

SeAP-IAP



GRACIAS

PUNCION CON AGUJA FINA DE TIROIDES. CONSENSO BETHESDA 2007

PEDRO DE AGUSTIN



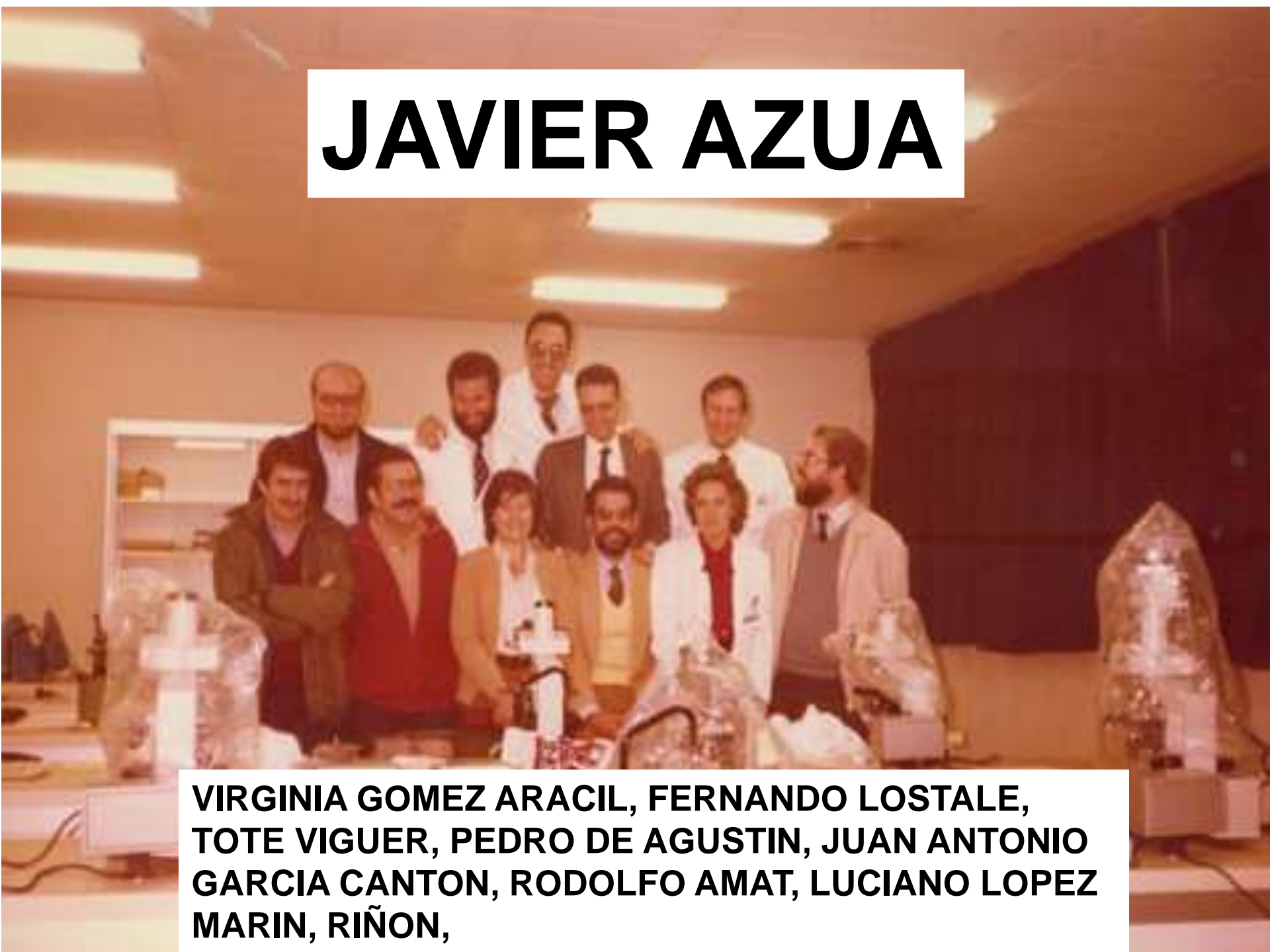
JEFE DE SERVICIO DE ANATOMIA PATOLOGICA

HOSPITAL UNIVERSITARIO 12 DE OCTUBRE. MADRID

FACULTAD DE MEDICINA DE ZARAGOZA



JAVIER AZUA



**VIRGINIA GOMEZ ARACIL, FERNANDO LOSTALE,
TOTE VIGUER, PEDRO DE AGUSTIN, JUAN ANTONIO
GARCIA CANTON, RODOLFO AMAT, LUCIANO LOPEZ
MARIN, RIÑON,**



H. Jack Baskin • Daniel S. Duick
Robert A. Levine *Editors*



Thyroid Ultrasound and Ultrasound- Guided FNA

Second Edition

 Springer

TIROIDES: NODULOS

PALPABLES. 4-7% DE LA POBLACION

**AUTOPSIAS Y TECNICAS DE IMAGEN
X10**

SUS CANCERES REPRESENTAN EL 2%

**DURANTE LOS ULTIMOS 30 AÑOS LA
PAAF ES EL MEJOR METODO COSTE
EFECTIVIDAD PARA EL MANEJO DE
ESTOS PACIENTES**

LA PAAF PUEDE UTILIZARSE:

1.- COMO TECNICA DE SCREENING:

**LESIONES FOLICULARES Y ONCOCITICAS
INCLUIDO BOCIO MULTINODULAR,
ADENOMAS FOLICULARES, CARCINOMAS
FOLICULARES Y ONCOCITICOS**

2.- DIAGNOSTICO:

**HASHIMOTO Y LESIONES MALIGNAS COMO
CARCINOMA PAPILAR, CA ANAPLASICO,
CA MEDULAR, LINFOMA Y METASTASIS**

PAAF DE TIROIDES ANTES DE BETHESDA

INFORMES NO SISTEMATIZADOS

INFORMES DESCRIPTIVOS

INFORMES NO COMPARABLES

NOMENCLATURA HISTOPATOLOGICA

**RARA VEZ INDICABAN MANEJO O
RIESGO DE MALIGNIDAD**

INTERNATIONAL
CYTOLOGY
SLIDE SETS
VOLUME XLIV

THYROID FINE NEEDLE ASPIRATION CYTOPATHOLOGY

TRANSPARENCIES AND EXPLANATORY TEXT



By
Prabodh K. Gupta, M.B., M.D., FIAC

and

Zubair W. Baloch, M.D., Ph.D.
Philadelphia, Pennsylvania, USA

INTERNATIONAL
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PA 27 8 2002

**TUTORIALS OF
CYTOPATHOLOGY.
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PRABODH K GUPTA y ZUBIAIR W BALOCH

**TABLE 4.1 Diagnostic Terminology for Thyroid FNA
Proposed by the Papanicolaou Society Task Force on
Standards of Practice 1996**

Inadequate

Benign nonneoplastic

Colloid nodule

Nodular goiter

Cystic goiter

Thyroiditis

Cellular follicular lesion

Favor hyperplastic (adenomatous) nodule

Follicular neoplasm

Hurthle cell neoplasm

Malignant

Specify

Other

Source: The Papanicolaou Society of Cytopathology Task Force on Standards of Practice. Guidelines of the Papanicolaou Society of Cytopathology for the examination of fine-needle aspiration specimens from thyroid nodules. *Diagn Cytopathol* 1996;15:84–89.

TABLE 4.2 Fine Needle Aspiration Terminology Used in the Management Guidelines for Patients with Thyroid Nodules and Differentiated Thyroid Cancer from the American Thyroid Association Guidelines Task Force 2006

Inadequate

Benign

Indeterminate

Suspicious for malignancy

Follicular lesion

Follicular neoplasm

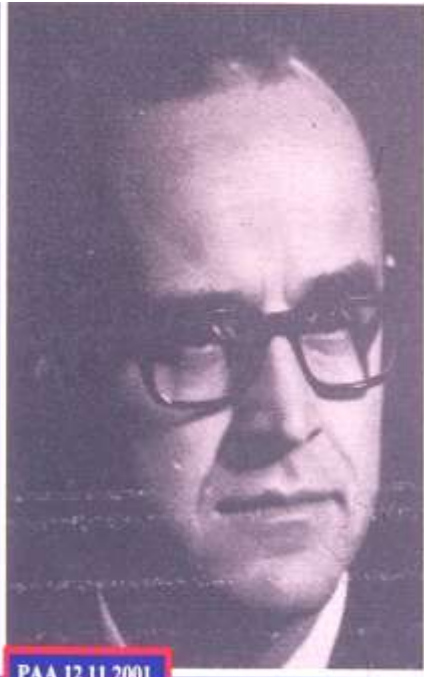
Malignant

Source: Cooper DS, Doherty GM, Haugen BR, et al. Management guidelines for patients with thyroid nodules and differentiated thyroid cancer. *Thyroid* 2006;16:109–142.



*Karolinska
Sjukhuset*





PAA 12 11 2001

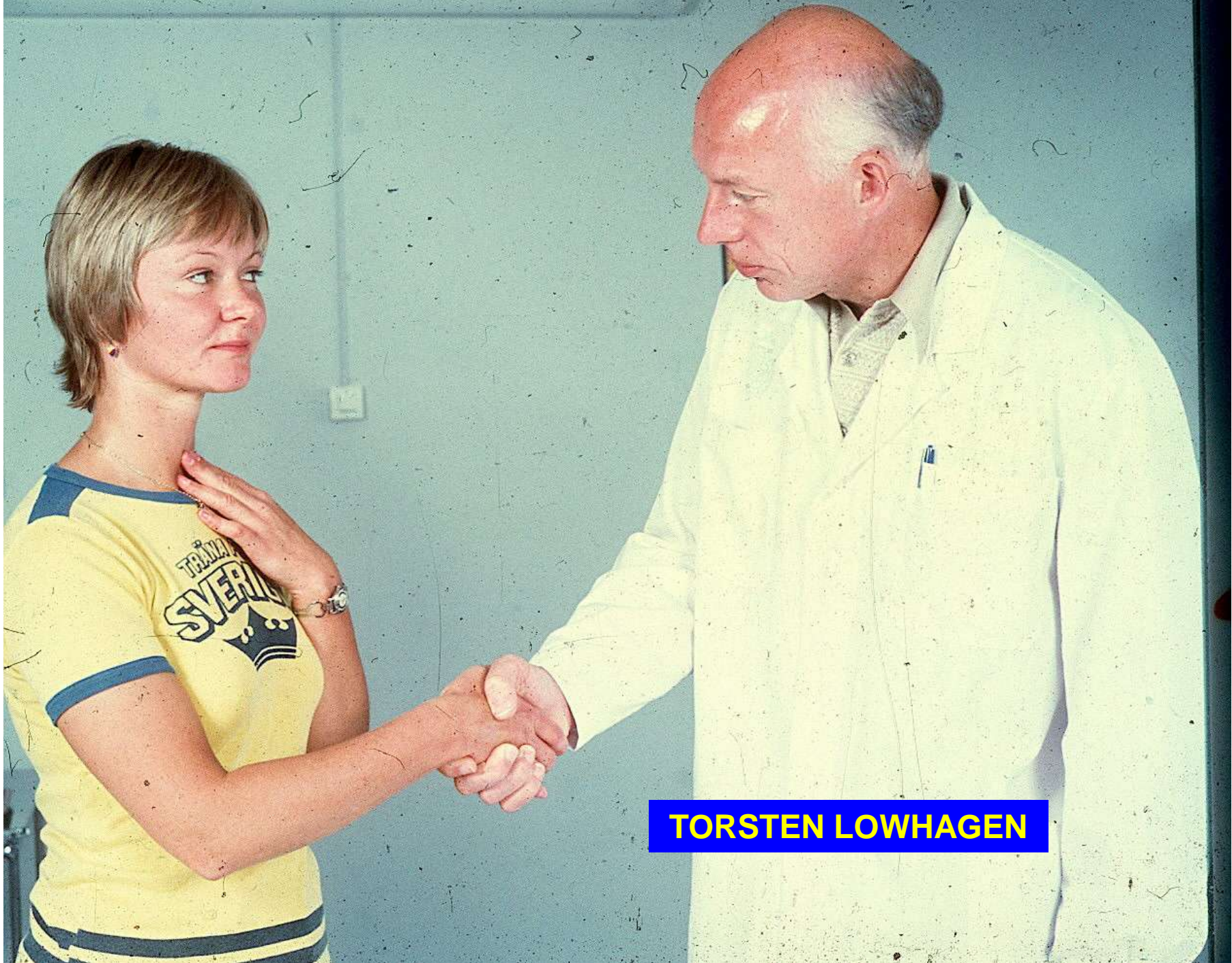
JOSEF ZAJICEK

PADRE DE LA
PAAF JUNTO A
SIXTEEN
FRANZEN



SIXTEEN
FRANZEN

PAA 18 11 2001



TORSTEN LOWHAGEN

PUNCION - ASPIRACION DE TIROIDES (LOWGHAGEN)

1. Bocio coloide
2. Bocio tirectóxico
3. Tiroiditis
4. Neoplasias

P.A.B. BOCIO COLOIDE

Coloide abundante
Células foliculares pequeñas
Macrófagos

P.A.B. BOCIO TIRECTOXICO

Coloide escaso
Sangre abundante
C. foliculares grandes
Vacuolas marginales

TIROIDITIS

Aguda supurada
Subaguda de Quervain
Crónica de Hashimoto
Riedel

P.A.B. TIROIDITIS SUPURADA

Leucocitos
Material proteináceo
Necrosis
Ca. anaplásico

P.A.B. TIROIDITIS SUBAGUDA

C. foliculares pequeñas
C. gigantes
Linfocitos y macrófagos
C. epitelioides

P.A.B. TIROIDITIS CR. LINFOIDE

C. foliculares: grandes y oncocitos
Linfocitos numerosos
C. gigantes raras

TUMORES TIROIDEOS

No malignos: Adenomas
Malignos: Carcinomas
Folicular
Papilar
Medular
Anaplásico

P.A.B. TUMOR FOLICULAR

Grupos foliculares iguales
Sangre abundante
Coloide escaso
Puede ser benigno o maligno
Núcleos agrandados. Redondos
Nucleolos raros
90% benignos
Si C. grandes pensar en malignidad

P.A.B. TUMOR PAPILAR

Placas papilares en una placa
Inclusiones intranucleares
Coloide viscoso: como goma de mascar
Homogéneo. Compacto

P.A.B. CARCINOMA MEDULAR

Células sueltas
Núcleos ovales excéntricos
Citoplasma alargado
Gránulos rojos
Material amorfo

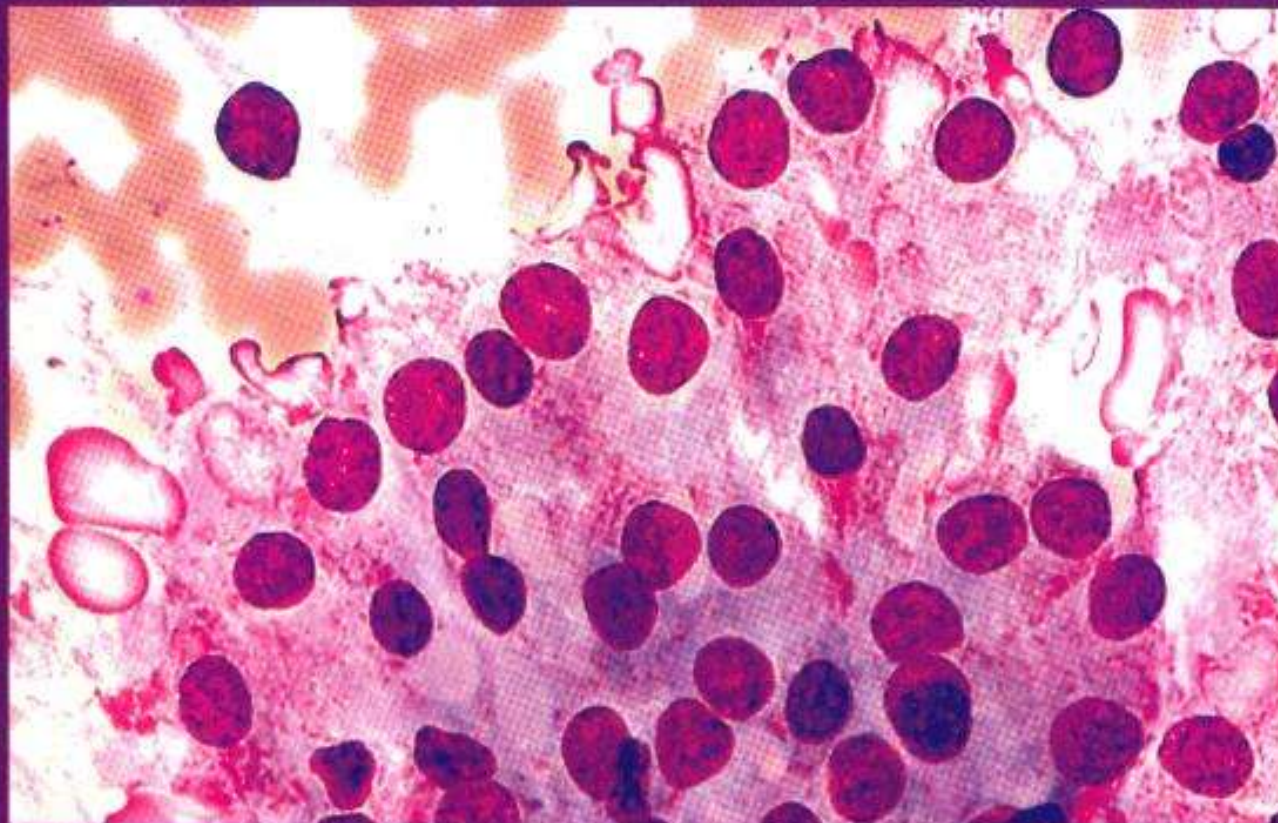
P.A.B. CARCINOMA ANAPLASICO DE C. GIGANTE:

Necrosis
Leucocitos
Células malignas abigarradas
Mitosis frecuentes
A veces se ve mejor con PAP

P.A.B. CA. ANAPLASICO DE C. PEQUEÑAS

Células sueltas
Mitosis abundantes
Fragmentación citoplásmica

NCI Thyroid Fine Needle Aspiration State of the Science Conference



October 22 - 23rd, 2007

Bethesda, Maryland
Natcher Conference Center
8am - 5pm

NCI THYROID FINE NEEDLE ASPIRATION STATE OF THE SCIENCE CONFERENCE

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Surgical Pathology

 NCI THYROID FINE NEEDLE ASPIRATION
STATE OF THE SCIENCE CONFERENCE

October 22-23, 2007
Bethesda, Maryland



WILLIAM C FAQUIN
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MARTHA BISHOP



Diane Solomon Ritu Nayar

EDITORS

The Bethesda System for Reporting Cervical Cytology

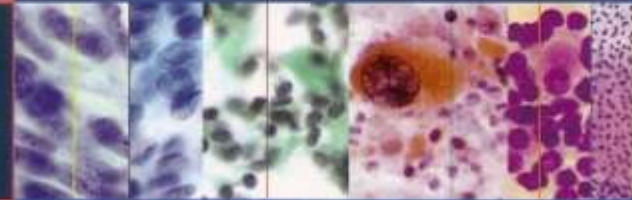
Definitions, Criteria, and
Explanatory Notes

Second Edition



2004

Syed Z. Ali • Edmund S. Cibas
Editors



The Bethesda System for Reporting Thyroid Cytopathology

Definitions, Criteria and
Explanatory Notes

 Springer

2010



The National Cancer Institute Thyroid Fine-needle Aspiration State-of-the-Science Conference

Inspiration for a Uniform Terminology Linked to Management Guidelines

Edmund S. Cibas, MD¹
Miguel A. Sanchez, MD^{2,3}

¹ Department of Pathology, Brigham and Women's Hospital and Harvard Medical School, Boston, Massachusetts.

² Department of Pathology, Englewood Hospital and Medical Center, Englewood, New Jersey.

³ Department of Pathology, Mt. Sinai School of Medicine, New York, New York.

Thyroid fine-needle aspiration (FNA) is a modern-day success story. Its clinical value is undisputed—safely and rapidly, FNA provides valuable information about the nature of a thyroid nodule and permits the triage of patients for follow-up or surgery. Because thyroid nodules are so common, in many laboratories, thyroid FNA has become the most common FNA specimen examined.

Our colleagues in endocrinology, surgery, and radiology have already successfully addressed professional consensus on the clinical aspects of thyroid FNA. In 2005 and 2006, they sponsored consensus conferences to develop guidelines that address the clinical questions

**PUNCION ASPIRACION
CON AGUJA FINA DE
PATOLOGIA TIROIDEA.
CONSENSO BETHESDA
OCTUBRE 2007**

- **ALGUNAS CATEGORIAS TIENE DOS NOMBRES**
- **CADA CATEGORIA TIENE UN RIESGO IMPLICITO DE CANCER QUE VARIA DE UN 0-3% EN PAAF BENIGNAS A PRACTICAMENTE EL 100% EN EL GRUPO DE PAAF MALIGNAS**

TABLE 1.2. The Bethesda system for reporting thyroid cytopathology: implied risk of malignancy and recommended clinical management.

Diagnostic category	Risk of malignancy(%)	Usual management ^a
Nondiagnostic or Unsatisfactory	^b	Repeat FNA with ultrasound guidance
Benign	0–3	Clinical follow-up
Atypia of Undetermined Significance or Follicular Lesion of Undetermined Significance	~5–15 ^c	Repeat FNA
Follicular Neoplasm or Suspicious for a Follicular Neoplasm	15–30	Surgical lobectomy
Suspicious for Malignancy	60–75	Near-total thyroidectomy or surgical lobectomy ^d
Malignant	97–99	Near-total thyroidectomy ^d

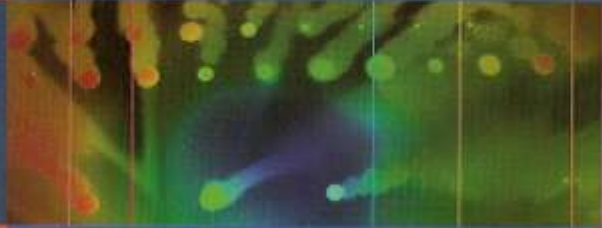
^aActual management may depend on other factors (e.g., clinical, sonographic) besides the FNA interpretation

^bSee Chap. 2 for discussion

^cEstimate extrapolated from histopathologic data from patients with “repeated atypicals” (Yang J et al. Fine-Needle Aspiration of Thyroid Nodules: A Study of 4703 Patients with Histologic and Clinical Correlations. *Cancer* 2007;111: 306–15; Yassa L et al. Long-Term Assessment of a Multidisciplinary Approach to Thyroid Nodule Diagnostic Evaluation. *Cancer* 2007;111: 508–16.)

^dIn the case of “Suspicious for metastatic tumor” or a “Malignant” interpretation indicating metastatic tumor rather than a primary thyroid malignancy, surgery may not be indicated

H. Jack Baskin • Daniel S. Duick
Robert A. Levine *Editors*



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Second Edition

 Springer



6 CATEGORIAS

1.- NO DIAGNOSTICO O NO SATISFACTORIO

2.- BENIGNO

3.- ATIPIA INDETERMINADA O LESION FOLICULAR DE SIGNIFICADO INCIERTO

4.- NEOPLASIA FOLICULAR O SOSPECHOSO DE NEOPLASIA FOLICULAR

IDEM DE TIPO ONCOCITICO

5.- SOSPECHOSO DE MALIGNIDAD

6.- MALIGNO

Chapter 2

Nondiagnostic/Unsatisfactory

Barbara A. Crothers, Michael R. Henry,
Pinar Firat, and Ulrike M. Hamper

CANTIDAD Y

CALIDAD

FAQUIN :10-20%

**6 GRUPOS CON AL
MENOS 10 CELULAS
FOLICULARES EN
CADA UNO**

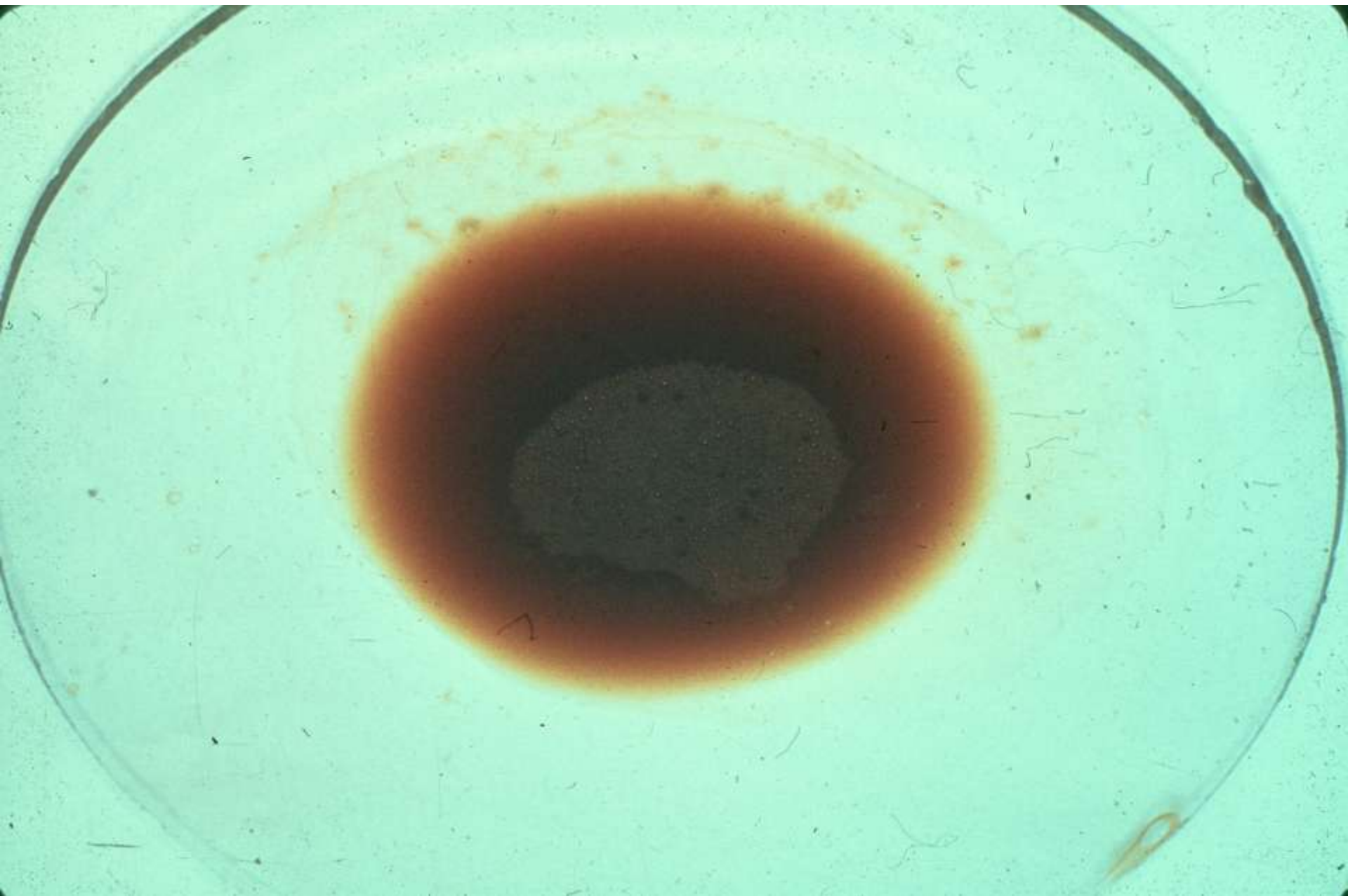
**1.- NODULOS SOLIDOS CON ATIPIA
CONSIDERARLOS REPRESENTATIVOS**

**2.- NODULOS SOLIDOS CON INFLAMACION
(HASHIMOTO, DE DE QUERVAIN O
TIROIDITIS AGUDA) SI TIENEN
NUMEROSAS CELULAS INFLAMATORIAS
CONSIDERAN REPRESENTATIVOS**

**3.- NODULOS COLOIDES CON SOLO
COLOIDE SE CONSIDERAN
REPRESENTATIVOS INCLUSO SIN
CELULAS FOLICULARES**



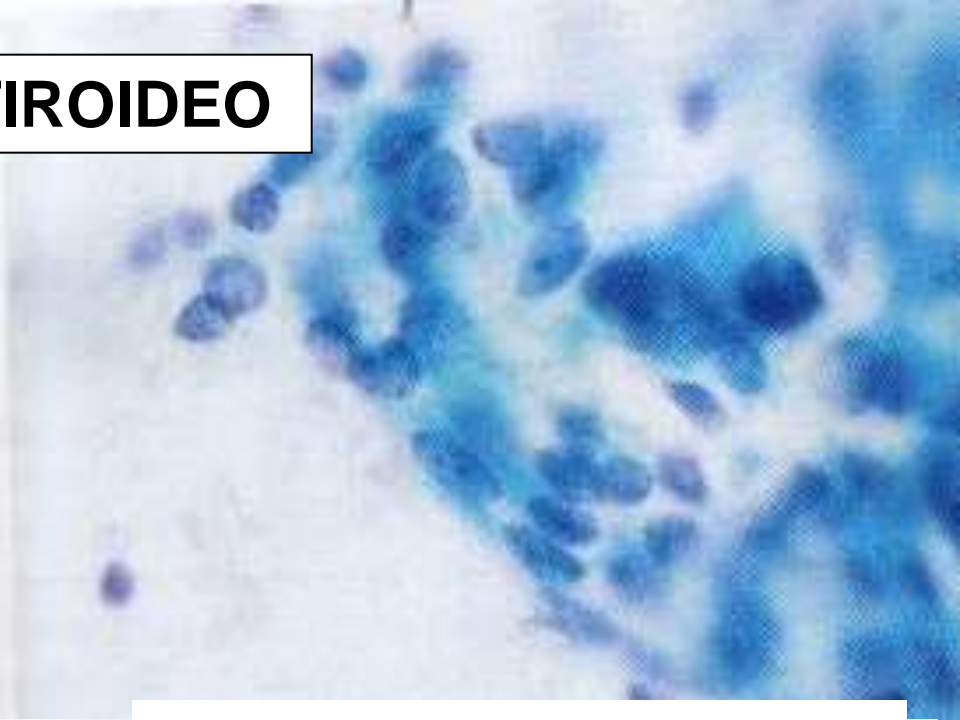
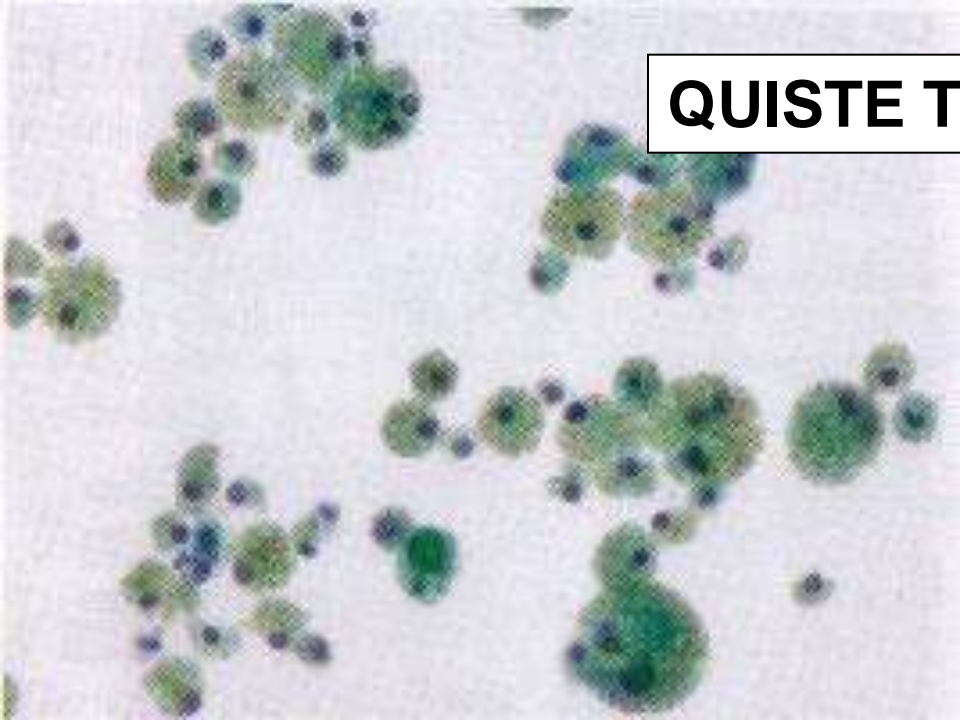
**COLOIDE ABUNDANTE SIN CELULAS BETHESDA
LO CONSIDERA VALORABLE Y NEGATIVO**



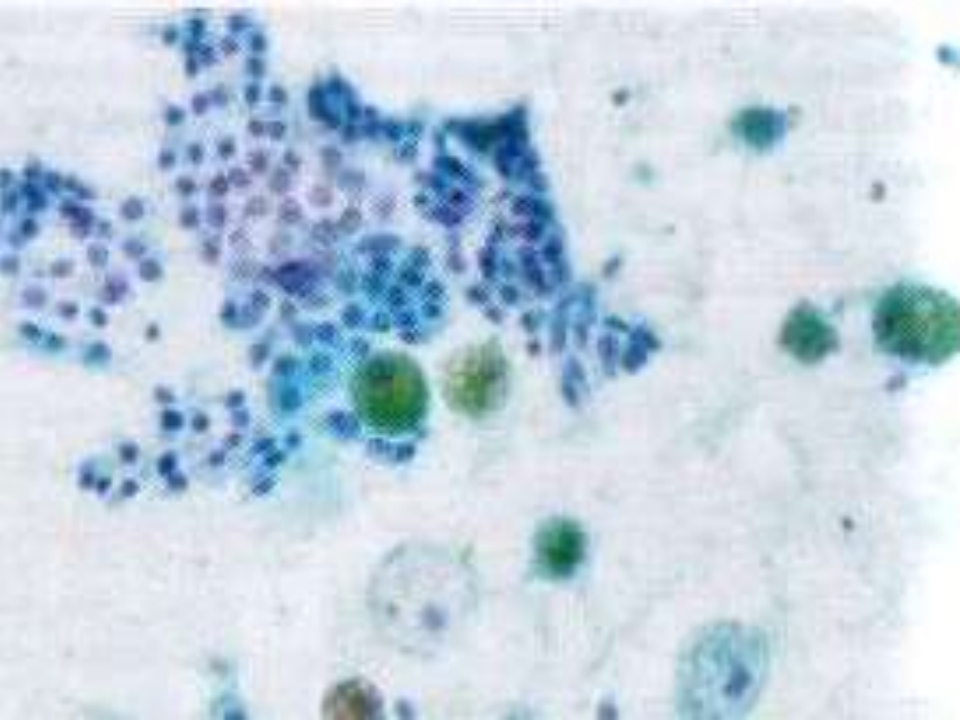
PAAF DE QUISTES TIROIDEOS

CUANDO EN UN QUISTE NO HAY CELULAS FOLICULARES DEBE DE SER RESEÑADO COMO MATERIAL MENOS QUE OPTIMO E INFORMARLO COMO: “NO DIAGNOSTICO. UNICAMENTE CONTENIDO QUISTICO”

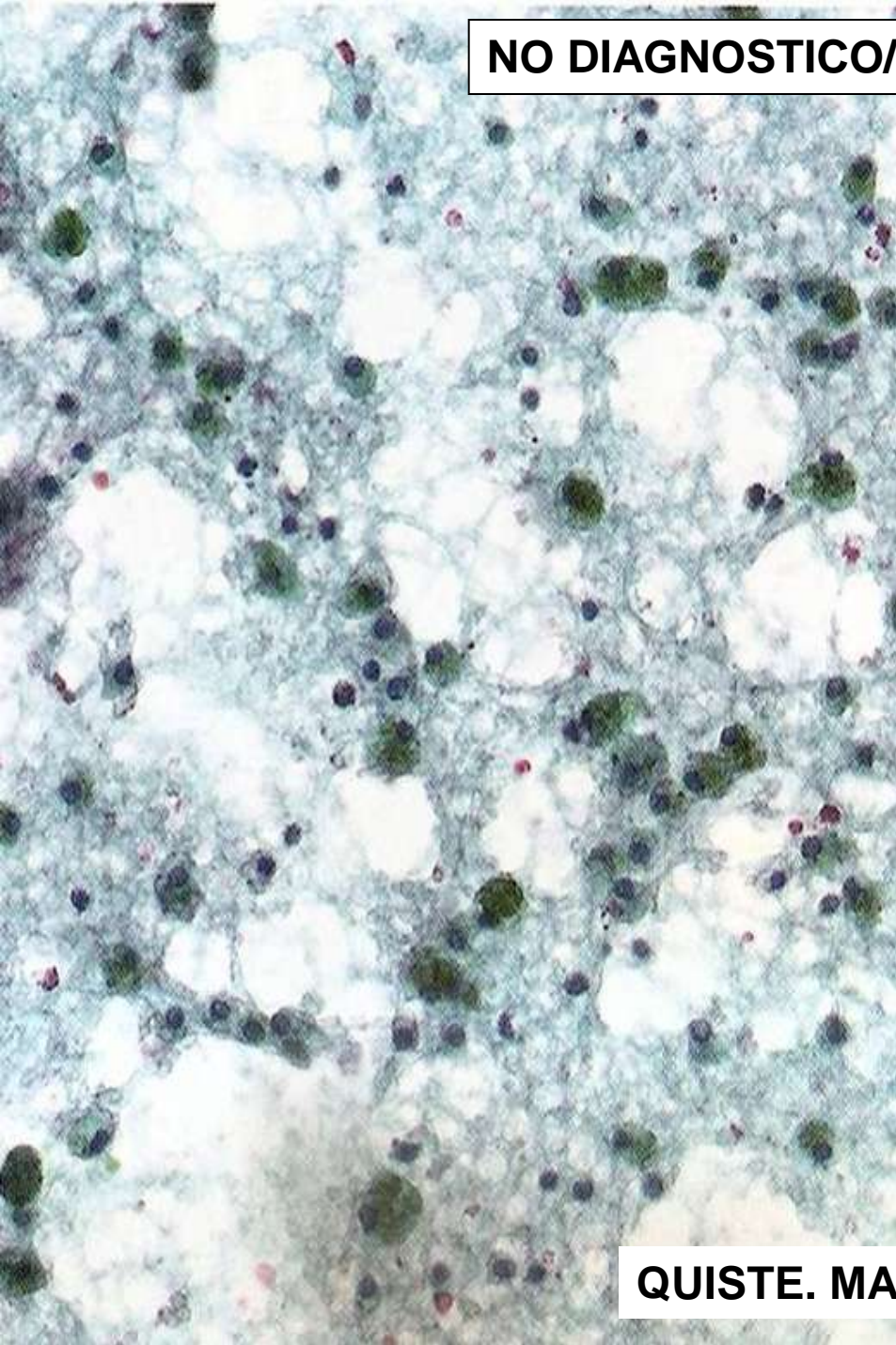
QUISTE TIROIDEO



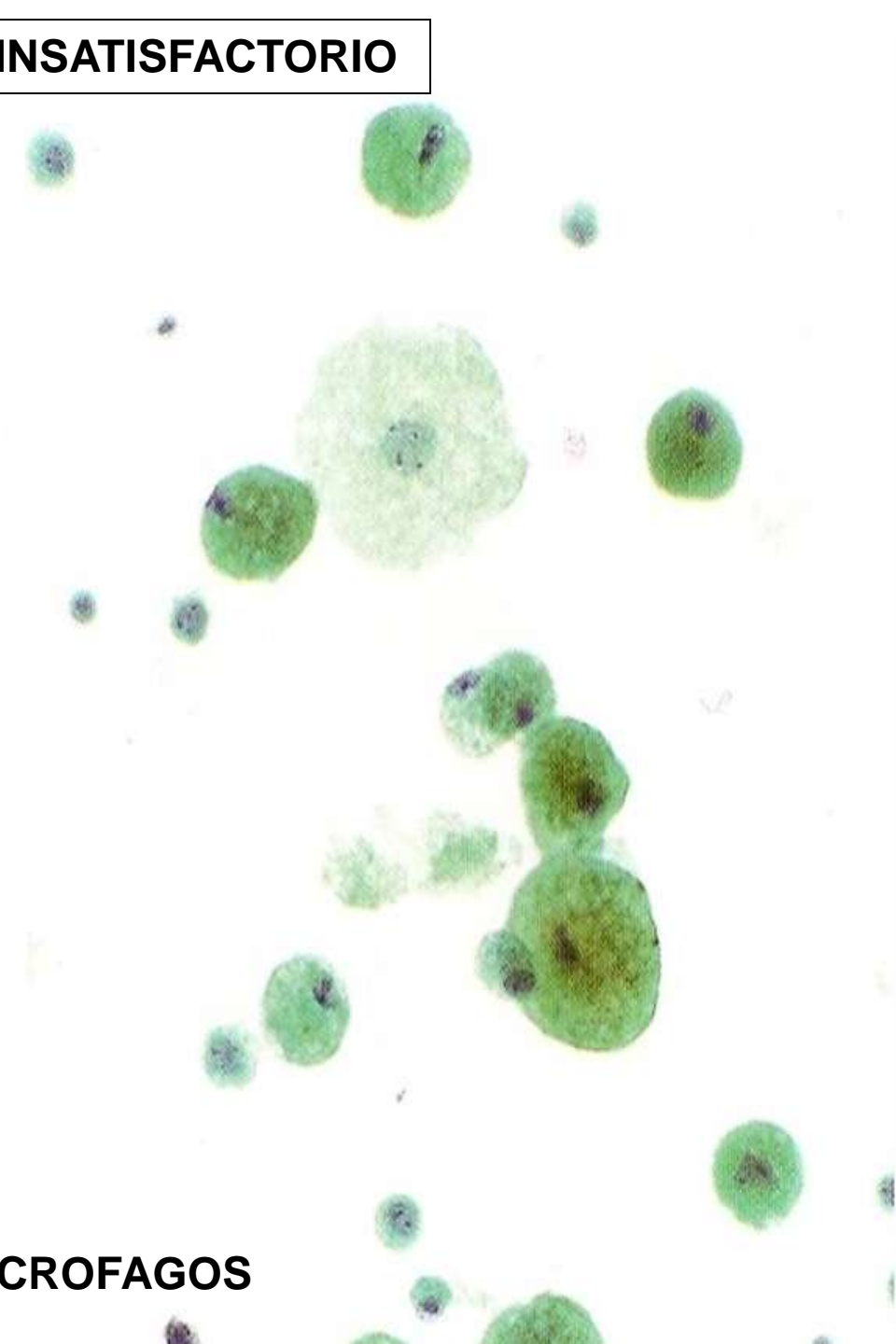
CELULAS DE RECUBRIMIENTO



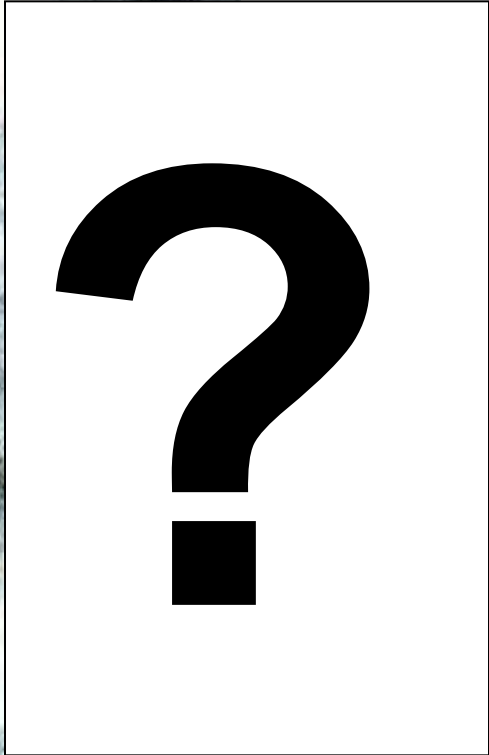
NO DIAGNOSTICO/INSATISFACTORIO



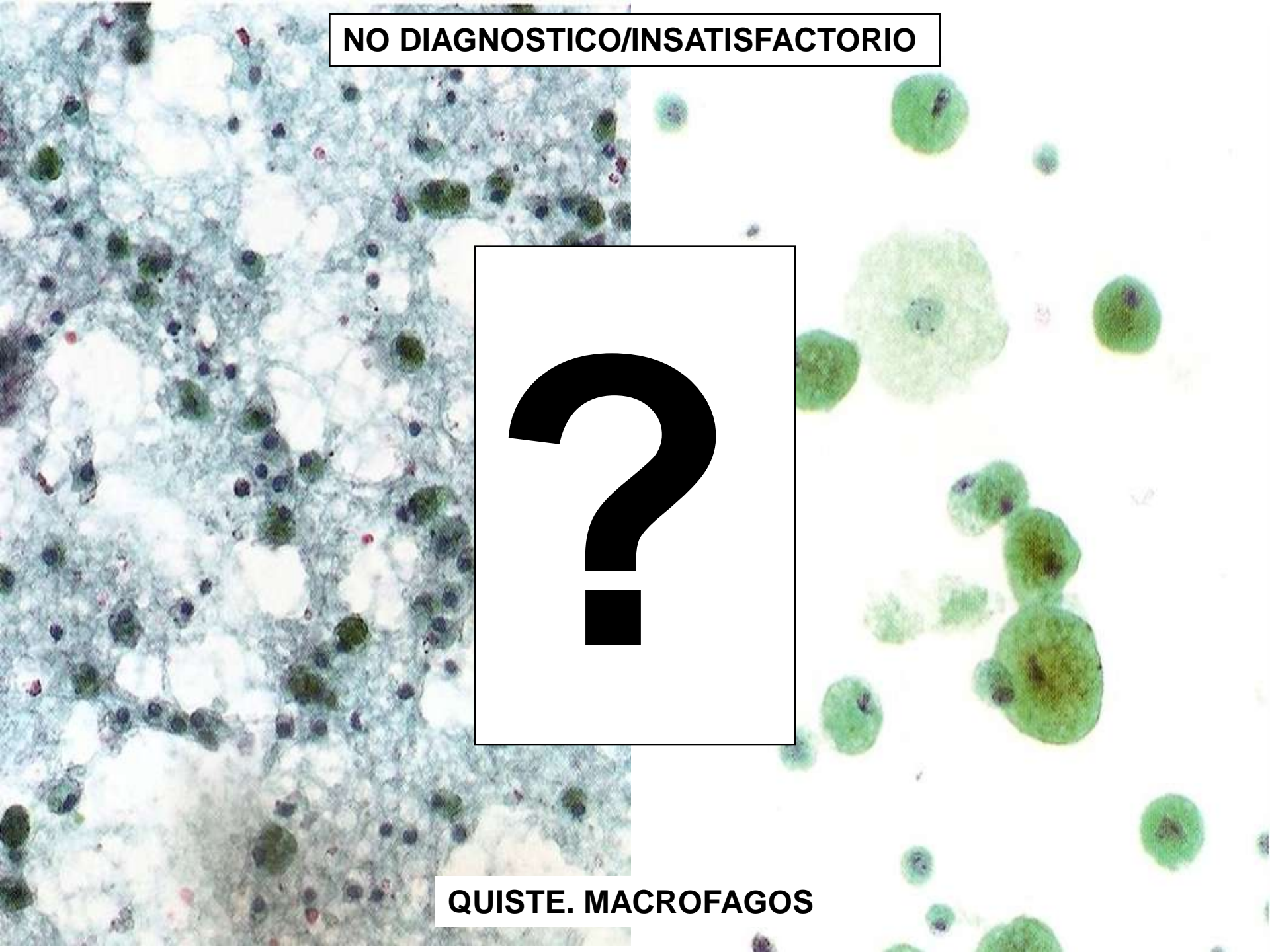
QUISTE. MACROFAGOS



NO DIAGNOSTICO/INSATISFACTORIO



QUISTE. MACROFAGOS



TIROIDES: LESIONES QUISTICAS

15 - 37% DE LOS NODULOS AL MENOS SON PARCIALMENTE QUISTICOS

RIESGO DE MALIGNIDAD EN LESIONES QUISTICAS:

