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LCISの病理

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小葉内細乳管内の増殖性病変

- 小葉過形成

lobular hyperplasia

- 異型小葉過形成

Atypical lobular hyperplasia

- 非浸潤性小葉癌

Lobular carcinoma in situ

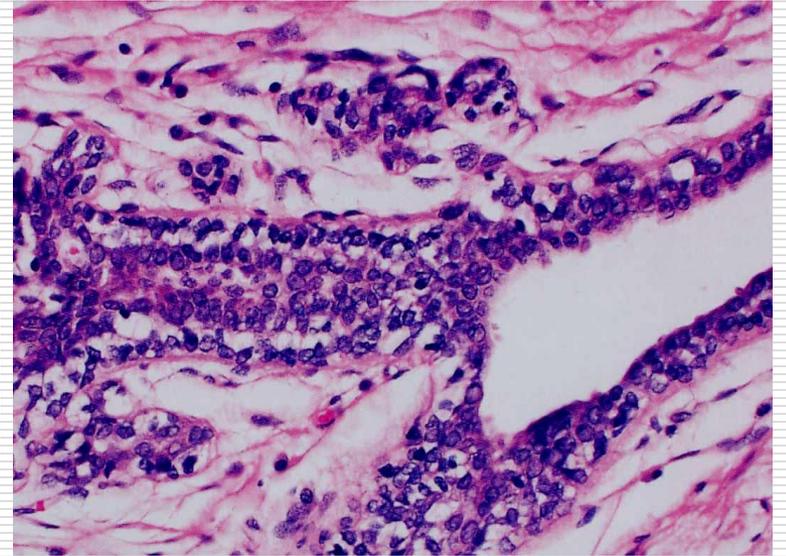
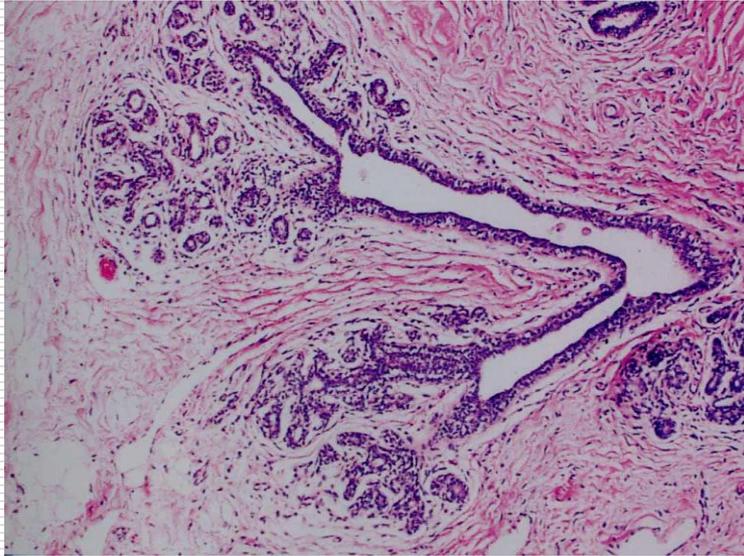
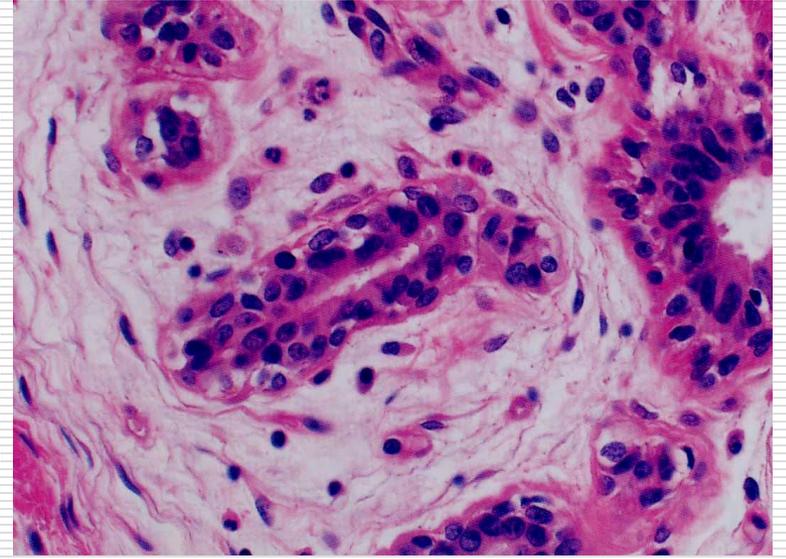
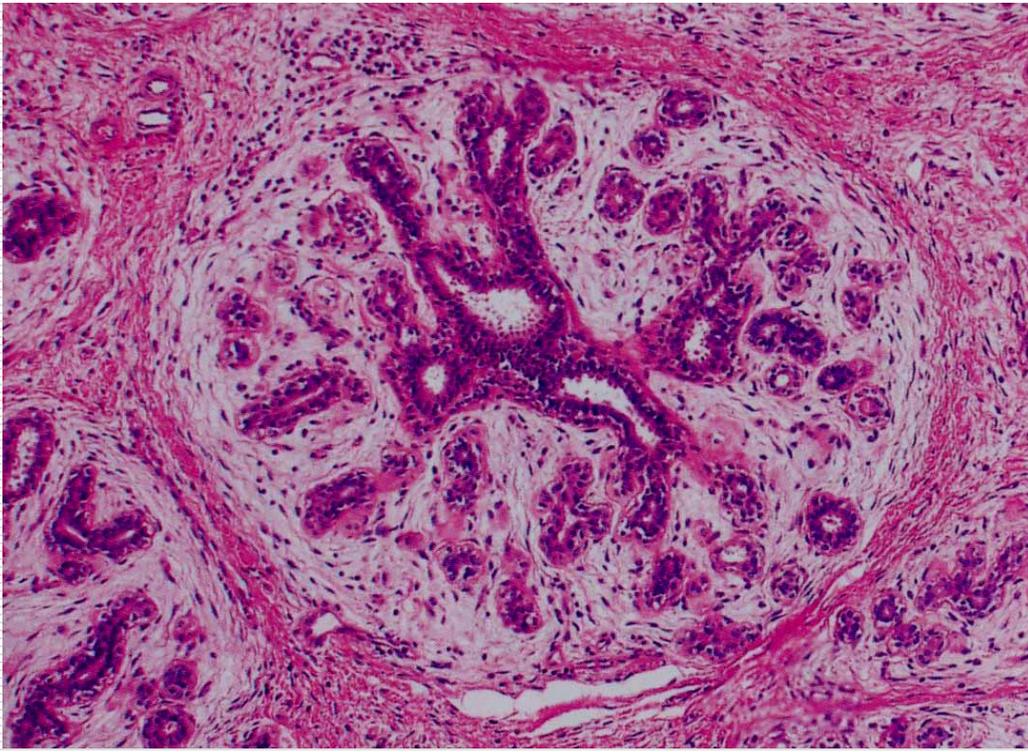
小葉(内)腫瘍

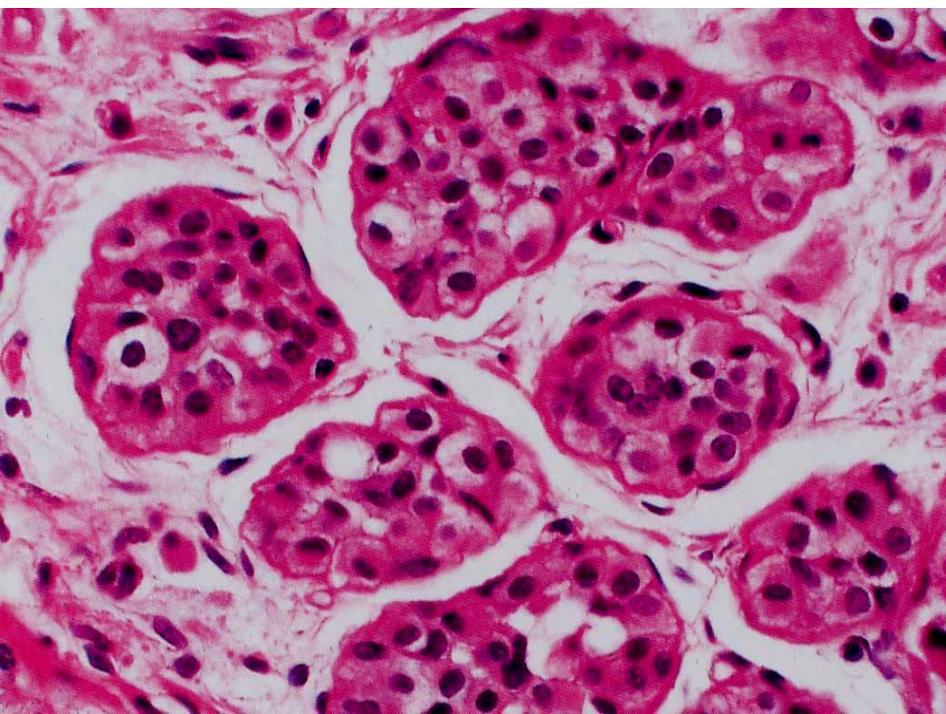
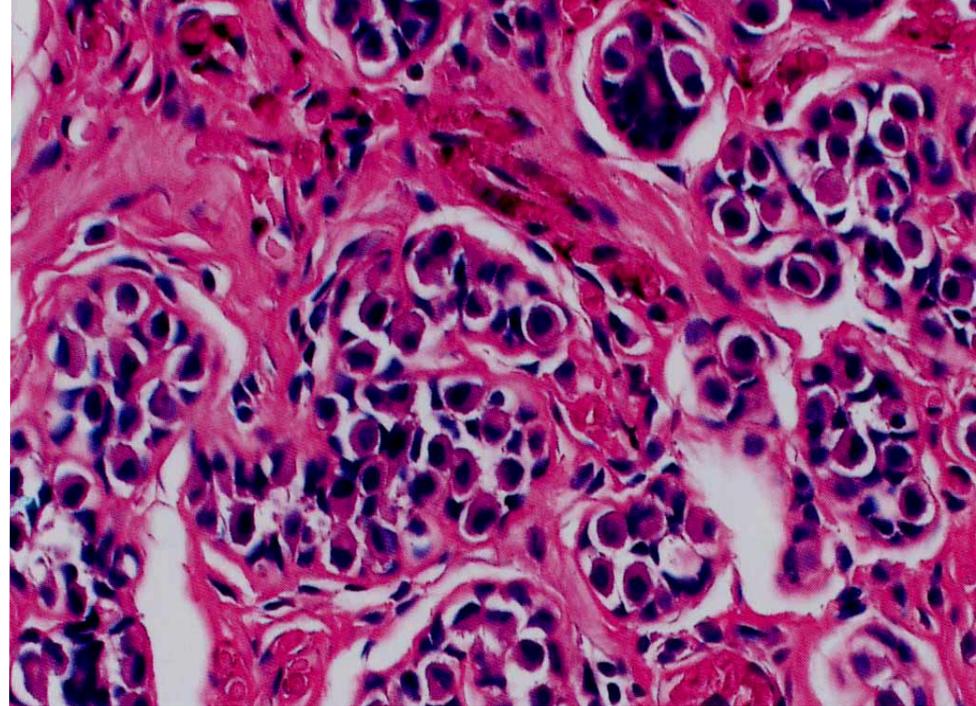
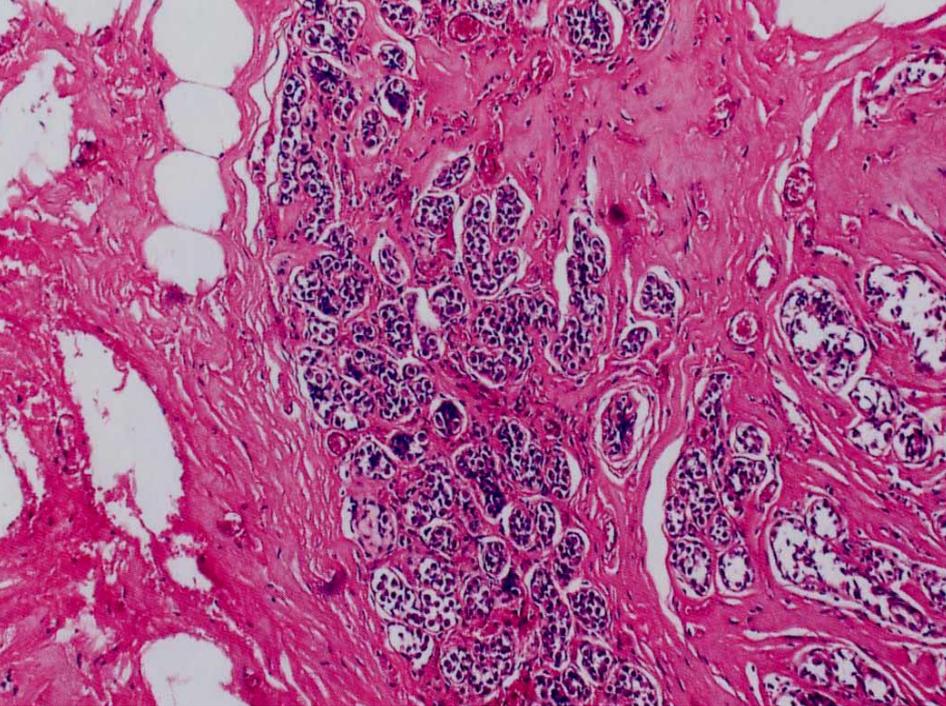
Lobular neoplasia

小葉(内)腫瘍

Lobular neoplasia

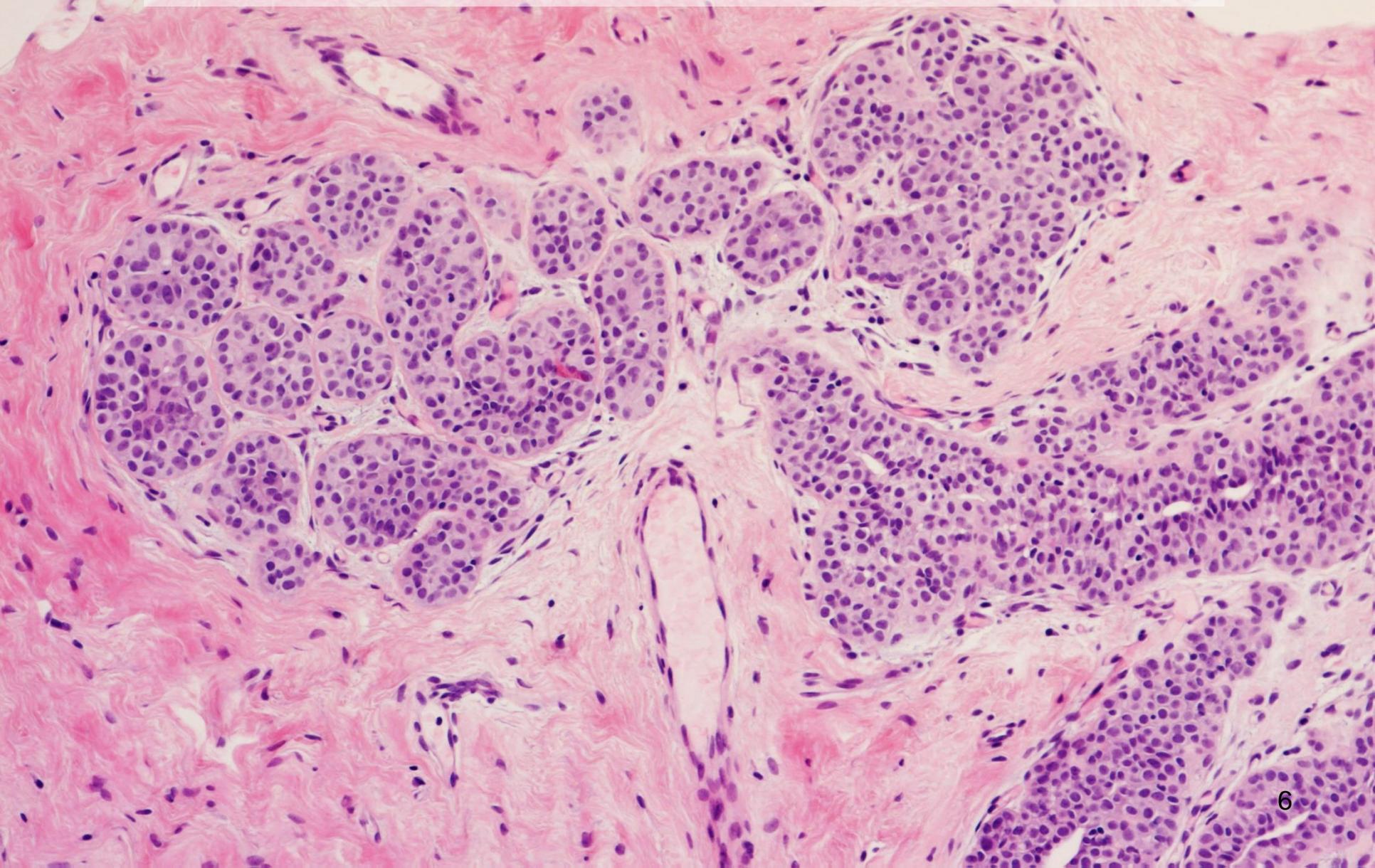
- 小型で接着性に乏しい細胞から構成
- 広いスペクトラムを示す異型病変
- 終末乳管・小葉単位 (terminal duct lobular unit; TDLU) から発生
- 浸潤癌(浸潤性乳管癌・浸潤性小葉癌)発生のリスクの指標(リスク・マーカー)

