Centro di Riferimento per l'Epidemiologia e la Prevenzione Oncologica in Piemonte

Torino 2 dicembre 2015

REGIONE PIEMONTE

Workshop

"PROGRAMMA REGIONALE DI SCREENING MAMMOGRAFICO PREVENZIONE SERENA" Workshop 2015

Novità dalla letteratura

FRANCESCA PIETRIBIASI

ANATOMIA PATOLOGICA

ASLTO 5

A.S.L. TO5
Azienda Sanitaria Locale
di Chieri, Carmagnola, Moncalieri e Nichelino

DIAGNOSI PRE-OPERATORIA

B2 vs B3

LESIONI FIBROEPITELIALI IPERCELLULARI

D.D. FAD/T. FILLOIDE

B1vs B2

RUOLO DEL PATOLOGO E RUOLO DELL' MDM

Significant Histologic Features Differentiating Cellular Fibroadenoma From Phyllodes Tumor on Core Needle Biopsy Specimens

Saba Yasir, MBBS,[1] Roberto Gamez, MD,[2] Sarah Jenkins, MS,[3] Daniel W. Visscher, MD,[1] and Aziza Nassar, MD[4]

Am J Clin Pathol September 2014;142:362-369

Human Pathology (2015) xx, xxx–xxx

ELSEVIER

Human PATHOLOGY

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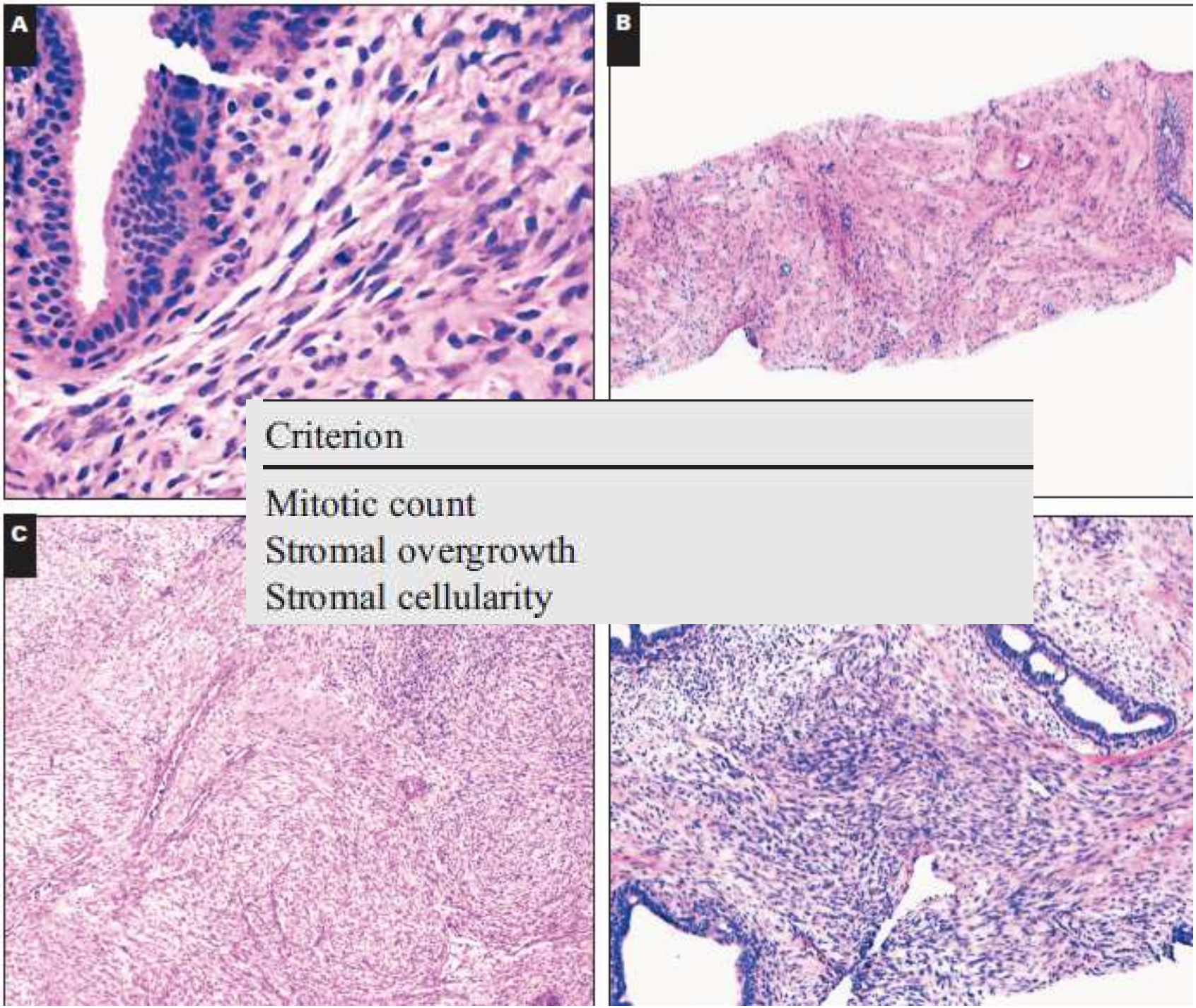
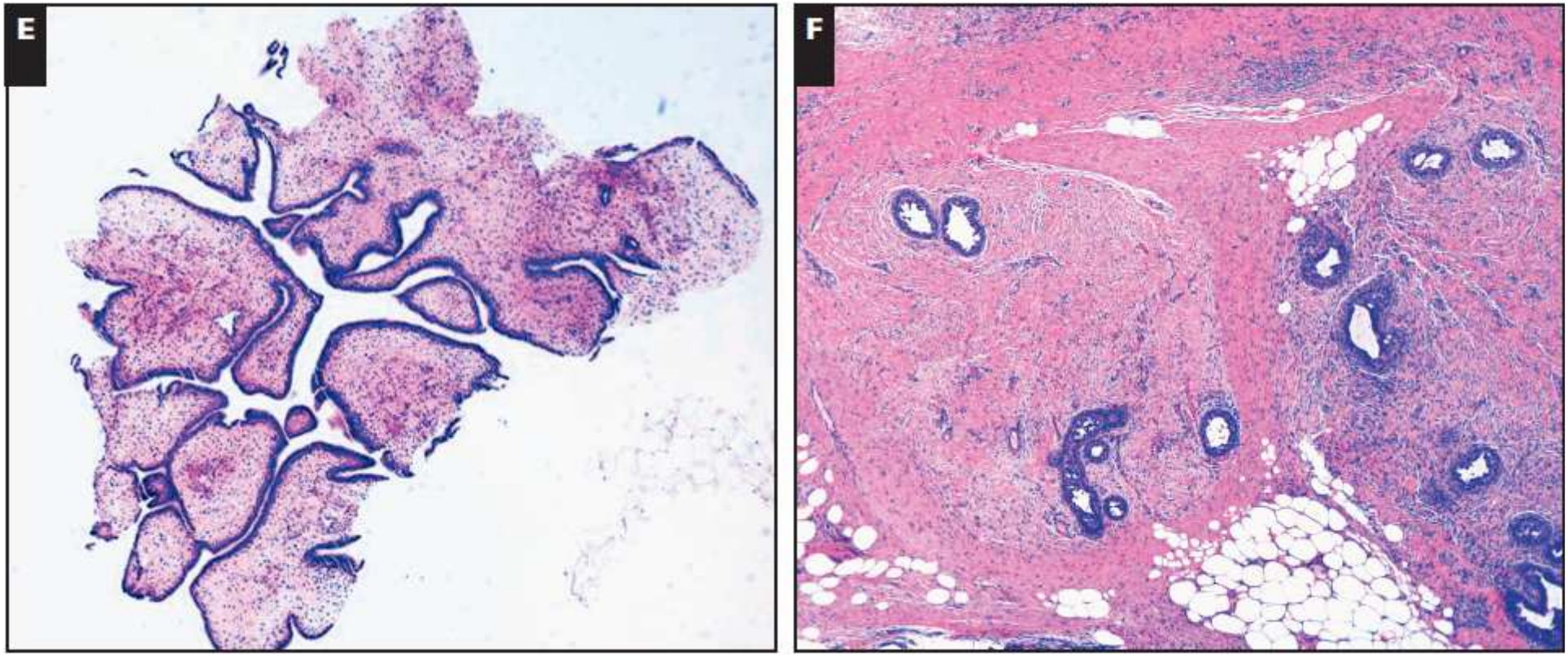
Original contribution