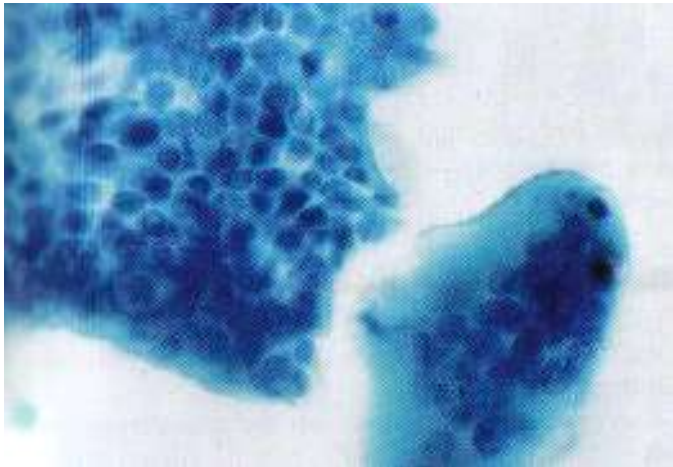
4% SI SON PURAS

14% SI SON MIXTAS Y DE MAS DE 3-4 CM

EN GENERAL SON CARCINOMAS PAPILARES

TIROIDES: CARCINOMA PAPILAR QUISTICO

**50% DE LOS CA PAPILARES SON PARCIALMENTE QUISTICOS
10% PREDOMINANTEMENTE QUISTICOS**



PAAF

CONTENIDO QUISTICO

**RARAS CELULAS EPITELIALES
GIGANTES CON CITOPLASMA DENSO**

RAROS PSAMMOMAS

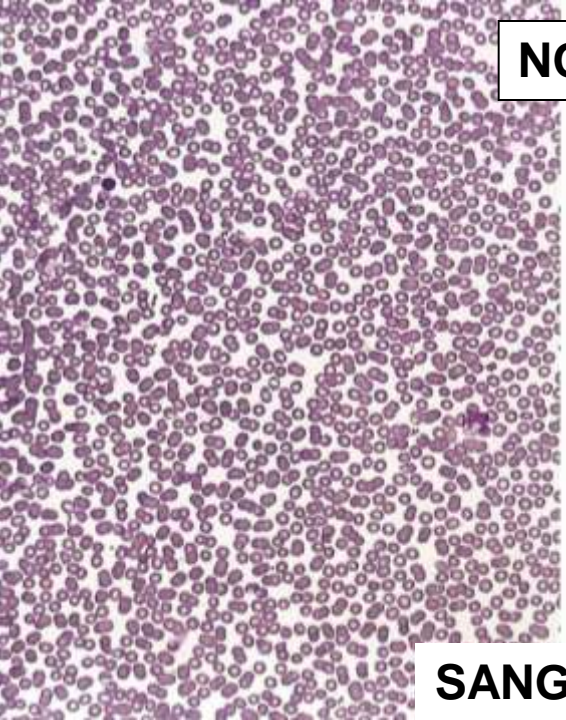
**RARAS CELULAS CON DISPOSICION
MONOCAPA O PAPILAR**

**RARO: CROMATINA PALIDA,
HENDIDURAS NUCLEARES,
PSEUDOINCLUSIONES, ASPECTO
EPIDERMIOIDE**

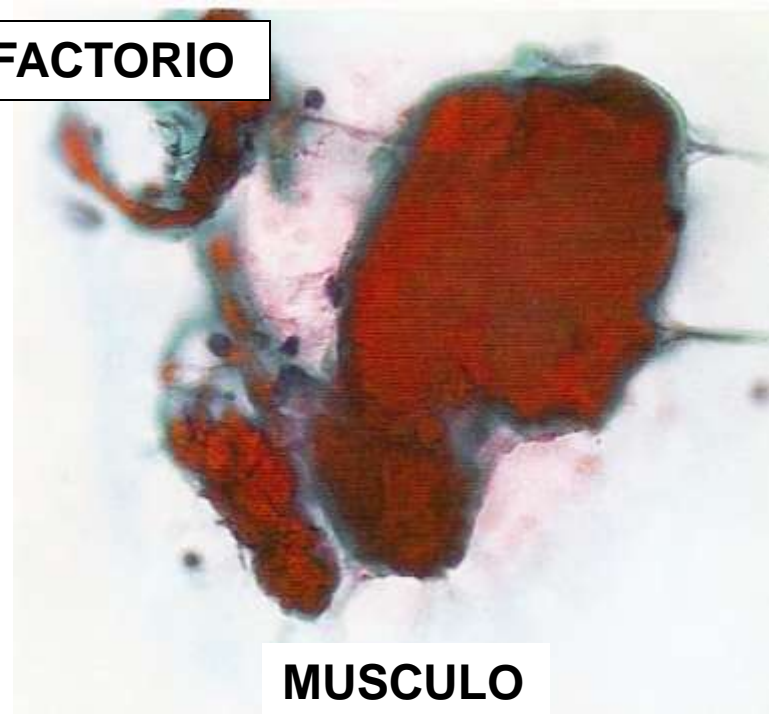
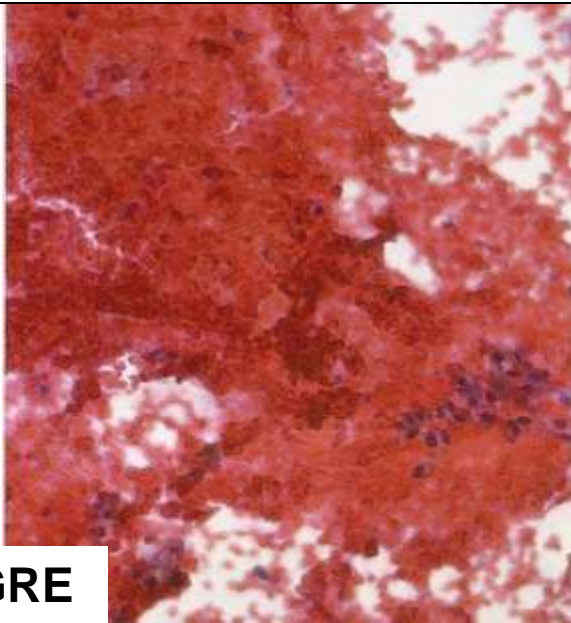


FALSO NEGATIVO

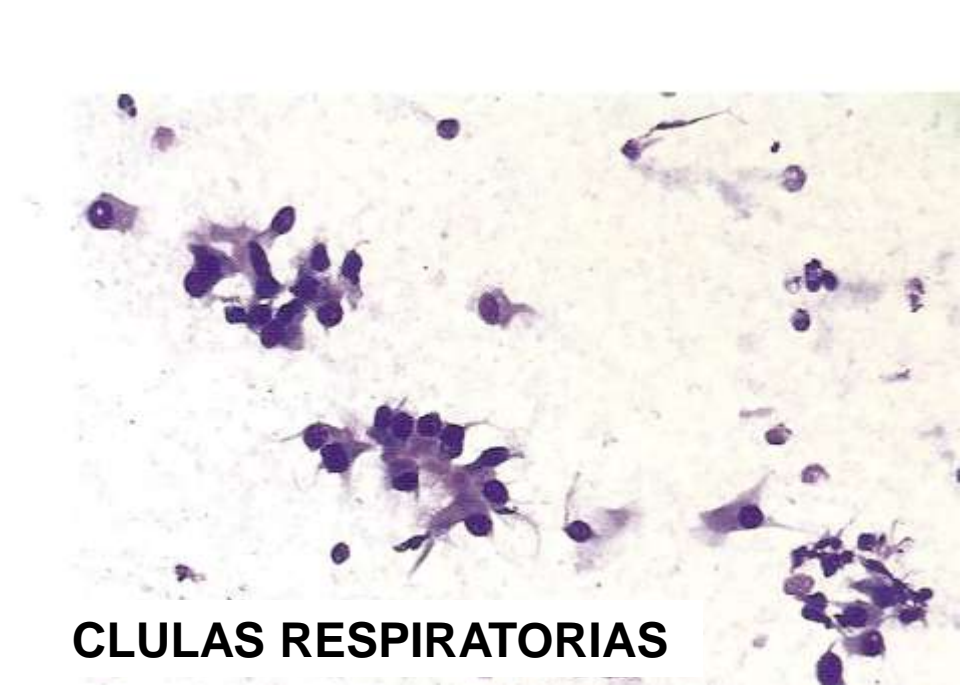
NO DIAGNOSTICO/INSATISFACTORIO



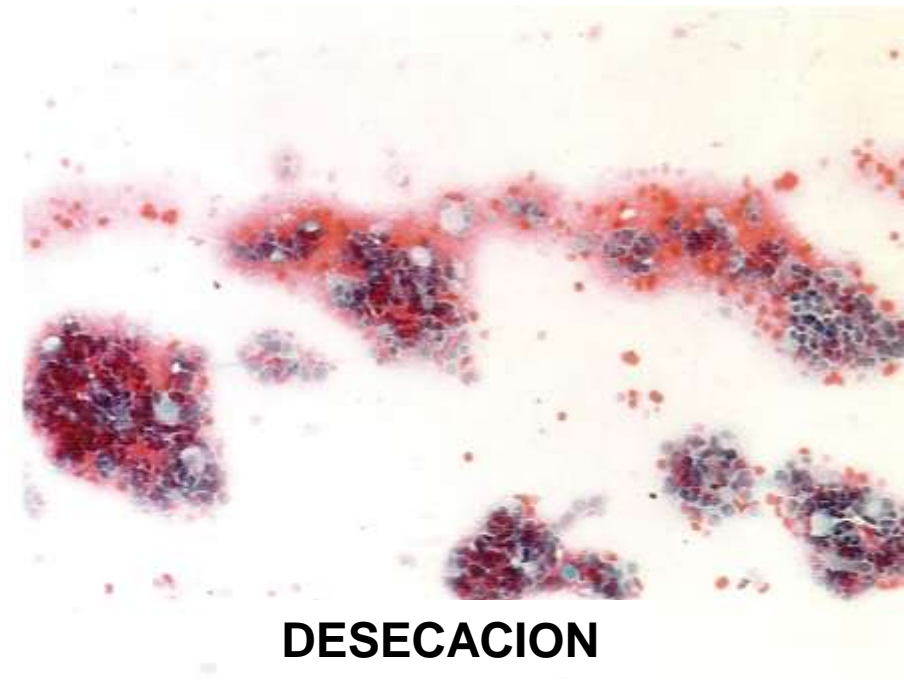
SANGRE



MUSCULO



CLULAS RESPIRATORIAS



DESECACION

Nondiagnostic/Unsatisfactory

Barbara A. Crothers, Michael R. Henry,
Pinar Firat, and Ulrike M. Hamper

A.- PROBLEMA CUANTITATIVO Y CUALITATIVO. CELULARIDAD LIMITADA, AUSENCIA DE CELULAS FOLICULARES, EXTENSIONES DEFECTUOSAS. FIJACION DEFECTUOSA O MALA

B.- SUGERIR REPETICION DE PAAF EN 3 O MAS MESES

Chapter 3

Benign

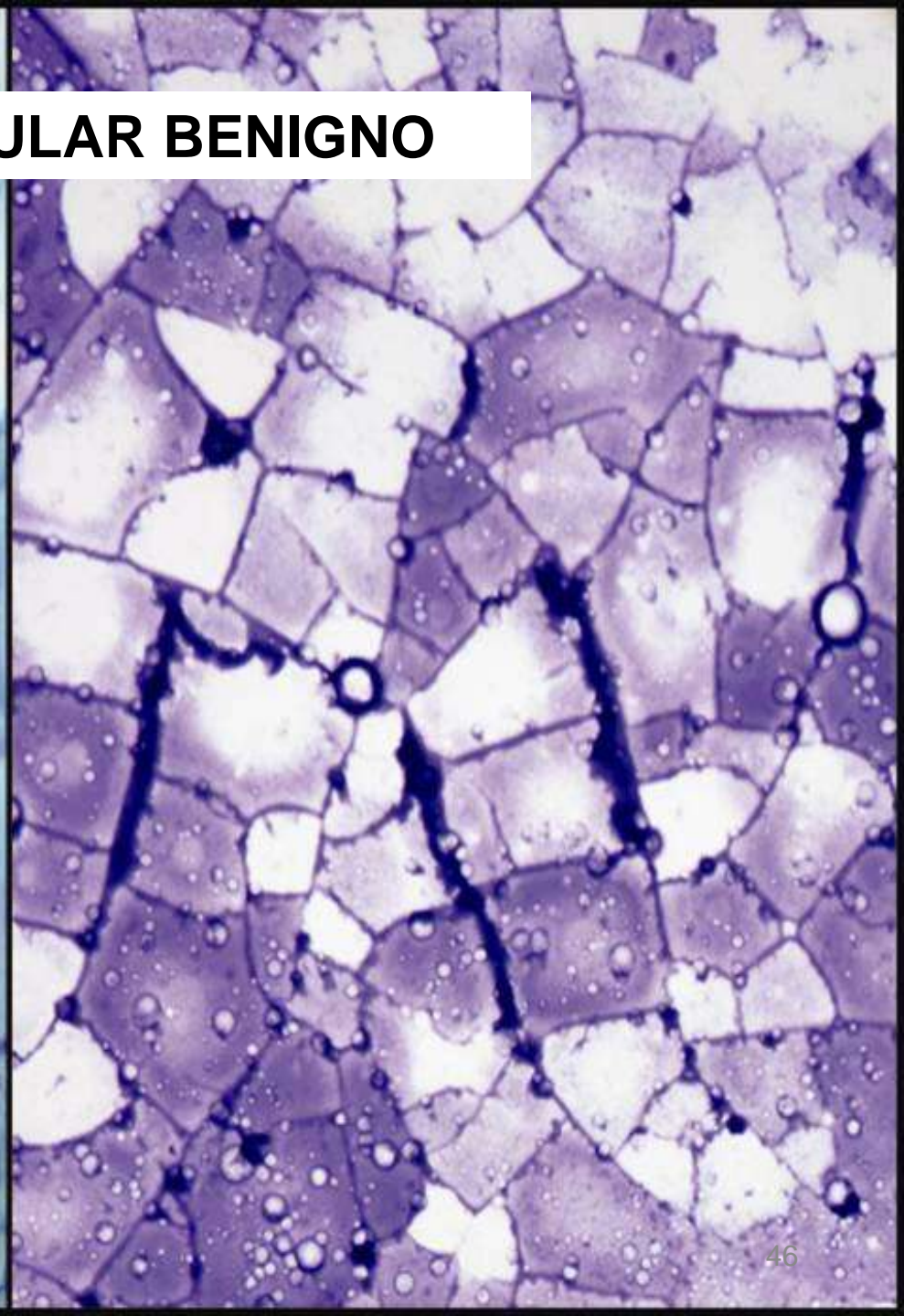
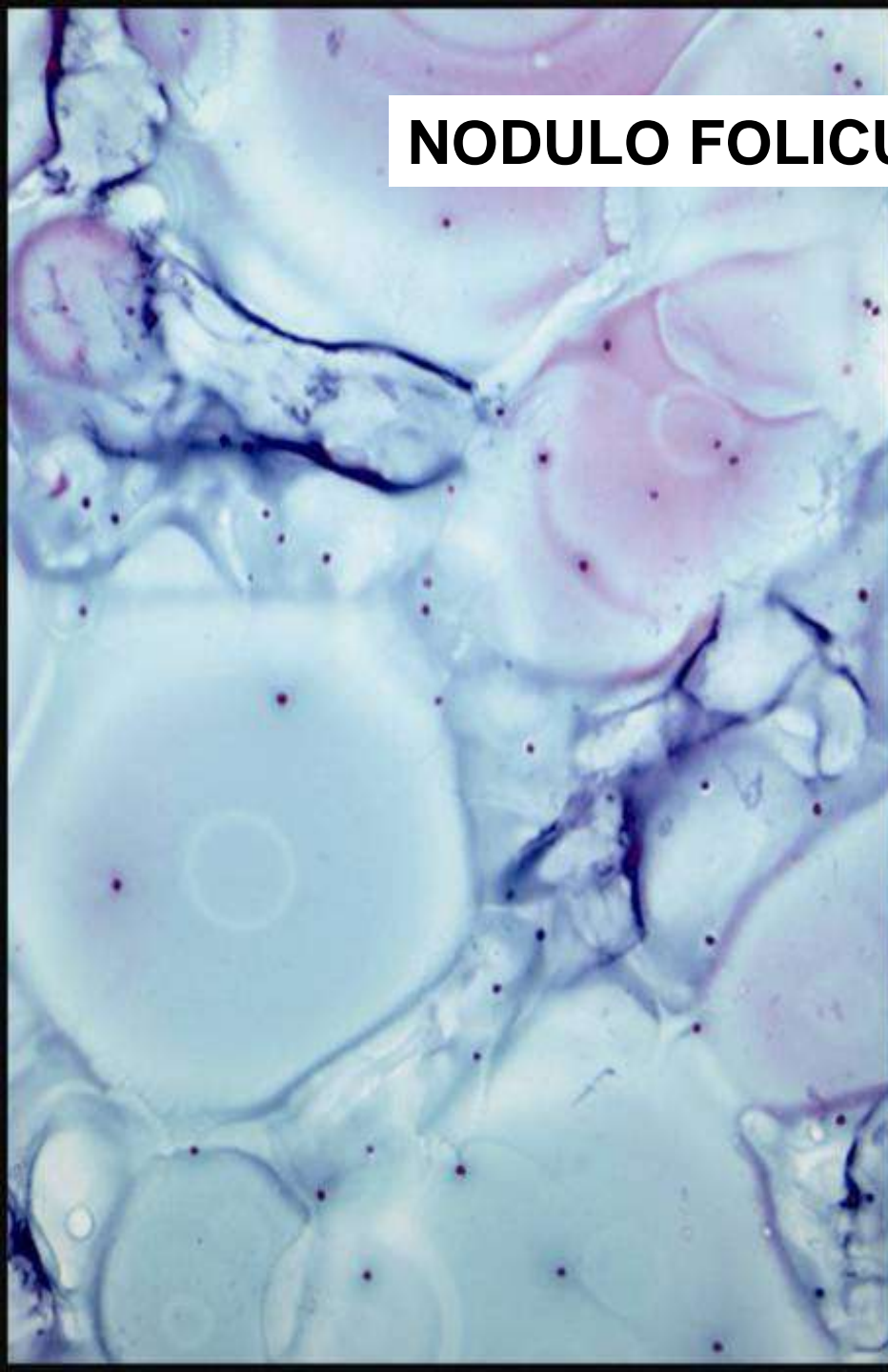
Tarik M. Elsheikh, Béatrix Cochand-Priollet,
Pedro Patricio de Agustin, Mary K. Sidawy, and Matthew A. Zarka

A.- BAJO RIESGO DE NEOPLASIA

**B.- BOCIO COLOIDE, TIROIDITIS
CRONICA LINFOIDE, NODULO
HIPERPLASICO...**

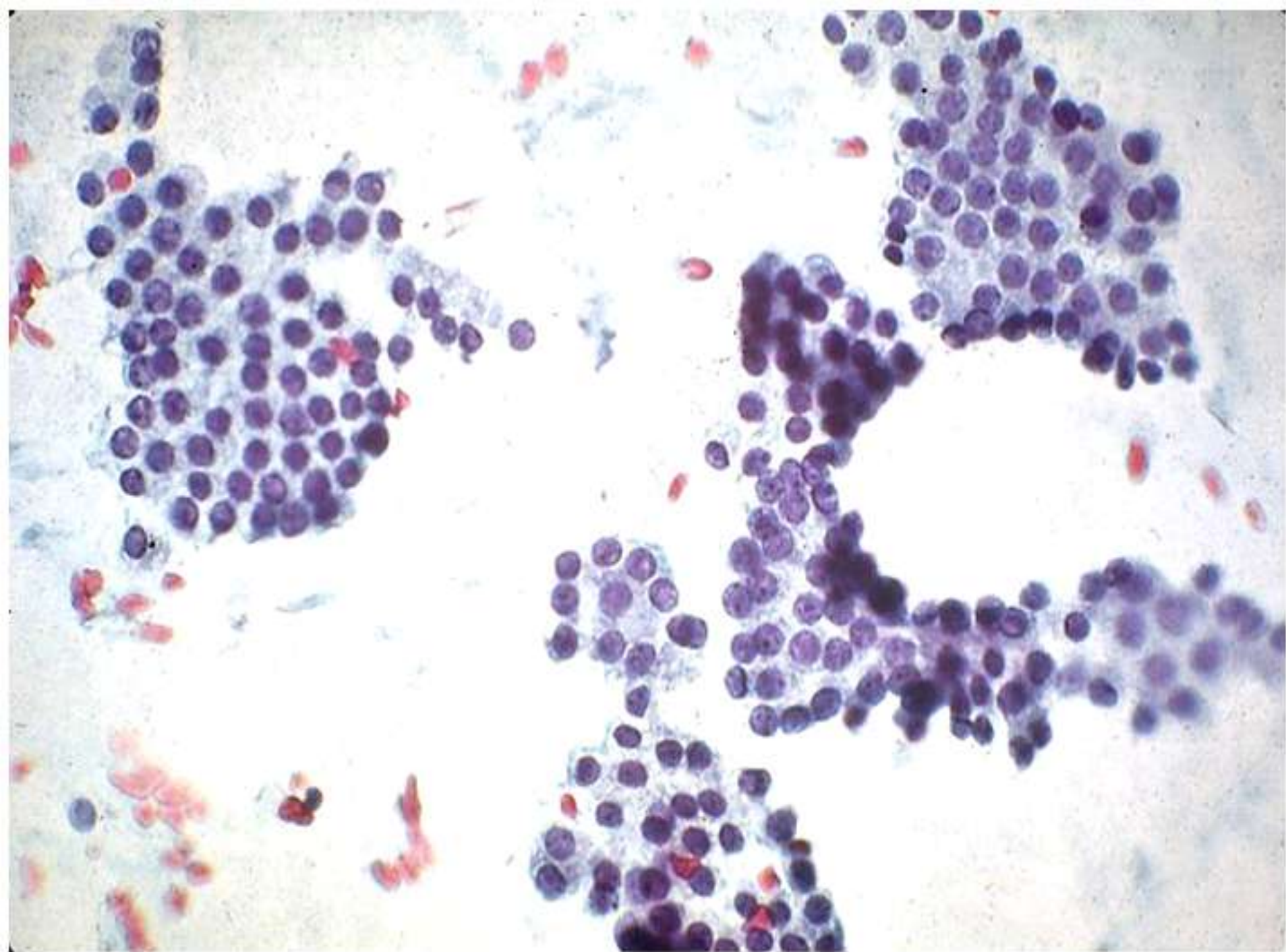
**C.- SEGUIMIENTO CLINICO,
EXAMEN RADIOLOGICO, NUEVA
PAAF SI CRECIMIENTO**

NODULO FOLICULAR BENIGNO

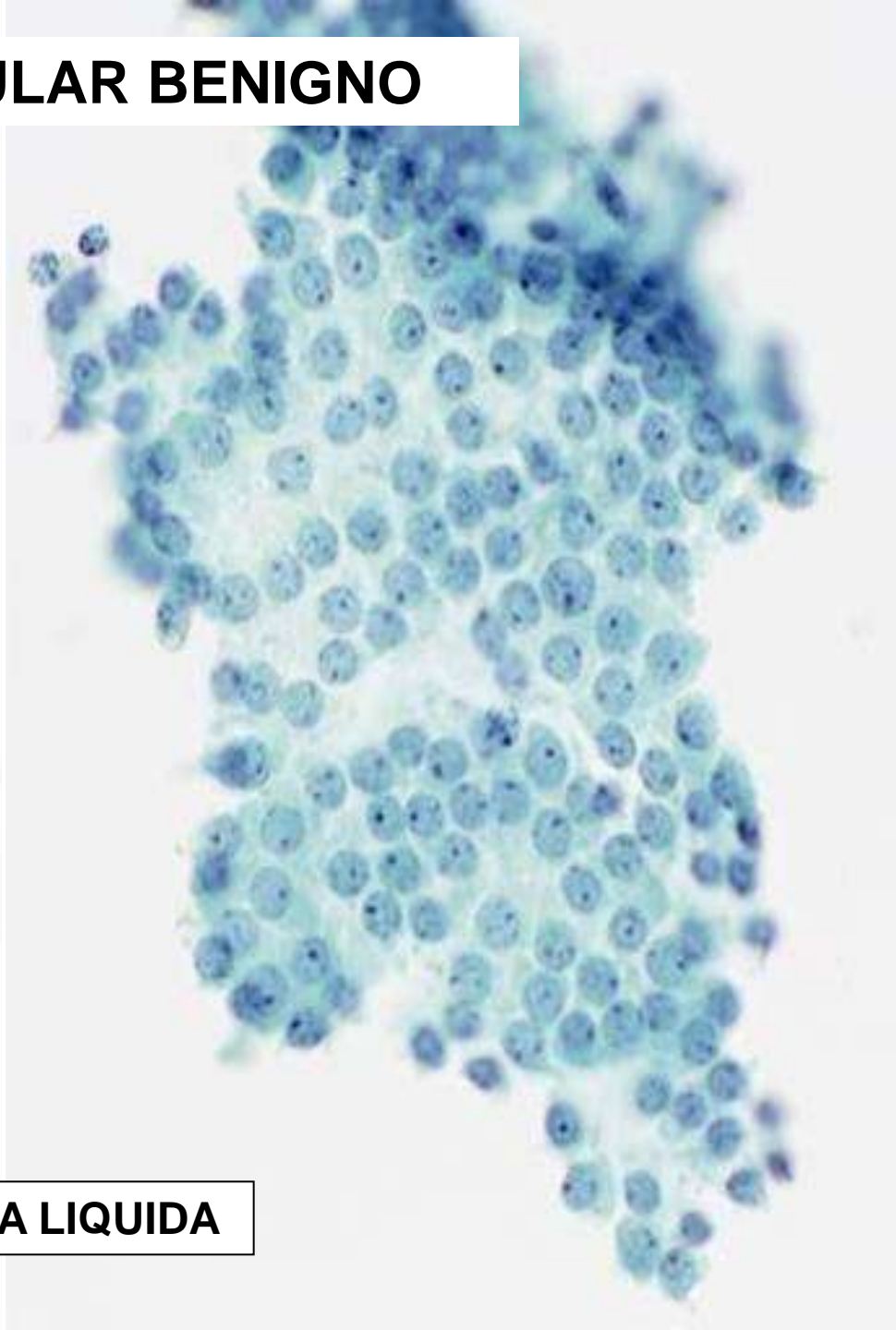
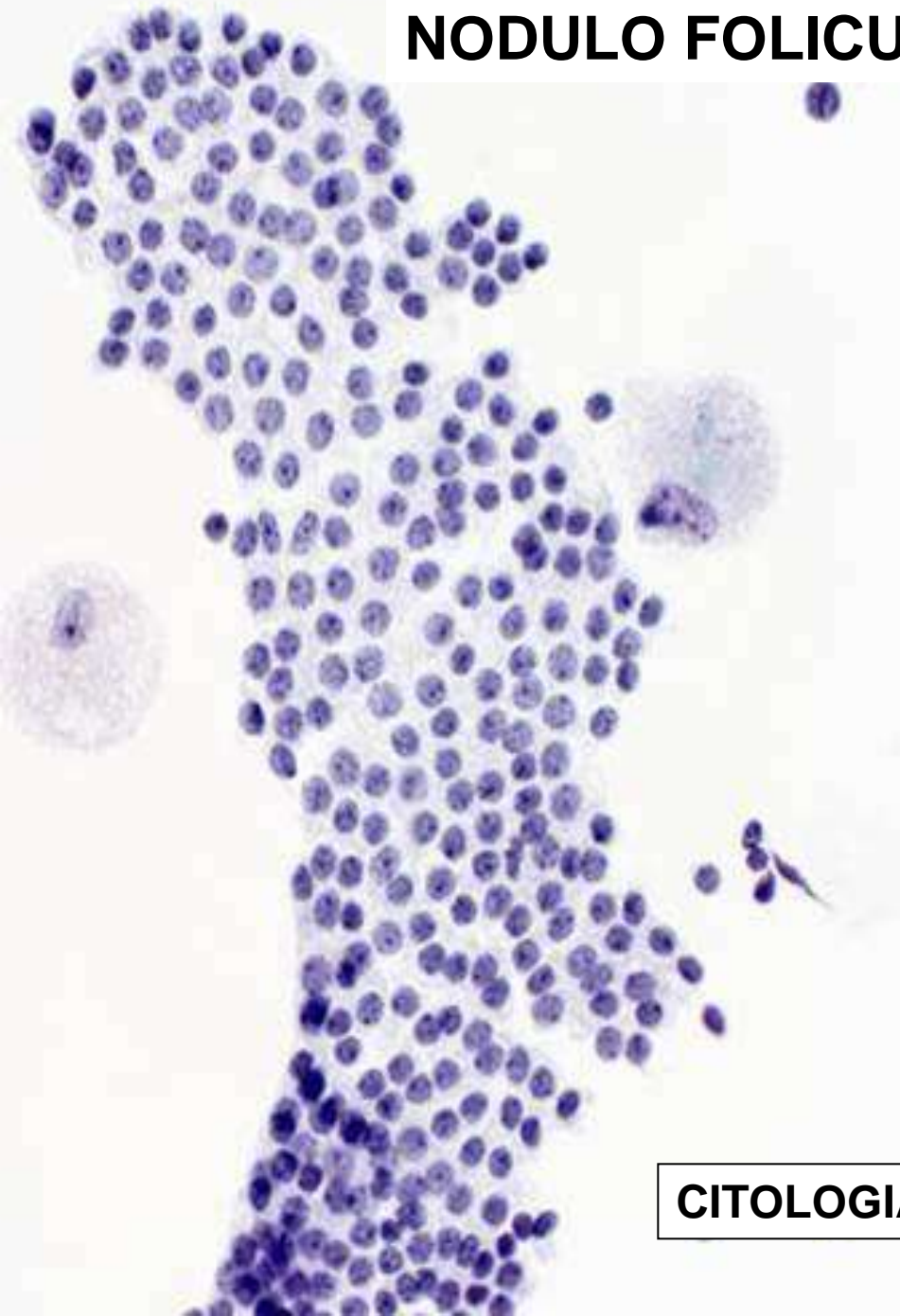


NODULO FOLICULAR BENIGNO



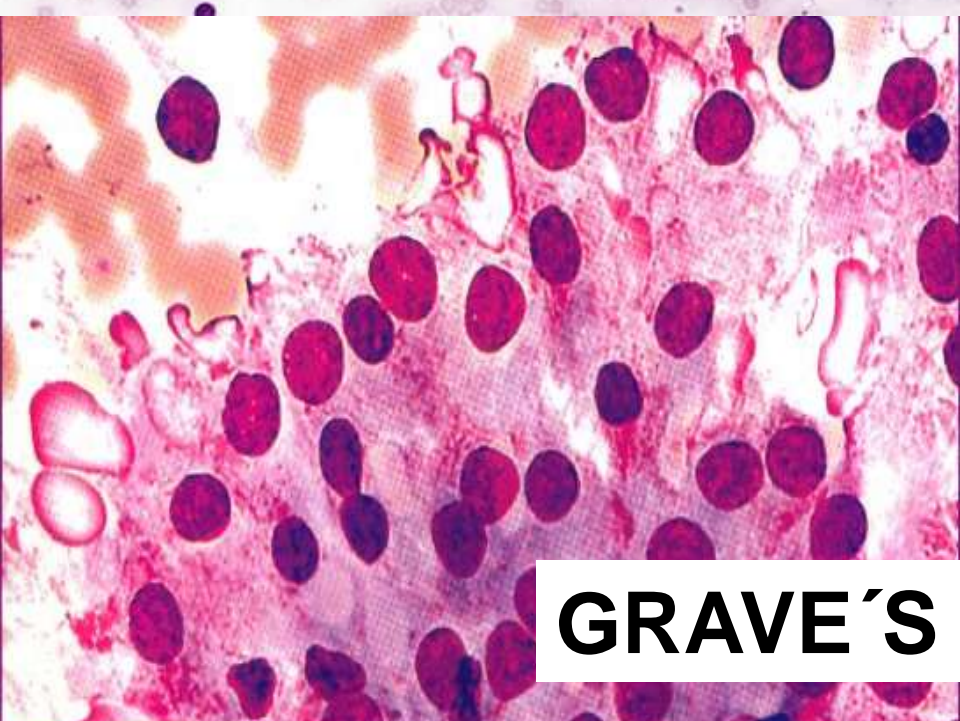
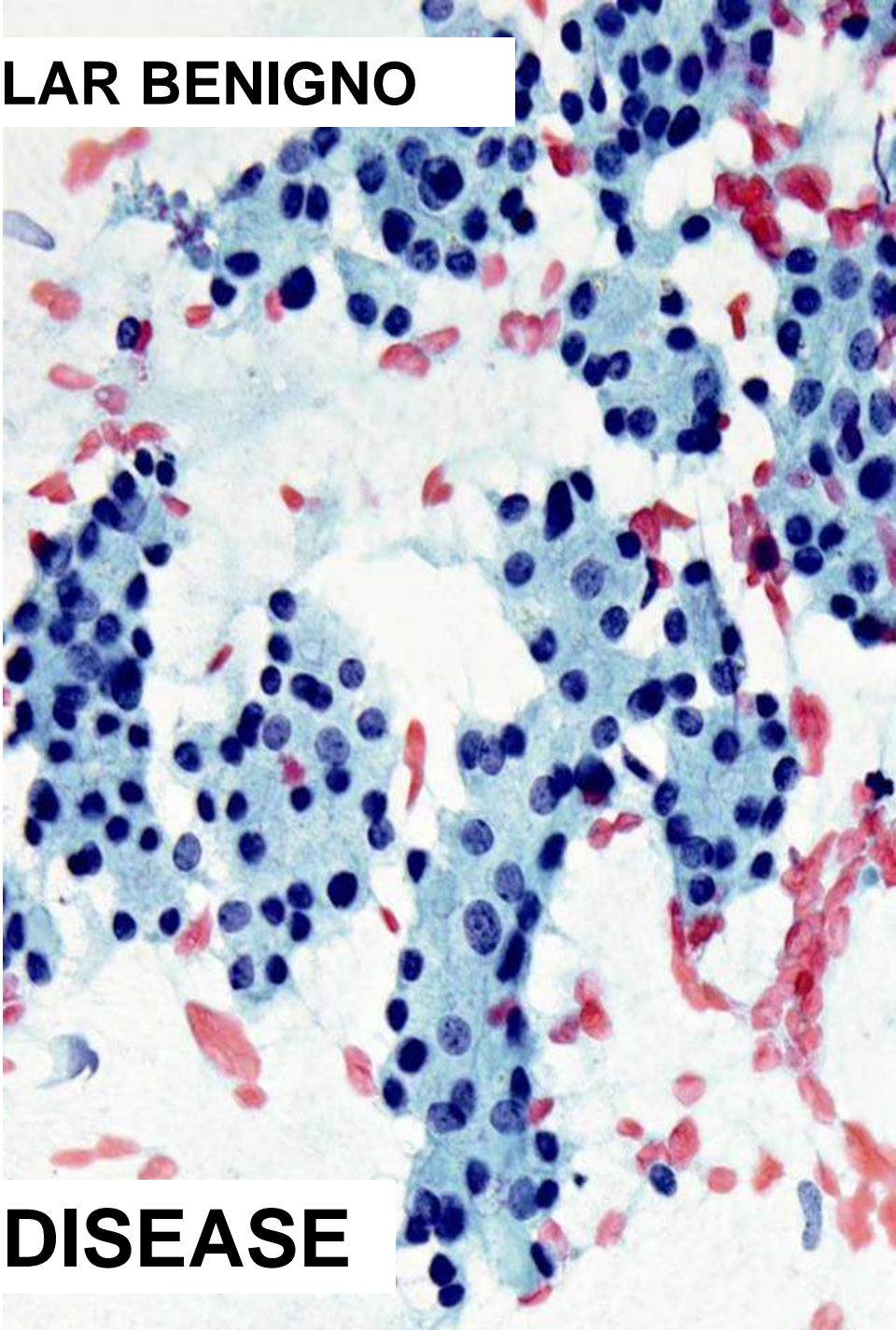
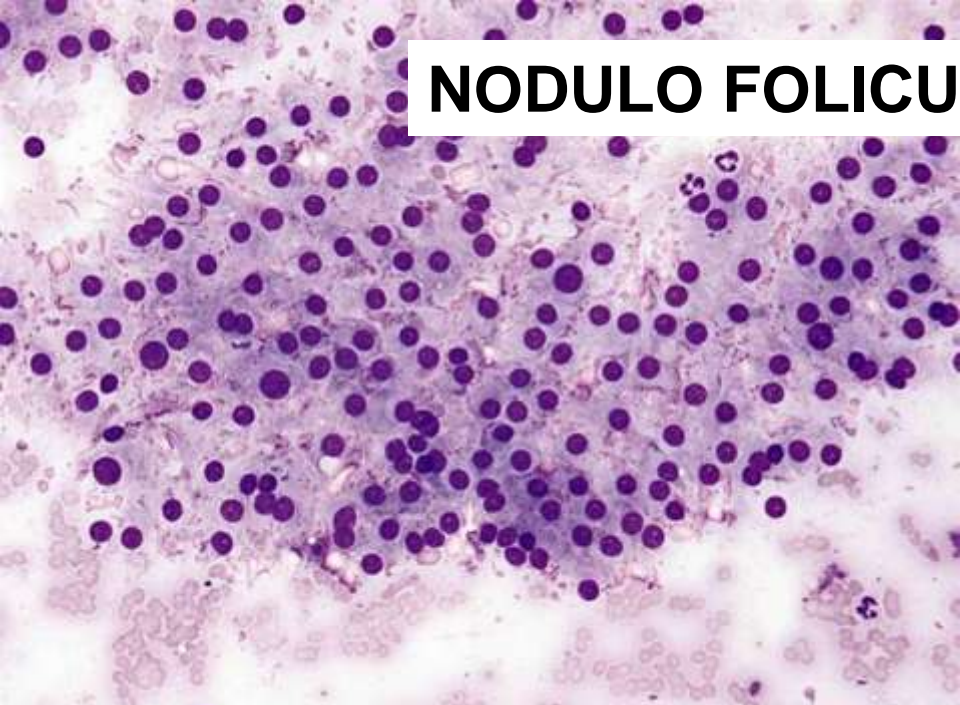


NODULO FOLICULAR BENIGNO



CITOLOGIA LIQUIDA

NODULO FOLICULAR BENIGNO



GRAVE'S DISEASE



ROBERT JAMES GRAVES

1797-1853



**KARL ADOLF VON
BASEDOW (1799-1853)**



HAKARU HASHIMOTO (1881-1934)



1907 SE GRADUO EN KYUSHU UNIVERSITY IN FUKUOKA

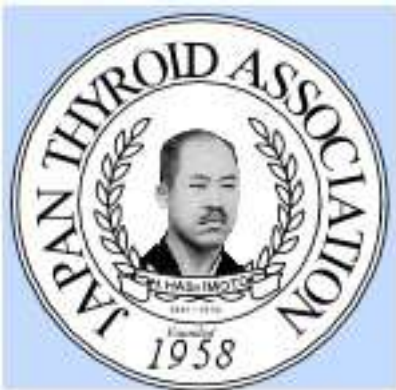
1908-1912 TRABAJO EN EL DEPARTAMENTO DE CIRUGIA DE HAYARI MIKAYE

1912 DESCRIBIO LA ENFERMEDAD DE HASHIMOTO

ESTUVO 3 AÑOS EN BERLIN, GÖTTINGEN Y LONDRES

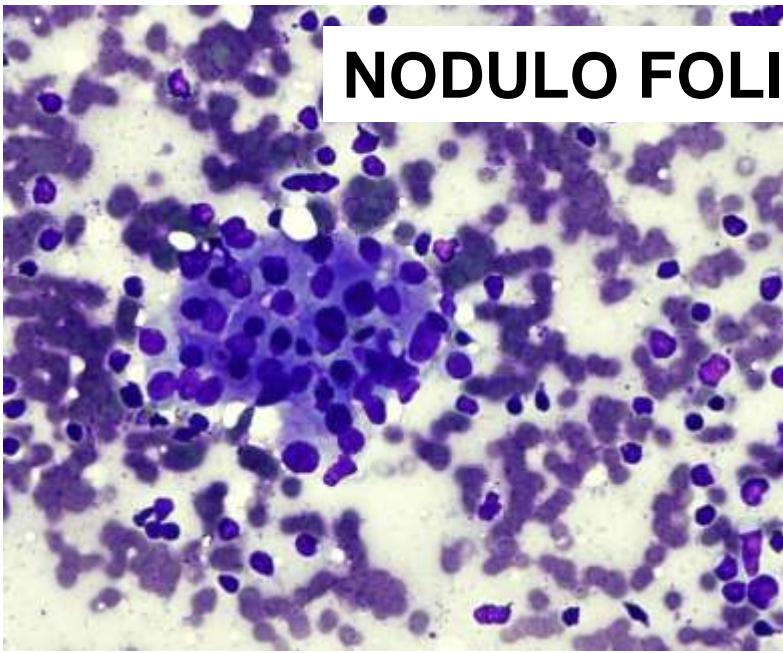
REGRESO A JAPON AL COMIENZO DE LA SEGUNDA GUERRA MUNDIAL

TRABAJO CON MUCHO ÉXITO CON SU FAMILIA QUE ERA DE MEDICOS.



CORTESIA DEL DR. A. PEREZ BARRIOS

NODULO FOLICULAR BENIGNO

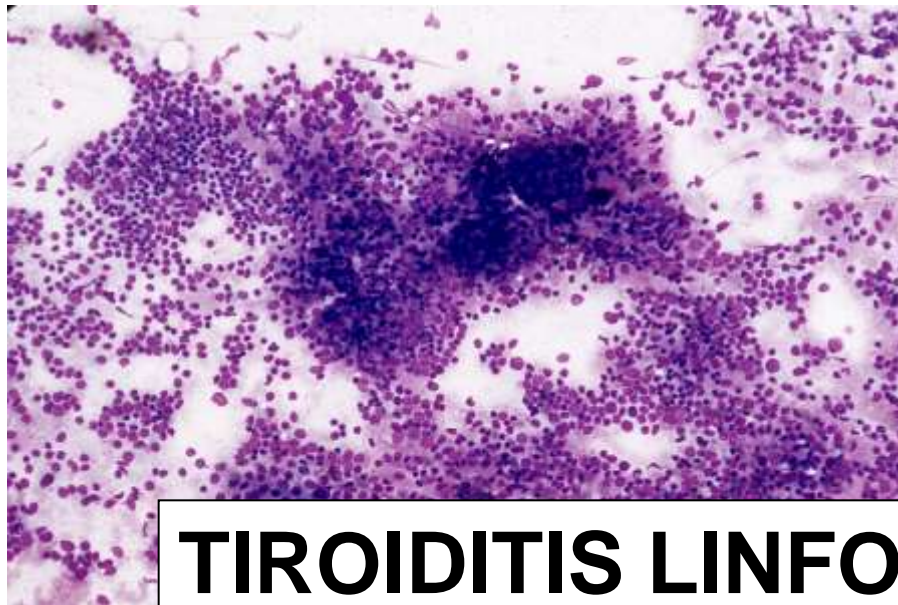


**MARCADA
CELULARIDAD**

**LINFOCITOS Y
PLASMATICAS**

**AGREGADOS
LINFOHISTIOCITICOS**

**CELULAS DE
HURTHLE CON
ATIPIA VARIABLE**

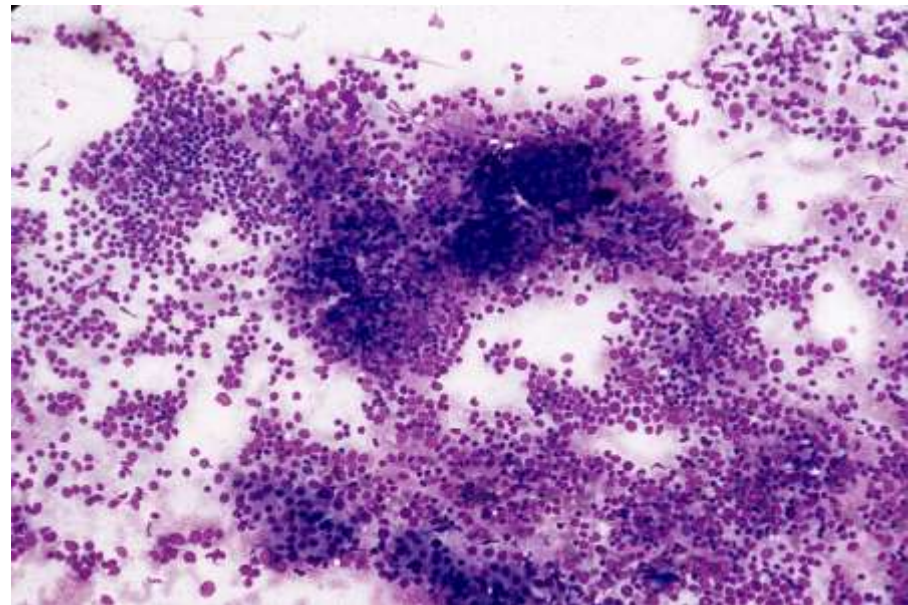
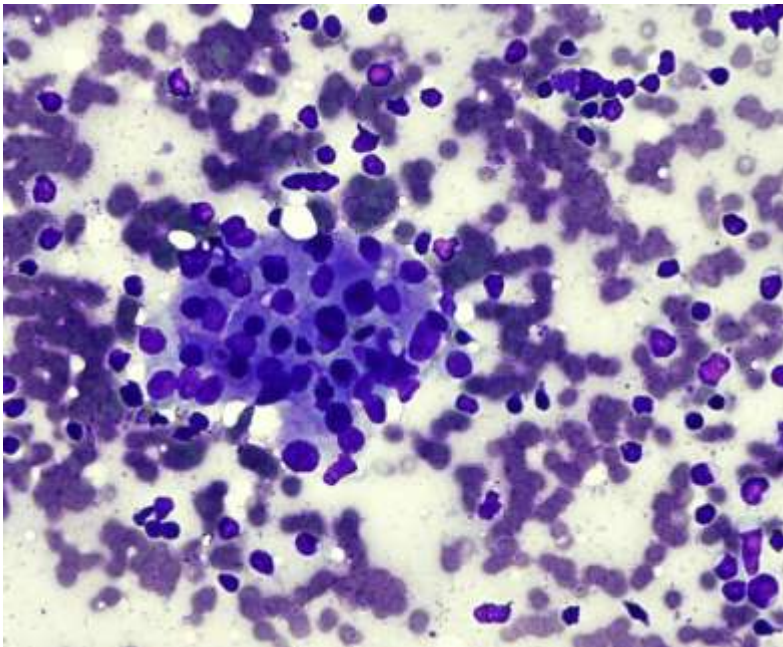


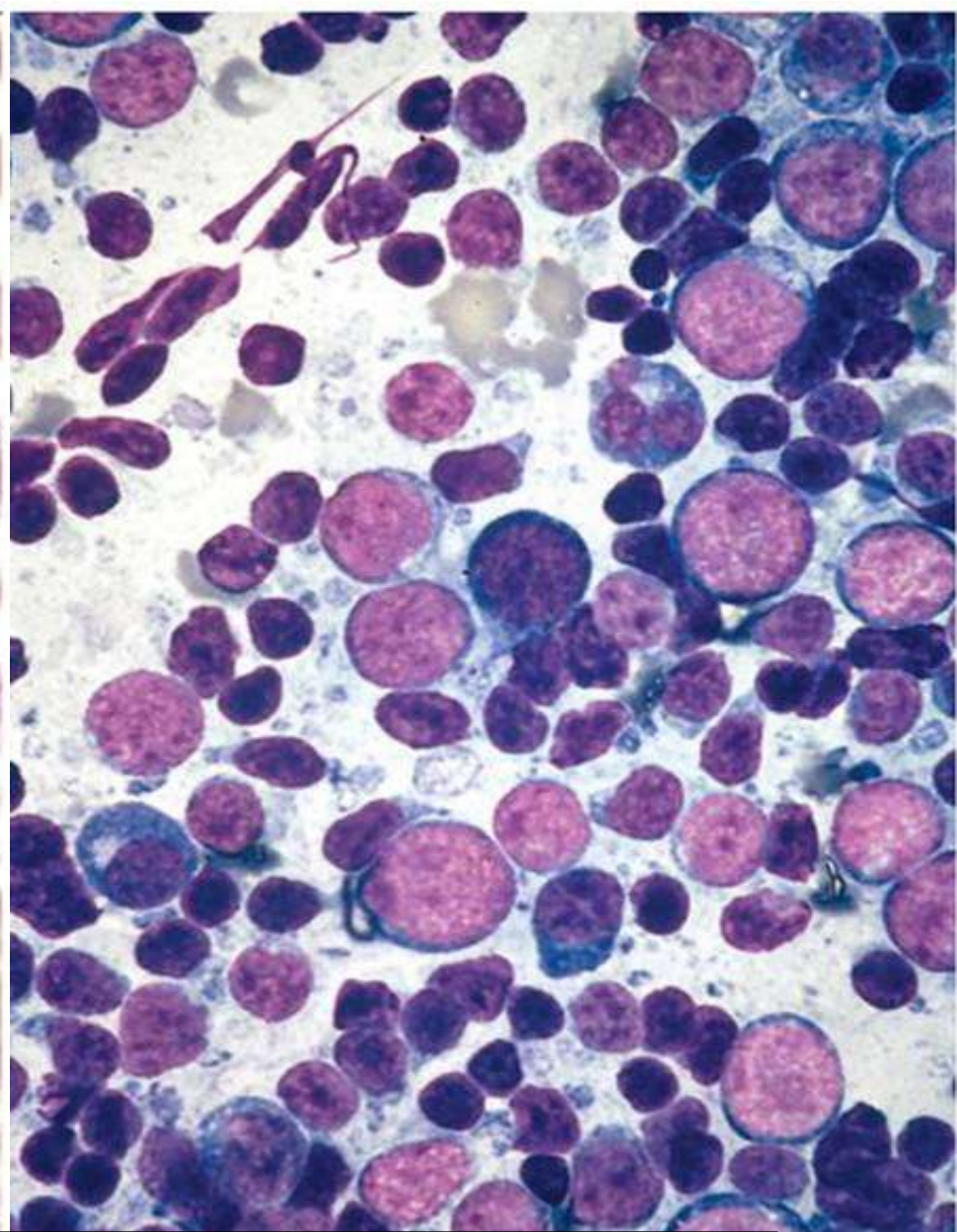
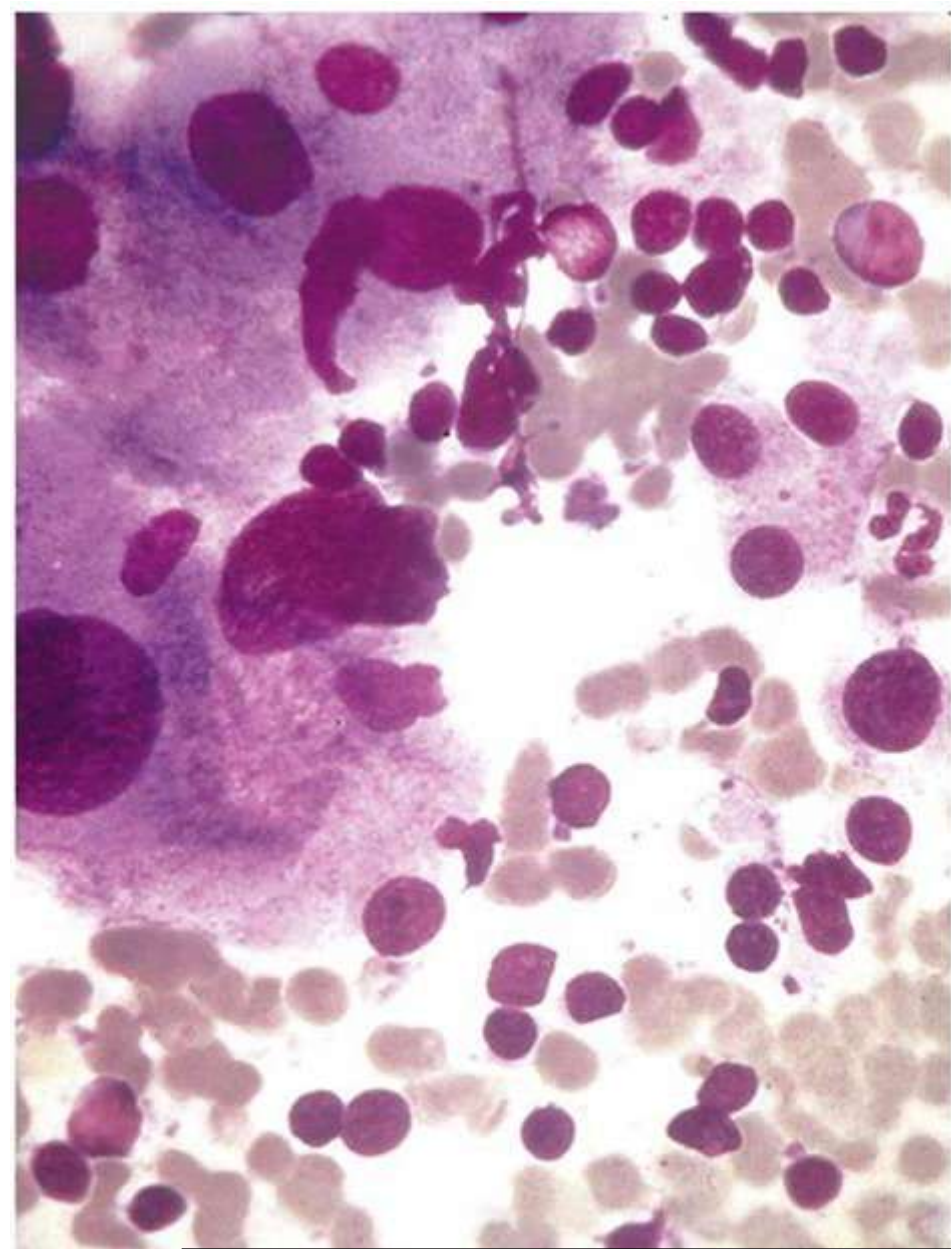
TIROIDITIS LINFOCITARIA CRONICA

