Lesiones proliferativas benignas
Problemas de diagnóstico diferencial

José Antonio López García-Asenjo

Zona gris de la citología mamaria

Material escaso, inadecuado, no representativo

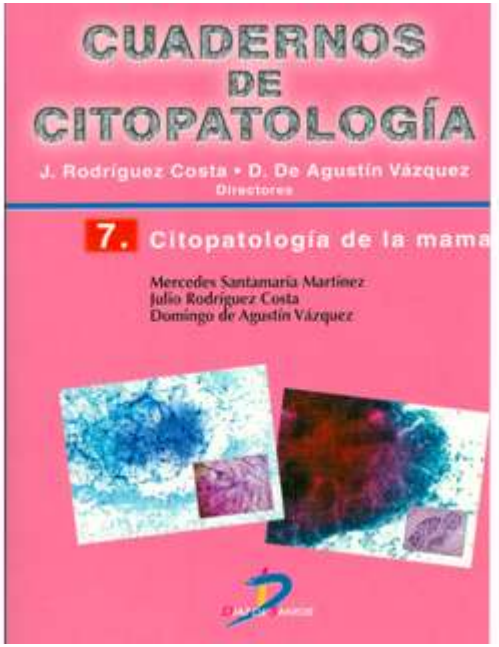
Mala interpretación del material obtenido

Lesiones de difícil interpretación

Acta Cytol. 1994 Nov-Dec;38(6):898-908.
The spectrum of the "gray zone" in breast cytology. A review of 186 cases of atypical and suspicious cytology. al-Kaisi N.

Zona gris de la citología mamaria

- **Lesiones de difícil interpretación en cuanto a su benignidad-malignidad.**
- **Lesiones en las que se corre el riesgo de hacer un sobrediagnóstico o un infradiagnóstico.**



Zona gris de la citología mamaria

Autores	Sospecha Nº de casos	Biopsia benigna Nº de casos
Mulford et al (1994)	86	77 (11.6%)
Al-Kaisi (1994)	95	27 (28,5%)
Wang et al (1996)	41	3 (7%)
Kim et al (2000)	13	3 (23%)
Özakara et al (2002)	35	7 (20%)
Kanhoush et al (2004)	162	27 (17%)

Mercedes Santamaría Martínez*, Pedro de Llano Varela *, María Asunción Arrechea Irigoyen**

“Atipia” en la citología de mama

The Significance of the Diagnosis of Atypia in Breast Fine-Needle Aspiration

Jennifer C. Lim, M.D.,[1] Hytham Al-Masri, M.D.,[1] Alia Salhadar, M.D.,[1] H. Bill Xie, M.D., Ph.D.,[3] Sheryl Gabram, M.D.,[2] and Eva M. Wojcik, M.D.[1]*

Diagn. Cytopathol. 2004;31:285–288.

Table II. Statistical Analysis of Cytological Criteria Differentiating Malignant From Benign Outcome

Cytological feature	*P* value
Cellularity	$P > 0.534$
Nuclear enlargement	$P > 0.096$
Dyscohesion	$P > 0.264$
Nucleoli	$P > 0.625$
Pleomorphism	$P > 0.224$
Nuclear crowding	$P > 0.483$
Myoepithelial cells	$P > 0.537$
Round spaces	$P > 0.400$

- 1,568 breast FNAs
- 64 cases (4%) atypical, 38 cases had correlated histological material.
- The review of these 38 surgical pathology cases revealed malignancy in 14 cases (37%) and benign lesions in 24 cases (63%)

• Benign:	Fibrocystic change	(12/24)
	Fibroadenoma	(3/24)
	Tubular adenoma	(2/24)
	Nonspecific findings	(7/24)
• Malignant:	Ductal carcinoma	(9/14)
	Lobular carcinoma	(3/14)
	DCIS	(1/14)
	Tubular carcinoma	(1/14).

In conclusion, our study confirmed that the diagnosis of atypia is clinically significant because it is still associated with a significant probability of malignancy (30–40% for those patients in whom surgical sampling was performed).
No morphological criteria are able to reliably differentiate benign and malignant lesions in all breast FNAs.

Lesiones proliferativas epiteliales

- Cambios por lactación
- Fibroadenoma
- Proliferacion epitelial con atipia D o L
- Proliferaciones papilares
- Carcinomas de bajo grado

Lesiones proliferativas epiteliales

- Cambios por lactación
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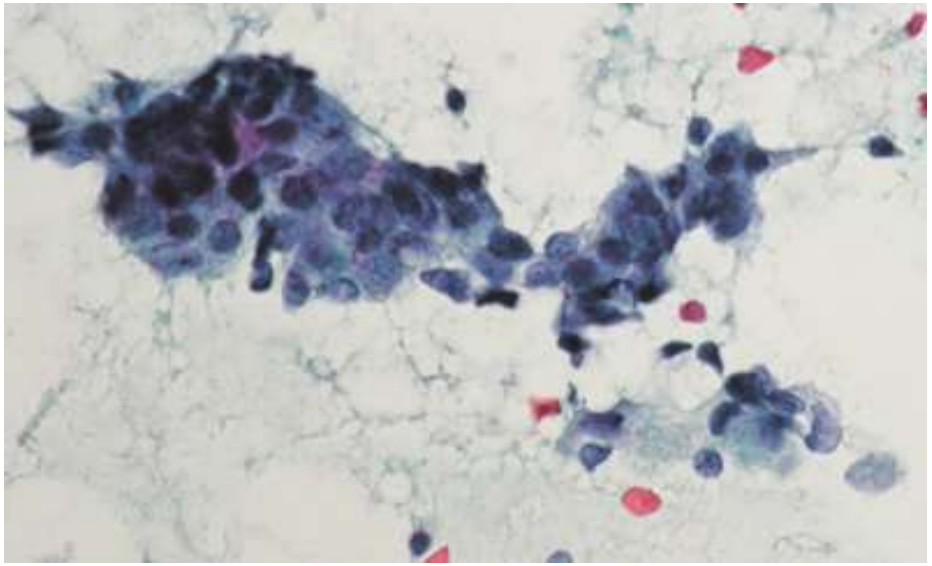
- Carcinomas de bajo grado

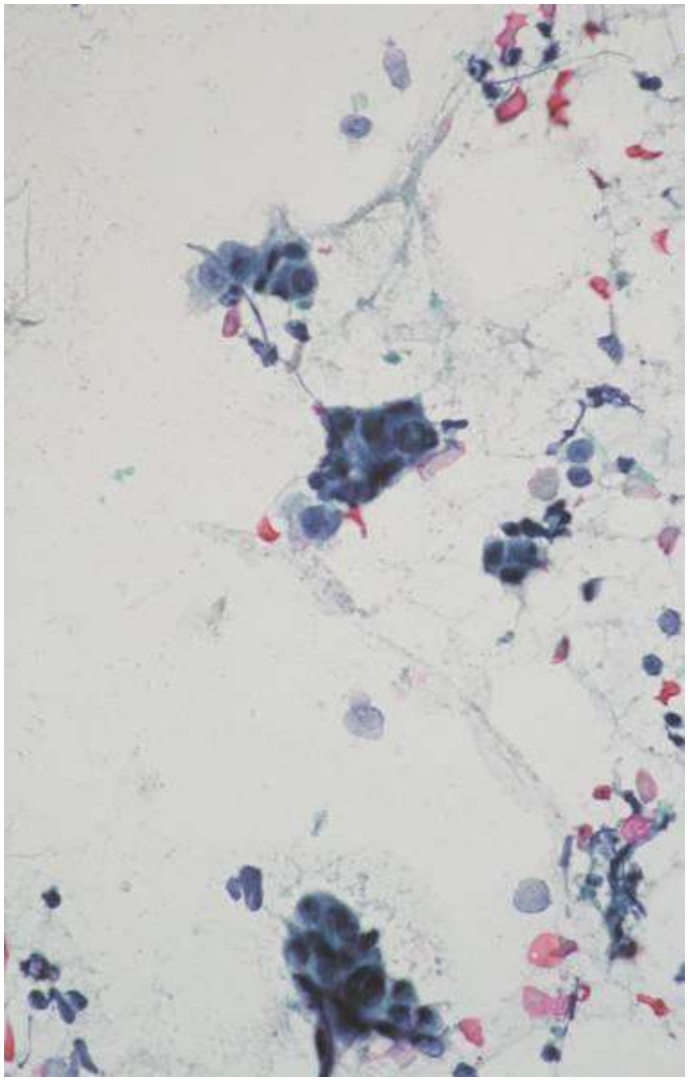
Cambios por lactación

- Aspirados de moderada o alta celularidad
- Células sueltas
- Células grandes con núcleos grandes
- Nucléolo prominente



Cambios por lactación

- Citoplasma amplio y vacuolado y muy tenue
- Núcleos desnudos
- Núcleos redondos con cromatina activa pero regular
- Nucléolo único
- Fondo granular espumoso rico en lípidos



Lesiones proliferativas epiteliales

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- Fibroadenoma
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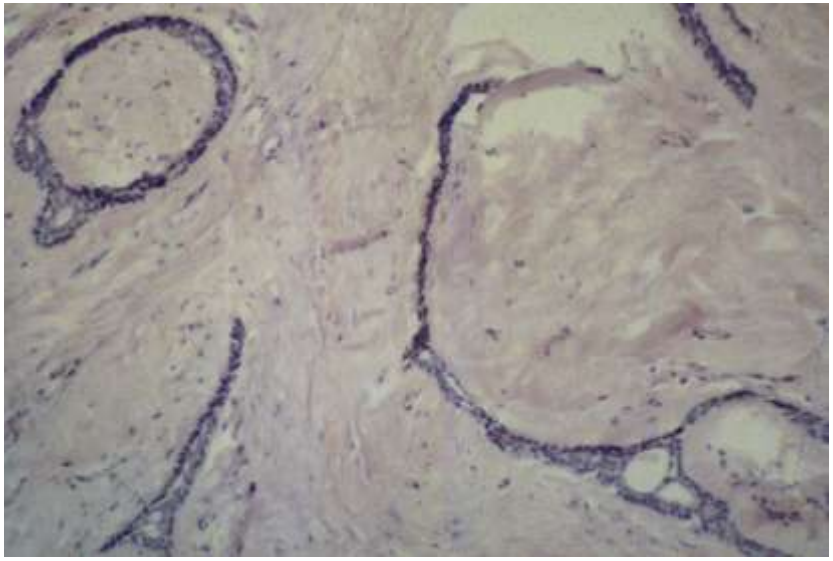
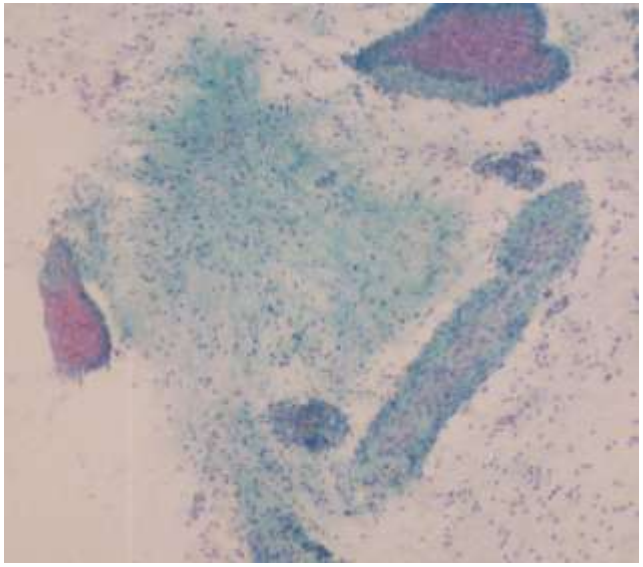
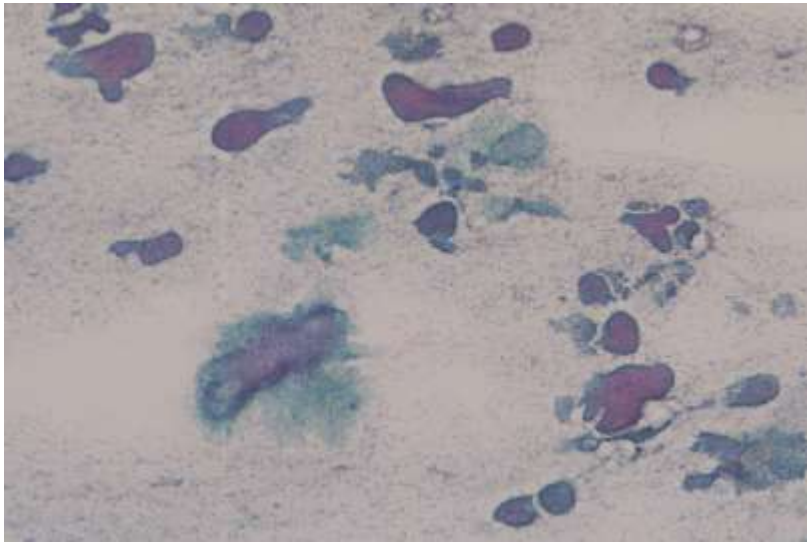
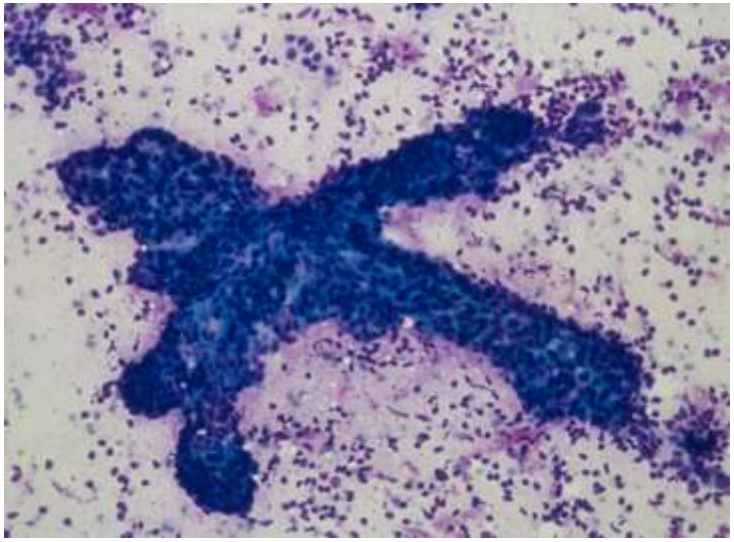
Fibroadenoma