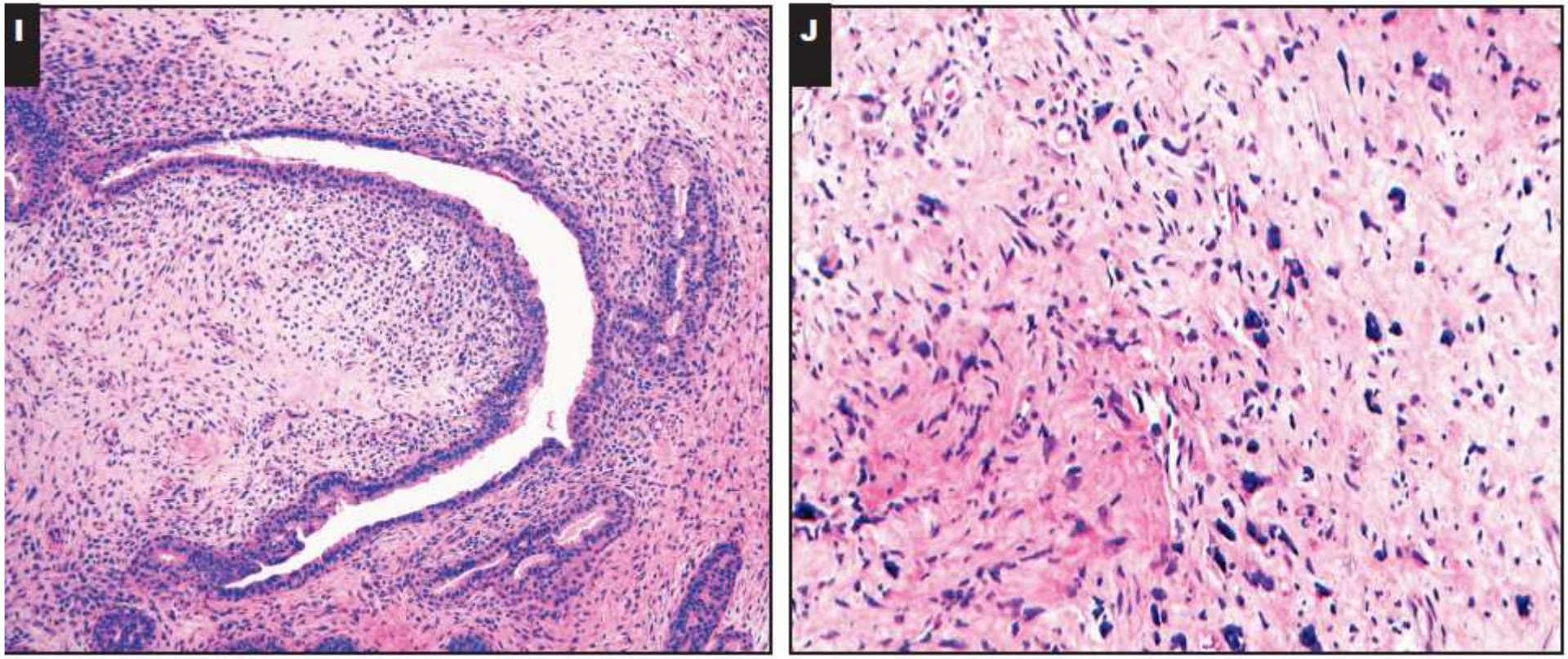
Can problematic fibroepithelial lesions be accurately classified on core needle biopsies?☆