**675.000 PERSONAS EN
ESPAÑA SON HIPOTIROIDEAS**

LA MAYORIA POR:

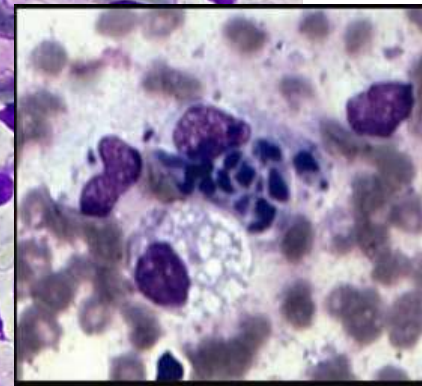
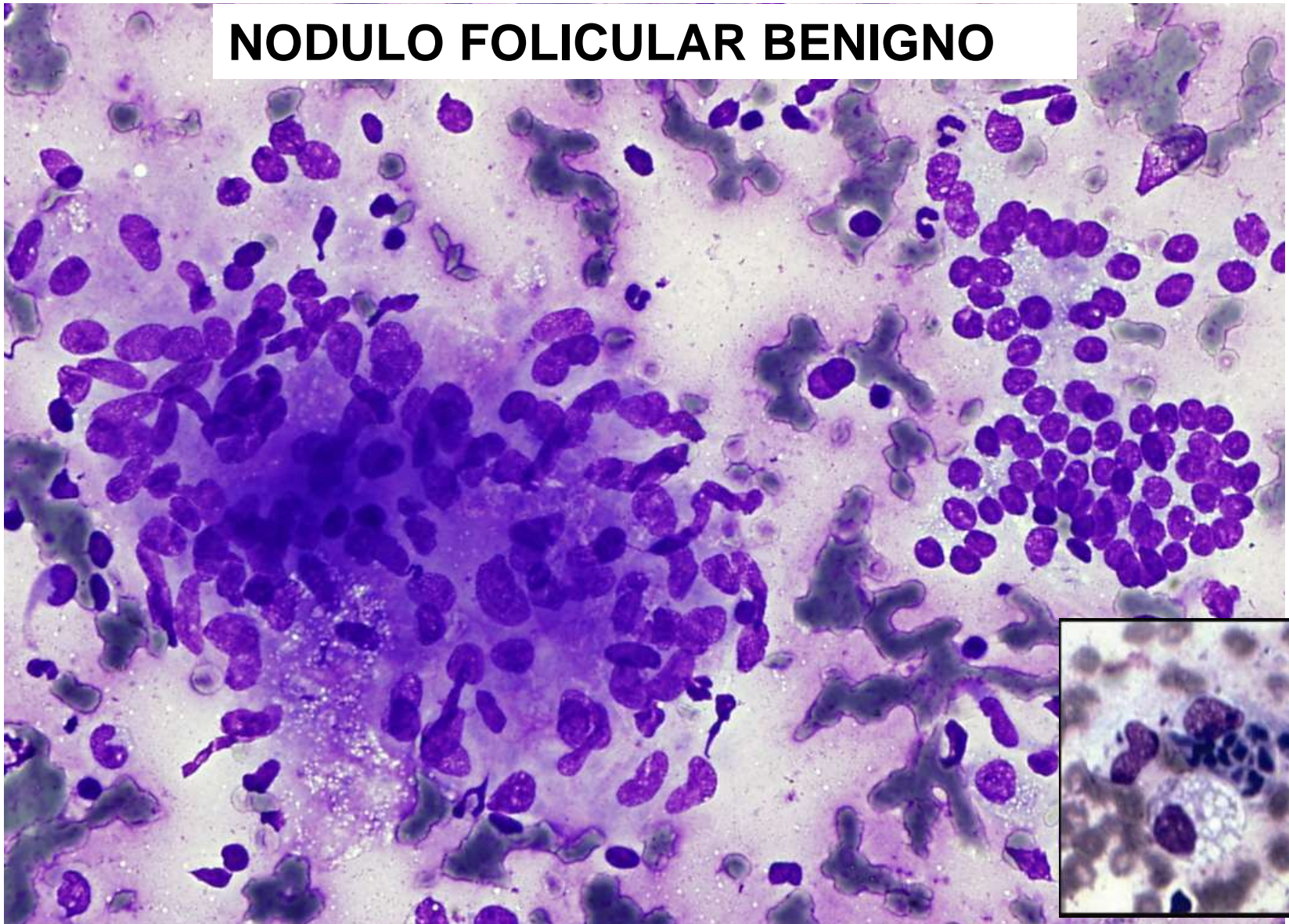
TIROIDITIS LINFOCITARIA CRONICA





TIROIDITIS LINFOCITARIA CRONICA

NODULO FOLICULAR BENIGNO



**TIROIDITIS GRANULOMATOSA
SUBAGUDA DE DE QUERVAIN**



FRITZ DE QUERVAIN

CIRUJANO SUIZO

(1868-1940)

TIROIDITIS

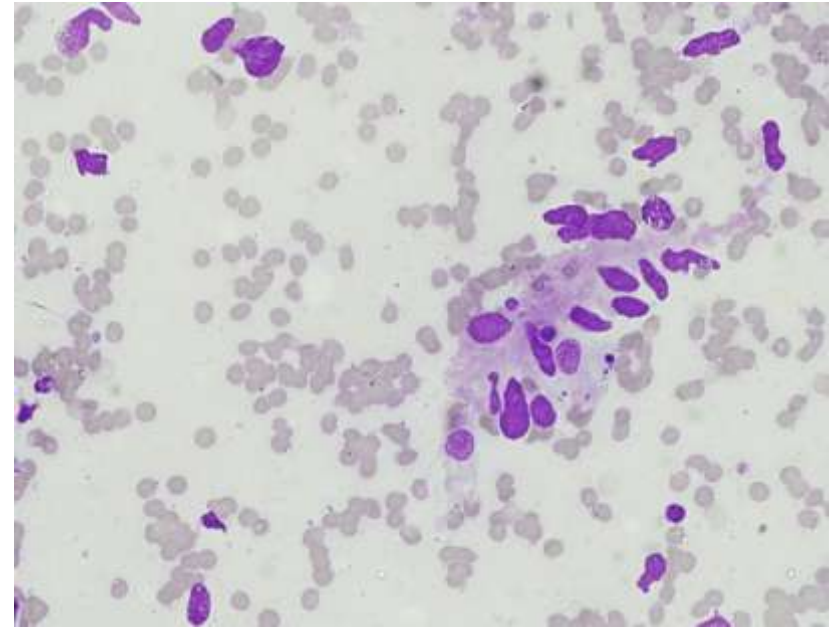
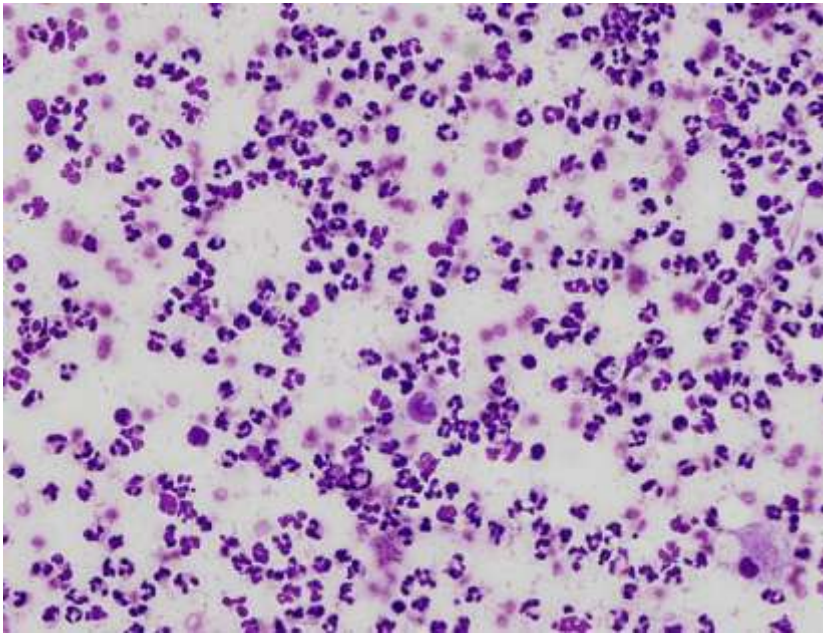
**TORCEDURA DE LAS
LAVANDERAS**



IODO EN LAS DIETAS

NODULO FOLICULAR BENIGNO

TIROIDITIS AGUDA



TIROIDITIS/ENFERMEDAD DE RIEDEL

AUS/FLUS



Chapter 4

Atypia of Undetermined Significance/Follicular Lesion of Undetermined Significance

Jeffrey F. Krane, Ritu Nayar, and Andrew A. Renshaw

**ATIPIA DE SIGNIFICADO
INCIERTO/LESION FOLICULAR DE
SIGNIFICADO INDETERMINADO**

AUS = ATIPIA DE SIGNIFICADO INCIERTO

**FLUS = LESION FOLICULAR DE
SIGNIFICADO INDETERMINADO**

**NO TODOS LOS CASOS
SUGIEREN LESION
FOLICULAR**

**ATIPIA DE SIGNIFICADO
INCIERTO/LESION FOLICULAR DE
SIGNIFICADO INDETERMINADO**

PROBLEMAS TECNICOS

EXTENSIONES GRUESAS

COAGULACION/HEMORRAGIA

DESECACION

TINCIONES DEFECTUOSAS

PROBLEMAS MORFOLOGICOS

PROBLEMAS MORFOLOGICOS

1.- CELULAS NO LINFOIDES

CELULARIDAD CUANTITATIVAMENTE NORMAL

FOCOS CON ATIPIA

NUCLEOS AGRANDADOS
HENDIDURAS/PSEUDOINCLUSIONES
CONTORNOS NUCLEARES
INDENTADOS
CROMATINA ACLARADA

D D CON CA PAPILAR

CELULAS GRANDES NUCLEOLOS
PROMINENTES
RESPUESTA A TRATAMIENTO
(YODO, CARBIMAZOLE, OTROS)
REPARATIVA/REGENERACION EN
QUISTES/HEMORRAGIA/PAAF

D D CON NEOPLASIAS
NO LINFOIDES

PROBLEMAS MORFOLOGICOS

1.- CELULAS FOLICULARES

CELULARIDAD CUANTITATIVAMENTE ESCASA

MICROFOLICULOS



D D CON NEOPLASIA FOLICULAR

CELULAS DE HURTHLE

EN BMN O HURTHLE



D D CON NEOPLASIA C HURTHLE

PROBLEMAS MORFOLOGICOS

2.- CELULAS LINFOIDES



D D CON LINFOMA

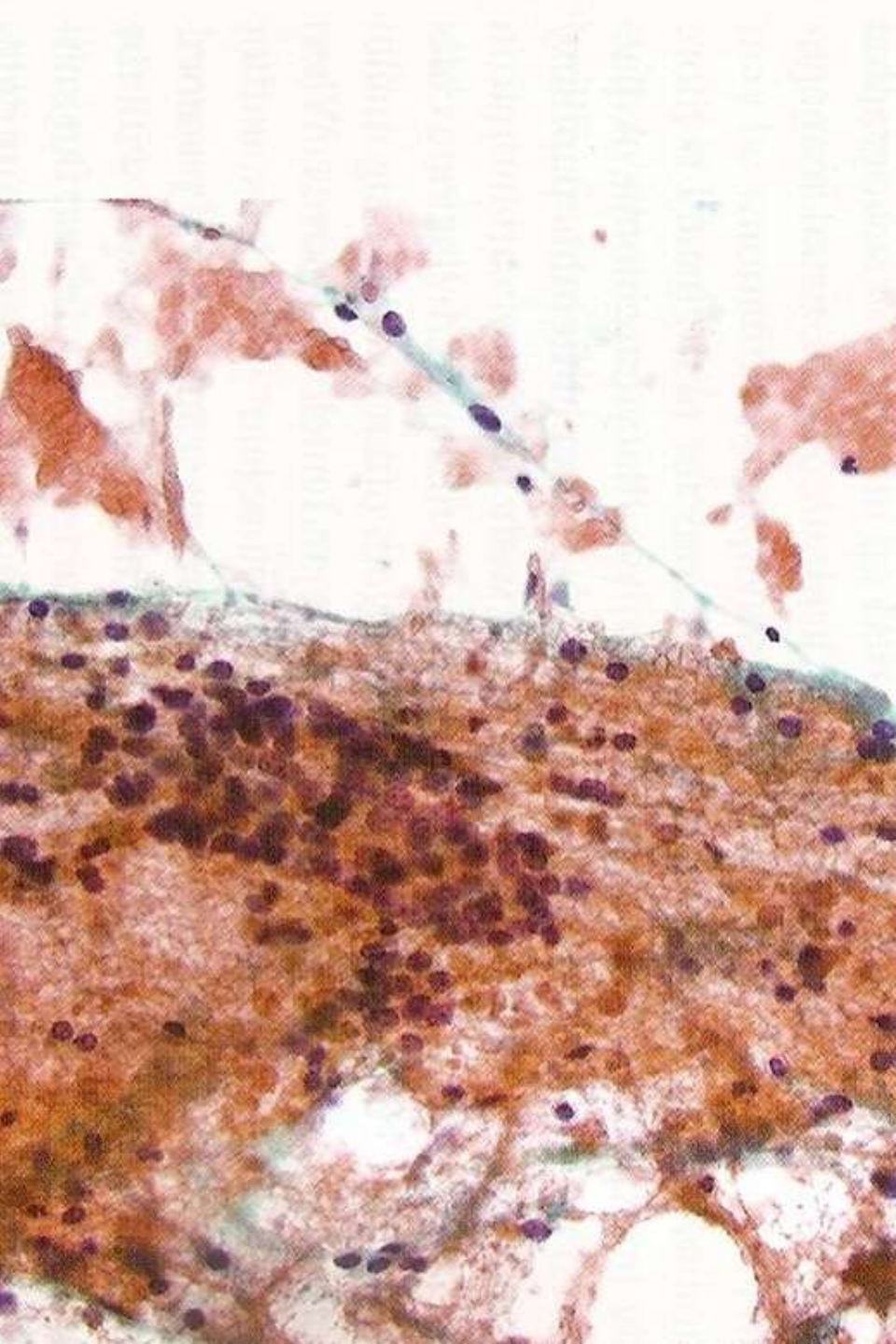
CITOMETRIA DE FLUJO

PROBLEMAS MORFOLOGICOS

3.- CELULAS CONECTIVAS



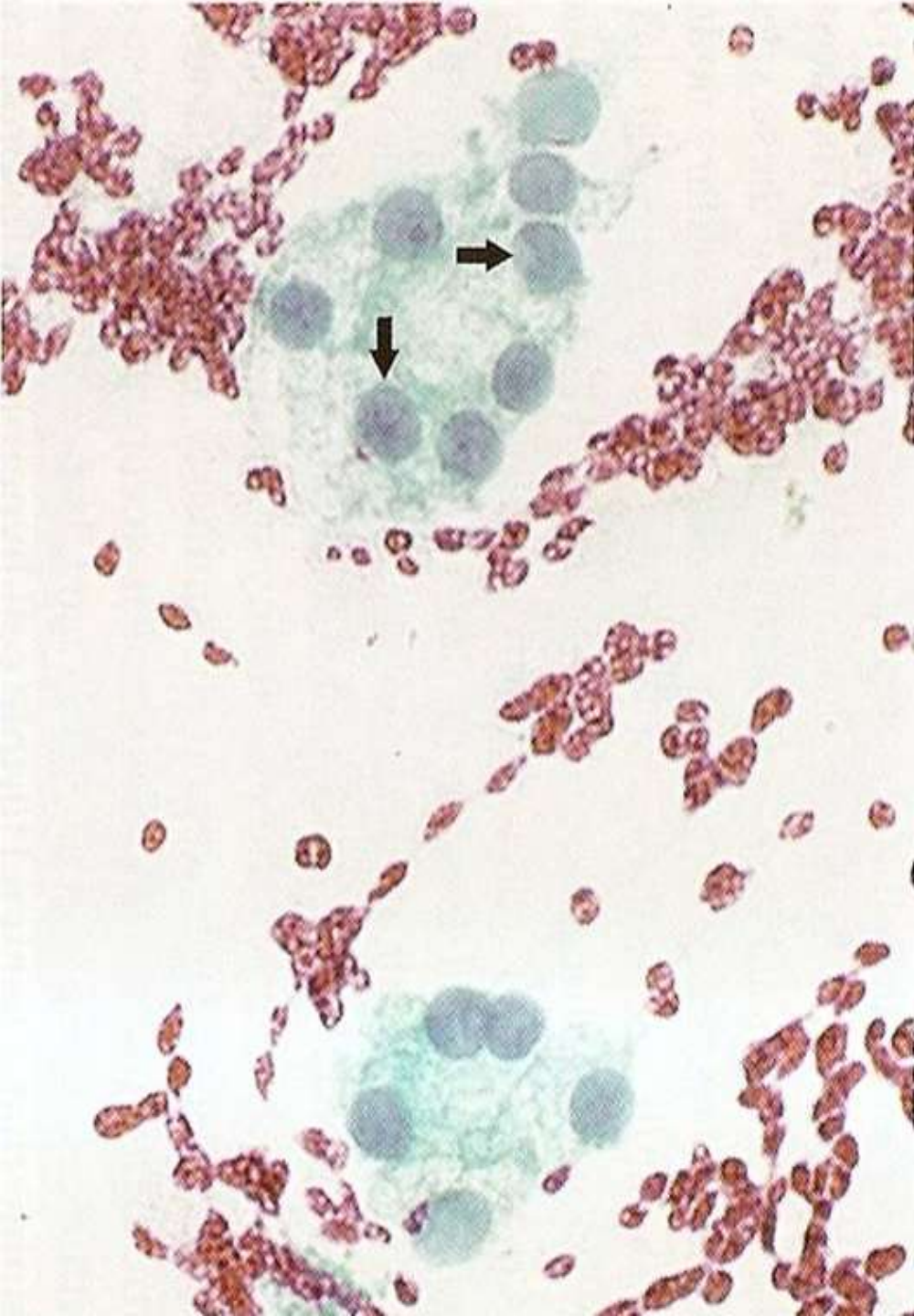
CICATRIZACIONES



ATIPIA DE SIGNIFICADO INCIERTO

**HEMORRAGIA
COAGULACION**

**¿INSUFICIENTE?
¿AUS?**



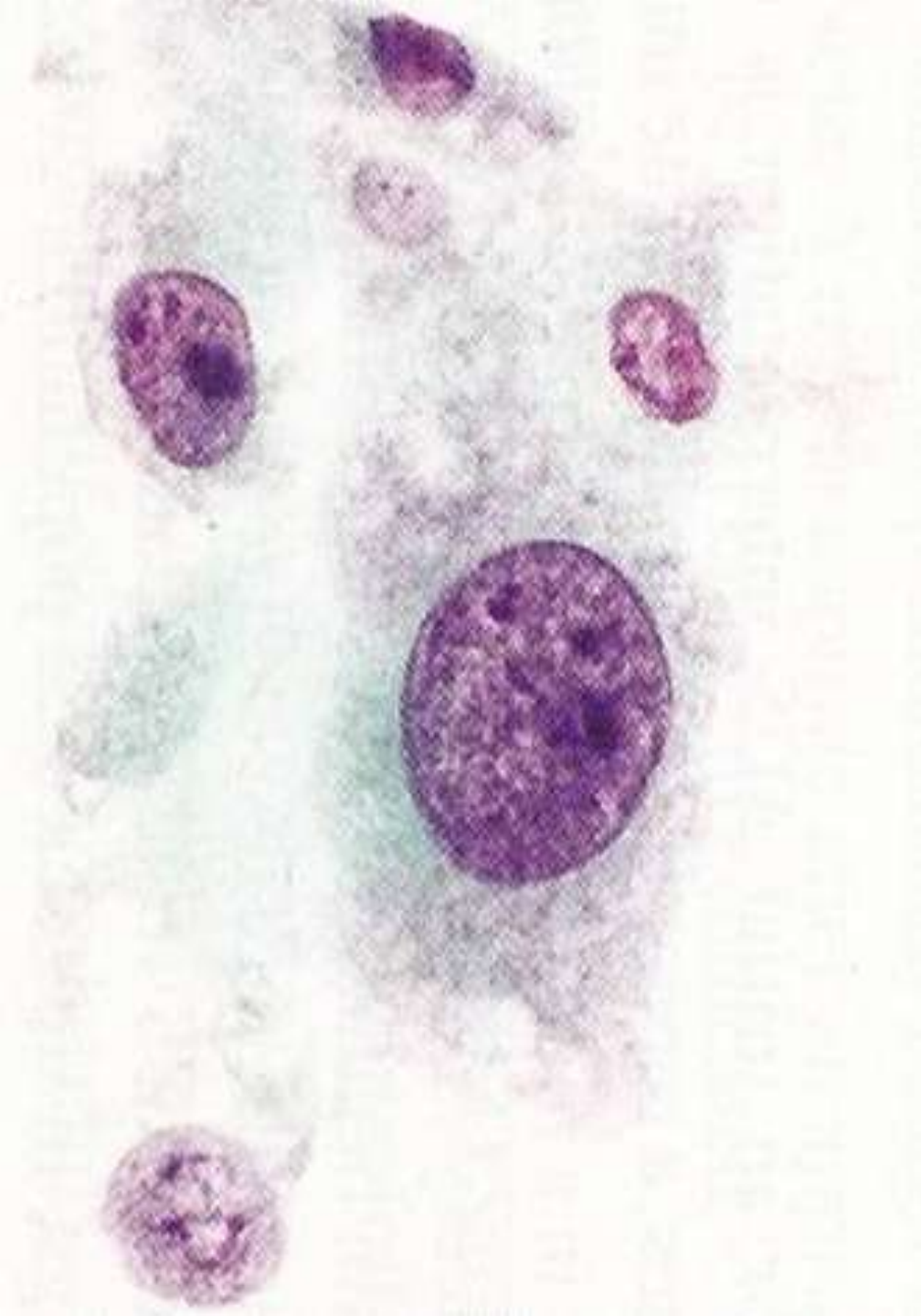
**ATIPIA DE SIGNIFICADO
INCIERTO**

DESECACION

NUCLEOS PALIDOS

**INSINUACION DE
PSEUDOINCLUSIONES**

¿NEOPLASIA PAPILAR?

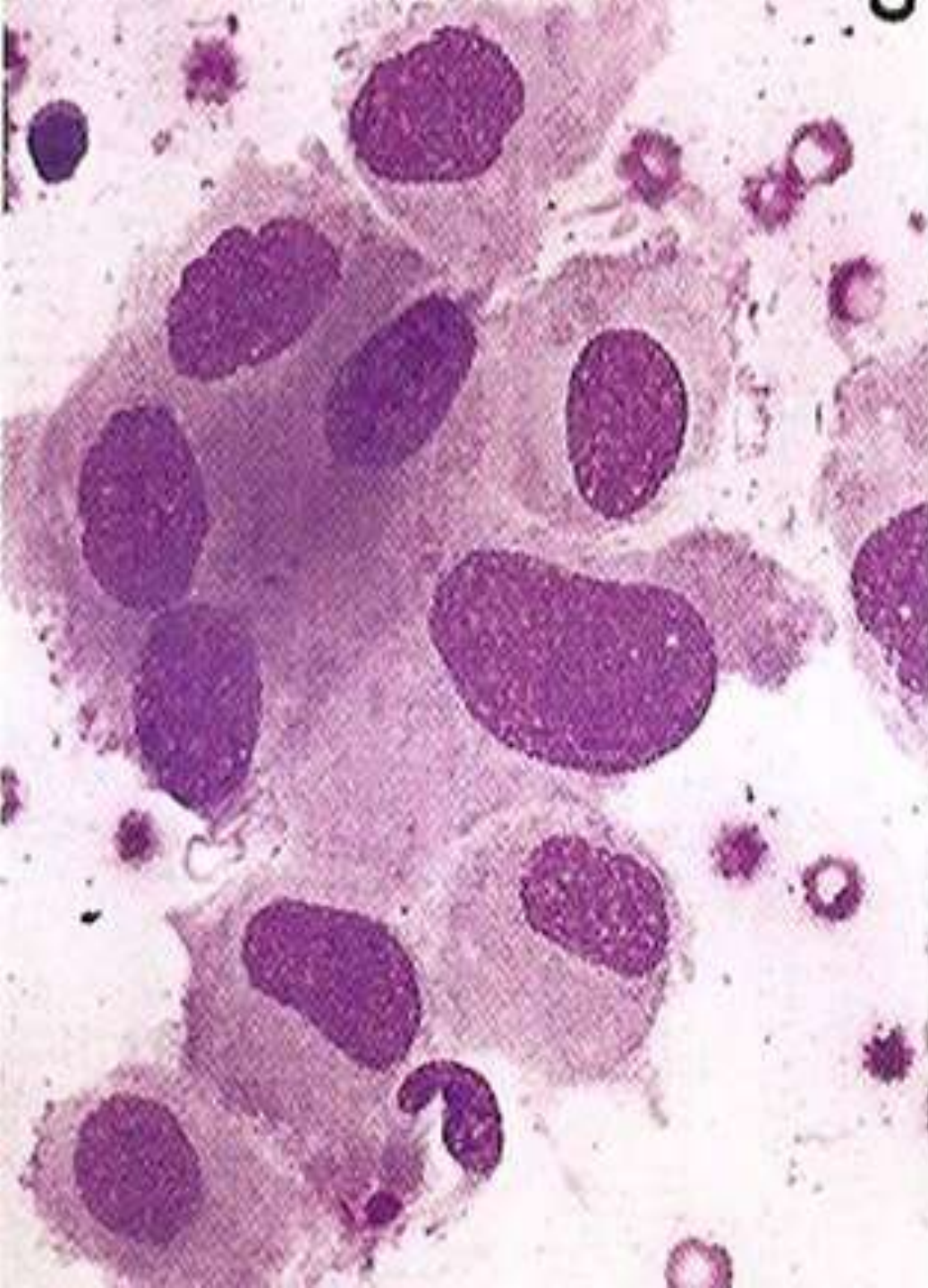


**ATIPIA DE SIGNIFICADO
INCIERTO**

**ENFERMEDAD DE GRAVES
TRATADA CON
METHIMAZOLE (TAPAZOLE)
AGRANDAMIENTO NUCEAR
ANISONUCLEOSIS**

¿NEOPLASIA?

CLAVE: DATOS CLINICOS

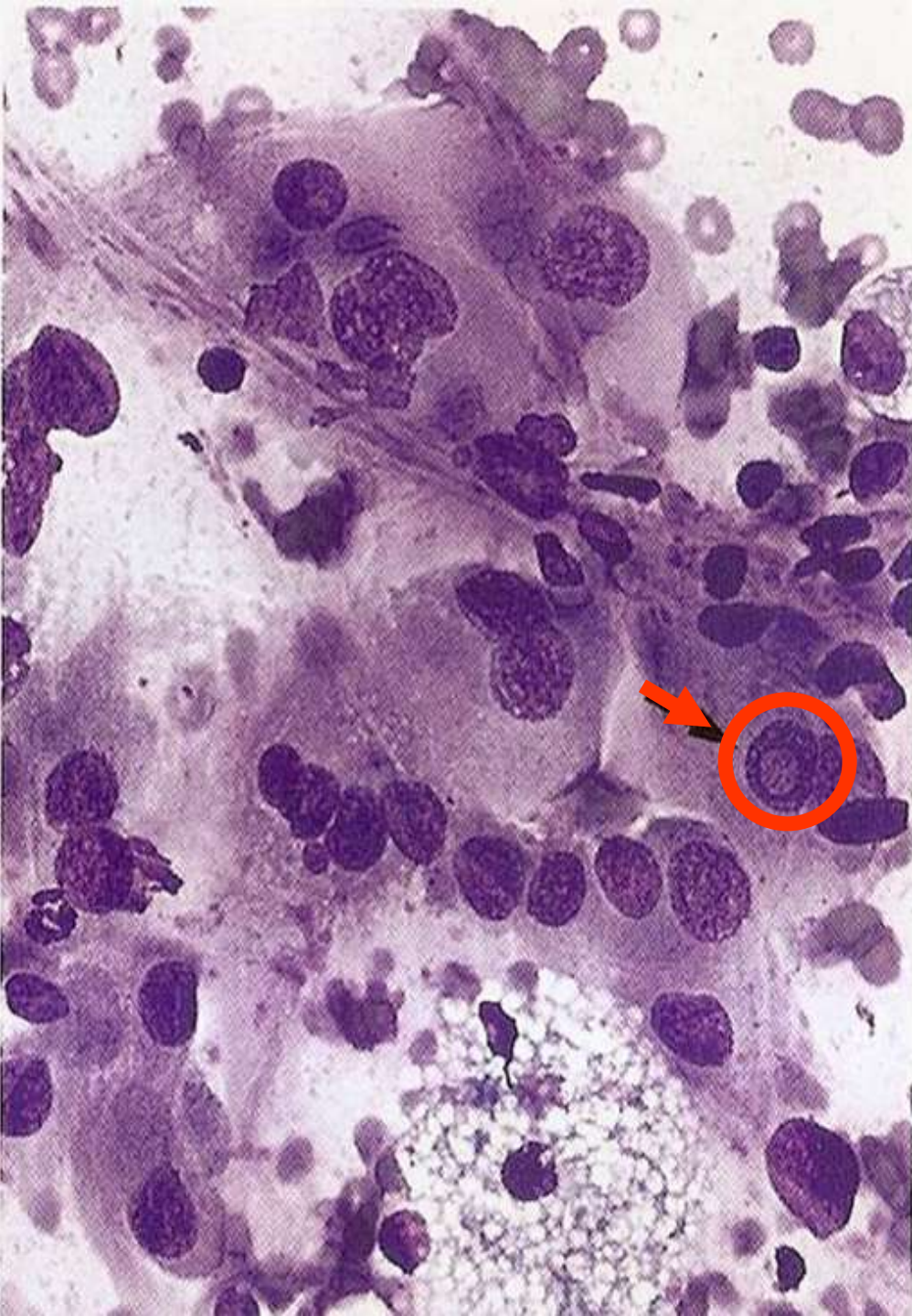


ATIPIA DE SIGNIFICADO INCIERTO

**PACIENTE CON
ANTECEDENTES DE
IRRADIACION EN CUELLO
CELULAS MUY ATIPICAS**

¿NEOPLASIA?

CLAVE: DATOS CLINICOS



**ATIPIA DE SIGNIFICADO
INCIERTO**

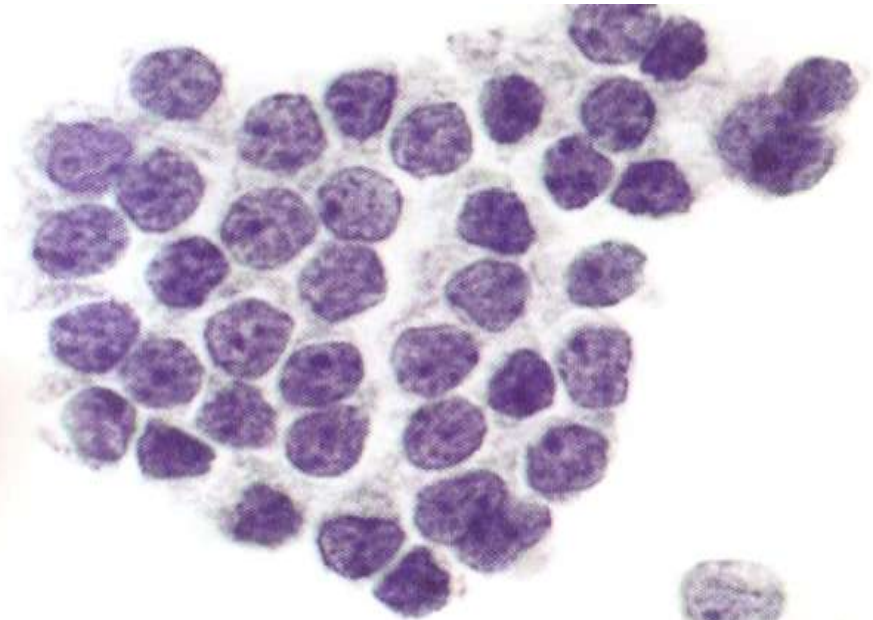
HASHIMOTO

**ONCOCITOS CON
NUCLEOS AGRANDADOS**

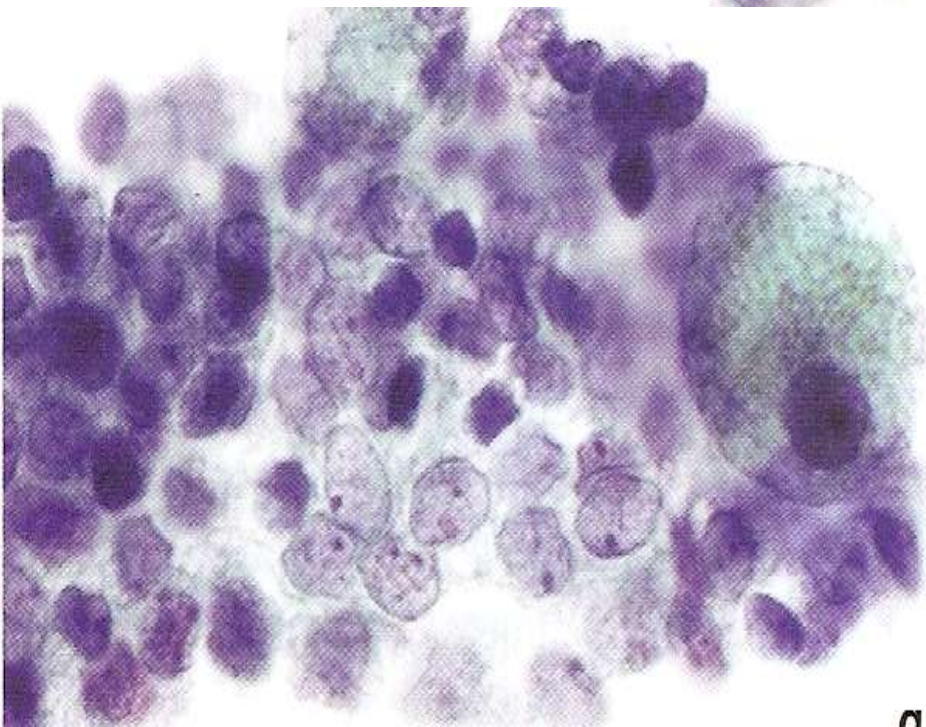
RARAS

PSEUDOINCLUSIONES

**¿NEOPLASIA?
¿CA PAPILAR?**



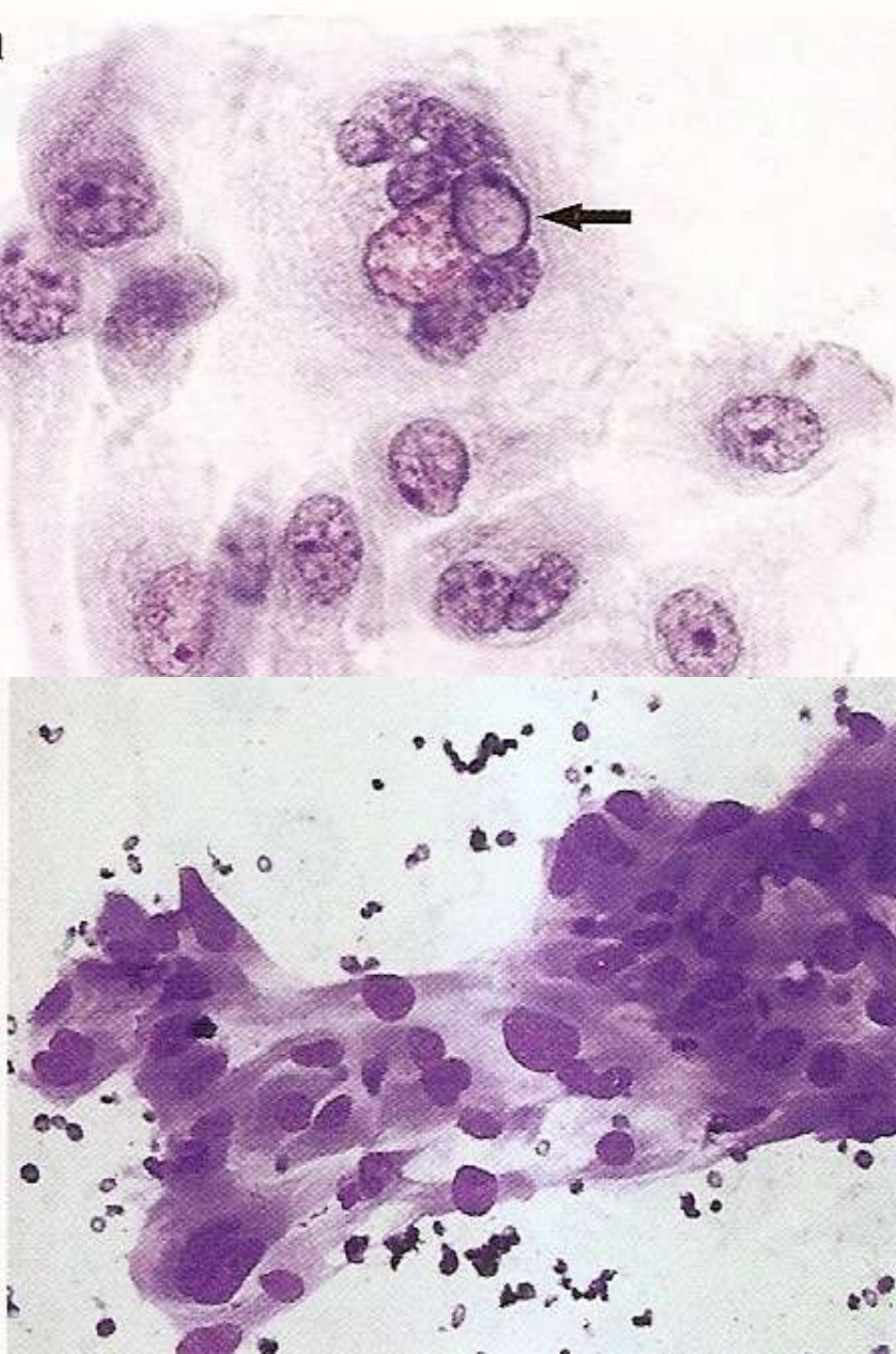
**ATIPIA DE SIGNIFICADO
INCIERTO**



**MACROFOLICULOS
NUCLEOS PALIDOS**

¿NEOPLASIA PAPILAR?

¿NEOPLASIA FOLICULAR?

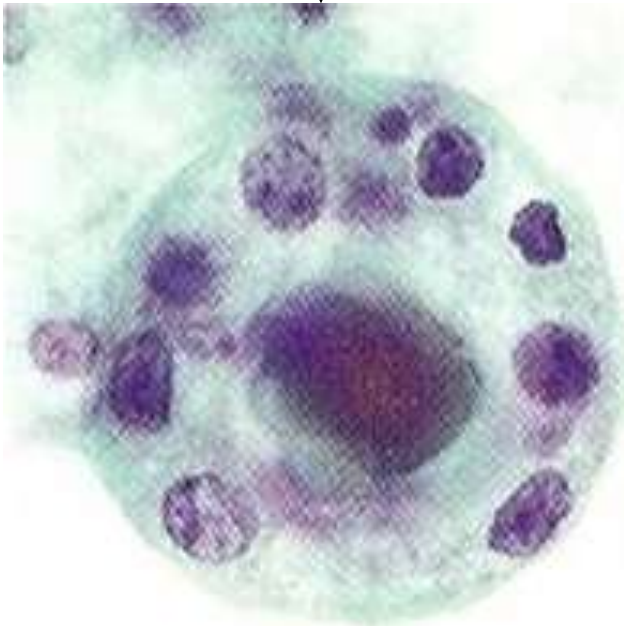


**ATIPIA DE SIGNIFICADO
INDETERMINADO**

**LESION QUISTICA
CELULAS GRANDES
NUCLEOS AGRANDADOS
NUCLEOLO
PSEUDOINCLUSIONES**

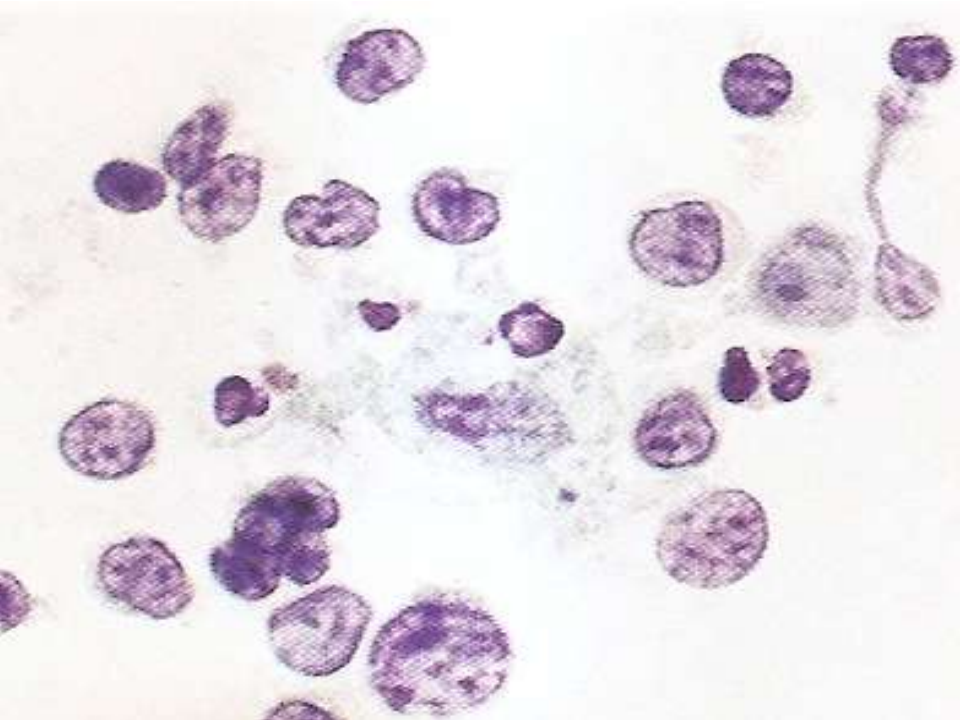
¿NEOPLASIA PAPILAR?

**ATIPIA DE SIGNIFICADO
INCIERTO**

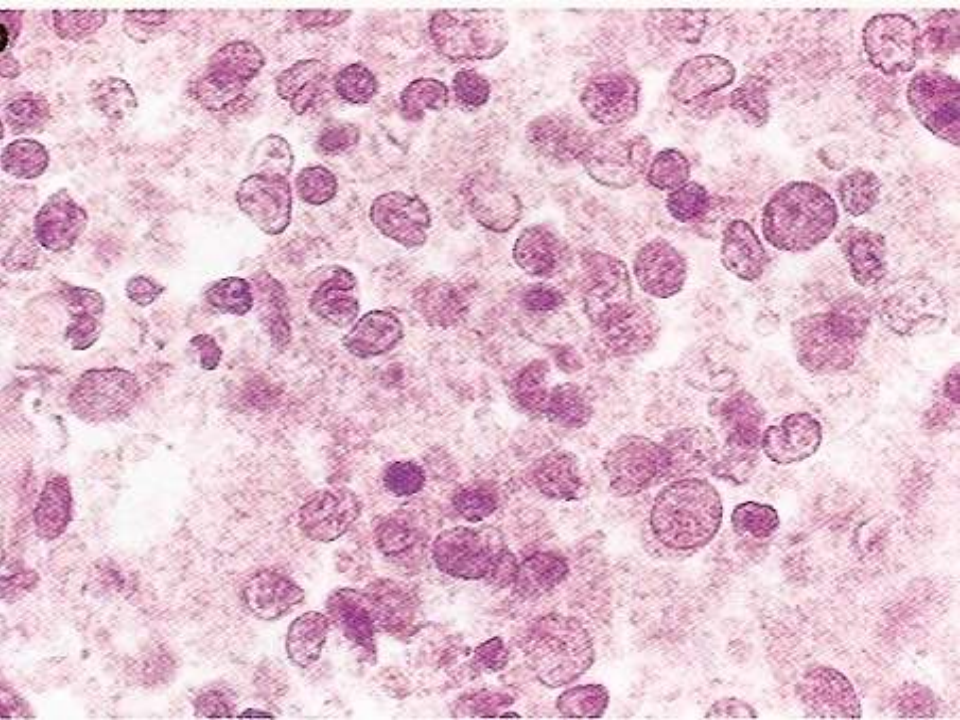


**ESCASISIMA CELULARIDAD
MICROFOLICULOS**

¿NEOPLASIA FOLICULAR?

