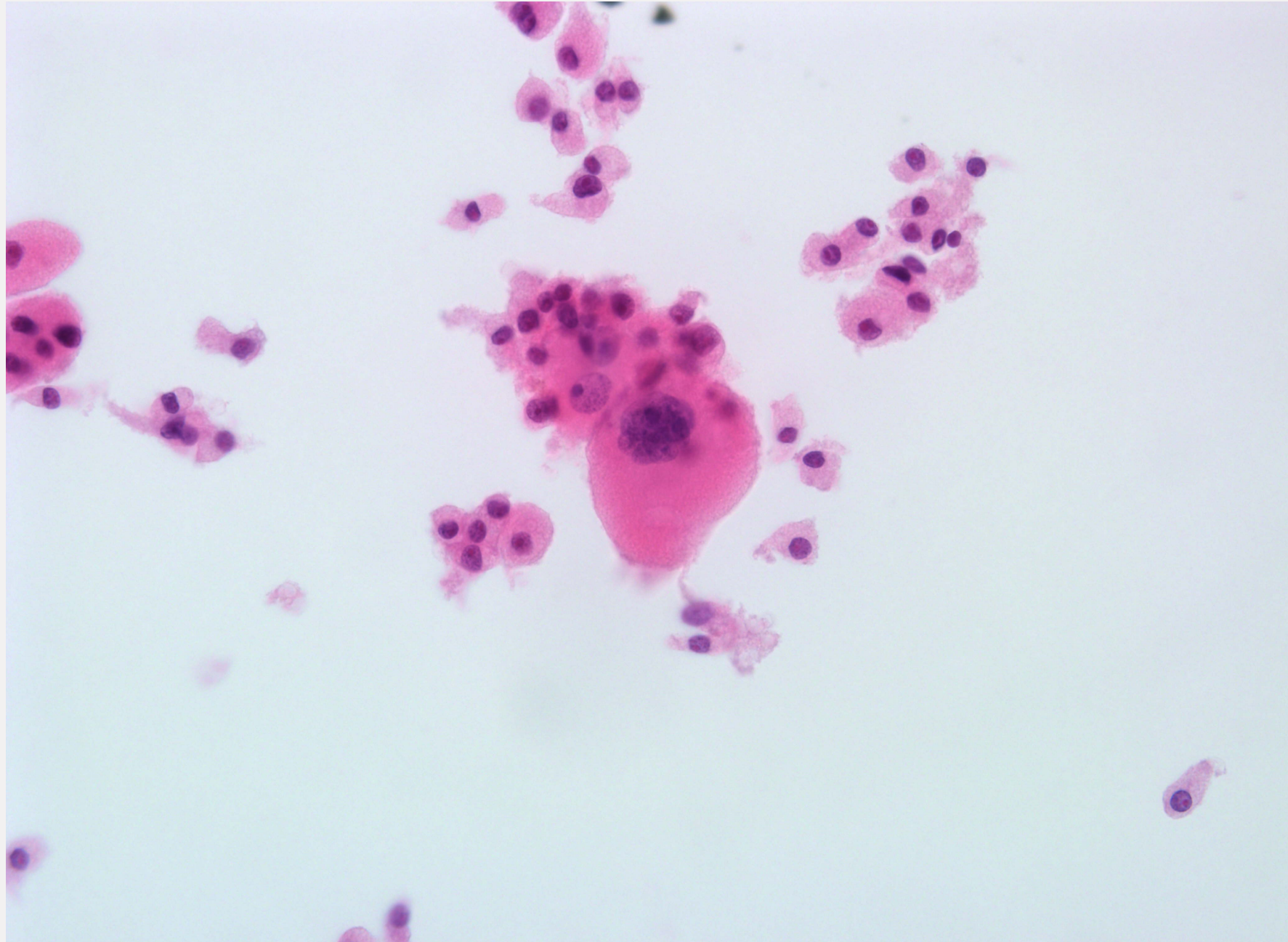
Espaciado uniforme + contorno liso + 3D = Esférula benigna

Núcleos superpuestos + contorno irregular + 2D = Microfolículo sospechoso



NEOPLASIA FOLICULAR CON CELULAS ONCOCITICAS

~~HÜRTLE~~



ATIPIA NUCLEAR

Intensa

Moderada

Ninguna.
Leve

**CPVF
Infiltrativo**

**CPT-clásico
CP-células altas
Otros subtipos**

NIFTP

CPT-VFencap

CATEGORIA (4)

Nódulo hiperplásico

Adenoma Foli

Ca Folicular

Macrofoliular

Microfoliular
Trabecular

Papilas y/o grupos
tridimensionales

ARQUITECTURA

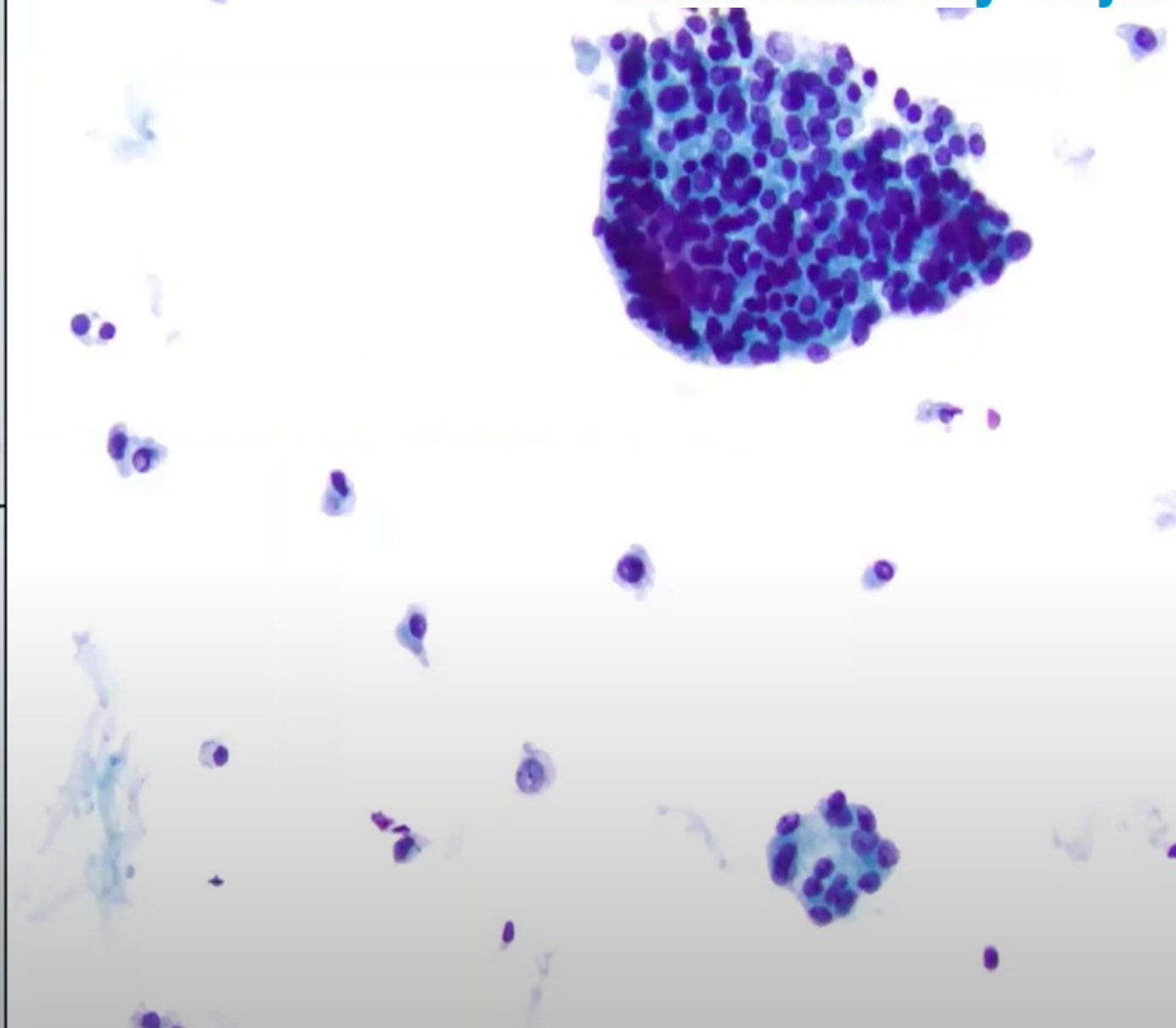
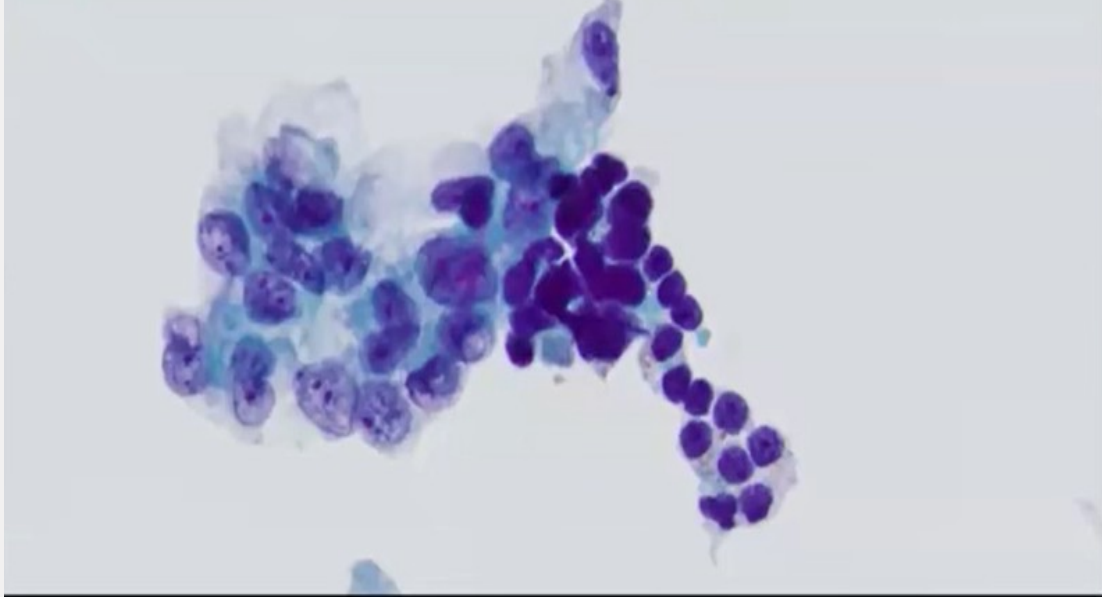
CATEGORIA V: SOSPECHOSO

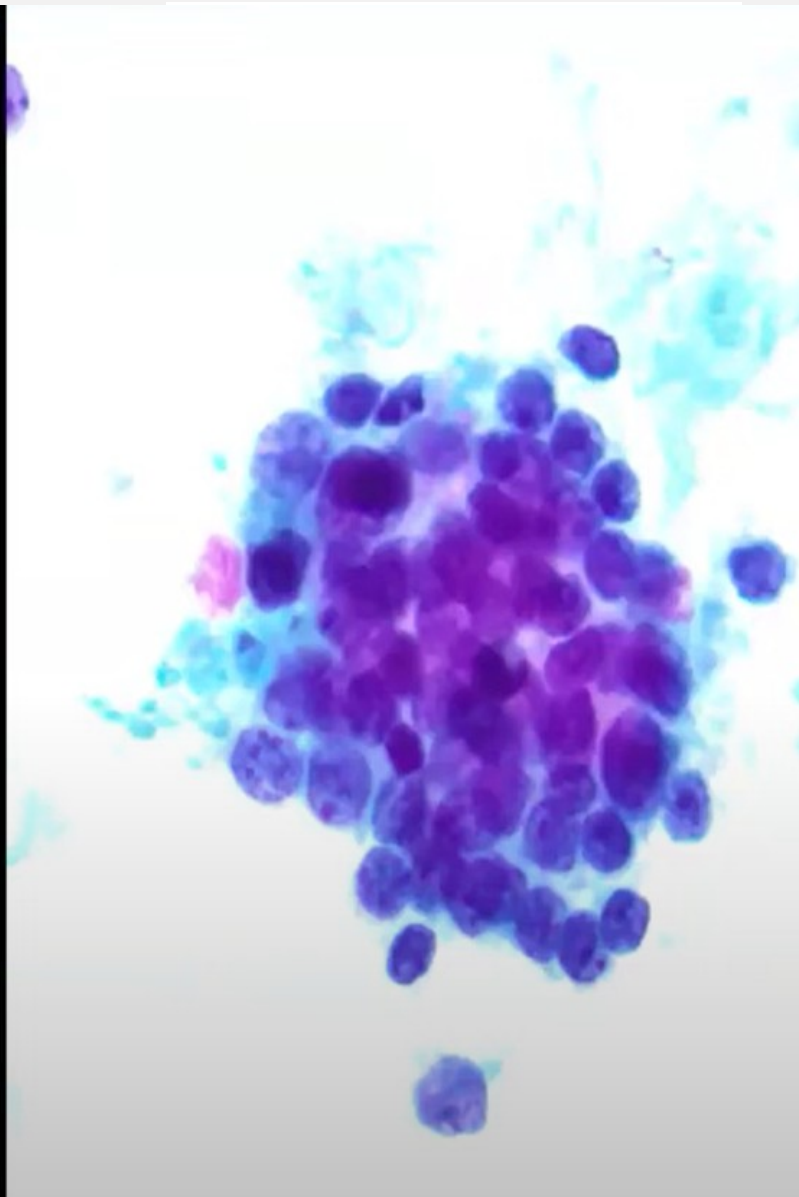
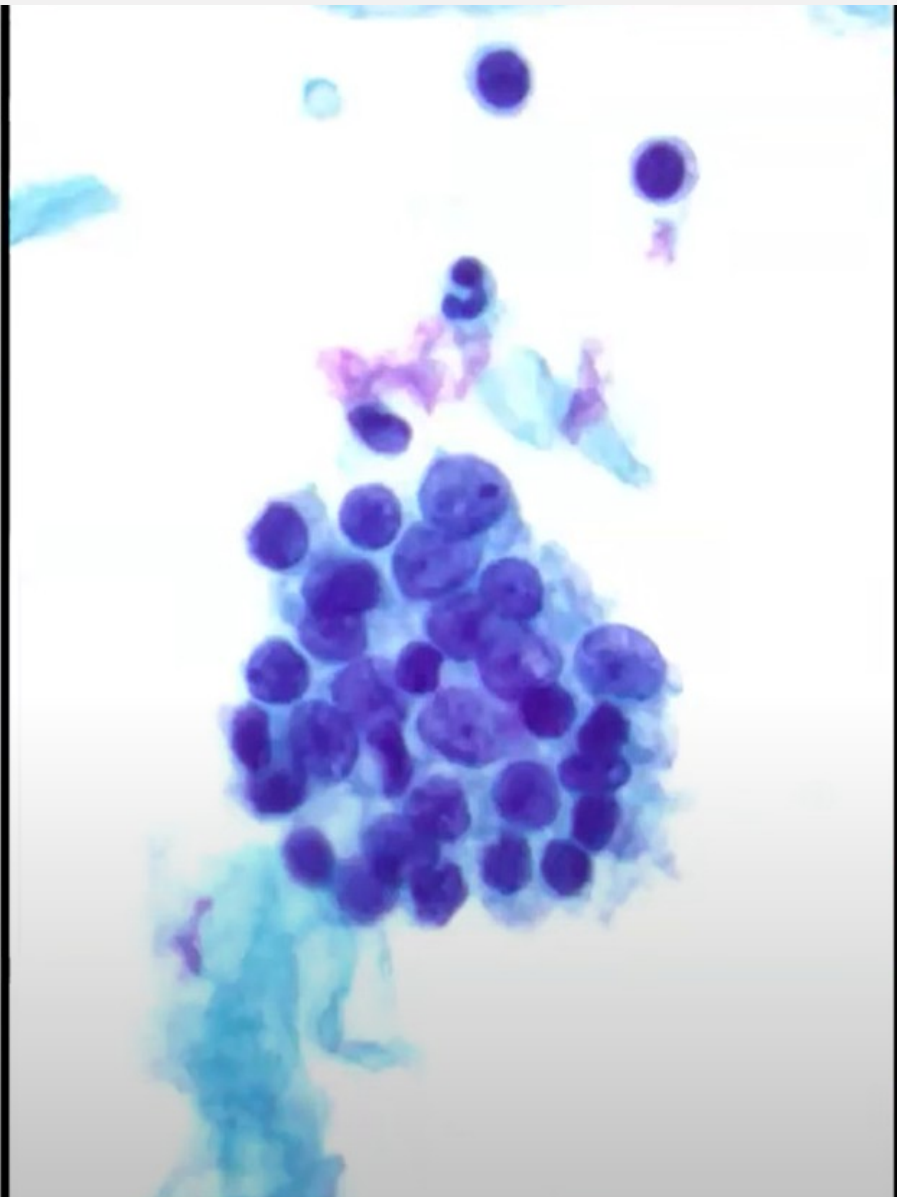
No tiene características suficientes para diagnóstico de maligno porque la ATIPIA es...

- Focal
- Moderada
- Artefactos (deseccación, hemorragia)

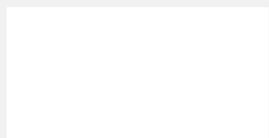


CATEGORIA V: SOSPECHOSO





V. SOSPECHOSO



ATIPIA NUCLEAR

Intensa

Moderada

Ninguna.
Leve

CPVF
Infiltrativo

CPT-clásico
CP-células altas
Otros subtipos

SOSPECHOSA (5)