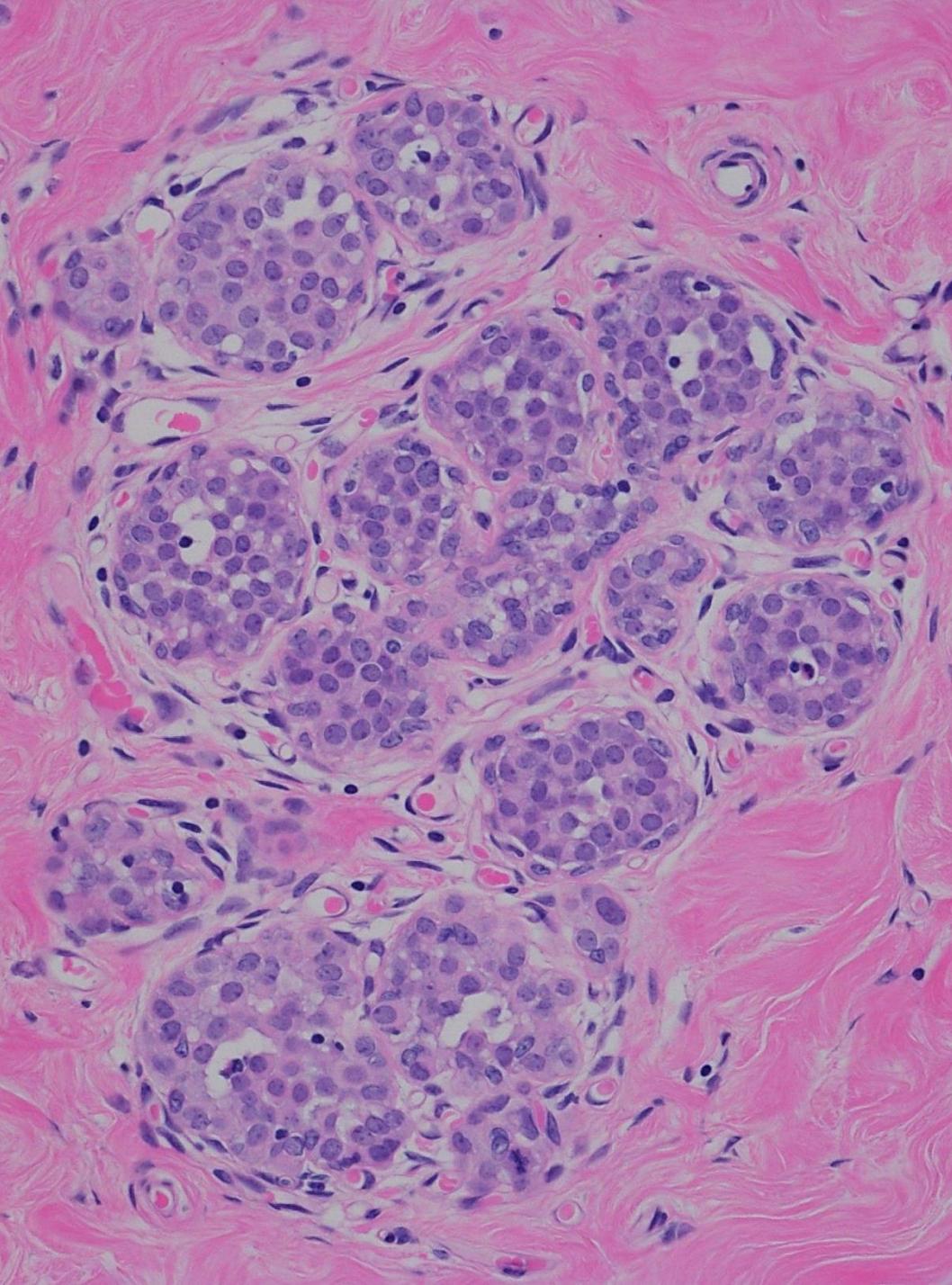




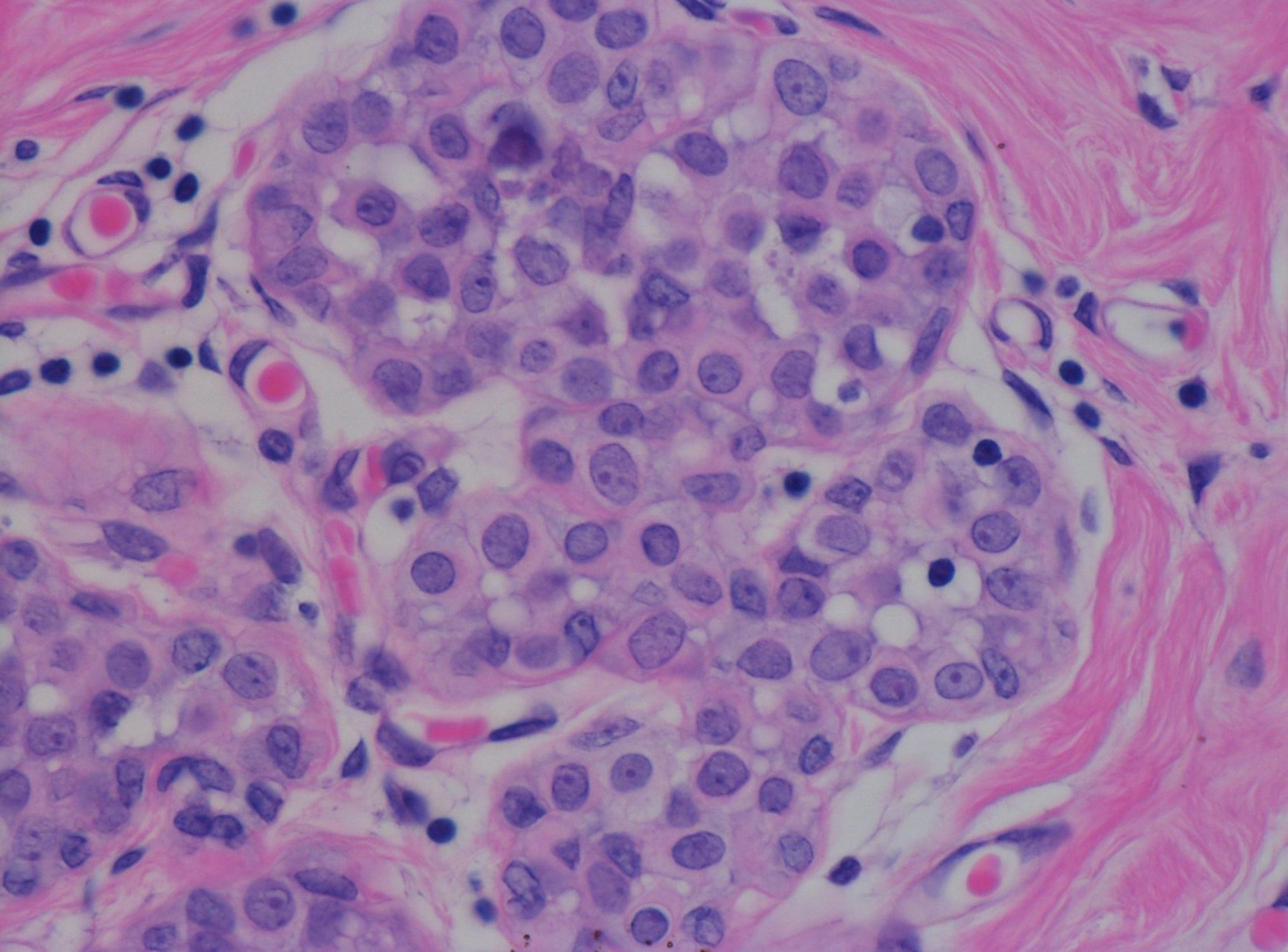
小葉過形成
Lobular hyperplasia

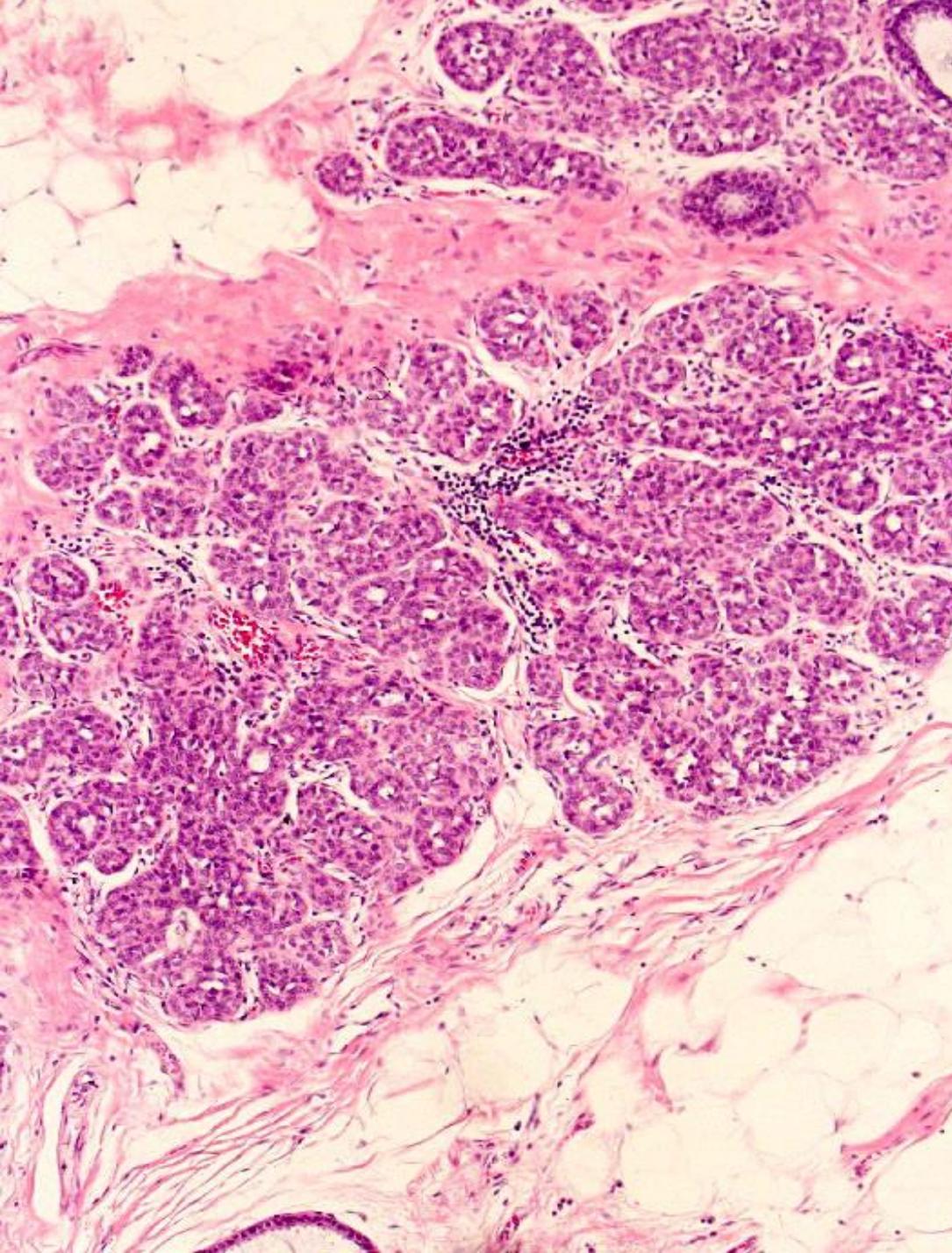
非浸潤性小葉癌



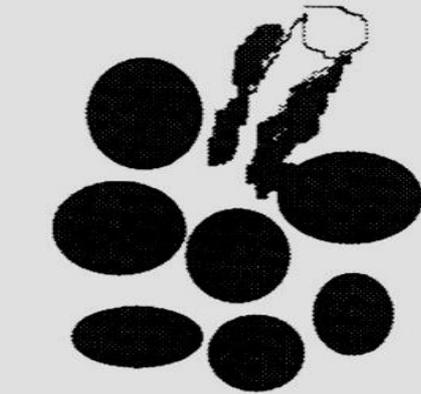


非浸潤性小葉癌 LCIS

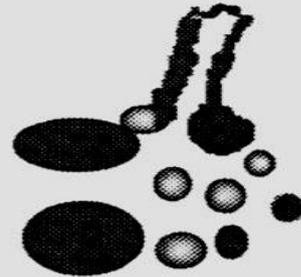
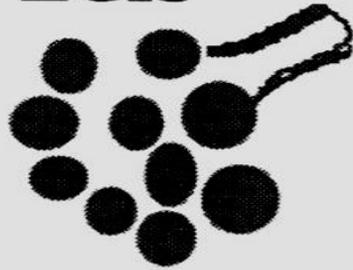




異型小葉過形成
Atypical lobular
hyperplasia



LCIS



ALH



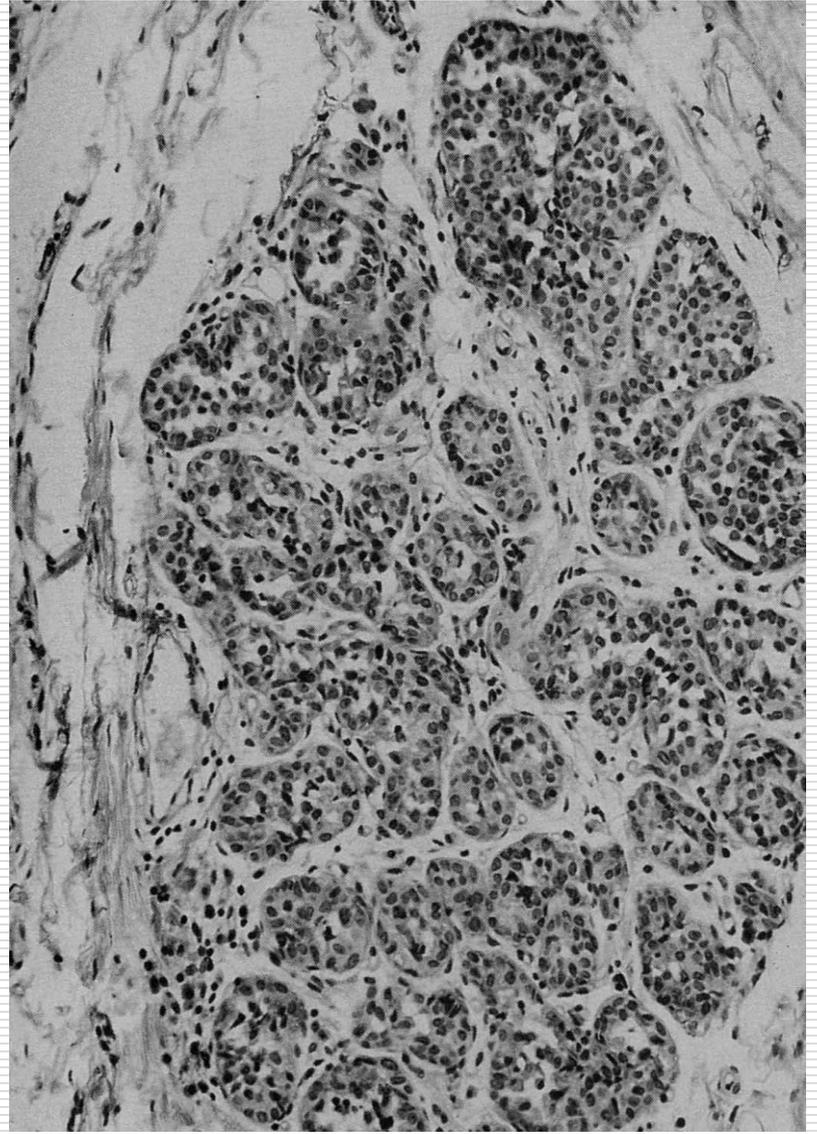
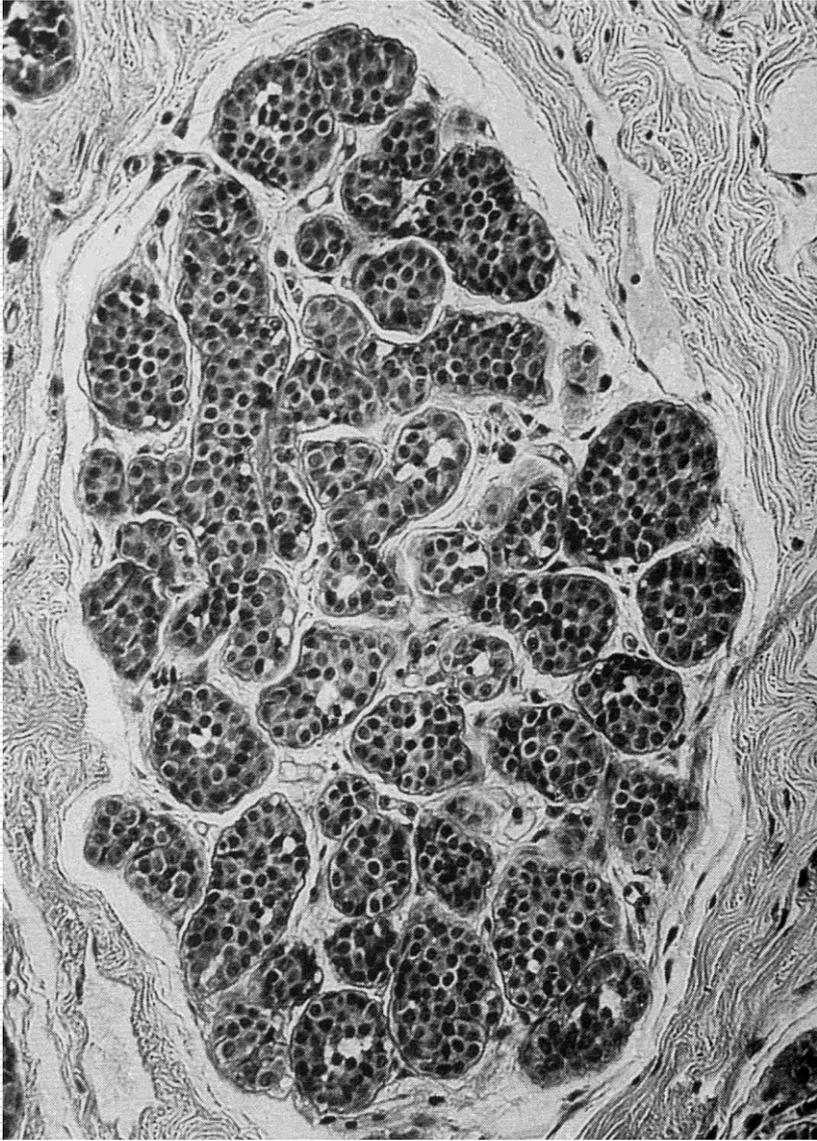
Normal