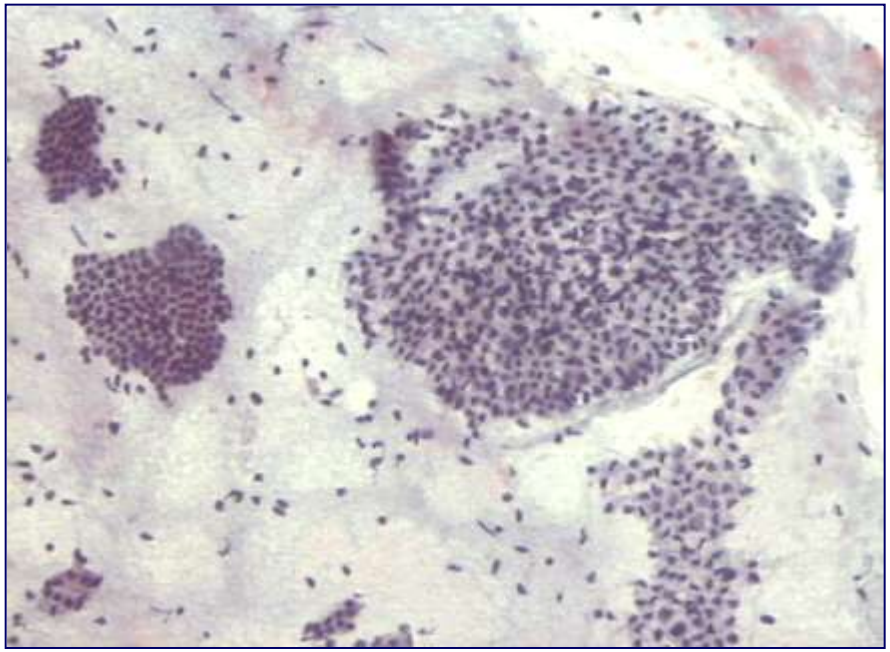
Fibroadenoma

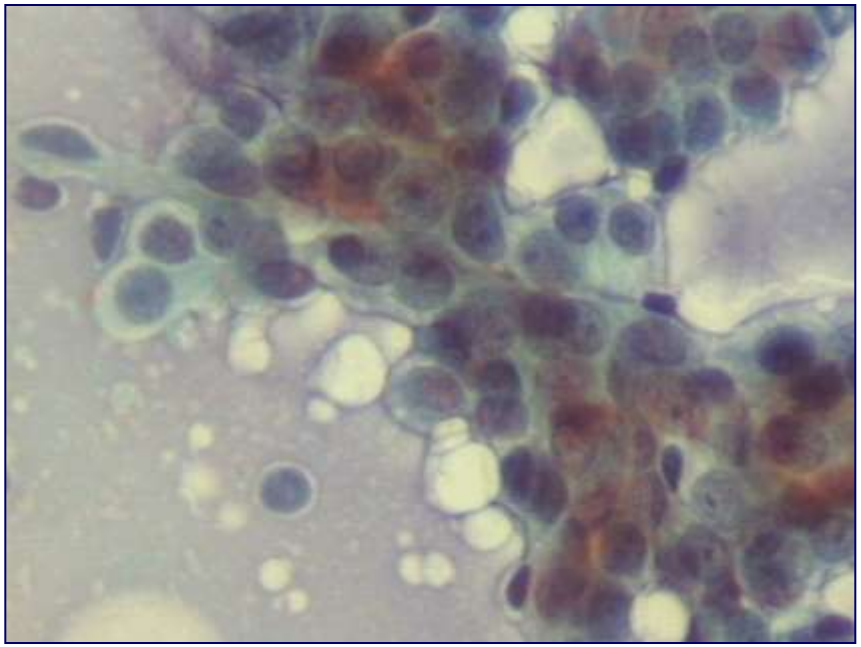
- Celularidad moderada o alta
- Placas cohesivas y ramificadas con células mioepiteliales
- Núcleos bipolares desnudos
- Puede haber algunas células apocrinas o células espumosas

Fibroadenoma

- Pérdida de cohesión celular
- Grupos papilares
- Atipia celular
- No hay necrosis

Fibroadenoma vs malignidad





Fibroadenoma vs malignidad

Fibroadenomas With Atypia: Causes of Under- and Overdiagnosis by Aspiration Biopsy

Aylin Simsir, M.D.,* Jerry Waisman, M.D., and Joan Cangiarella, M.D.

Diagn. Cytopathol.2001;25:278 –284.

- Although the cytologic diagnosis is straightforward in most cases, cellular discohesion and atypia in FAs may lead to falsely atypical or positive FNAB diagnoses.
- Conversely, some adenocarcinomas mimic a fibroadenomatous pattern on FNAB, resulting in a false negative diagnosis.
- 980 smears were assessed for cellularity, cellular discohesion, presence of dissociated intact cells and nucleoli, nuclear pleomorphism, oval bare nuclei, and stromal fragments. Twenty five (2.6%) of these were diagnosed as atypical,
- At excision, 88% of FAs classified as atypical on FNAB were benign (FA with ductal hyperplasia and lactational change, myxoid FA, and other fibroepithelial lesions).
- Two (8%) cases were carcinomas on excision; the reasons for underdiagnosis in one case reflected sampling, and in the other, interpretative error. (zona negra)
- One (4%) benign phyllodes tumor which lacked stromal fragments and single stromal cells on FNAB smears. The lesion was called atypical, based on the epithelial discohesion on the smears.

Fibroadenoma vs malignidad

Fibroadenomas With Atypia: Causes of Under- and Overdiagnosis by Aspiration Biopsy

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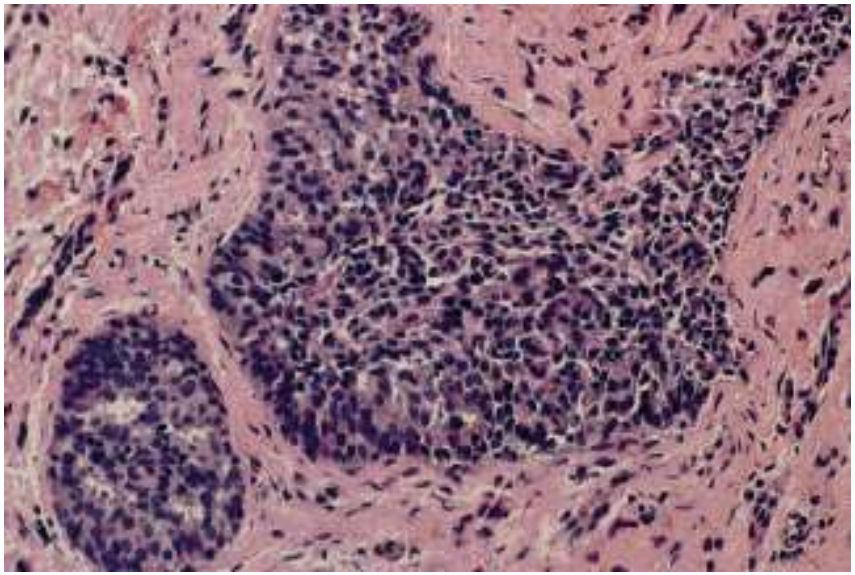
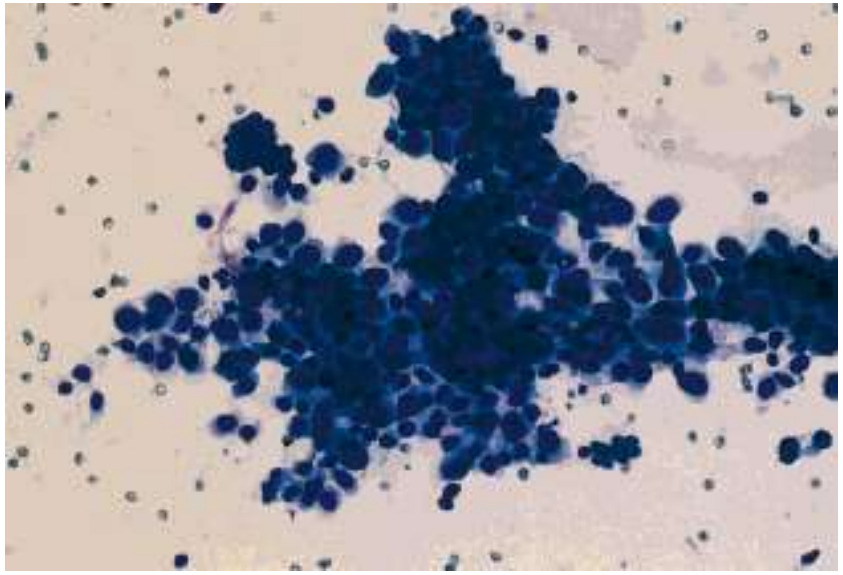
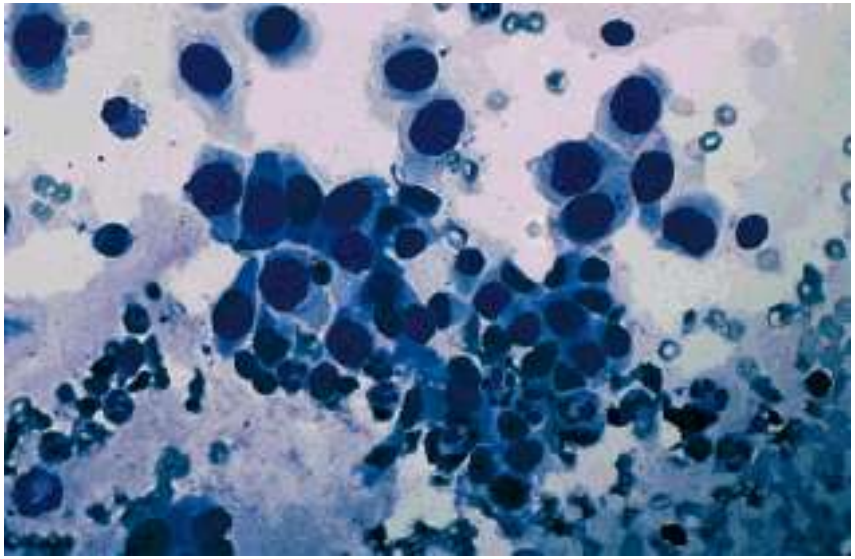
We conclude that the majority of FAs with atypia on FNAB are benign lesions. Considering the grave consequences of a false-positive cytologic diagnosis, we recommend a ***conservative approach*** *in interpreting FNAB smears which overall display a fibroadenomatous pattern.*