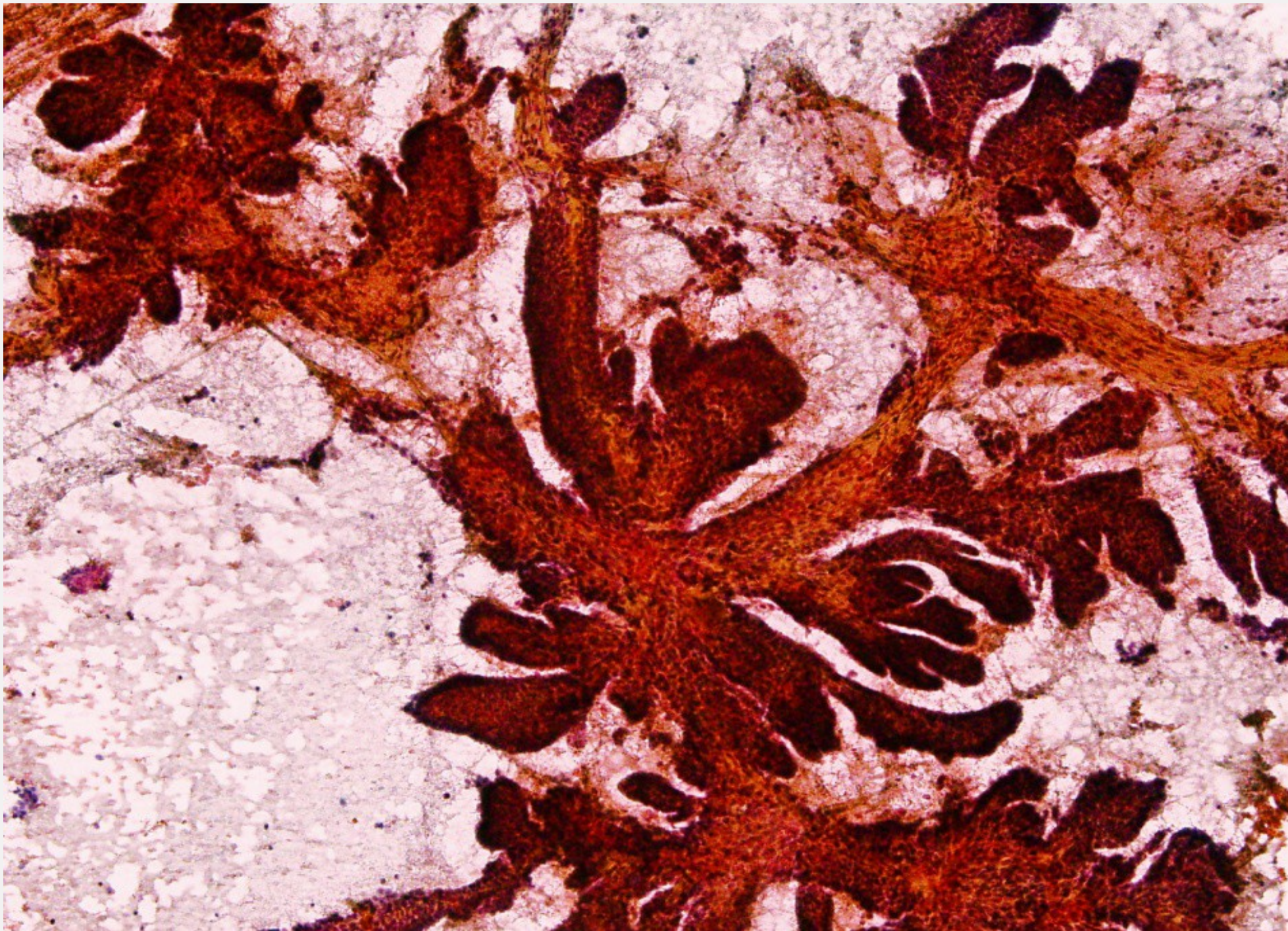
Nódulo hiperplásico

Macrofolicular

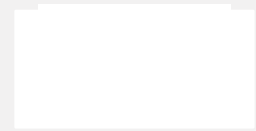
Microfolicular
Trabecular

Papilas y/o grupos
tridimensionales

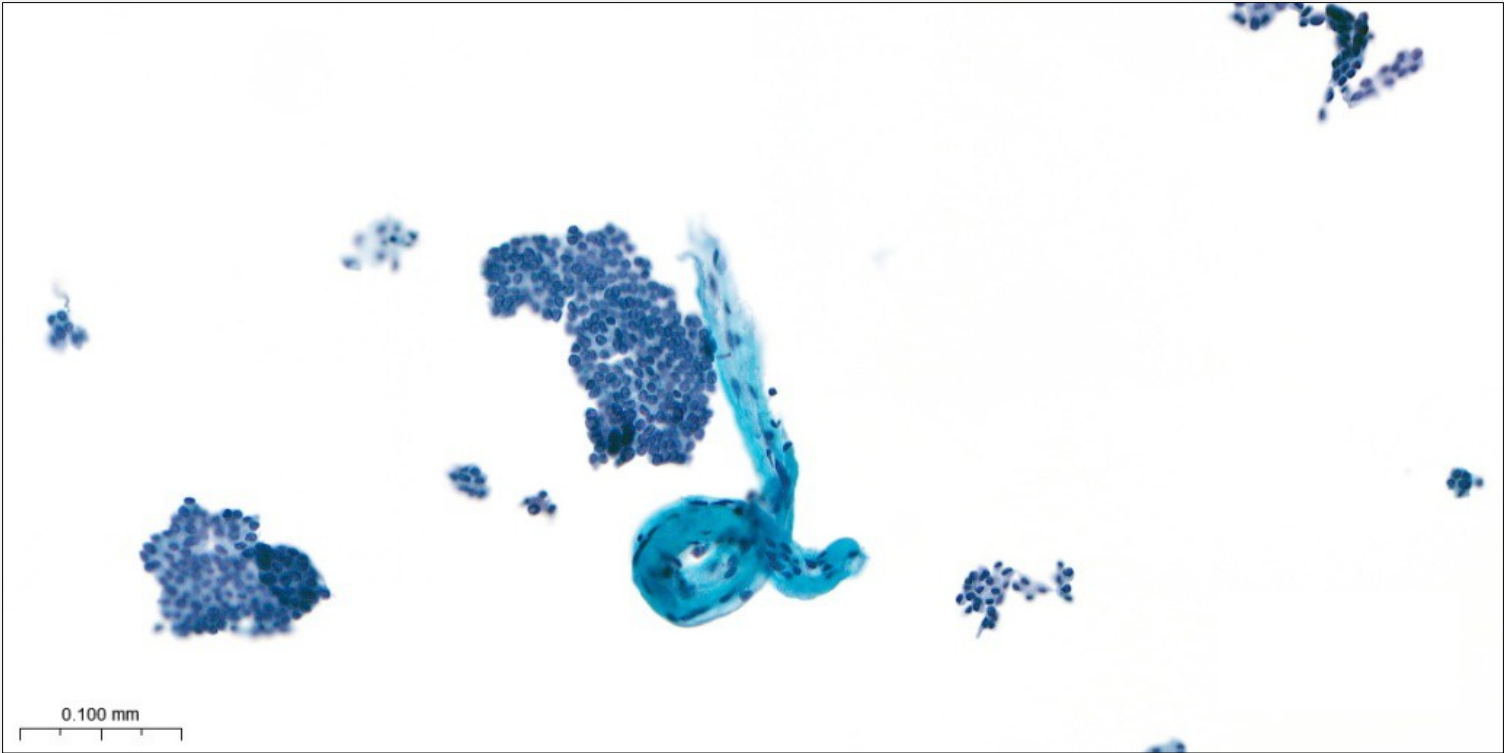
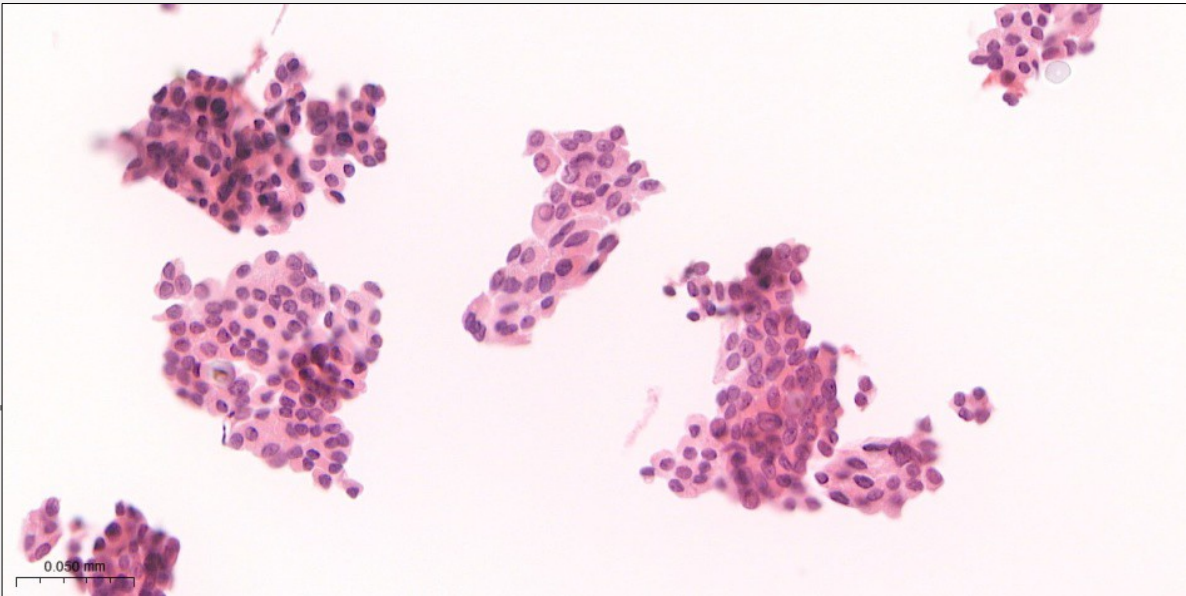
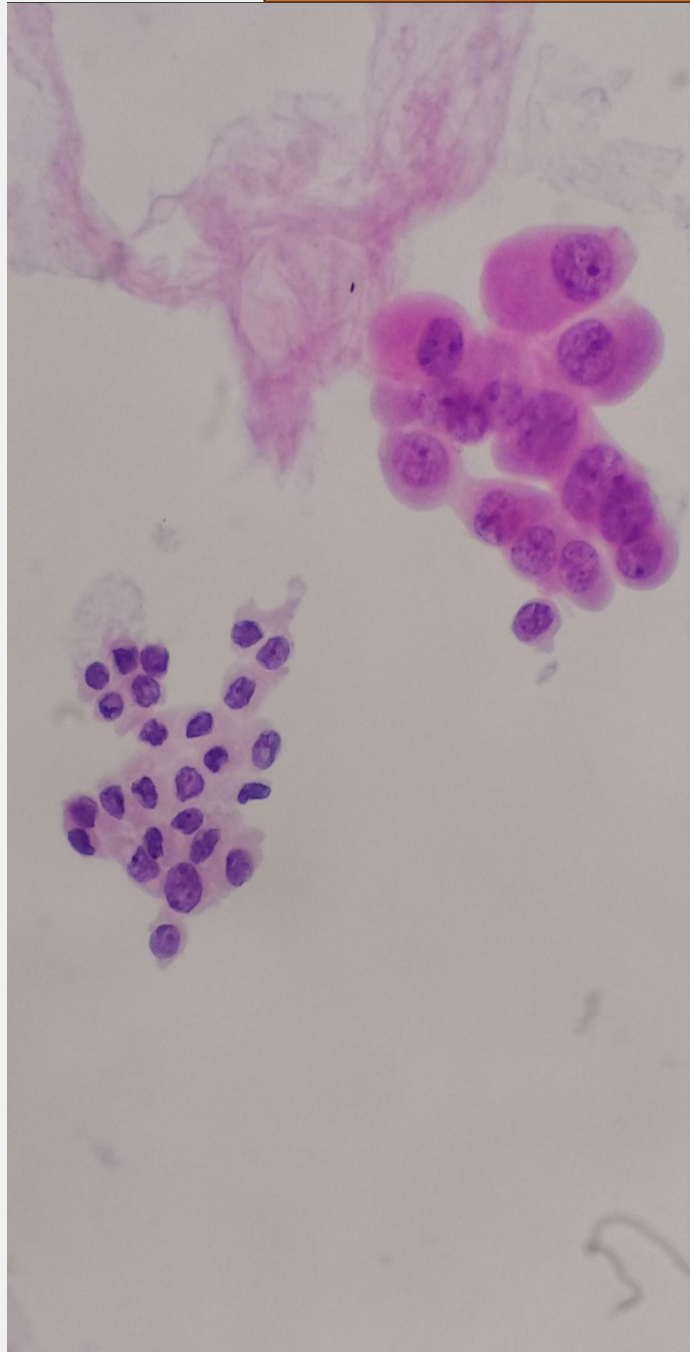
ARQUITECTURA

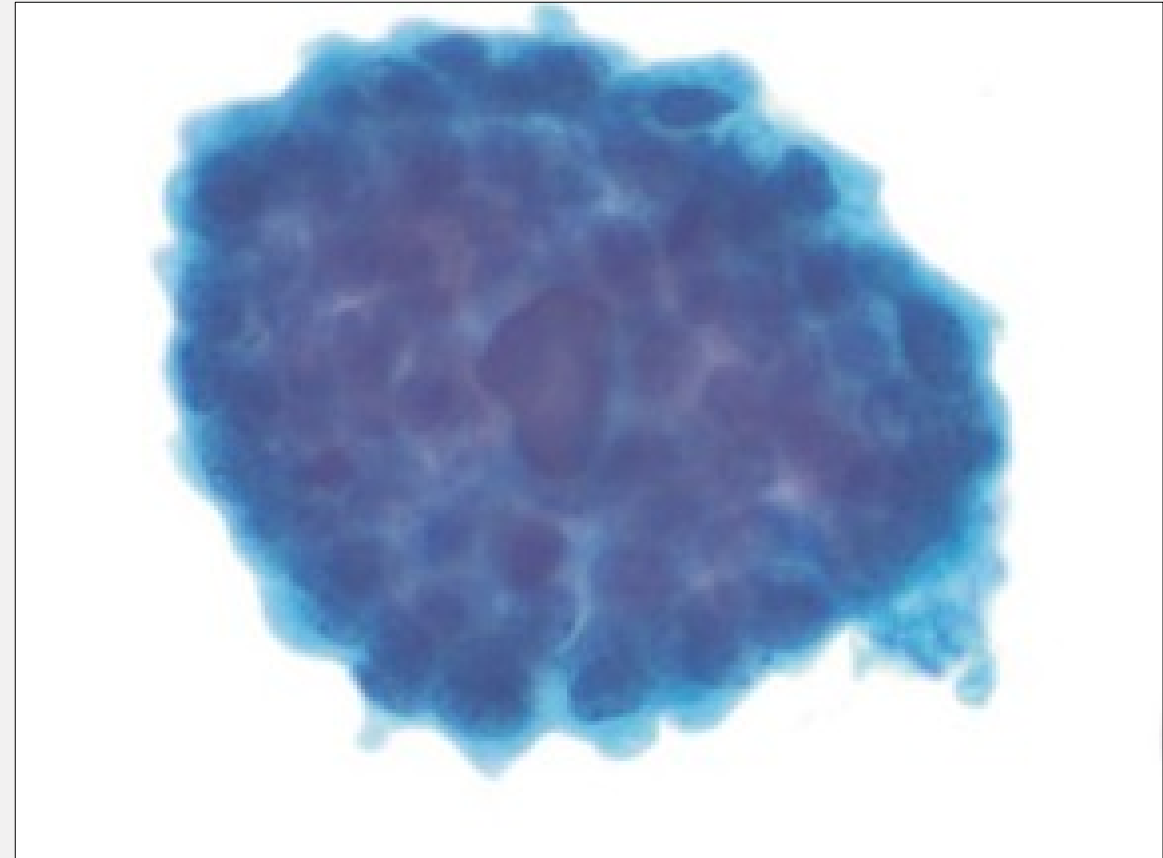
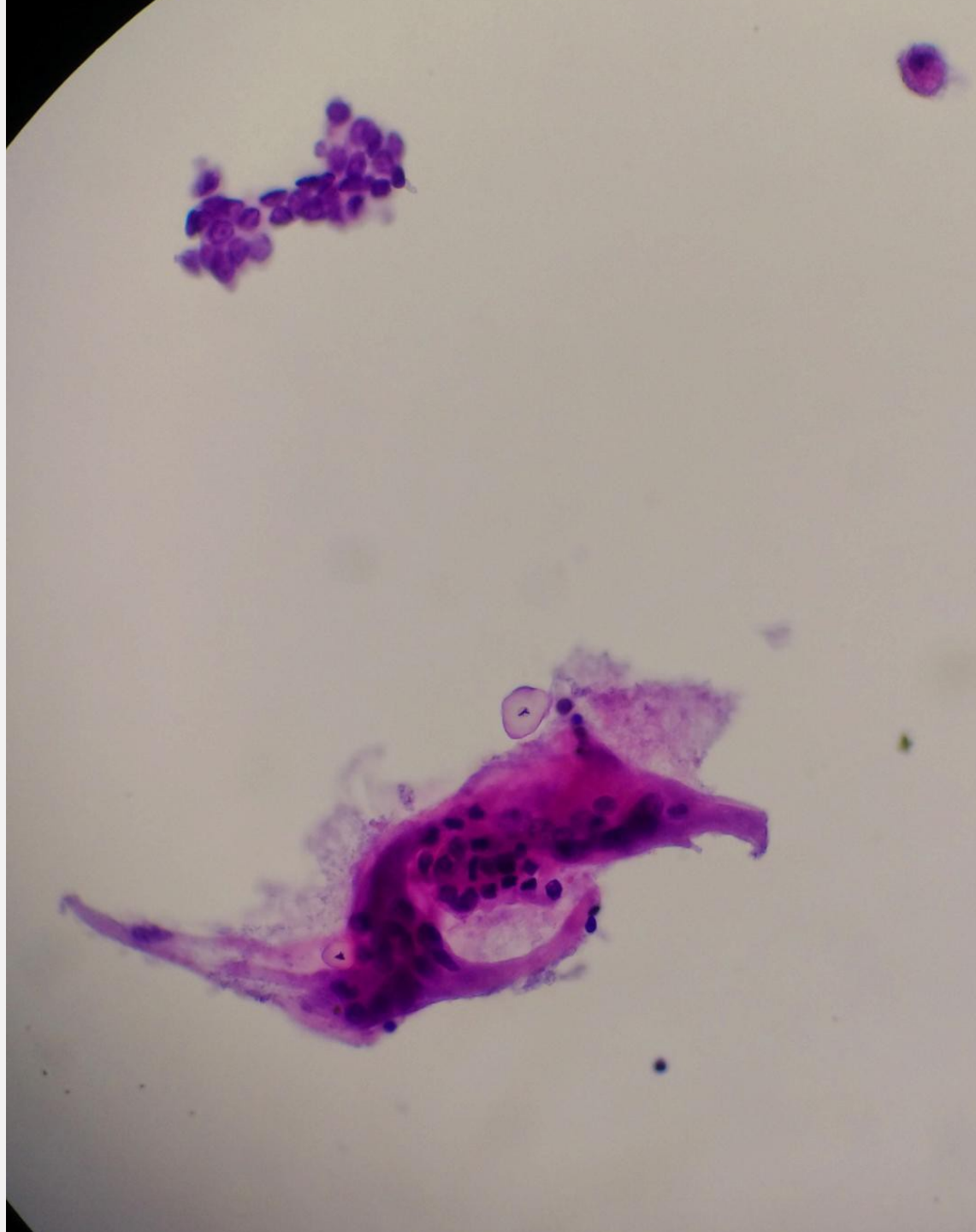