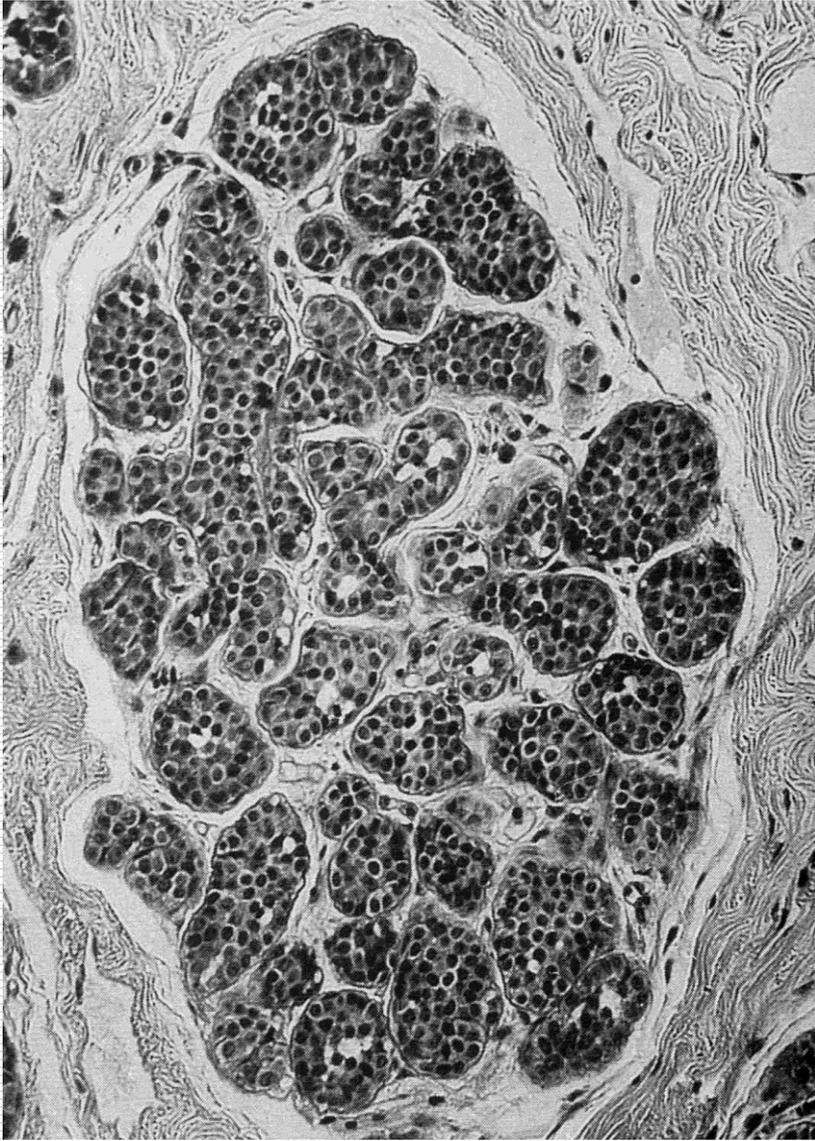
LCIS (Page の基準)

- 特徴的で均一な細胞が小葉単位構成細胞の全てを占める
- 全ての小葉内細乳管(腺房)を完全に充満(隙間なし)
- 小葉内細乳管(腺房)の少なくとも半分が拡大、あるいは変形

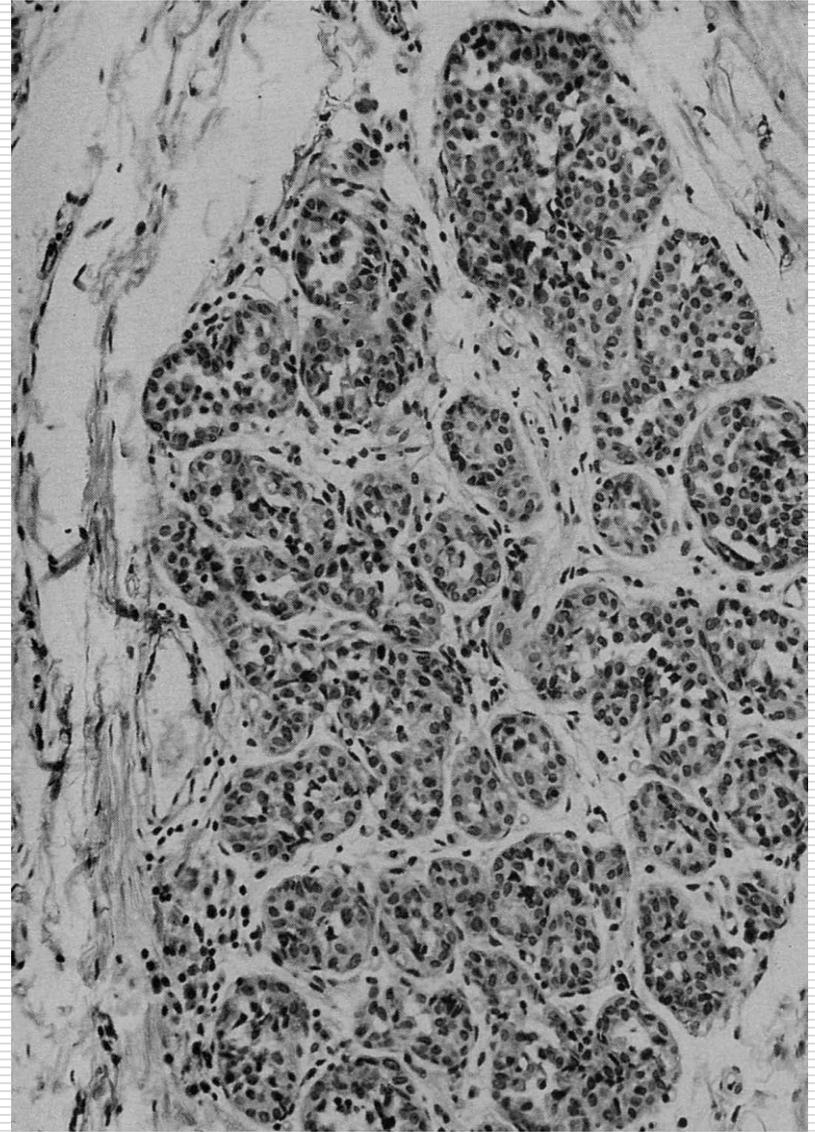
ALH

- 筋上皮細胞などが介在
- 小葉内細乳管の拡張と変形が半数にとどまる
- 細胞の充満が不十分(隙間が残存)

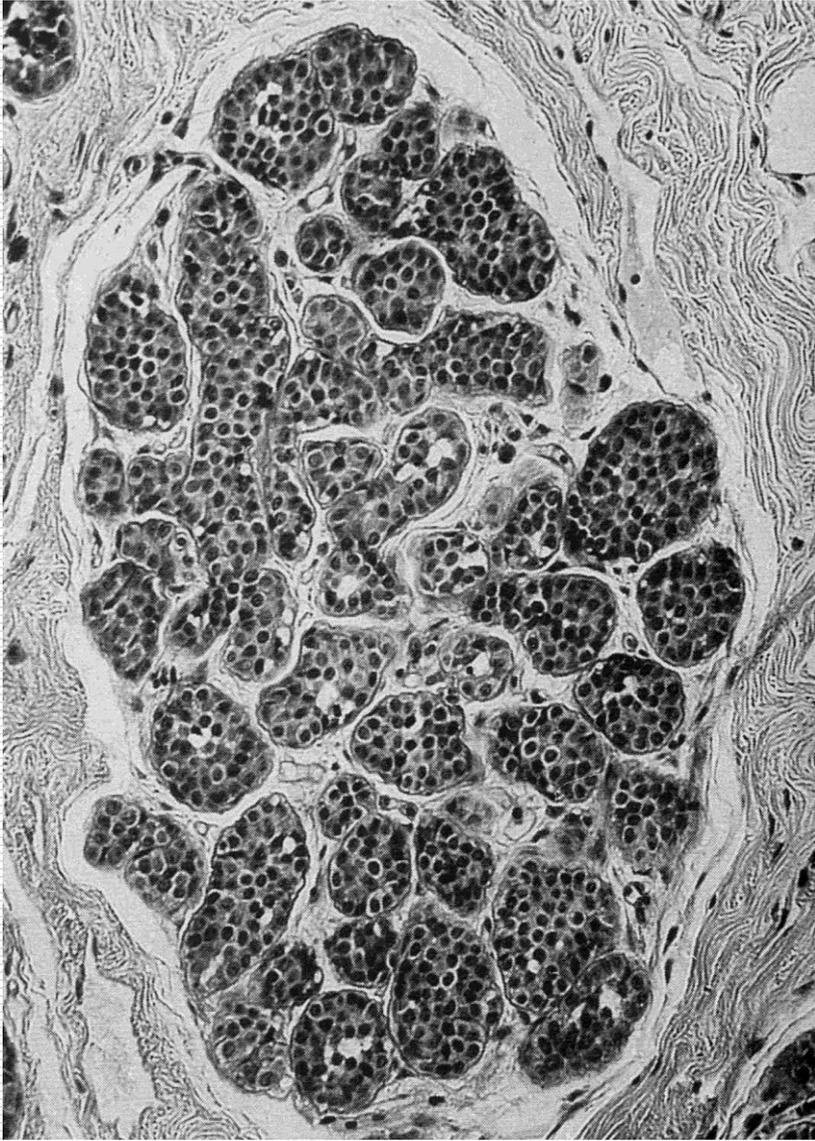




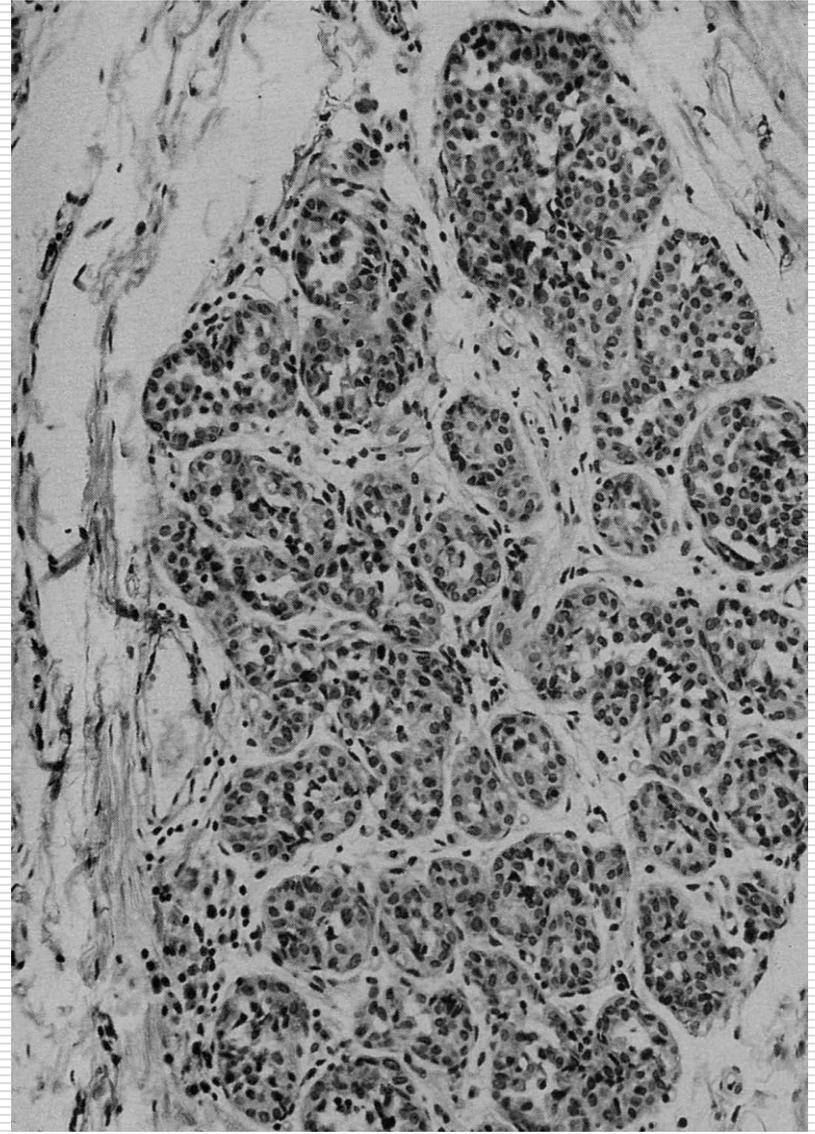
LCIS



異型小葉過形成



Lobular neoplasia



Lobular neoplasia

非浸潤性小葉癌

Lobular carcinoma in situ (LCIS)