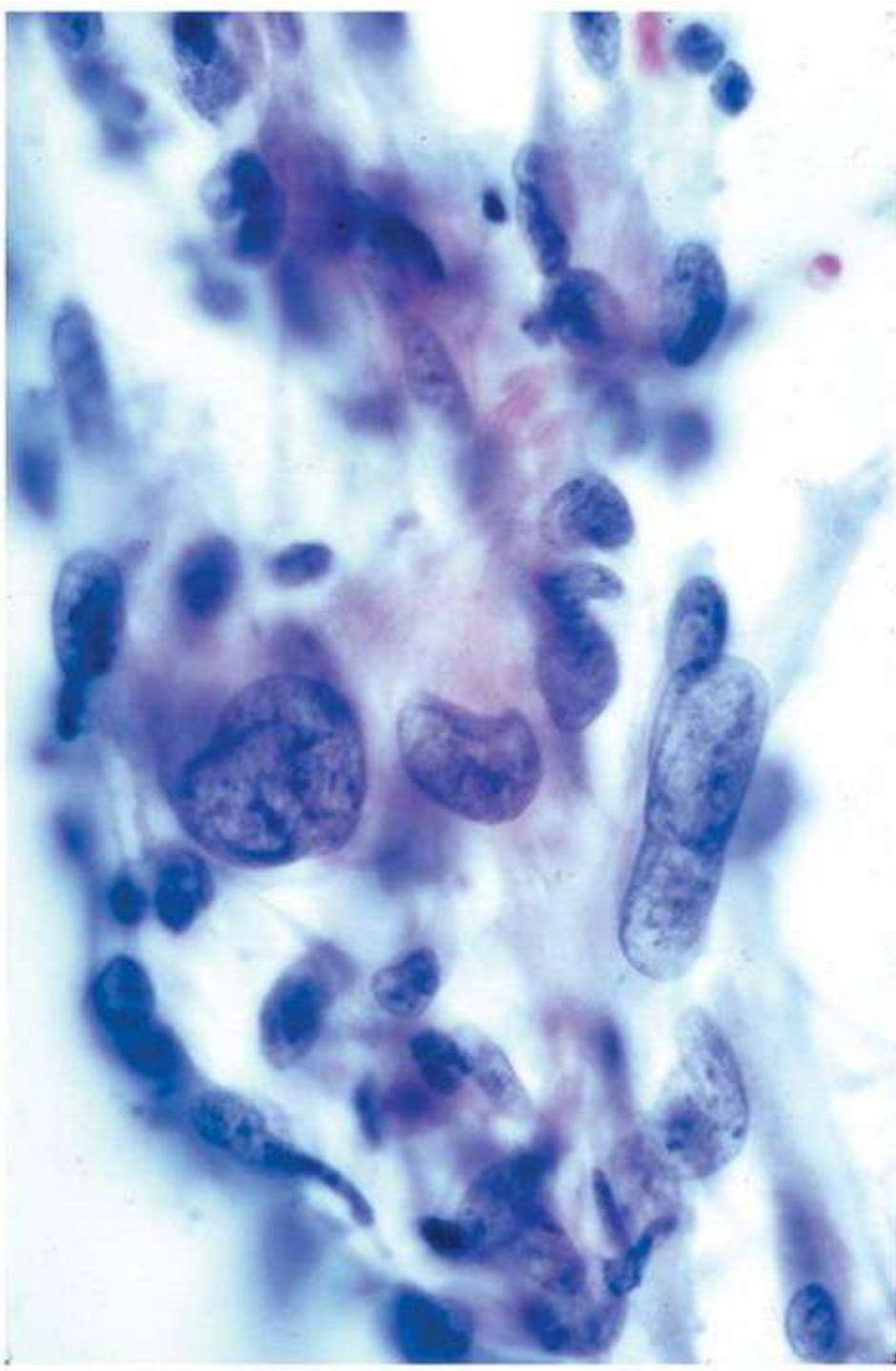


**ATIPIA DE SIGNIFICADO
INCIERTO**



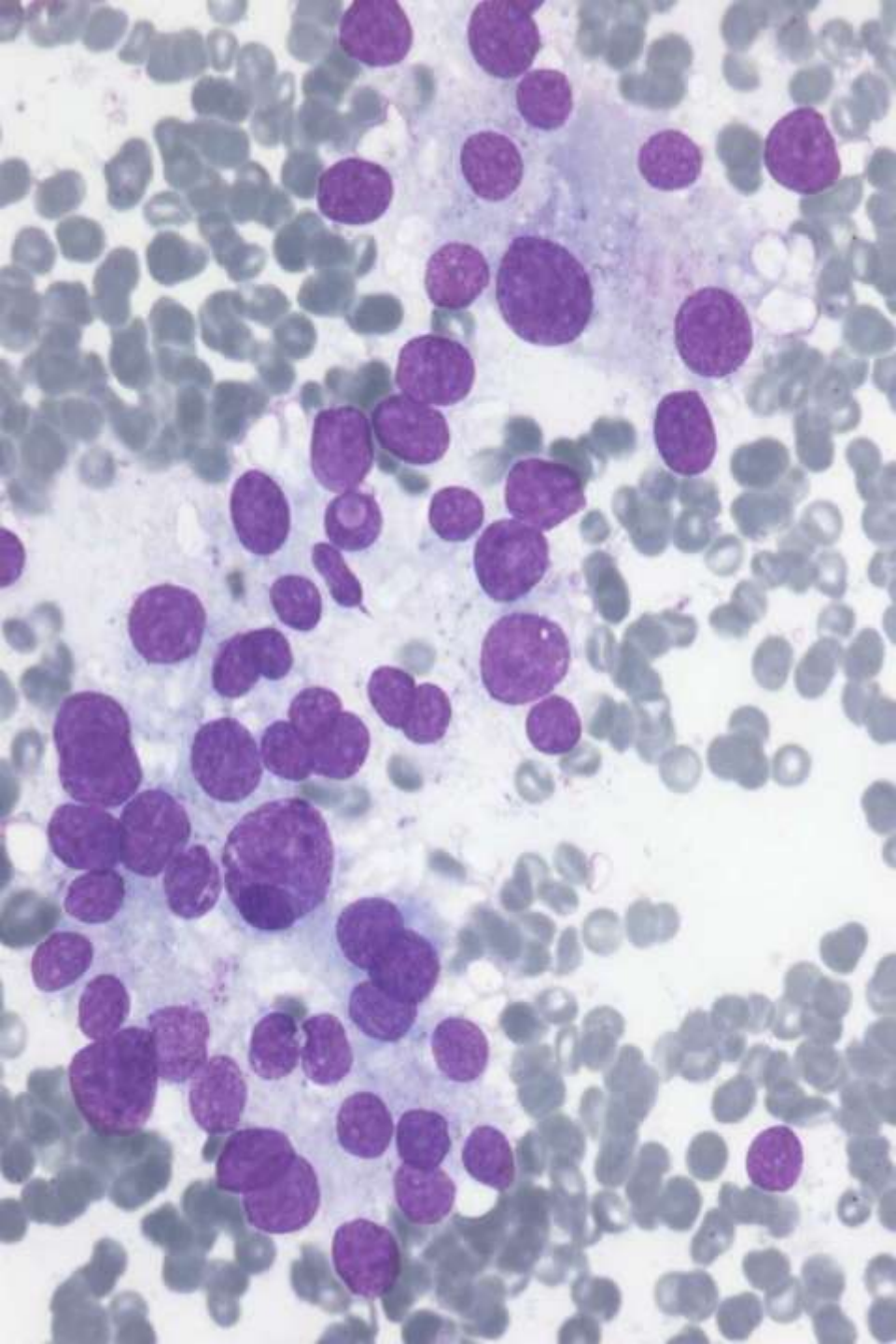
**EXTENSION LINFOIDE
CON ALGUNAS ATIPIAS**

**¿LINFOMA?
PARECE REACTIVO**



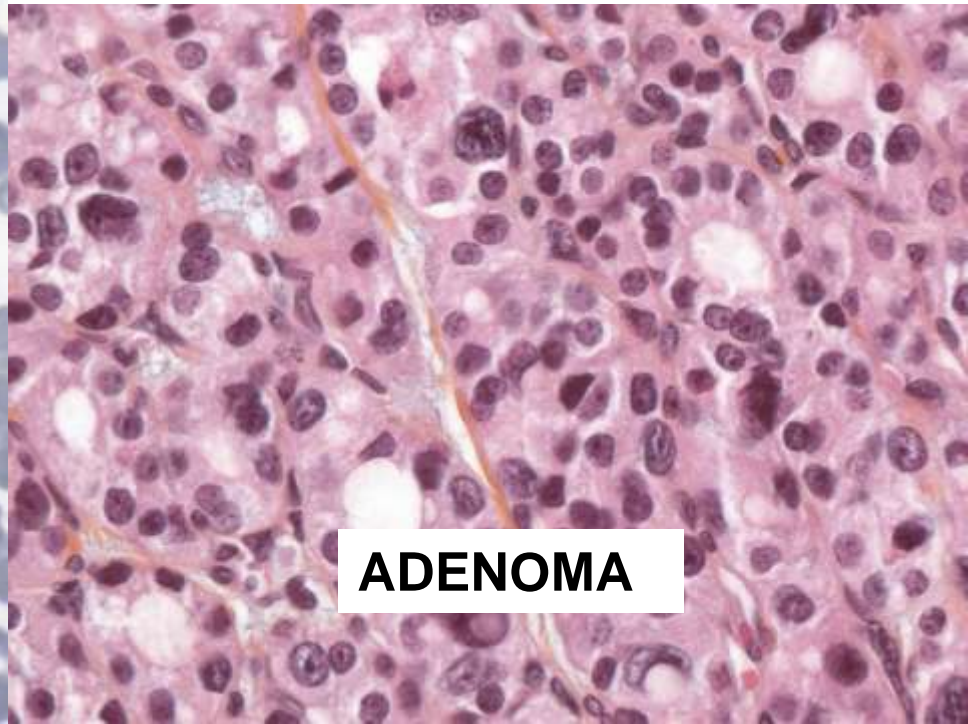
**ATIPIA DE SIGNIFICADO
INCIERTO**

**CICATRIZ EN
BOCIO COLOIDE**

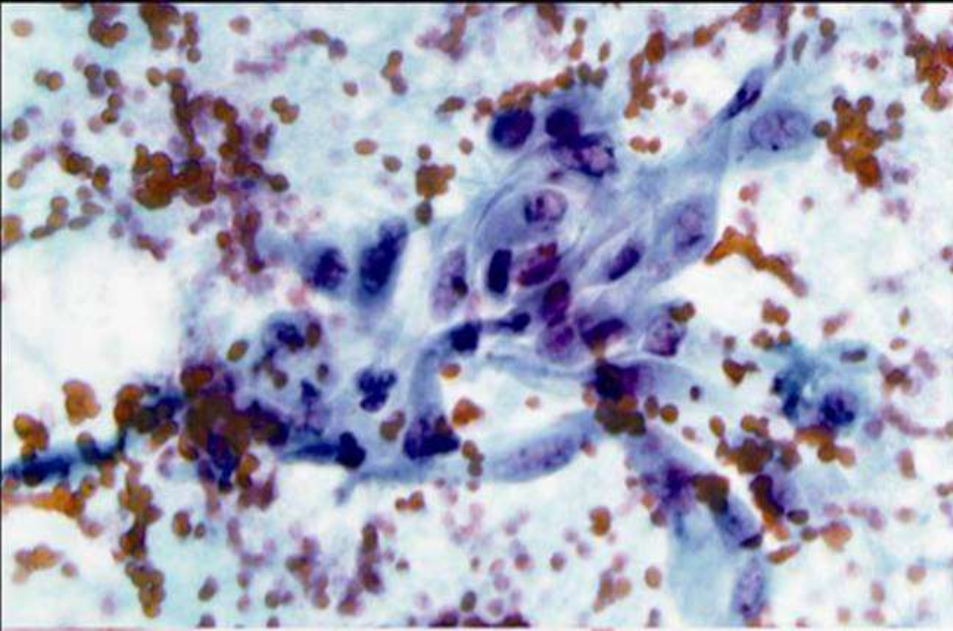


**ATIPIA DE SIGNIFICADO
INCIERTO**

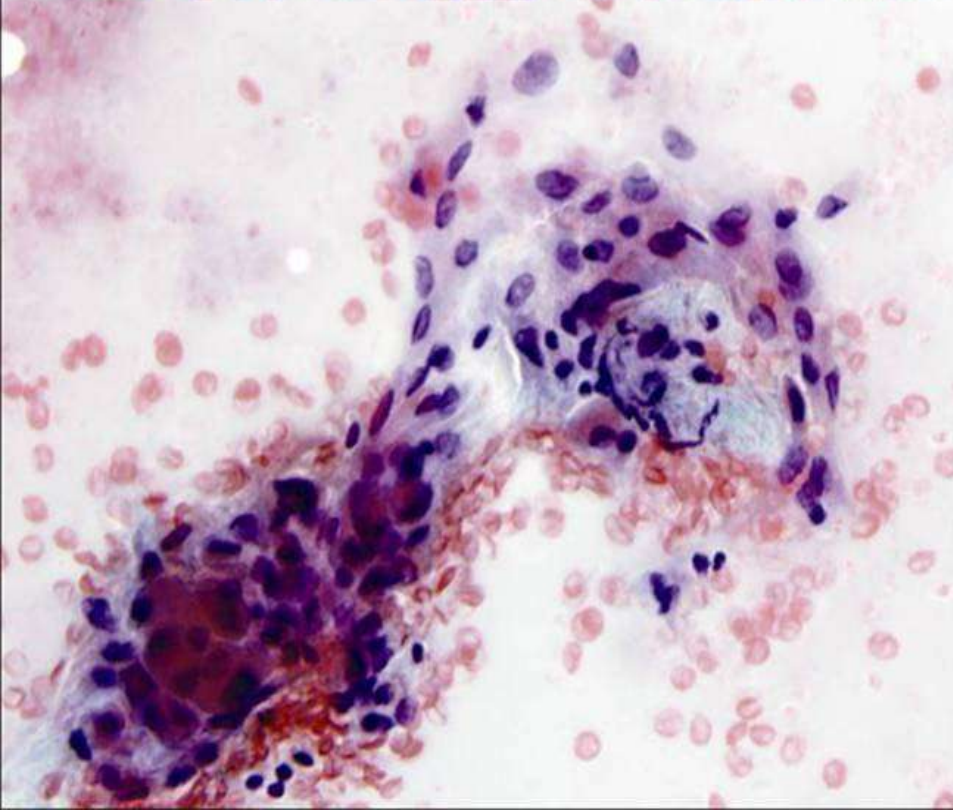
**BOCIO TIREOTOXICO TRATADO
CON CARBIMAZOLE**



ADENOMA

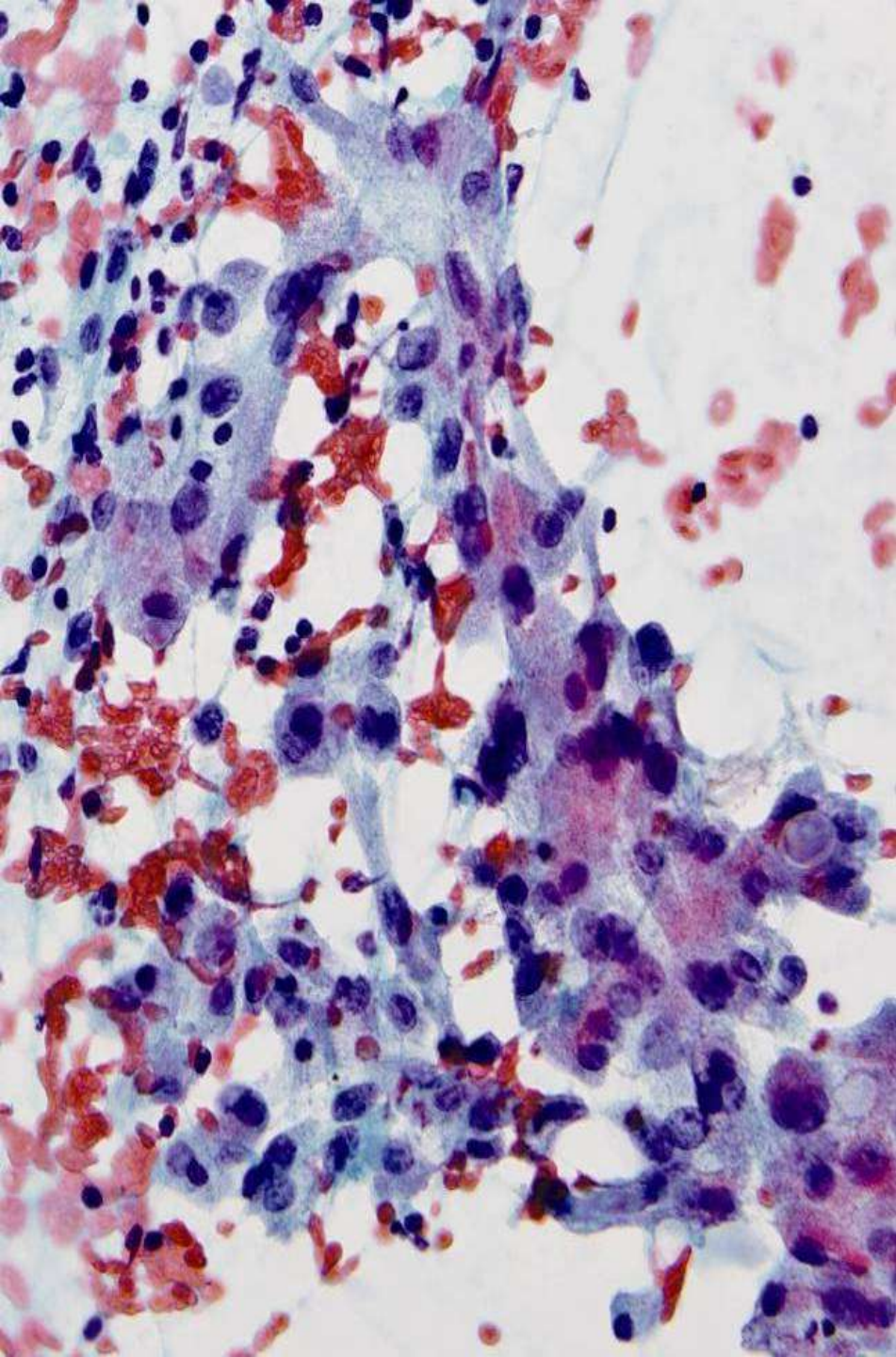


**ATIPIA DE SIGNIFICADO
INCIERTO**



**NODULO FOLICULAR
BENIGNO**

**CAMBIOS
REPARATIVOS/REACTIVOS
NO HACER F +**



**ATIPIA DE SIGNIFICADO
INCIERTO**

**TIROIDITIS
LINFOCITARIA
CRONICA**

NO HACER F +

**ATIPIA DE SIGNIFICADO
INCIERTO/LESION FOLICULAR DE
SIGNIFICADO INDETERMINADO**

**A.- NO SE PUEDE EXCLUIR
NEOPLASIA, SUGIERE
HIPERPLASIA, SUGIERE
NEOPLASIA**

**B.- REPETIR PAAFS Y
CORRELACIONAR CON CLINICA Y
RADIOLOGIA**



AUS/FLUS BETHESDA PAG 37

CORRELACION CLINICO MORFOLOGICA

100 AUS/FLUS

```
graph TD; A[100 AUS/FLUS] --> B[75-80% SE RECLASIFICARAN COMO BENIGNO, SOSPECHOSO MALIGNO]; A --> C[20-25% SE VOLVERAN A CLASIFICAR COMO AUS/FLUS CON UN PELIGRO TEORICO DE SER LESION MALIGNA DEL 5-10%];
```

75-80% SE RECLASIFICARAN COMO BENIGNO, SOSPECHOSO MALIGNO

20-25% SE VOLVERAN A CLASIFICAR COMO AUS/FLUS CON UN PELIGRO TEORICO DE SER LESION MALIGNA DEL 5-10%



AUS/FLUS



7-10% DE LAS PAAFS DE TIROIDES









Chapter 5

Follicular Neoplasm/Suspicious for a Follicular Neoplasm

Michael R. Henry, Richard M. DeMay, and Katherine Berezowski

NEOPLASIA FOLICULAR/SOSPECHOSO DE NEOPLASIA FOLICULAR

A.- RIESGO BAJO O MEDIO DE NEOPLASIA

B.- INCLUYE PATRON FOLICULAR NO PAPILAR DE LESIONES/ NEOPLASIAS, Y LESIONES/ NEOPLASIAS DE HURTHLE

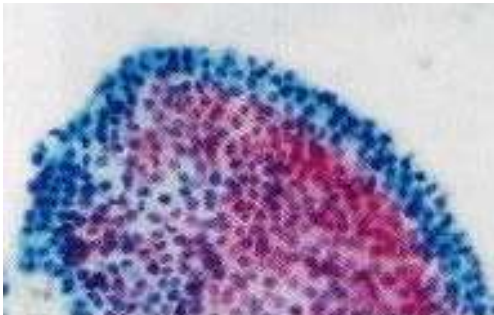
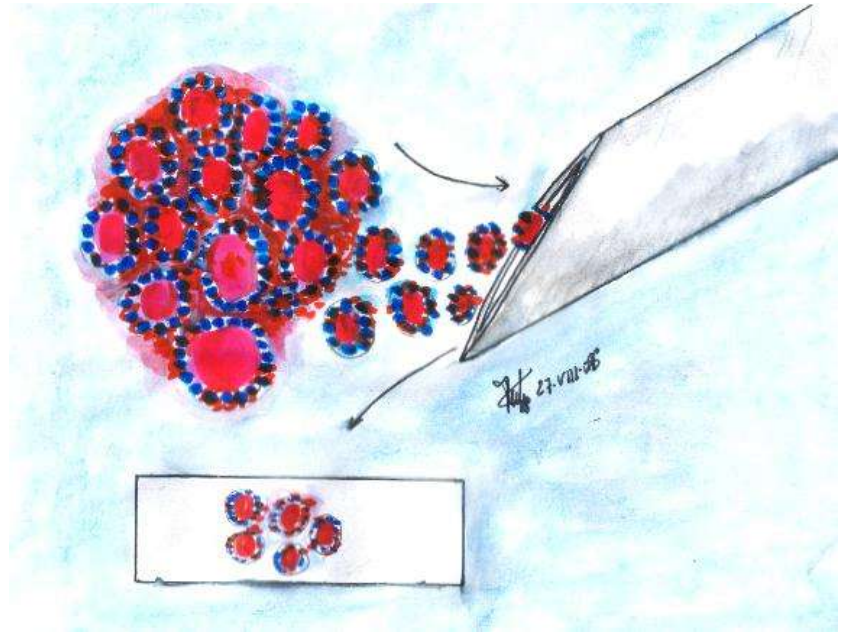
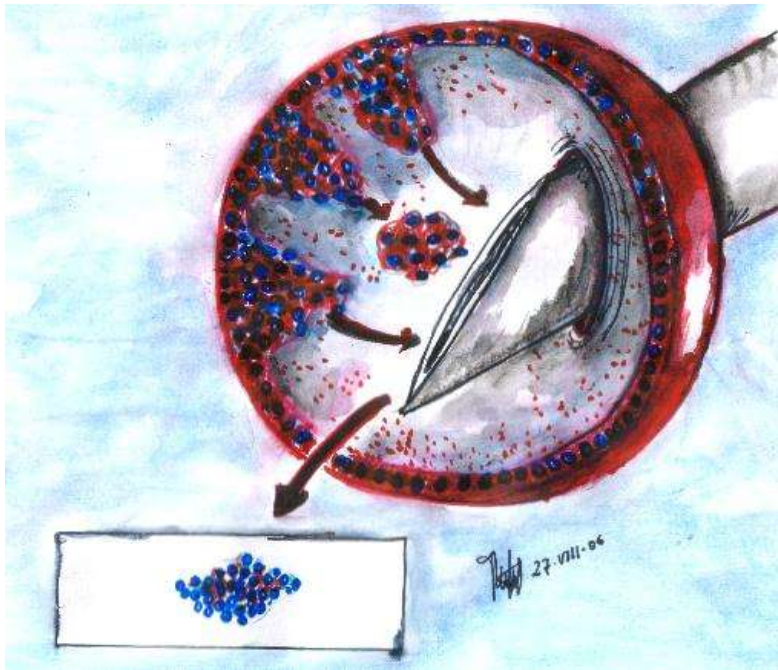
C.- LA NOMENCLATURA PROPUESTA ES PROLIFERACION MICROFOLICULAR, LESION SUGESTIVA DE NEOPLASIA, LESION FOLICULAR, NEOPLASIA FOLICULAR

D.- 20% SON MALIGNAS EN BIOPSIAS. >20% SI HURTHLE Y >3,5 CM

E.- SI HAY CRECIMIENTO RAPIDO U OTROS PARAMETROS CLINICOS SOSPECHOSOS = CIRUGIA. SI NO CONTROL CON PAAFS

F.- LA MAYORIA SON OPERADOS CON LOBECTOMIA O HEMITIROIDECTOMIA CON DIAGNOSTICOS DE NODULO ADENOMATOIDE, ADENOMA, CARCINOMA



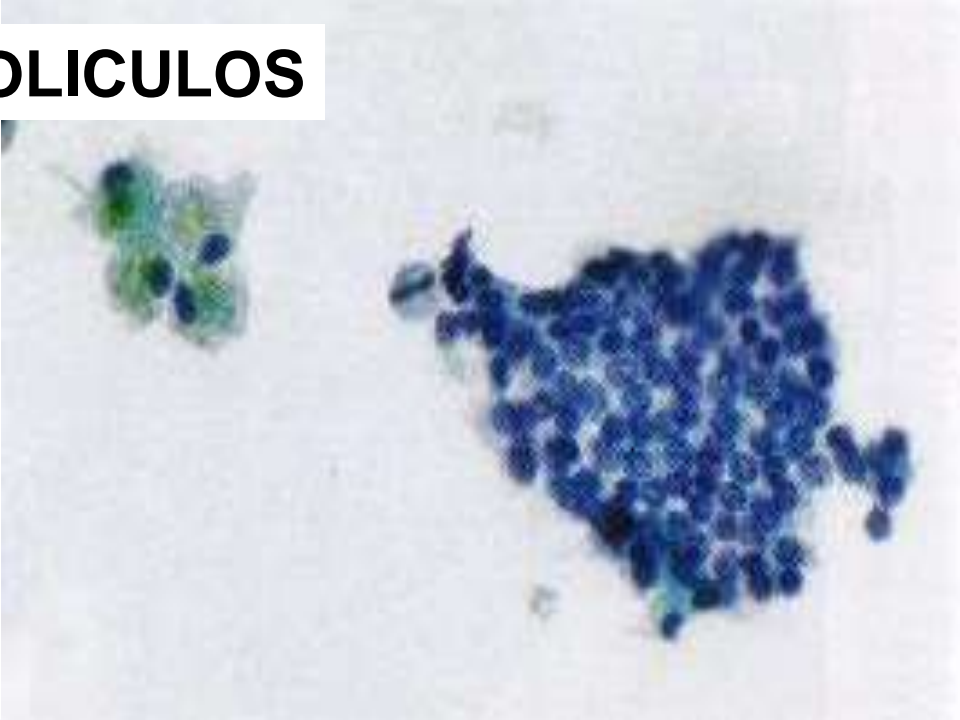
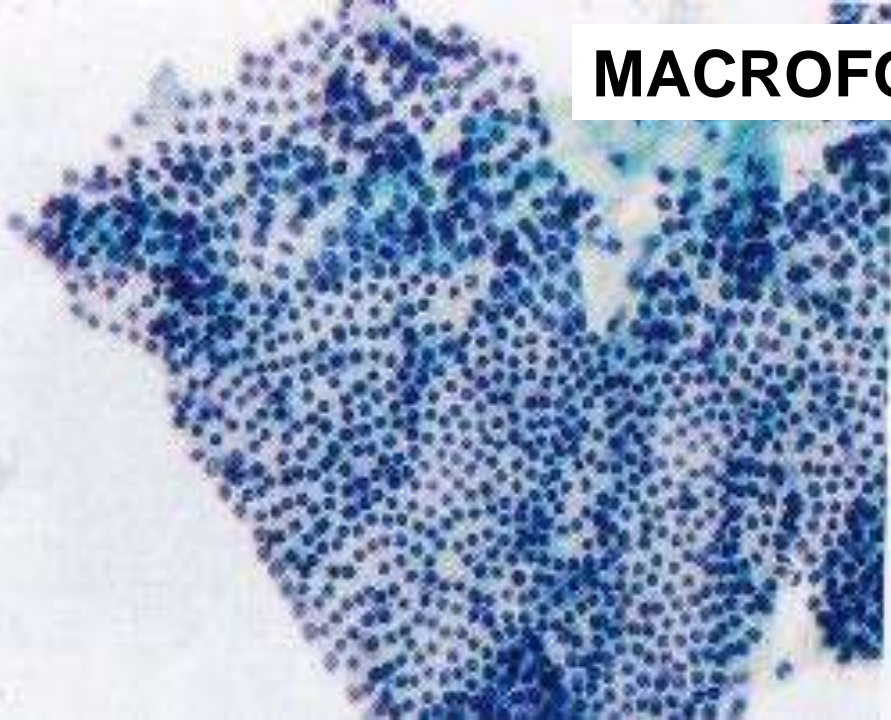


MACROFOLICULO

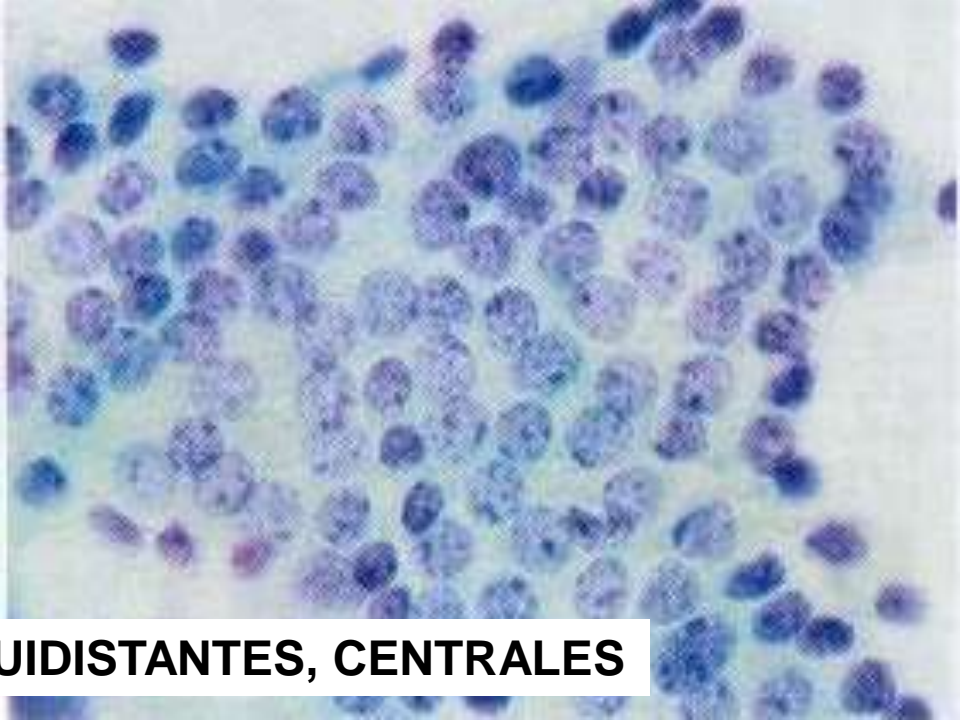


MICROFOLICULO

MACROFOLICULOS

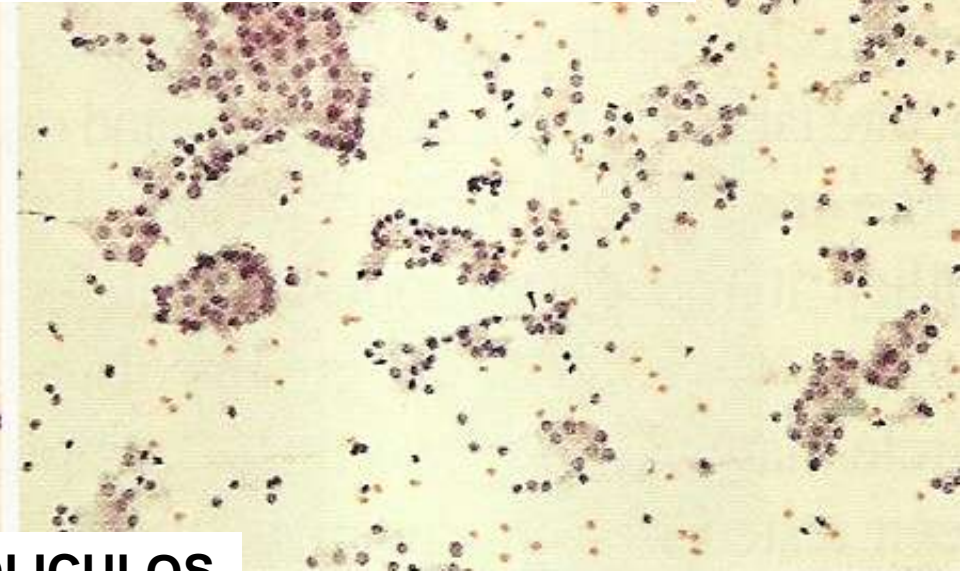
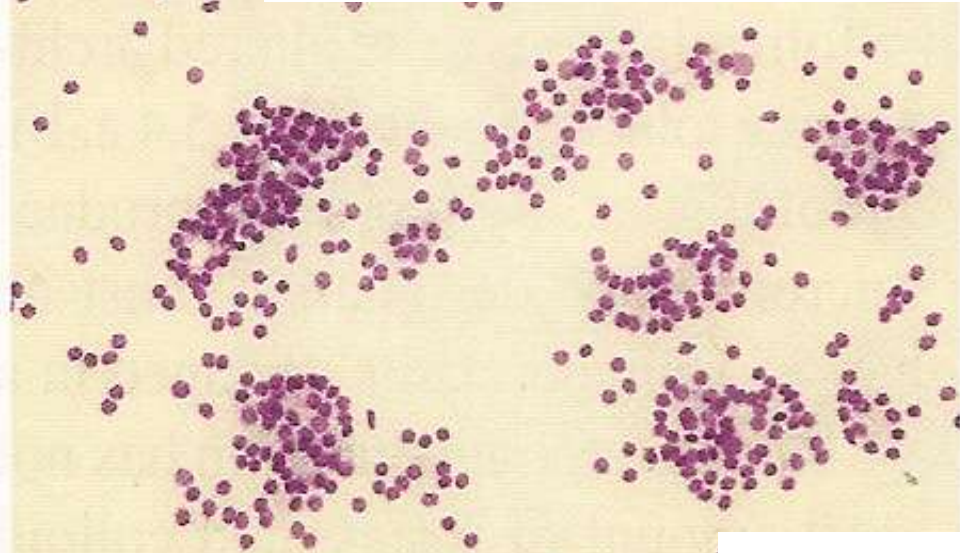


PANAL

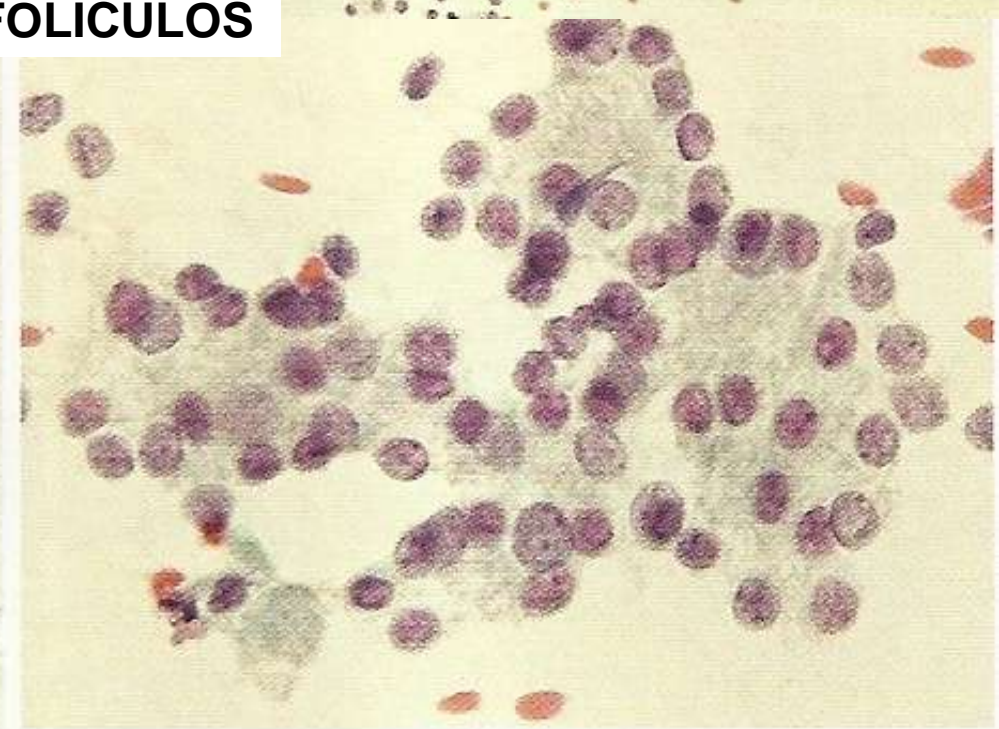
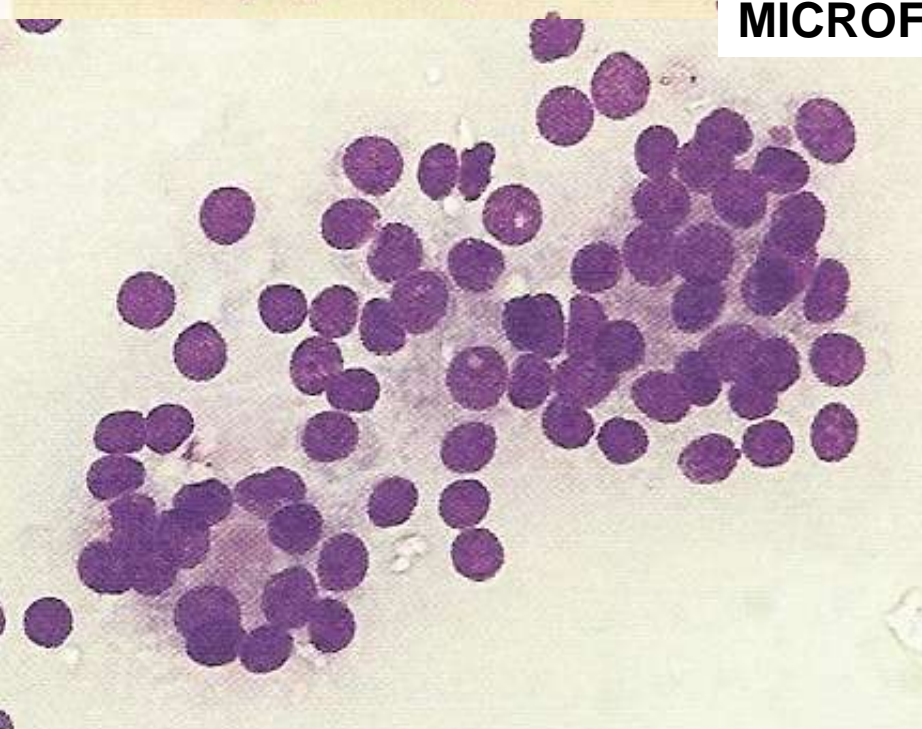


NUCLEOS REDONDOS, EQUIDISTANTES, CENTRALES

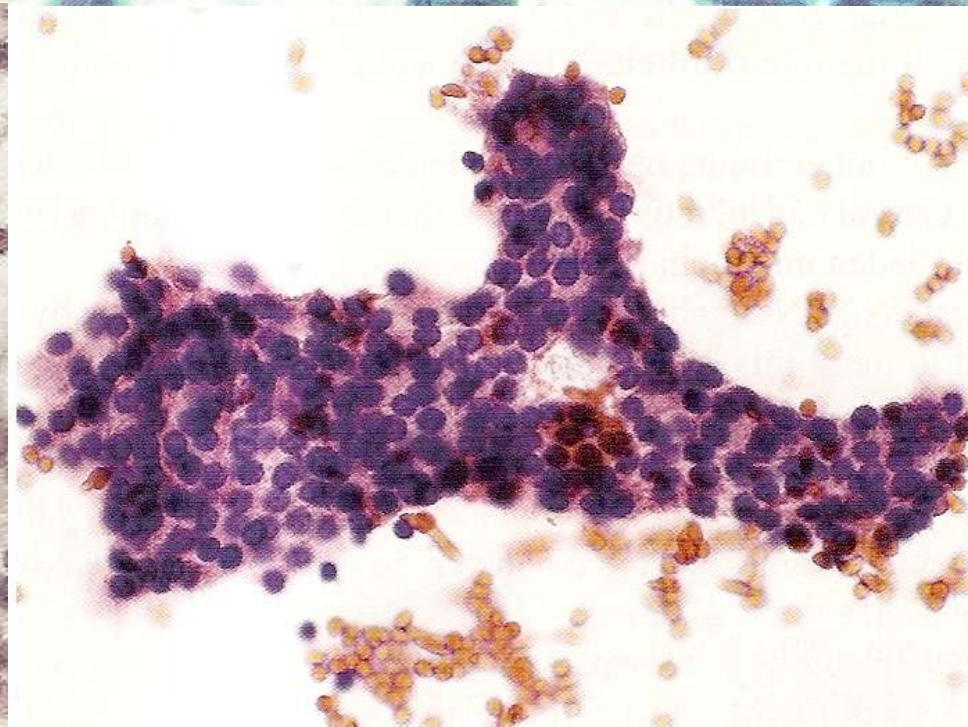
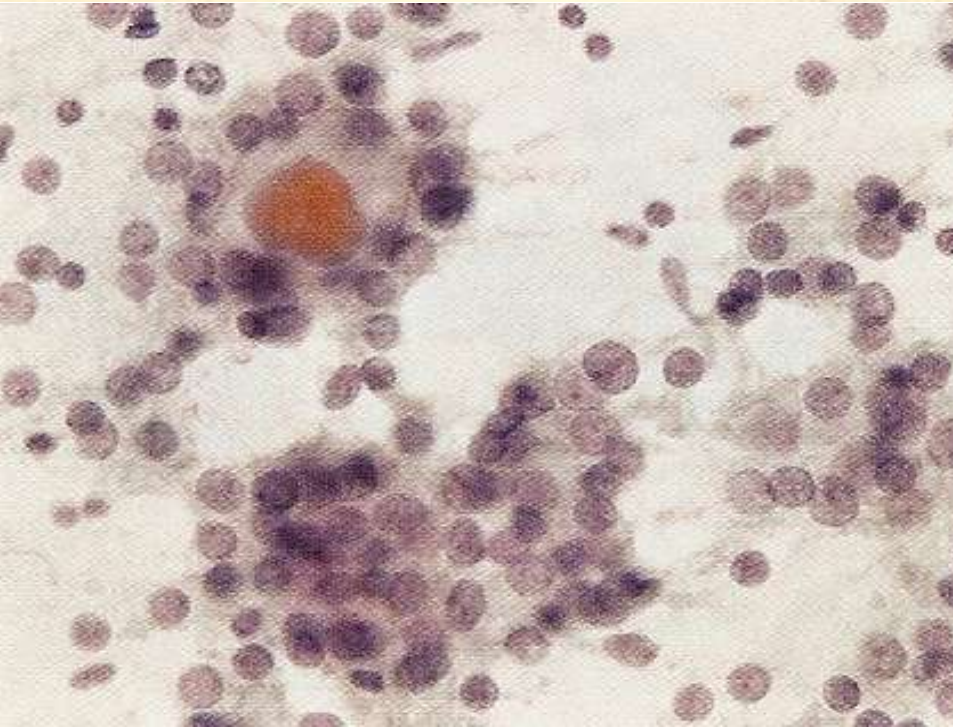
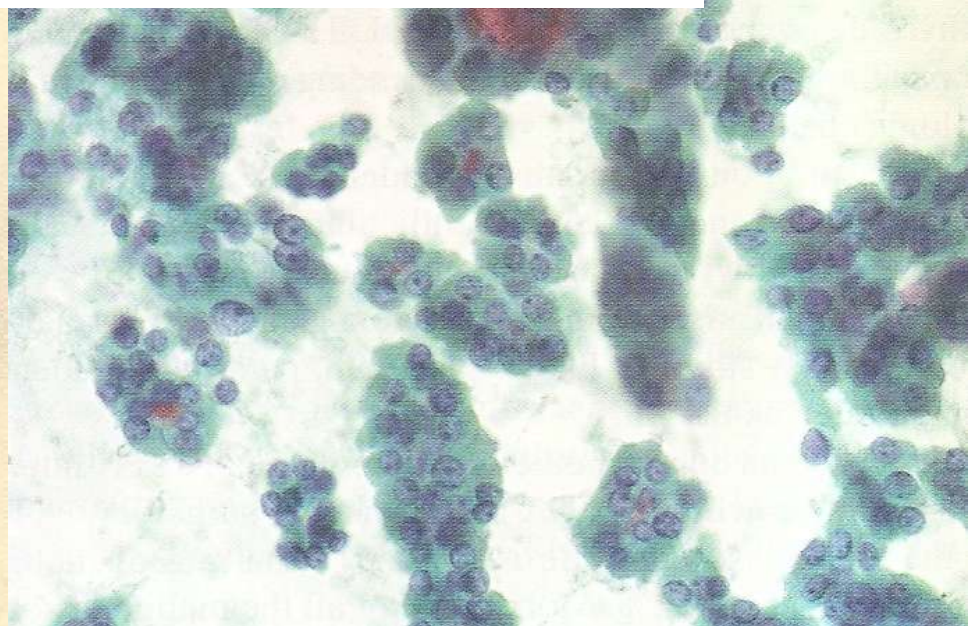
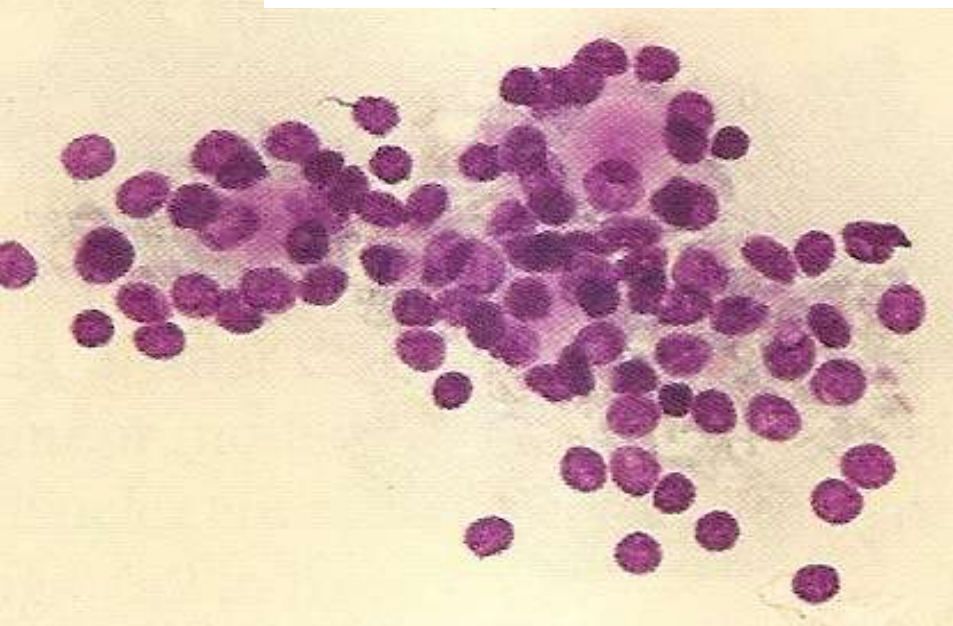
SOSPECHOSO DE NEOPLASIA FOLICULAR



MICROFOLICULOS



SOSPECHOSO DE NEOPLASIA FOLICULAR



SOSPECHOSO DE NEOPLASIA FOLICULAR



HIPERCELULARIDAD

POCO COLOIDE PERO MUY DENSO

AUSENCIA DE CARACTERISTICAS

NUCLEARES DE CA PAPILAR

MICROFOLICULAR

TRABECULAR

TRIDIMENSIONAL

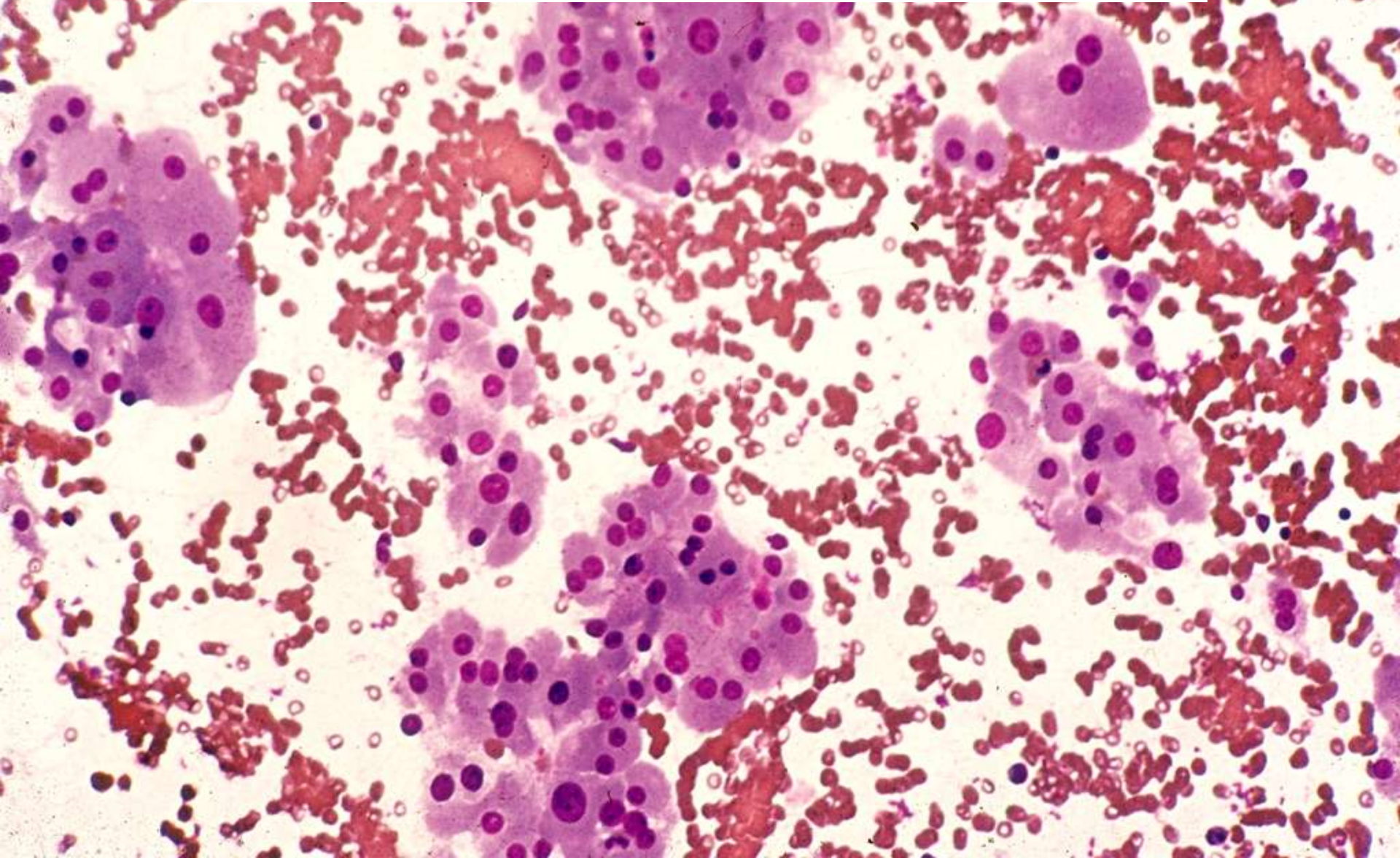
Chapter 6

Follicular Neoplasm, Hürthle Cell Type/Suspicious for a Follicular Neoplasm, Hürthle Cell Type

William C. Faquin, Claire W. Michael, Andrew A. Renshaw,
and Philippe Vielh



**SOSPECHOSO DE NEOPLASIA FOLICULAR
VARIANTE DE C DE HURTHLE**

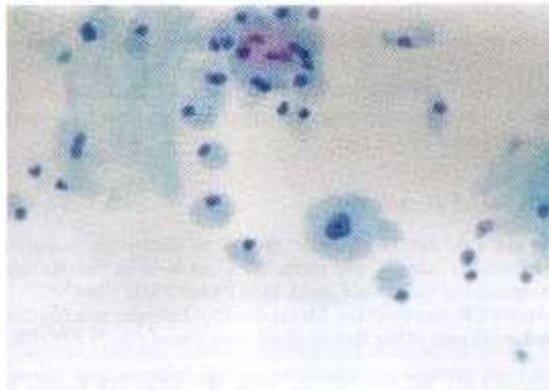


NEOPLASIA DE CELULAS DE HURTHLE Y THINPREP

TENDENCIA A TRIDIMENSIONALIDAD

CELULAS Y NUCLEOS MAS PEQUEÑOS

CITOPLASMA MAS PALIDO



**LAS CELULAS TUMORALES
PUEDEN SER CONFUNDIDAS
CON HISTIOCITOS
ESPUMOSOS**

NUCLEOLO MENOS PROMINENTE



**FNA CAN
PROVIDE
ADEQUATE
MATERIAL FOR
PERFORMING
MOLECULAR
STUDIESWE
JUST NEED THE
RIGHT
MARKER!**

WILLIAM CLAY FAQUIN



ES LO QUE HAY



Chapter 7

Suspicious for Malignancy

Helen H. Wang, Armando C. Filie,
Douglas P. Clark, and Celeste N. Powers

Definition

A specimen is suspicious for malignancy (SFM) when some features of malignancy (mainly PTC in this context) raise a strong suspicion of malignancy, but the findings are not sufficient for a conclusive diagnosis. Specimens that are suspicious for a follicular or Hürthle cell neoplasm are excluded from this category (see Chaps. 5 and 6). For the category SFM, the morphologic changes are of such a degree that a malignancy is considered more likely than not. The target PPV of this category is 55–85%.¹