CATEGORIA 6



CATEGORIA 6



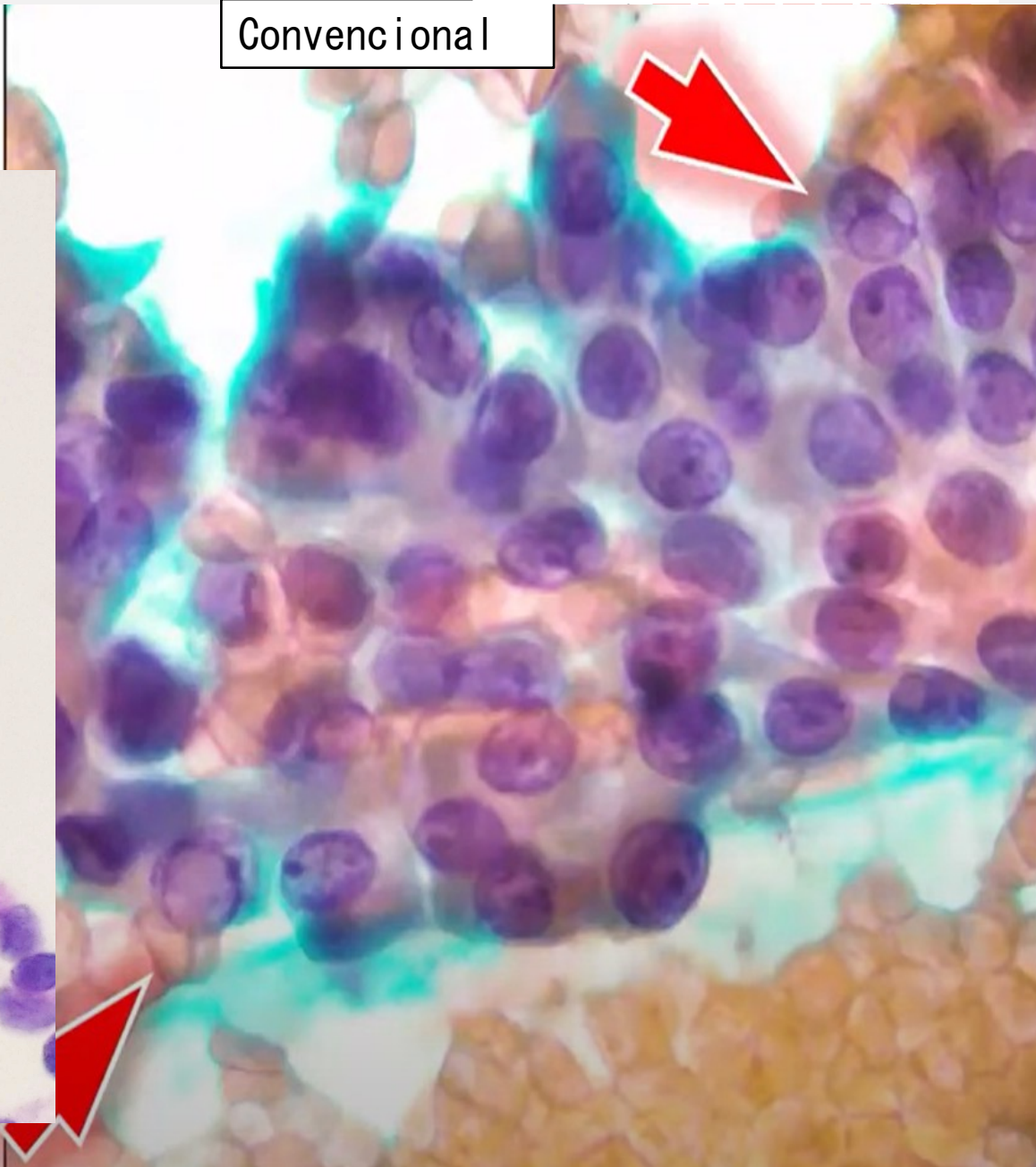
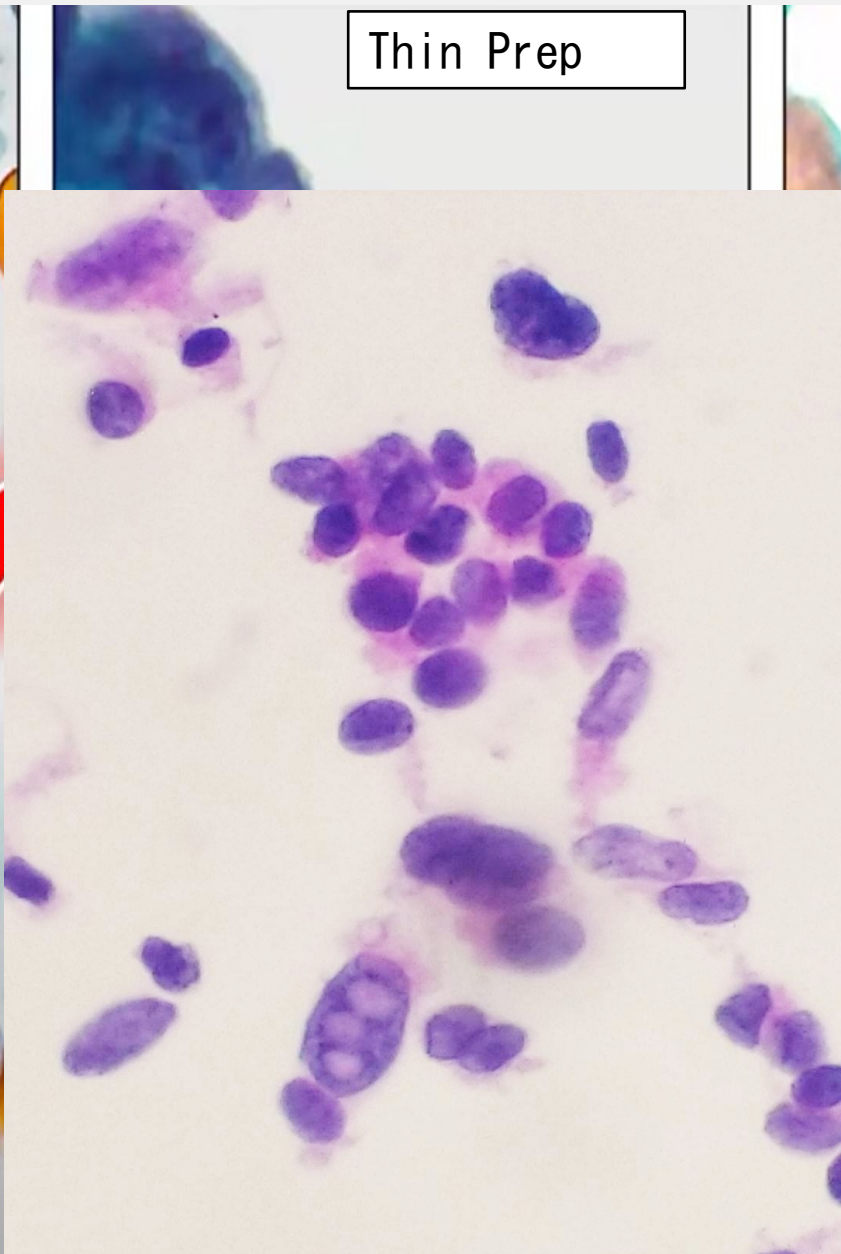
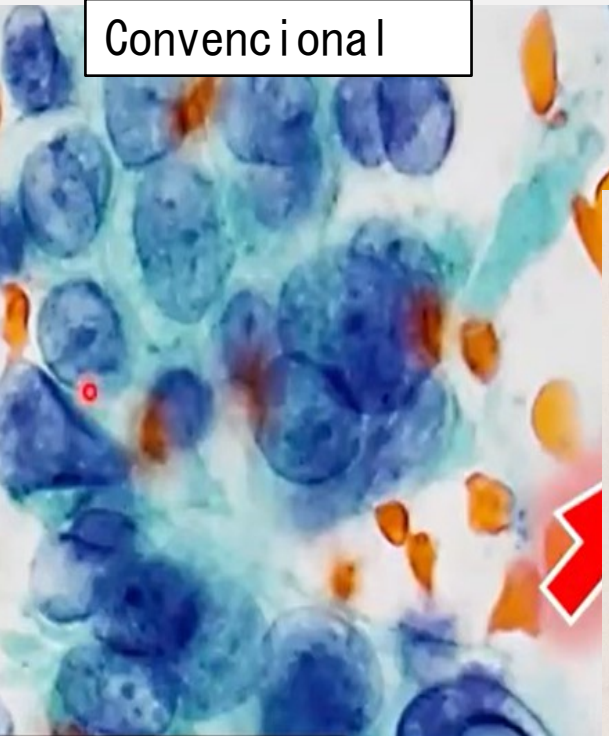


CARCINOMA PAPILAR

Convencional

Thin Prep

Convencional



ATIPIA NUCLEAR

Intensa

Moderada

Ninguna.
Leve

**CPVF
Infiltrativo**

**CPT-clásico
CP-células altas
Otros subtipos**

Citología
maligna
6 Bethesda

Nódulo hiperplásico

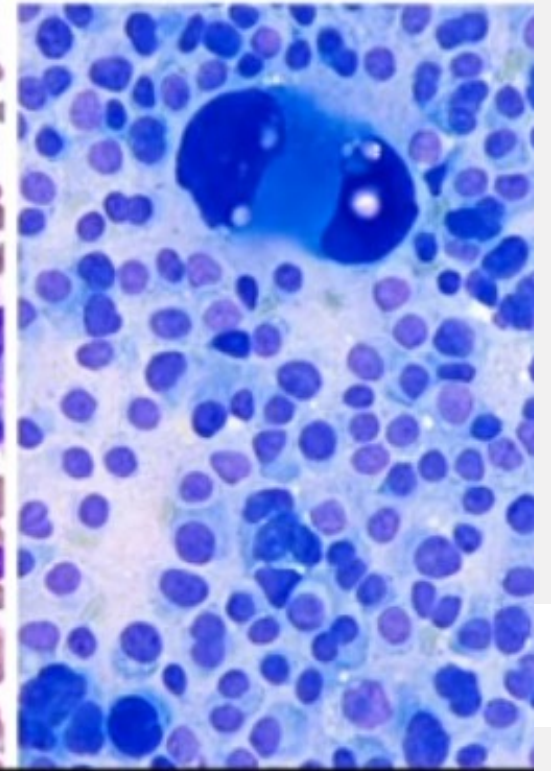
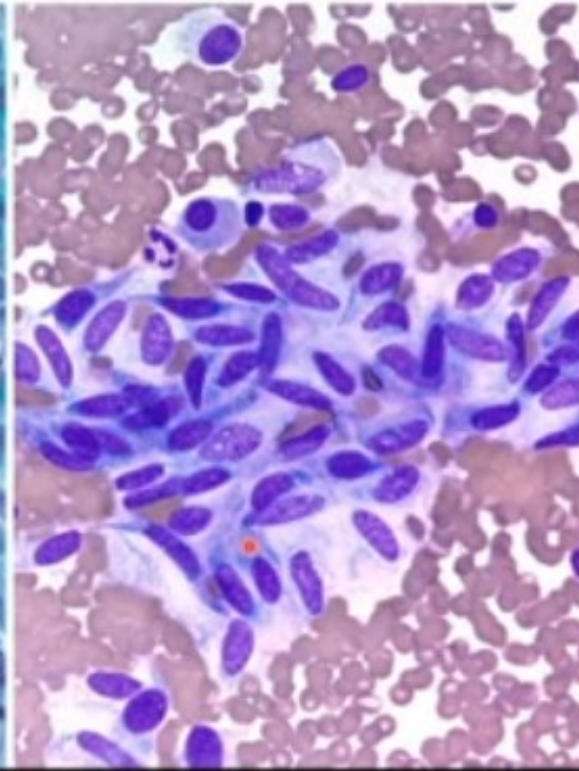
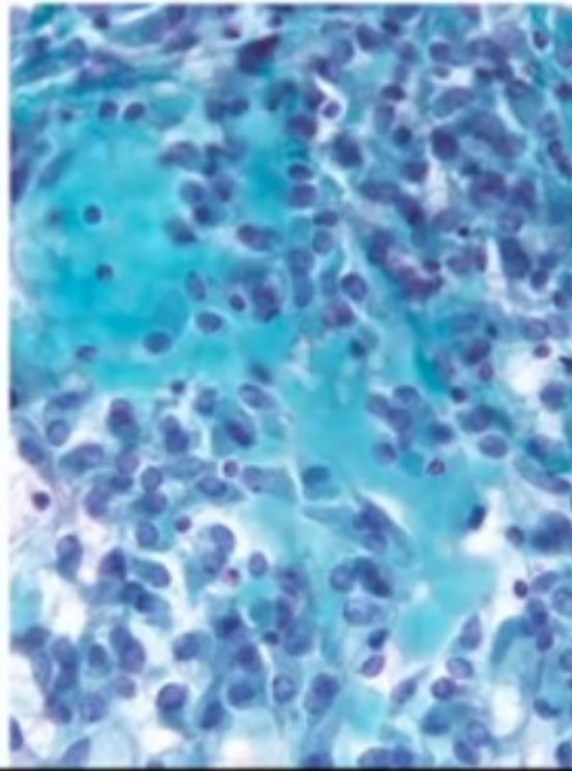
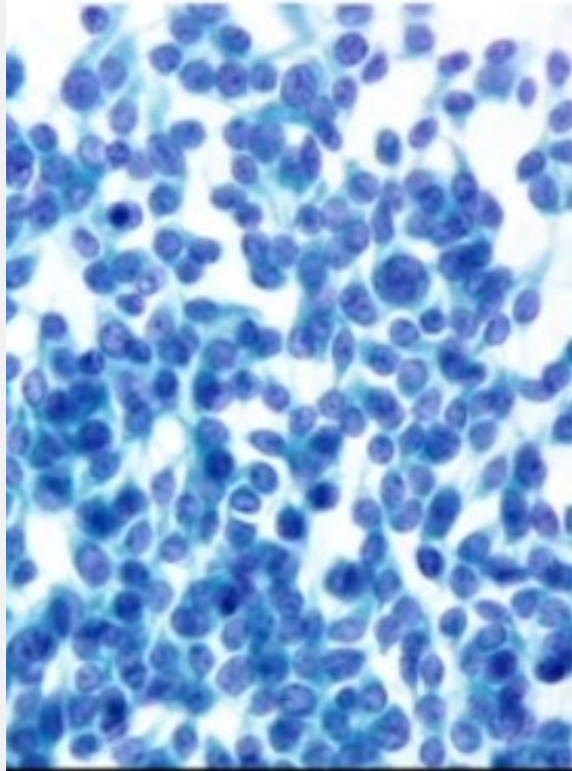
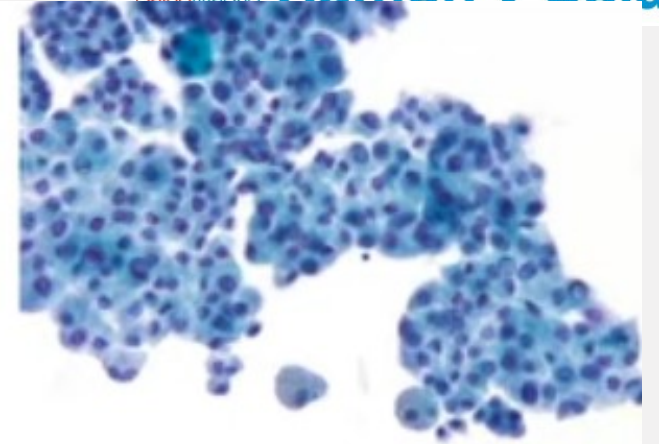
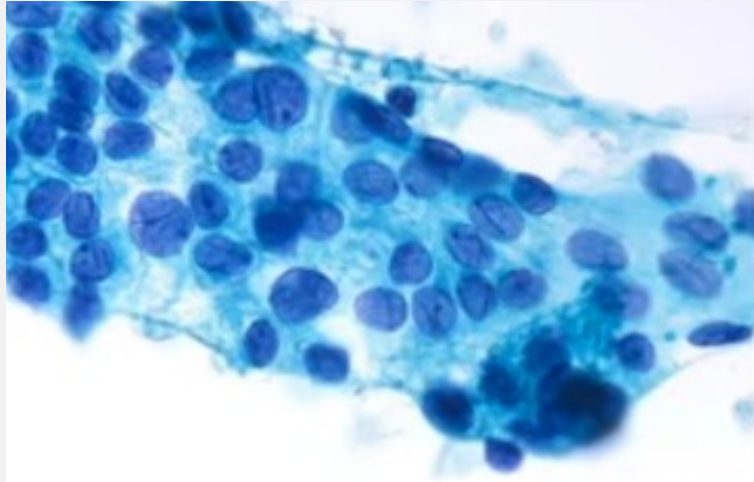
Macrofolicular

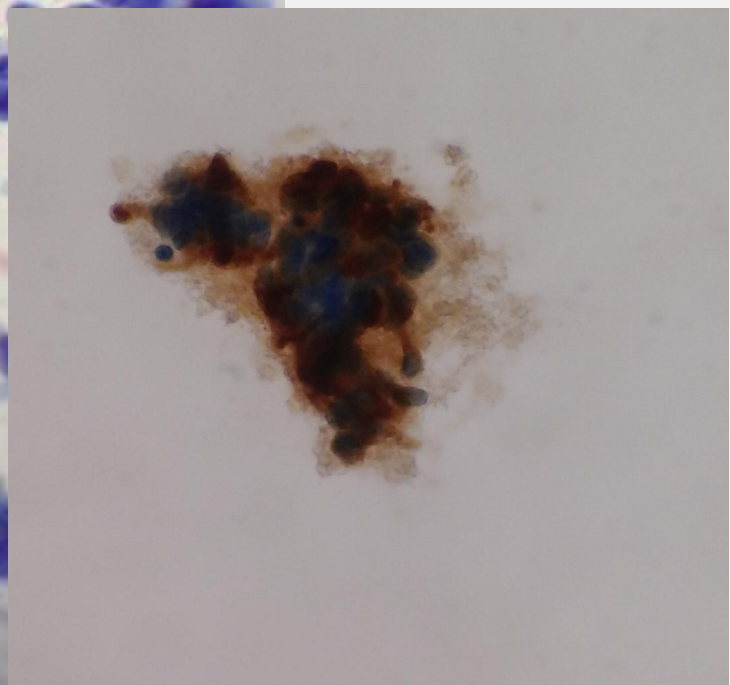
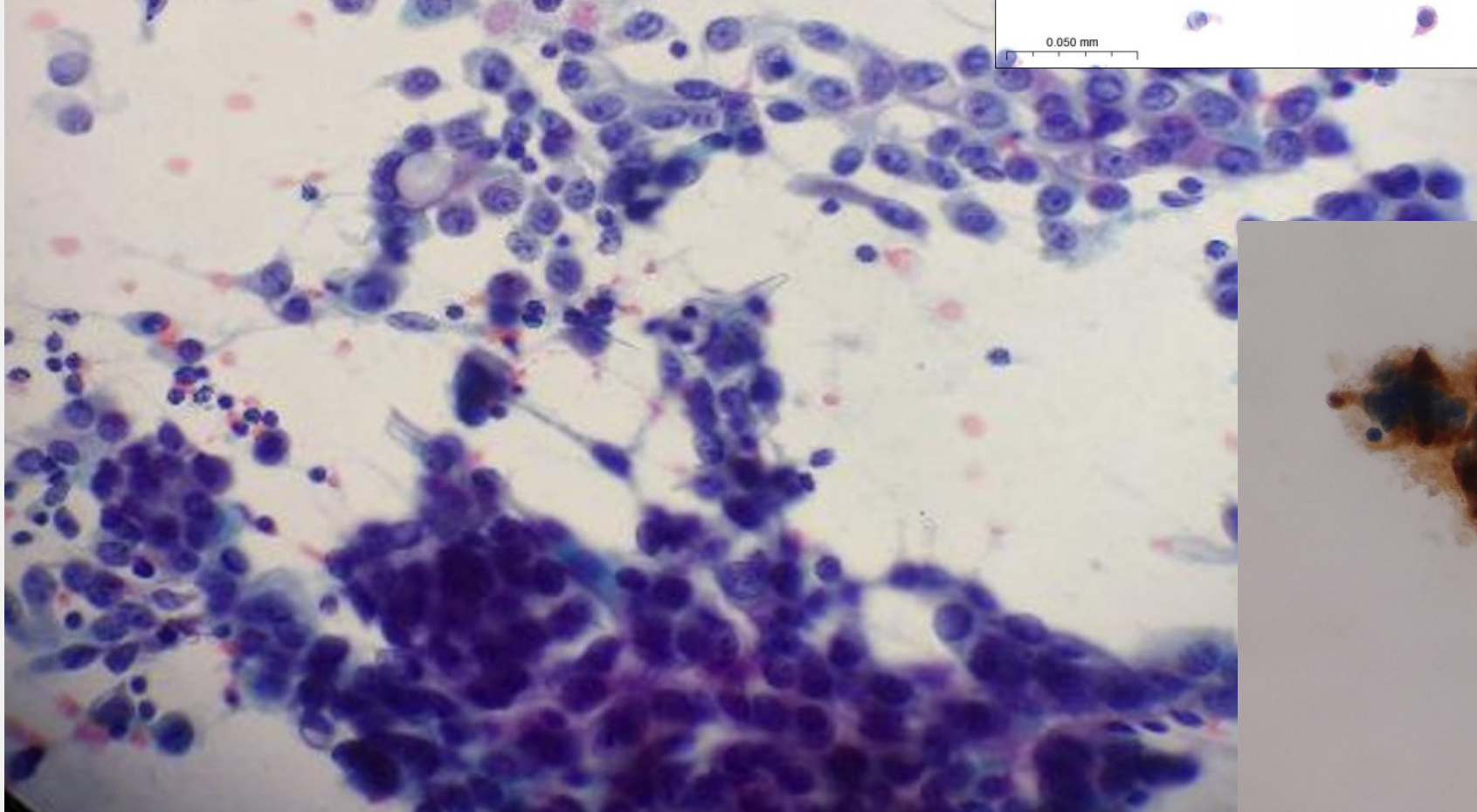
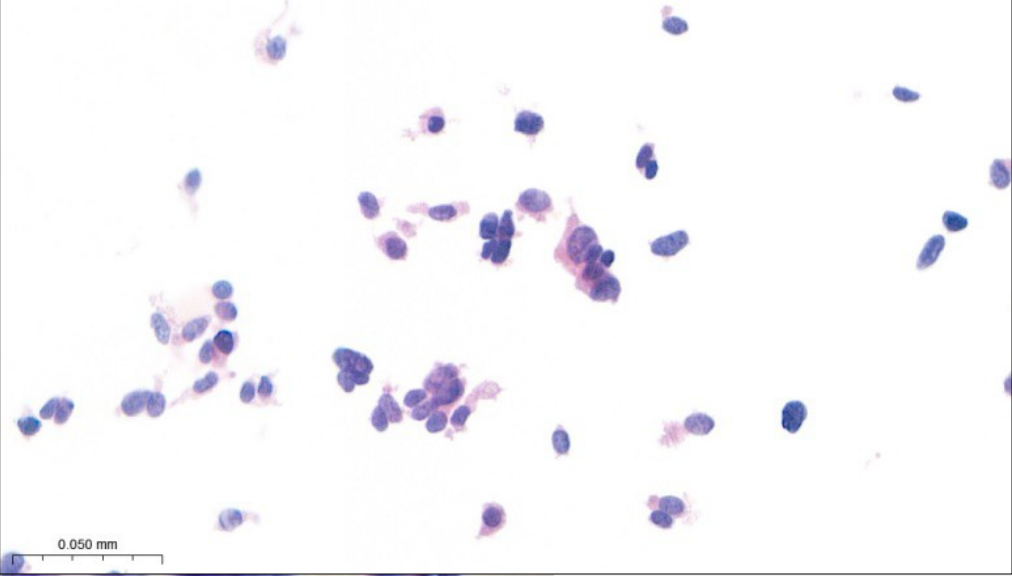
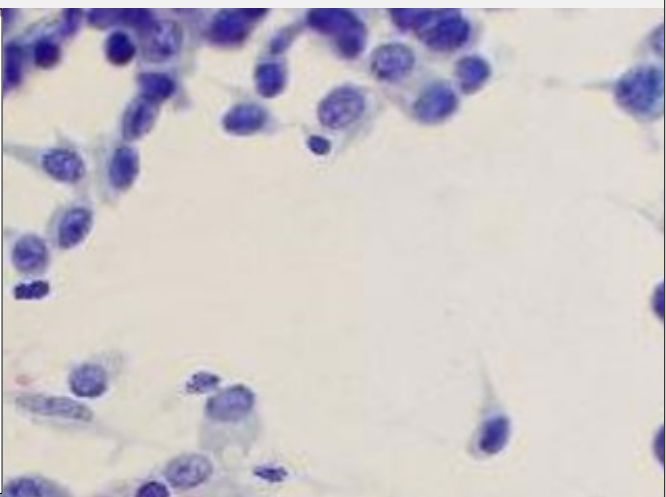
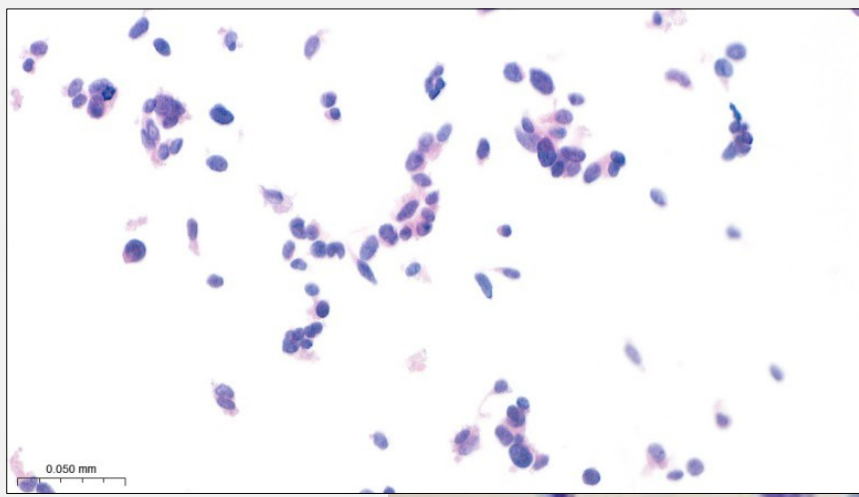
Microfolicular
Trabecular