- MMG異常に対して施行されたCNBでLCIS、ALHのみがみつかるとの頻度
– 0.5～2.9%
- 偶然発見
– 良性生検の0.5-3.8%

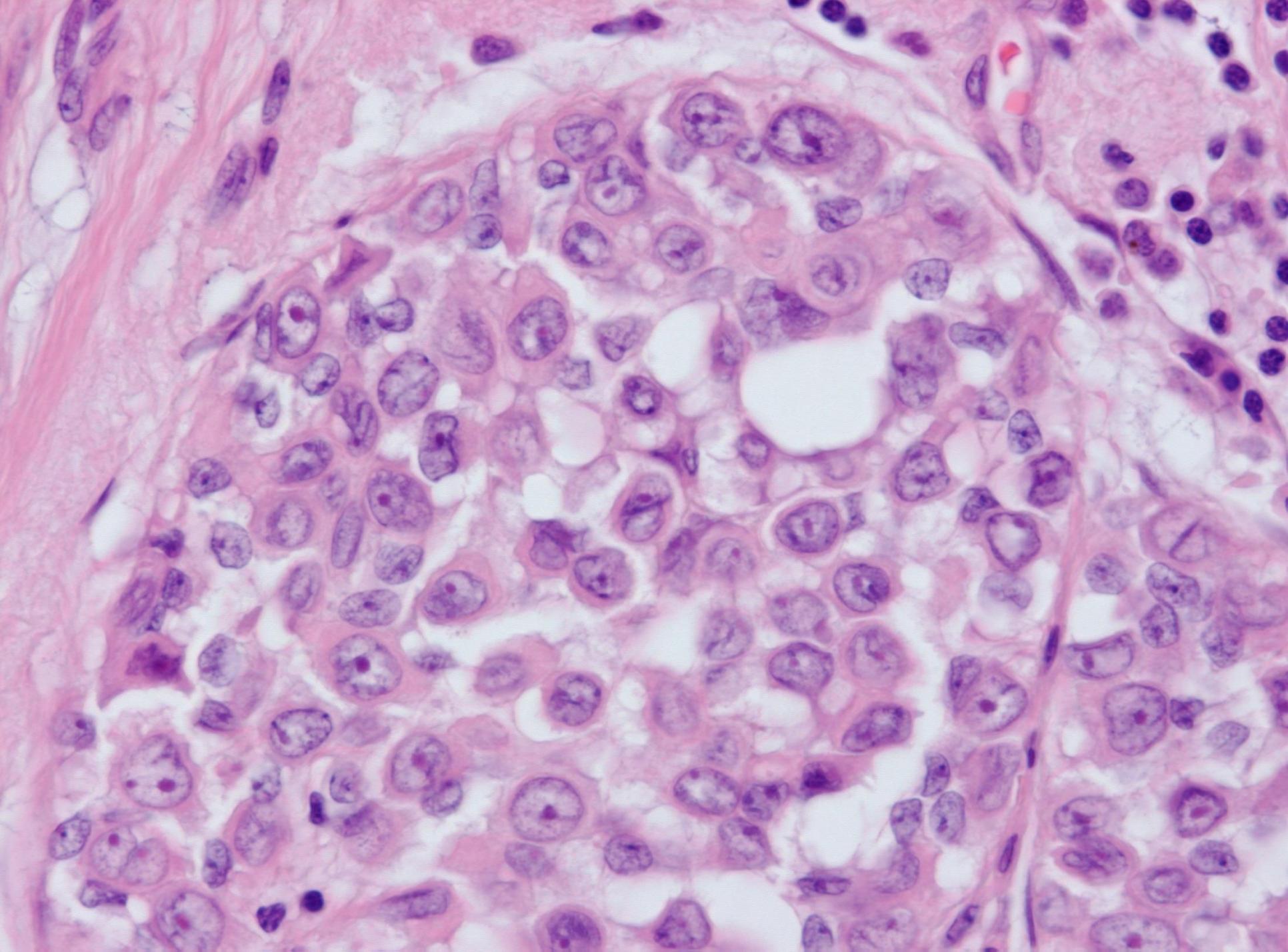
非浸潤性小葉癌

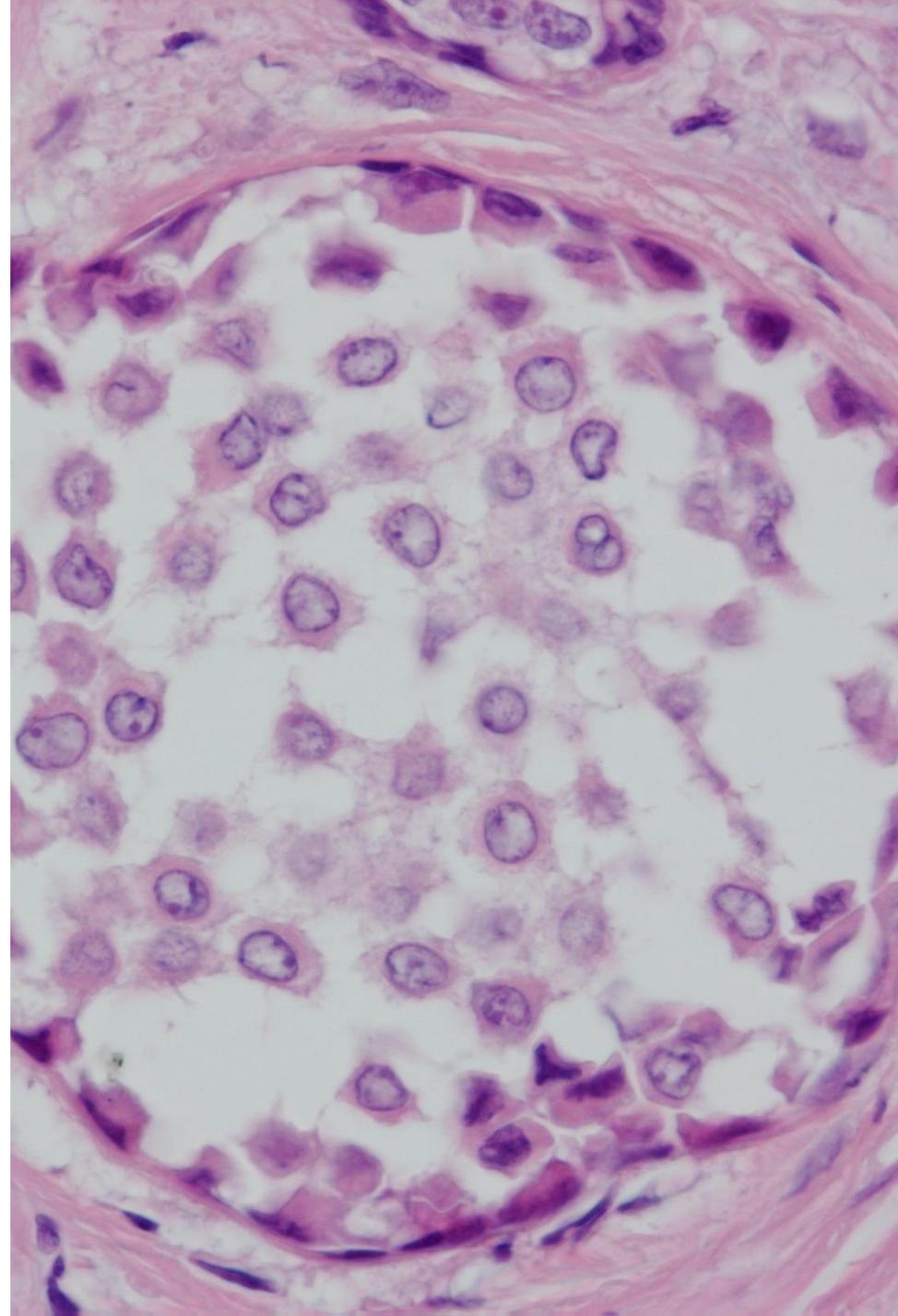
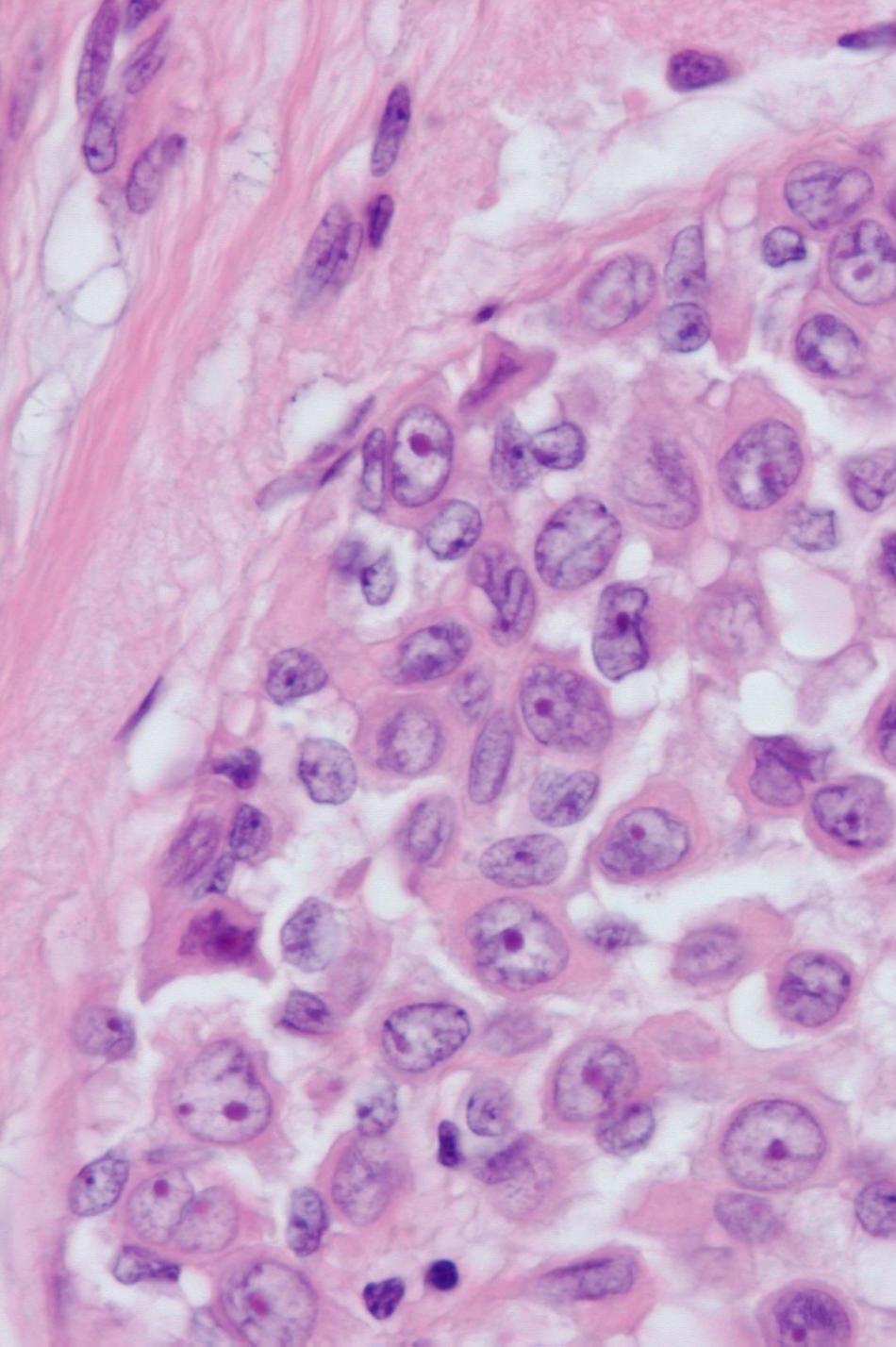
Lobular carcinoma in situ (LCIS)

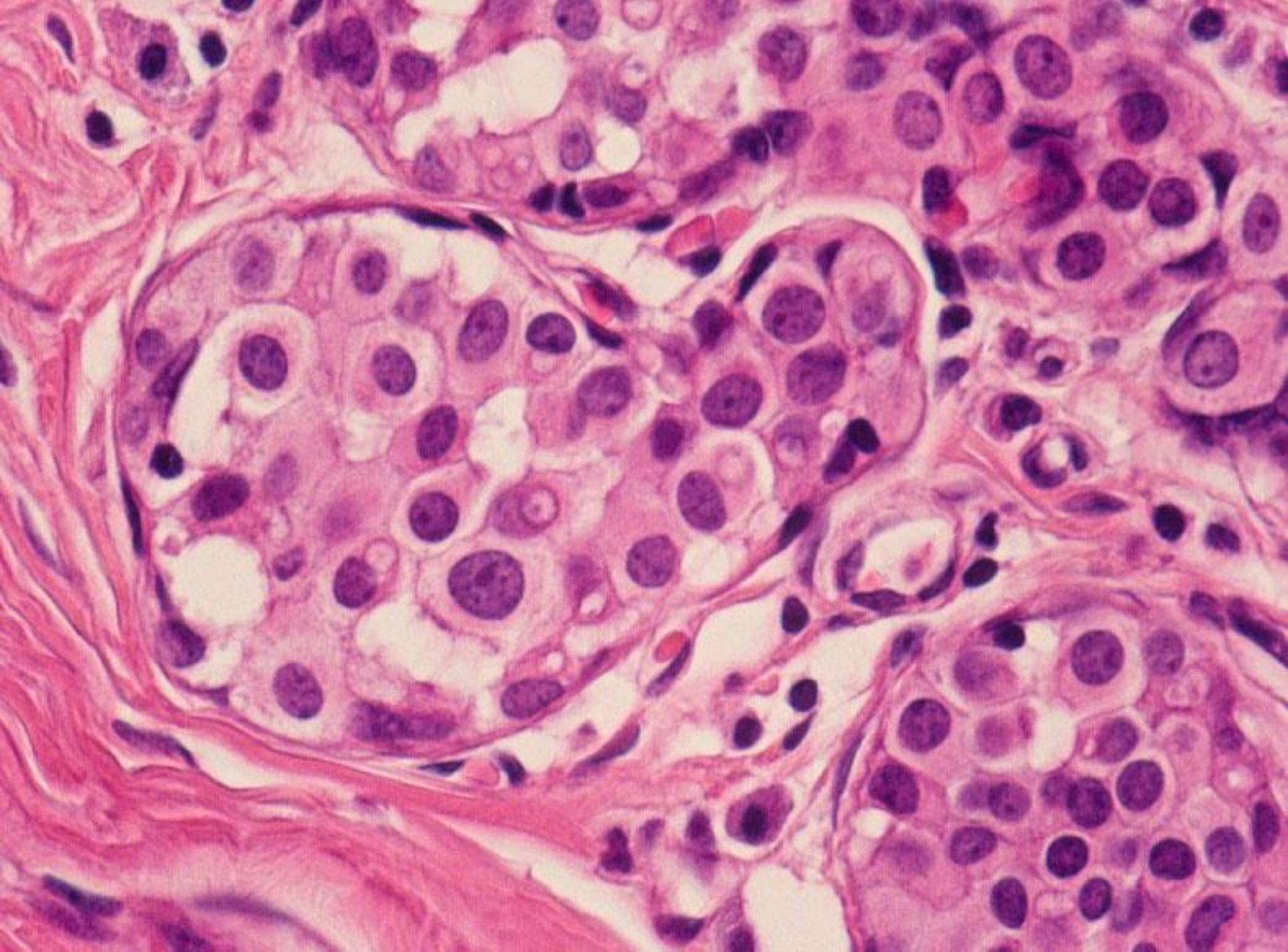
- 閉経前にピークを迎え、その後減少
- しばしば両側性(50~70%)
 - DCISは10~20%
- 多巣性、多中心性(30~40%)
- 腫瘤形成なし