**SOLO SE DEBE
DE
DIAGNOSTICAR
MALIGNIDAD
CUANDO SE
TENGA LA
ABSOLUTA
CERTEZA
MORFOLOGICA**

SOSPECHOSO DE MALIGNIDAD

1.- SOSPECHOSO DE CARCINOMA PAPILAR (75% SON VARIANTES FOLICULARES DEL CA PAPILAR)

2.- SOSPECHOSO DE CARCINOMA MEDULAR SI NO SE CONFIRMA CON CALCITONINA

RECOMENDAR COMPROBAR NIVELES DE CALCITONINA EN SANGRE

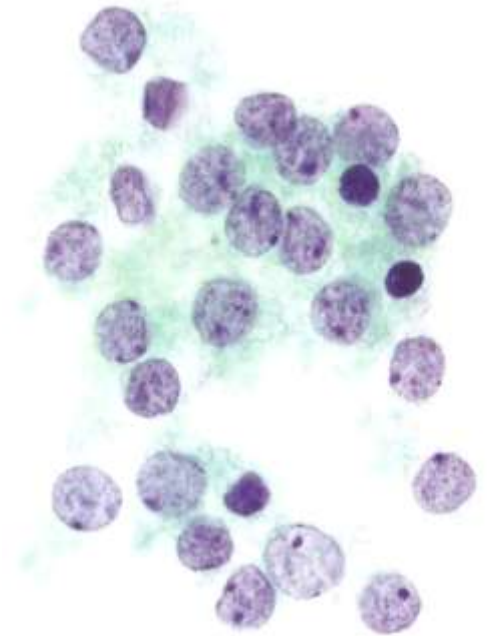
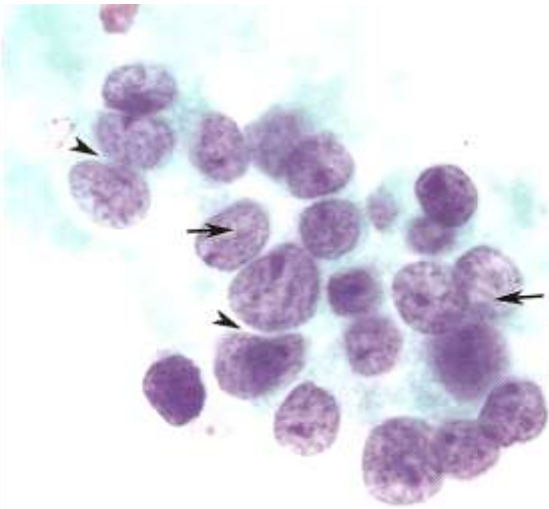
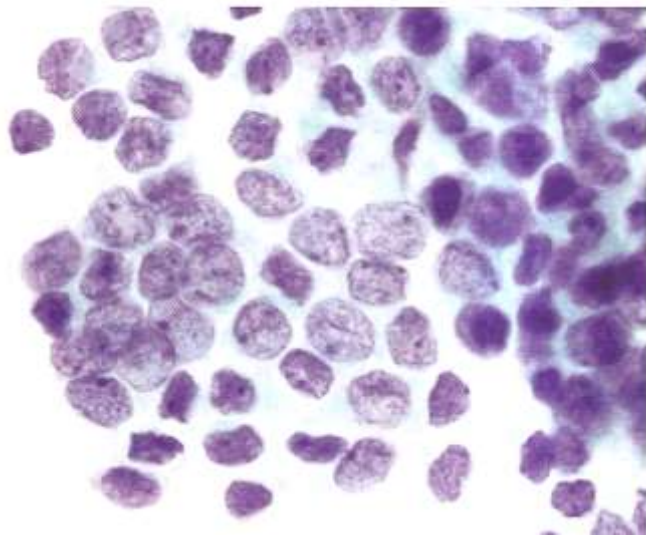
SOSPECHOSO DE MALIGNIDAD

3.- SOSPECHOSO DE OTRO TIPO DE MALIGNIDADES:

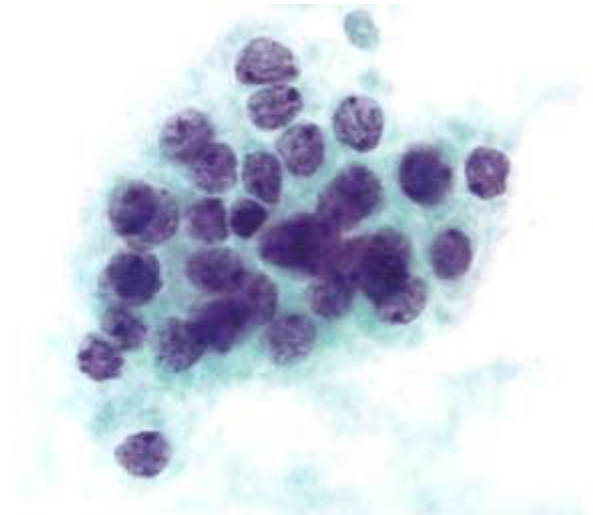
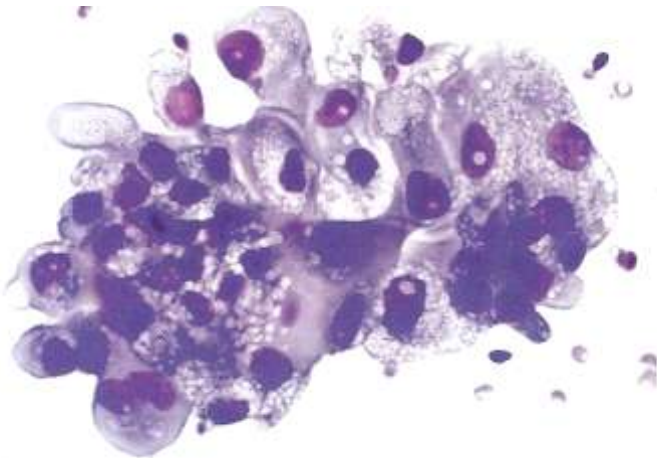
A.- LINFOMA (RECOMENDAR CITOMETRIA DE FLUJO)

B.- METASTASIS O TUMOR SECUNDARIO

4.- SOSPECHOSO DE NEOPLASIA PERO CON NECROSIS O AUSENCIA DE CELULAS (ANAPLASICO)

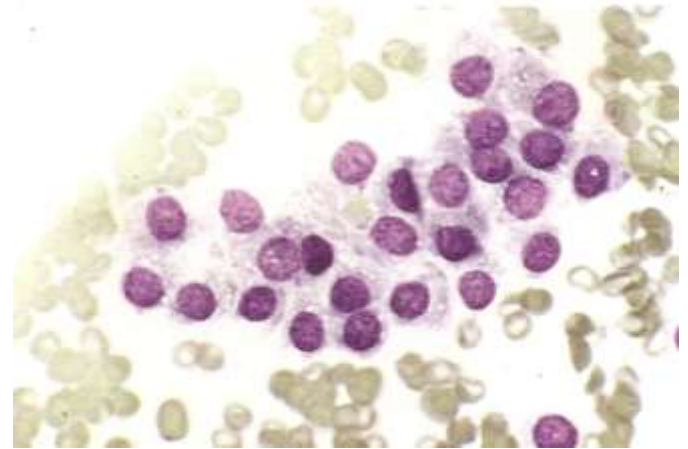
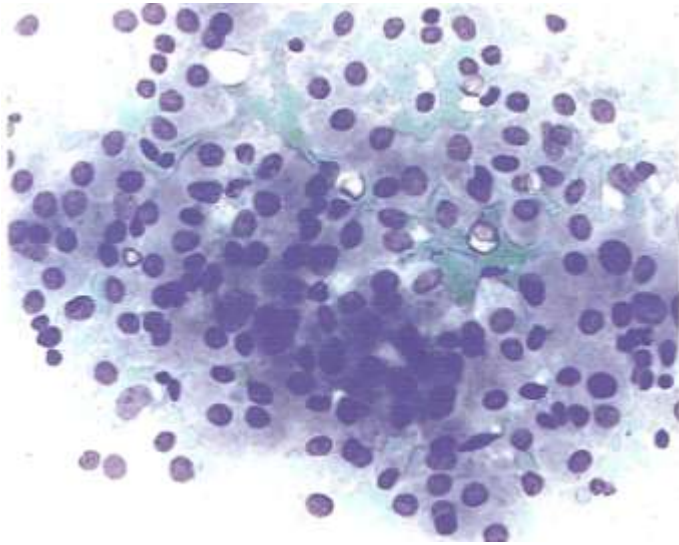


SOSPECHOSO DE CARCINOMA PAPILAR

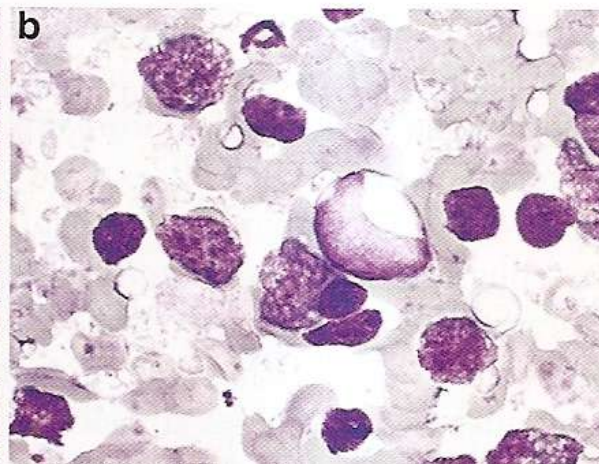
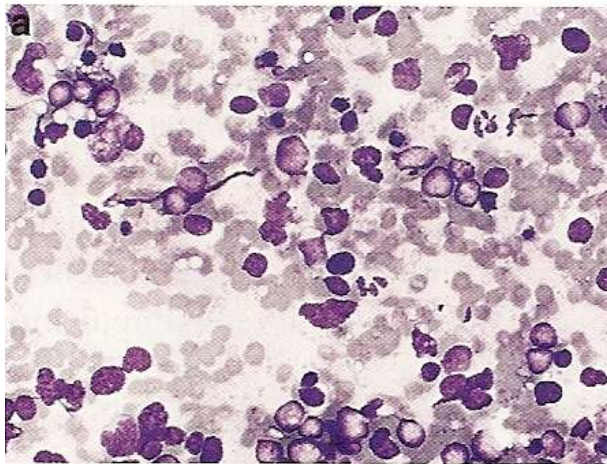


EN HASHIMOTO

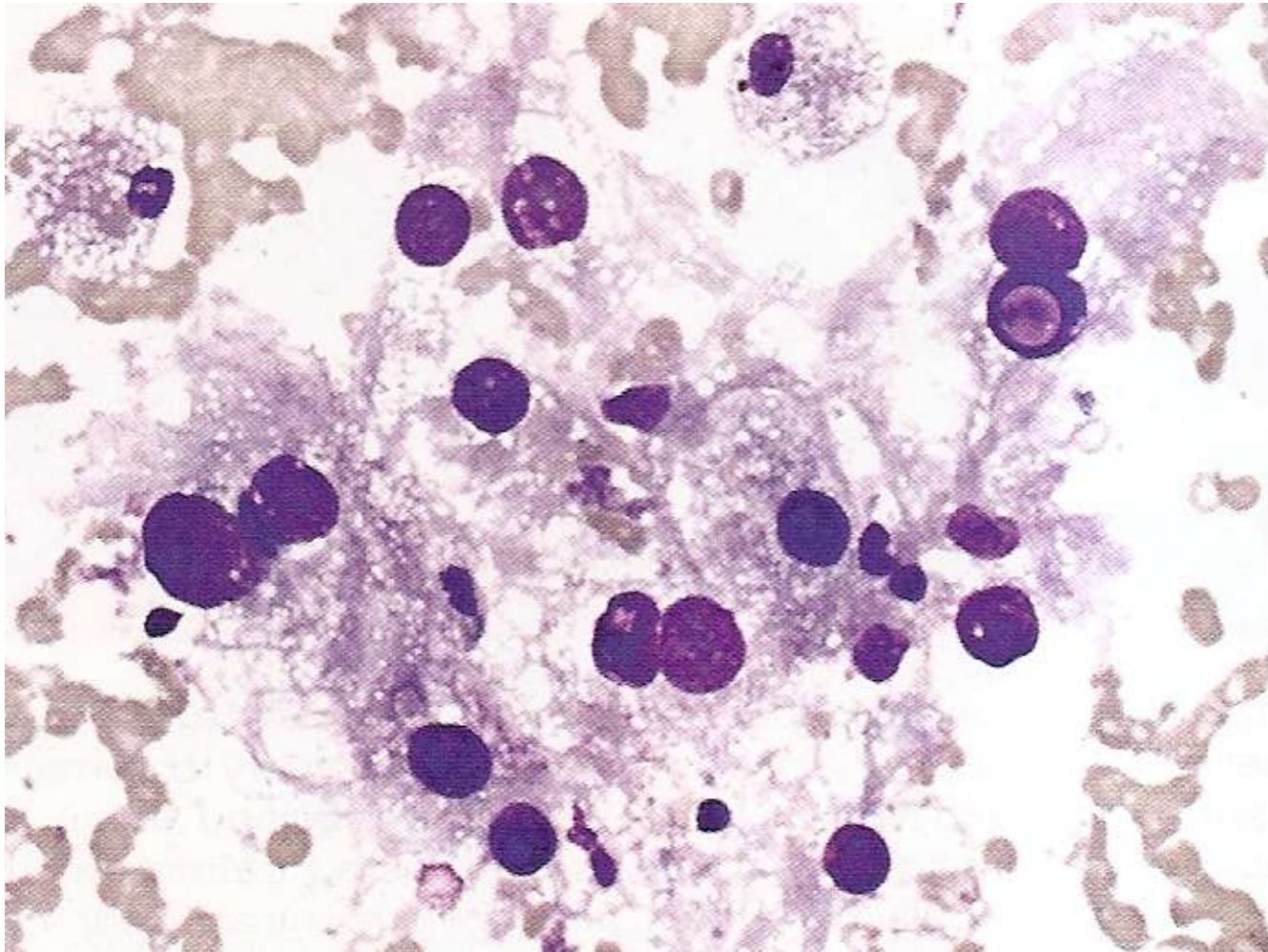
SOSPECHOSO DE CARCINOMA MEDULAR



SOSPECHOSO DE LINFOMA



SOSPECHOSO DE MALIGNIDAD
RESULTO METASTASIS DE CA RENAL



Chapter 8

Papillary Thyroid Carcinoma and Variants

Manon Auger, Edward B. Stelow, Grace C.H. Yang,
Miguel A. Sanchez, Sylvia L. Asa, and Virginia A. Livolsi



CARCINOMA PAPILAR DE TIROIDES

DEFINICION

**TUMOR MALIGNO DERIVADO DEL
EPITELIO FOLICULAR CON
CARACTERISTICAS
ALTERACIONES NUCLEARES QUE
NO REQUIERE PRESENCIA DE
PAPILAS**

CARCINOMA PAPILAR DE TIROIDES

CRITERIOS

PAPILAS O SINCITIOS

REMOLINOS

NUCLEO →

PSAMMOMAS

CELULAS GIGANTES

MULTINUCLEADAS

GRANDES

**OVALES,
IRREGULARES,
MOLDEADOS**

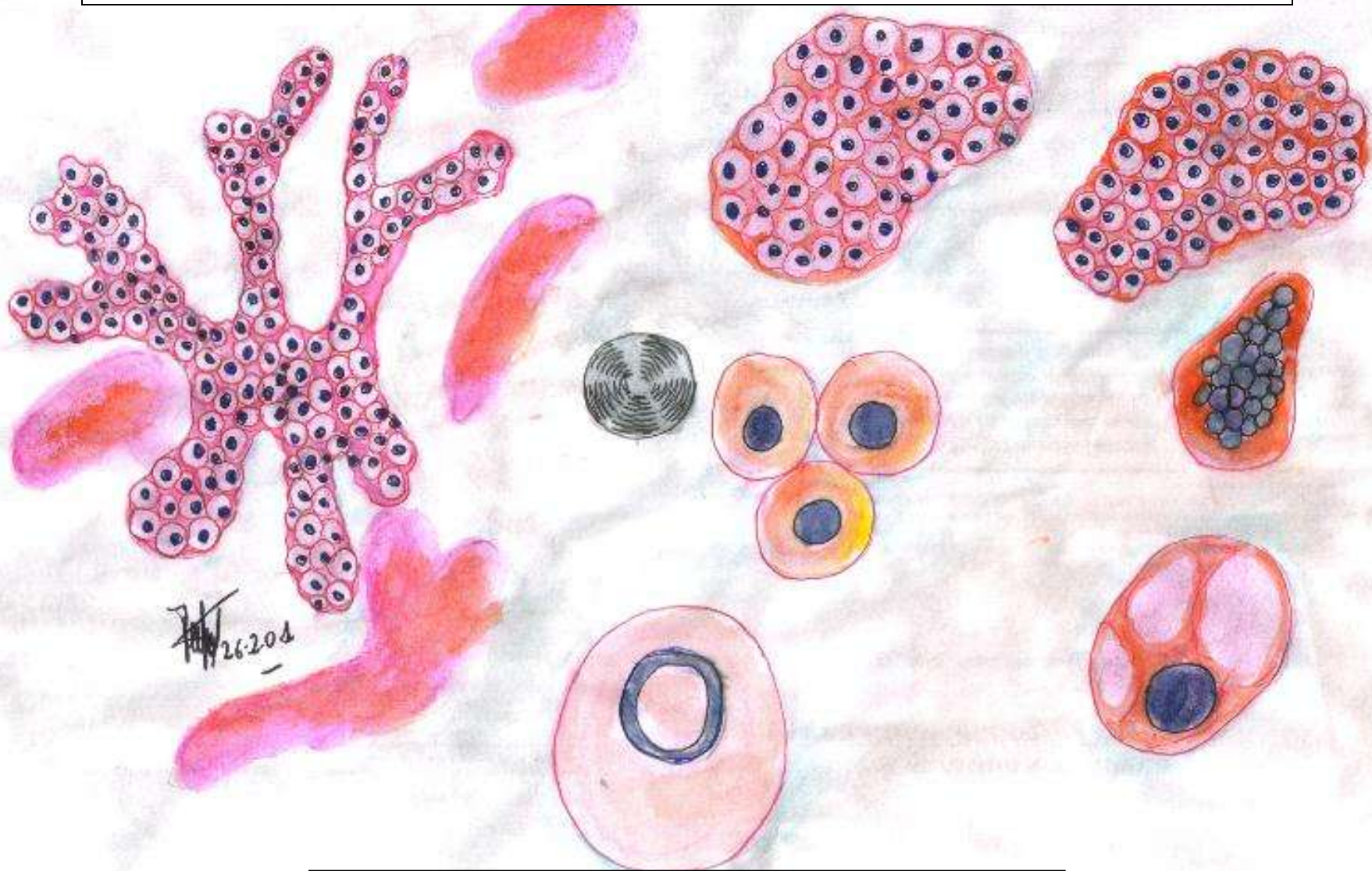
HENDIDURAS

PSEUDOINCLUSIONES

**ANNIE LA
HUERFANITA**

**MICRONUCLEOLO
MARGINAL UNICO O
MULTIPLE**

CARCINOMA PAPILAR DE TIROIDES



BETHESDA NO HABLA DEL CHICLE



ORPHAN ANNIE EYE NUCLEI: A HISTORICAL NOTE

AMER J SURG PATHOL 17 10 1993

**LA DRA NANCY WARNER OYO QUE NATHAN FRIEDMAN
COMPARABA LOS NUCLEOS DE LOS CARCINOMAS PAPILARES DE
TIROIDES CON LOS OJOS DE MARTHA SCOTT**

**PERO ¿QUIÉN ERA
MARTHA SCOTT?**

**ERA UNA GRAN
SECUNDARIA DEL CINE
AMERICANO**

**HIZO DE MADRE DE
CHARLTON HESTON EN DOS
PELICULAS MITICAS, LOS
DIEZ MANDAMIENTOS Y BEN
HUR**

**RECORDE QUE DE
PEQUEÑO TENIA UN ALBUN
DE LA SEGUNDA VERSION
CINEMATOGRAFICA DE
CECIL B DE MILLE DE LOS
10 MANDAMIENTOS. LO
BUSQUE Y LO ENCONTRE
PERO....**





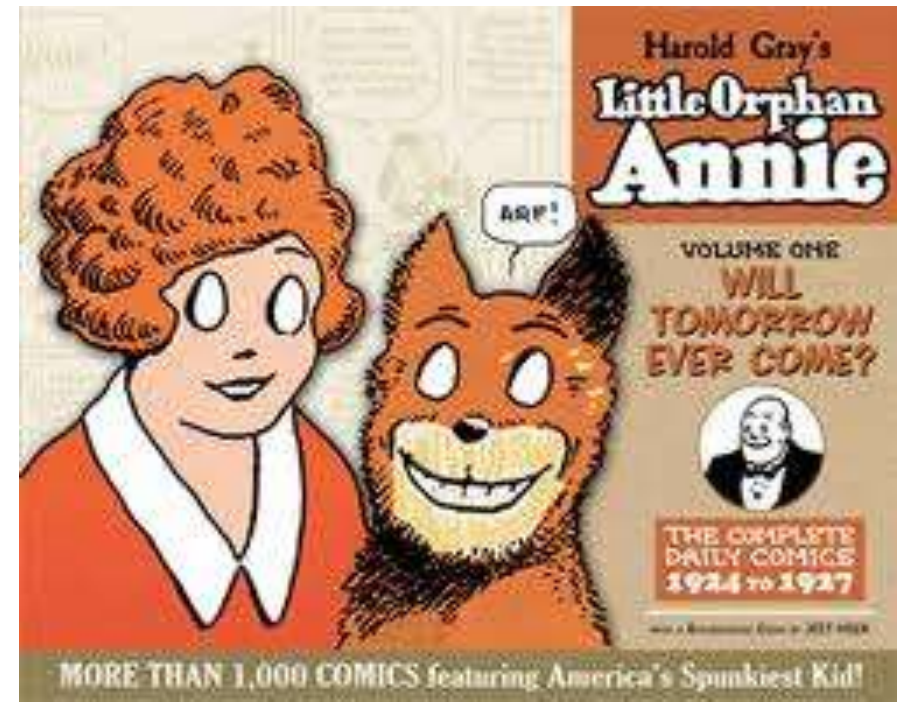
**LA VERDAD ES QUE LA
HABIA IMAGINADO MAS
JOVEN Y MAS GUAPA Y
ADEMAS NO ME
ACLARABAN NADA SUS
OJOS Y LOS NUCLEOS DEL
CARCINOMA PAPILAR**

**PERO ME
QUEDABA POR
INVESTIGAR A
ANNIE LA
HUERFANITA**

ANNIE ERA EL PERSONAJE DE UNA TIRA COMICA CREADA POR HAROD GREY EN 1924 QUE APARECIA SEMANALMENTE EN EL NEW YORK DAYLY NEWS

EN 1937 FUE DECLARADA LA TIRA COMICA MAS POPULAR DE USA

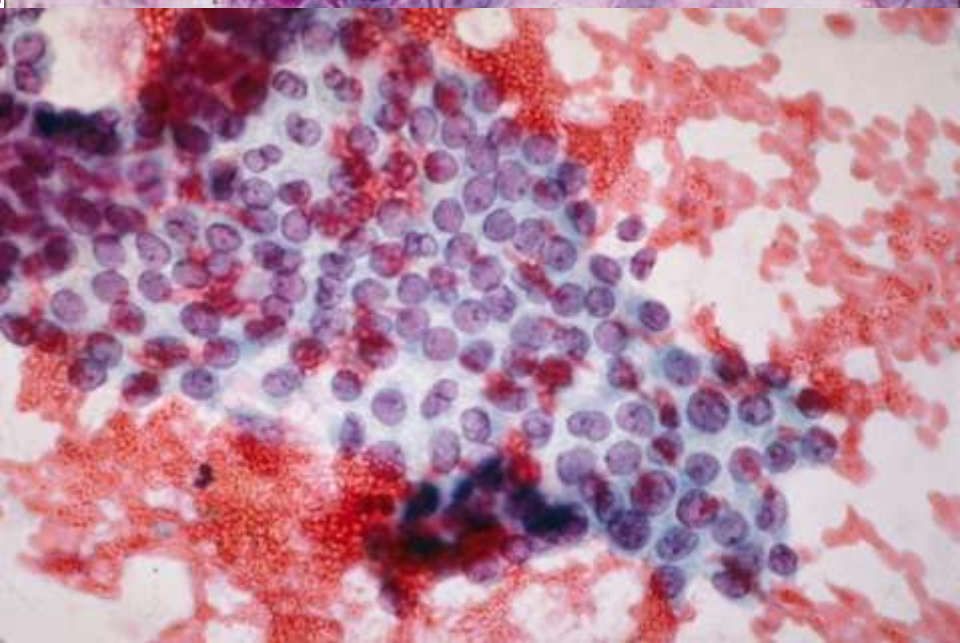
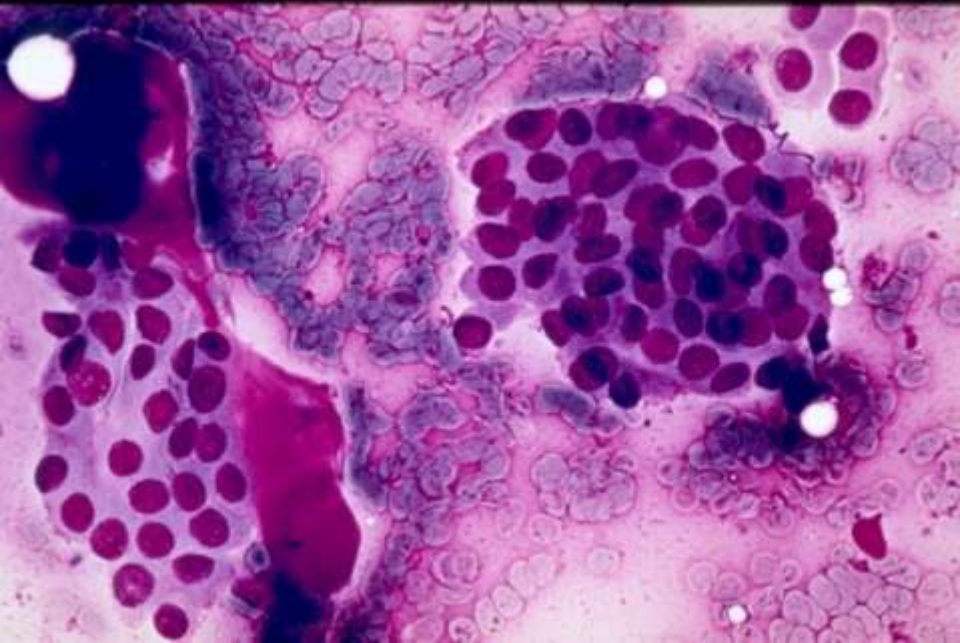
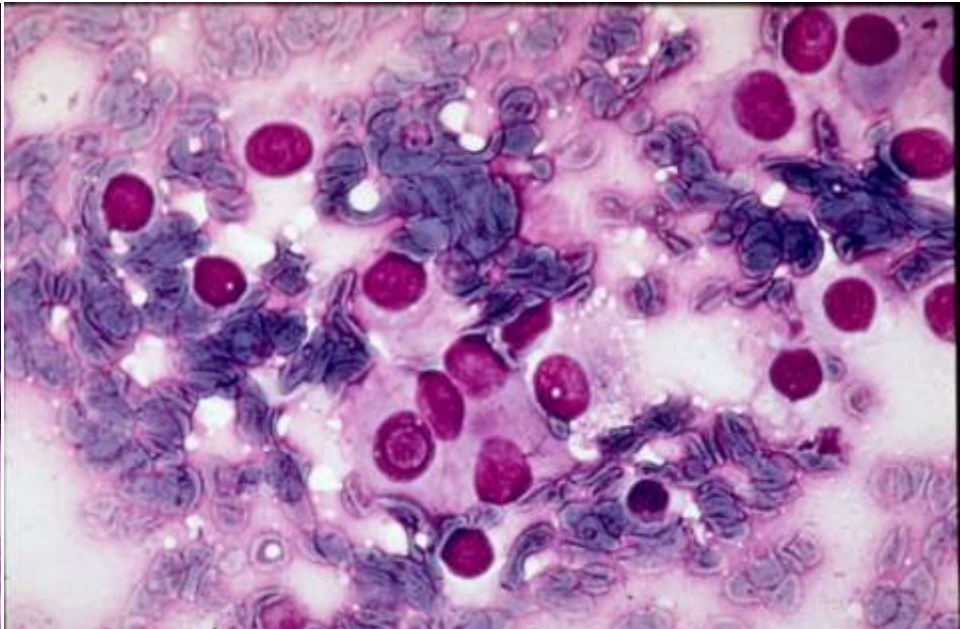
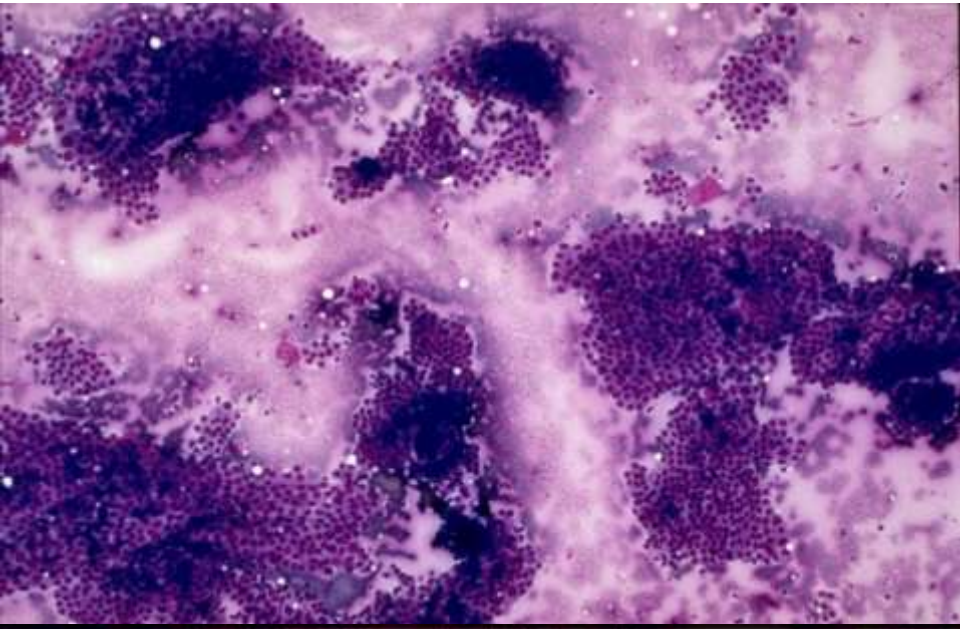
FUE LLEVADA AL CINE EN VARIAS OCASINES. UNA DE ELLAS CON CAROL BURNETT Y ALBERT FINNEY



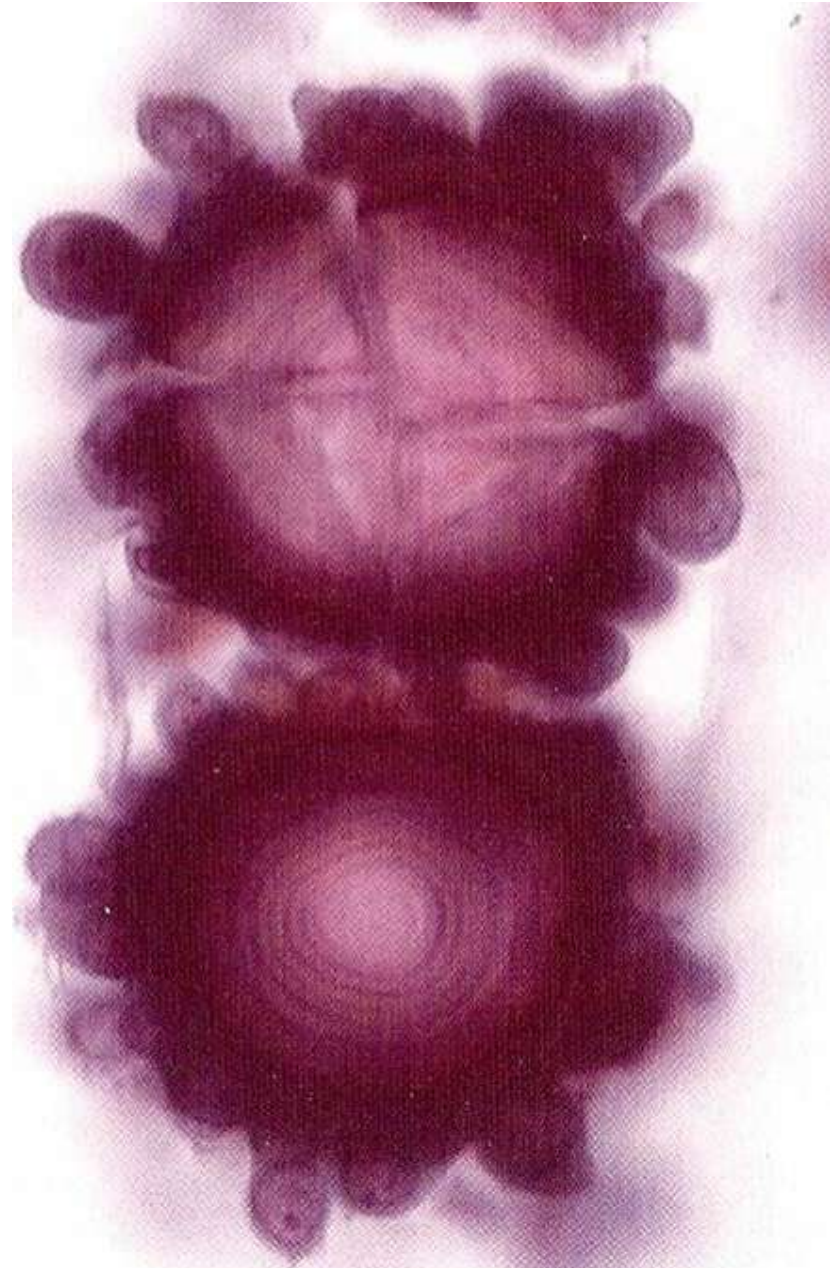
AMER J SURG PATHOL 17 10 1993



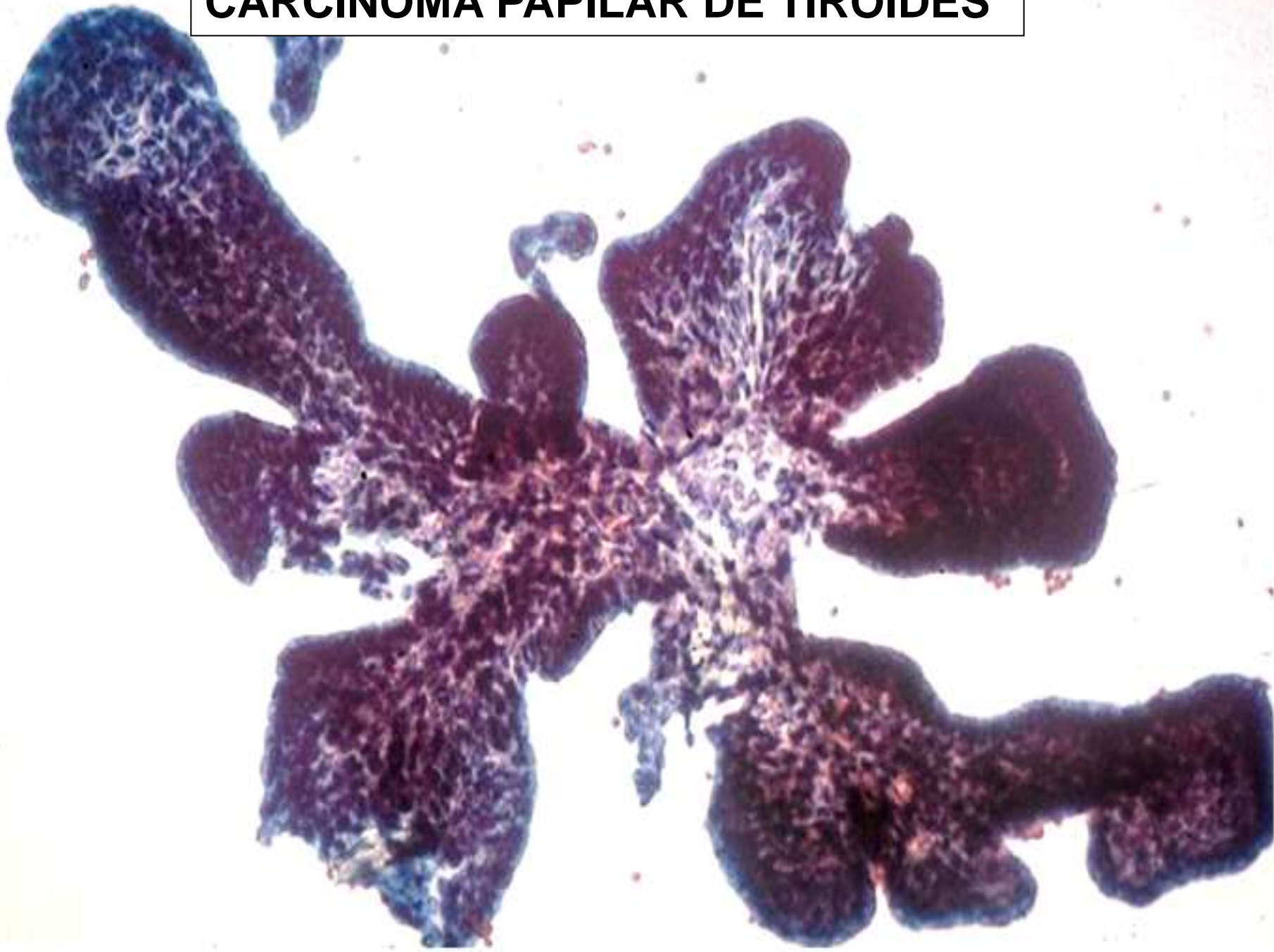
CARCINOMA PAPILAR DE TIROIDES



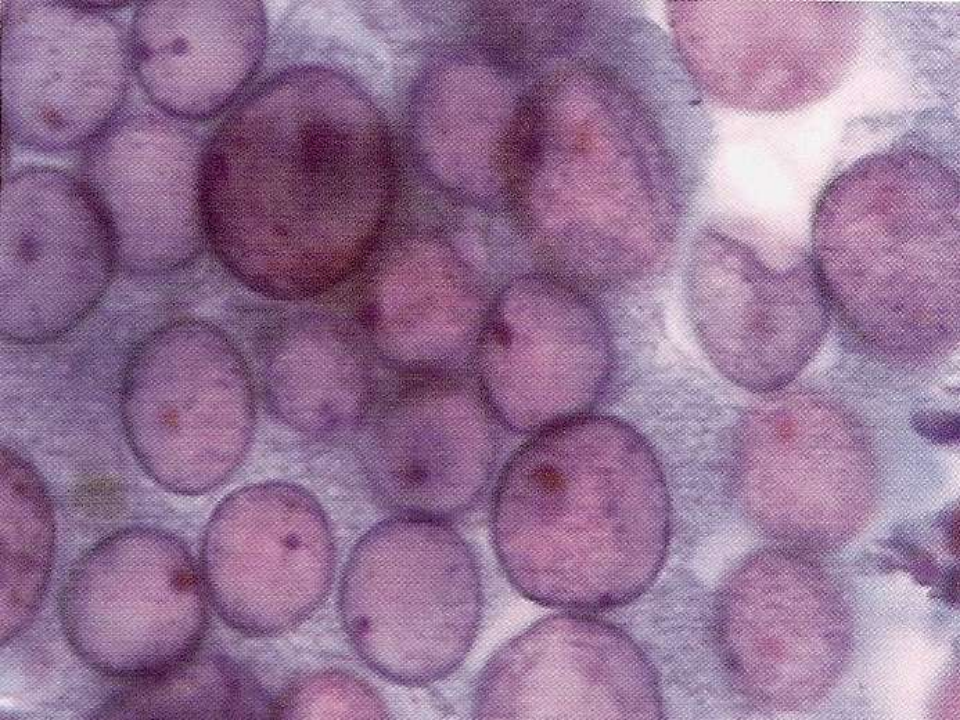
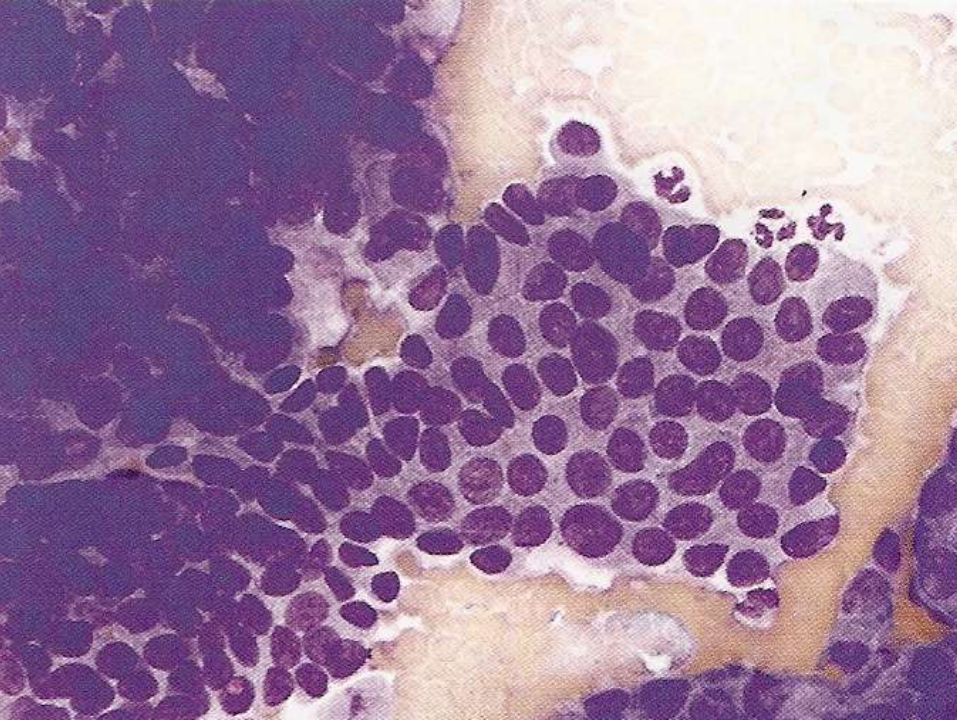
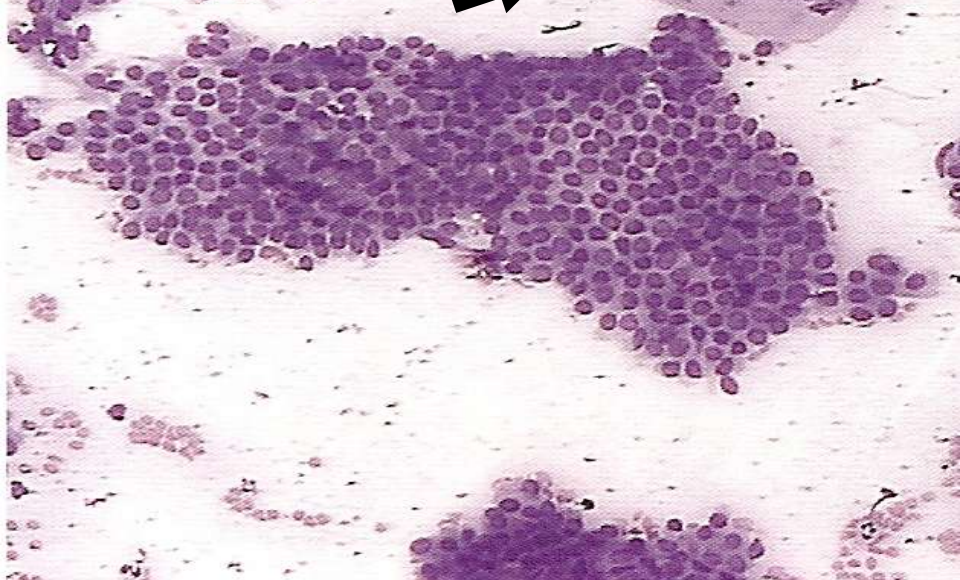
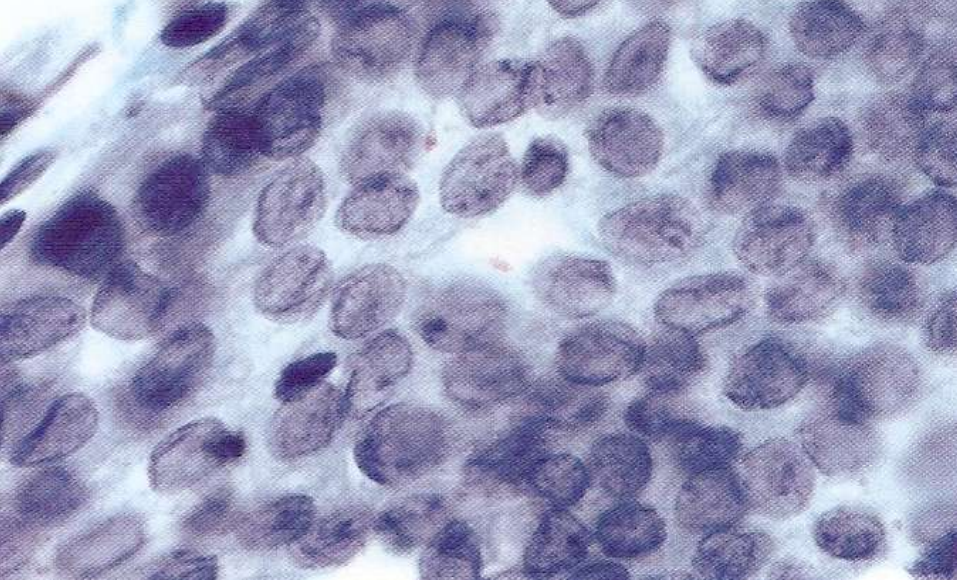
CARCINOMA PAPILAR DE TIROIDES



CARCINOMA PAPILAR DE TIROIDES

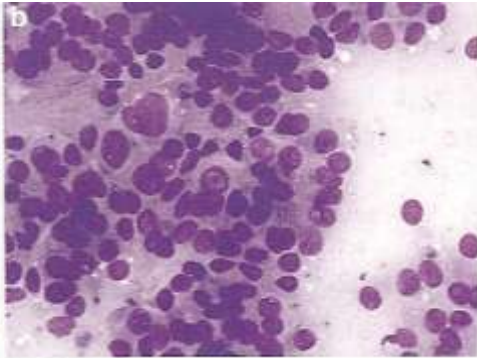
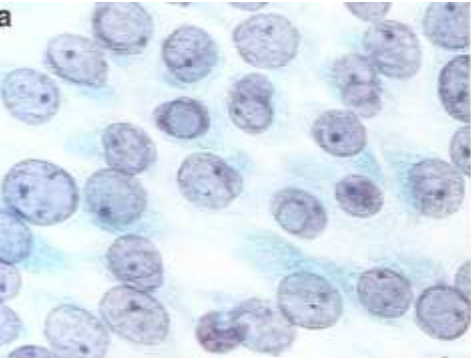