Papilas y/o grupos
tridimensionales

ARQUITECTURA

CARCINOMA MEDULAR





TECNICAS DE INMUNOCITOQUIMICA

Diagnostic utility of immunocytochemistry by using liquid-based cytology (LBC) slides

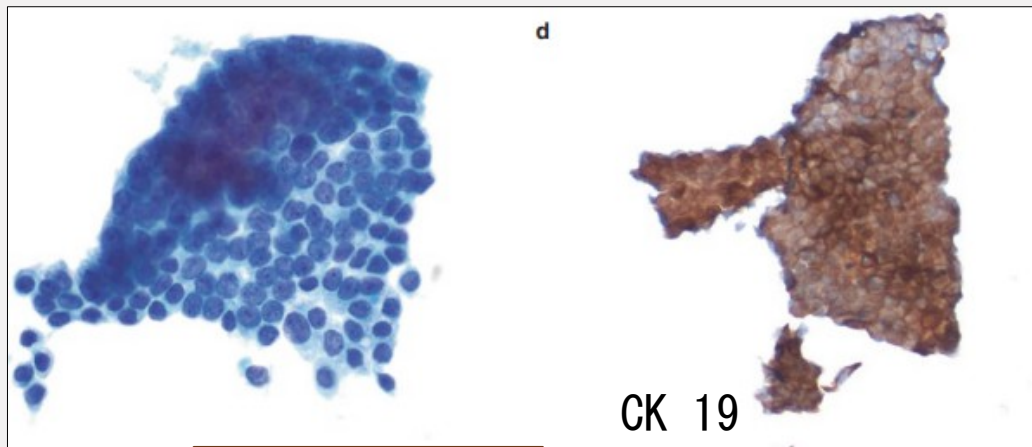
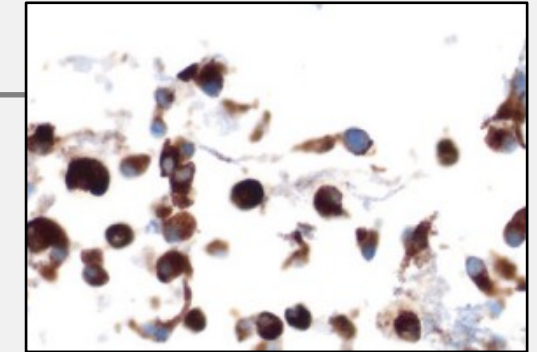
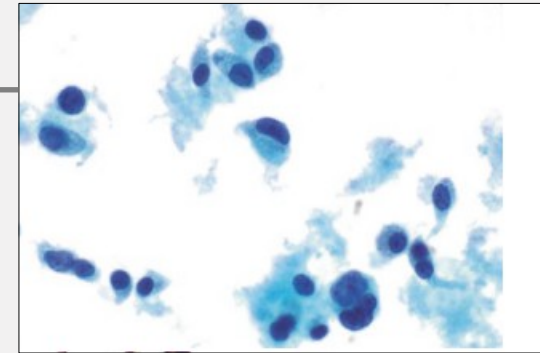
Ozben Yalcin¹, Senay Erdogan-Durmus², Enver Yarikkaya³

¹Prof. Dr. Cemil Tascioglu City Hospital, Department of Pathology, İstanbul, Turkiye

²Prof. Dr. Cemil Tascioglu City Hospital, Department of Pathology, Cytopathology Division, İstanbul, Turkiye

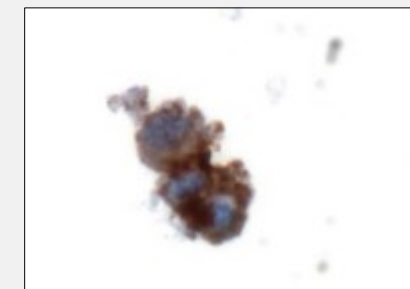
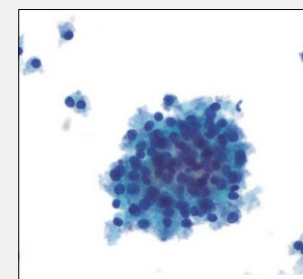
³İstanbul Training and Research Hospital, Department of Pathology, İstanbul, Turkiye

FOLIA HISTOCHEMICA
ET CYTOBIOLOGICA
Vol. 62, No. 1, 2024
pp. 1-12



CK 19
Galectina 3
HBME-1

CARCINOMA MEDULAR



CD45

Linfoma

THYROID
Volume 35, Number 8, 2025
© American Thyroid Association
DOI: 10.1177/10507256251363120

GUIDELINES

2025 American Thyroid Association Management Guidelines for Adult Patients with Differentiated Thyroid Cancer

Matthew D. Ringel,^{1,*} Julie Ann Sosa,^{2,*} Zubair Baloch,³ Lindsay Bischoff,⁴ Gary Bloom,⁵ Gregory A. Brent,⁶
Pamela L. Brock,⁷ Roger Chou,⁸ Robert R. Flavell,⁹ Whitney Goldner,¹⁰ Elizabeth G. Grubbs,¹¹
Megan Haymart,¹² Steven M. Larson,¹³ Angela M. Leung,^{5,14} Joseph Osborne,¹⁵ John A. Ridge,¹⁶
Bruce Robinson,¹⁷ David L. Steward,¹⁸ Ralph P. Tufano,¹⁹ and Lori J. Wirth²⁰

Paneles expresión microRNA

CATEGORIA TIPO III ,IV ,V BETHESDA)

Tumores BRAF v600E-like vs RAS-like

Muy alta probabilidad de cancer

Probabilidad de cancer

	BRAFv600E like	RAS-like
Mutaciones	BRAF v600E	H/K/NRAS, BRAFK601E; DICER1, EIF1AX, PTEN
Fusiones	RET, ALK, B RAF, NTRK 1-3, MET	PAX8::PPARG THADA
Tumores benignos o premalignos	ninguno	Adenoma folicular NIFTP
Tumores malignos	CPT clásico/CPT células altas	Carcinoma folicular CPT-VFE invasiva



BRAF V600E and *TERT* Promoter Mutations Cooperatively Identify the Most Aggressive Papillary Thyroid Cancer With Highest Recurrence

Xing et al

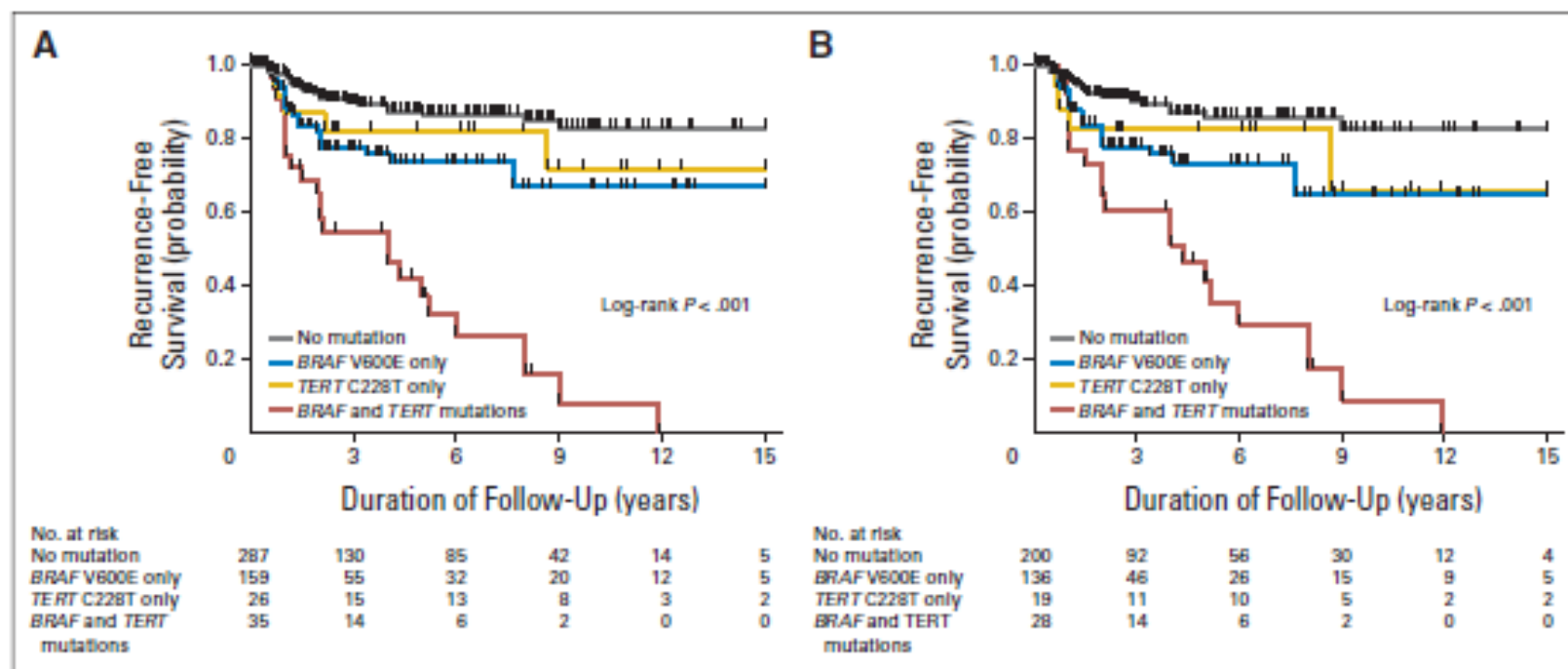


Fig 2. Kaplan-Meier analyses of the impacts of *BRAF* V600E or *TERT* C228T alone or their coexistence on disease-free survival of patients with papillary thyroid cancer (PTC). (A) Results of the analyses of patients with PTC of all types. (B) Results of the analyses of conventional variant PTC only. Four groups of patients are indicated in A and B, including patients with neither mutation (gray lines), *TERT* C228T mutation only (gold lines), *BRAF* V600E mutation only (blue lines), and coexistence of the two mutations (red lines).

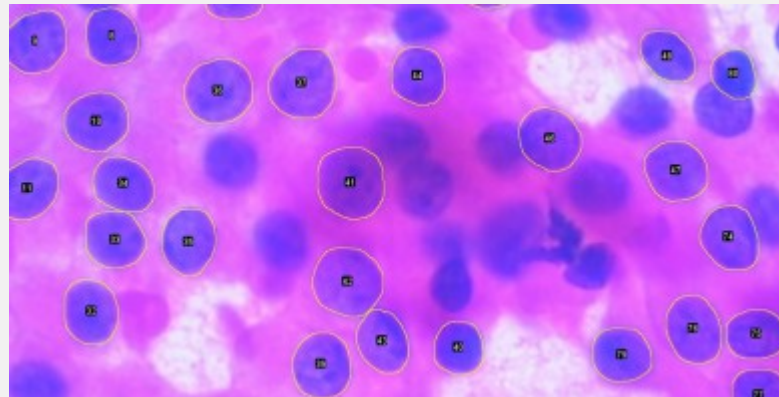
Digital analyses of nuclear features can help discriminate among non-invasive follicular thyroid neoplasm with papillary-like nuclear features, papillary thyroid carcinoma follicular subtype, and follicular carcinoma in cytological specimens

Fábio Massahito Yamamoto¹ | Leonardo Carnevalli Liano² | Deolino João Camilo-Júnior³ | José Cândido Caldeira Xavier-Junior^{1,2,3}

Cytopathology. 2024;35:98–104.

PARAMETROS NUCLEARES

- Area
- Perímetro
- Anchura
- Altura
- Circularidad



NIFTP > CF > CPVF

([https:// imagej.nih.gov/ij/](https://imagej.nih.gov/ij/))

CONCLUSIONES

CASO 1

Mujer de 78 años

AP: Divertículos de colon y polipos intestinales

EA: Deterioro cognitivo en las últimas semanas, somnolencia, refiere “pérdida de la cabeza”, ideas suicidas

Analítica:

Proteína C Reactiva: elevada, leucocitosis. Serología: negativa

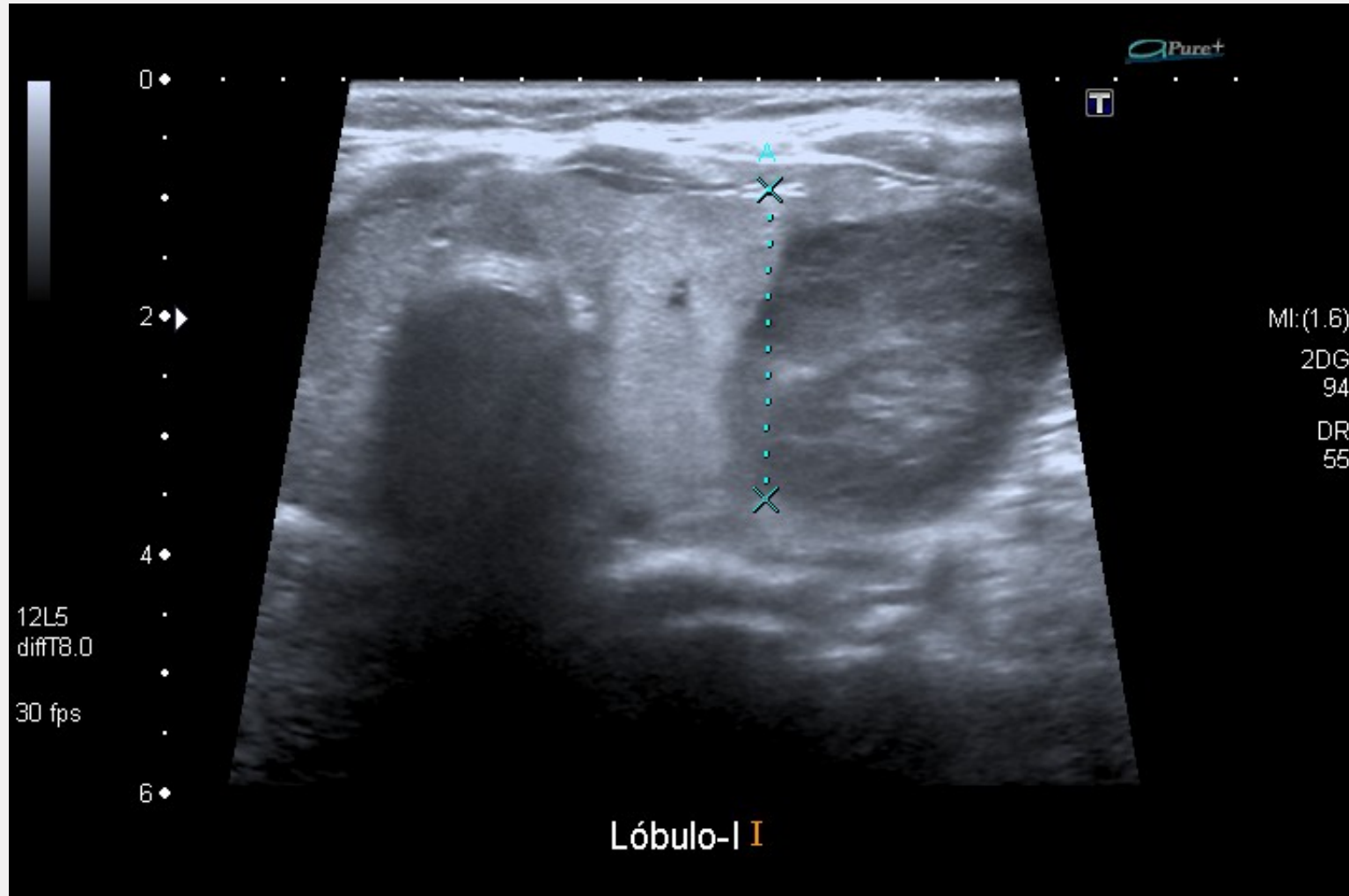
T3 libre: 1660, IgG TPO: 245; IgG ATG: 170

Estudio AC neuronales de Superficie:

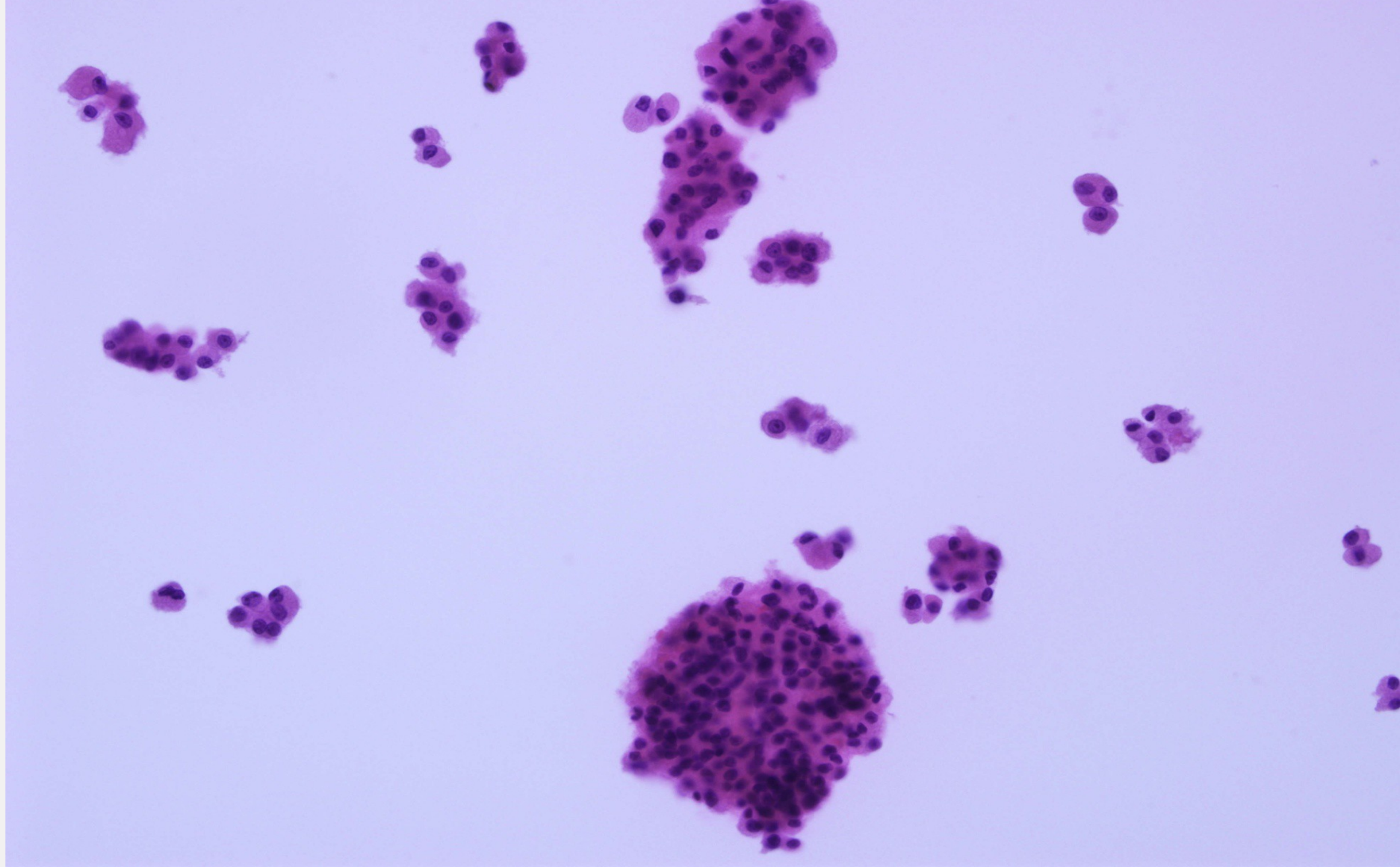
- Suero : IgG anti LGI1: Positivo 1/40 (N-1/10)
- **LCR: IgG anti-LGI1: Positivo 1/10 (N 1/1)**