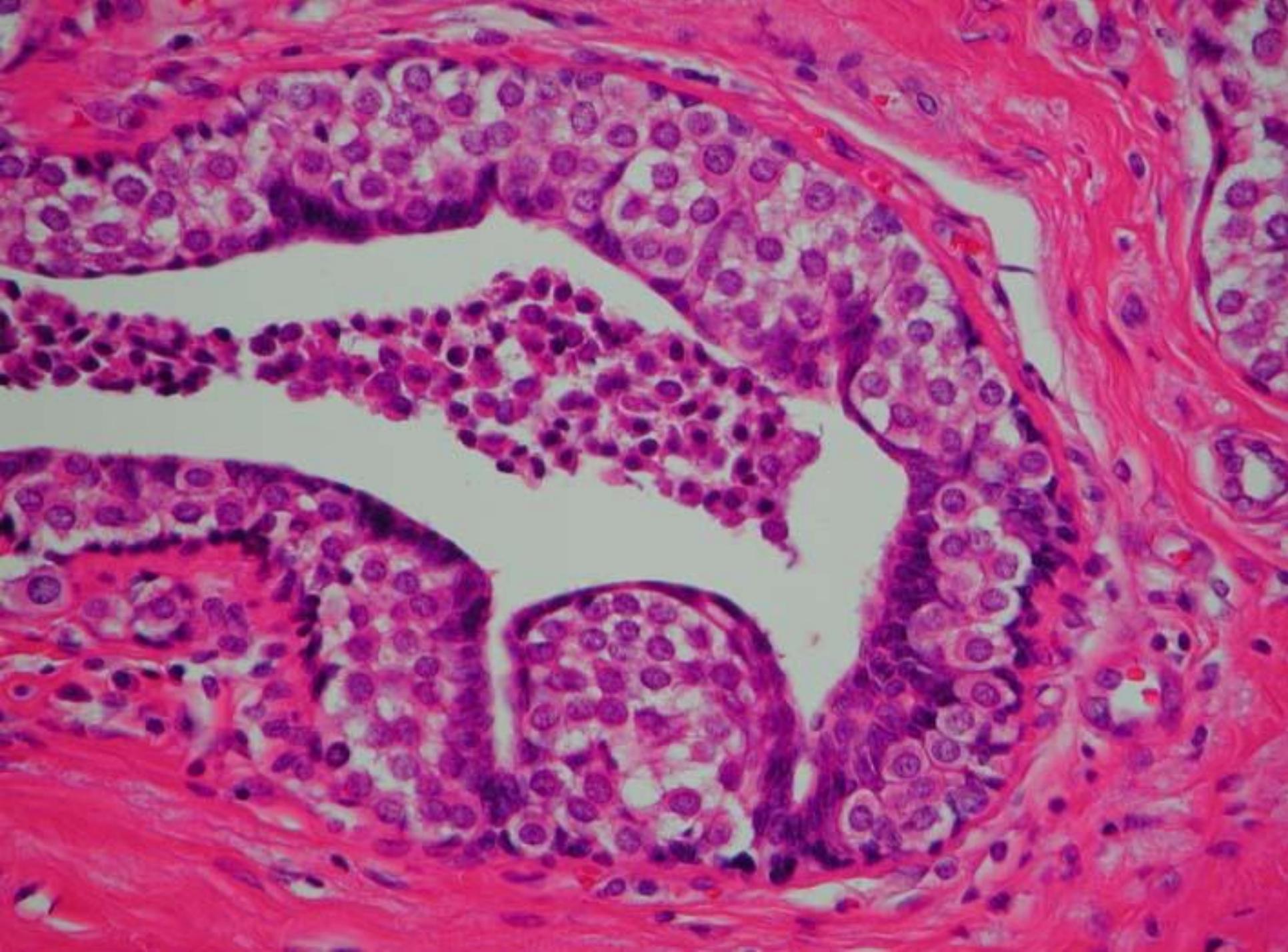
非浸潤性小葉癌

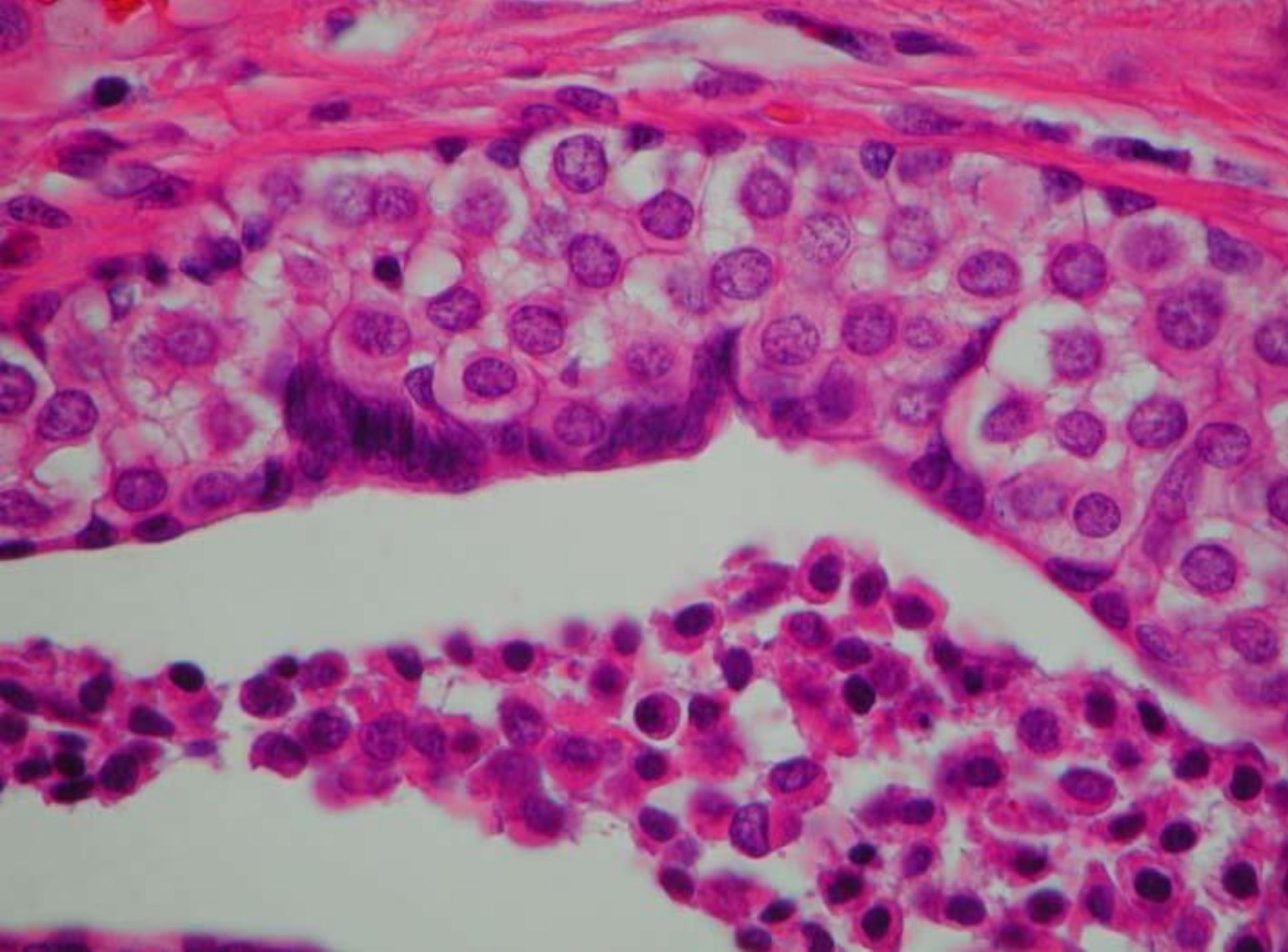
- 古典型 (A型) Classical
- 多形型 (B型) Pleomorphic
- 印環細胞型 Signet-ring cell
- 淡明細胞型 Clear cell
- アポクリン型 Apocrine
- 筋類似型 Myoid
- モザイク型 Mosaic (“fried egg”)