Fibroadenoma vs malignidad

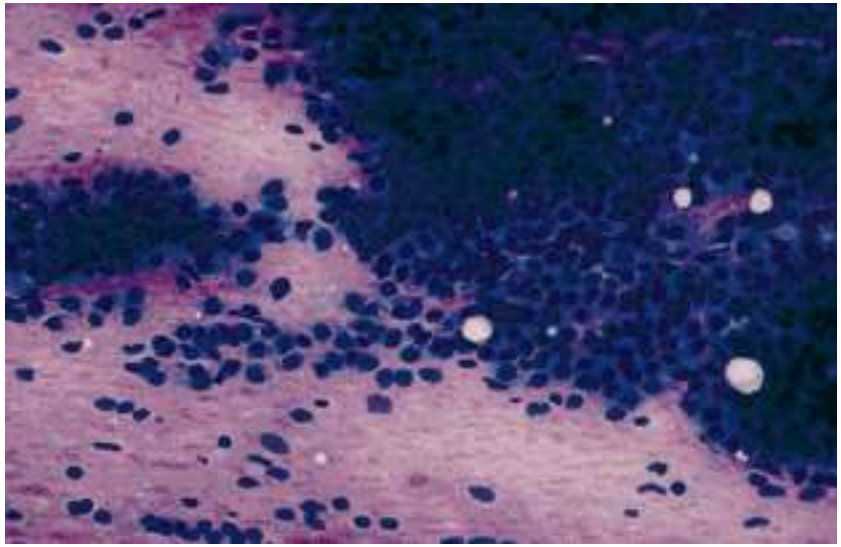


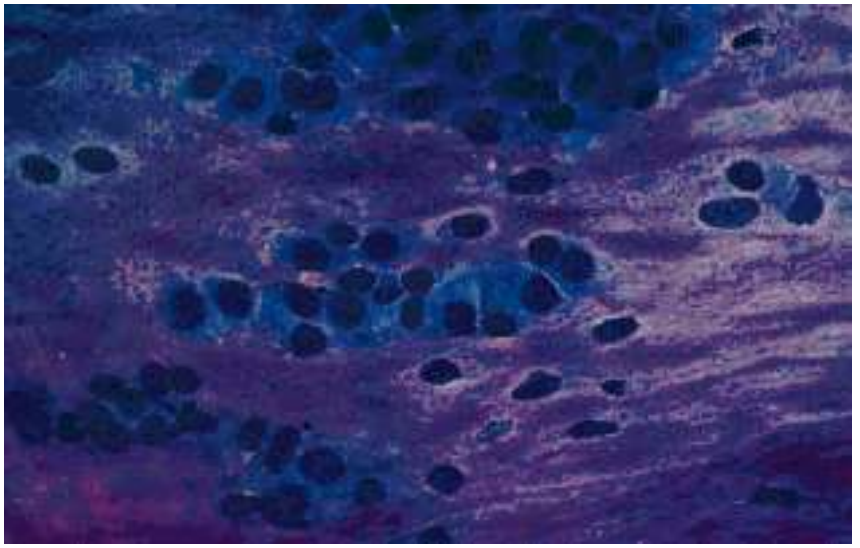


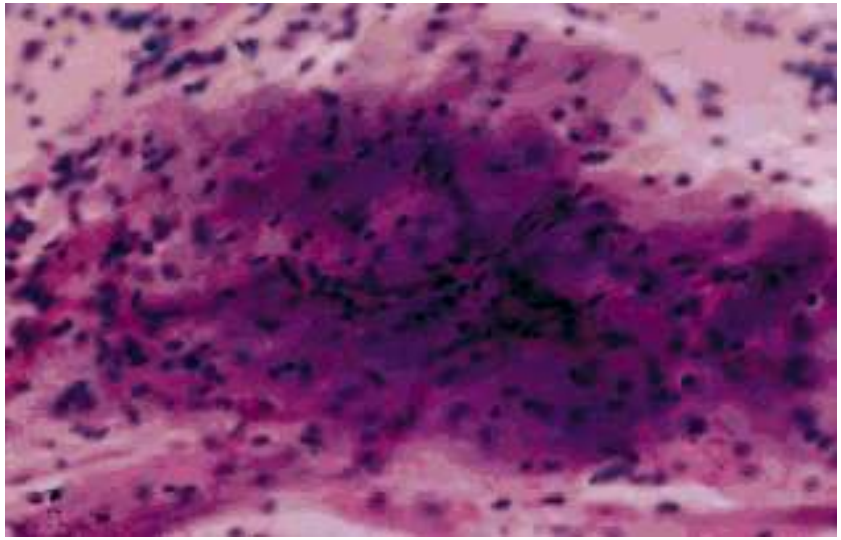


Fibroadenoma con atipia

Fibroadenoma vs malignidad







Fibroadenoma con estroma mixoide

Fibroadenoma vs malignidad

Fibroadenoma Mimicking Papillary Carcinoma on ThinPrep of Fine-Needle Aspiration of the Breast

Timothy Myers, MD; Helen H. Wang, MD, DrPH

• *Objective.*—To compare and contrast benign and malignant lesions of the breast that have similar appearances on fine-needle aspiration cytology and that constitute diagnostic pitfalls.

Design.—The cytology files (dated November 1995 through May 1998) of the Beth Israel Deaconess Medical Center were searched to identify cases of breast fine-needle aspiration biopsies that were highly cellular and composed of bland-appearing spindle/columnar cells and that could represent either epithelial or stromal cells; these cases were reported as indeterminate (atypical/suspicious) and had subsequent excisional biopsies taken.

Results.—Four such cases were found. Two were fibroadenomas and 2 were papillary carcinomas. Their appearances were strikingly similar on aspiration cytology. All cases were prepared with the ThinPrep method. On microscopic examination, all 4 cases were hypercellular and had many single cells and clusters of columnar/elongate cells. Immunocytochemistry proved these cells to be of epithelial origin. At least occasional bipolar stromal cells were seen in the background. The only appreciable difference between the benign and malignant cases was more significant nuclear atypia, which was barely discernible, in the malignant cases. Immunocytochemistry for smooth muscle actin was helpful in 2 cases that had sufficient material.

Conclusions.—Some cases of fibroadenomas and papillary carcinomas can be very difficult, if not impossible, to distinguish on fine-needle aspiration cytology. Immunocytochemistry may be helpful if sufficient material is available. To avoid false-negative or false-positive diagnosis on cytology, it is best to report such cases as atypical or suspicious with final diagnosis pending excisional biopsy.

(*Arch Pathol Lab Med.* 2000;124:1667–1669)

Fibroadenoma vs T. Phyllodes

CANCER
CYTOPATHOLOGY

Distinction of Phyllodes Tumor from Fibroadenoma

A Reappraisal of an Old Problem

Savitri Krishnamurthy, M.D.[1]
Raheela Ashfaq, M.D.[2]
Hyung Ju C. Shin, M.D.[1]
Nour Sneige, M.D.[1]

[1] Department of Pathology, University of Texas, M. D. Anderson Cancer Center, Houston, Texas.

[2] Department of Pathology, University of Texas, Southwest Medical Center, Dallas, Texas.

BACKGROUND. Using fine-needle aspiration (FNA) smears, it is difficult to distinguish low grade phyllodes tumor (PT) from fibroadenoma (FA) due to overlapping cytologic features between the two lesions. The authors retrospectively studied 45 histologically proven fibroepithelial breast tumors of which 33 were FA and 12 were PT (1 malignant, 8 borderline, and 3 benign) to define cytologic features that can help in the accurate categorization of these lesions by using FNA samples.

METHODS. The cytologic features analyzed included: 1) epithelial component for number (<5 or >5), architecture, apocrine metaplasia, squamous metaplasia, nuclear pleomorphism, and mitosis; 2) stromal fragments for number (<5 or >5), cellularity (on a scale of 1+ to 3+), borders, cell characteristics, nuclear pleomorphism, and mitosis; 3) individual dispersed stromal cells in the background for cellularity (on a scale of 1+ to 3+), and cellular shape (short/round/oval or long spindle) based on whether they were smaller or larger than 2 times the size of a small round lymphocyte.

Cancer (Cancer Cytopathol) **2000;90:342–349.**

Fibroadenoma vs T. Phyllodes

- Hypercellular stromal fragments occur not only in PT, but also in FA, and hence they cannot be used as the sole criterion for making a diagnosis of PT on FNA.
- The proportion of individual long spindle nuclei (>30%) amid the dispersed stromal cells in the background is the most reliable discriminator between the two lesions.
- Lesions in which long spindle nuclei constitute between 10% and 30% may represent either PT or FA, and therefore such lesions should be categorized as indeterminate on FNA

***Cancer (Cancer Cytopathol)* 2000;90:342–349.**

Fibroadenoma vs T. Phyllodes

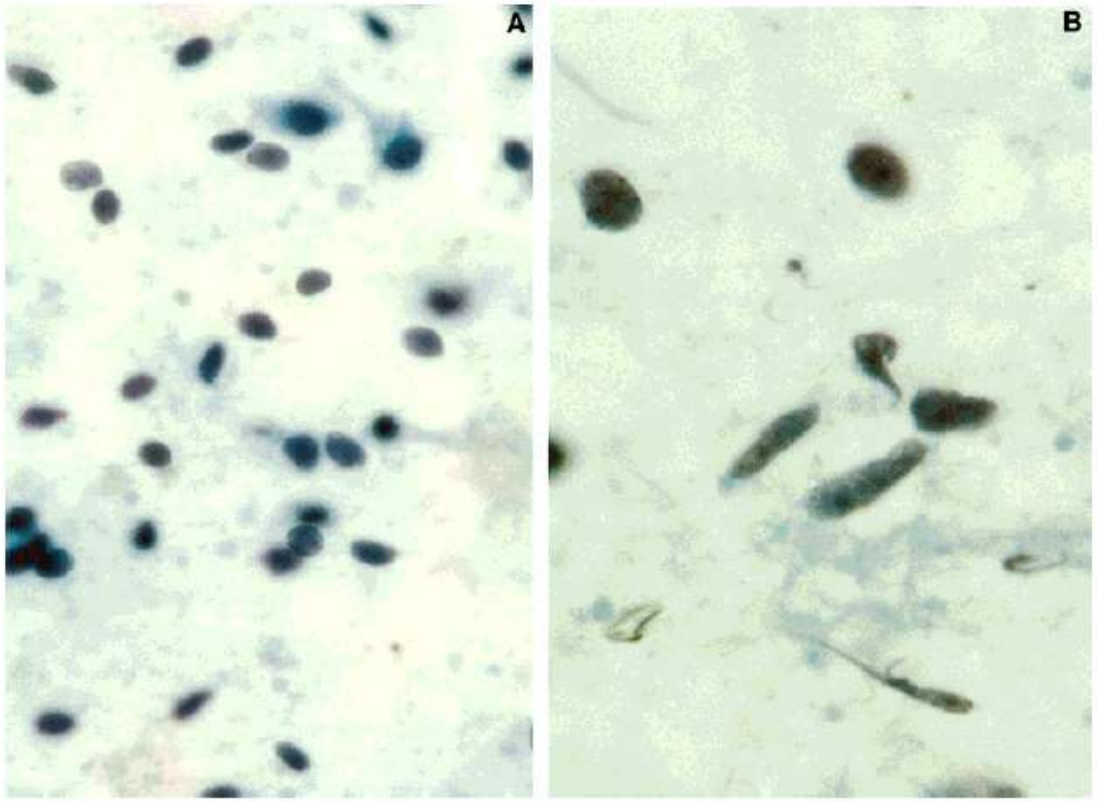
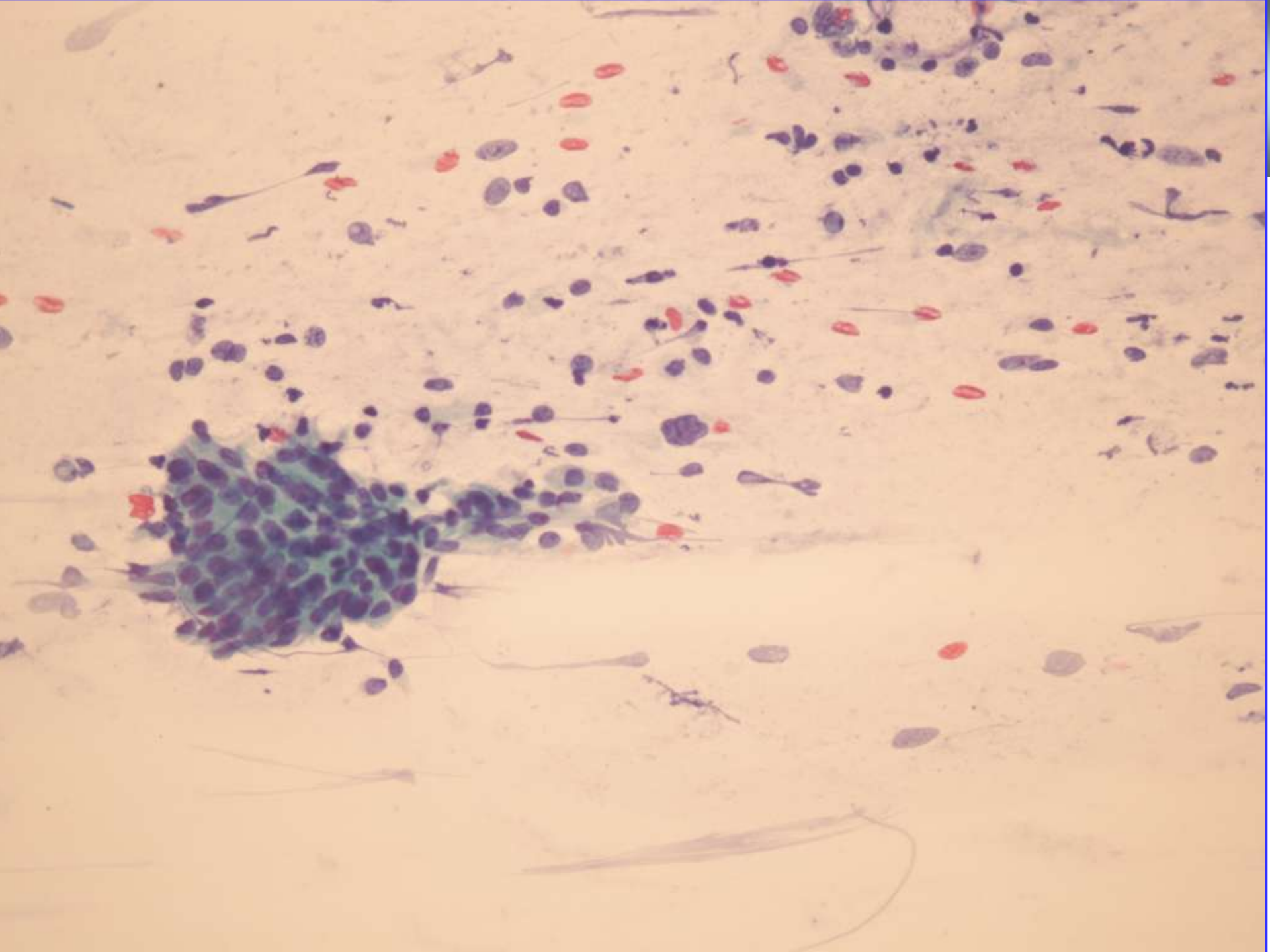
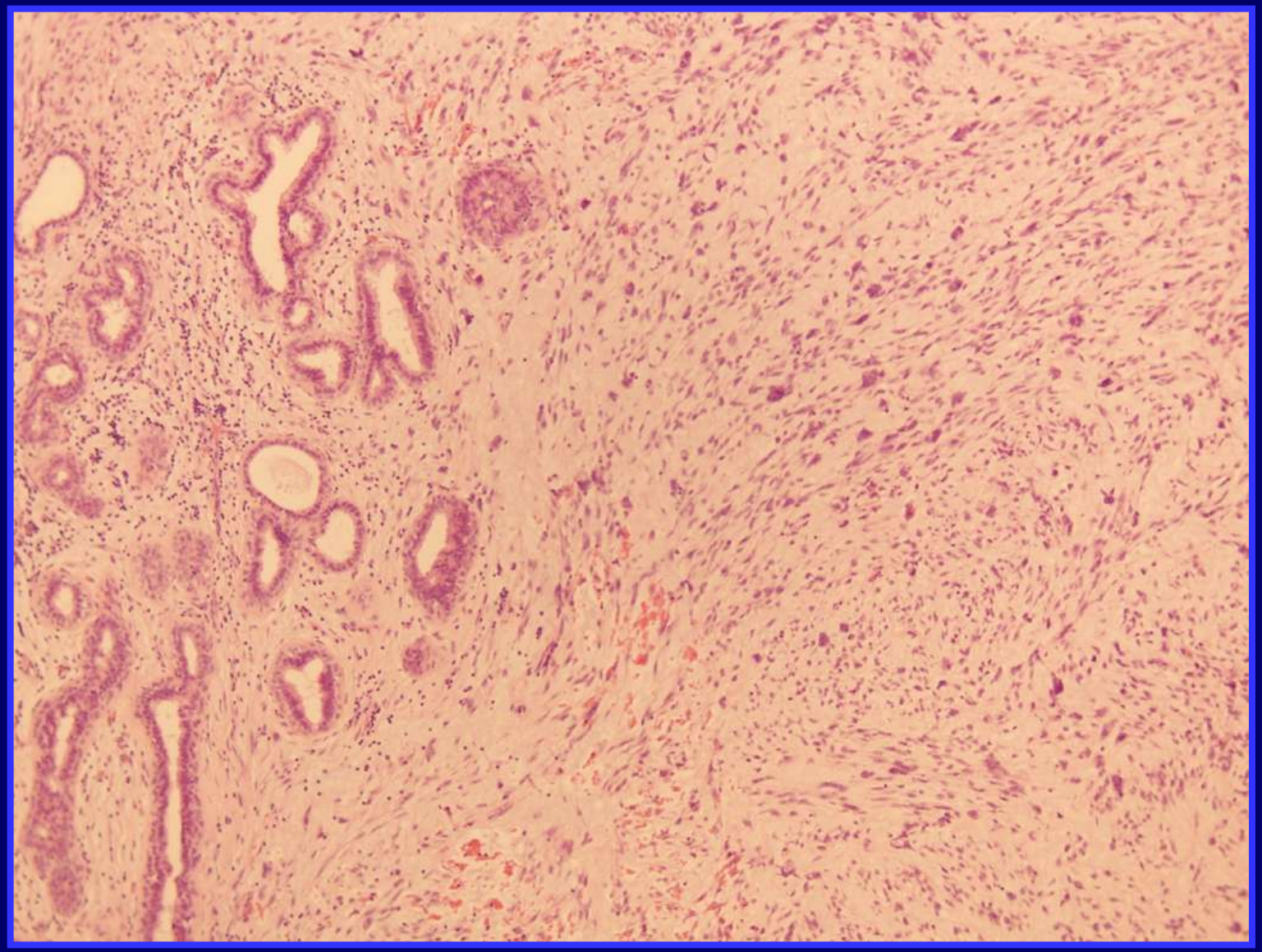