CARCINOMA PAPILAR DE TIROIDES

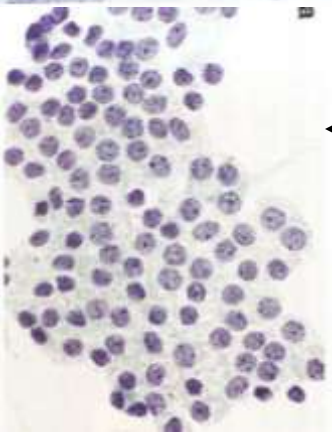


CARCINOMA PAPILAR DE TIROIDES

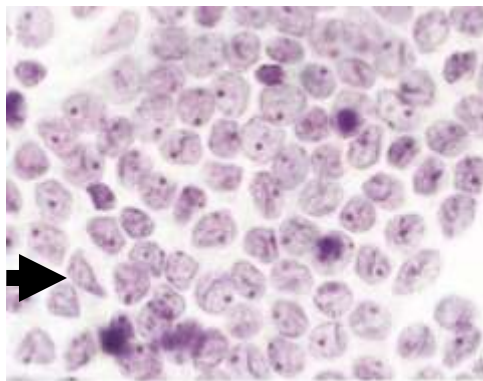
PSEUDOINCLUSIONES



NUCLEOS DE
CELULAS
NORMALES

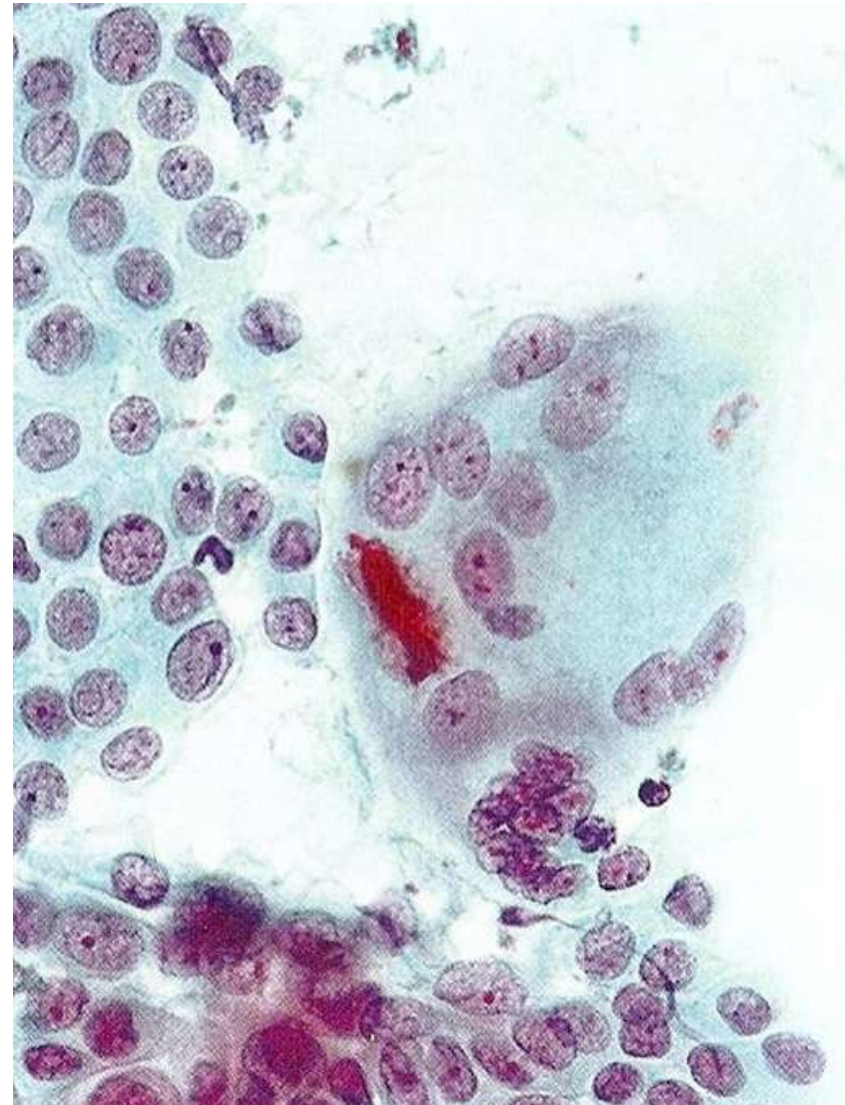


NUCLEOS DE
CA PAPILARES



MAS AMONTONADOS. MAS GRANDES
MAS PALIDOS. MEMBRANAS MAS
IRREGULARES

GIGANTES MULTINUCLEADAS



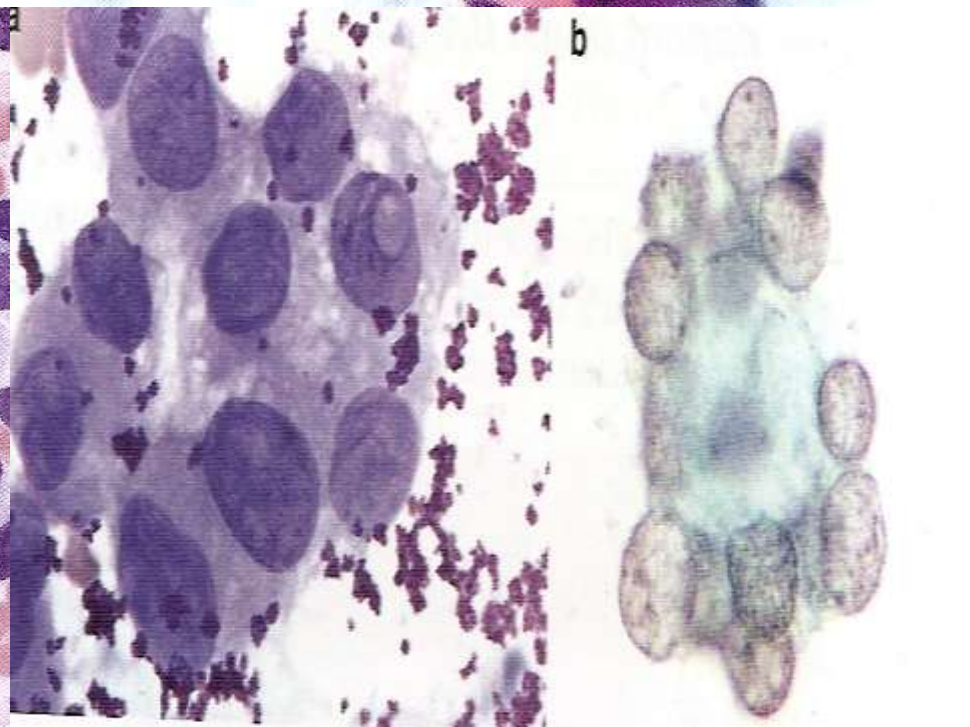
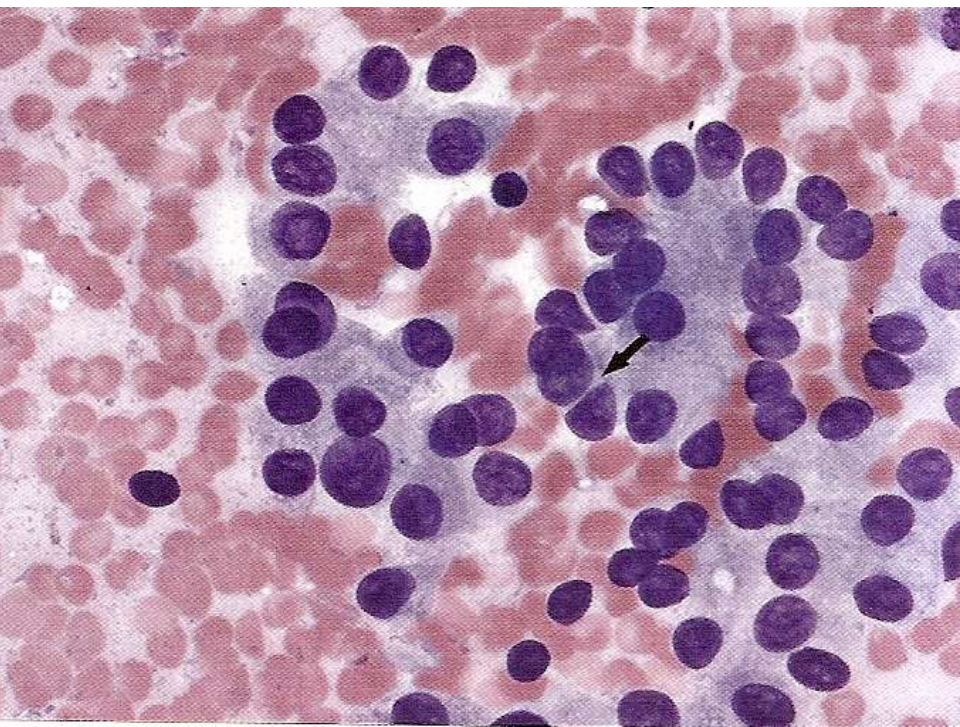
CARCINOMA PAPILAR DE TIROIDES

VARIANTE FOLICULAR

PATRON FOLICULAR

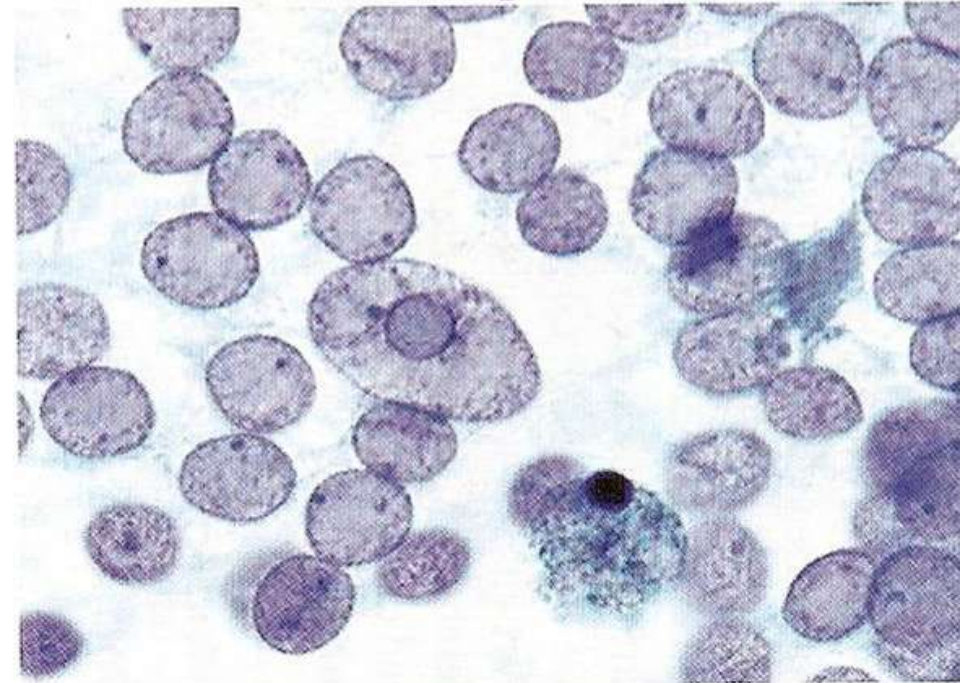
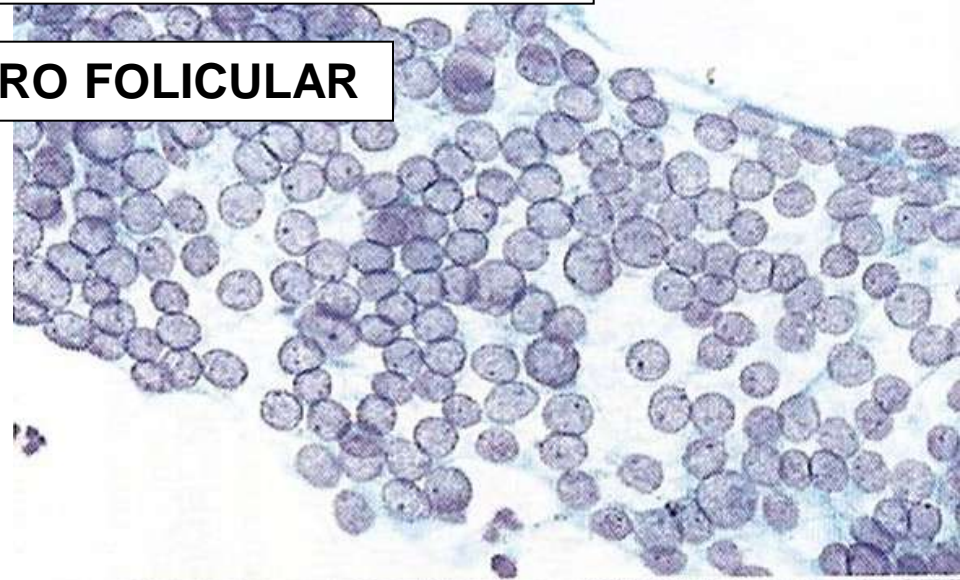
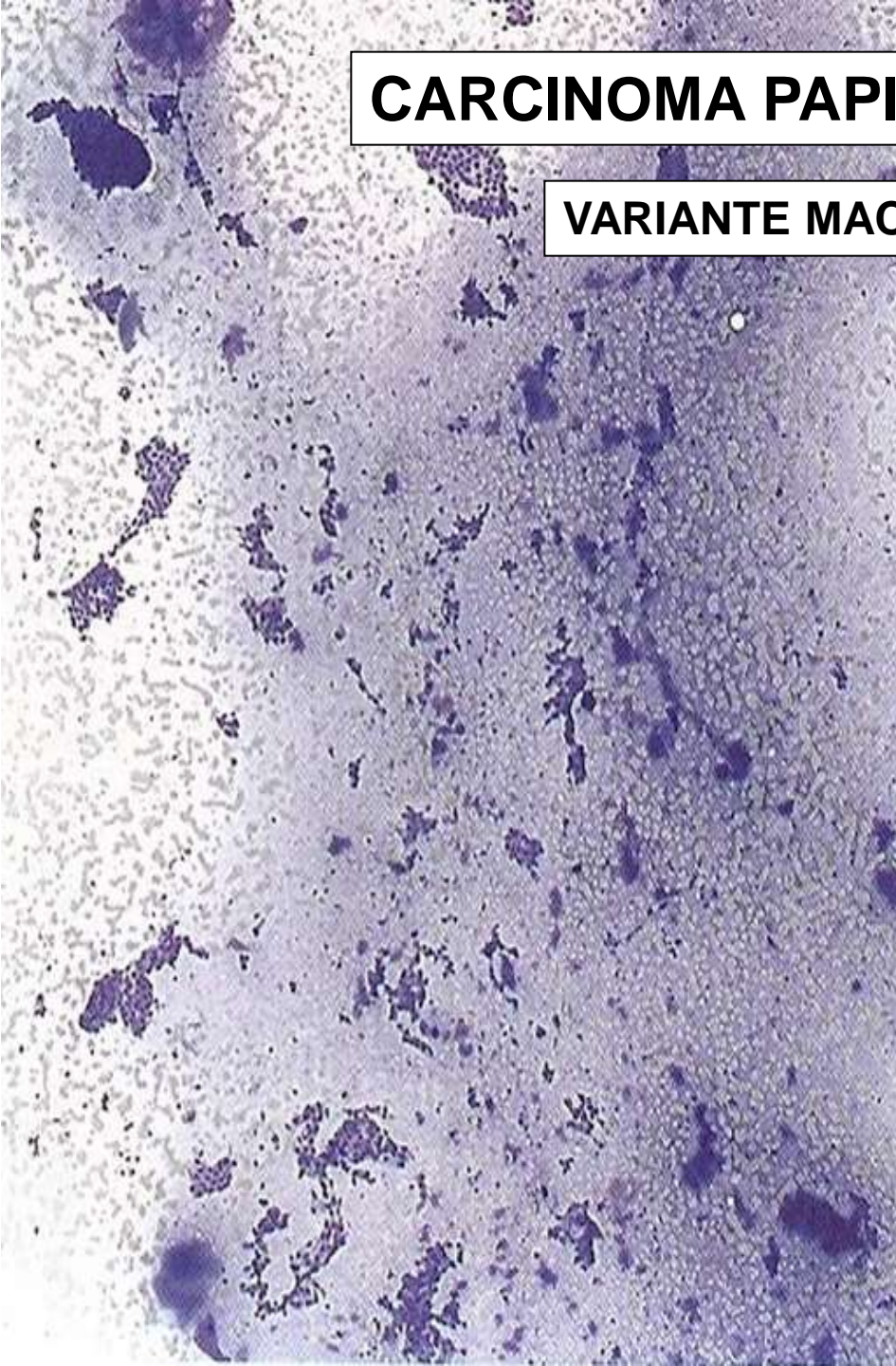
CELULAS MAS PEQUEÑAS

MENOS NUCLEOS HENDIDOS



CARCINOMA PAPILAR DE TIROIDES

VARIANTE MACRO FOLICULAR



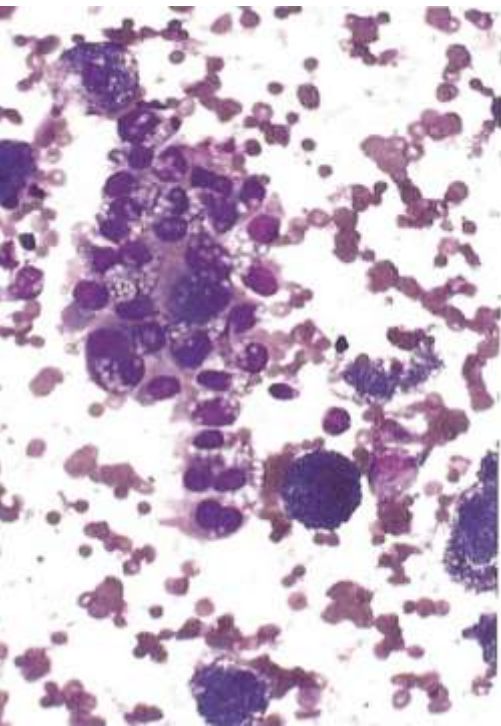
CARCINOMA PAPILAR DE TIROIDES

VARIANTE QUISTICA

50% DE LOS CA PAPILARES SON PARCIALMENTE QUISTICOS

10% PREDOMINANTEMENTE QUISTICOS

FALSO NEGATIVO



CONTENIDO QUISTICO

**RARAS CELULAS EPITELIALES
GIGANTES CON CITOPLASMA DENSO**

RAROS PSAMMOMAS

**RARAS CELULAS CON DISPOSICION
MONOCAPA O PAPILAR**

**RARO: CROMATINA PALIDA,
HENDIDURAS NUCLEARES,
PSEUDOINCLUSIONES, ASPECTO
EPIDERMÓIDE**

CARCINOMA PAPILAR DE TIROIDES

VARIANTE ONCOCITICA

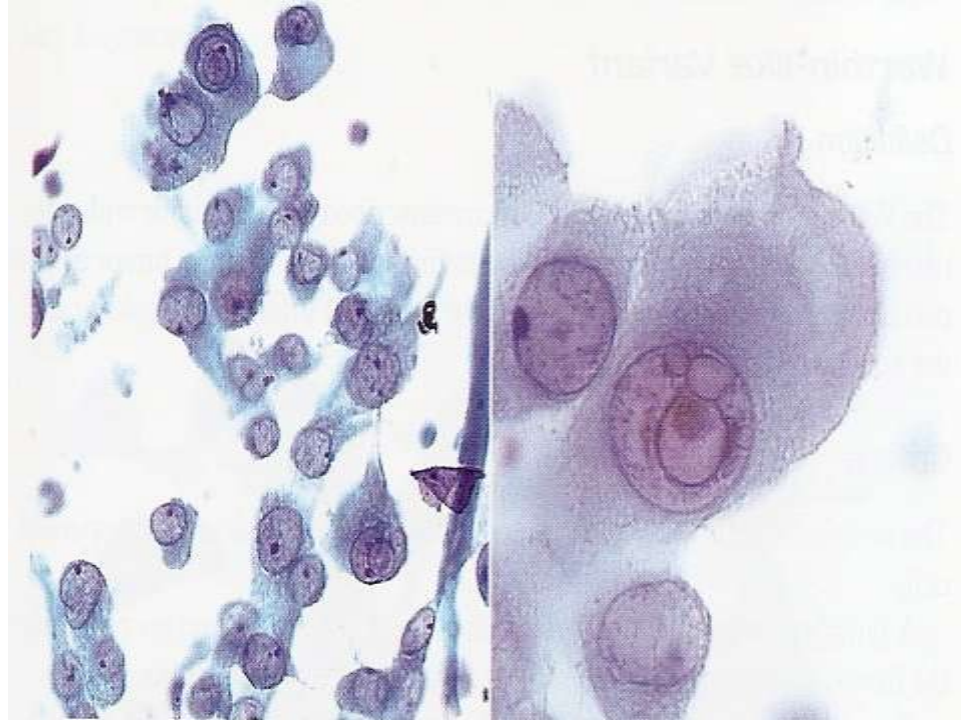
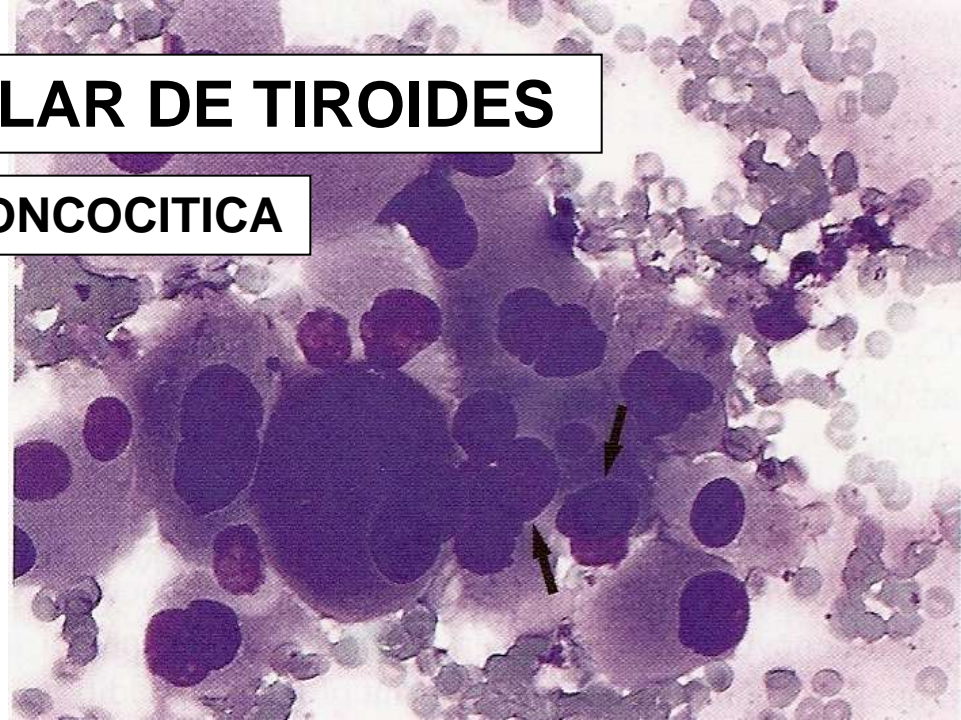
EXTENDIDOS CELULARES

CELULAS POLIGONALES

GRUPOS PAPILLARES LAXOS

CITOPLASMA ABUNDANTE GRANULAR Y
EOSINOFILO

DIFERENCIARLOS DE NEOPLASIAS DE HURTHLE,
ONCOCITOMAS, VARIANTE ONCOCITICA DEL
CARCINOMA MEDULAR



CARCINOMA PAPILAR DE TIROIDES

VARIANTE DE CELULAS ALTAS

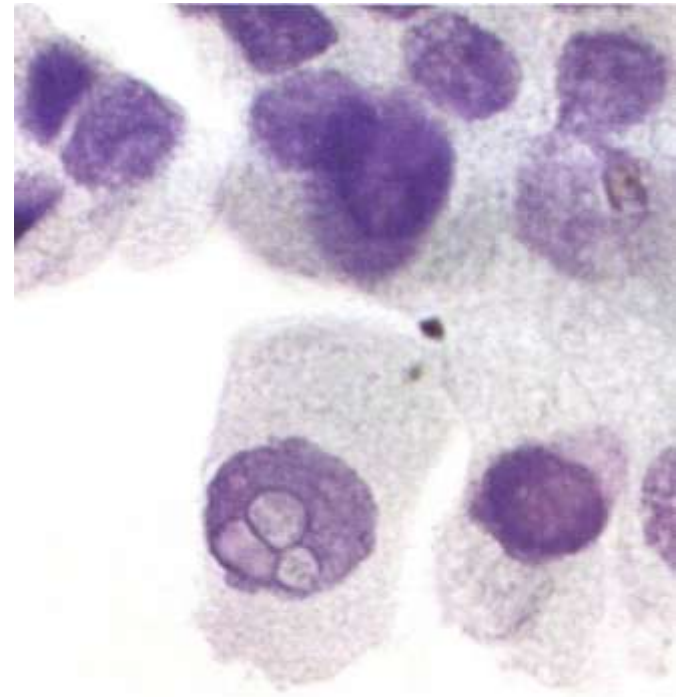
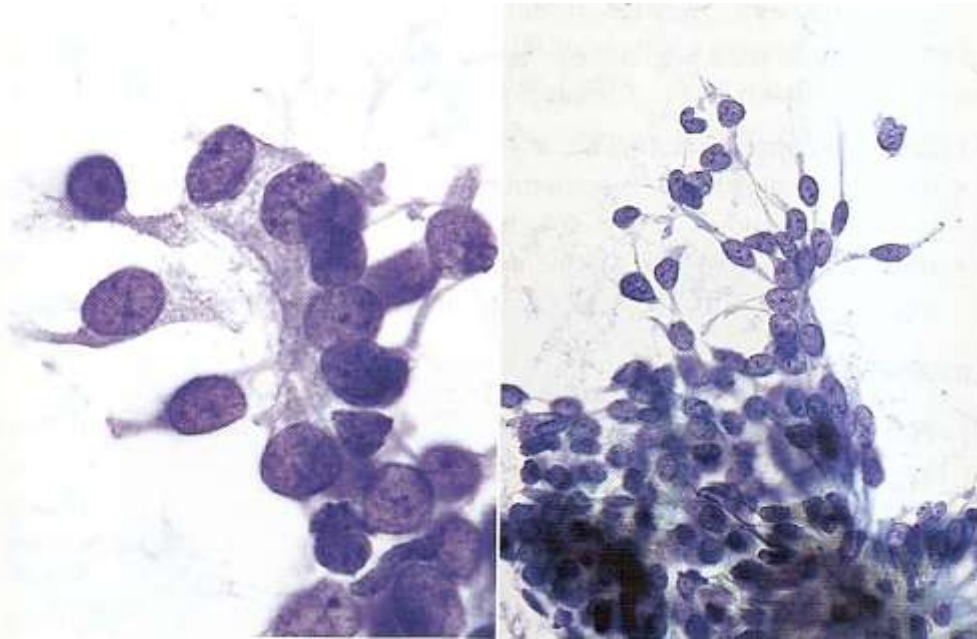
50% DE LAS CELULAS 3 VECES MAS ALTAS QUE ANCHAS (SE VE MEJOR EN BLOQUES Y BIOPSIA QUE EN PAAF)

CITOPLASMAS ABUNDANTES Y ROSADOS

NUCLEOS CONVENCIONALES DE CA PAPILAR

REPRESENTA EN PERSONAS MAYORES, MASA TUMORAL GRANDE Y METASTASIS

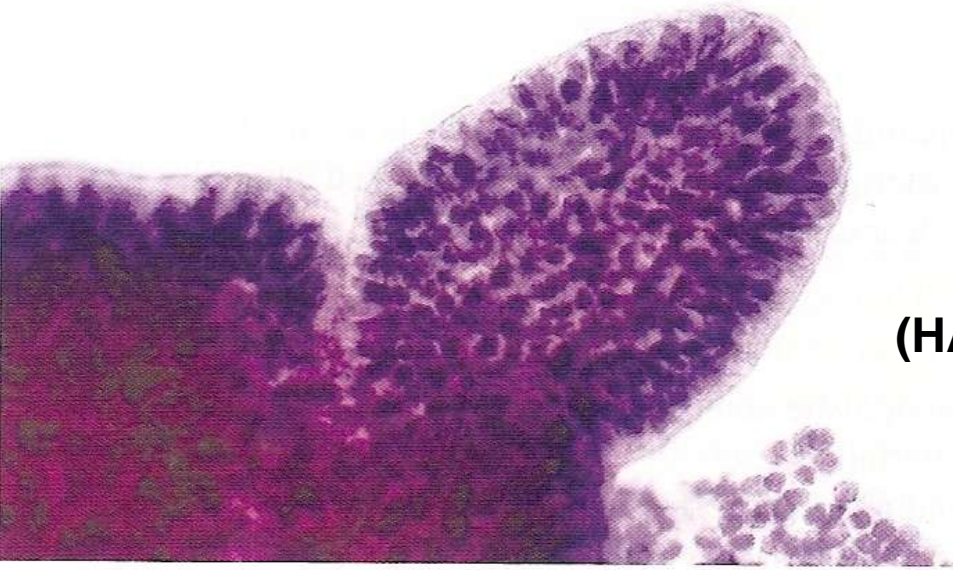
MAL PRONOSTICO



CARCINOMA PAPILAR DE TIROIDES

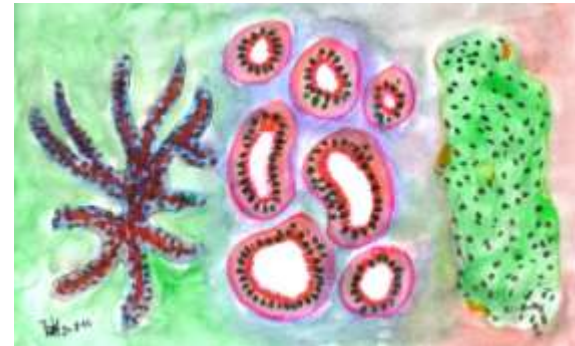
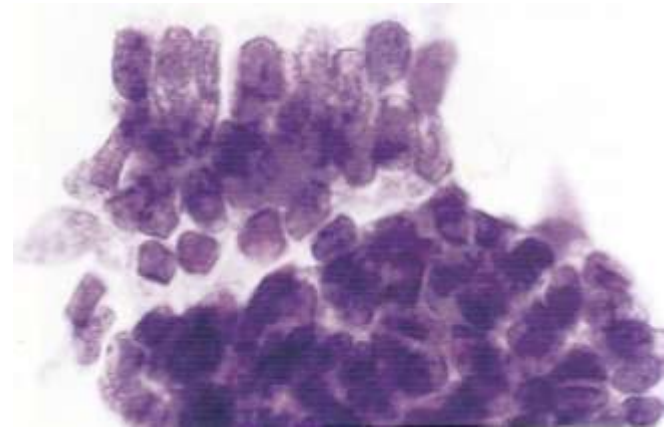
VARIANTE DE CELULAS ALTAS

(HAY UNA SUB VARIANTE ENCAPSULADA)



NUCLEOS
PARECIDOS A
LOS BASTOS DE
LA BARAJA

CELULAS ALARGADAS
PARECIDAS A LAS DEL
ADENOMA COLONICO

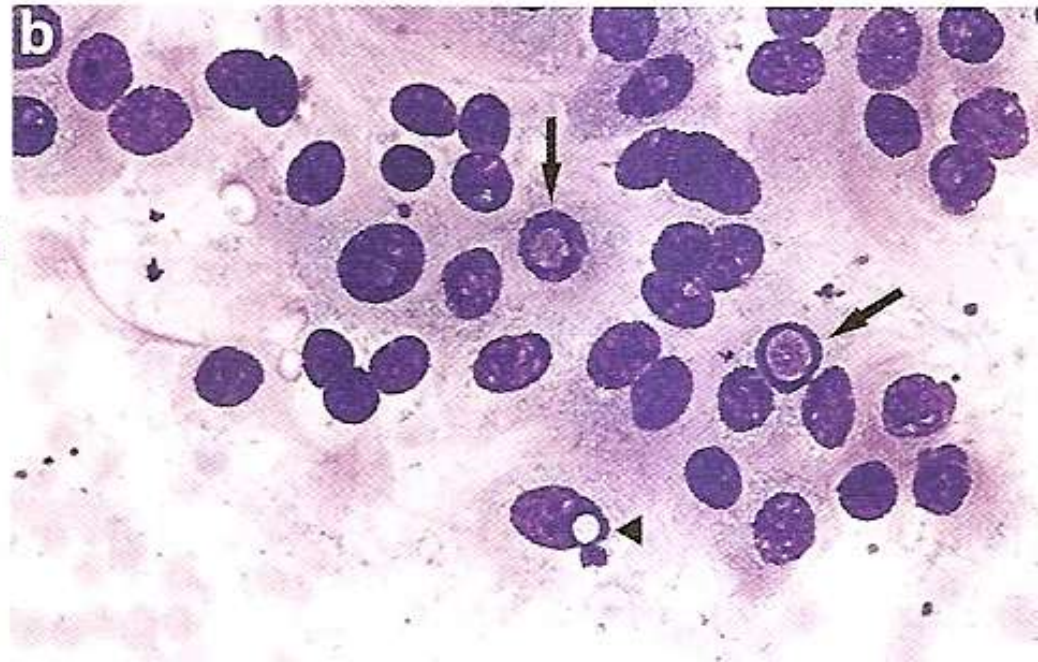
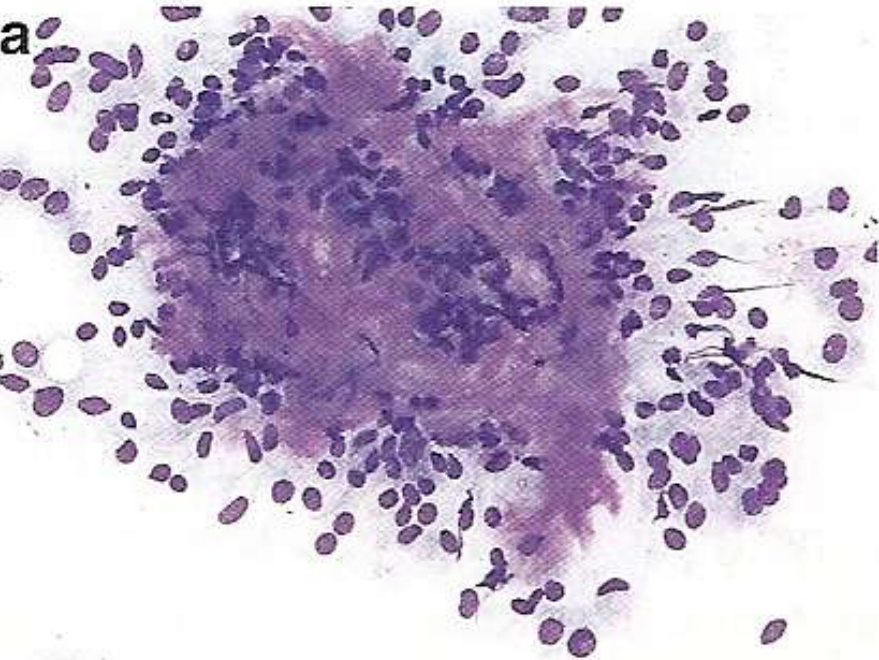


PAPILAR GLANDULAR SOLIDO

CARCINOMA PAPILAR DE TIROIDES

VARIANTE TRABECULAR HIALINIZANTE

**COMPARTE CON CARCINOMA PAPILAR
NOS LOS NUCLEOS CLAROS Y
PSEUDOINCLUSIONES Y EL
REORDENAMIENTO DEL GEN RET**



CARCINOMA PAPILAR DE TIROIDES

VARIANTE ESCLEROSANTE DIFUSA

PAPILAS

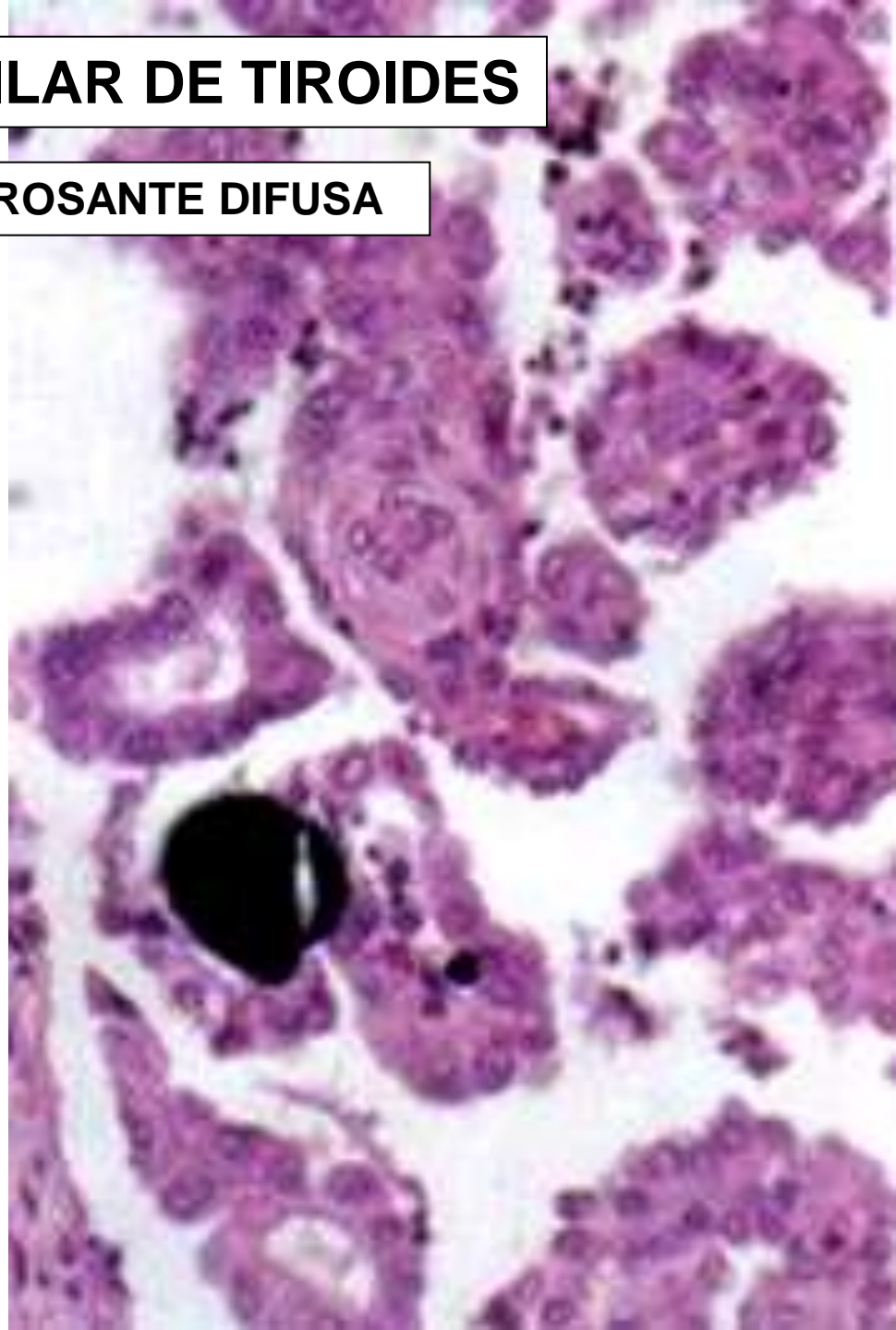
PSAMMOMAS

CELULAS ESCAMOSAS

LINFOCITOS

MAS FRECUENTE EN MUJERES

CONDUCTA MAS AGRESIVA



CARCINOMA PAPILAR DE TIROIDES

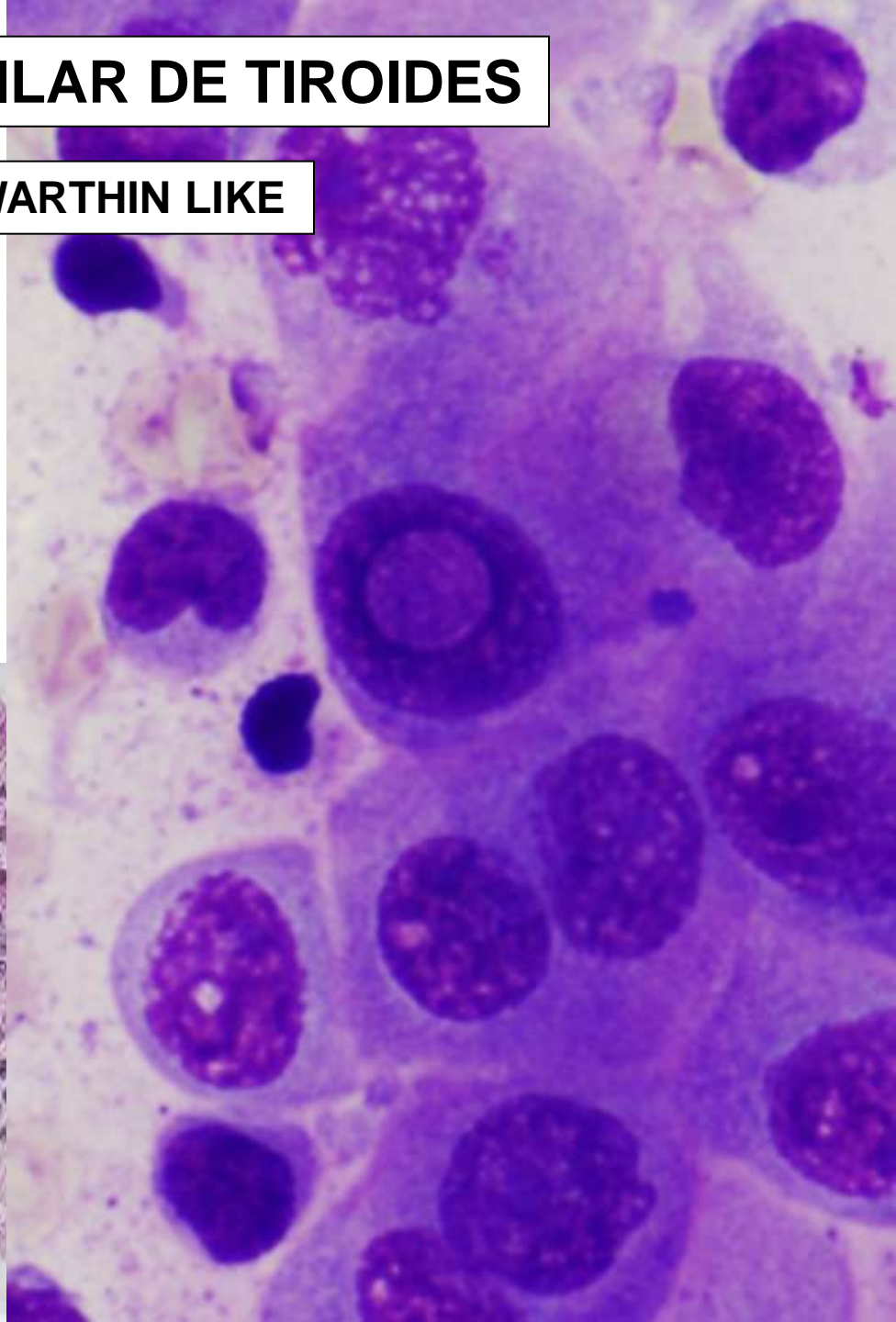
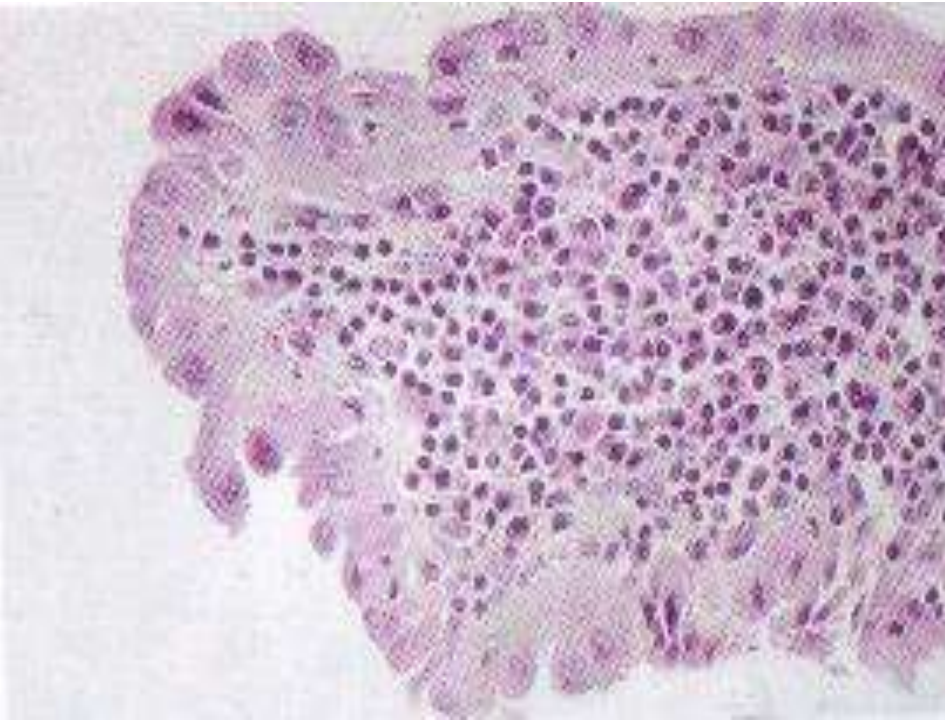
VARIANTE WARTHIN LIKE

ARQUITECTURA PAPILAR

NUCLEOS DE CARCINOMA PAPILAR

CITOPLASMAS AMPLIOS

NO CONFUNDIR CON HASHIMOTO



Chapter 9

Medullary Thyroid Carcinoma

Martha B. Pitman, Yolanda C. Oertel, and Kim R. Geisinger

CARCINOMA MEDULAR

PAAF: CRITERIOS MAYORES

POBLACION UNIFORME (PLASMOCITOIDE, FUSOCELULAR, POLIGONAL)

CROMATINA EN SAL Y PIMIENTA

AMILOIDE

CRITERIOS MENORES

MARCADA CELULARIDAD

AUSENCIA DE COLOIDE

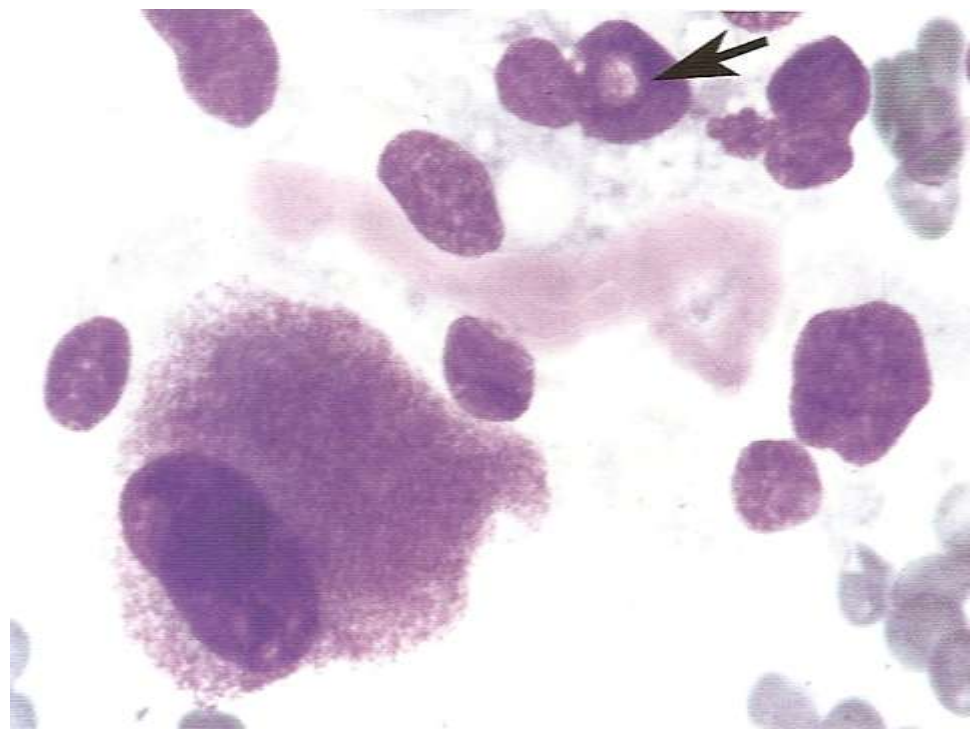
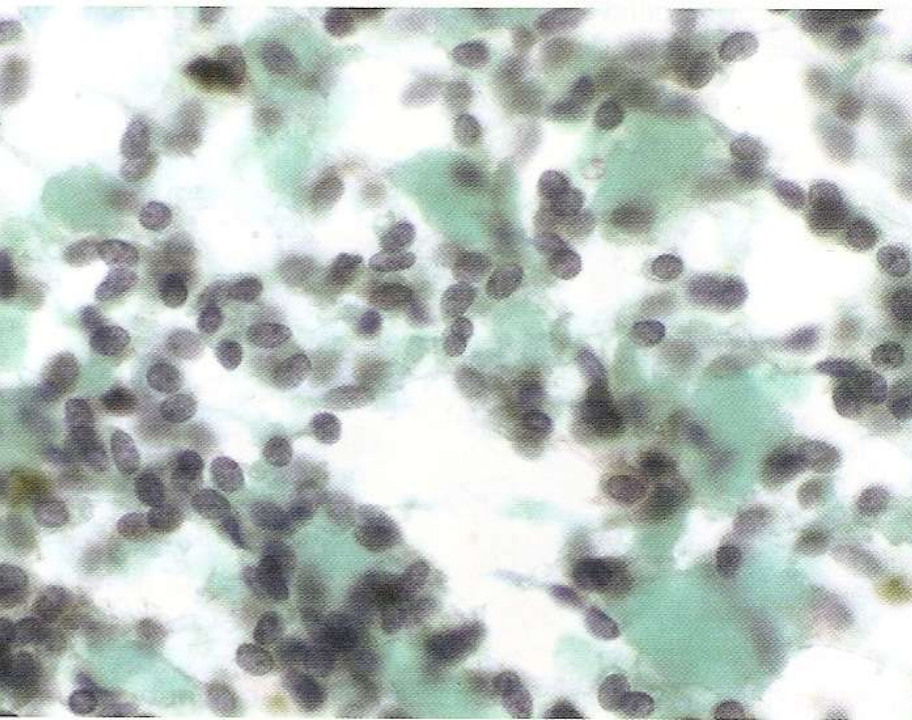
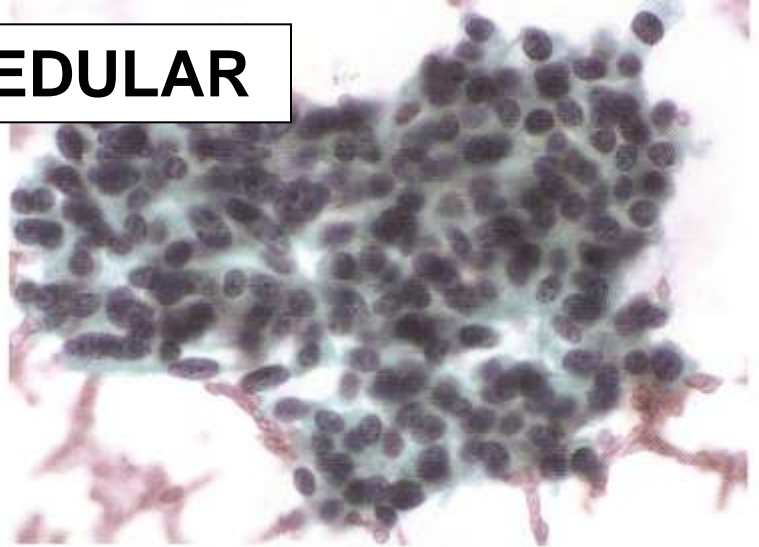
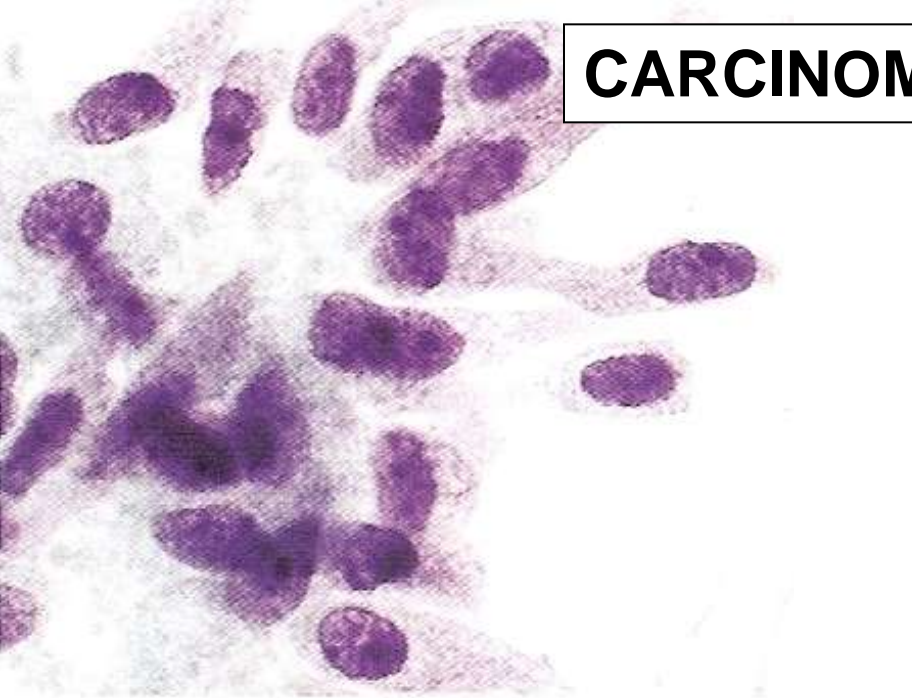
PSEUDOINCLUSIONES