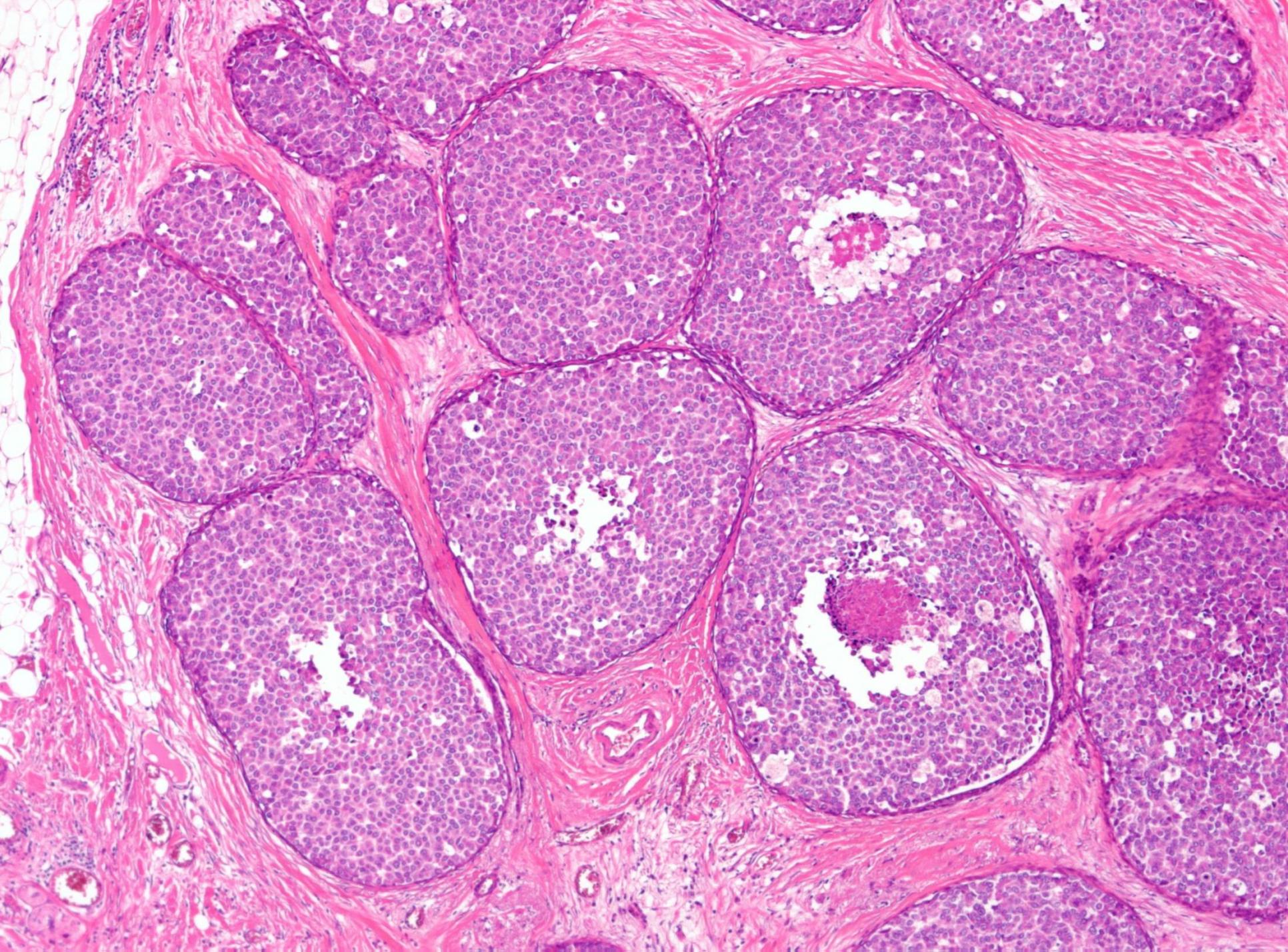


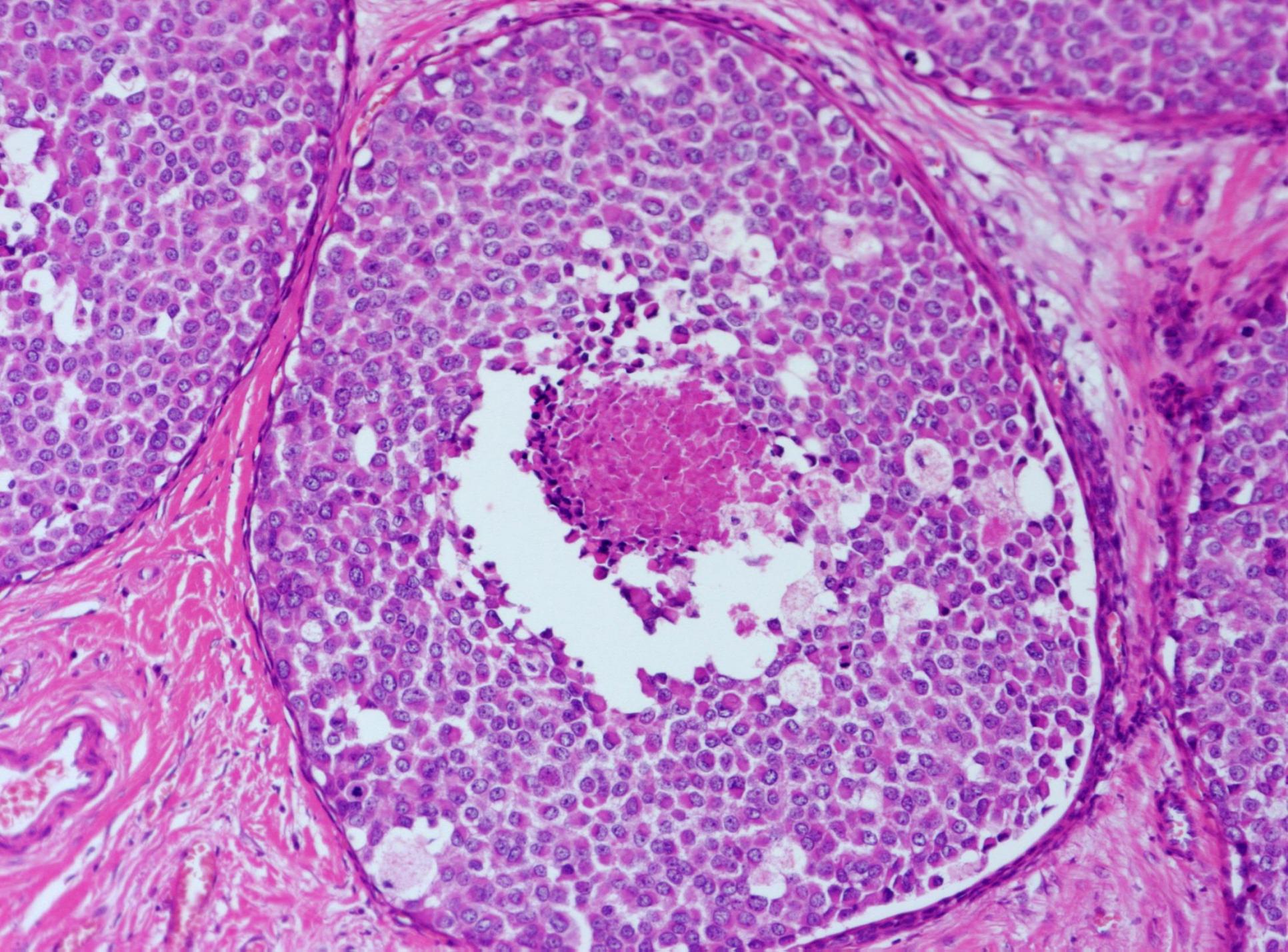


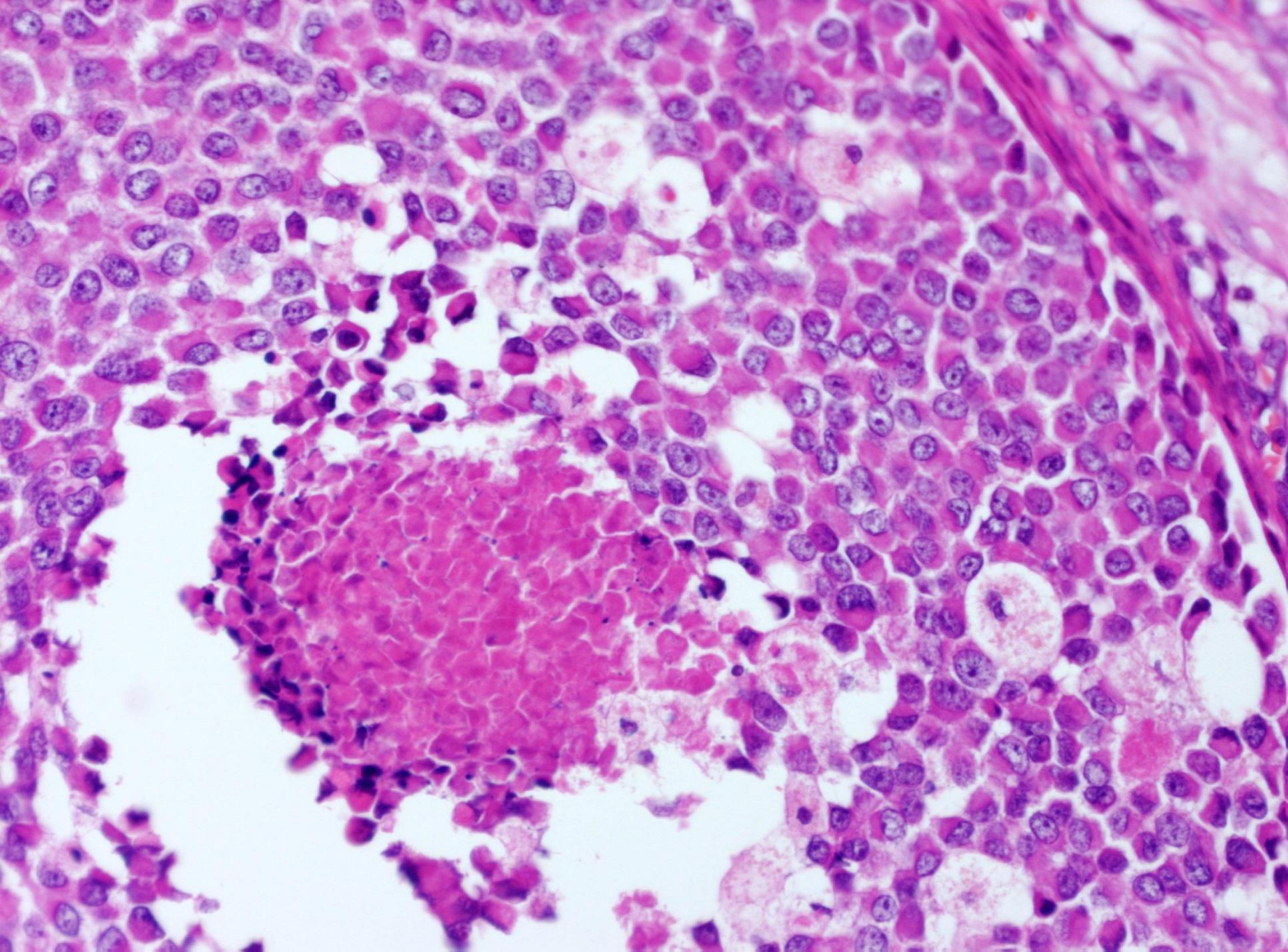


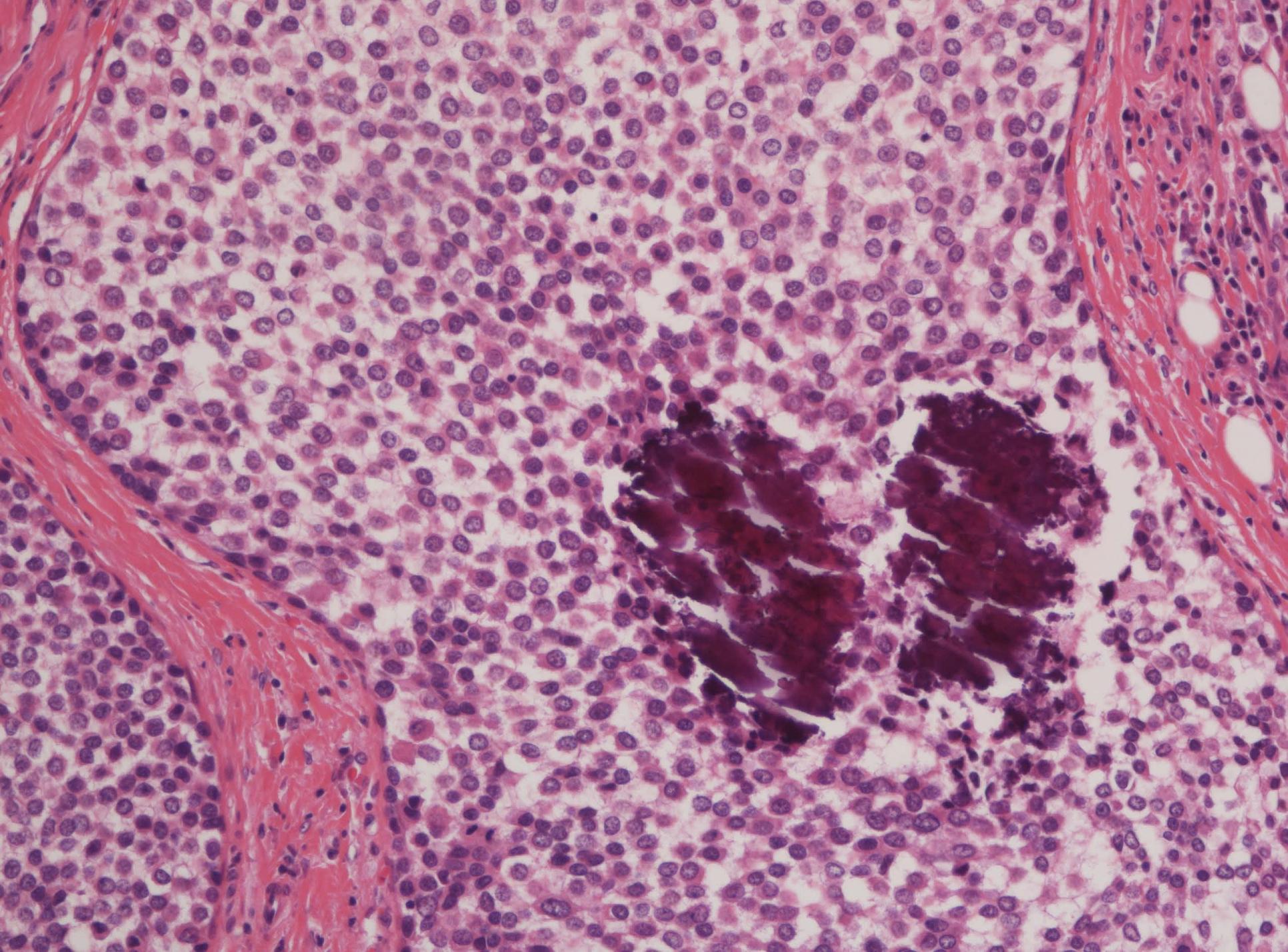






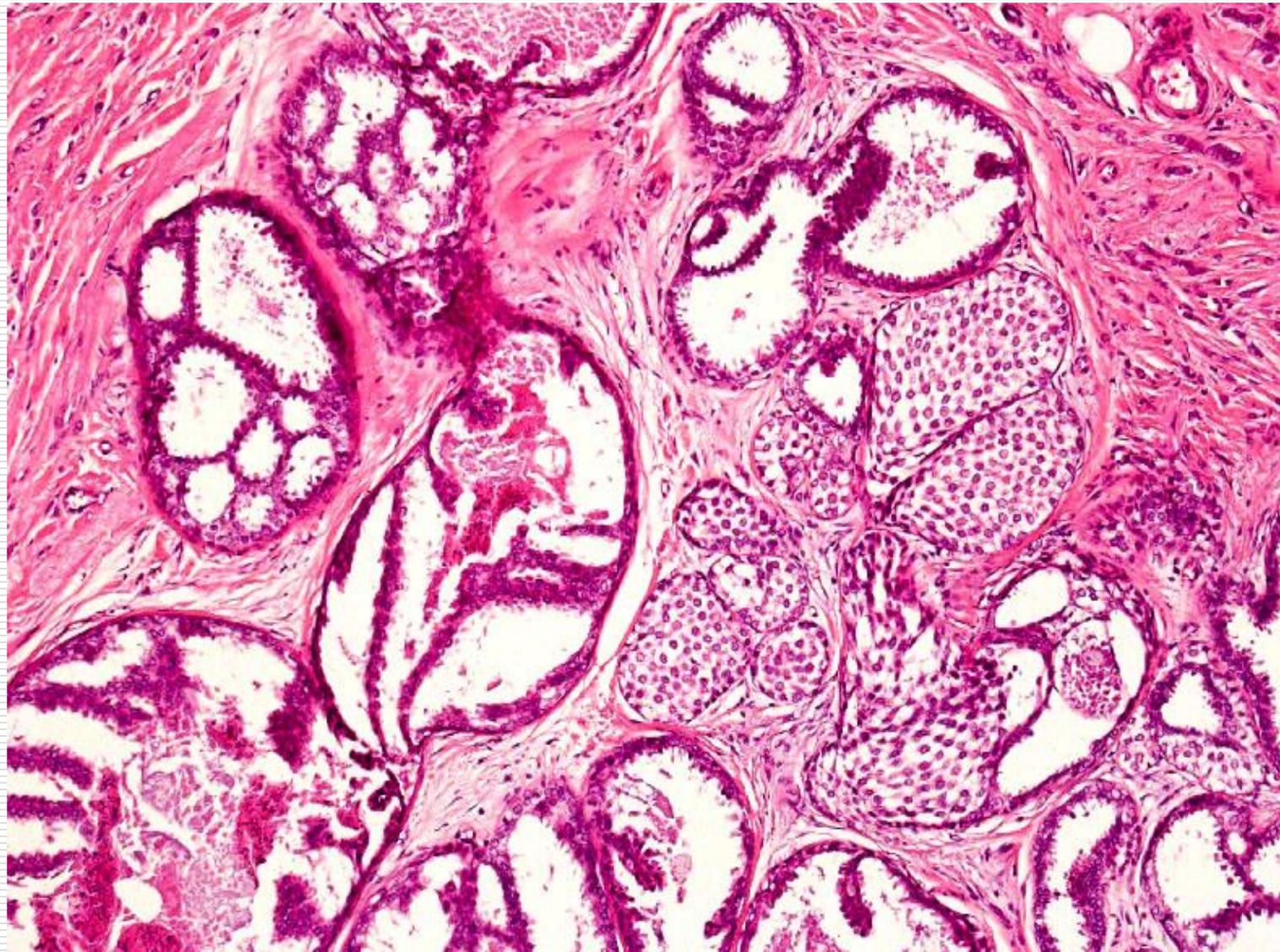




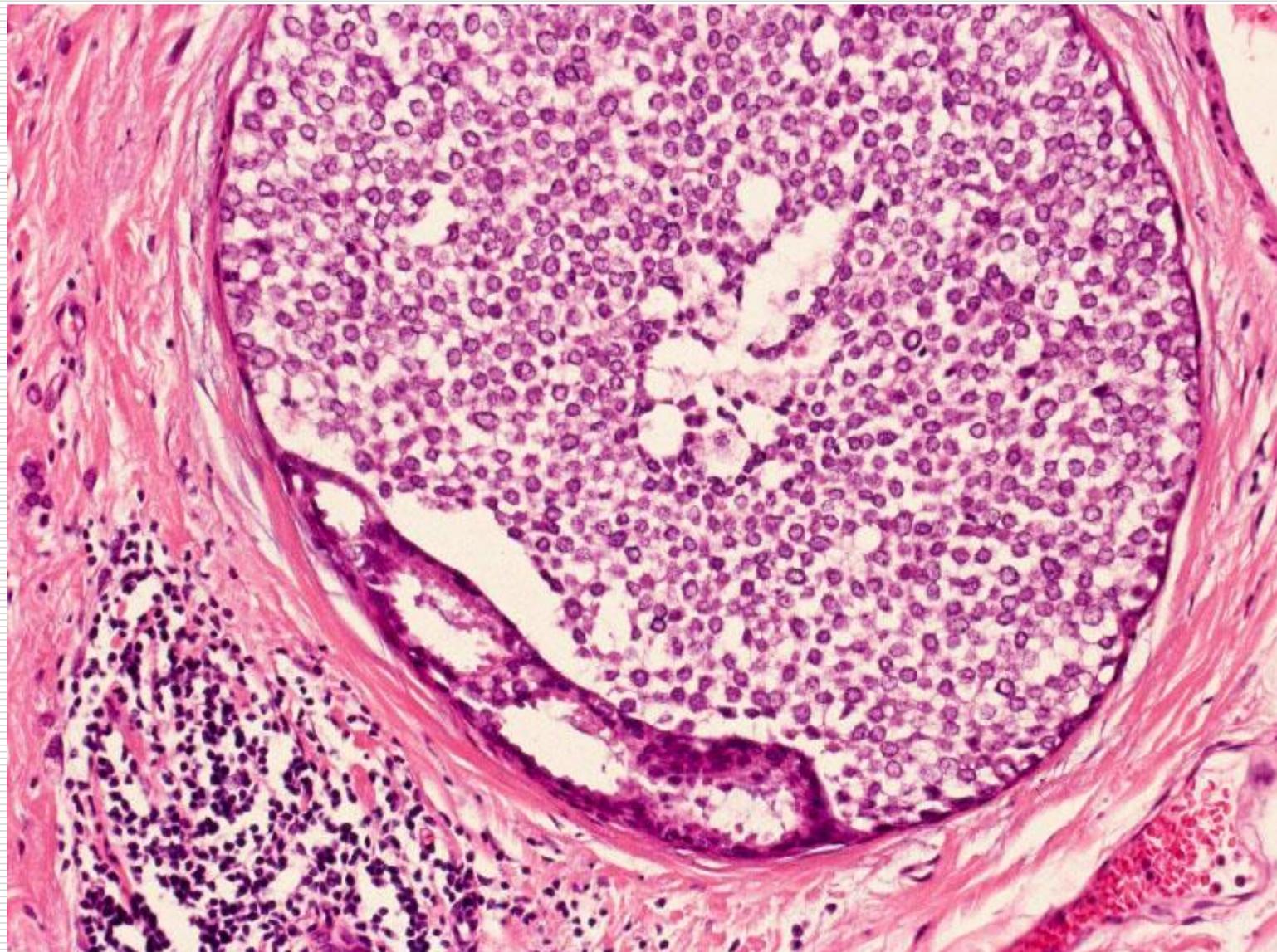


広範な非浸潤性小葉癌 Florid LCIS

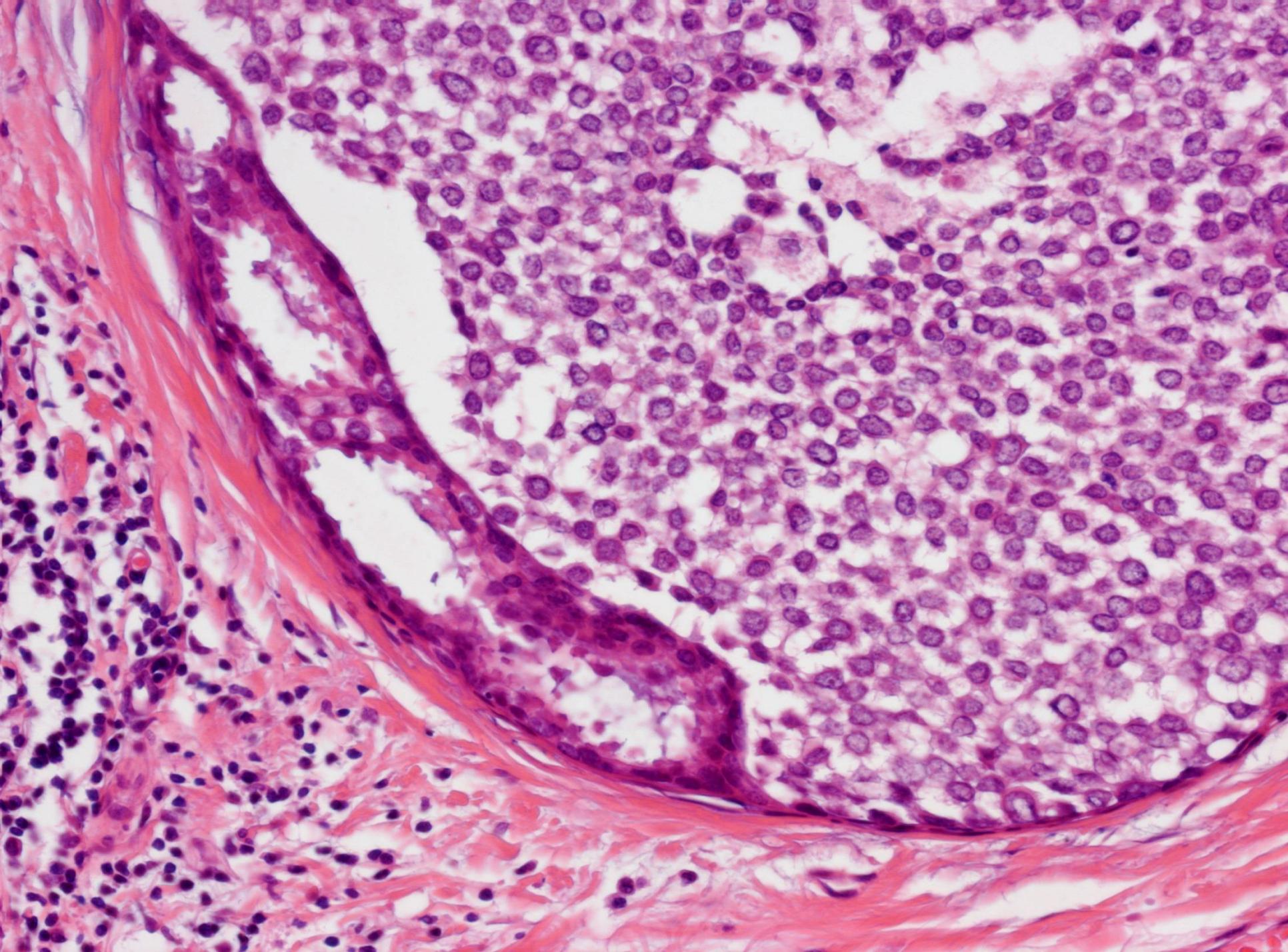
- 小葉から乳管内に進展して、乳管を充満
- 壊死・石灰化
- 微小浸潤の併存に注意
- DCISに準じた取扱い



DCIS and LCIS



DCIS and LCIS



小葉(内)腫瘍

Lobular neoplasia

	WHO旧版	WHO2012
ALH	LN1	ALH
LCIS, classical	LN2	LCIS, classical
LCIS, pleomorphic	LN3	LCIS, pleomorphic

LCISとALHのマネージメント

- 生涯にわたる経過観察
- タモキシフェン療法
- 切除生検
- 対側乳腺の生検
- 乳房全摘
 - 1/3の例では対側乳腺でLCIS
 - 家族歴、病歴などを勘案
- 放射線・化学療法
 - LCISは放射線抵抗性？

Lobular carcinoma in situ

前癌病変か？

Lobular carcinoma in situ

のちに浸潤癌が発生するリスク
要因である

LCIS後の浸潤癌発生リスク

- 8～10倍 (ALH 4～5倍)
- 1～2%/年
- 7～8%/10年
- 30～40%/生涯

LCISの診断後の浸潤癌の リスク要因

- 家族歴
- 未経産

LCIS 1174例(18文献)

→ 浸潤癌181例(15.4%)