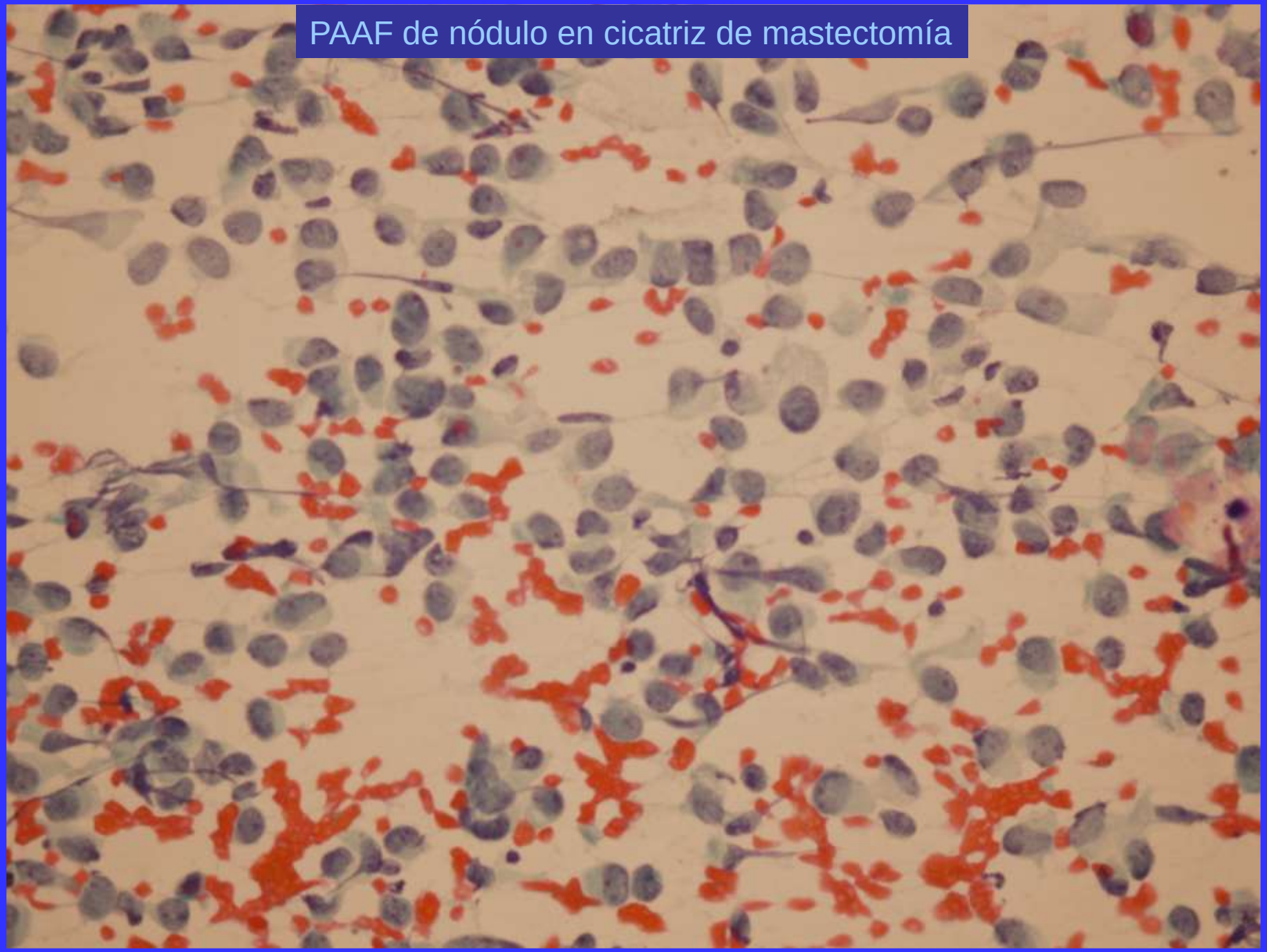
FIGURE 3. Comparison of individual short/round/oval (A) and long spindle stromal cells in the background. Note that whereas the former cells are smaller than two times the size of a small round lymphocyte, the latter are clearly more than two times the size of a small lymphocyte.

Cancer (Cancer Cytopathol) **2000;90:342–349.**



T. Phyllodes




PAAF de nódulo en cicatriz de mastectomía

Lesiones proliferativas epiteliales

- Cambios por lactación
- Fibroadenoma
- Proliferacion epitelial con atipia D o L
- Proliferaciones papilares
- Carcinomas de bajo grado

Hiperplasia Epitelial

Hiperplasia sin atipias

Moderada celularidad

Grupos tridimensionales con buena cohesión

Moderada superposición nuclear

Ligero aumento del núcleo y pequeños nucléolos

Células apocrinas, histiocitos y algunas calcificaciones

Pérdida focal de la polaridad

Algunas células mioepiteliales

Crecimiento en “remolinos”

Pequeñas luces.

Hiperplasia Epitelial

Hiperplasia con atipias

- Muy celular
- Amoldamiento celular con superposición de los núcleos
- Anisocariosis
- Cromatina en grumos
- Células mioepiteliales
- Rara vez apocrinas y macrófagos
- Membrana nuclear irregular
- Cromatina en grumos
- Macronucléolos eosinófilos

Interobserver Variability in the Classification of Proliferative Breast Lesions by Fine-Needle Aspiration: Results of the Papanicolaou Society of Cytopathology Study

Mary K. Sidawy, M.D.,1* Mark H. Stoler, M.D.,2 William J. Frable, M.D.,3 Andra R. Frost, M.D.,1 Shahla Masood, M.D.,4 Theodore R. Miller, M.D.,5 Steven G. Silverberg, M.D.,6 Nour Sneige, M.D.,7 and Helen H. Wang, M.D.8

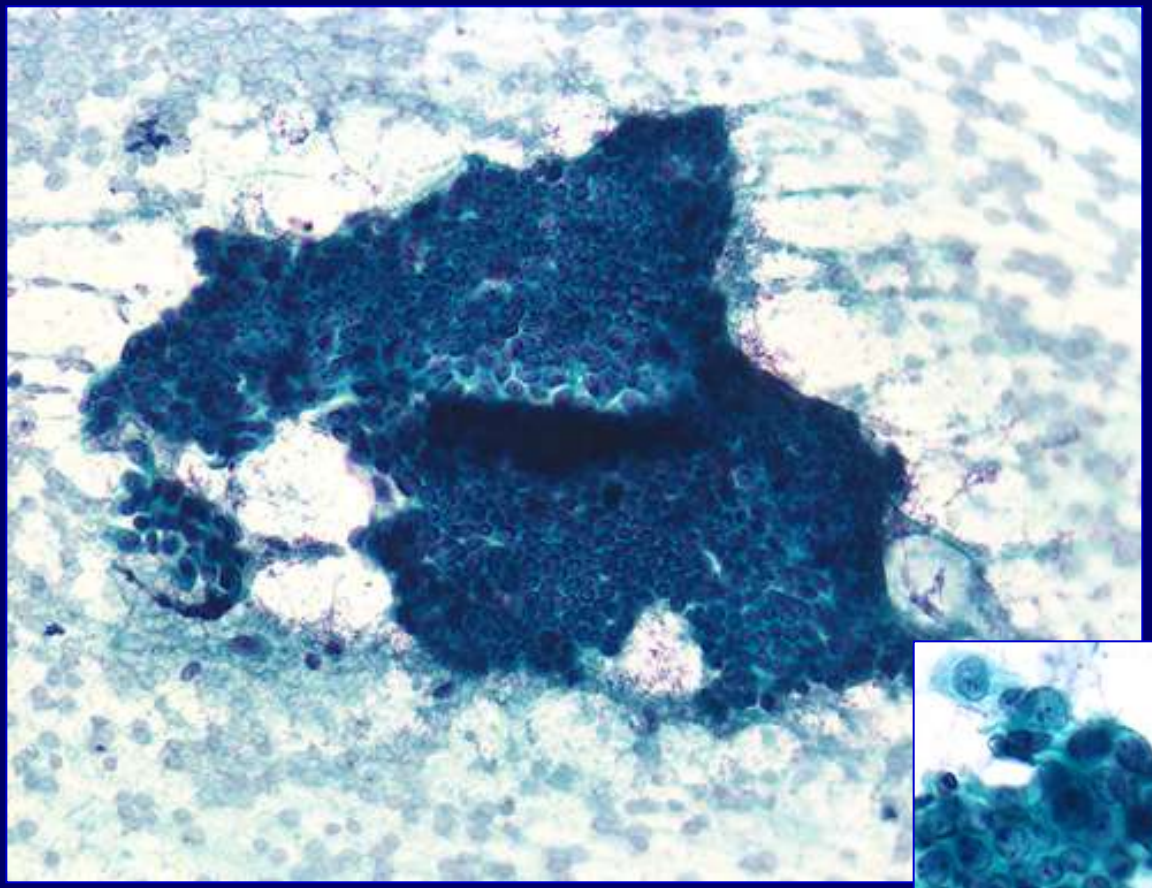
Diagn. Cytopathol. 1998;18:150–165.