Sudeshna Bandyopadhyay MD[a], Stephanie Barak MD[a], Kinda Hayek MD[a], Sumi Thomas MD[a], Haleema Saeed MD[a], Rafic Beydoun MD[a], Dongping Shi MD[a], Haitham Arabi MD[a], Julie Ruterbusch MPH[a], Michele Cote PhD[a,b], Rouba Ali-Fehmi MD[a,*]

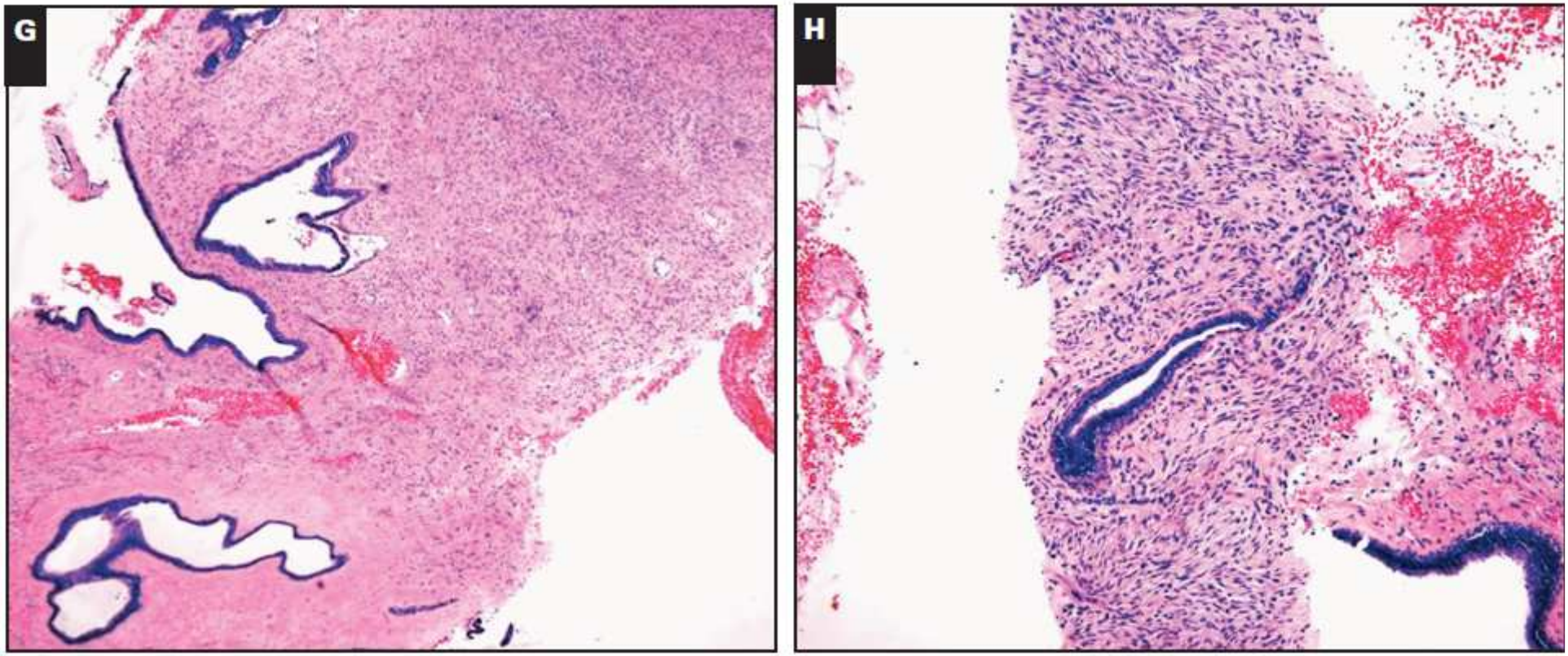

A
B
C
Criterion
Mitotic count
Stromal overgrowth
Stromal cellularity