**対側
79例(6.7%)**

**同側
102例(8.7%)**

Ductal:Lobular = 1:1

Ductal:Lobular = 1:1

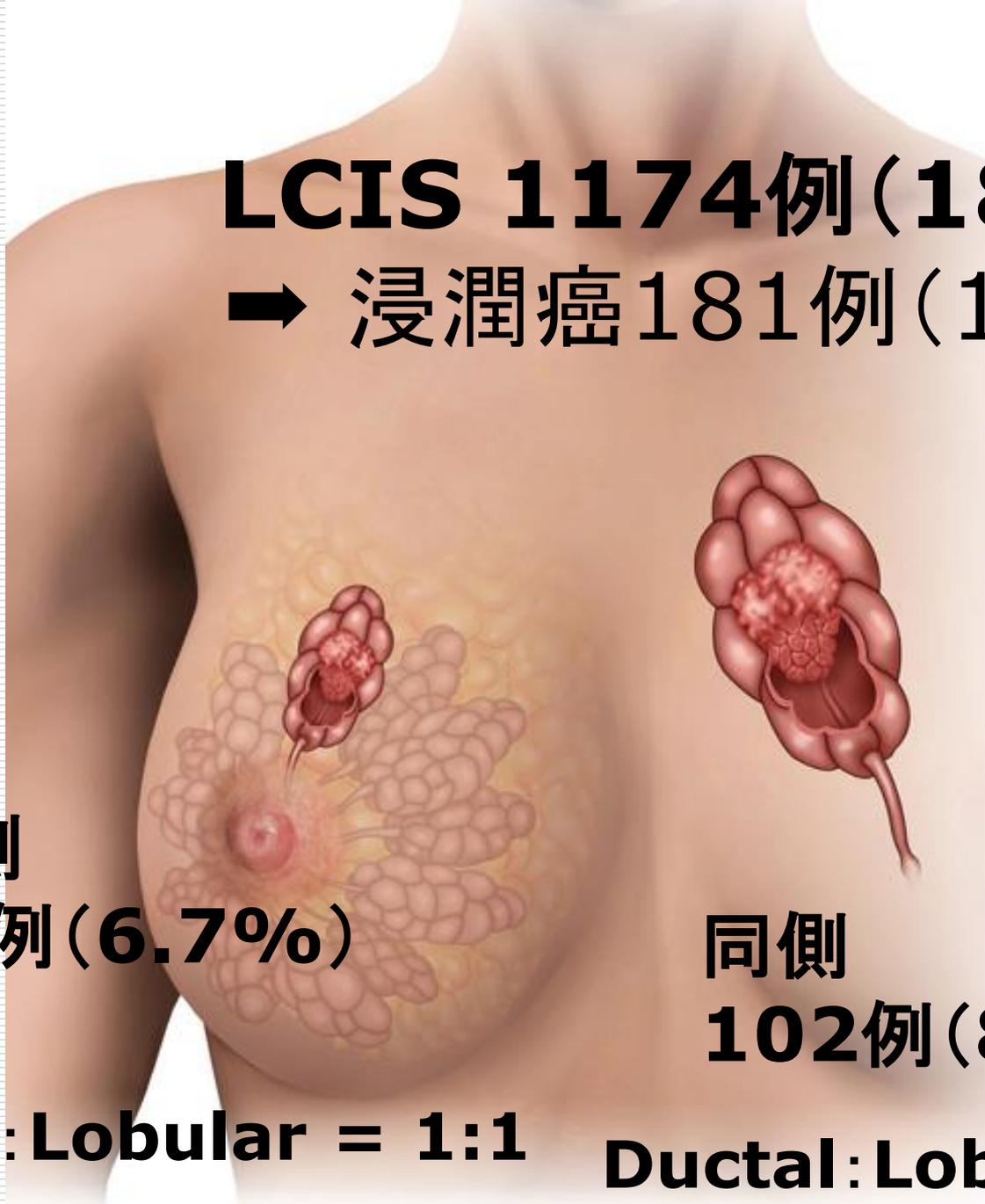
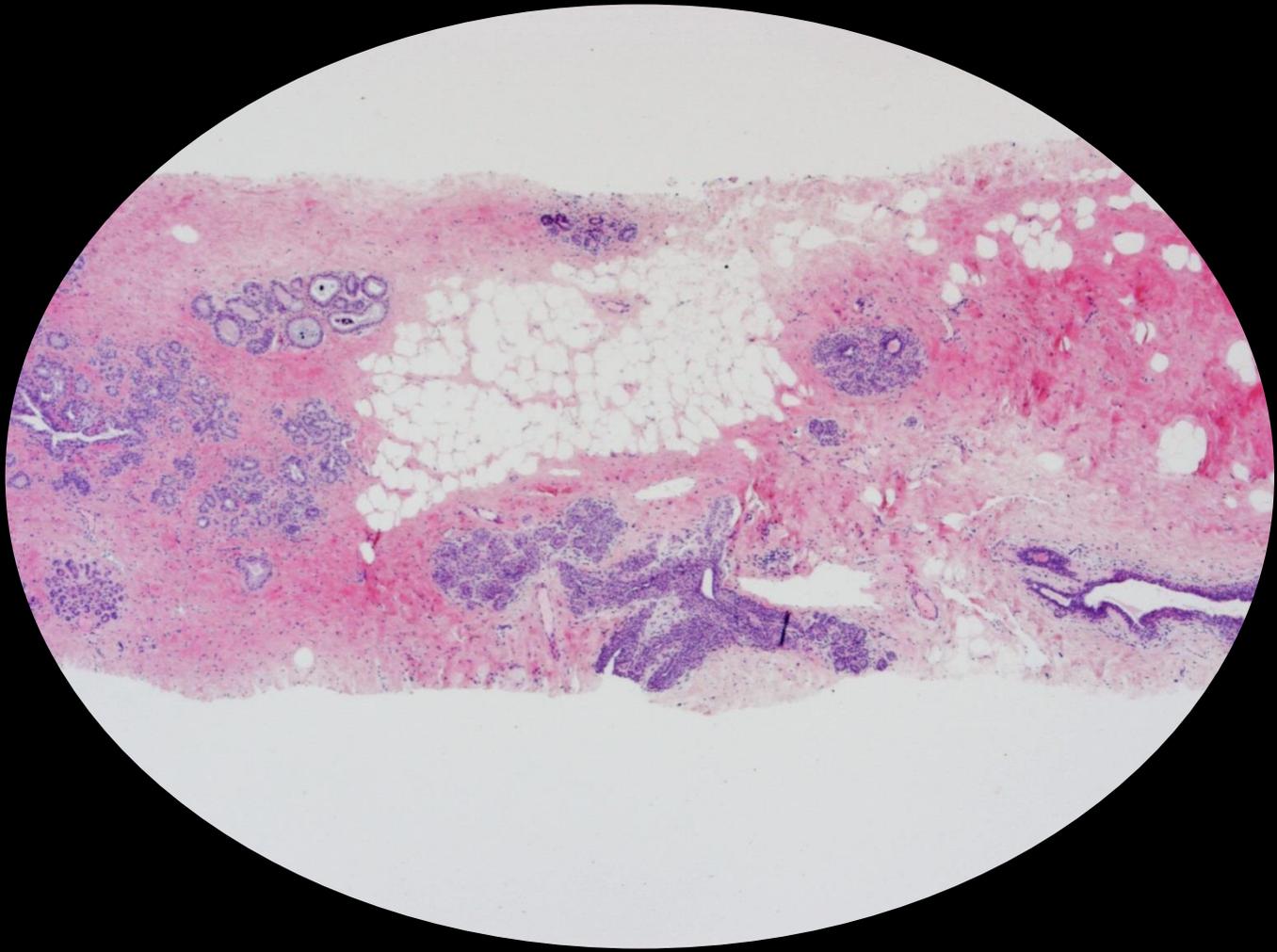
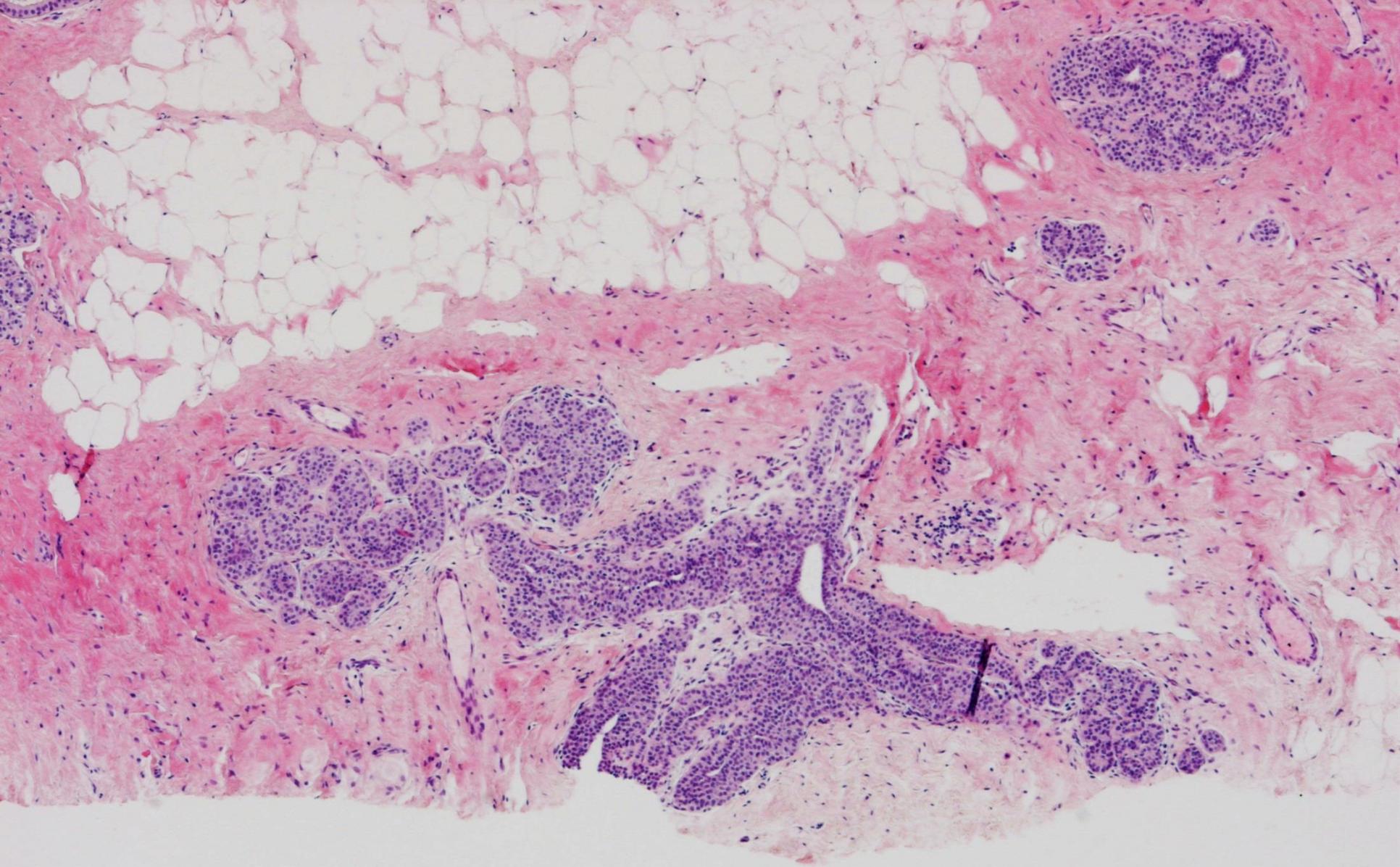
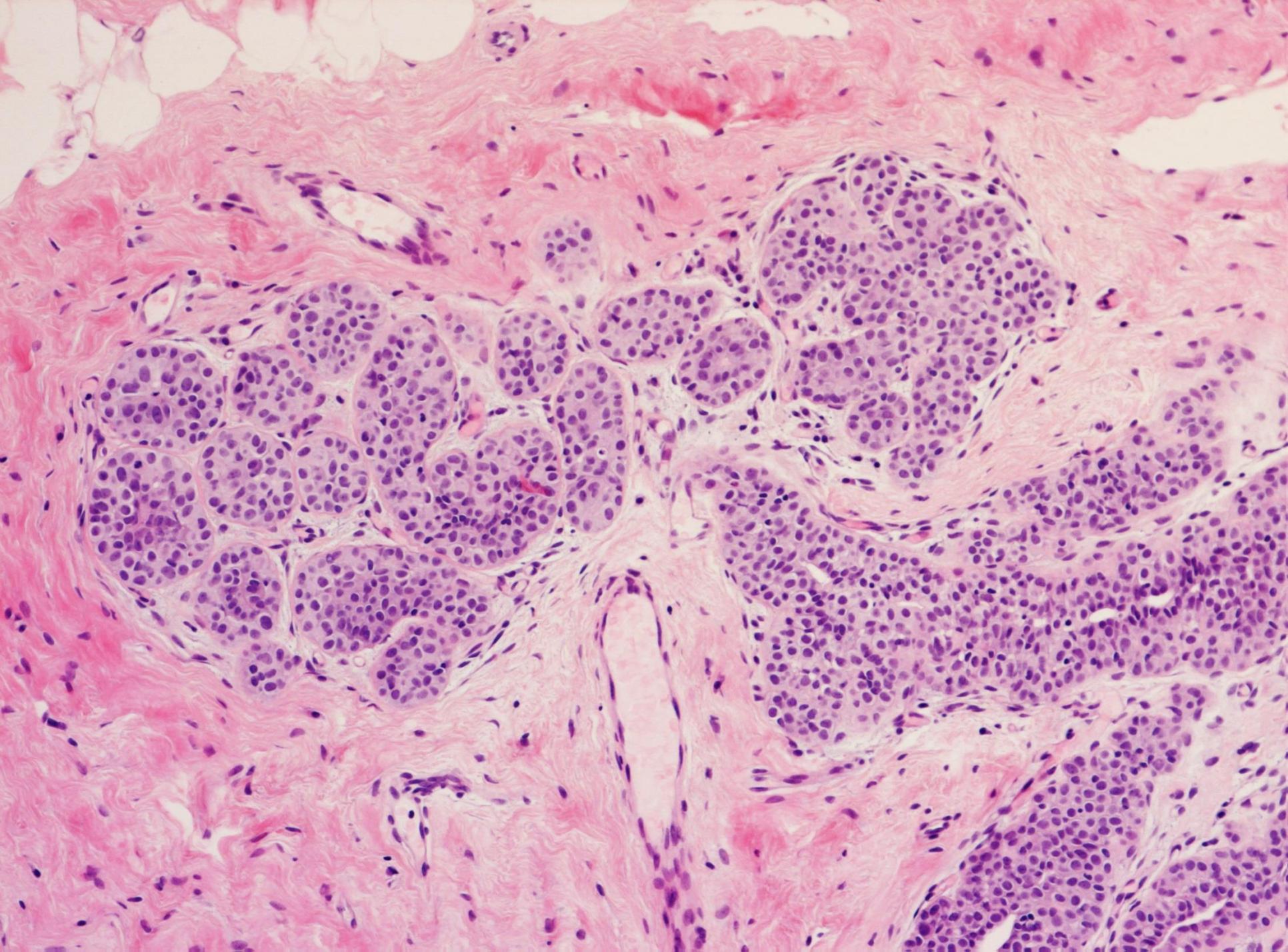


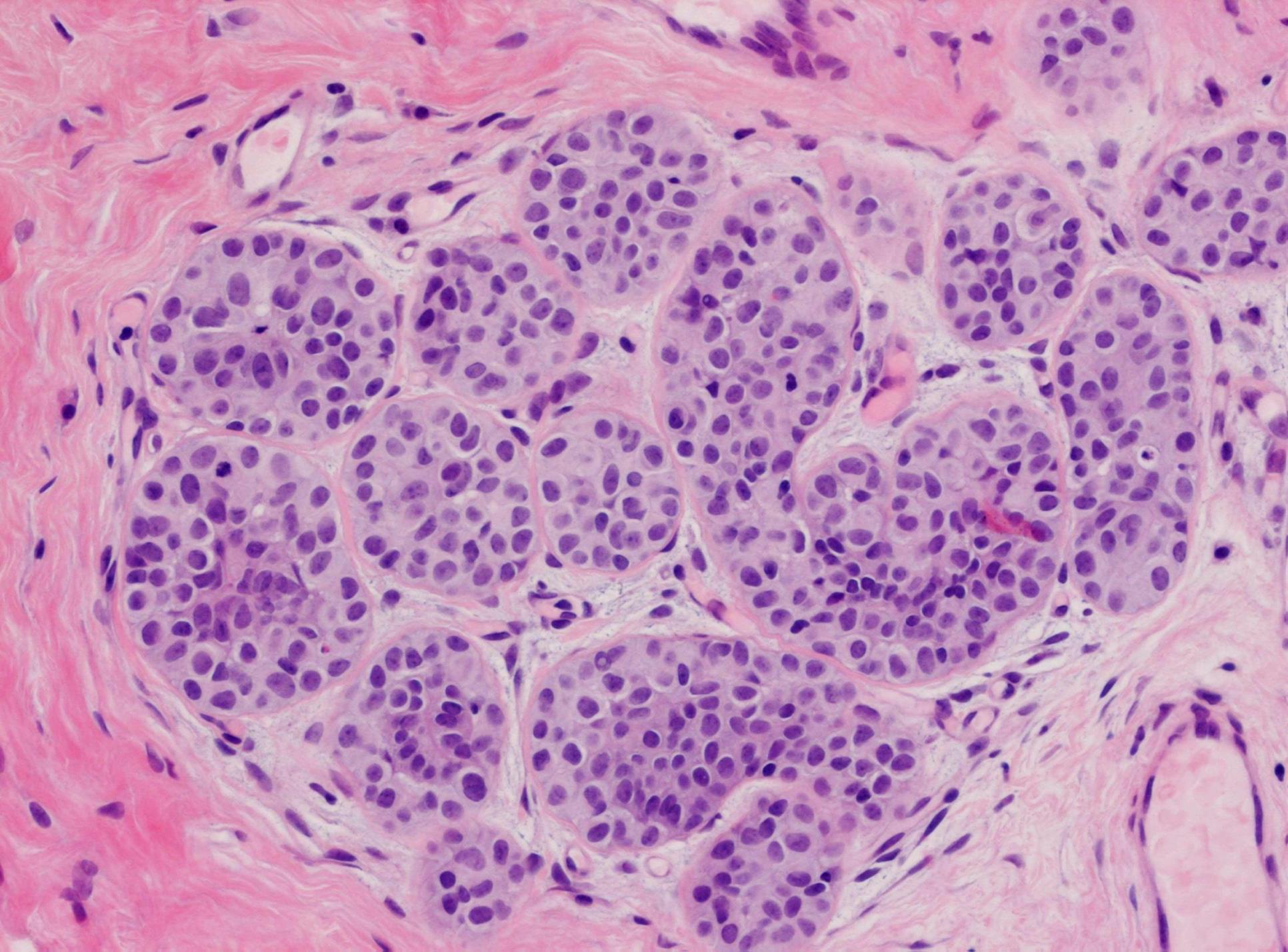
Table 3. Pure Atypical Lobular Hyperplasia (ALH) and Lobular Carcinoma In Situ (LCIS) Cases Diagnosed on Core Biopsy and Number With Carcinoma (Ductal Carcinoma In Situ or Invasive Carcinoma) on Surgical Excision*