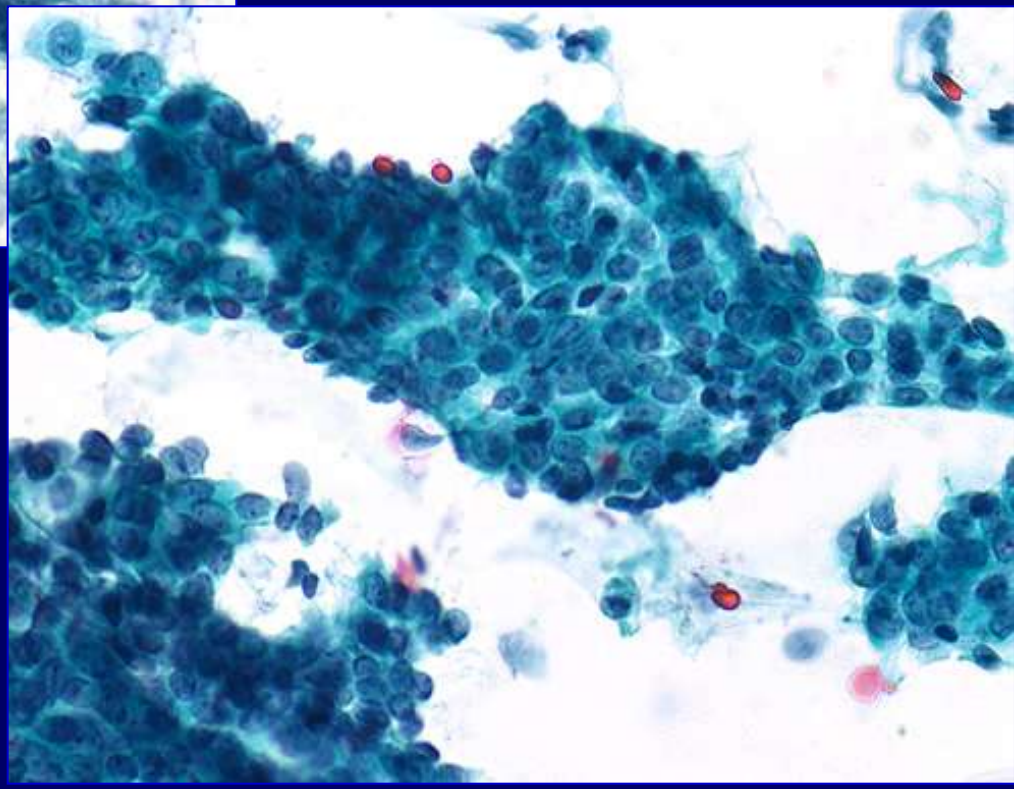
Table I. Guidelines for the Classification of Proliferative Breast Lesions

Nonproliferative breast lesion
Cytologic grading score 6–10
Low to medium cellularity
Epithelial cells arranged in monolayered cohesive clusters
Proliferative breast lesion
Cytologic grading score 11–14
Cellular yield higher than NPL
Complex or cribriform arrangement of epithelial cells
Intercellular spaces are regular or irregular, cellular streaming or nuclear spindling with overlap
Cells are uniform or have variation in size and shape
Bland chromatin pattern
A relatively small number of single epithelial cells may be present. These cells closely resemble those of the benign epithelial cell groups
Admixture of nonproliferative epithelium, apocrine cells, and stromal cells
Low nuclear grade ductal carcinoma in situ
Cytologic grading score 19–24
High cellular yield
Monomorphic population of small to intermediate epithelial cells arranged singly or in clusters
Three-dimensional cell clusters having papillary, solid, or cribriform (regular round/oval spaces with surrounding uniform rounded cells) pattern
Myoepithelial cells within epithelial cell clusters are absent
Absence of admixed benign cellular elements
Presence of many single epithelial cells
Individual cells are polygonal or cuboidal with round-to-oval nuclei and occasional small nucleoli
Proliferative breast lesion with atypia
Cytologic grading score 15–18
Ductal epithelium architecturally and/or cytologically similar to the low nuclear grade DCIS *but:*
Single epithelial cells usually few or absent
Scantly cellular sample
Admixture with a large component of benign epithelium

In the current study, the agreement among the six raters in categorizing the 12 lesions was low (Kappa 5 0.35). All six participants rendered the same diagnosis in only 2/12 cases.

The categorization of proliferative breast lesions by FNA remains a challenge to the pathologist and the cytologic criteria need to be further defined and assessed. Decreasing the number of diagnostic categories is likely to improve the correlation between the cytologic and histologic diagnoses without compromising patient management.
‘‘Low risk lesions’’ (which encompass NPL and PL) may be managed conservatively and ‘‘high risk lesions’’ (which encompass PLA and noncomedo DCIS) need to be biopsied.



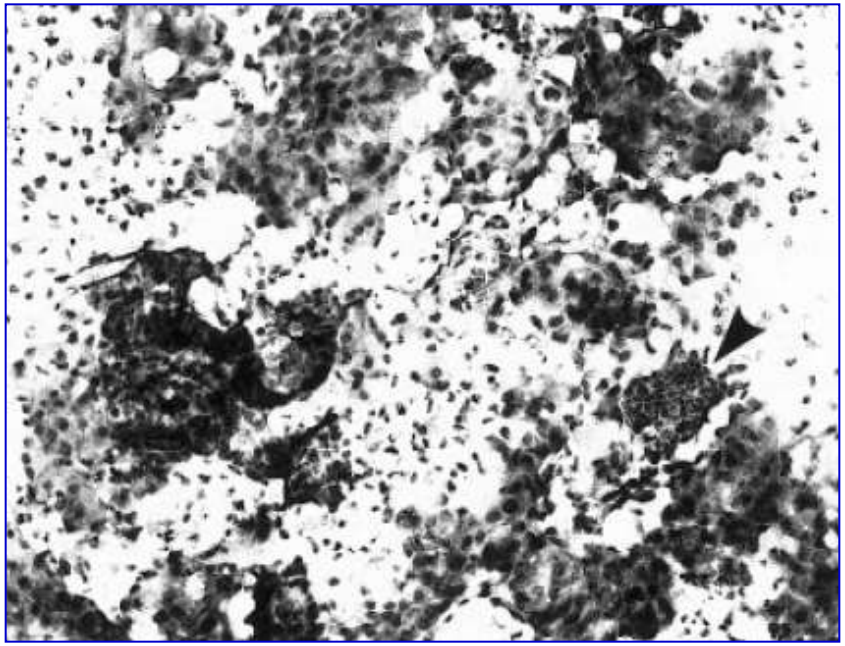


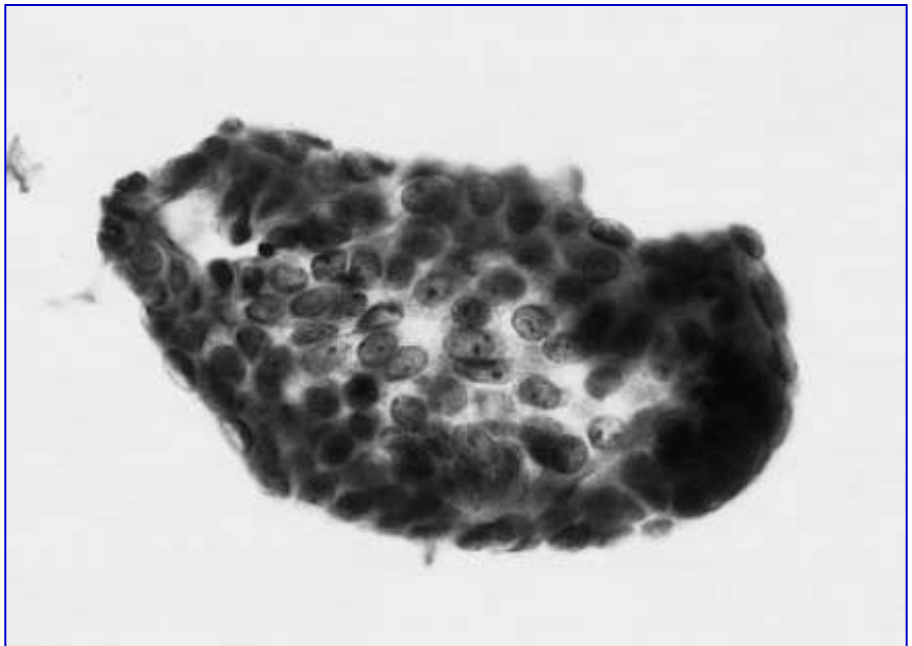
Hiperplasia epitelial

Fine-Needle Aspiration Cytology of Apocrine Adenosis of the Breast: Report on Three Cases

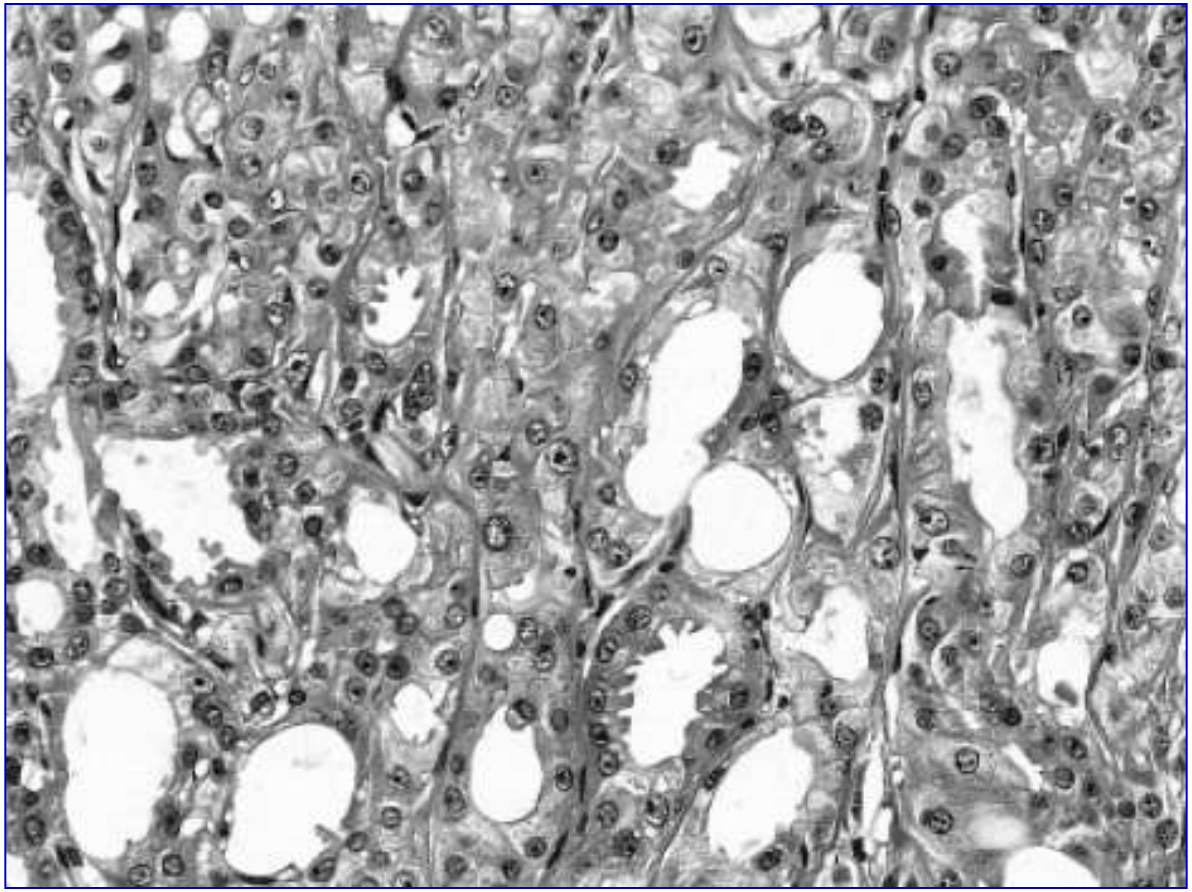
Kazuo Watanabe, M.D.,* Mizuko Nomura, M.D.,Yuko Hashimoto, M.D.,
Miyoko Hanzawa, C.T., and Toshiyuki Hoshi, C.T.

Diagn. Cytopathol. 2007;35:296–299.

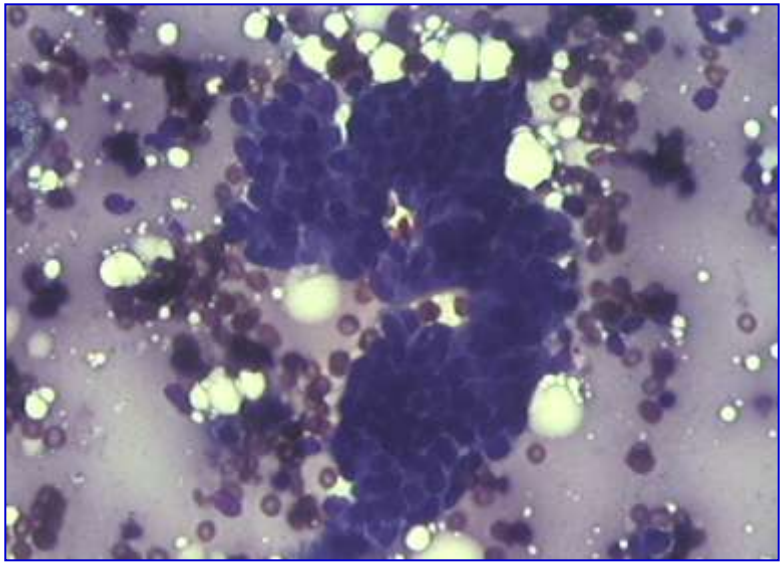




Hiperplasia epitelial



Hiperplasia epitelial



Grupos papilares en mastopatía

Carcinoma “in situ”

CANCER
CYTOPATHOLOGY

Cytologic Diagnosis and Grading of Ductal Carcinoma In Situ

Grace T. McKee, M.D.[1]
Gemma Tildsley, M.D.[1]
Sean Hammond, Ph.D.[2]

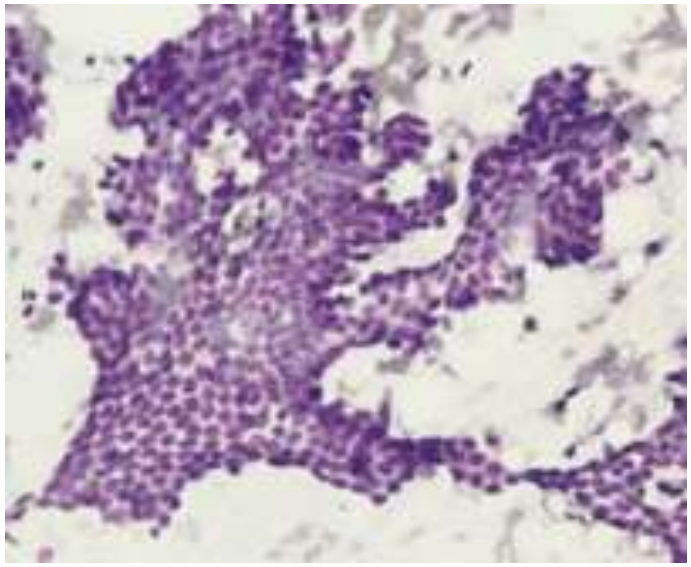
[1] The Royal Surrey County Hospital, Guildford, United Kingdom.