Stromal fragmentation
Fat infiltration



Subepithelial condensation
Heterogeneity
Stromal pleomorphism

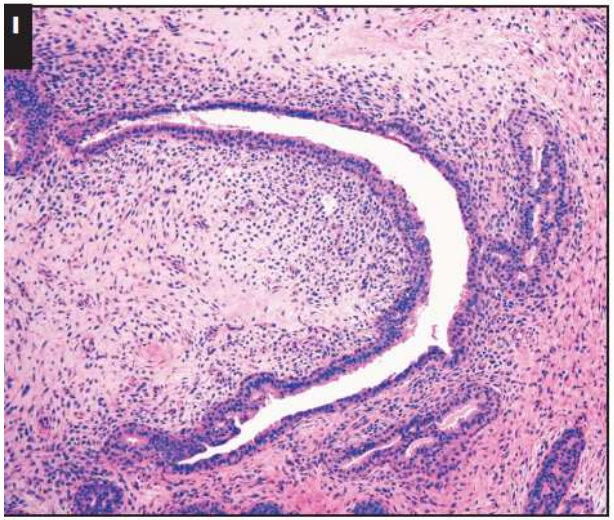


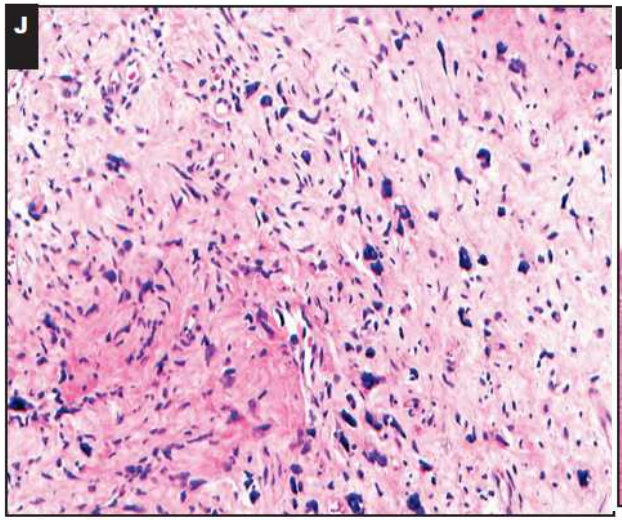
Heterogeneity

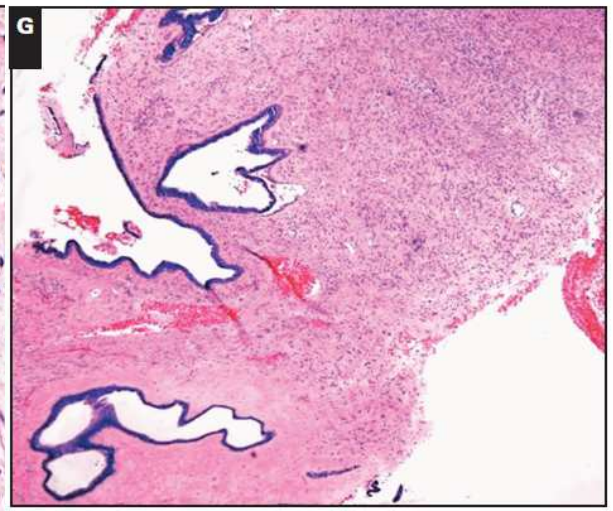
Table II
Univariate Analysis of Clinicopathologic Features With Final Excisional Diagnosis (CFA and BPT)[a]