Source, y	ALH		LCIS	
	CBdx	CA at EB, No. (%)	CBdx	CA at EB, No. (%)
Arpino et al, ²¹ 2004	17	1 (6)	4	2 (50)
Foster et al, ⁸ 2004	14	2 (14)	12	4 (33)
Yeh et al, ¹⁸ 2003	12	1 (8)	3	0
Irfan and Brem, ¹⁴ 2002	7	1 (14)		
Dmytrasz et al, ¹⁹ 2003	7	3 (43)		
Lechner et al, ²² 1999	84	18 (21)	58	20 (34)
Pacelli et al, ²³ 2001	7	0	7	0
O'Driscoll et al, ¹² 2001			7	3 (43)
Berg et al, ¹¹ 2001	7	1 (14)	8	0
Liberman et al, ⁹ 1999	4	0	5	0
Renshaw et al, ¹⁵ 2002	6	0	9	0
Shin and Rosen, ¹³ 2002	5	0	8	2 (25)
Crisi et al, ²⁰ 2003	3	0	13	2 (15)
Philpotts et al, ⁷ 2000			4	1 (25)
Middleton et al, ¹⁶ 2003	6	4 (67)	9	2 (22)
Burak et al, ¹⁰ 2000	6	1 (17)		
Bauer et al, ¹⁷ 2003			7	1 (14)
Zhang et al, ²⁴ 2001	8	0	10	3 (30)
Elskeikh and Silverman, ²⁵ 2001	20	5 (25)	13	4 (31)
Bonnett et al, ²⁶ 2003	24	2 (8)		
Brown et al, ²⁷ 1998	3	0		
Mahoney et al, ²⁸ 2006	10	1 (10)	10	4 (40)
Zuiani et al, ²⁹ 2005	3	1 (33)	3	1 (33)
Margenthaler et al, ³⁰ 2006	19	3 (16)	16	3 (19)
Renshaw et al, ³¹ 2006	40	1 (3)	52	2 (4)
Karabakhtsian et al, ³² 2007	63	5 (8)	29	5 (17)
Our study	18	1 (6)	20	2 (10)
Total	393	51 (13)	307	61 (20)









CNBにおいて異型小葉過形成と診断された場合に切除は必要か？

Table 1. Radiologic/Pathologic Correlation in Cases That Underwent Surgical Excision for a Percutaneous Core Diagnosis of Atypical Lobular Hyperplasia (ALH)*

Age, y	Surgical Biopsy Diagnosis	Radiologic Abnormality
68	ALH	Calcification
41	ALH	Calcification
41	IDC, LCIS	9-mm spiculate density
51	Fibrocystic change, proliferative type	1-cm hypoechoic mass
66	ALH	Calcification
57	Fibrocystic change, nonproliferative type	Calcification
74	ALH	Calcification
56	LCIS	Calcification
64	Fibrocystic change, nonproliferative type	Calcification
50	Fibrocystic change, proliferative type	Calcification
52	LCIS	Calcification
67	LCIS	Calcification
50	Fibrocystic change, proliferative type	Calcification
59	Fibrocystic change, proliferative type	Calcification
62	ALH	Calcification
58	Fibrocystic change, proliferative type	Calcification
46	ALH	Calcification
66	ALH	Calcification

* IDC indicates infiltrating ductal carcinoma; LCIS, lobular carcinoma in situ.

N=18

Cangiarella J al.

Arch Pathol Lab Med 2008; 132: 979-983⁴²

CNBにおいて非浸潤性小葉癌と診断された場合に切除は必要か？

Table 2. Radiologic/Pathologic Correlation in Cases That Underwent Surgical Excision for a Percutaneous Core Diagnosis of Lobular Carcinoma In Situ (LCIS)*

Age, y	Surgical Biopsy Diagnosis	Radiologic Abnormality
52	Fibrocystic change, proliferative type	Calcification
52	LCIS	Asymmetric density
54	LCIS	Calcification
50	Infiltrating lobular carcinoma	Hypoechoic area
65	LCIS	Calcification
49	LCIS/PASH	1.9-cm solid mass
45	LCIS/fibroadenoma	Solid mass
51	LCIS	Calcification
59	LCIS	2-mm hypoechoic mass
67	DCIS/LCIS	Calcification
63	LCIS	Calcification
75	ALH	Calcification
47	LCIS	Calcification
50	LCIS	Calcification
43	LCIS/fibroadenoma	1.2-cm solid mass
54	ALH	Calcification
52	LCIS	Calcification
45	ALH	Calcification
42	ADH	Calcification
50	LCIS	Calcification

* PASH indicates pseudoangiomatous stromal hyperplasia; DCIS, ductal carcinoma in situ; ALH, atypical lobular hyperplasia; and ADH, atypical ductal hyperplasia.

N=20

Cangiarella J et al.

Arch Pathol Lab Med 2008; 132: 979-983⁴³

生検でLCISが認められた後の 切除生検の適応

- ADH、放射状瘢痕など、切除生検の適応となるが認められた場合
- 臨床、画像、病理所見が乖離する場合
- 腫瘤、architectural distortion がある場合
- DCISと判別困難、あるいはDCISの併存
- 多形型 (pleomorphic variant)
- 広範な乳管進展±面疱型壊死

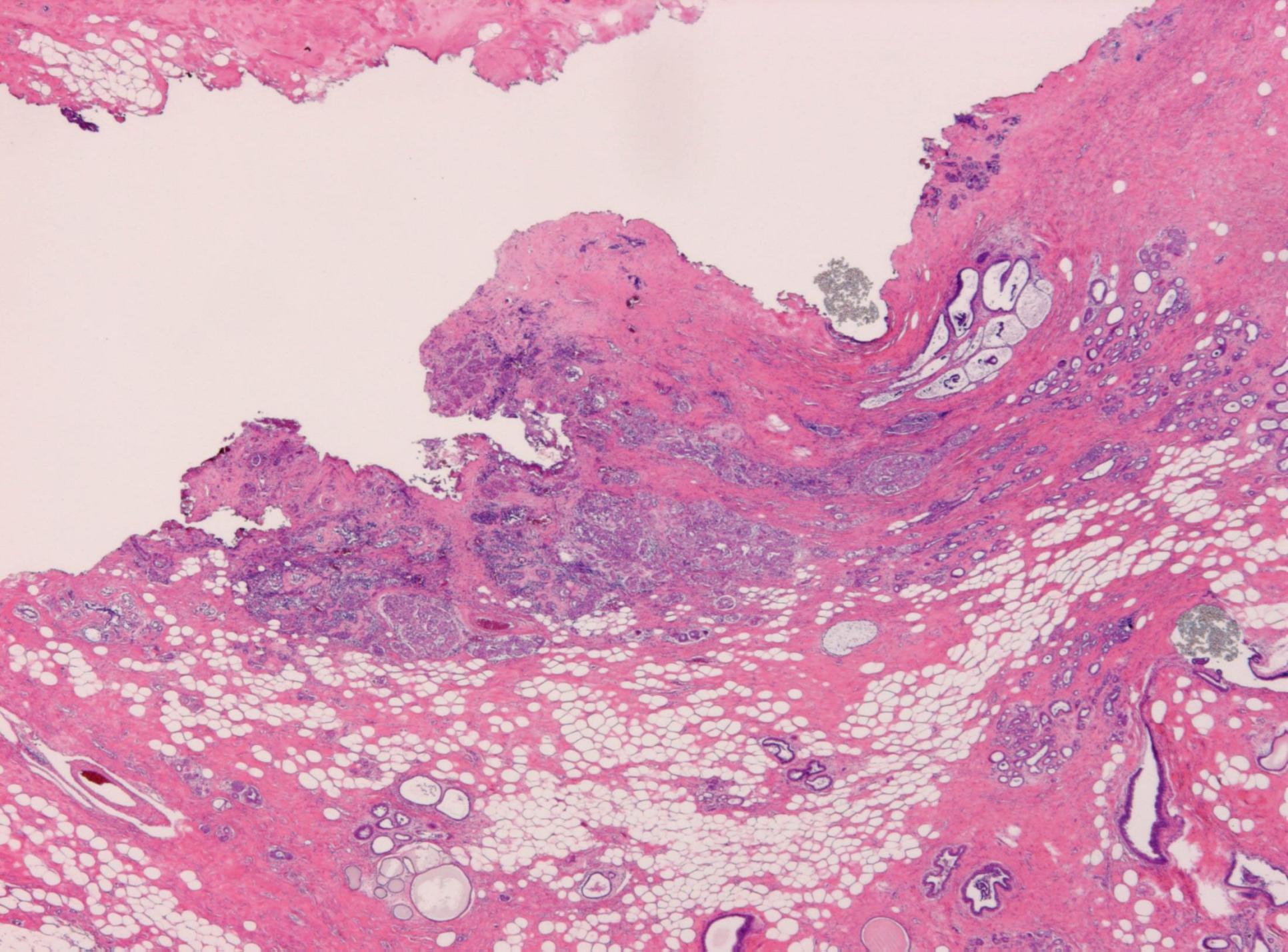
病理診斷

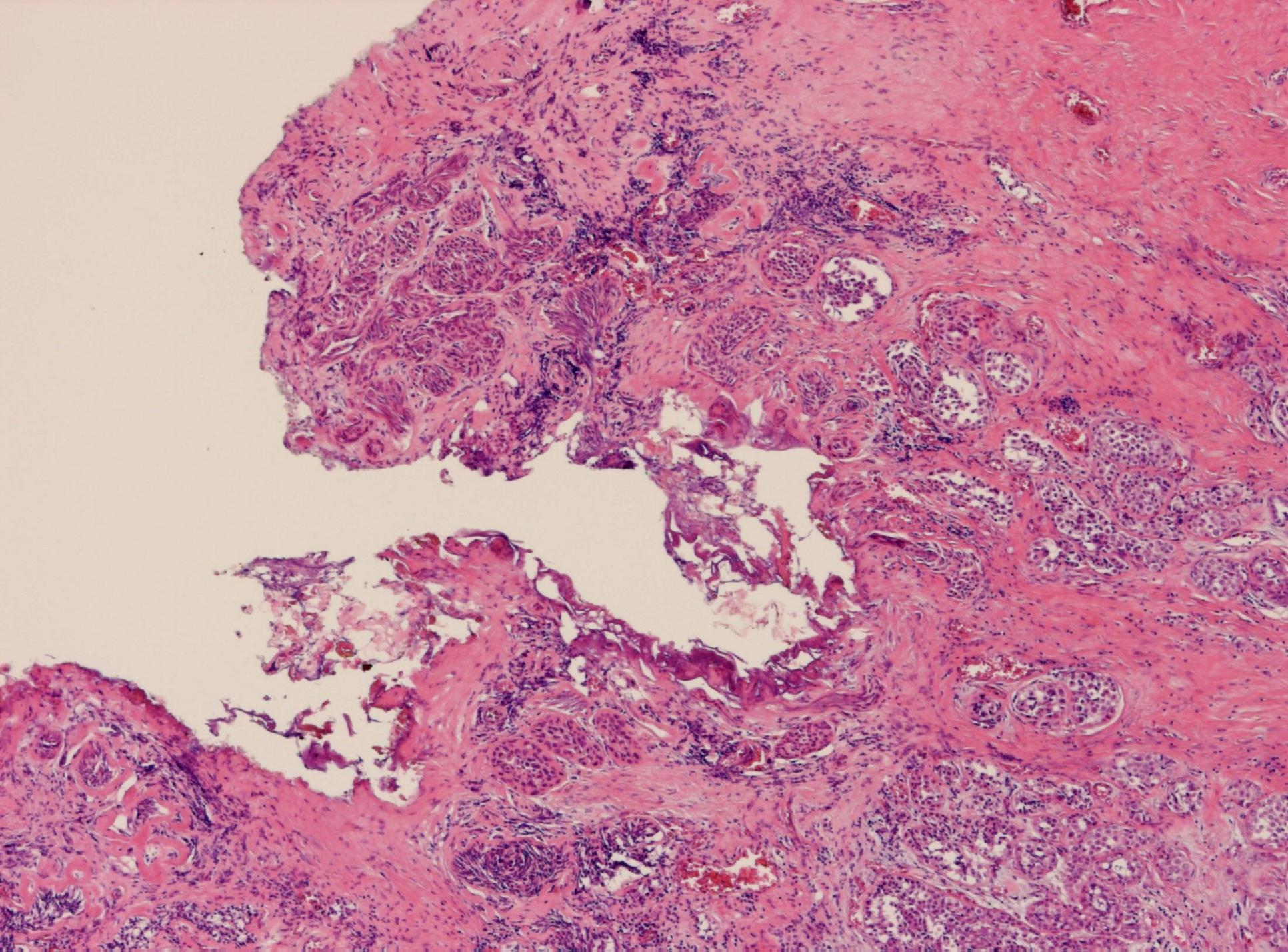
病理医

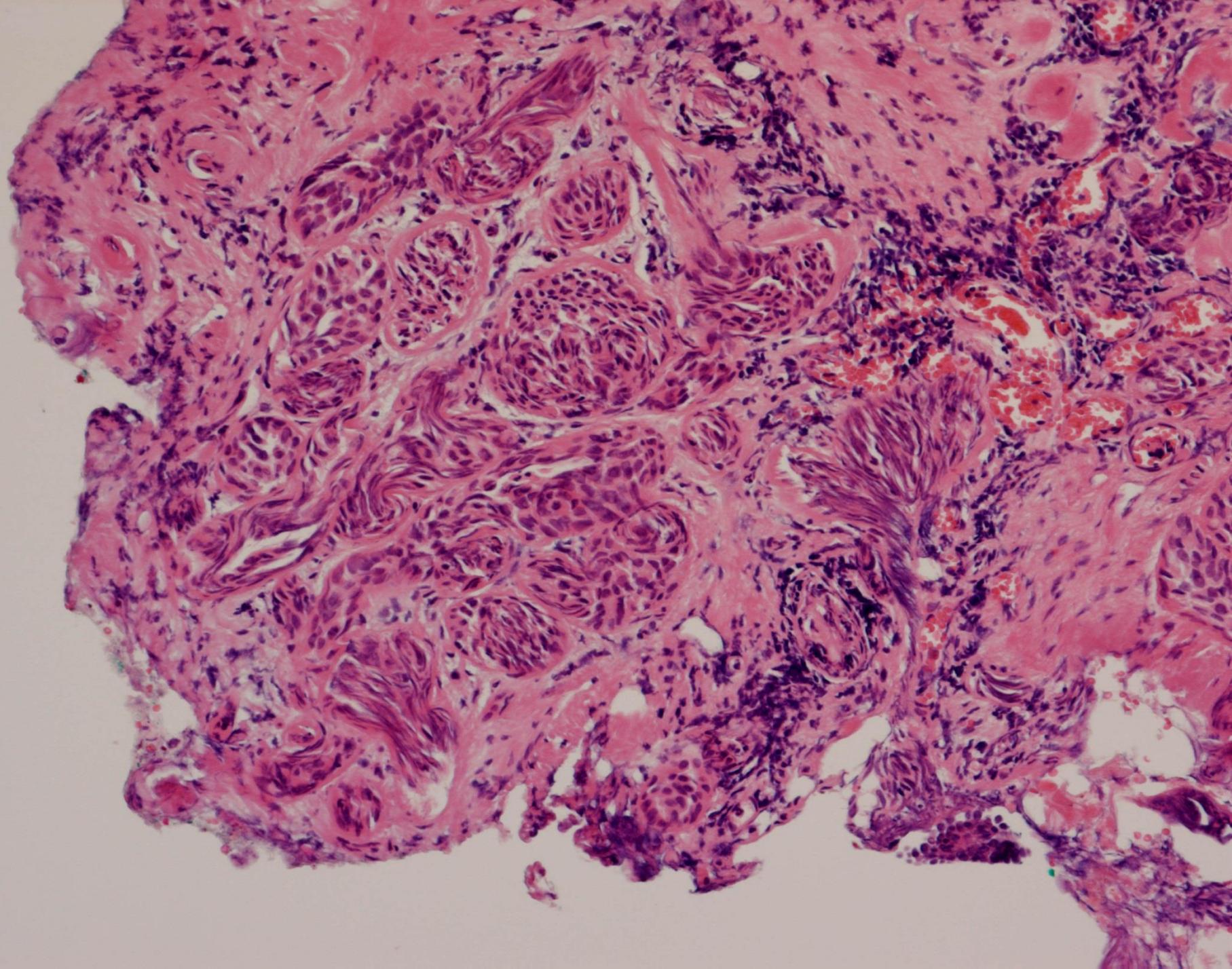
放射線科医



乳腺外科医







部分切除検体の断端でLCIS が認められた場合

- 主病変と一連の病変である場合 ➡ 追加切除
 - 広範な乳管進展 ± 面疱型壊死
 - 多形型 (pleomorphic variant)
- 偶発所見として存在する場合 ➡ 経過観察

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