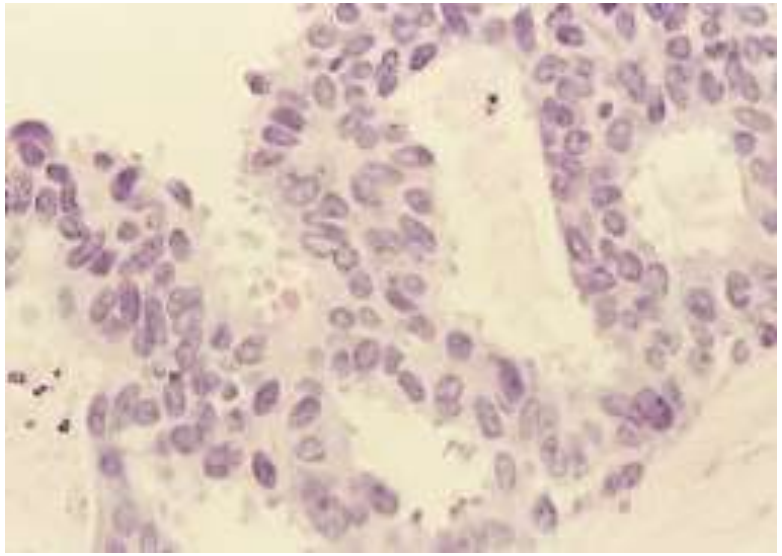
[2] Clinical Decision Making Support Unit, Broadmoor Hospital, Crowthorne, United Kingdom.

BACKGROUND. Fine-needle aspiration cytology plays an important role in the preoperative diagnosis of palpable masses as well as impalpable lesions that can only be sampled by stereotactic or ultrasound techniques. A further refinement of cytologic diagnosis would be the ability to distinguish among the different types of ductal carcinoma in situ (DCIS) also between in situ and invasive malignant disease.

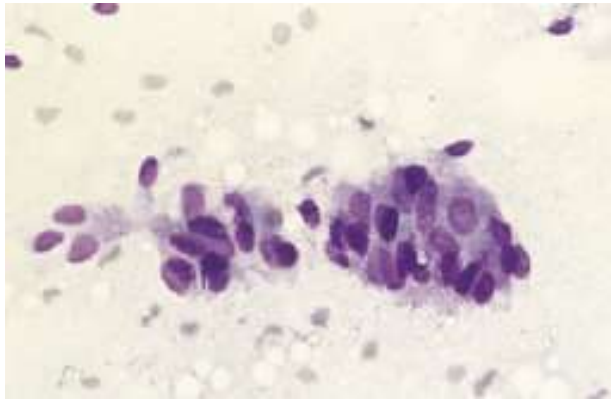
METHODS. Sixty-six cases of histologically proven, pure DCIS (39 high grade, 12 cribriform, and 15 low/intermediate grade) with a preoperative cytology report of carcinoma were retrieved from our files. All the cytology (wet-fixed and air-dried smears) was reviewed by G.M., and the histology sections were reviewed by G.T. Seven cytologic features, including cellularity, cell dissociation, nuclear size, cell uniformity, nucleoli, nuclear margins, and chromatin pattern, were assigned scores from 1 to 3. The presence of calcium, necrosis, and foamy macrophages was recorded. Cell clusters were examined for evidence of a cribriform pattern. Fat and stromal fragments were closely checked for infiltration by tumor cells.

Carcinoma “in situ”





Carcinoma cribiforme de bajo grado



Carcinoma “in situ”

ORIGINAL ARTICLE

p63 staining of myoepithelial cells in breast fine needle aspirates: a study of its role in differentiating in situ from invasive ductal carcinomas of the breast

J S Reis-Filho, F Milanezi, I Amendoeira, A Albergaria, F C Schmitt

J Clin Pathol 2002;**55**:936–939

Results: p63 consistently stained the nuclei of myoepithelial cells, either overlying malignant cell clusters and/or admixed with malignant cells. p63 positive myoepithelial cells were seen in all DCIS cases and in nine of the 15 cases of IDC ($p = 0.0375$). In eight cases (three DCIS and five IDC), scattered p63+ epithelial malignant cells were seen.

Conclusions: Although p63 positive myoepithelial cells are found more frequently in DCIS cases, their presence cannot be used as a criterion to rule out invasion in breast FNABs because they are present in up to 60% of invasive cases.

Carcinoma “in situ”

CANCER
CYTOPATHOLOGY

Is a Diagnosis of Infiltrating versus In Situ Ductal Carcinoma of the Breast Possible in Fine-Needle Aspiration Specimens?

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BACKGROUND. With widespread use of mammographic screening, more cases of ductal carcinoma in situ (DCIS) are being detected. Fine-needle aspiration (FNA) is an established and reliable method for diagnosing breast carcinoma. However, its usefulness in distinguishing infiltrating ductal carcinoma (IDC) from DCIS is controversial.

METHODS. The authors retrospectively reviewed 36 breast FNAs (23 palpable lesions and 13 nonpalpable lesions) that were confirmed histologically as being exclusively DCIS. On review, 27 cases (75%) were categorized as carcinomas, and 9 cases (25%) were categorized as proliferative lesions with atypia. Findings of only these 27 carcinomas were compared with findings of 42 breast FNAs that surgically were proven to be IDC (≥ 85% invasive). Five key cytologic features compared included the presence of fibroadipose tissue, stromal fragments, benign epithelial groups, angulated tumor cell clusters, and tubular structures of tumor cells; for the first three features, the proximity with tumor cells also was noted.

Carcinoma “in situ”

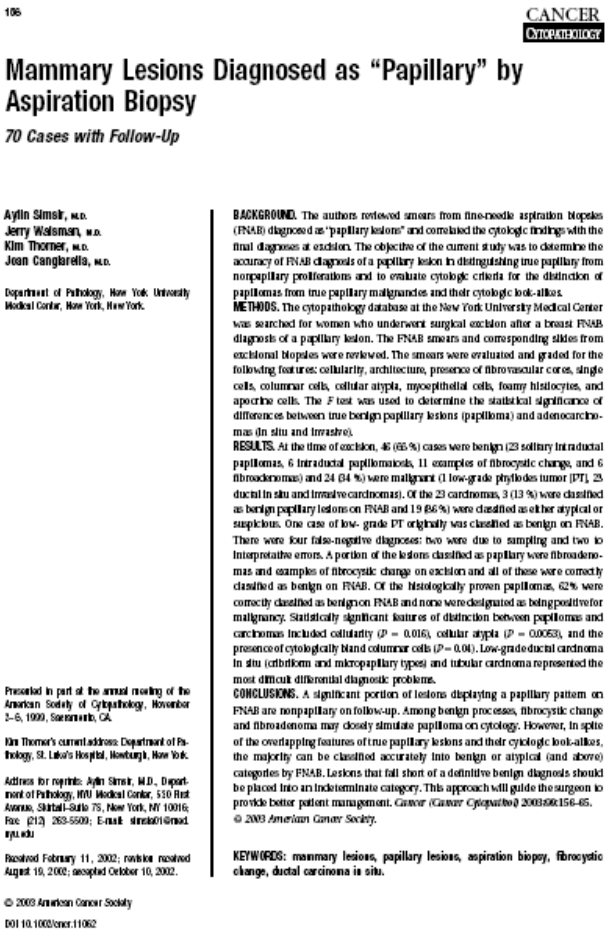
RESULTS. The presence of stromal fragments associated with tumor cells was significantly different between cases of DCIS (9 of 27; 33%) and IDC (29 of 42; 69%) ($P = 0.006$). Tubular structures were present only in IDCs (10 of 42; 24%) ($P = 0.02$). Nine of ten IDCs that had tubular structures also contained stromal fragments. No other cytologic features were different statistically between IDC and DCIS on FNA specimens.

CONCLUSIONS. Tubular structures of tumor cells and the presence of stromal fragments in breast FNA are significant indicators of stromal invasion. However, the low occurrence rate of tubular structures (24% in this series) in IDC and the low specificity of stromal fragments limit their utility in separating IDC from DCIS. Nonetheless, if present, tubular structures in conjunction with stromal fragments can be used to evaluate stromal invasion in patients whose disease is being managed surgically. *Cancer (Cancer Cytopathol)* **1998;84:186–91.**

Lesiones proliferativas epiteliales

- Cambios por lactación
- Fibroadenoma
- Proliferacion epitelial con atipia D o L
- Proliferaciones papilares
- Carcinomas de bajo grado

Proliferaciones papilares



CANCER
CYTOPATHOLOGY

Mammary Lesions Diagnosed as "Papillary" by Aspiration Biopsy

70 Cases with Follow-Up

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BACKGROUND. The authors reviewed smears from fine-needle aspiration biopsies (FNAB) diagnosed as "papillary lesions" and correlated the cytologic findings with the final diagnoses at excision. The objective of the current study was to determine the accuracy of FNAB diagnosis of a papillary lesion in distinguishing true papillary from nonpapillary proliferations and to evaluate cytologic criteria for the distinction of papillomas from true papillary malignancies and their cytologic look-alikes.

METHODS. The cytopathology database at the New York University Medical Center was searched for women who underwent surgical excision after a breast FNAB diagnosis of a papillary lesion. The FNAB smears and corresponding slides from excisional biopsies were reviewed. The smears were evaluated and graded for the following features: cellularity, architecture, presence of fibrovascular cores, single cells, columnar cells, cellular atypia, myoepithelial cells, foamy histiocytes, and apocrine cells. The *F* test was used to determine the statistical significance of differences between true benign papillary lesions (papilloma) and adenocarcinomas (in situ and invasive).

RESULTS. At the time of excision, 46 (65%) cases were benign (23 solitary intraductal papillomas, 6 intraductal papillomatosis, 11 examples of fibrocystic change, and 6 fibroadenomas) and 24 (34%) were malignant (1 low-grade phyllodes tumor [PT], 23 ductal in situ and invasive carcinomas). Of the 23 carcinomas, 3 (13%) were classified as benign papillary lesions on FNAB and 19 (86%) were classified as either atypical or suspicious. One case of low- grade PT originally was classified as benign on FNAB. There were four false-negative diagnoses: two were due to sampling and two to interpretative errors. A portion of the lesions classified as papillary were fibroadenomas and examples of fibrocystic change on excision and all of these were correctly classified as benign on FNAB. Of the histologically proven papillomas, 62% were correctly classified as benign on FNAB and none were designated as being positive for malignancy. Statistically significant features of distinction between papillomas and carcinomas included cellularity ($P = 0.016$), cellular atypia ($P = 0.0053$), and the presence of cytologically bland columnar cells ($P = 0.04$). Low-grade ductal carcinoma in situ (cribriform and micropapillary types) and tubular carcinoma represented the most difficult differential diagnostic problems.

CONCLUSIONS. A significant portion of lesions displaying a papillary pattern on FNAB are nonpapillary on follow-up. Among benign processes, fibrocystic change and fibroadenoma may closely simulate papilloma on cytology. However, in spite of the overlapping features of true papillary lesions and their cytologic look-alikes, the majority can be classified accurately into benign or atypical (and above) categories by FNAB. Lesions that fall short of a definitive benign diagnosis should be placed into an indeterminate category. This approach will guide the surgeon to provide better patient management. *Cancer (Cancer Cytopathol)* 2003;99:156–65.

KEYWORDS: mammary lesions, papillary lesions, aspiration biopsy, fibrocystic change, ductal carcinoma in situ.

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- No todo lo que diagnosticamos como "papilar" corresponde a una proliferación papilar
- Los mayores simuladores son fibroadenoma y MFQ
- La mayor parte de las lesiones se clasifican como atípicas o sospechosas

Proliferaciones papilares

CANCER
CYTOPATHOLOGY

Can True Papillary Neoplasms of Breast and Their Mimickers Be Accurately Classified by Cytology?

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[2] University of South Alabama, Department of Pathology, Mobile, Alabama.

BACKGROUND. The cytologic accuracy in assessing malignancy in papillary breast neoplasms (PBNs) is controversial. This is further complicated by overlapping features observed in other breast lesions that produce papillary-like tissue fragments.

METHODS. The authors reviewed 22 fine-needle aspirates (FNAs) from histologically proven papillary neoplasms: papillary carcinoma (PCA; 10 aspirates) and intraductal papilloma (IDP; 12 aspirates). They also reviewed 8 FNAs in which a papillary neoplasm was suggested by cytology but not confirmed by follow-up biopsy: fibroadenoma (6), mucinous carcinoma (1), and cribriform ductal carcinoma in situ (1).

Cancer (Cancer Cytopathol) 2002;96:92–100.