Characteristic	PT (n = 27)	CFA (n = 37)	Total (n = 64)	*P* Value	C Statistic
Age, y				.9907[b]	0.51
Mean (SD)	40.7 (15.3)	40.6 (14.5)	40.7 (14.7)		
Range	18.0-69.0	15.0-83.0	15.0-83.0		
Tumor size, cm				.0293[b]	0.70
Mean (SD)	2.9 (2.2)	1.8 (1.1)	2.2 (1.7)		
Median (range)	2.3 (0.8-12.0)	1.5 (0.6-5.4)	1.8 (0.6-12.0)		
Q1, Q3	1.5, 3.5	1.0, 2.2	1.1, 2.7		
Mitoses/10 hpf				<.0001[b]	0.83
Mean (SD)	3.0 (1.7)	0.8 (1.3)	1.8 (1.8)		
Median (range)	3.0 (0.0-6.0)	0.0 (0.0-5.0)	1.0 (0.0-6.0)		
Q1, Q3	2.0, 4.0	0.0, 1.0	0.0, 3.0		
Mitoses/10 hpf: categorical, No. (%)				<.0001[c]	0.83
0	4 (14.8)	22 (59.5)	26 (40.6)		
1-2	3 (11.1)	11 (29.7)	14 (21.9)		
≥3	20 (74.1)	4 (10.8)	24 (37.5)		
Mitoses/10 hpf (≤2 vs ≥3), No. (%)				<.0001[c]	0.82
0-2	7 (25.9)	33 (89.2)	40 (62.5)		
≥3	20 (74.1)	4 (10.8)	24 (37.5)		
Stromal overgrowth, No. (%)				.0004[d]	0.69
Missing	1	0	1		
Absent (0)	15 (57.7)	35 (94.6)	50 (79.4)		
Present (1)	11 (42.3)	2 (5.4)	13 (20.6)		
Increased stromal cellularity, No. (%)				.3877[c]	0.55
Absent (0)	1 (3.7)	5 (13.5)	6 (9.4)		
Present (1)	26 (96.3)	32 (86.5)	58 (90.6)		
Stromal fragmentation, No. (%)				.0011[c]	0.70
Absent (0)	3 (11.1)	19 (51.4)	22 (34.4)		
Present (1)	24 (88.9)	18 (48.6)	42 (65.6)		
Infiltration into fat, No. (%)				.0058[d]	0.66
Absent (0)	14 (51.9)	31 (83.8)	45 (70.3)		
Present (1)	13 (48.1)	6 (16.2)	19 (29.7)		
Stromal heterogeneity, No. (%)				.0002[d]	0.73
Absent (0)	8 (29.6)	28 (75.7)	36 (56.3)		
Present (1)	19 (70.4)	9 (24.3)	28 (43.8)		
Subepithelial condensation, No. (%)				.0001[d]	0.73
Absent (0)	10 (37.0)	31 (83.8)	41 (64.1)		
Present (1)	17 (63.0)	6 (16.2)	23 (35.9)		
Stromal pleomorphism, No. (%)				.0010[d]	0.71
Absent (0)	7 (25.9)	25 (67.6)	32 (50.0)		
Present (1)	20 (74.1)	12 (32.4)	32 (50.0)		
Combined histologic features excluding mitotic activity (of seven possible from above), No.				<.0001[b]	0.94
Mean (SD)	3.9 (1.2)	1.4 (1.0)	2.5 (1.6)		
Median (range)	4.0 (2.0-6.0)	1.0 (0.0-4.0)	2.0 (0.0-6.0)		
Q1, Q3	3.0, 5.0	1.0, 2.0	1.0, 4.0		
Combined histologic features excluding mitotic activity, categorized, No. (%)				<.0001[d]	0.88
0-2 features	4 (14.8)	33 (89.2)	37 (57.8)		
3-7 features	23 (85.2)	4 (10.8)	27 (42.2)		

Conclusions: *The presence of mitoses (three or more) and/or total histologic features of three or more on CNB specimens were the most helpful features in predicting PT on excision.*







Summary Fibroepithelial lesions (FEL) of the breast are notoriously difficult to classify on core needle biopsies. The goal of this study was to evaluate interobserver variability and accuracy of subclassifying difficult FELs into fibroadenoma (FA) and phyllodes tumors (PTs). We identified 50 breast core needle biopsies, initially diagnosed generically as FEL, with subsequent excision and final diagnosis of either FA or benign PT. Five surgical pathologists from one institution independently reviewed these in 3 rounds. The pathologists were blinded to the final excisional diagnosis. Two diagnostic categories were allowed: FA and PT. A set of histologic criteria was provided including the presence of subepithelial condensation, stromal heterogeneity, overgrowth, pleomorphism, fragmentation, cellularity, adipose tissue entrapment, and mitotic count and asked to review the slides for the second round. A third round of interpretations was conducted after each criterion was defined. Interobserver agreement for the diagnosis and each criterion was evaluated using the κ level of agreement. Accuracy of ratings to final diagnosis was calculated using Wilcoxon signed-rank test. κ Values for interobserver agreement were fair for the first and second rounds varying from 0.20 to 0.22, respectively. This increased to 0.27 in round 3. When considering each category, the κ value varied from 0.26 to 0.29 for FA and 0.28 to 0.14 for PT. Overall, there was fair agreement between the pathologists in all categories. The rate of correctly diagnosed cases ranged from 40% in the first round, to 48% in the second round, to 67% in round 3. Overall the pathologists performed better in identifying FA than PT. The accuracy of interpretations was significantly different between the first (40%), second (48%), and third rounds (67%).