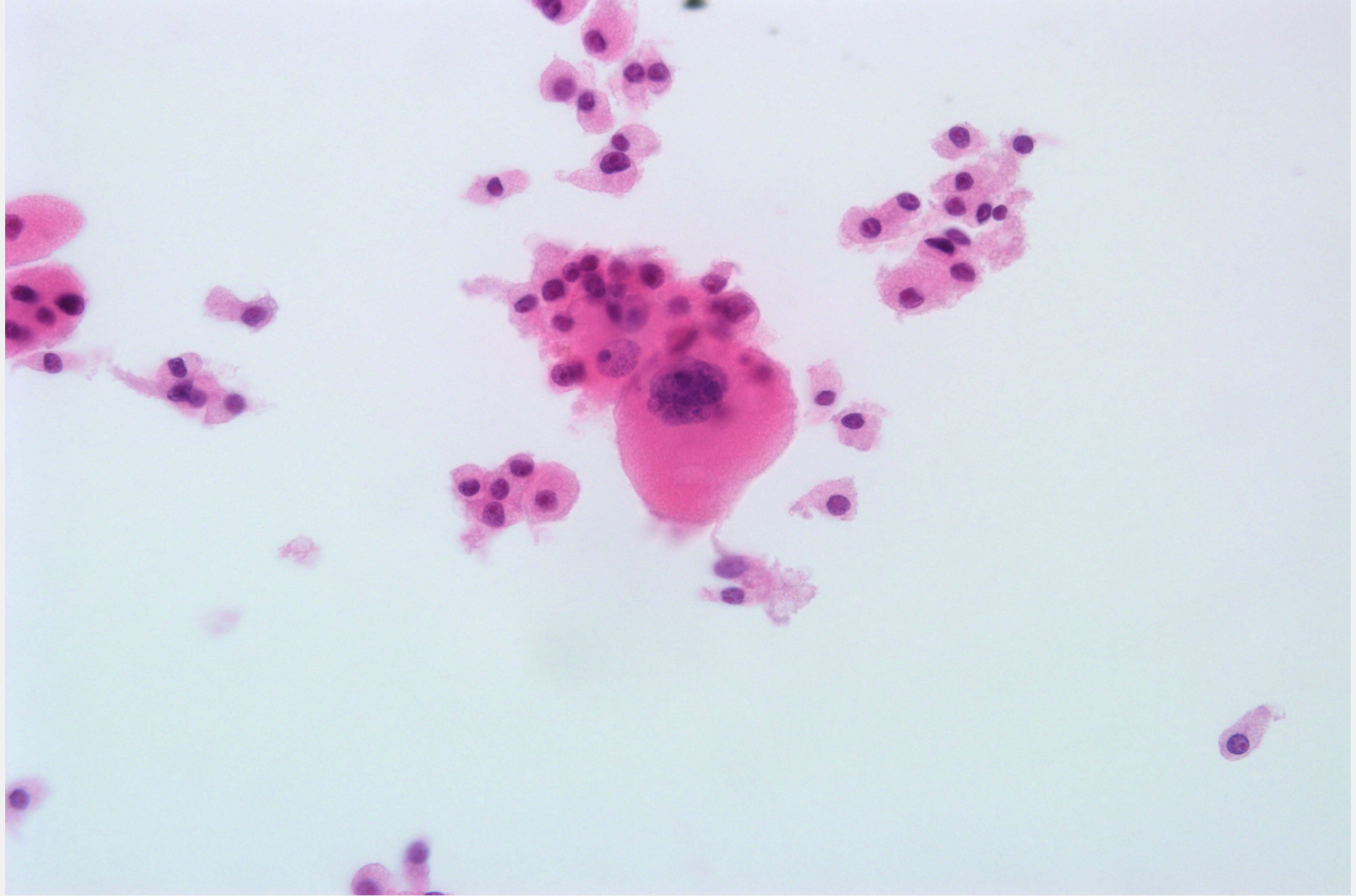
RM cerebral: Lesion hiperintensa en rama arteria basilar de 10X5mm (isquemia)

ECOGRAFIA TIROIDES



Tirradi 4
LTI

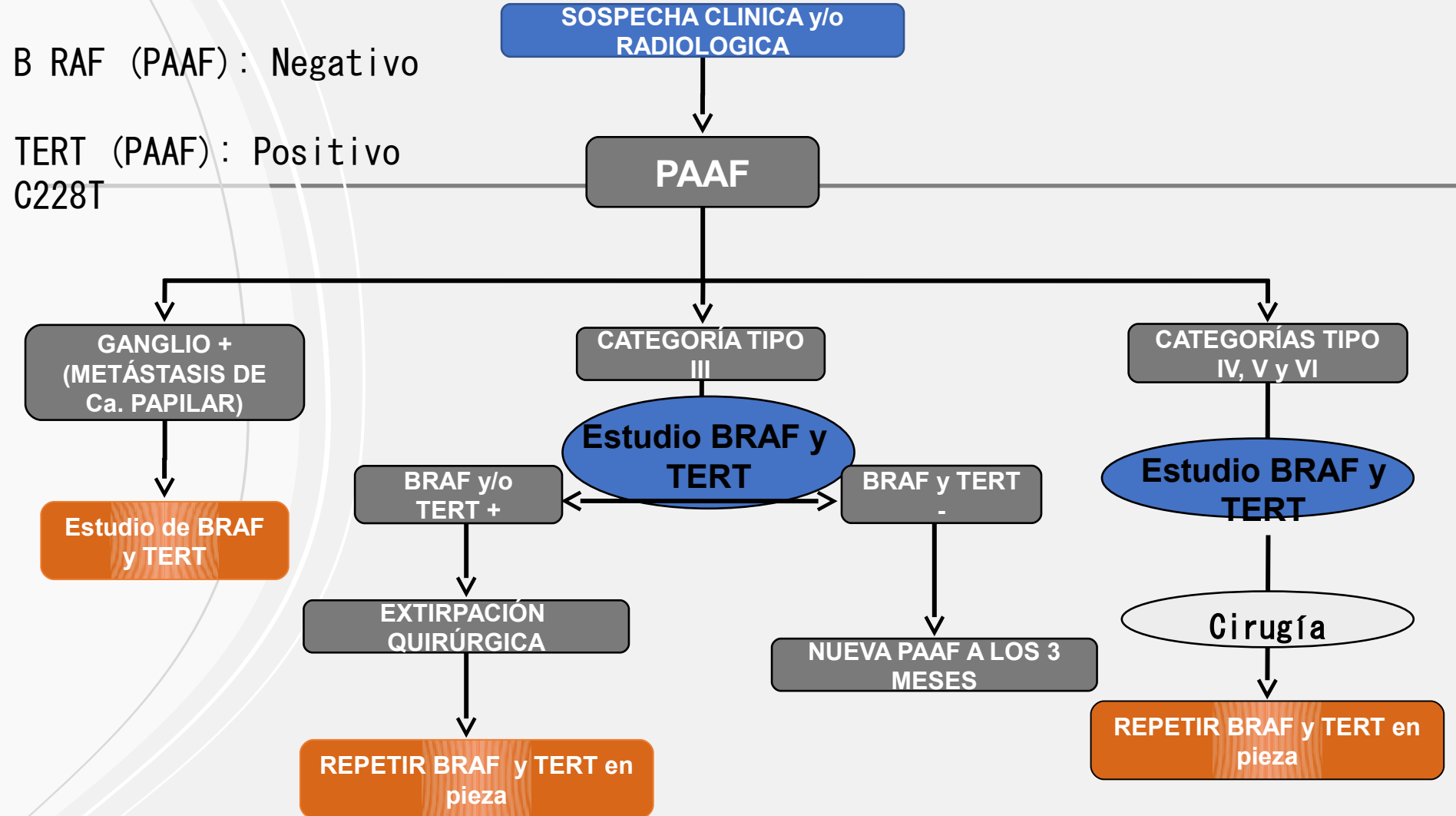




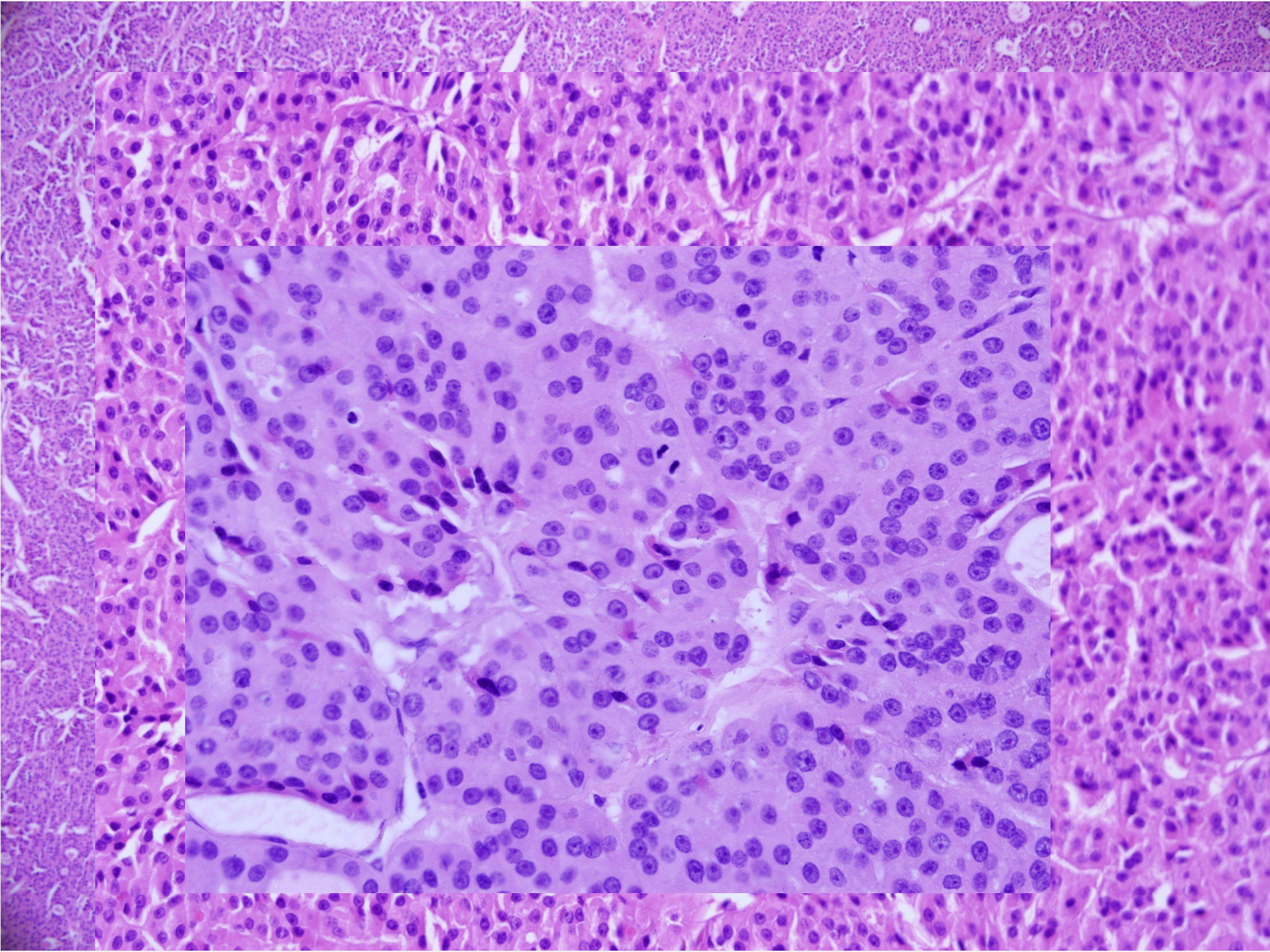
¿QUE CATEGORIA BETHESDA SERIA LA CORRECTA???

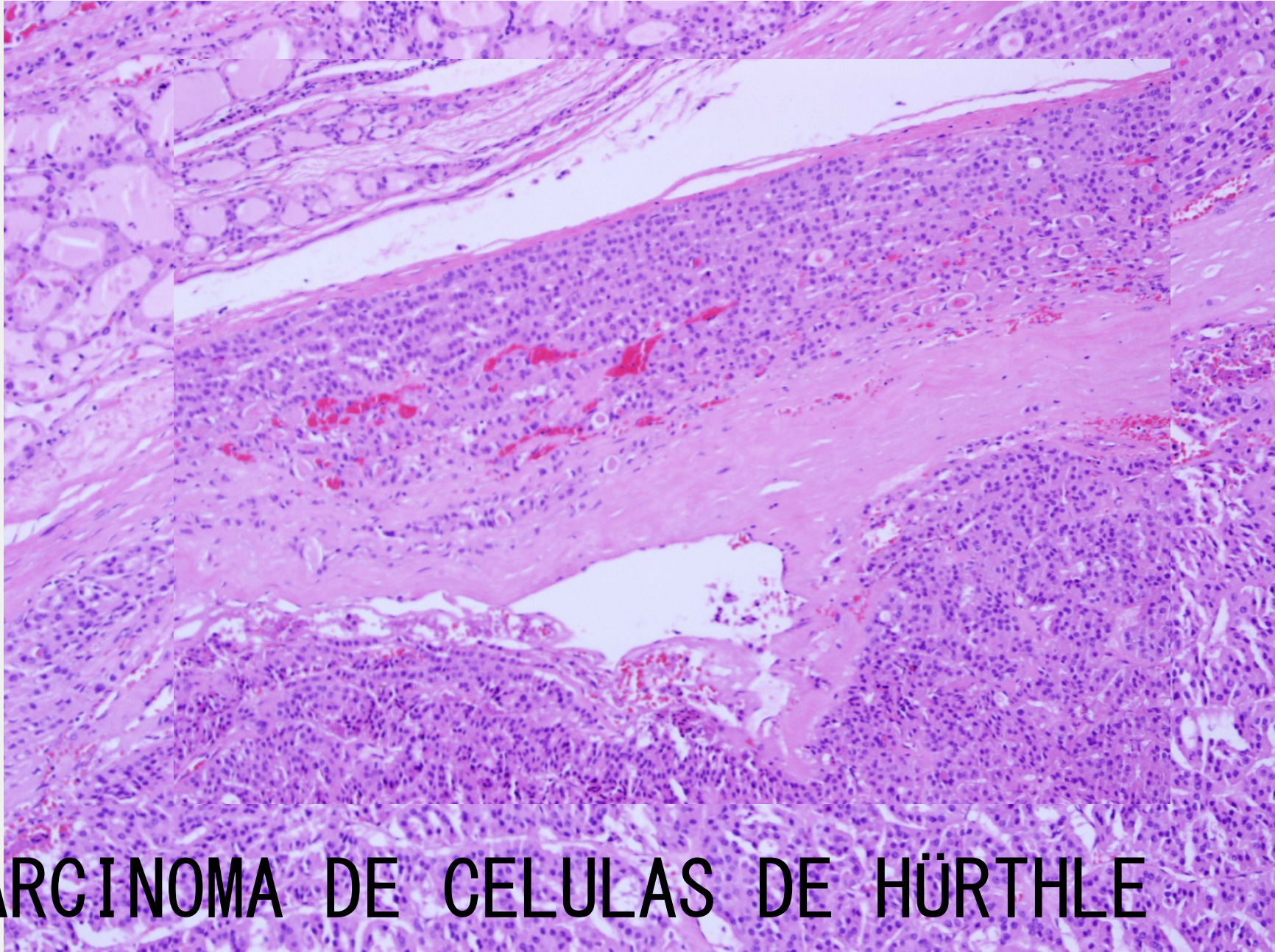
1. CATEGORIA II Bethesda
2. CATEGORIA III Bethesda
3. CATEGORIA IV Bethesda
4. CATEGORIA V Bethesda
5. CATEGORIA VI Bethesda

PROTOCOLO PARA DETERMINACIONES MOLECULARES EN TIROIDES









CARCINOMA DE CELULAS DE HÜRTHLE



Case Report: Anti-LGI1 Limbic Encephalitis Associated With Anti-thyroid Autoantibodies

Ricardo Otiniano-Sifuentes¹, Anali Cuba Antezana², Walter F. De La Cruz Ramirez³, Kevin Pacheco-Barrios^{4*} and Darwin A. Segura Chavez^{5*}

¹ Department of Neurovascular Diseases, Instituto Nacional de Ciencias Neurológicas, Lima, Peru, ² Servicio de Neurología y Neuropsiquiatría, Departamento de Medicina, Hospital Nacional Cayetano Heredia, Lima, Peru, ³ Departamento de Investigación, Docencia y Atención Especializada en Epilepsia, Instituto Nacional de Ciencias Neurológicas, Lima, Peru, ⁴ Unidad de Investigación para la Generación y Síntesis de Evidencias en Salud, Universidad San Ignacio de Loyola, Lima, Peru, ⁵ Centro Básico de Investigación en Enfermedades Neuromusculares, Instituto Nacional de Ciencias Neurológicas, Lima, Peru

Antibodies	Syndrome	Associated cancers
Against intracellular antigen		
Hu (ANNA1)	Limbic encephalitis	SCLC
Ma2	Limbic encephalitis	Testicular seminoma
GAD	Limbic encephalitis	Thymoma, SCLC
CRMP5	Encephalomyelitis Chorea PCD	SCLC, thymoma
Ri (ANNA2)	Brainstem encephalitis Opsoclonus myoclonus	Breast, SCLC
Yo (PCA1)	PCD	Ovary, breast
Amphiphysin	Stiff-person syndrome Myelopathy and myoclonus Encephalomyelitis	Breast, SCLC
Against synaptic receptors		
NMDA receptor	Encephalitis	
AMPA receptor	Limbic encephalitis	Thymoma, SCLC
GABA _B receptor	Limbic encephalitis	SCLC
GABA _A receptor	Encephalitis	Thymoma
mGluR5	Encephalitis	Hodgkin's lymphoma
Against ion channels and other cell surface proteins		
LGI1	Limbic encephalitis	Thymoma
Caspr2	Morvan's syndrome Limbic encephalitis	Thymoma
DPPX	Encephalitis	Lymphoma

AMPA, α -amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid; ANNA, antinuclear-nuclear antibody; CRMP-5, collapsin response mediator protein; DPPX, dipeptidyl-peptidase-like protein-6; GABA, gamma-aminobutyric acid; GAD, glutamic acid decarboxylase; LGI, leucine-rich glioma-inactivated protein; NMDA, N-methyl-D-aspartate; PCA, Purkinje cell antibody; PCD, posterior cerebellar degeneration; SCLC, small cell lung cancer.

· ENCEFALITIS AUTOINMUNE

Descrita por Josep Dalmau en 2010.

Grupo de enfermedades con síntomas neuropsiquiátricos y asociadas con anticuerpos contra proteínas de membrana, canales de iones, receptores

5-8 casos por 100.000 habitantes

La encefalitis LGI 1 es la segunda en frecuencia (0,83 casos por millón).