Proliferaciones papilares

TABLE 1
Fine-Needle Aspiration Diagnosis of Papillary Carcinoma (10 Cases)

Patient no.	Age (yrs)	Cytologic diagnosis	Histologic diagnosis
1	46	Ductal carcinoma	Noninvasive papillary carcinoma
2	75	Ductal carcinoma	Noninvasive papillary carcinoma
3	90	Suspicious for carcinoma	Noninvasive papillary carcinoma
4	60	Suspicious for carcinoma	Invasive papillary carcinoma
5	69	Papillary neoplasm	Invasive papillary carcinoma
6	68	Proliferative breast disease	Noninvasive papillary carcinoma
7	68	Atypical	Noninvasive papillary carcinoma
8	68	Atypical	Noninvasive papillary carcinoma
9	69	Papillary carcinoma	Invasive papillary carcinoma
10	75	Papillary carcinoma	Invasive papillary carcinoma

TABLE 2
Fine-Needle Aspiration Diagnosis in Papilloma with and without Atypia (12 Cases)

Patient no.	Age (yrs)	Cytologic diagnosis	Histologic diagnosis
1	63	Fibrocystic changes	Papilloma
2	58	Benign mammary epithelium	Papilloma
3	46	Fibrocystic changes	Papilloma
4	58	Benign mammary epithelium	Papilloma
5	76	Papillary neoplasm, favor papilloma	Papilloma
6	55	Papillary neoplasm, favor papilloma	Papilloma
7	31	Suspicious for papillary carcinoma	Papilloma
8	36	Fibroadenoma	Papilloma
9	52	Fibrocystic changes	Papilloma
10	46	Fibroadenoma	Papilloma
11	79	Suspicious for carcinoma	Papilloma with atypia
12	75	Suspicious for carcinoma	Papilloma with atypia

TABLE 3
Histologic Diagnosis in Needle Aspirates Misclassified as Papillary (8 Cases)

Patient no.	Age (yrs)	Cytologic diagnosis	Histologic diagnosis
1	79	Papillary neoplasm	Mucinous carcinoma
2	54	Papillary neoplasm	Ductal carcinoma in situ
3	24	Papillary neoplasm, favor papilloma	Fibroadenoma
4	41	Papillary neoplasm with atypia	Fibroadenoma with lactational changes
5	34	Papillary neoplasm, favor papilloma	Fibroadenoma
6	17	Papillary neoplasm, favor papilloma	Juvenile fibroadenoma
7	41	Papillary neoplasm, favor papilloma	Fibroadenoma
8	29	Papillary neoplasm, favor papilloma	Fibroadenoma

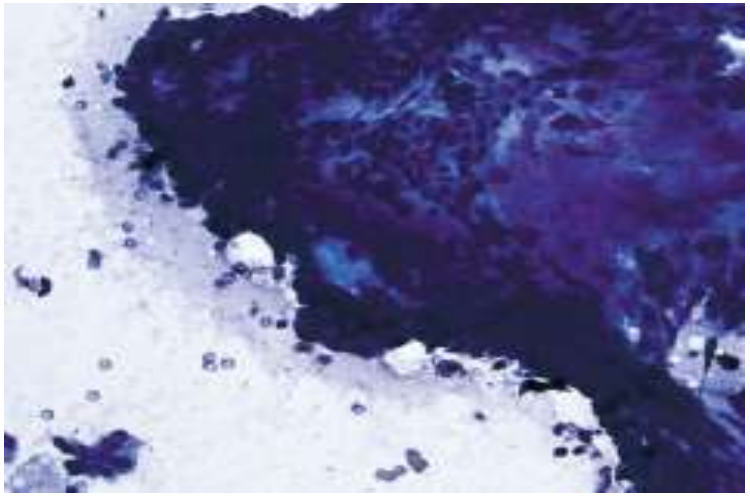
Proliferaciones papilares

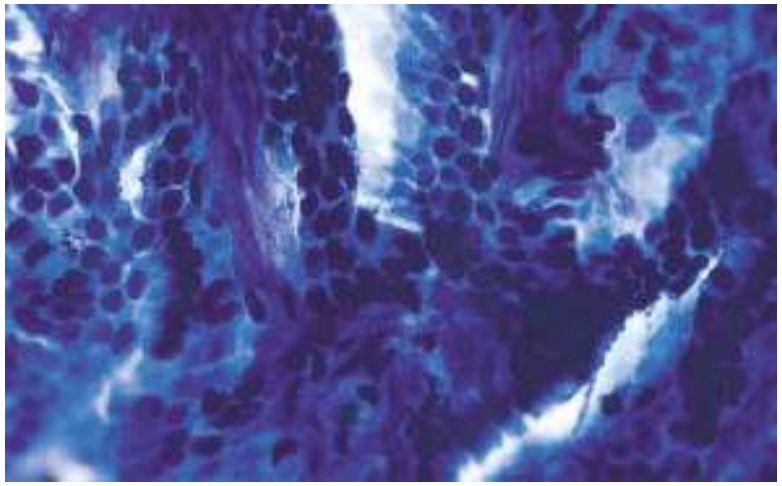
TABLE 7
Comparison of Different Breast Papillary Neoplasms

Criteria	IDP	IDPA	PCa
Cellularity	Low to moderate	Moderate to high	High
Cell population	Polymorphous	Polymorphous	Monomorphous
Papillary fragments	Thick branches broader at the periphery with ruffled and scalloped contours	Simple rigid branching, fronds are relatively longer and thinner than IDP	Very complex branching with numerous thin fronds
Discohesion	Minimal	Moderate	Marked
Columnar cells	Orderly arranged	Orderly arranged in most fragments	Crowded and disorderly arranged
Fibrovascular cores within epithelial fragments	Occasionally thick and eccentrically placed	Thin or thick centrally placed	Mostly thin and centrally placed
Detached fibrous tissue	Frequently present	Present	Rare
Single detached papillae	Absent	Moderate	Abundant
Nuclear chromatin	Vesicular	Variable	Mild to moderate hyperchromasia

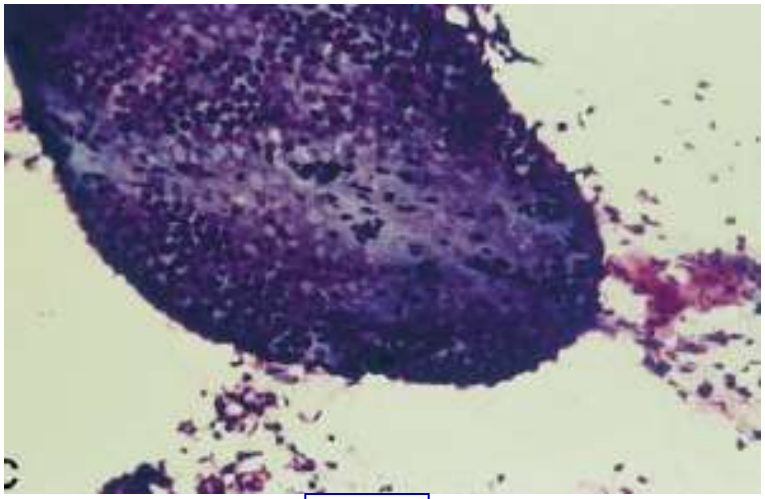
IDP: intraductal papilloma; IDPA: intraductal papilloma with atypia; PCa: papillary carcinoma.