Table 2 Comparison of the overall mean accuracy rate and κ level of agreement

	Round 1	Round 2	Round 3	*P*
Mean accuracy rate (%)	40	48	67	<.05
κ Level of agreement	0.20	0.22	0.27	NS

Abbreviation: NS, not significant.

National survey of B1 and B2 reporting of breast needle core biopsies

J Clin Pathol 2015;0:1–4.

Rahul Deb,[1] Jacquie A Jenkins,[2] David Rowlands,[3] Ian O Ellis,[4] Andrew HS Lee[4]

Questionario

701 patologi

279 (40%)

89% dedicati

also recommended for symptomatic lesions.[1] High levels of diagnostic accuracy can be achieved using the triple approach which combines clinical and radiological findings with core biopsy diagnosis.

The NHSBSP guidelines state that the B category should be solely based on the histological features.[1] B1 categorisation "indicates a core of normal tissue whether or not breast parenchymal structures are present. Normal histology may indicate that the lesion has not been sampled." However, "in the case of certain benign lesions, such as hamartomas and lipomas, apparently normal histological features would be expected on core biopsy. Cores with B1 diagnoses may contain microcalcification, for example within involutional lobules. A core is classified as B2 when it contains a benign abnormality … including fibroadenomas, fibrocystic changes, sclerosing adenosis, duct ectasia … abscesses [or] necrosis. In some cases, it may be difficult to determine whether a specific lesion is present, for example if minor fibrocystic changes are seen. It may be appropriate and prudent to classify the lesion as B1, rather than B2, if only very minor changes are present." The judgement of the

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Table 1 Responses to the clinical scenarios

Responses—number (%) Question	B1	B2	Prefer B1/B2	Comments, number of responses
				Check size of calcification 4 B category depends on radiology 10 B1 as not representative 2
6. Biopsies done for a vague mass seen on mammogram. Histology shows mostly normal/mild fibrosis, with one small cyst in one core. No microcalcification	107 (40%)	81 (31%)	77 (29%)	Need MDT discussion 46 B category depends on MDT 22 Biopsy may not be representative 6 Repeat biopsy 1 Need levels 1
7. Biopsies done for calcification seen on mammogram. Histology shows prominent fibrocystic change, with fibrosis, cysts and apocrine change throughout the cores. However, no microcalcification is seen	163 (61%)	75 (28%)	28 (11%)	Need MDT discussion 27 No calcification in biopsy 56 Check calcs in block X-ray 16 Need rebiopsy 11 B1 if no calcification in biopsy 11 Polarise to look for Wedelite 3 X-ray the block 1
8. Biopsies done for a well-defined mass on mammogram and ultrasound. Cores show a fibroadenoma	0	268 (100%)	0	Need MDT discussion 4
9. Biopsies done for a spiculate mass seen on mammogram, highly suspect of a cancer. Cores show prominent fibrocystic change, with fibrosis, cysts and apocrine change	84 (32%)	141 (53%)	41 (15%)	Need MDT discussion 74 Biopsy may not be representative 65 Need repeat biopsy 25 Need levels 4 B1 as not representative 3 B2 if representative 1

Take home messages

- The breast screening guidelines state that core biopsy diagnosis should be based solely on the histological features.
- The guidelines also state that the multidisciplinary meeting should decide whether a lesion has been adequately sampled.
- This survey shows that some pathologists when choosing the diagnostic category are influenced by the clinical or radiological features, in particular by whether they consider a lesion has been adequately sampled.