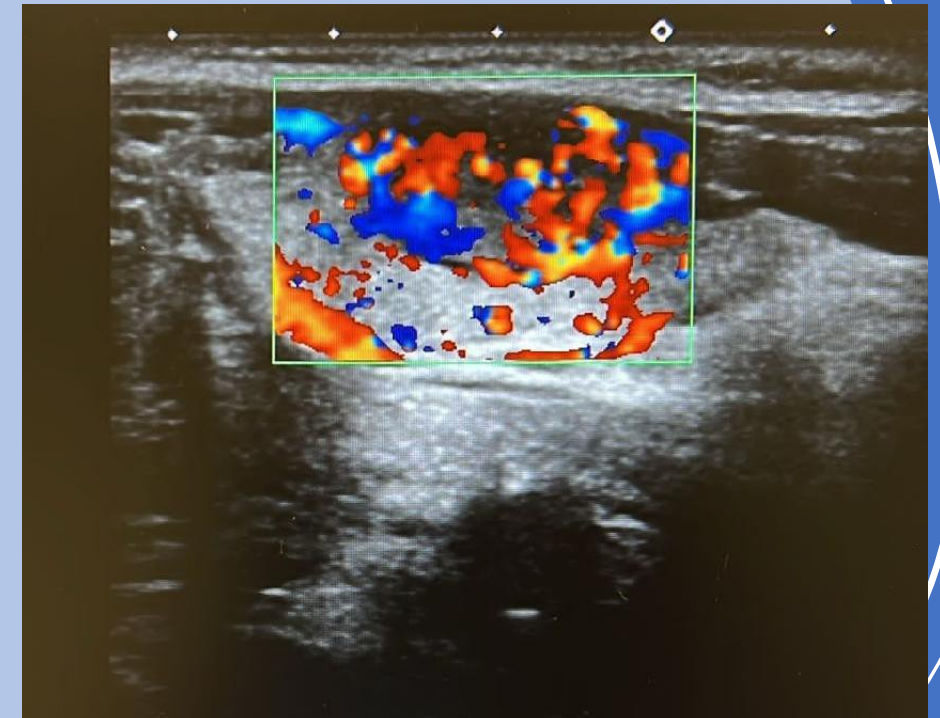
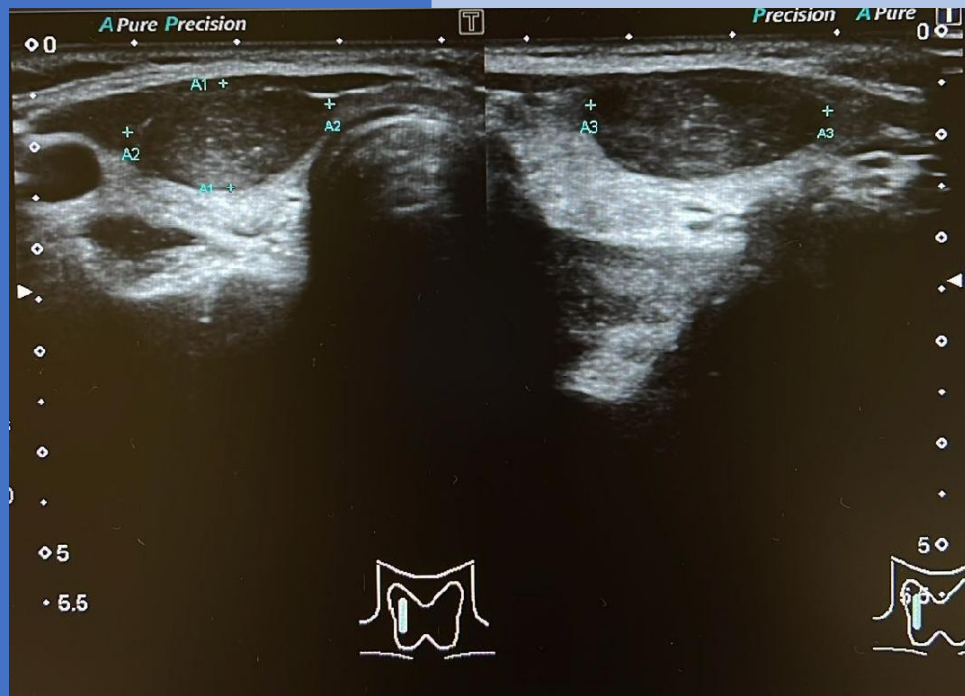
Paraneoplásicas

Tratamiento: Corticoides, globulina intravenosa, ciclofosfamida

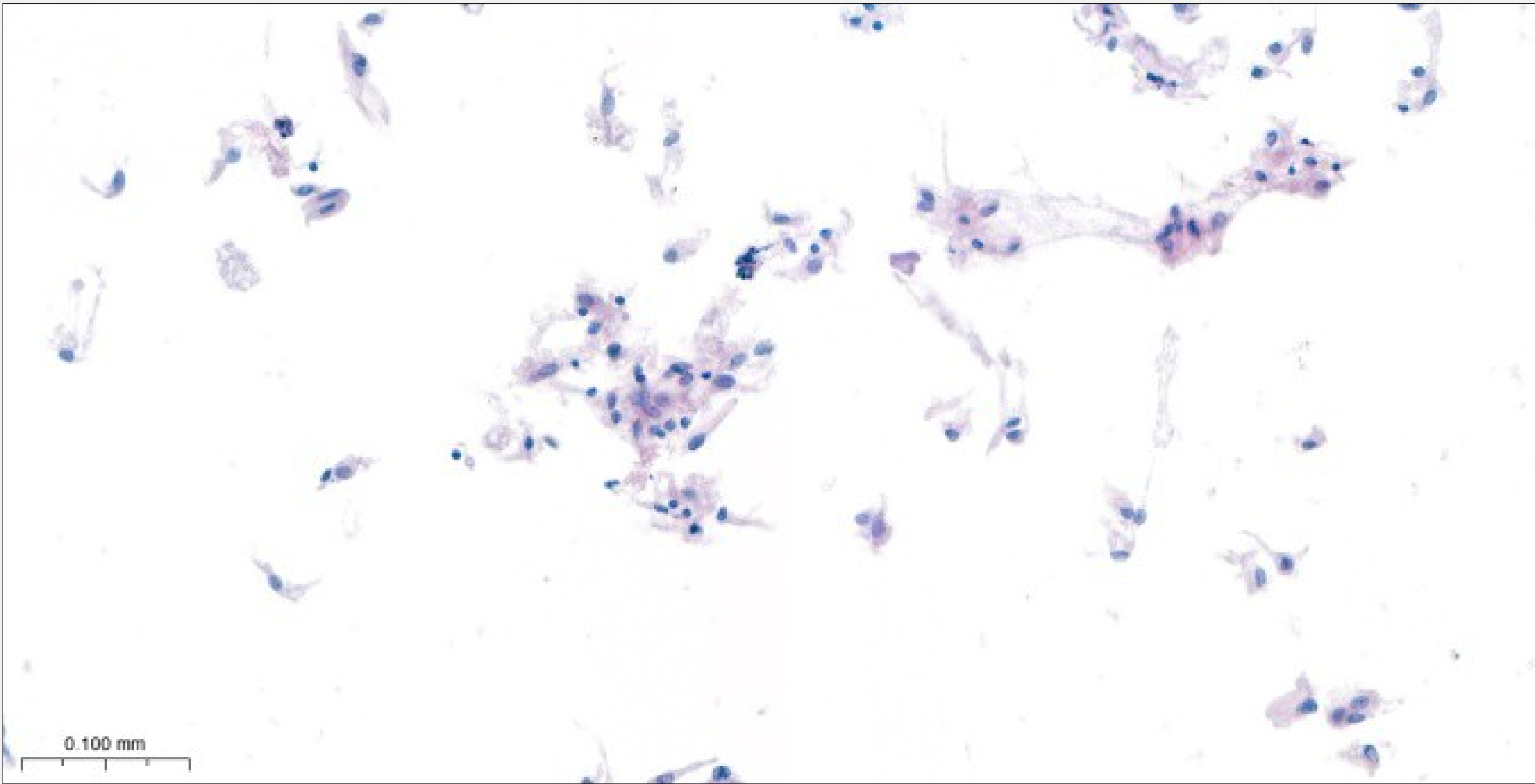
Mujer 38 años

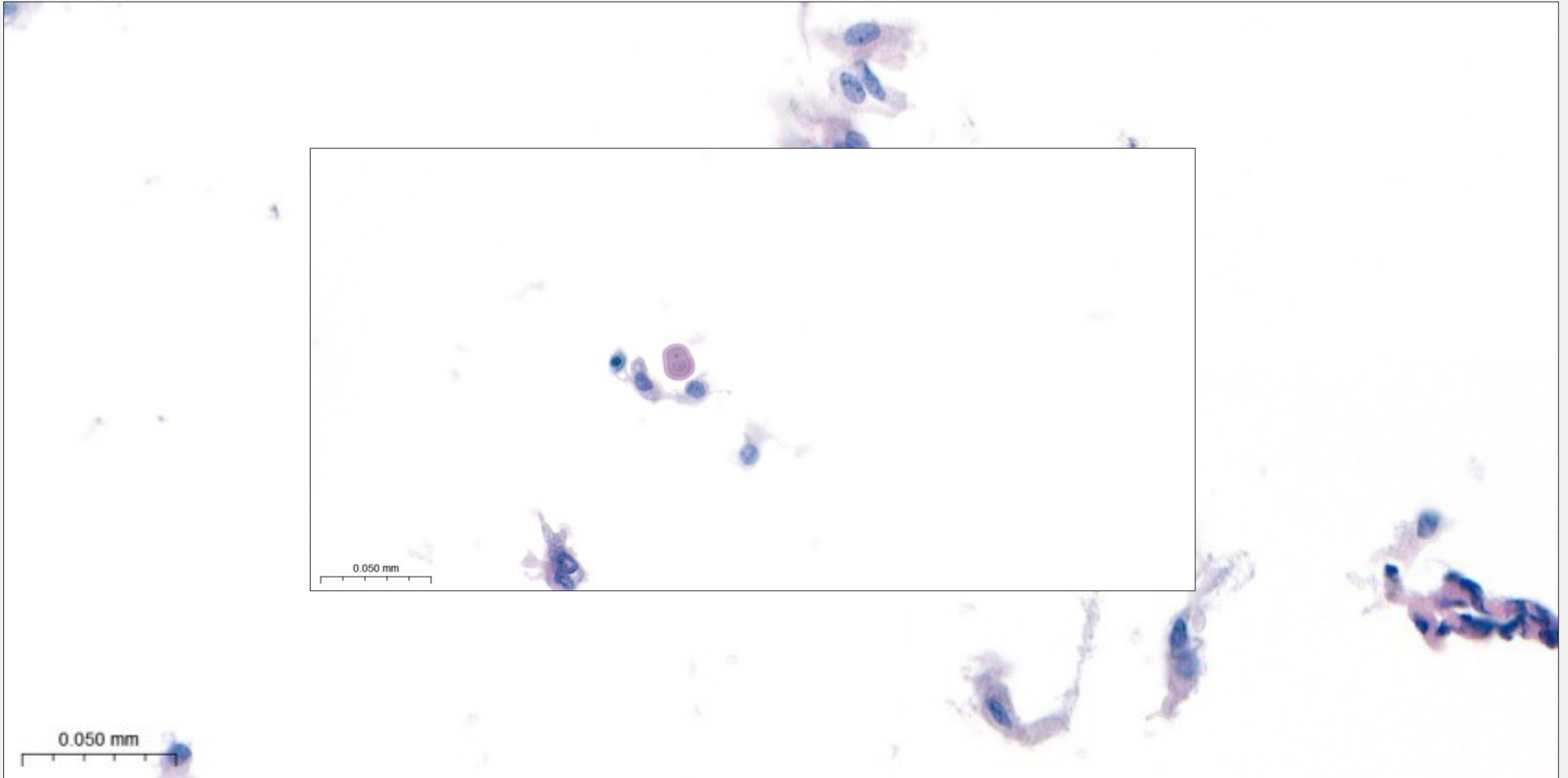
Nodulo solido en LTD

CASO 2



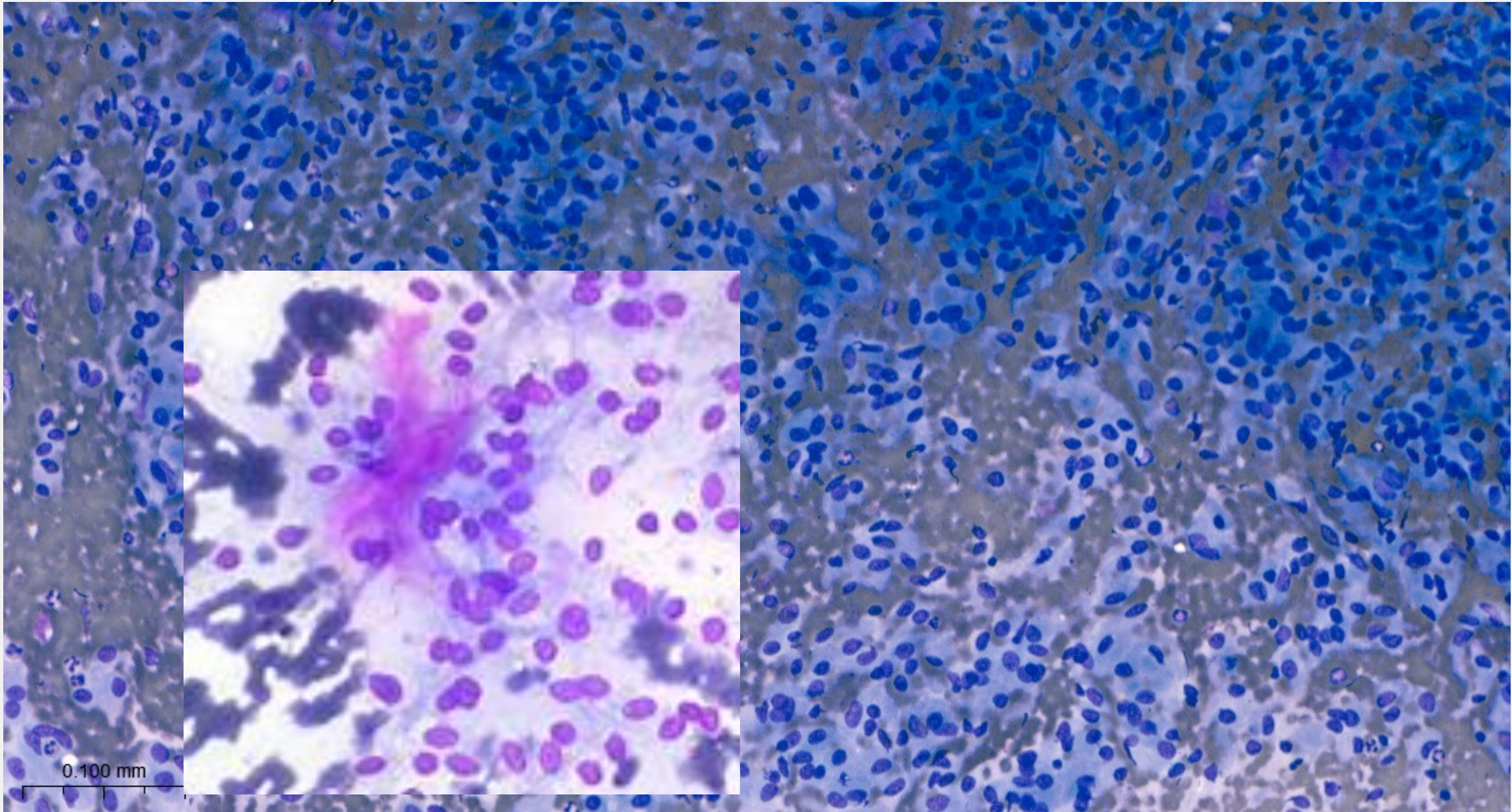
Tirrads-4

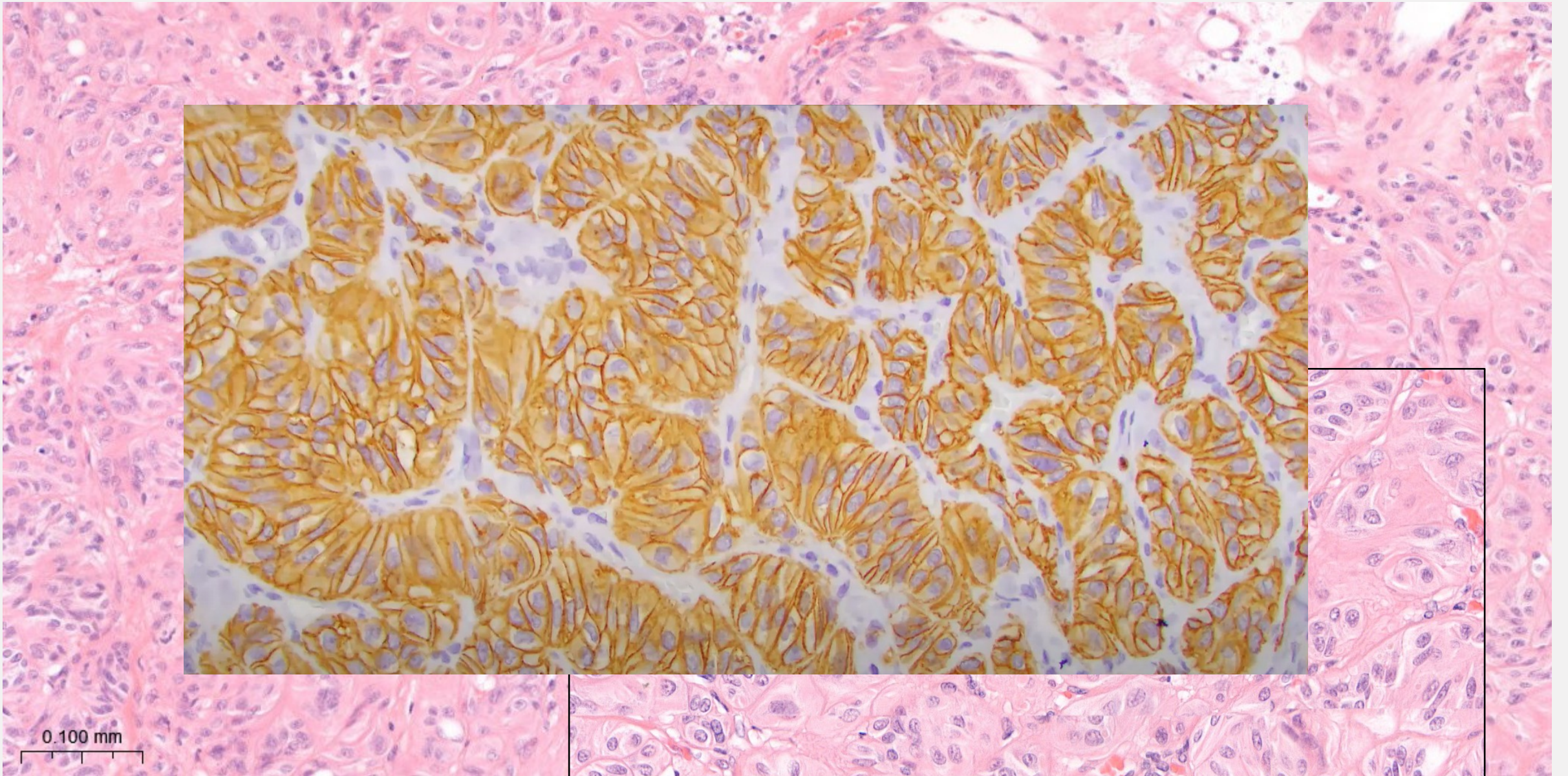




**¿QUE
CATEGORIA
BETHESDA
SERIA LA
CORRECTA???**

1. CATEGORIA II Bethesda
2. CATEGORIA III Bethesda
3. CATEGORIA IV Bethesda
4. CATEGORIA V Bethesda
5. CATEGORIA VI Bethesda





PAX 8-GLIS 1/3



2022 WHO Classification of Thyroid Neoplas

Follicular cell-derived neoplasms

Benign tumours

- Thyroid follicular nodular disease
- Follicular thyroid adenoma
- Follicular thyroid adenoma with papillary architecture
- Oncocytic adenoma of the thyroid

Low risk neoplasms

- Non-invasive follicular thyroid neoplasm with papillary-like nuclear features (NIFTP)
- Thyroid tumours of uncertain malignant potential
- Hyalinizing trabecular tumour of thyroid