BI Y MULTINUCLEACIONES

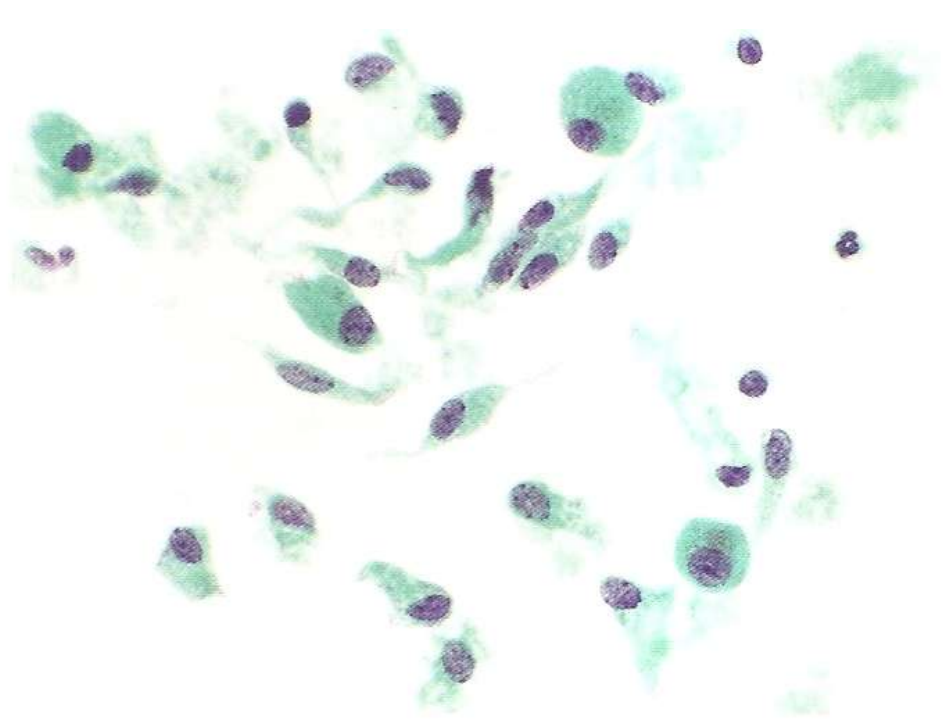
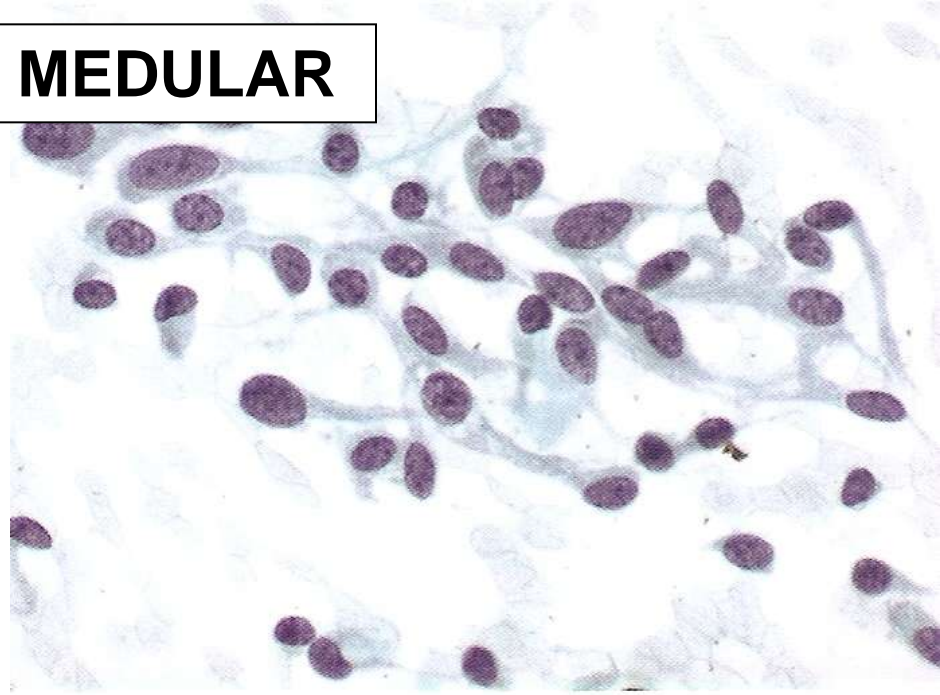
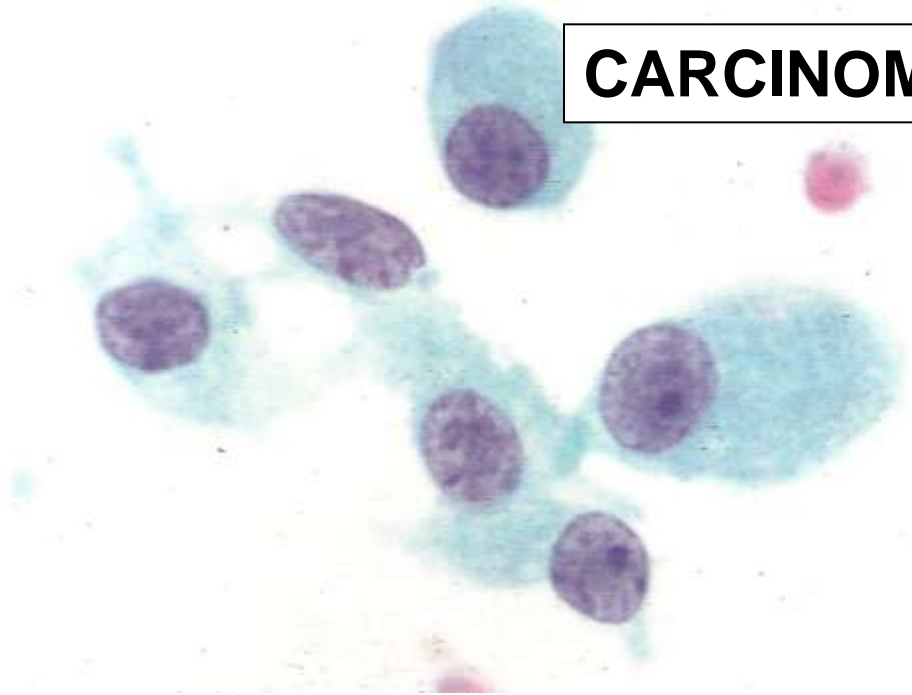
**CITOPLASMA CON GRANULOS ROSADOS = MATERIAL METACROMATICO
(SE VE BIEN EN MGG Y REGULAR CON DQ)**

A VECES CELULAS GRANDES ATIPICAS

CARCINOMA MEDULAR

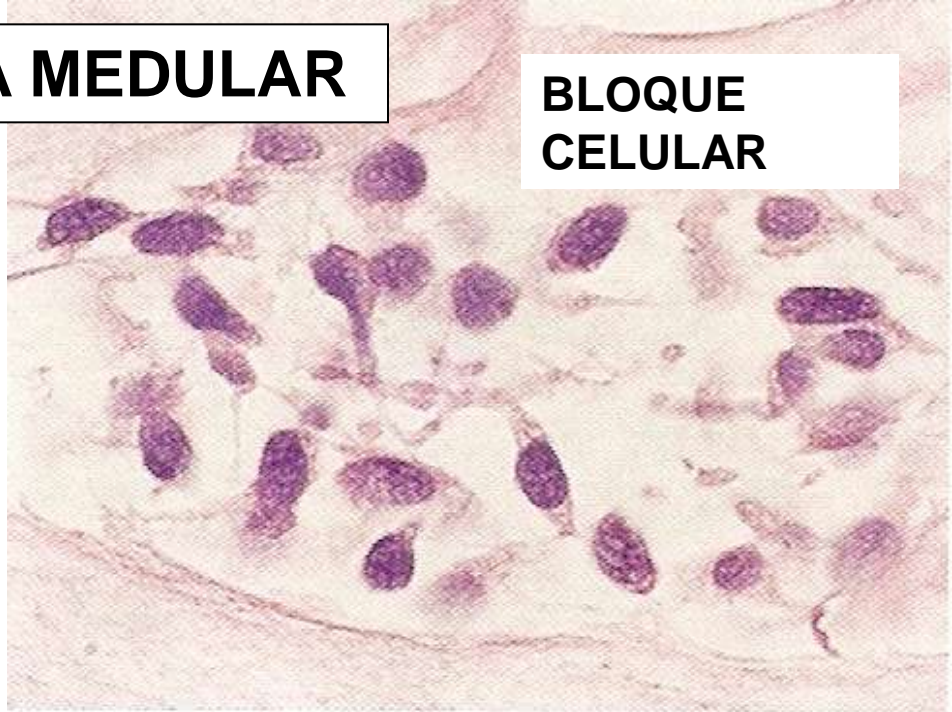
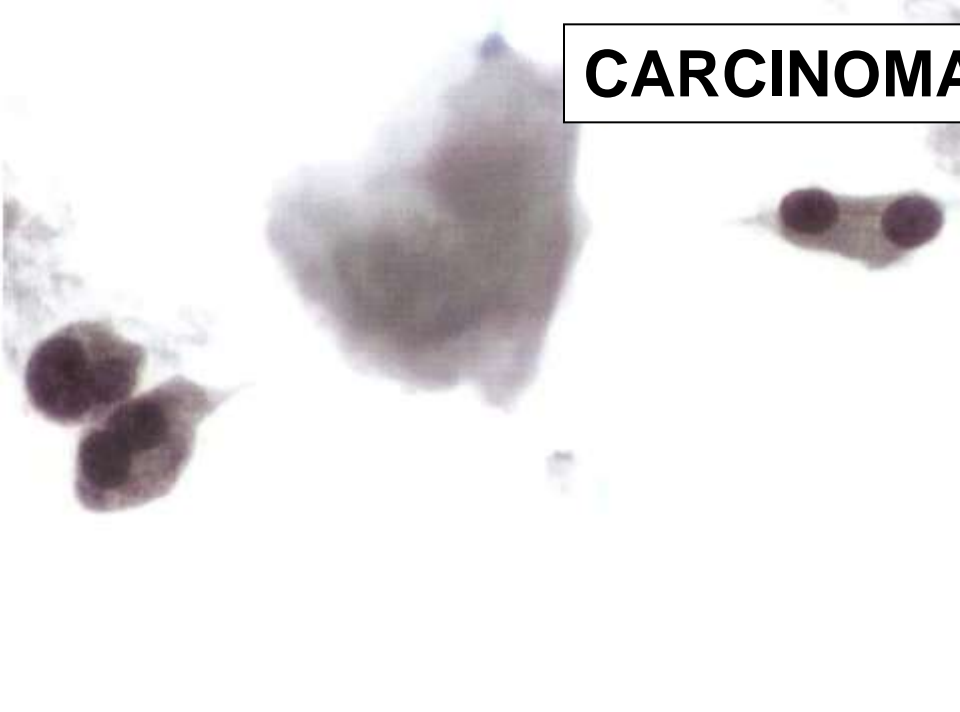


CARCINOMA MEDULAR



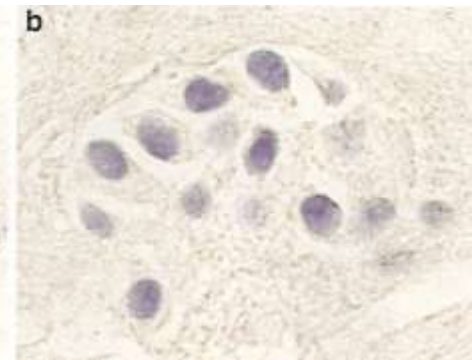
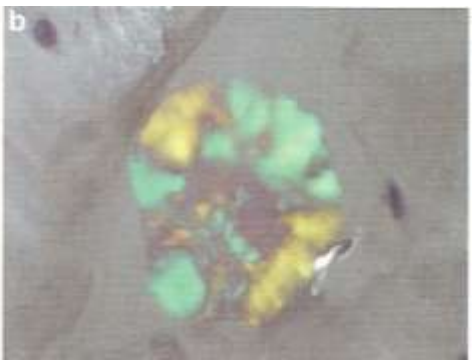
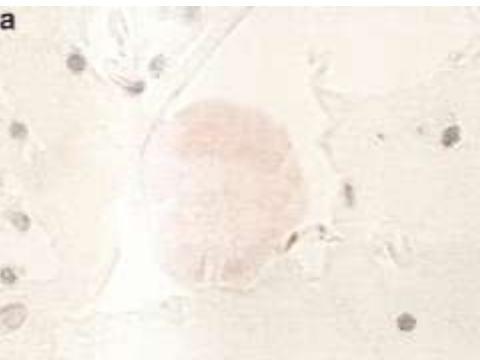
CARCINOMA MEDULAR

BLOQUE
CELULAR



AMILOIDE. ROJO CONGO. LUZ
POLARIZADA VERDE MANZANA

CALCITONINA +
TIROGLOBULINA -



CARCINOMA MEDULAR

VARIANTES

ONCOCITICO

CELULAS GIGANTES

FUSOCELULARES

ANAPLASICO

CELULAS PEQUEÑAS

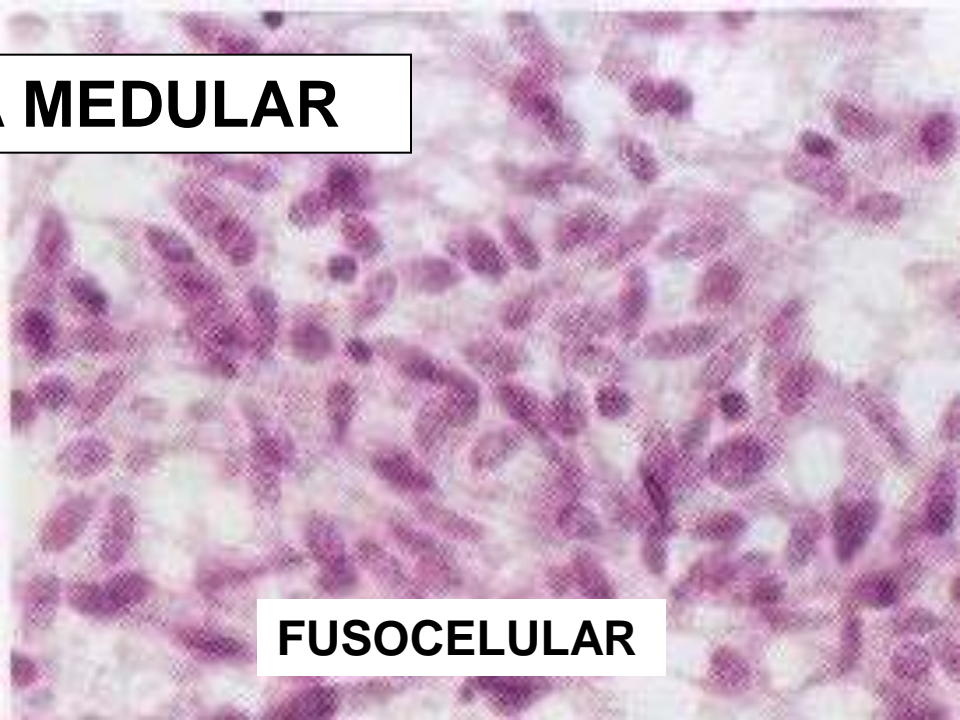
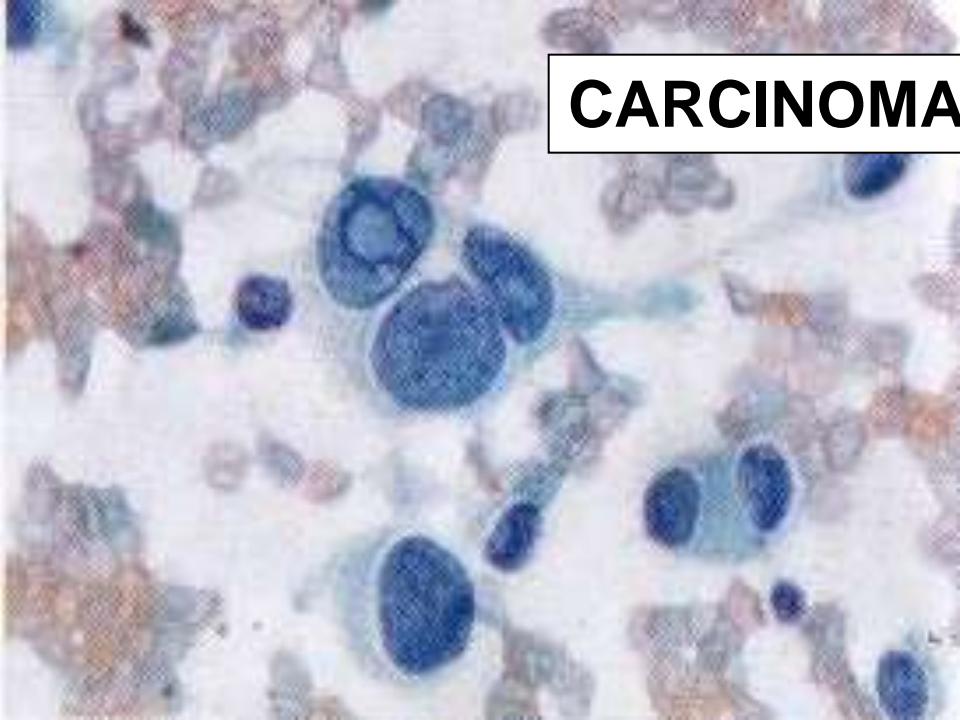
CELULAS CLARAS

PAPILAR

FOLICULAR

MIXTO (FOLICULAR Y MEDULAR)

CARCINOMA MEDULAR



FUSOCELULAR



ONCOCITICO



AMILOIDE

CARCINOMA MEDULAR

DIAGNOSTICO DIFERENCIAL

ES EL GRAN SIMULADOR

NEOPLASIA DE CELULAS DE HURTHLE

CARCINOMA INDIFERENCIADO

CARCINOMA PAPILAR

CARCINOMA INSULAR

BOCIO AMILOIDE

METASTASIS: MELANOMA, PLASMOCITOMA, CA FUSOCELULAR, CA RENAL, CA DE CELULAS PEQUEÑAS, CA NEUROENDOCRINO

CARCINOMA MEDULAR

INMUNOCITOQUIMICA

**100% CALCITONINA,
CITOQUERATINA,
CROMOGRANINA, TTF-1**

94% CEA

45% GALECTINA

6% TIROGLOBULINA



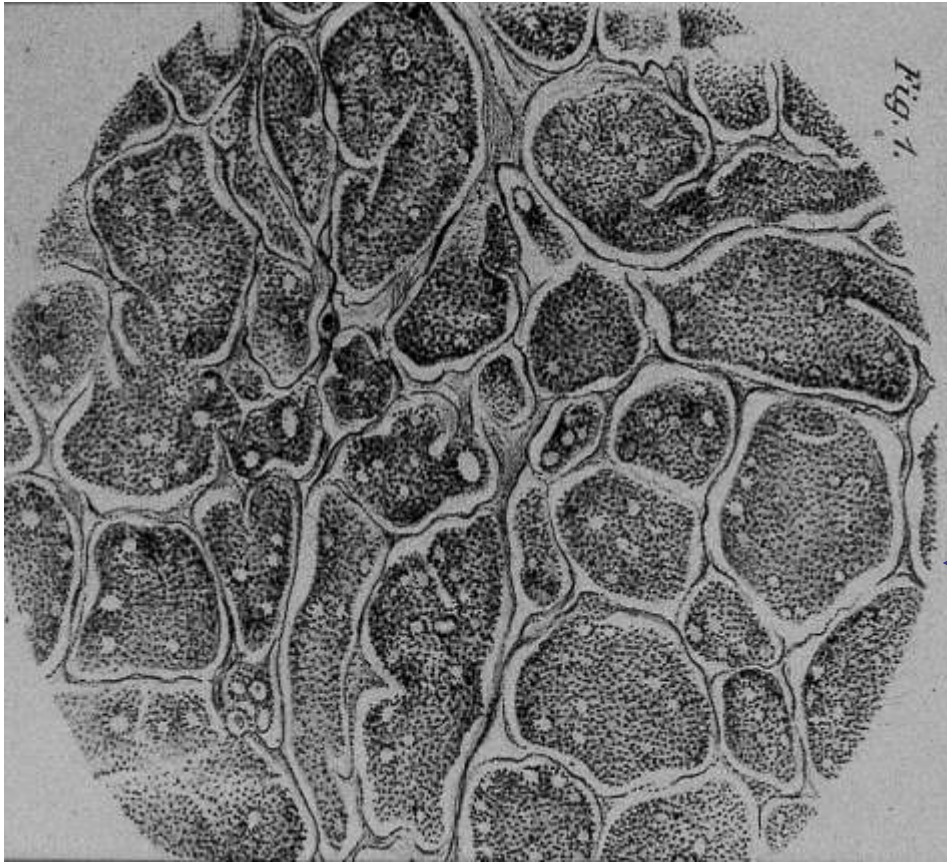


Chapter 10

Poorly Differentiated Thyroid Carcinoma

Massimo Bongiovanni and William C. Faquin





TIROIDES: CARCINOMA INSULAR

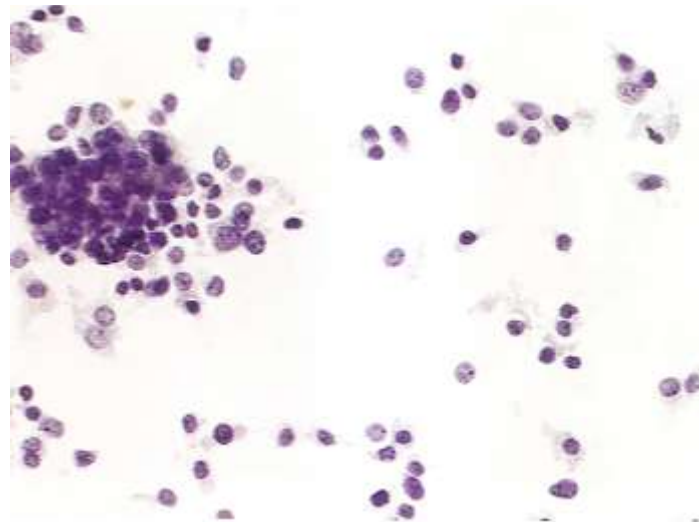
← **1907
LANGERHANS**

PA 18 4 2004

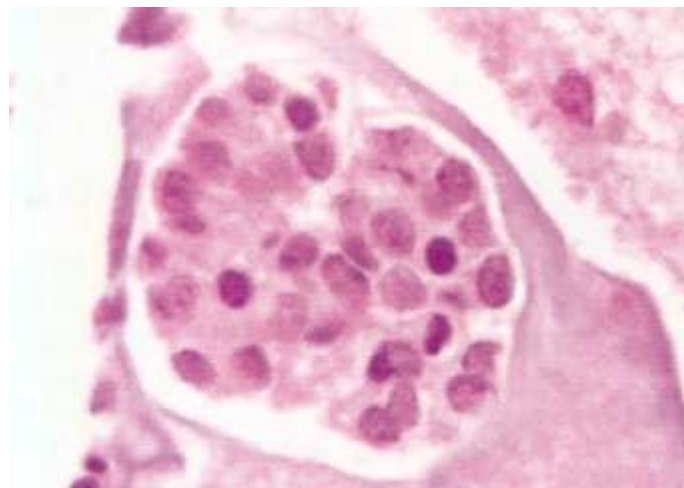
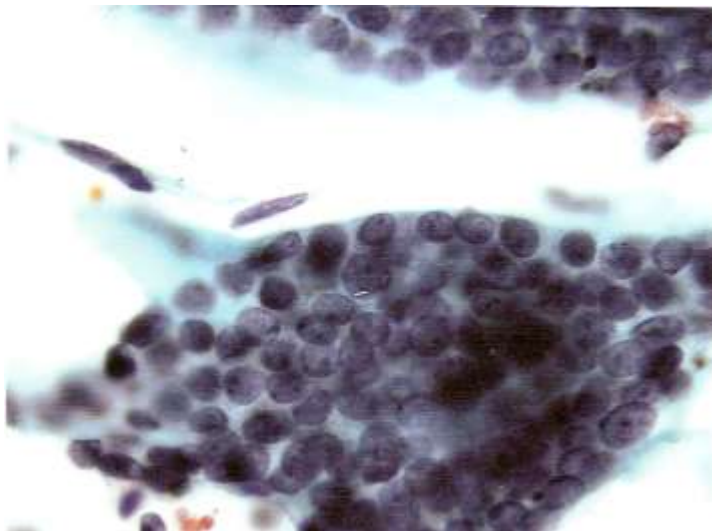
**LANGERHANS T. UBER DIE EPITHELIALEN FORMEN DER
MALIGNENT STRUMA. VIRCHOWS ARCH (A) 1907 189 69-188**

**CARCANGIU M L, ZAMPI G, ROSAI L. POORLY
DIFFERENTIATED (“INSULAR”) THYROID CARCINOMA.
AM J SURG 1984 8 655-668**

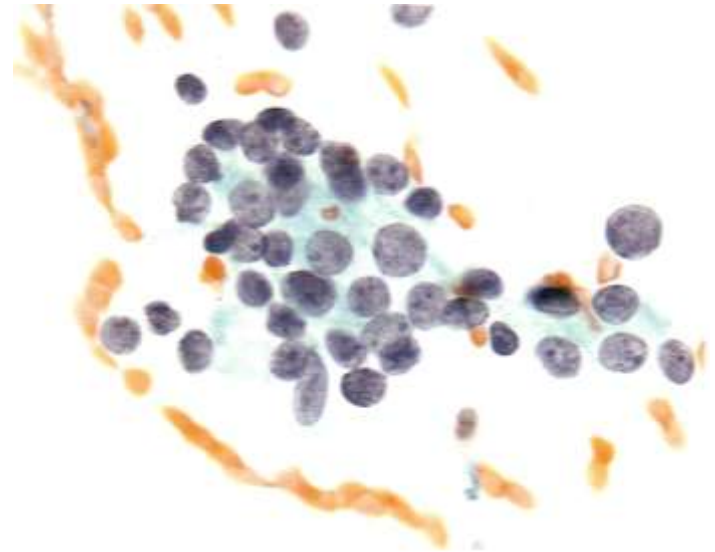
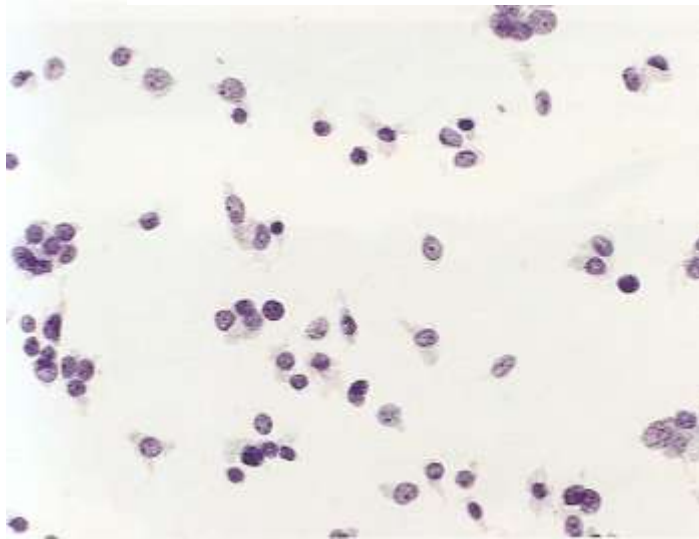
CARCINOMA POBREMENTE DIFERENCIADO



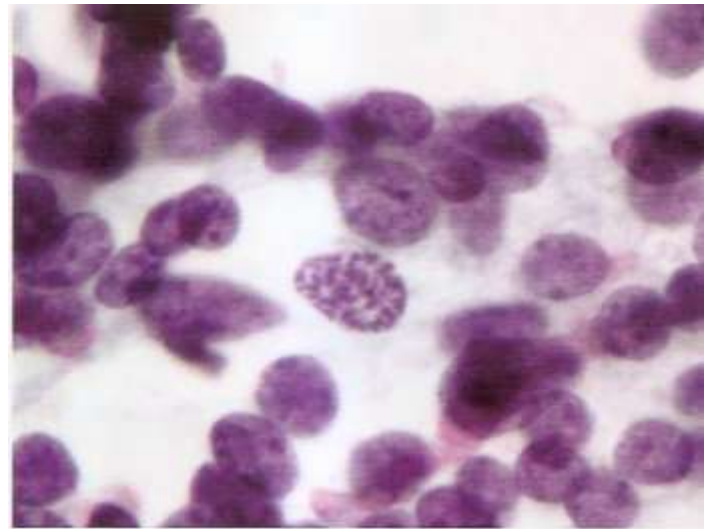
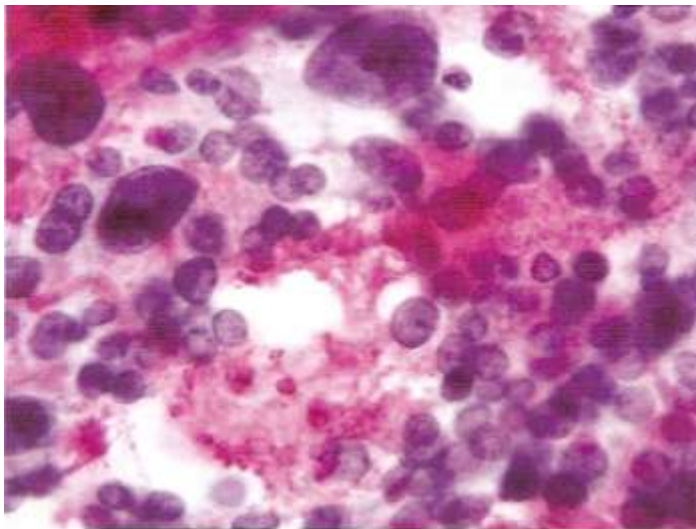
VARIANTE INSULAR



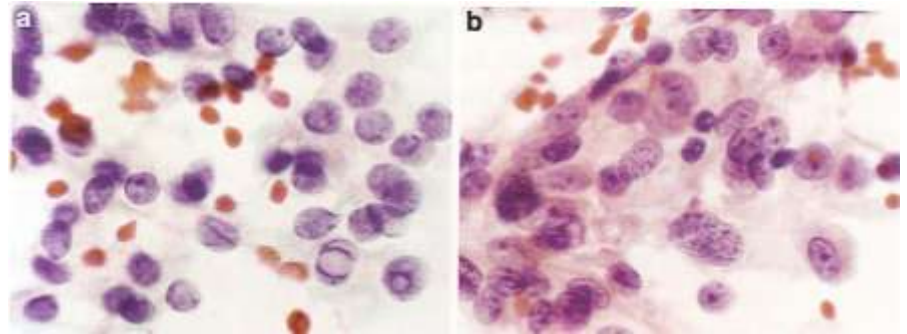
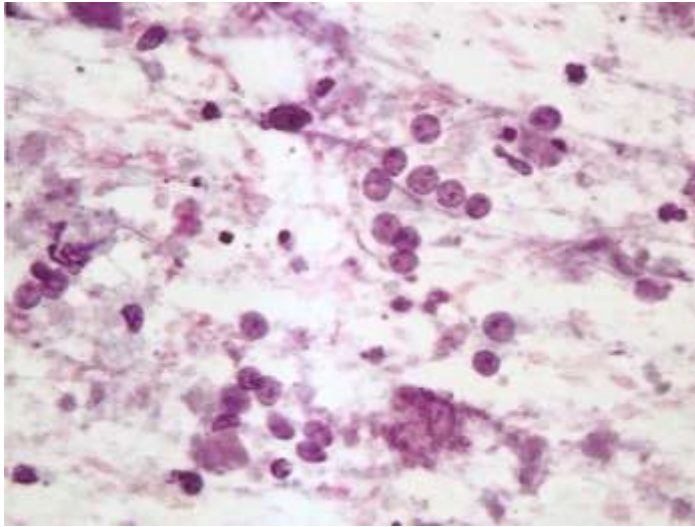
CARCINOMA POBREMENTE DIFERENCIADO



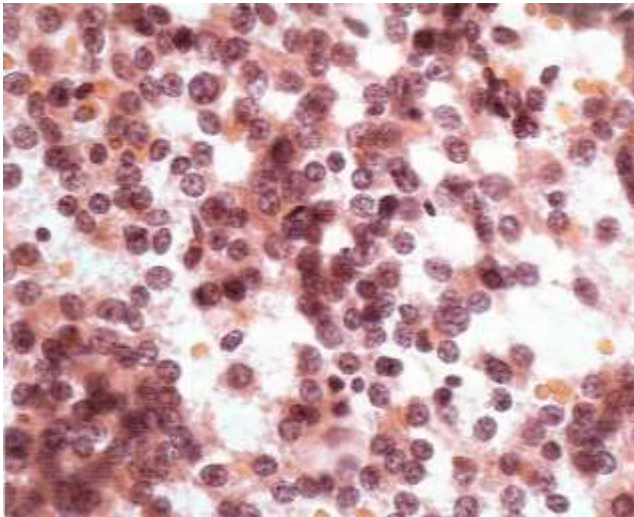
VARIANTE NO INSULAR



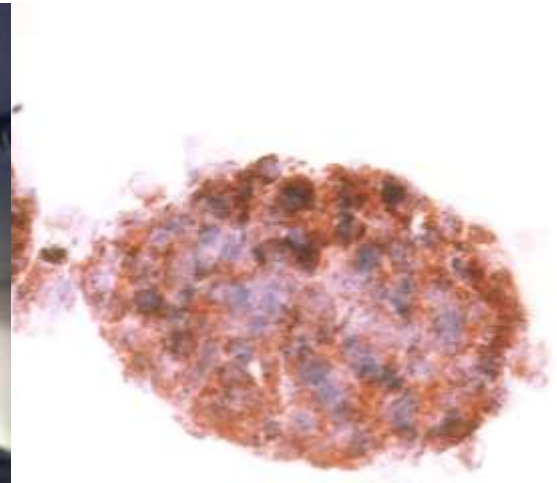
CARCINOMA POBREMENTE DIFERENCIADO



PAPILAR-LIKE



MEDULAR-LIKE



TIROGLOBULINA

Chapter 11

Undifferentiated (Anaplastic) Carcinoma and Squamous Cell Carcinoma of the Thyroid

Gregg A. Staerkel, Britt-Marie E. Ljung,
Vinod Shidham, William J. Frable, and Juan Rosai



CARCINOMA ANAPLASICO DE TIROIDES

PAAF

EFICACIA 78-90%

LA CANTIDAD DEPENDE DE LA FIBROSIS. PLEOMORFISMO

1. CELULAS FUSIFORMES.
2. C. GIGANTES
3. C. EPIDERMOIDES.

EXO DO. LEUCOFAGOCITOSIS
M.E : EPITELIAL

+CCK↓
+VIM. AVECES
+EMA
+CEA-ESCAP.
2 TIROGL.
+LISCEIMA : CG-MUD.

RARO : METAPLASIA OSEA O CARTILAGINOSA.



DIAGNOSTICO DIFERENCIAL

1. PROCESOS BENIGNOS

T. GRANULACION. GRANULOMAS
TTO Ist - RIEDEL .C. POLICULA
DEGENERADAS.

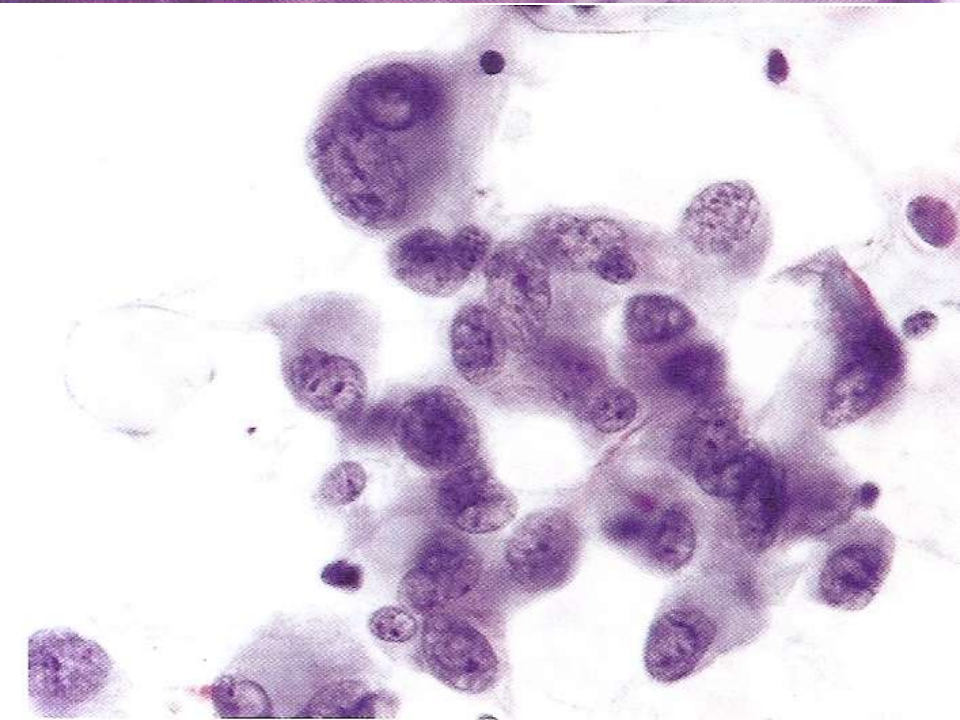
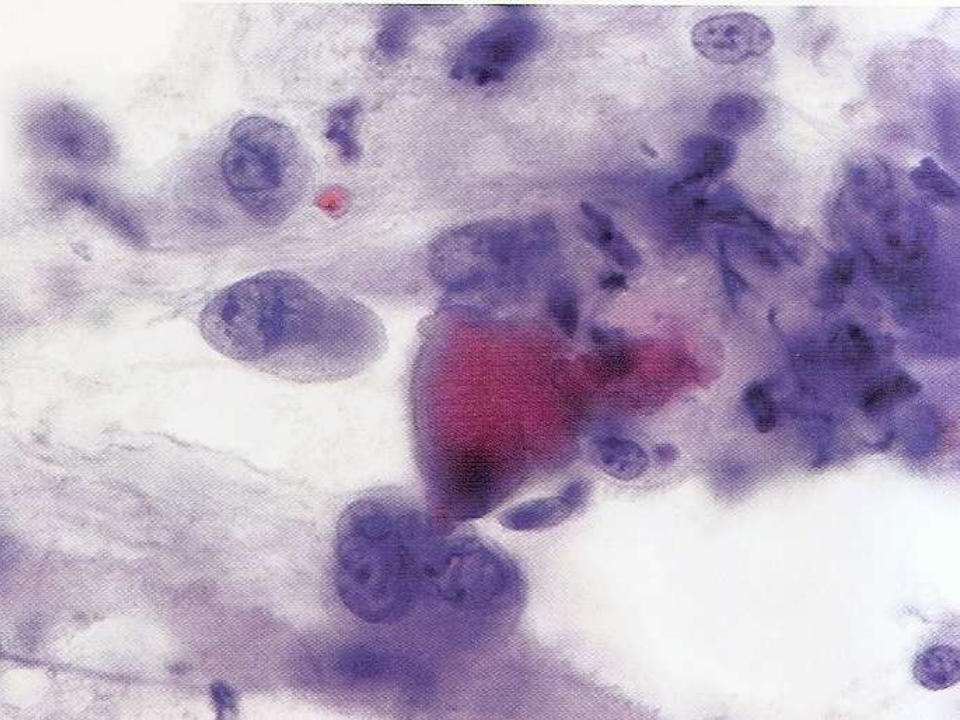
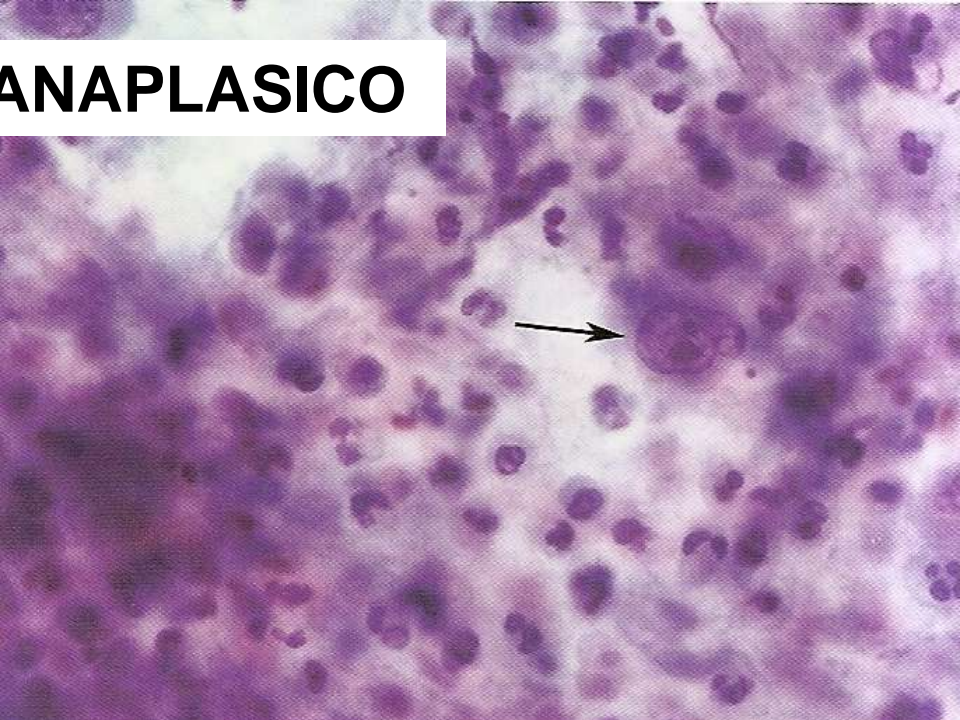
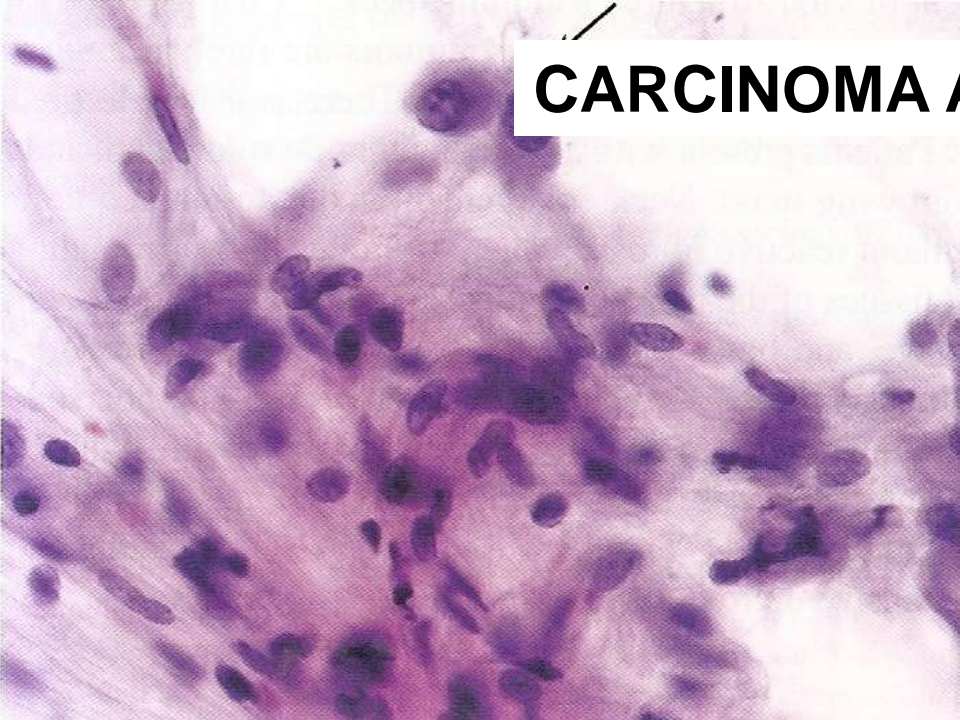
2. PROCESOS MALIGNOS

CA. MEDULAR. HEMANGIOENDOTELIOMA
(ALPES). LINFOMA. F.M.M.
METASTASIS.