Proliferaciones papilares

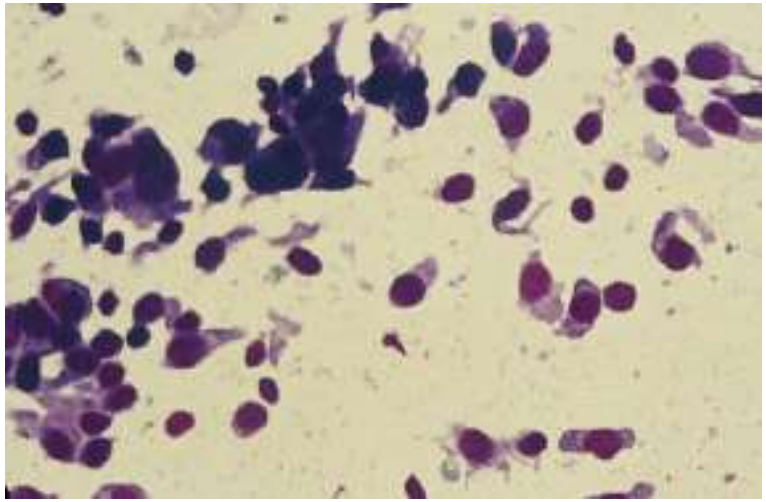




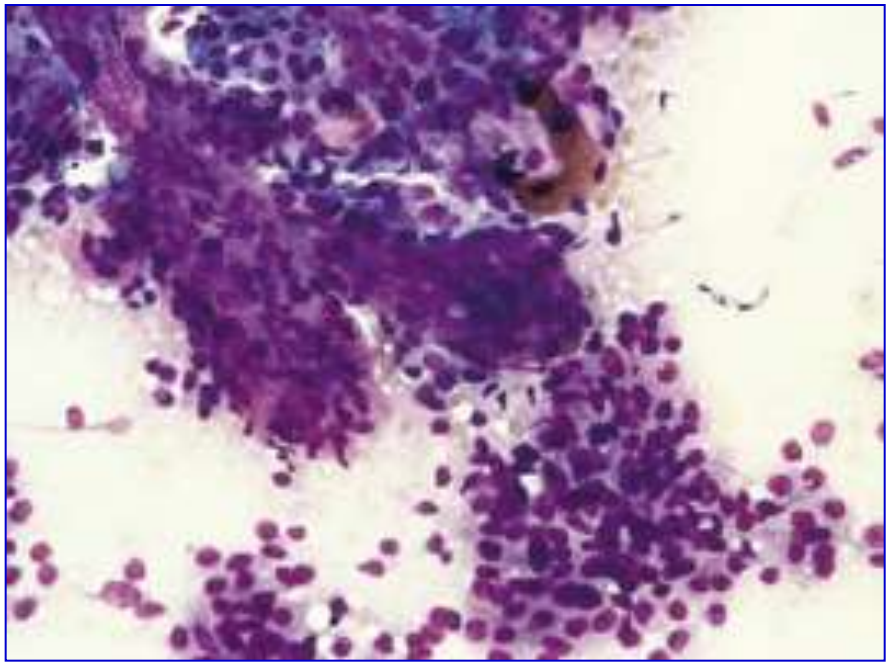
Papiloma

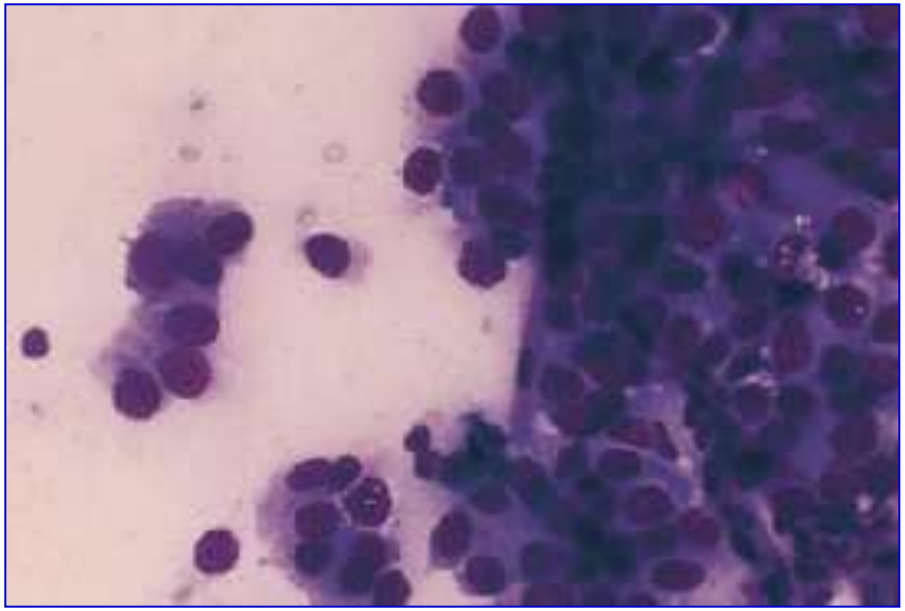


MFQ



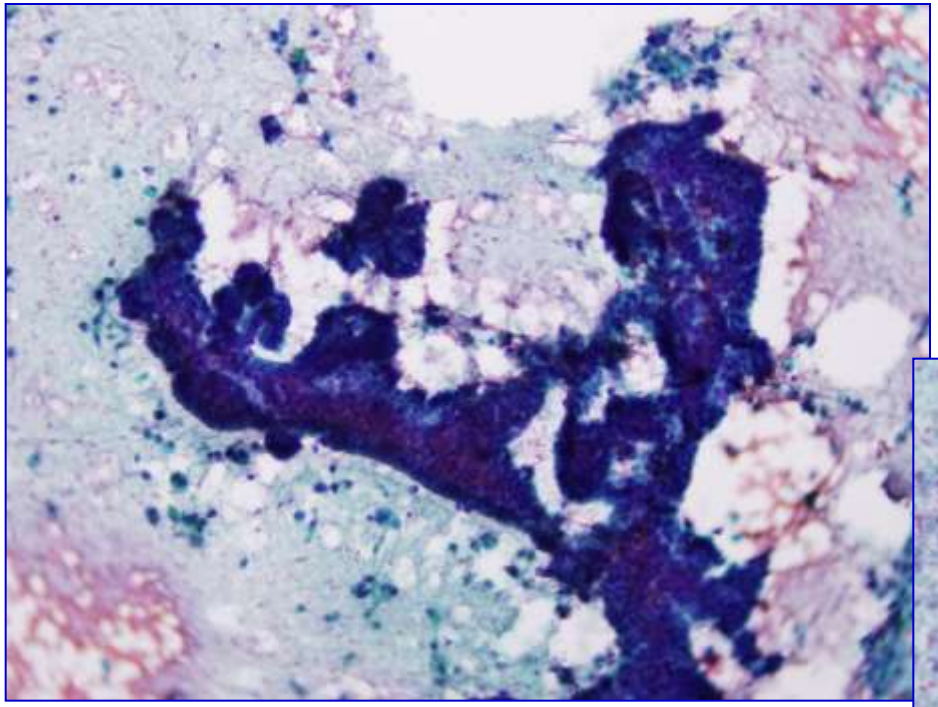
Proliferaciones papilares

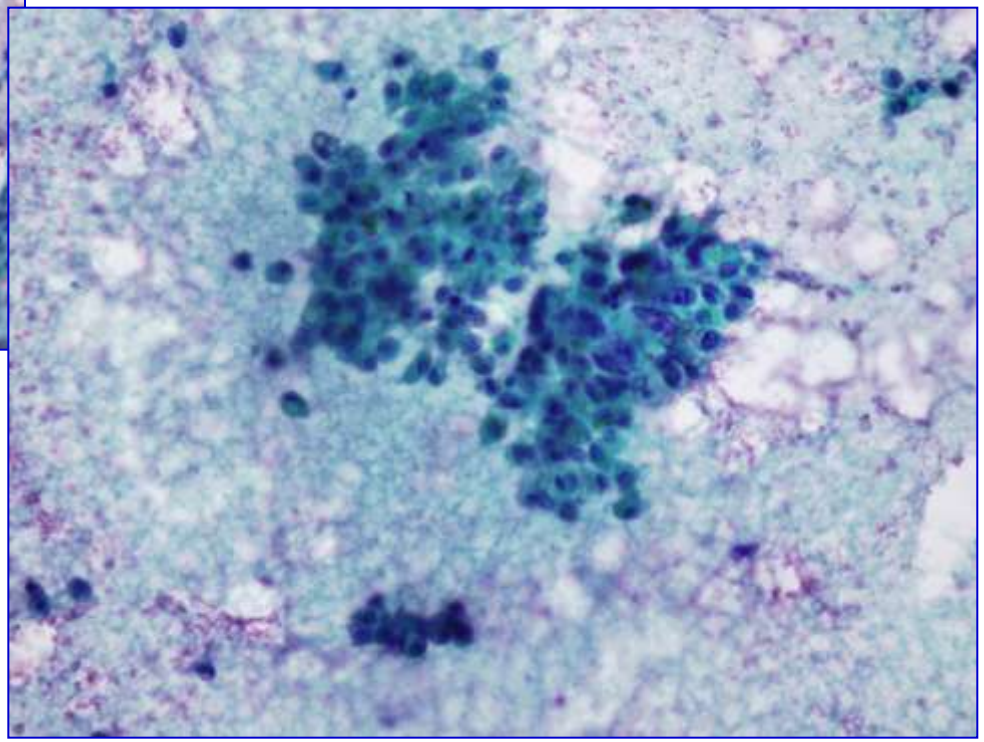




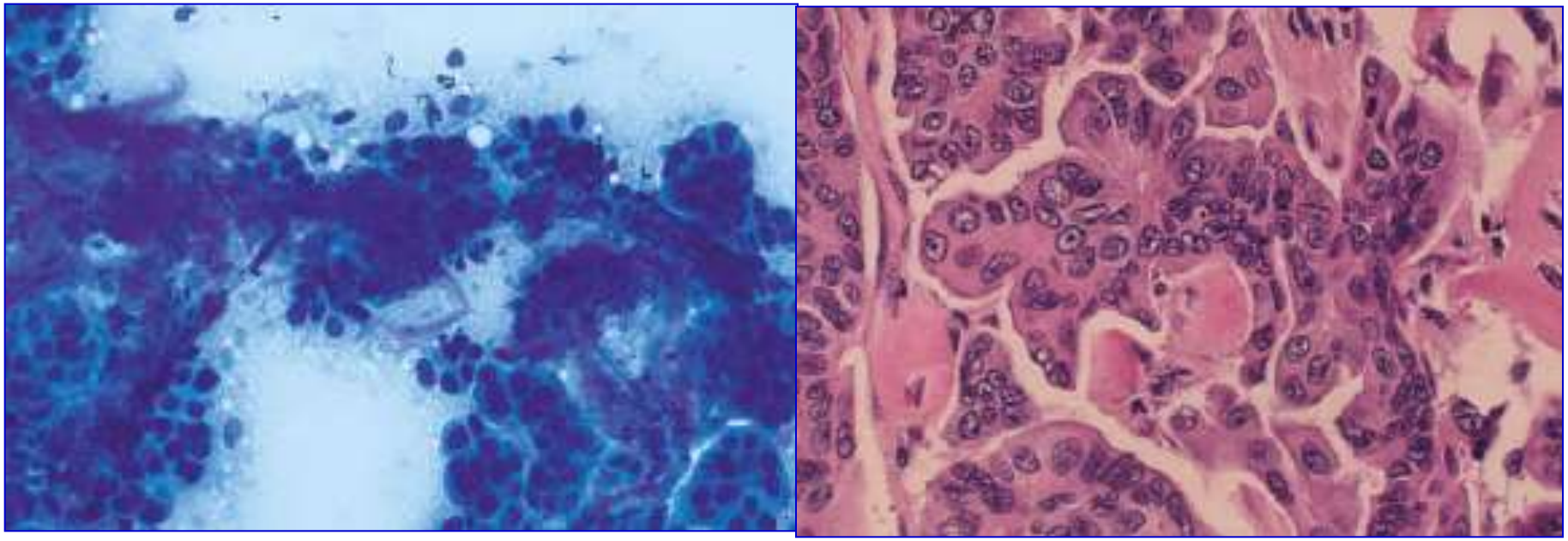
Carcinoma papilar intraquístico

Proliferaciones papilares





Proliferaciones papilares



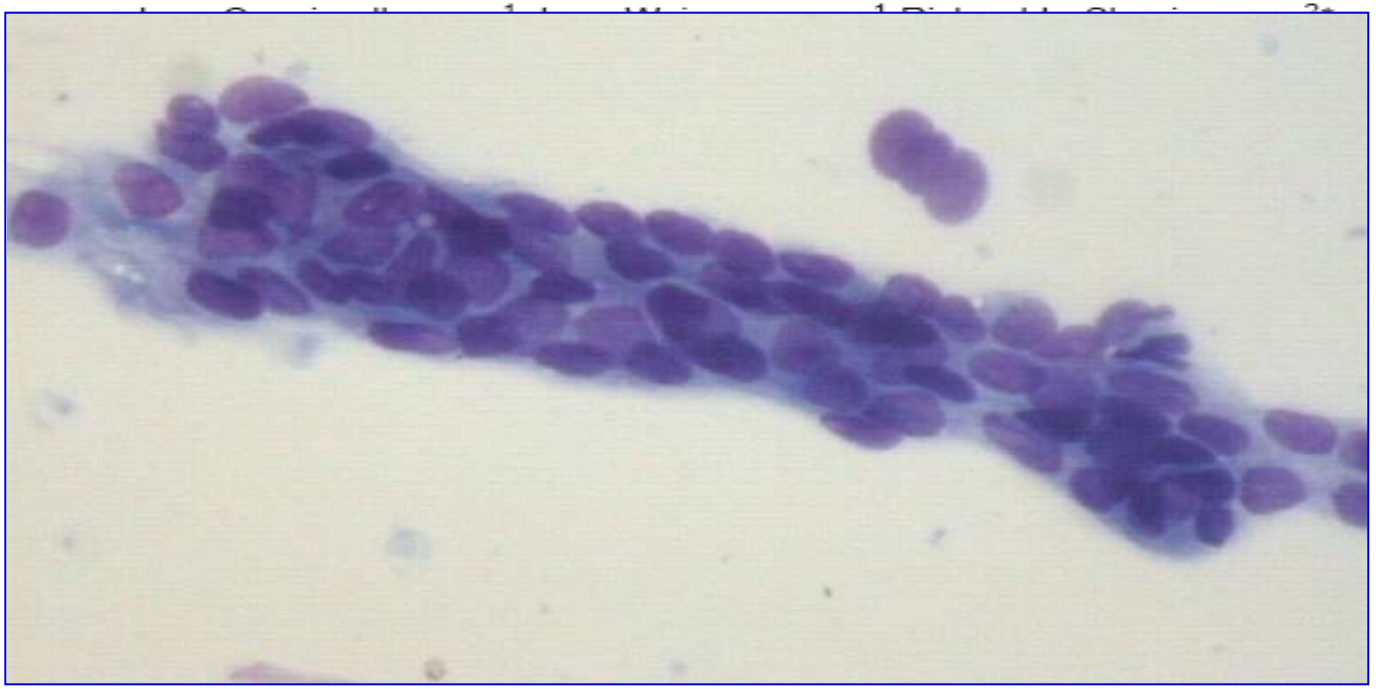
Carcinoma micropapilar

Lesiones proliferativas epiteliales

- Cambios por lactación
- Fibroadenoma
- Proliferacion epitelial con atipia D o L
- Proliferaciones papilares
- Carcinomas de bajo grado

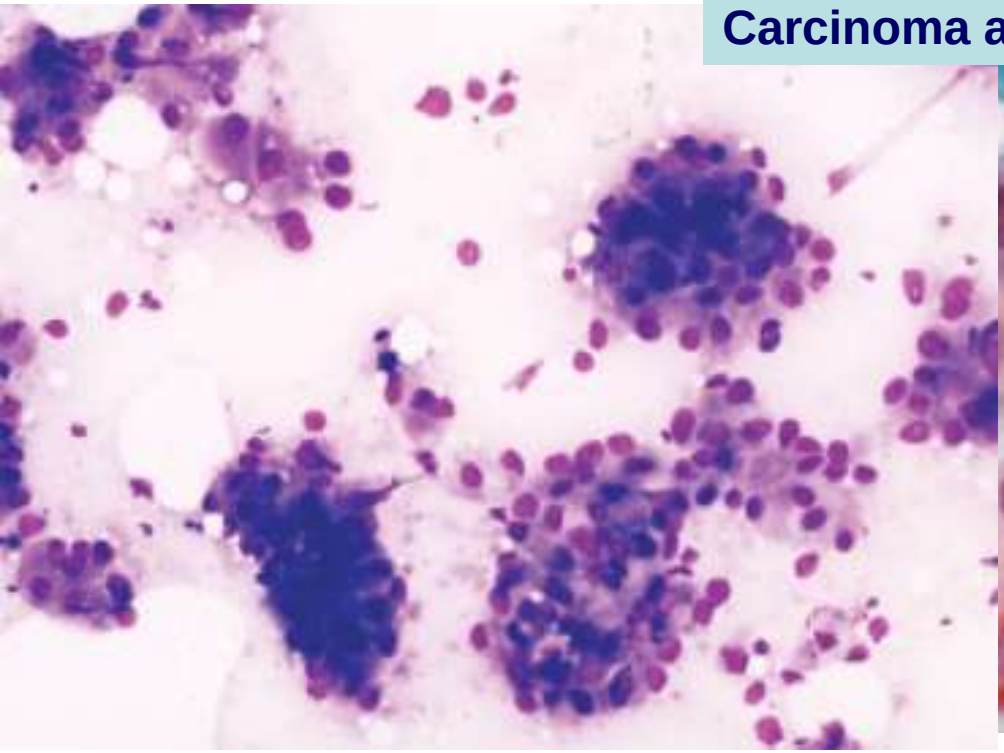
Malignidad vs Benignidad

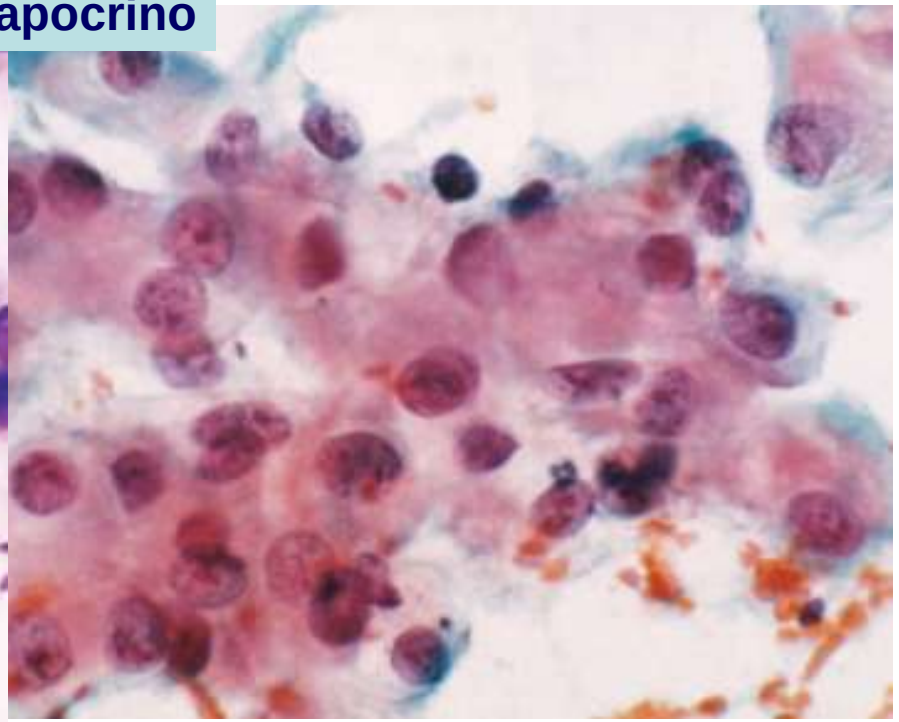
Cytologic Features of Tubular Adenocarcinoma of the Breast by Aspiration Biopsy



Malignidad vs Benignidad

Carcinoma apocrino





Células apocrinas atípicas con abundante citoplasma granular
Núcleo grande e irregular
Marcada anisocariosis
Gran nucléolo - múltiple
Diátesis inflamatoria

Correlación citohistológica

Table I. Correlation of results of FNA with histology.

Cytological diagnosis	No. of cases	No. of cases with histology	No. of cases with benign histology	No. of cases with malignant histology
C3	43	22 (51%)	14 (64%)	8 (36%)
C4	105	68 (65%)	13 (19%)	55 (81%)

Original Article

Singapore Med J 2005; 46(12) : 706

Atypical and suspicious categories in fine needle aspiration cytology of the breast: histological and mammographical correlation and clinical significance

B Chaiwun, N Sukhamwang, S Lekawanvijit, K Sukapan, S Rangdaeng, M Muttarak, P S Thorner

Zona gris de la citología mamaria

- La citología no siempre es capaz es capaz de llegar a un diagnóstico definitivo
- No se trata de falta de competencia del patólogo
- Amplio espectro morfológico de algunas lesiones de la mama
- Integración con la clínica y el diagnóstico por imagen

Muchas gracias por su atención

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