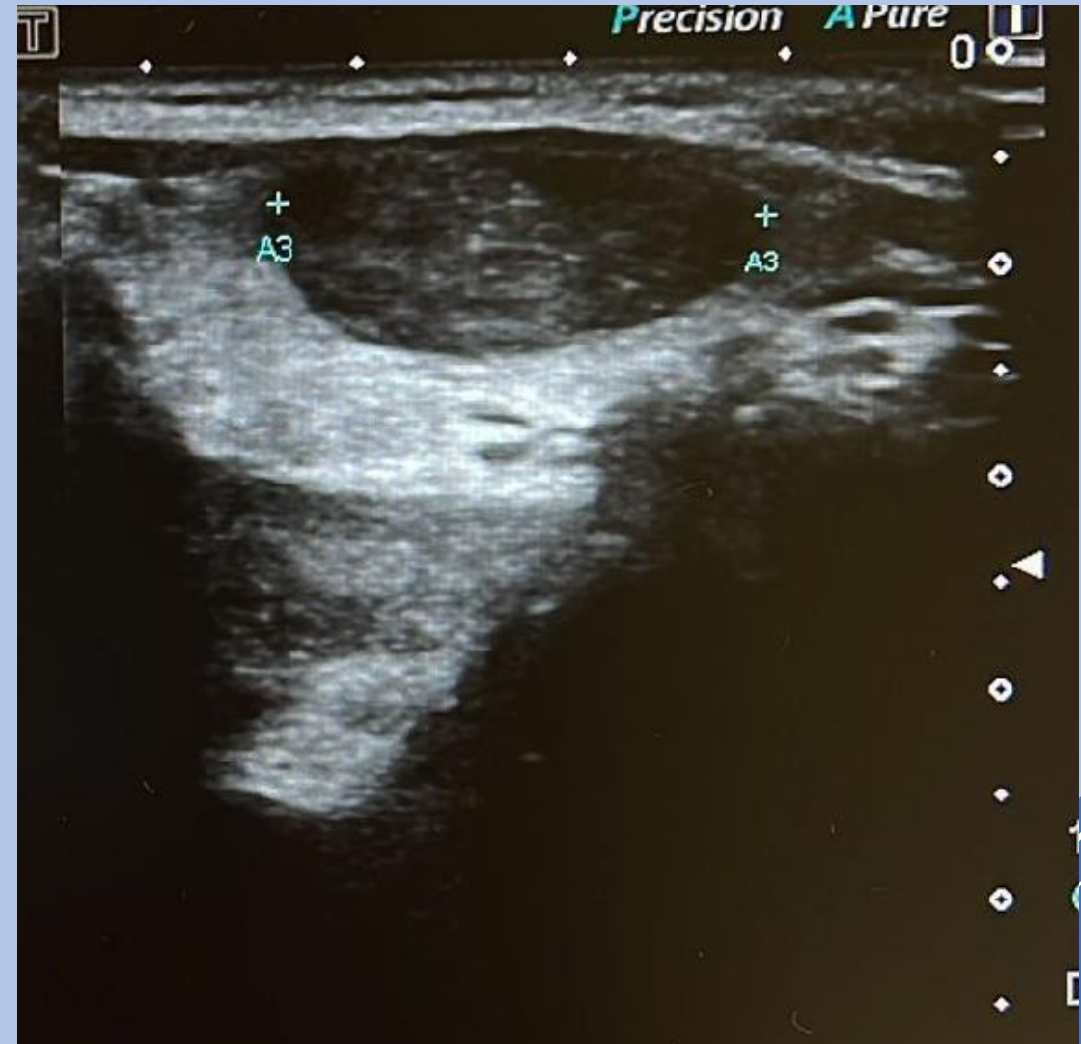
Malignant neoplasms

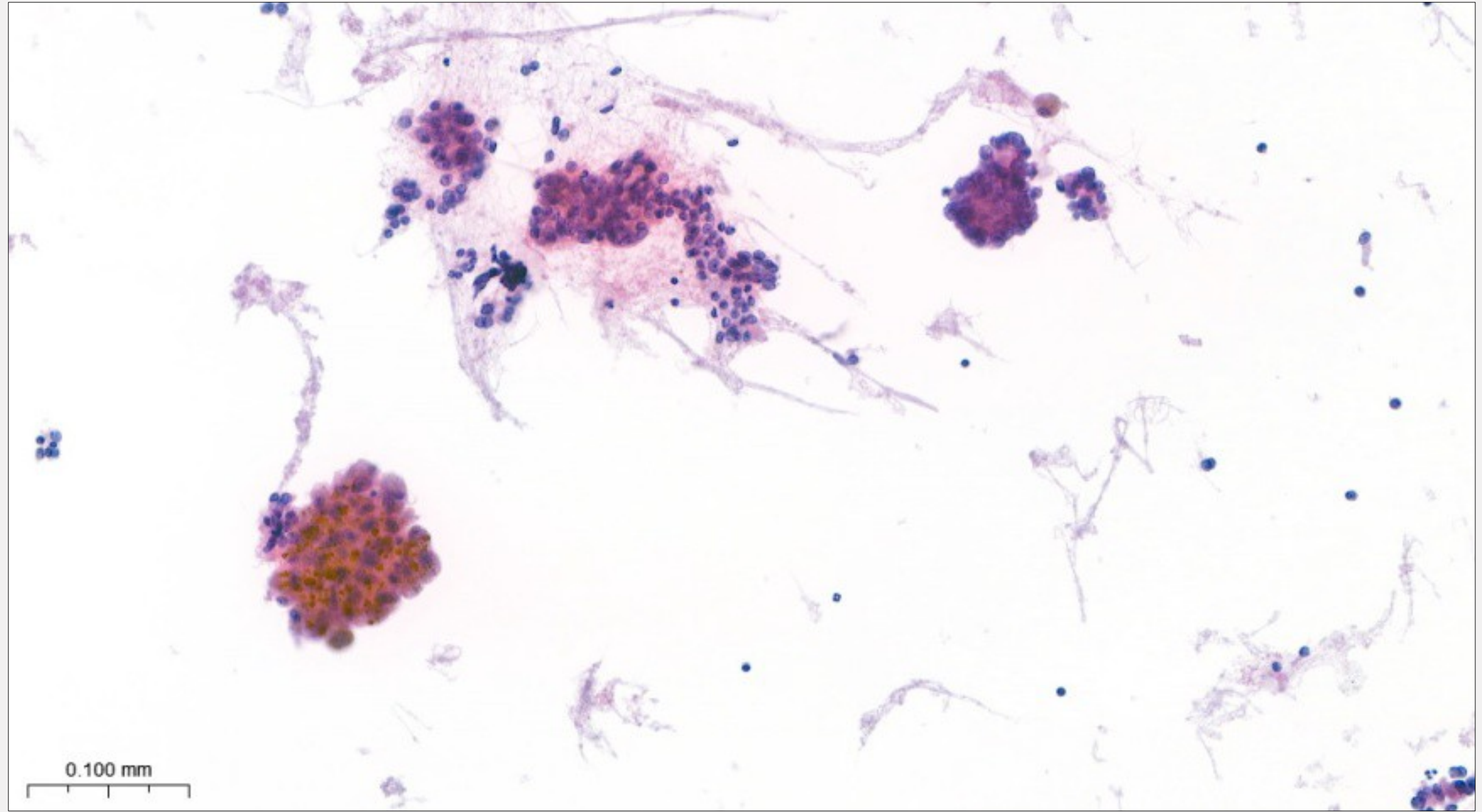
- Follicular thyroid carcinoma
- Invasive encapsulated follicular variant papillary carcinoma
- Papillary thyroid carcinoma
- Oncocytic carcinoma of the thyroid
- Follicular-derived carcinomas, high-grade
- Anaplastic follicular cell derived thyroid carcinoma

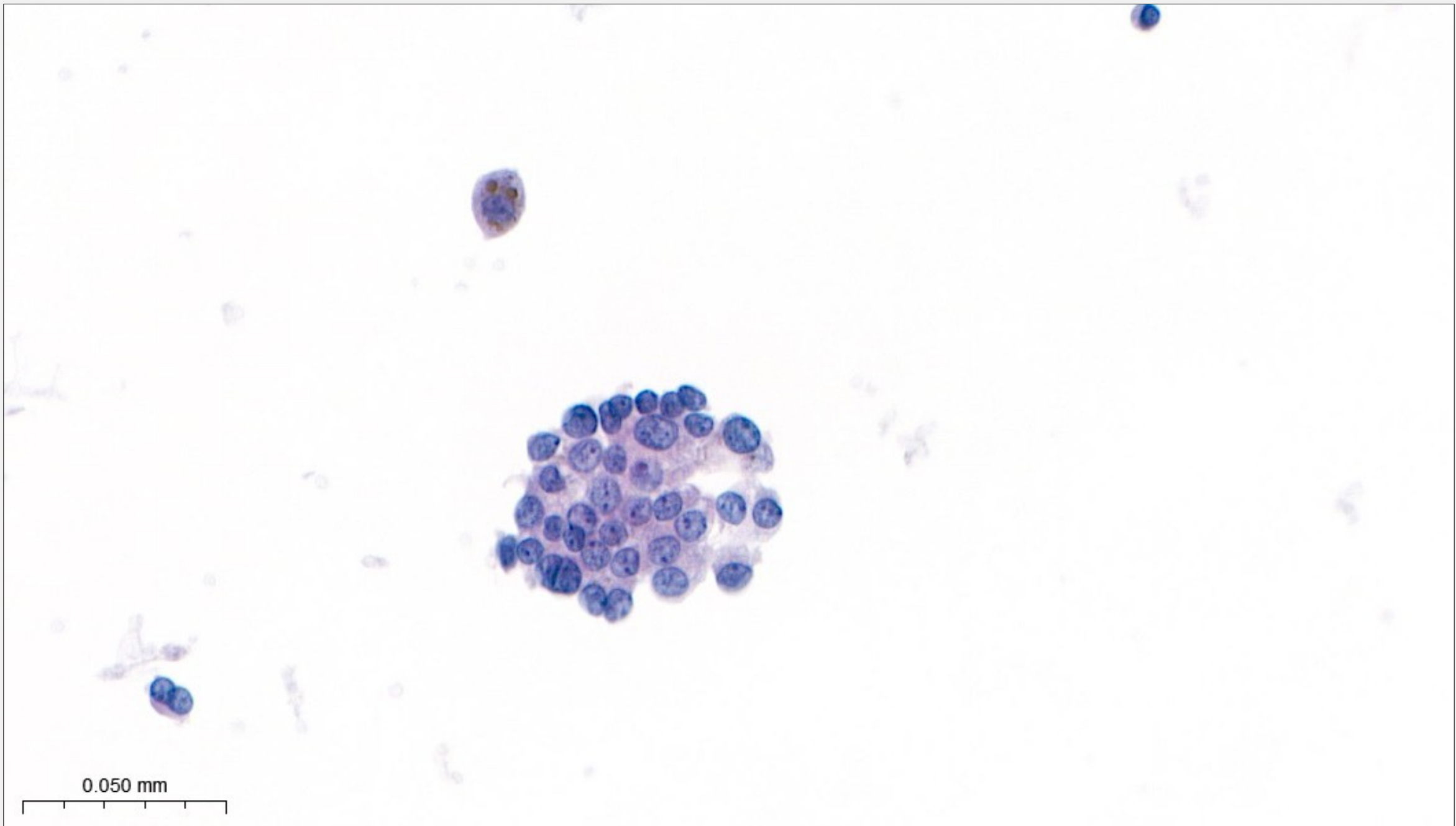
Mujer 35 años

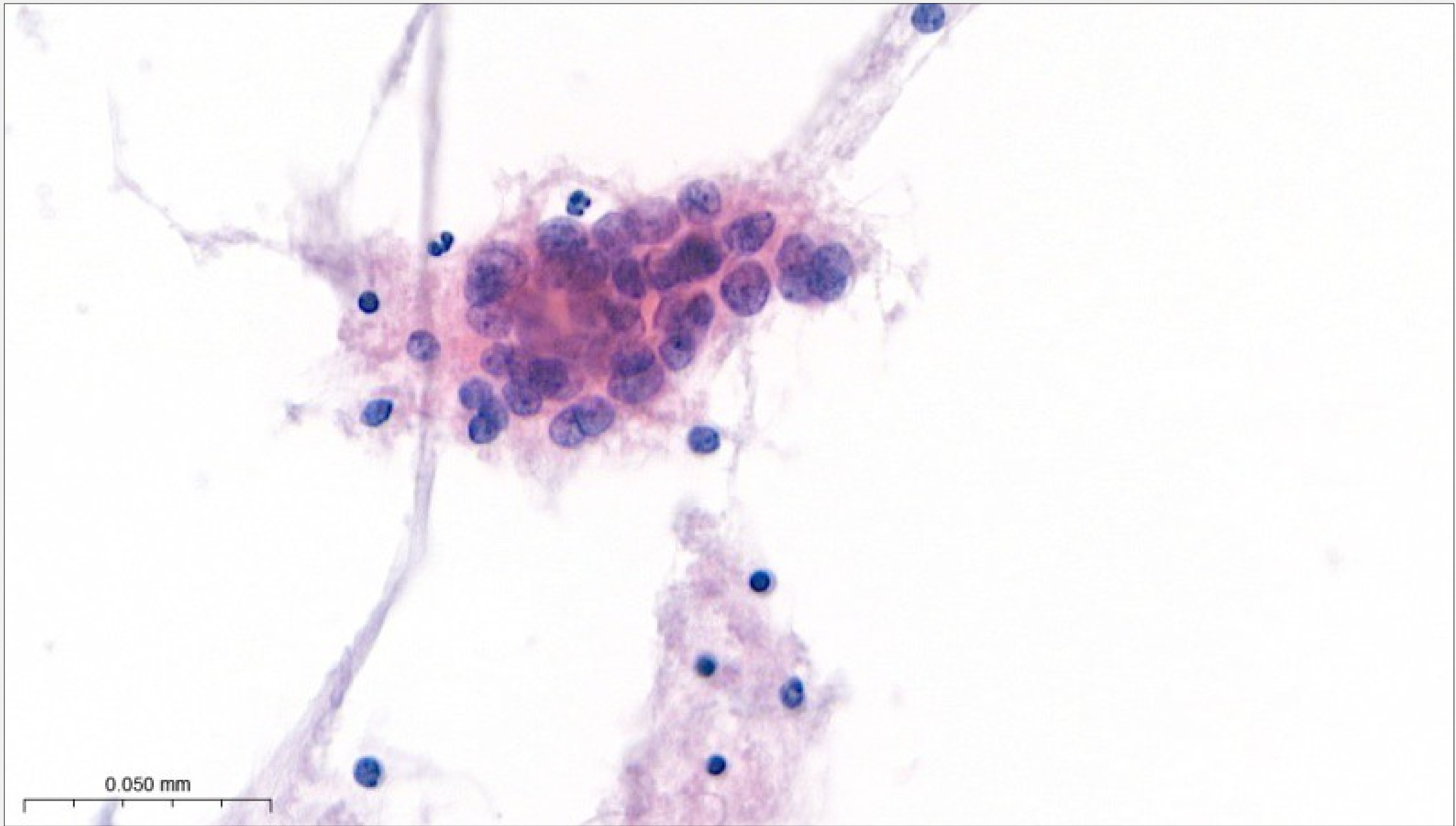
Nodulo hipocogenico en LTI

CASO 3







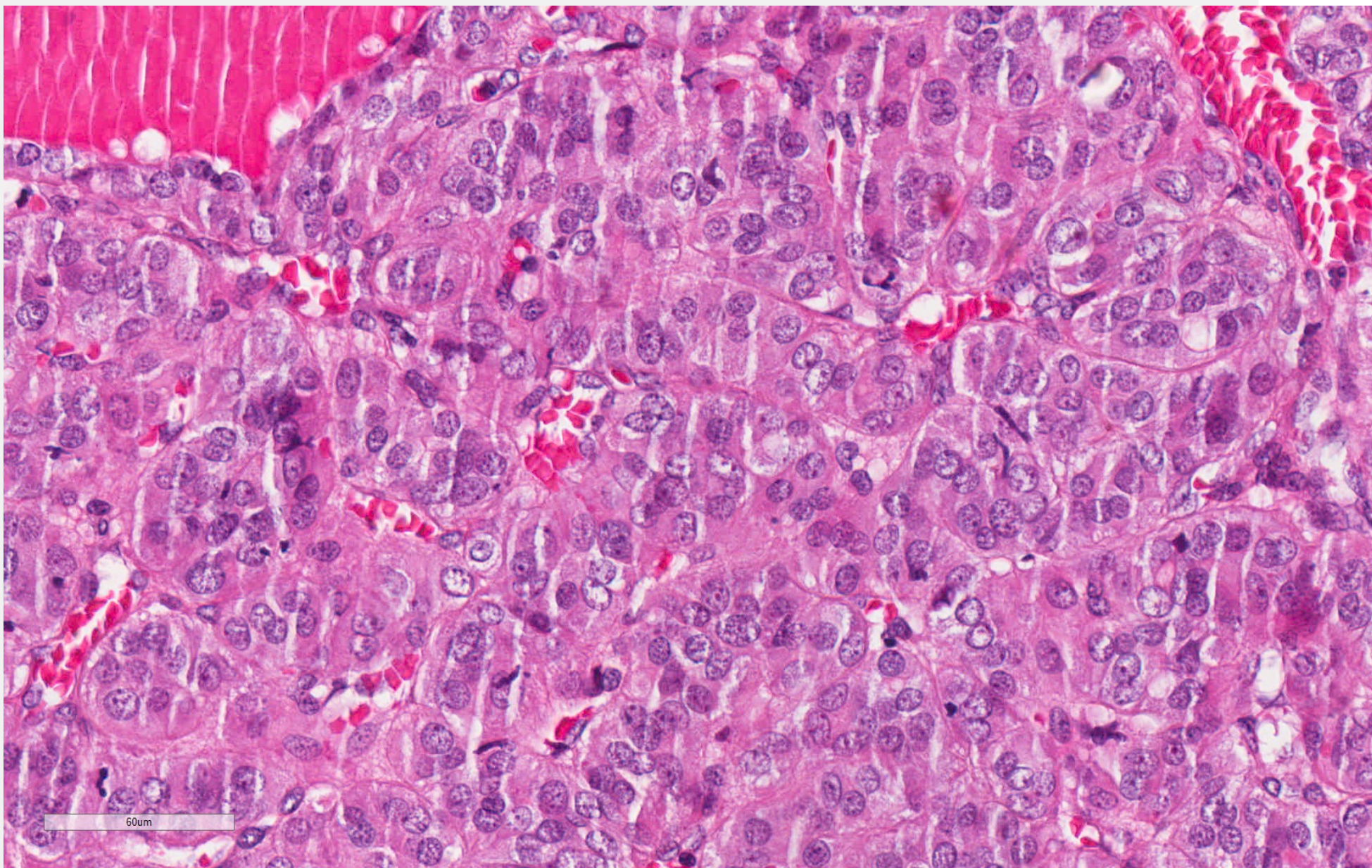


0.050 mm

¿QUE CATEGORIA BETHESDA SERIA LA CORRECTA???

1. CATEGORIA II Bethesda
2. CATEGORIA III Bethesda
3. CATEGORIA IV Bethesda
4. CATEGORIA V Bethesda
5. CATEGORIA VI Bethesda





NIFTP

BRAF K601



2022 WHO Classification of Thyroid Neoplas

Follicular cell-derived neoplasms

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- Thyroid follicular nodular disease
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- Hyalinizing trabecular tumour of thyroid

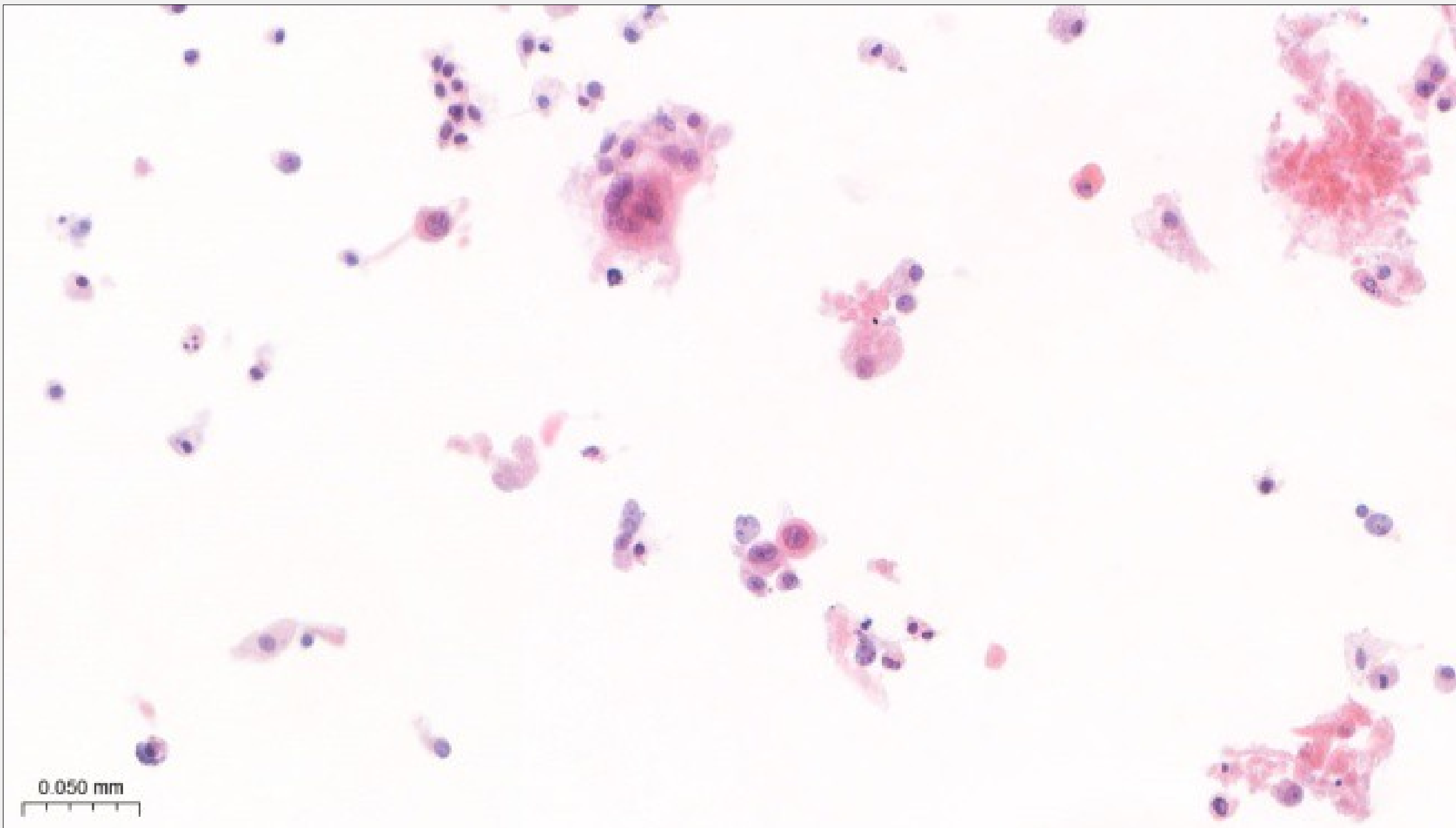
Malignant neoplasms

- Follicular thyroid carcinoma
- Invasive encapsulated follicular variant papillary carcinoma
- Papillary thyroid carcinoma
- Oncocytic carcinoma of the thyroid
- Follicular-derived carcinomas, high-grade
- Anaplastic follicular cell derived thyroid carcinoma