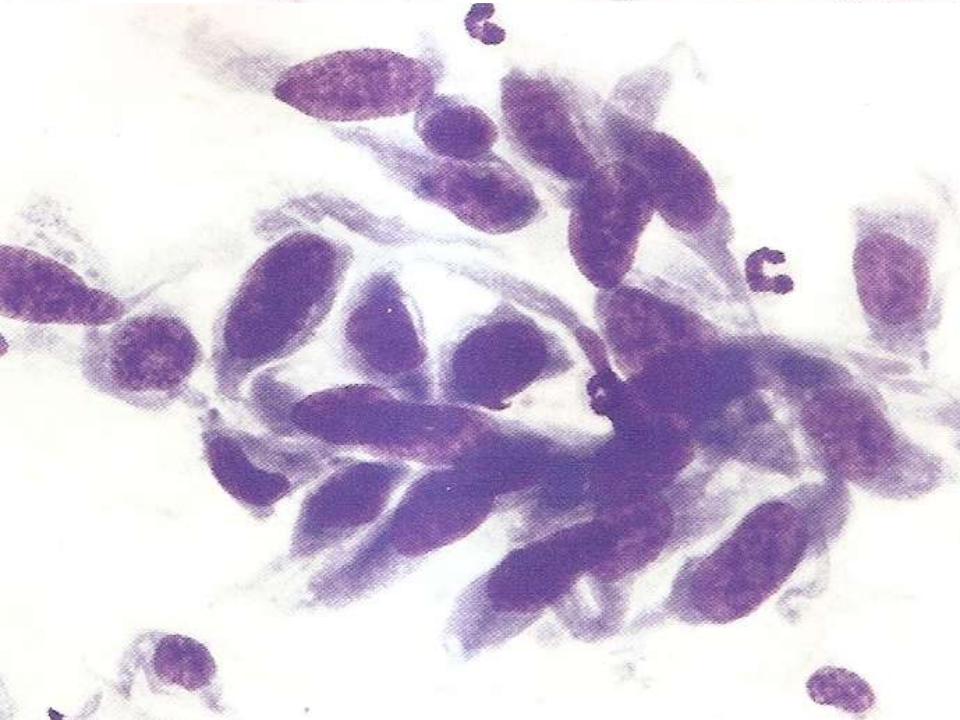
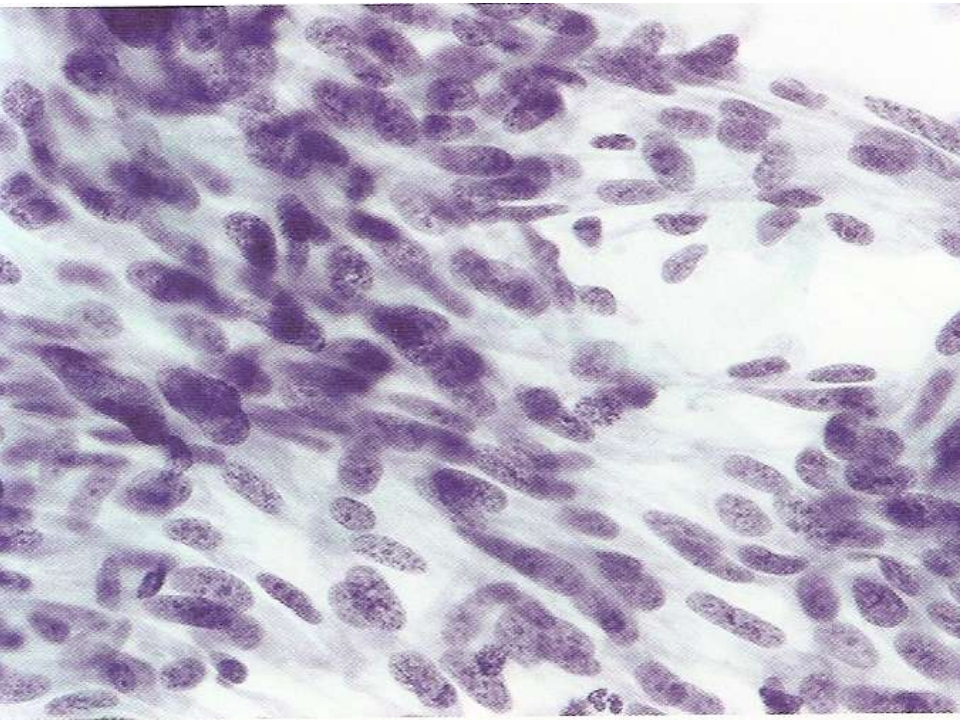
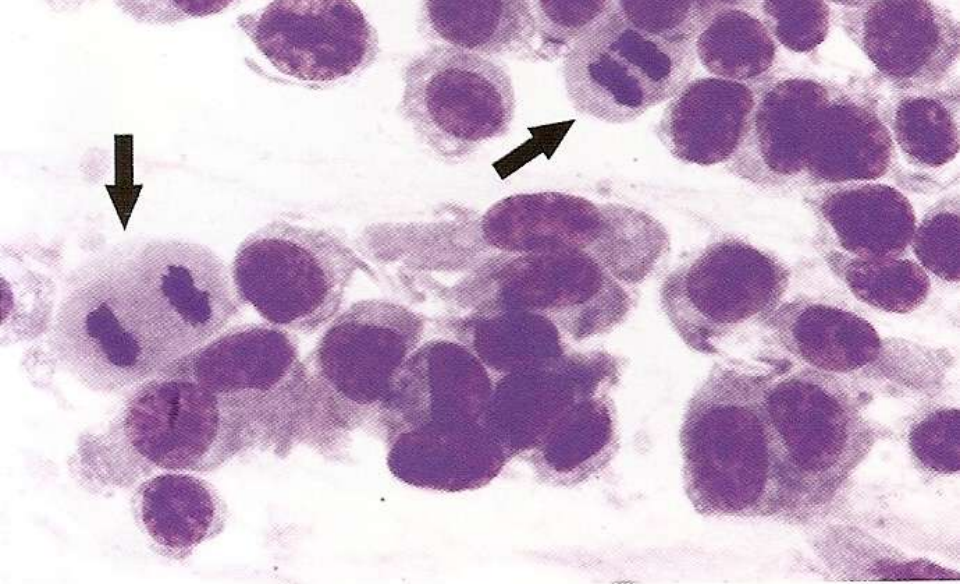
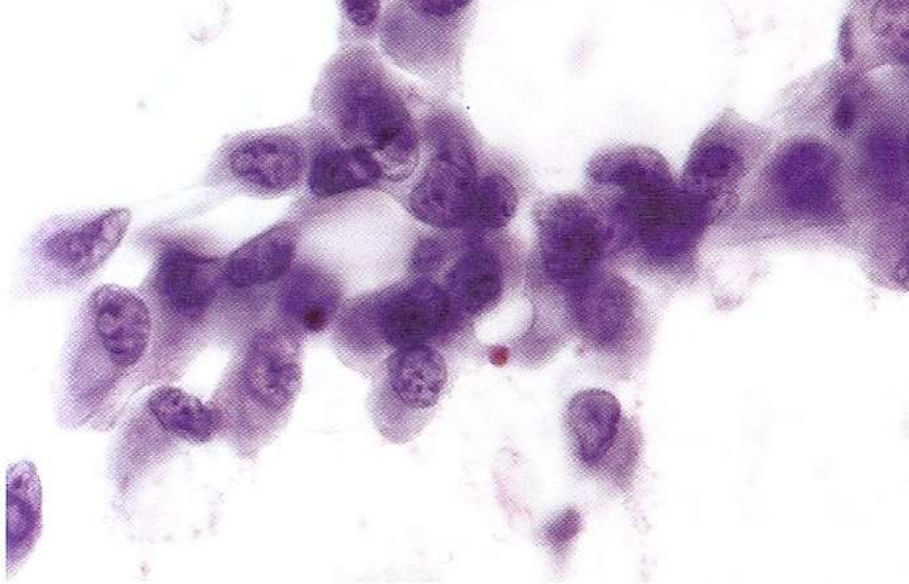
2018-99



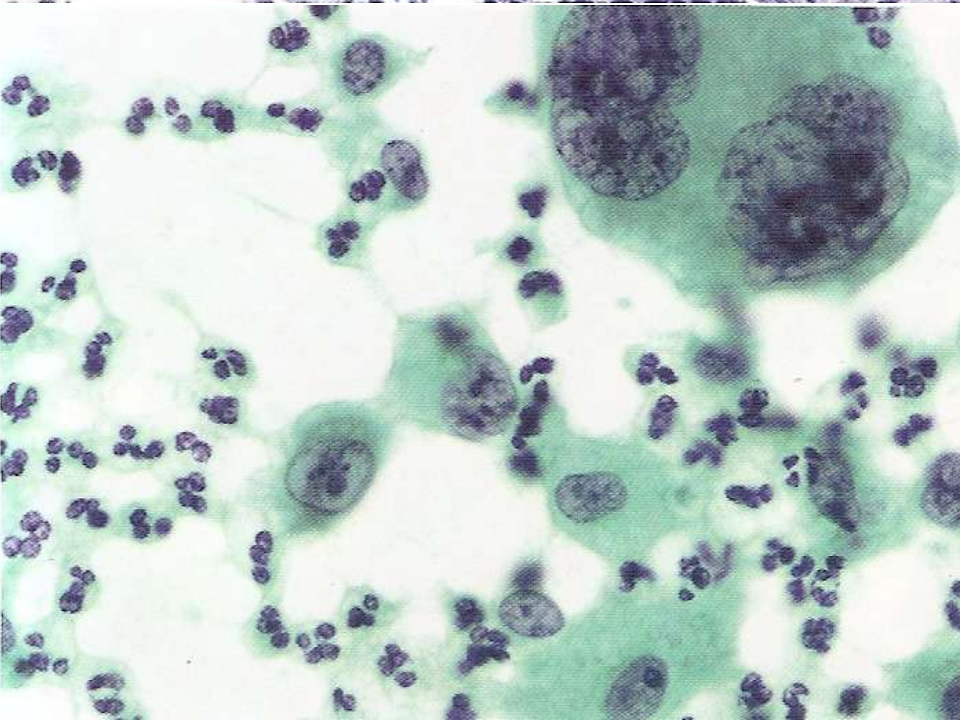
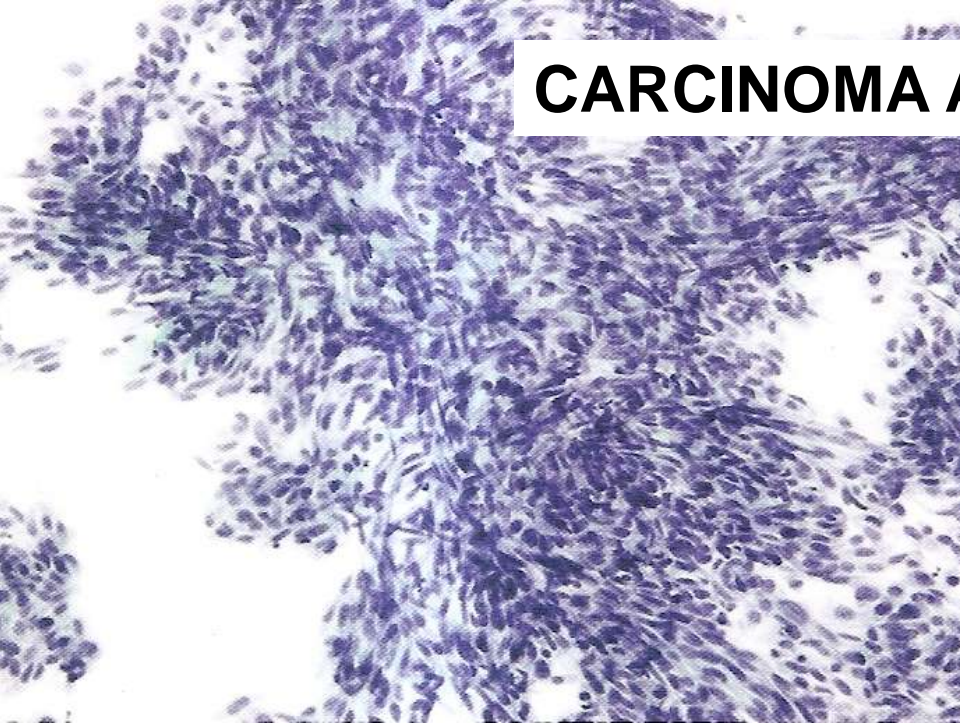
CARCINOMA ANAPLASICO



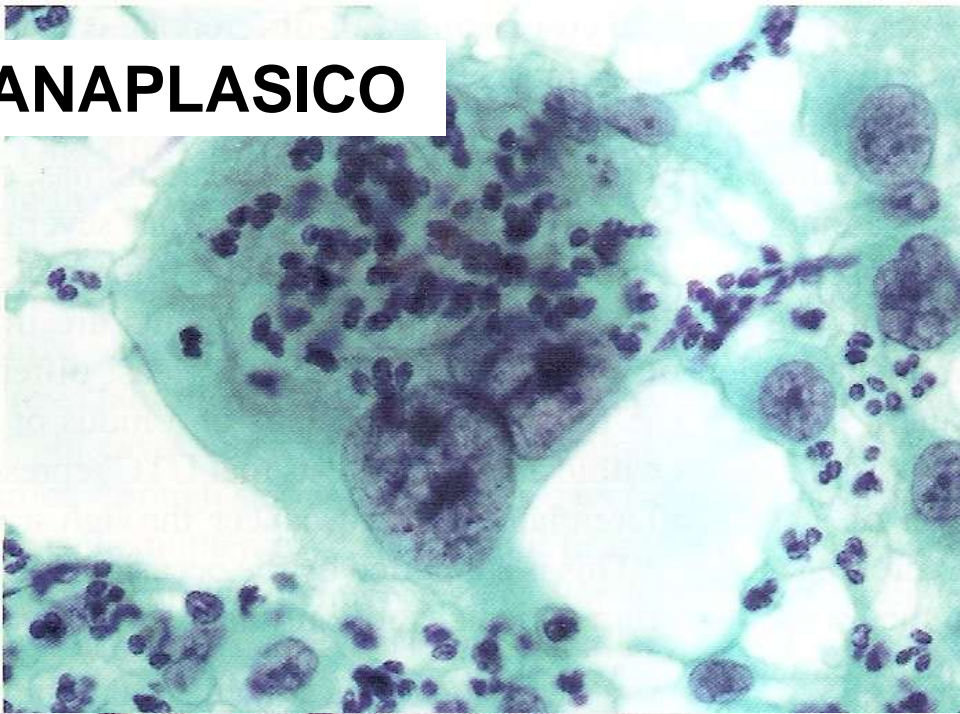
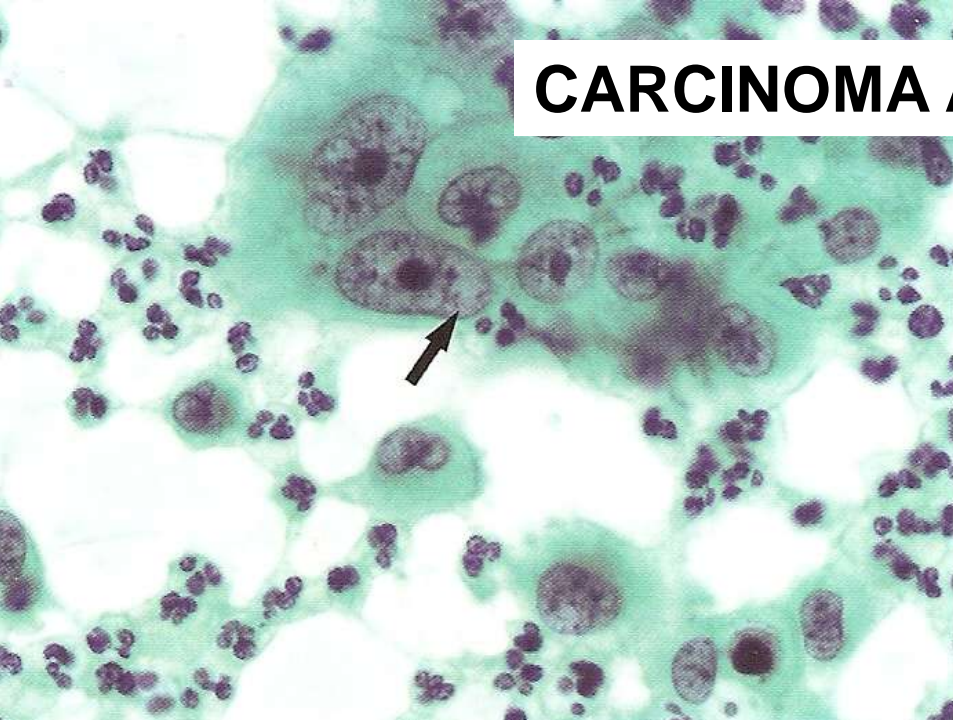
CARCINOMA ANAPLASICO



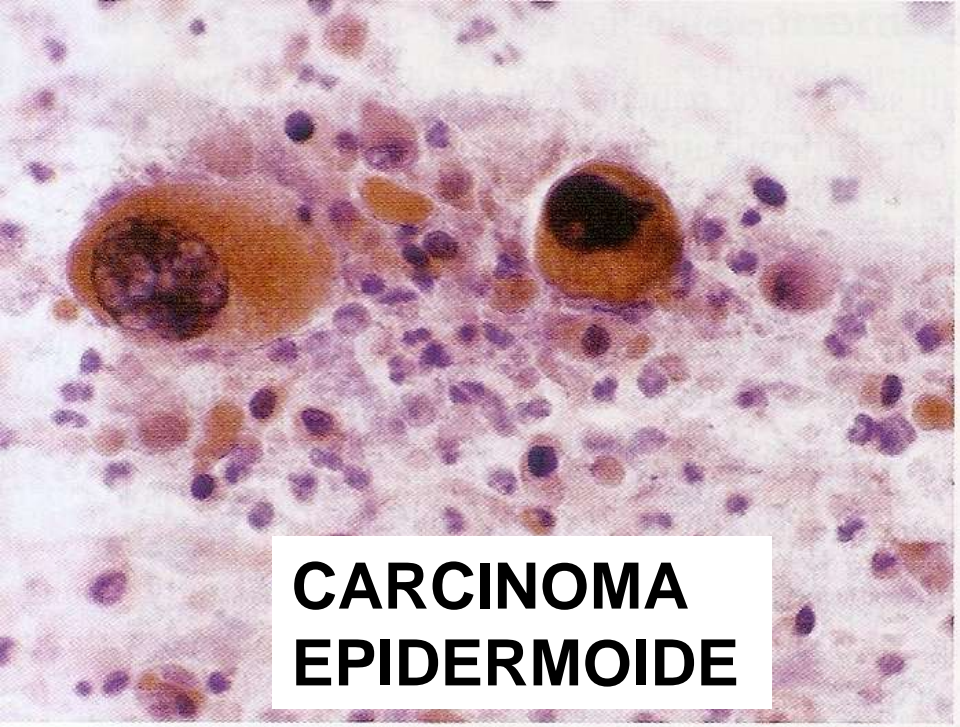
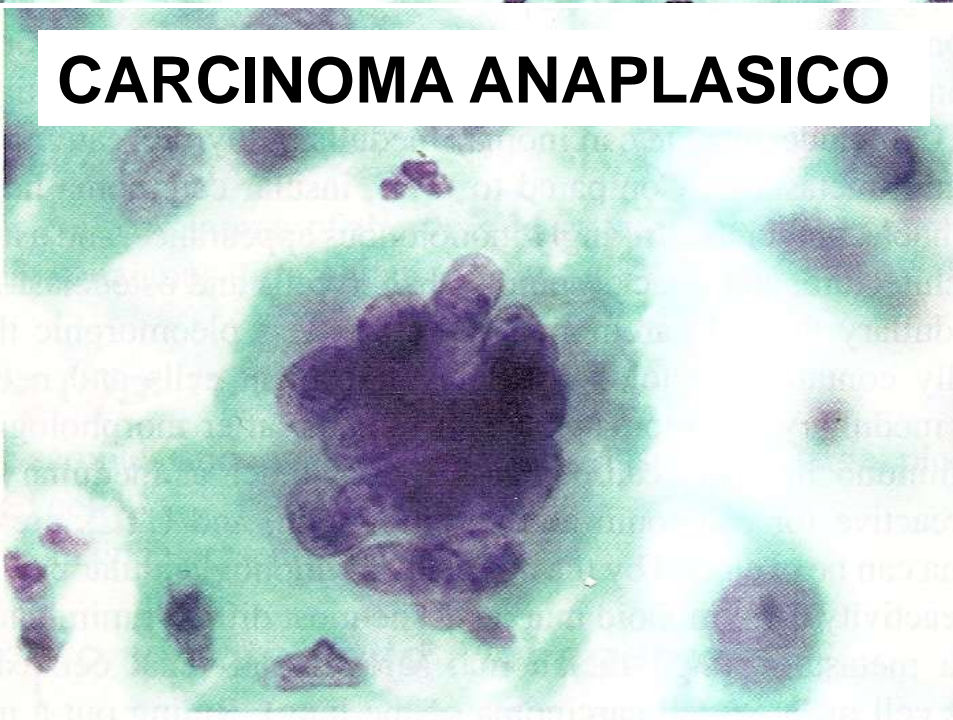
CARCINOMA ANAPLASICO



CARCINOMA ANAPLASICO



CARCINOMA ANAPLASICO



**CARCINOMA
EPIDERMIOIDE**

Chapter 12

Metastatic Tumors and Lymphomas

Lester J. Layfield, Jerry Waisman, and Kristen A. Atkins

TIROIDES: METASTASIS



SON EL 0,8% DE LAS PAAFS

**ORIGENES: RIÑÓN,
COLORECTAL,
PULMON, MAMA,
MELANOMA,
LINFOMA,
CARCINOMA DE
CUELLO Y CABEZA**

PAAF DE METASTASIS

HIPERCELULARIDAD

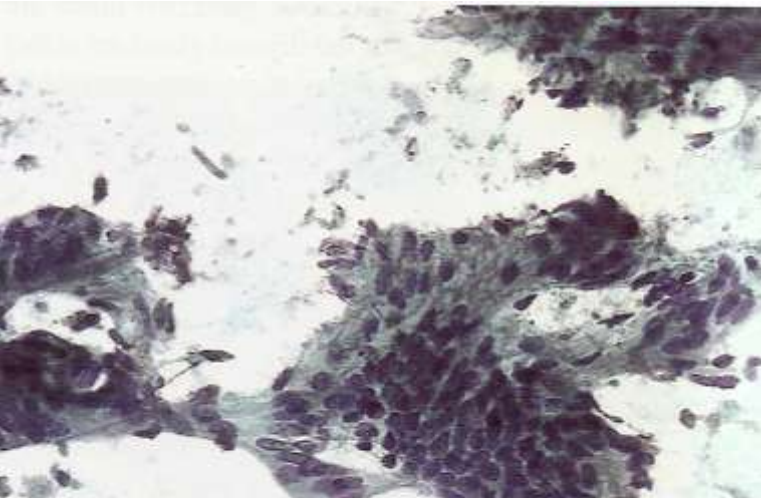
NUCLEOS MALIGNOS

NECROSIS

MEZCLA DE MACROFOLICULOS Y CELULAS MALIGNAS

-TIROGLOBULINA

-HISTORIA DE MALIGNIDAD EXTRATIROIDEA



METASTASIS DE CA DE COLON

DIAGNOSTICO DIFERENCIAL

CARCINOMA MEDULAR

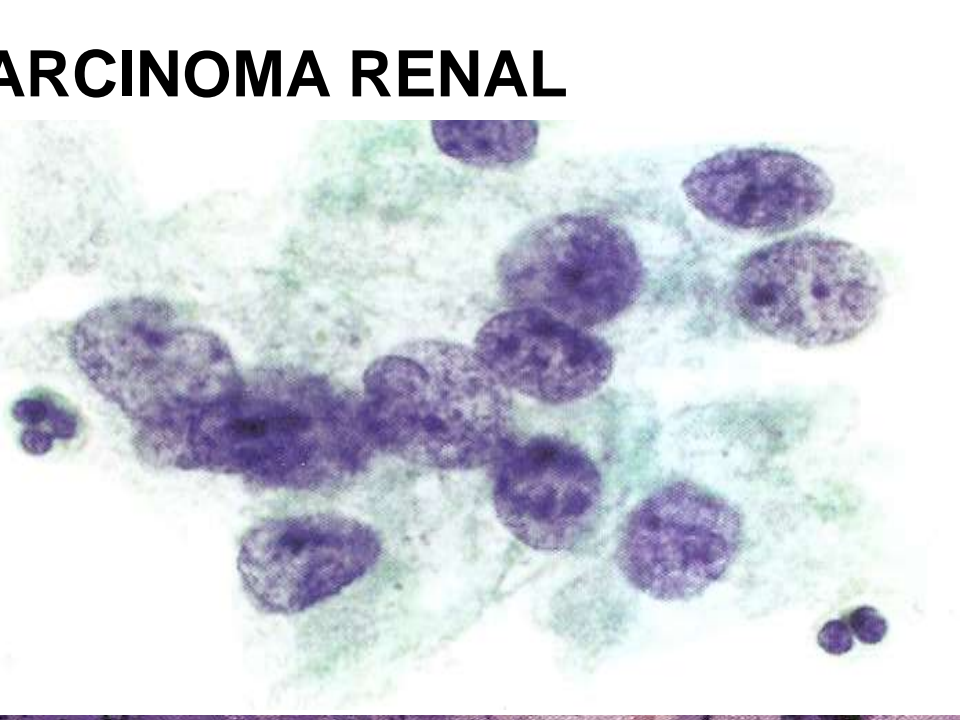
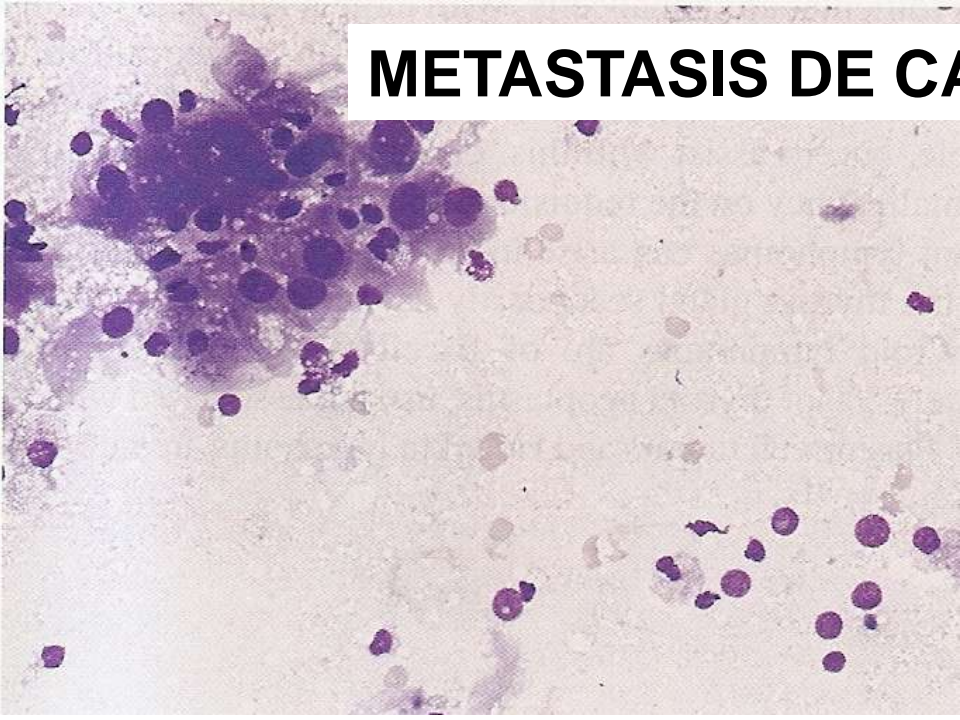
CARCINOMA EPIDERMOIDE

MELANOMA

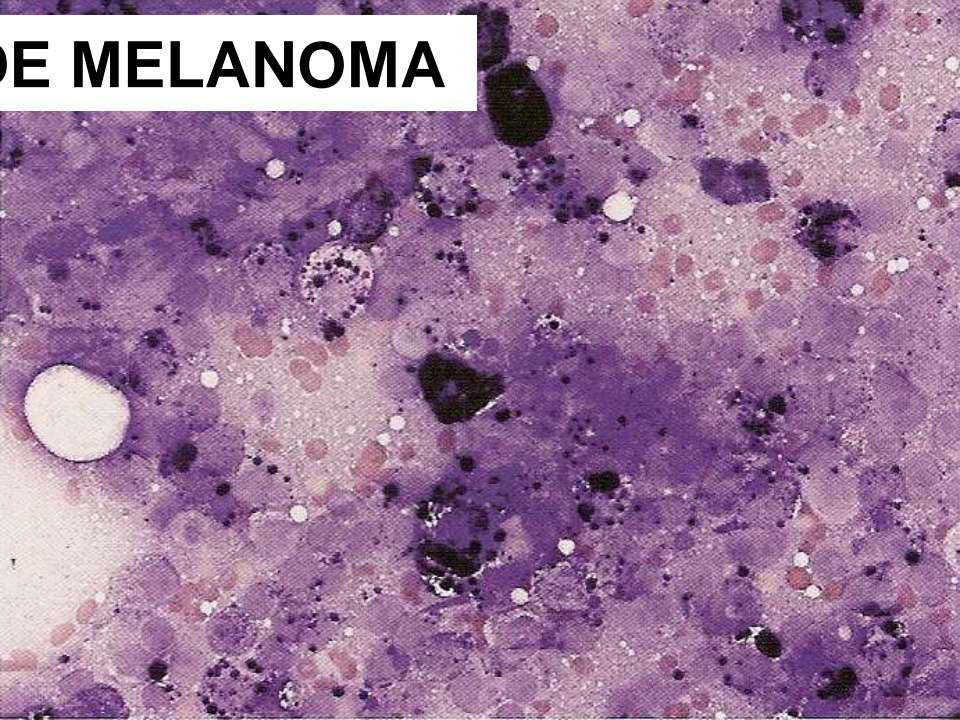
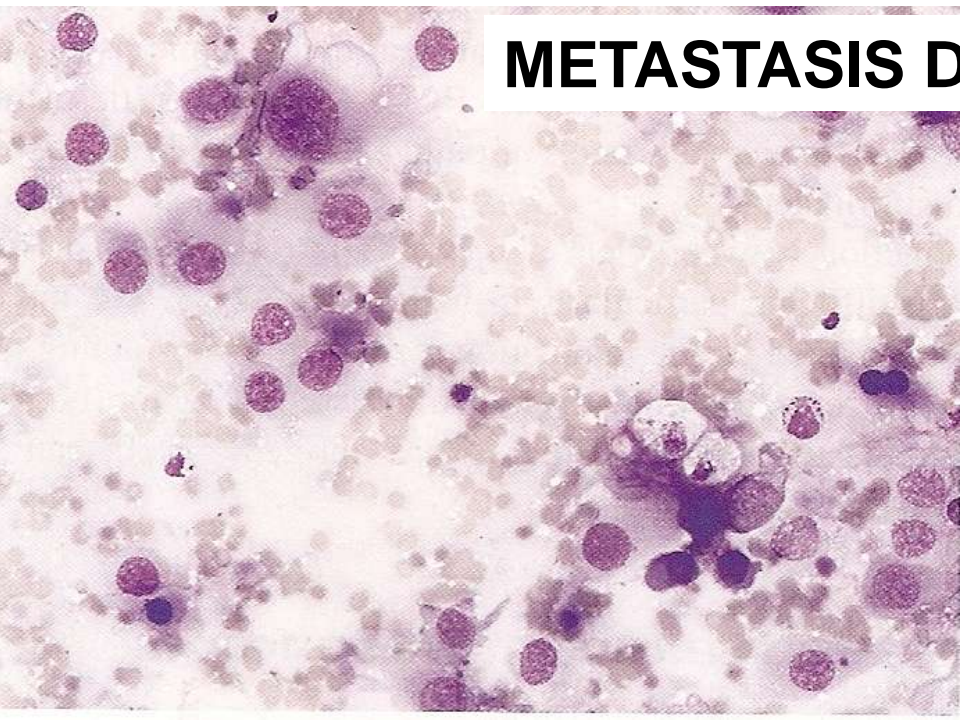
LINFOMA

IODO 131

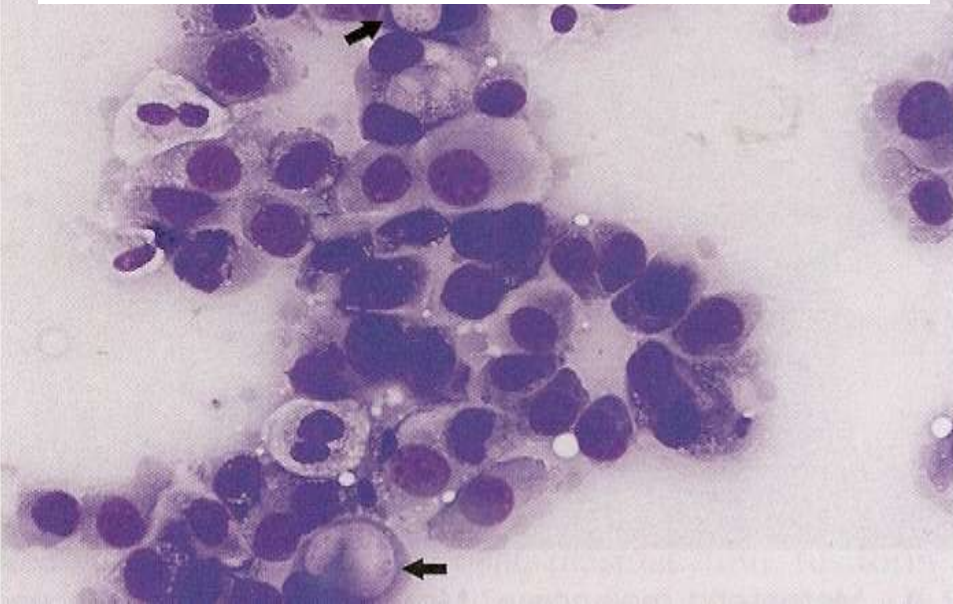
METASTASIS DE CARCINOMA RENAL



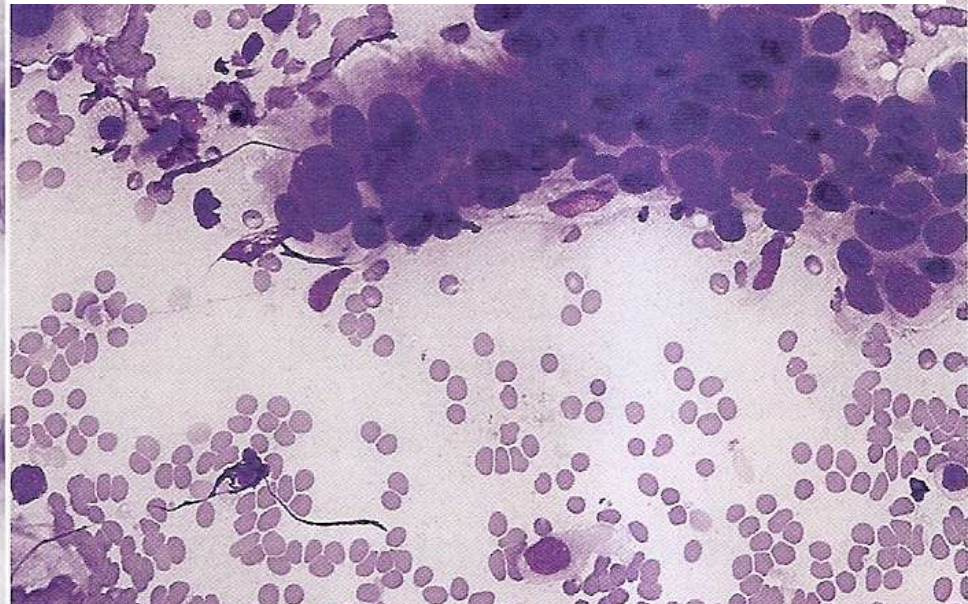
METASTASIS DE MELANOMA



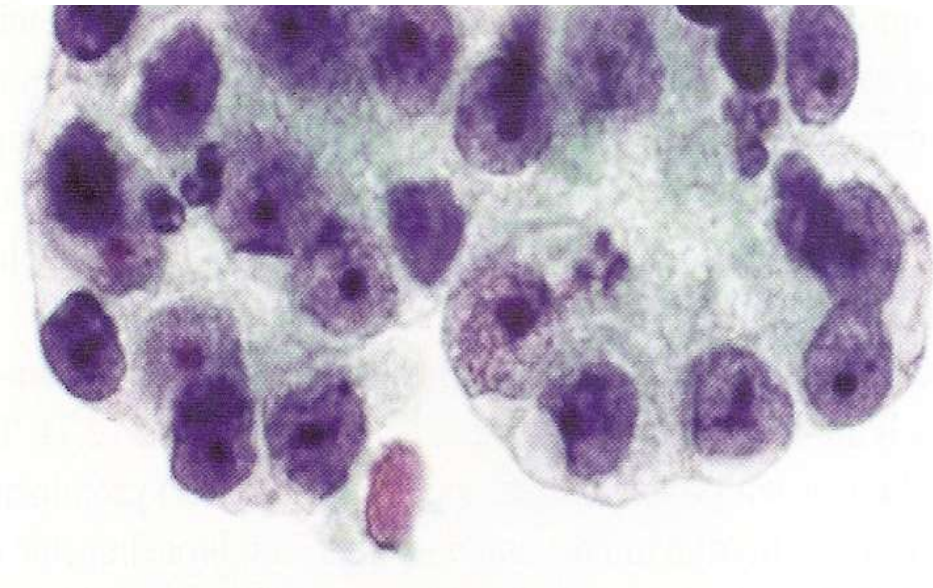
METASTASIS DE CARCINOMA DE MAMA



METASTASIS DE CARCINOMA DE PULMON



METASTASIS DE CARCINOMA DE PULMON



METASTASIS DE CARCINOMA GASTRICO



TIROIDES: LINFOMA PRIMARIO

1-5% DE TODAS LAS MALIGNIDADES DE TIROIDES

MUJERES EN 6ª DECADA

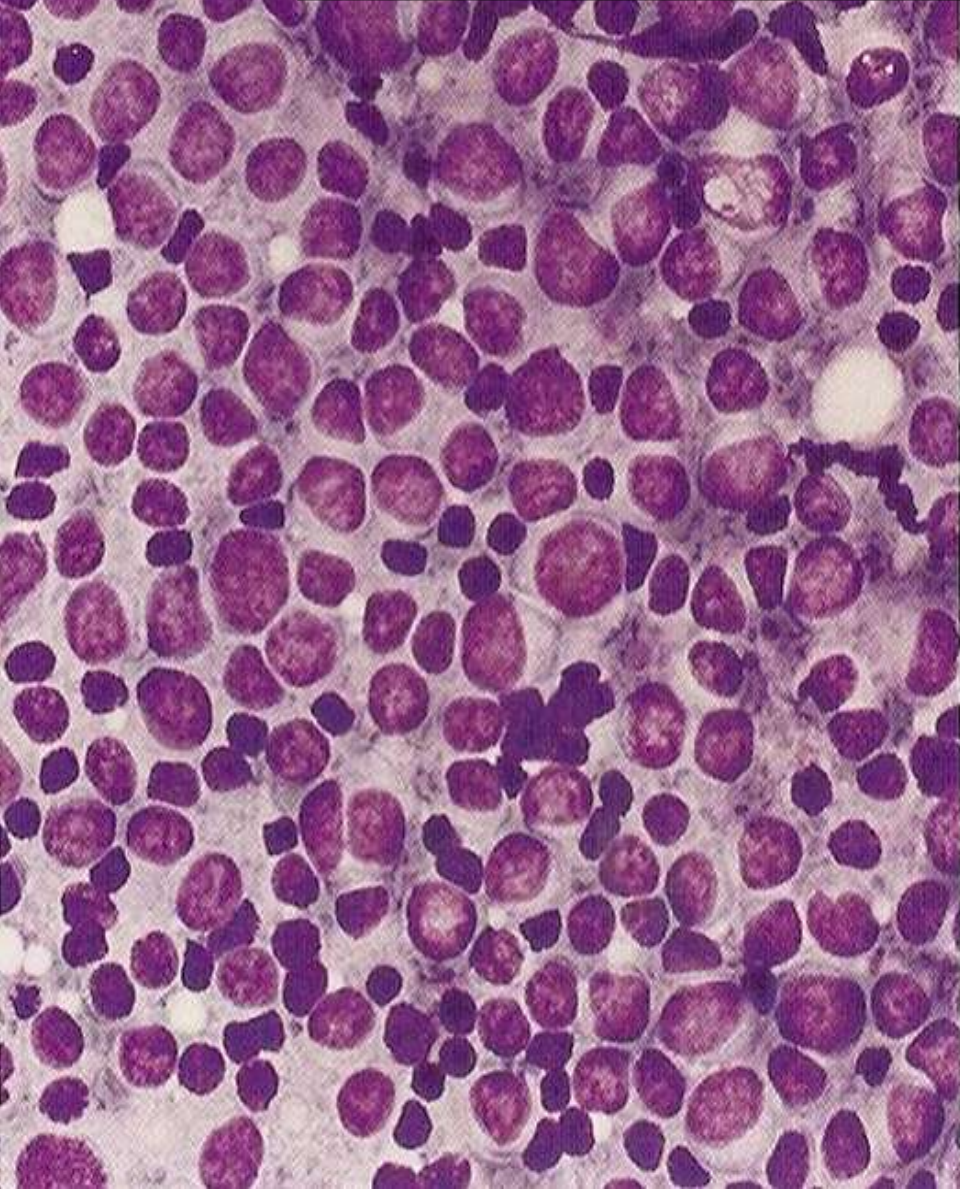
HISTORIA DE HASHIMOTO

MASA FIRME Y DIFUSA

CRECIMIENTO RAPIDO

**LA MAYORIA SON LINFOMAS B: 1/3 DIFUSO DE
CELULAS GRANDES, 1/3 MALT Y 1/3 MIXTO
RARA VEZ LINFOMAS T, MIELOMA O HODGKIN**

TIROIDES: LINFOMA B DIFUSO DE CELULAS GRANDES



MARCADA CELULARIDAD

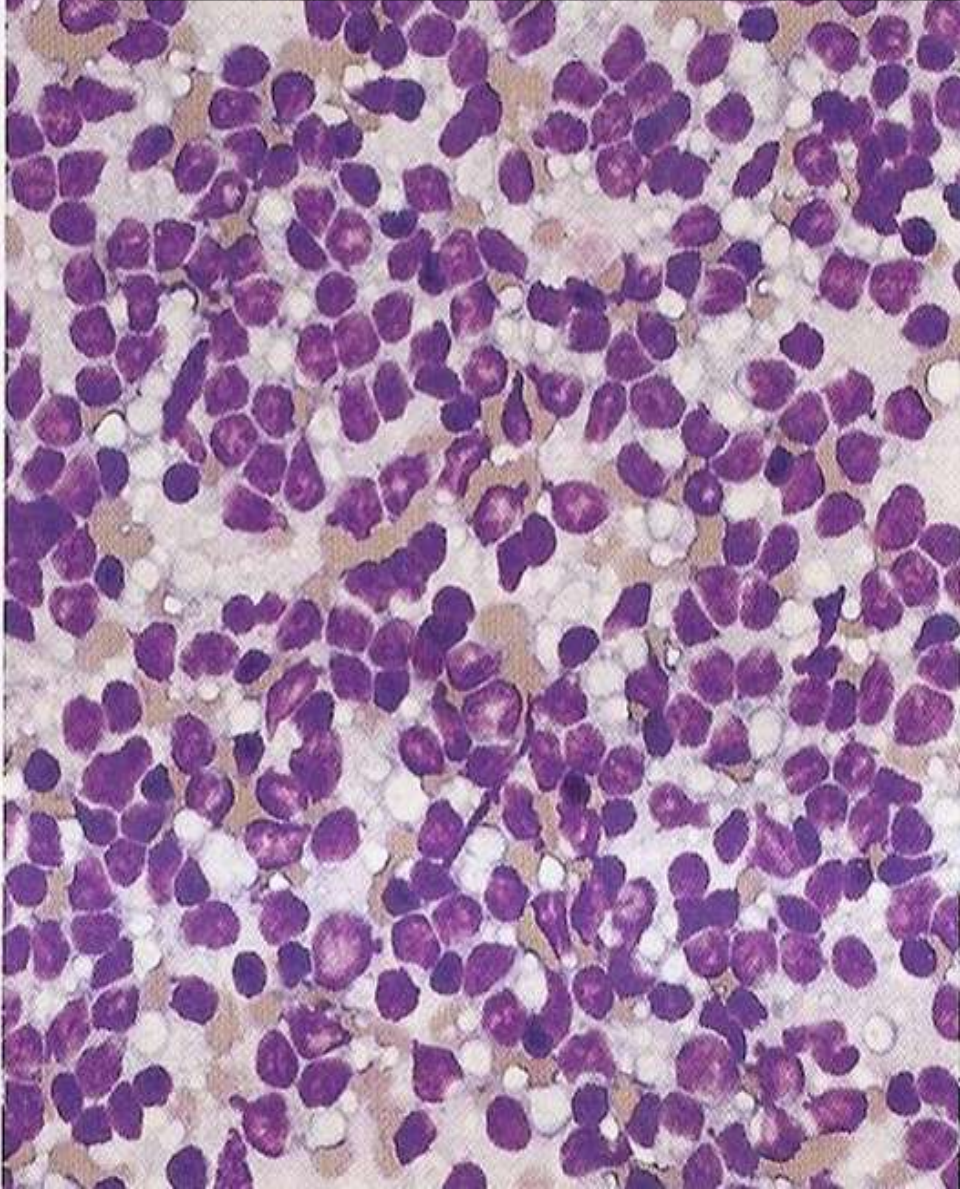
**CELULAS SUELTAS
GRANDES ATIPICAS E
INMADURAS DE HABITO
LINFOIDE**

**AUSENCIA DE CELULAS
FOLICULARES**

**RESTRICCIÓN
MONOTÍPICA DE CADENAS
LIGERAS**

**CD20+, CD45+, CD5-,
CD10+/-**

TIROIDES: LINFOMA MALT (EXTRANODAL DE LA ZONA MARGINAL)



PARECE UN GANGLIO REACTIVO

**LINFOCITOS PEQUEÑOS Y
MEDIANOS**

APARIENCIA MONOCITOIDE

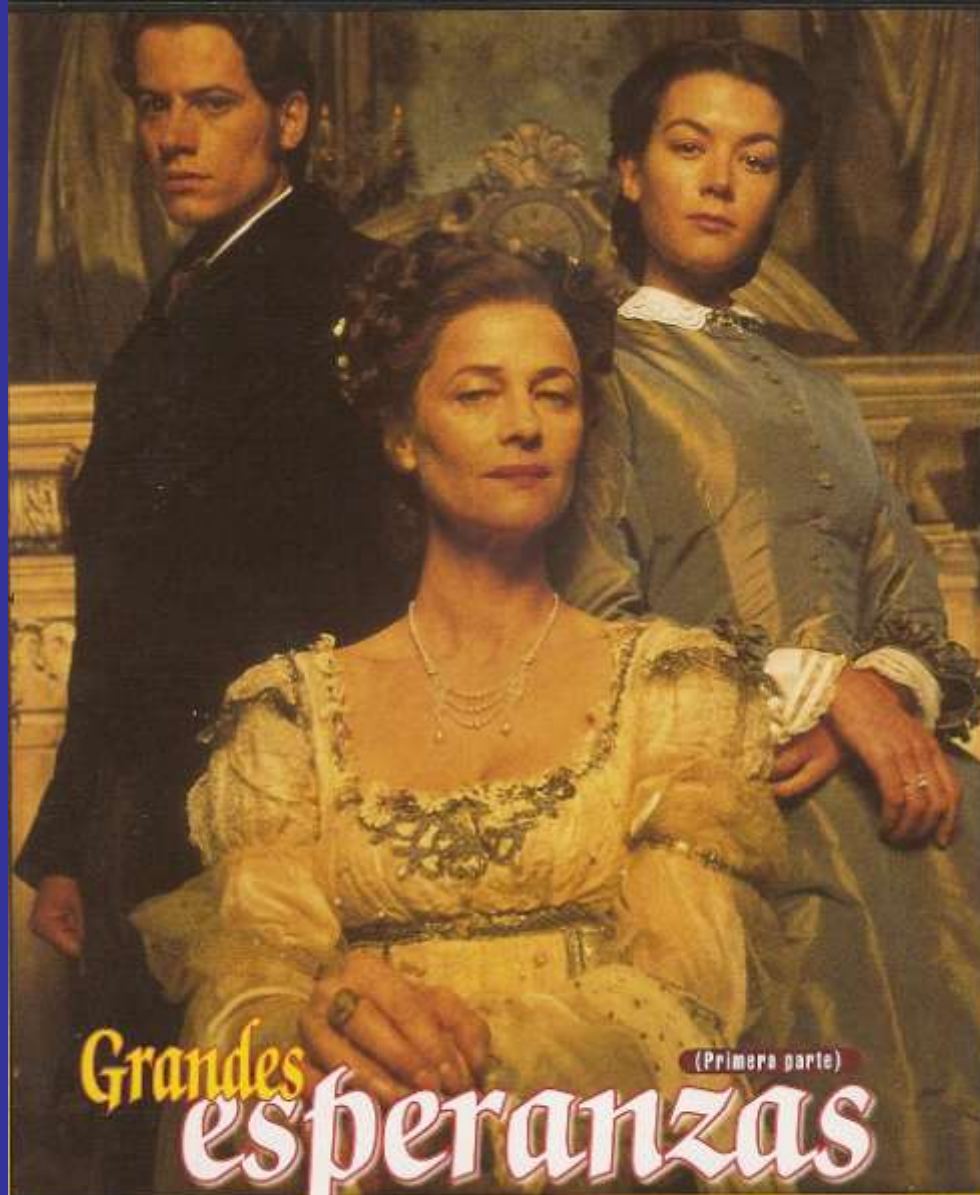
**AISLADAS PLASMATICAS Y E
INMUNOBLASTOS**

**AGREGADOS
LINFOHISTIOCITARIOS**

**RESTRICCION MONOTIPICA DE
CADENAS LIGERAS**

CD20+, CD45+, CD5-, CD10-, CD23-

**CICLINA D1- (EN BLOQUE Y PARA
DESCARTAR LINFOMA DEL
MANTO)**



Grandes
esperanzas (Primera parte)

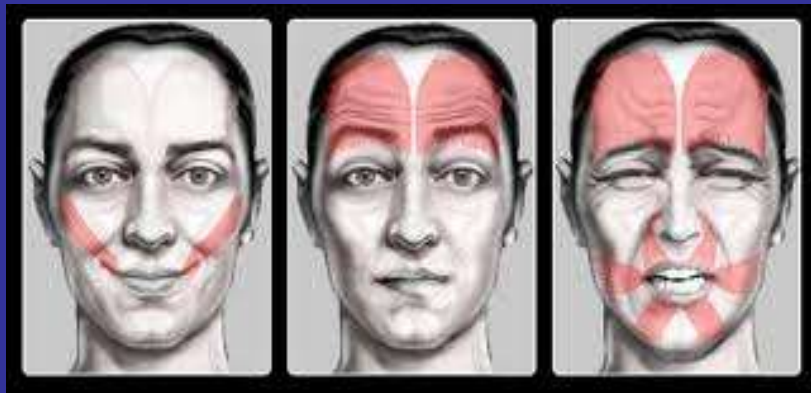
Basada en la obra de CHARLES DICKENS
Dirigida por JULIAN JARROLD
con CHARLOTTE RAMPLING,
IOAN GRUFFUDD y JUSTINE WADDELL

Con el patrocinio de

Telefónica

DESPUES DE BETHESDA

SEGUIDORES



DETRACTORES

INDIFERENTES





**THE BETHESDA THYROID TERMINOLOGY
AND PROGRESS TOWARDS
INTERNATIONAL AGREEMENTS ON
THYROID FNA CYTOLOGY REPORTING**

P. A. CROSSER D. POLLER

CYTOPATHOLOGY 21 2 71-74 2010

**THYROID FINE NEEDLE ASPIRATION
CYTOLOGY A REVIEW OF THE NATIONAL
CANCER INSTITUTE STATE OF THE
SCIENCE SYMPOSIUM**

L. J. LAYFIELD E. S. CIBAS Z. BALOCH

CYTOPATHOLOGY 21 2 75-85 2010

EDITORIAL

**THE BETHESDA THYROID TERMINOLOGY
AND PROGRESS TOWARDS
INTERNATIONAL AGREEMENT ON
THYROID FNA CYTOLOGY REPORTING**

PA CROSS AND D POLLER

CYTOPATHOLOGY 2010 21 71-74

DIAGNOSTIC TERMINOLOGY FOR REPORTING THYROID FINE NEEDLE ASPIRATION CYTOLOGY: EUROPEAN FEDERATION OF CYTOLOGY SOCIETIES THROID WORKING PARTY SYMPOSIUM, LISBON 2009

**G KOCJAN, B CLOCHAND-PRIOU, P P DE AGUSTIN, C BOURGAIN,
A CHANDRA, Y DANESHBOD, A DeERY, J DUSKOVA, C ERSOZ, G
FADDA, A FASSINA, P FIRAT, B JIMENEZ, P KARAKITSO, O KOPEREK,
N MATEA, DPOLLER, L THIENPONT, A RYSKA, U SCHENK, T SAUER,
FSCHMITT, E TANI, T TOIVONEN, M TÖTSCH, G TROCONE, L VASS
AND P VIEHL**

CYTOPATHOLOGY 2010 21 86-92

EDITORIAL

BETHESDA AND BEYOND

EDMUND CIBAS

CANCER CYTOPATHOLOGY 2010 184-185

**FINE-NEEDLE ASPIRATION OF FOLLICULAR
PATTERNED LESIONS OF THE THYROID:
DIAGNOSIS, MANAGEMENT AND FOLLOW-UP
ACCORDING TO NATIONAL CANCER INSTITUTE
(NCI) RECOMMENDATIONS**

**W C FAQUIN AND ZUBAIR W BALOCH
DIAGN CYTOPATHOL 2010 38 731-739**

SHOULD “ATYPICAL FOLLICULAR CELL” IN THYROID FINE-NEEDLE ASPIRATES BE SUBCLASIFIED?

ANDREW RENSHAW

CANCER CYTOPATHOLOGY 2010 118186-9

IMPROVING THE DIAGNOSTIC ACCURACY OF THYROID FOLLICULAR NEOPLASMS: CYTOLOGICAL FEATURES IN FINE-NEEDLE ASPIRATION CYTOLOGY

**JUNKO MARUTA, HIRONOBU
HASHIMOTO, YURI SUEHISA, HIROTO
YAMAMISHA, SHIRO, NOGUCHI,
YATSUKI ARATAKE, EIJI OHNO, AND
TADAO K KOBAYASHI**

CANCER CYTOPATHOLOGY 2011 39 28-34

THYROID CYTOPATHOLOGY: BETHESDA AND BEYOND

SYZED Z ALI



ACTA CYTOLOGICA 2011 55 4-12



CONTINUARA.....



CONTINUARA.....

Zzzz





[Signature] 4.3.08



**Y ESTO ES
TODO.....**

**DE
MOMENTO**

**MUCHAS
GRACIAS**