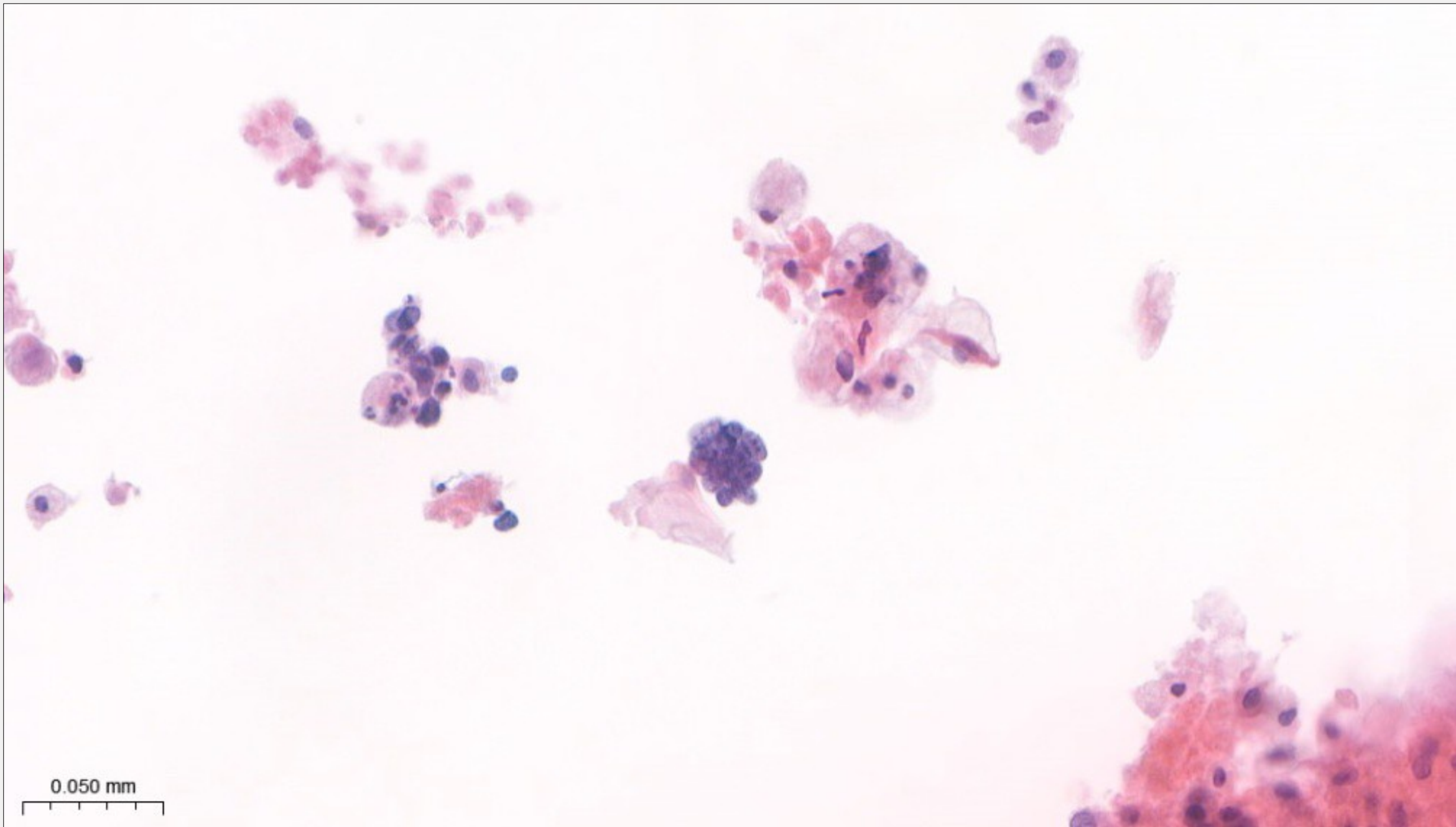
CASO 4

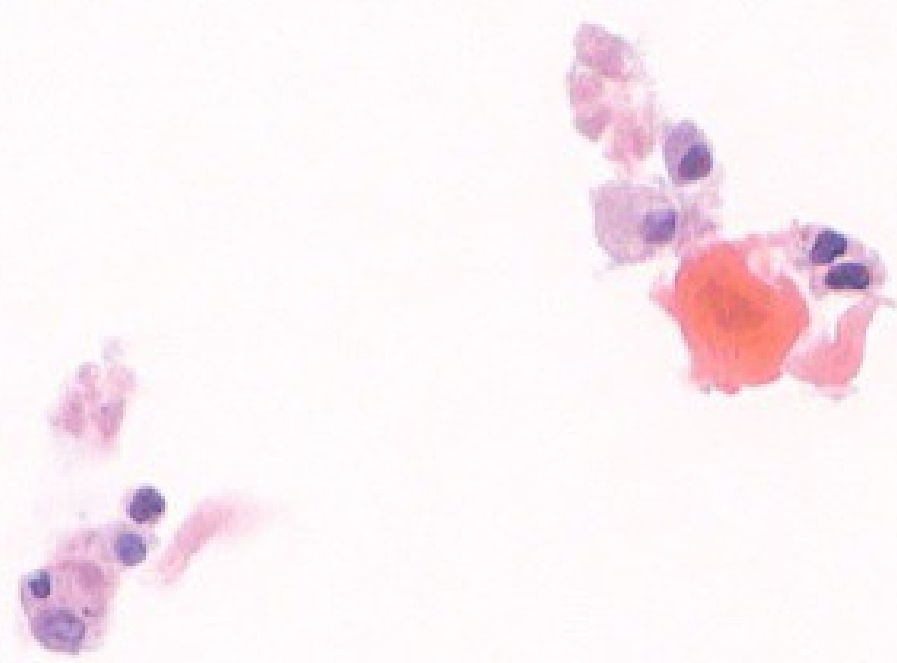
Hombre de 56 años

TAC: Masa en tiroides y Adenopatía cervical izquierda

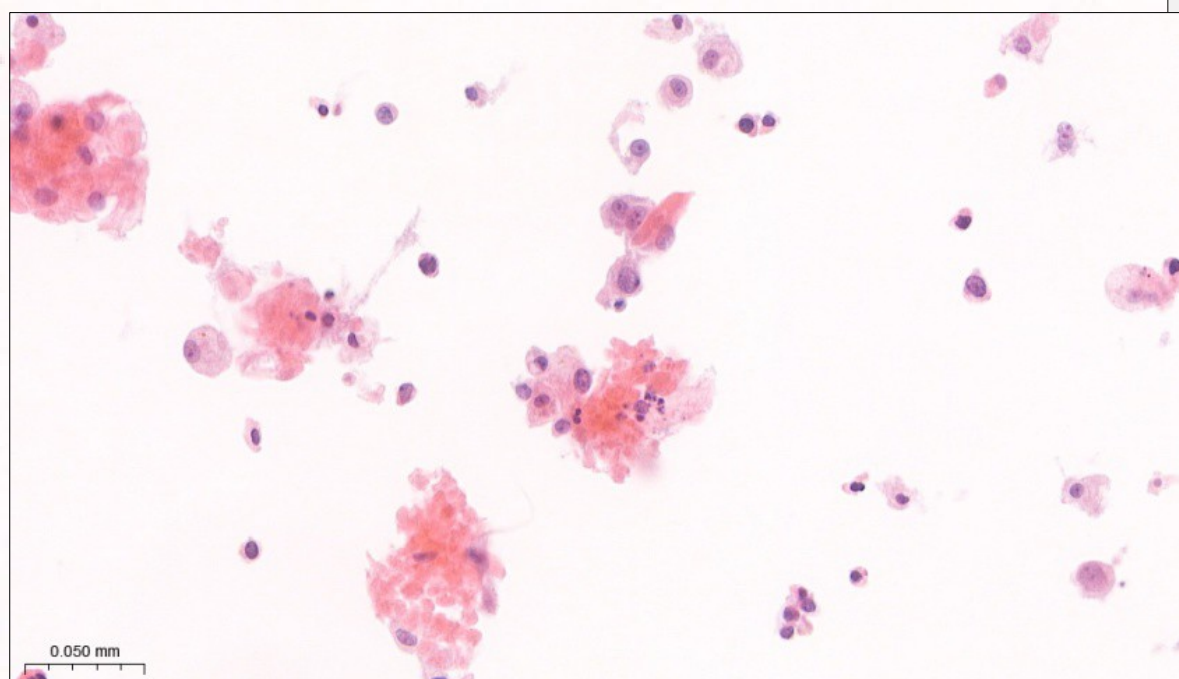


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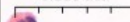


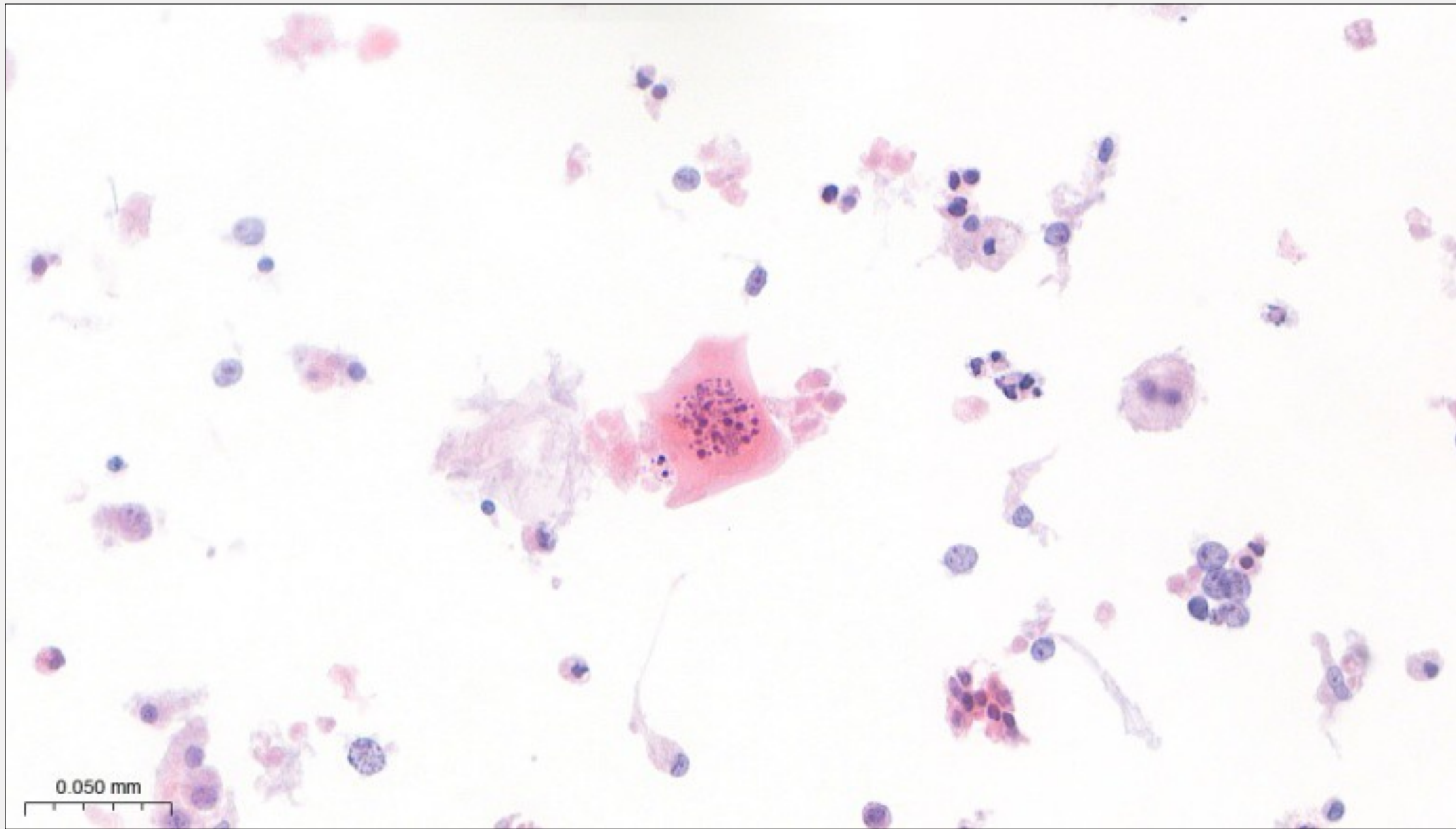


0.050 mm



0.050 mm





**¿QUE
CATEGORIA
BETHESDA
SERIA LA
CORRECTA???**

1. CATEGORIA II Bethesda

2. CATEGORIA III Bethesda

3. CATEGORIA IV Bethesda

4. CATEGORIA V Bethesda

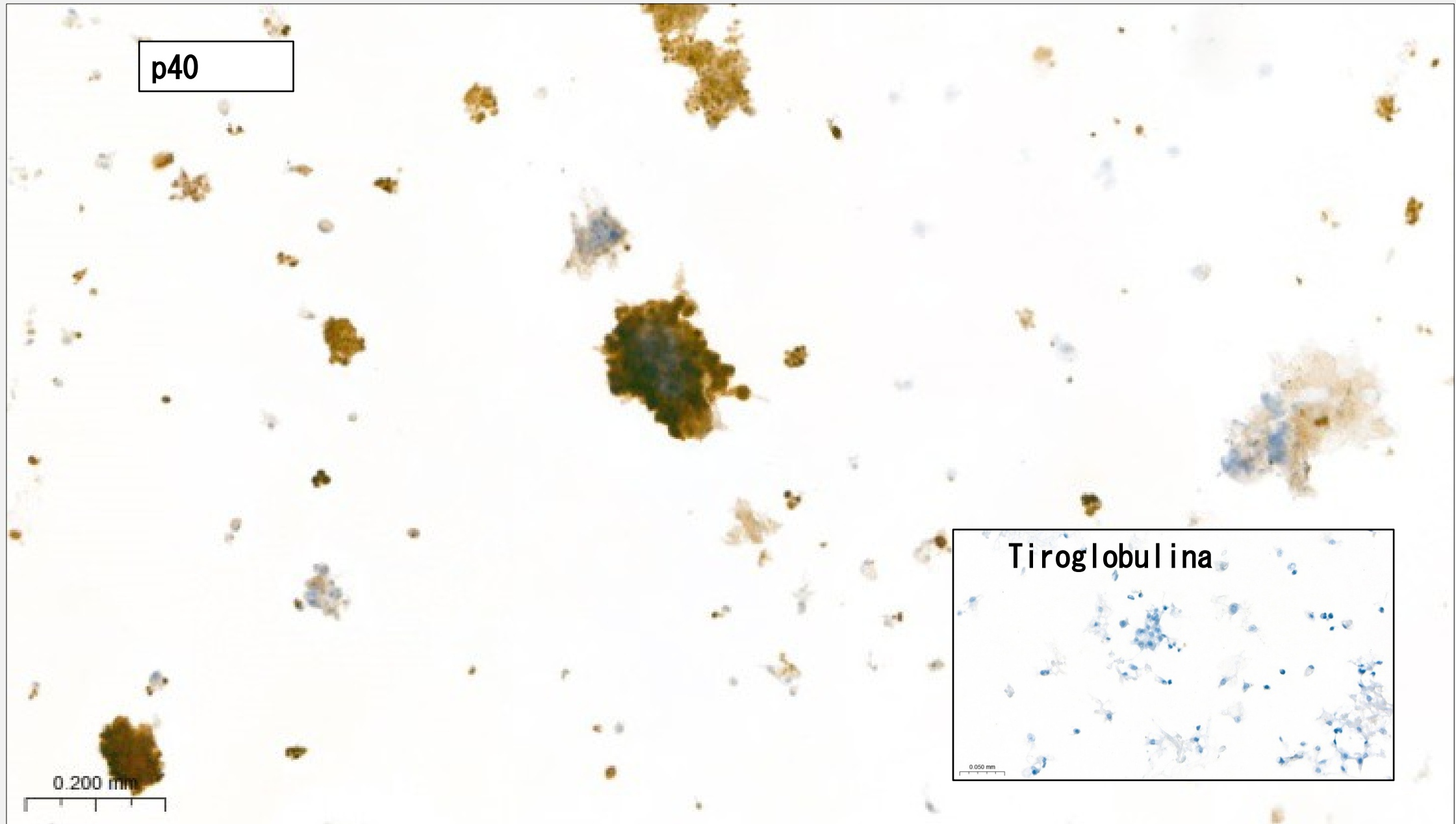
5. CATEGORIA VI Bethesda

p40

Tioglobulina

0.200 mm

0.050 mm





2022 WHO Classification of Thyroid Neoplasms

Follicular cell-derived neoplasms

Benign tumours

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- Follicular thyroid adenoma
- Follicular thyroid adenoma with papillary architecture
- Oncocytic adenoma of the thyroid

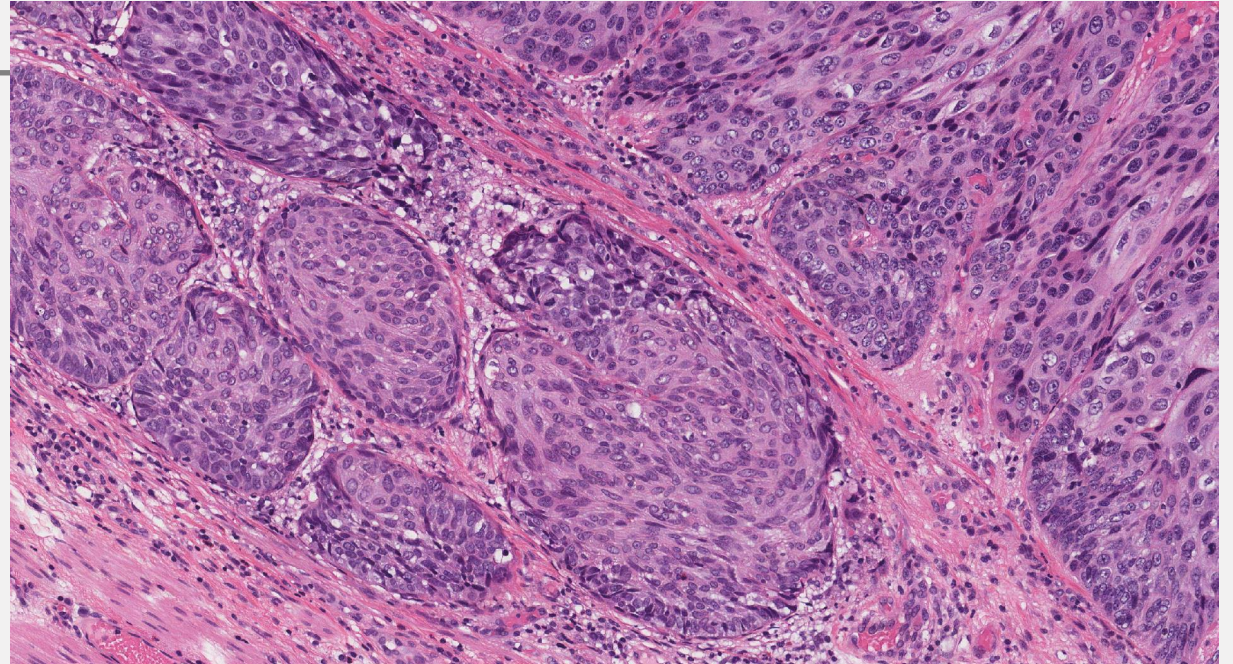
Low risk neoplasms

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- Thyroid tumours of uncertain malignant potential
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- Invasive encapsulated follicular variant papillary carcinoma
- Papillary thyroid carcinoma
- Oncocytic carcinoma of the thyroid
- Follicular-derived carcinomas, high-grade
- Anaplastic follicular cell derived thyroid carcinoma

REVISANDO HISTORIA CLINICA...



CARCINOMA ESCAMOSO DE ESOFAGO



Dr Syed Ali



Reunión de Primavera de la **SEAP-IAP 2026**



Dra Merce Jorda

EN CÓRDOBA SIEMPRE ES
PRIMAVERA

SeAP-IAP
[Sociedad Española de Anatomía Patológica]
[International Academy of Pathology]

14 · 16 septiembre 2026 · Palacio de Congresos de Córdoba





¡Gracias!

sonsoles.aso@salud.madrid.org

@MansoAso

x