

Circulation cases	Slide label (Click to go to the images' URL link)	Clinical data	Diagnosis	Comments
Case 1	TS677a (H&E)	Female 53 y, with fronto-parietal dural based lesion; known previous breast carcinoma. No other history was given.	Invasive breast carcinoma metastatic to the brain with PAX8 false positivity. Strong GATA3 positivity. Also CK7 is very focal which maybe seen in breast cancers	How to identify false positive and false negative stains
	TS677b (ER)			
	TS677c (PAX8)			
	TS677d (GATA3)			
	TS677e (CK7)			
Case 2	TS676 (H&E)	Female 65 y, screen detected breast mass UOQ. No previous history.	Histiocytoid rich carcinoma	DD: Lipid-rich carcinoma, glycogen-rich, histiocytoid, secretory, signet-ring, myoepithelial carcinomas , metastatic renal cell carcinomas and breast carcinomas modified by hormonal therapy and chemotherapy. Fat necrosis and xanthogranulomatous mastitis. Histiocytosis, rare granulomatous infections rich in histiocytes
Case 3	TS675a (H&E)	Female 56 y, with fairly defined lesion in the RUQ. Normal axilla. Previous core biopsy was B3.	Microglandular adenosis and atypical microglandular adenosis + acinic cell carcinoma	how to identify MGA, AMGA, IBC and DD: AMGA from DCIS and IBC
	TS675b (H&E)			
Case 4	TS674 (H&E)	Female 51 y, Screen detected lesion, Rt breast, core biopsy.	Columnar cell change with extensive micropapillary proliferation amounting to low grade DCIS	
Case 5	TS656 (H&E)	Female 68 y, Lesion close to nipple, diagnostic excision.	Pleomorphic adenoma	Chondrioid syringoma in the skin: Cutaneous mixed tumors, also known as chondrioid syringomas, are benign cutaneous adnexal tumors that exhibit remarkable histopathological similarities to pleomorphic adenoma of the salivary gland. Thus far, there is little information on the genetic profiles of cutaneous mixed tumors, although specific genetic aberrations including fusion genes involving PLAG1 and HMGA2 have been demonstrated in pleomorphic adenomas. CS lacks the characteristic translocations of PLAG1 seen in pleomorphic adenoma of salivary gland

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Case 6	TS678 (H&E)	Female 57 y, diagnostic excision of superficial breast mass. Previous core biopsy B3. (lesion represented on the slide)	Cutaneous eccrine spiradenoma	
Case 7	TS659 (H&E)	Female 52 y.o. with UOQ mass.	Invasive adenoid cystic carcinoma	
Case 8	TS660 (H&E)	Female 55 y.o.; suspicious stellate lesion of the breast with calcifications.	Mix of DCIS and LCIS in an area mimicking CSL/RS.	
Case 9	TS663a (H&E) TS663b (S100) TS663c (P63)	Female 45 y, core biopsy of suspicious mass, left breast. ER, PR, SMA and SMM negative.	Low grade secretory carcinoma.	
Case 10	TS664 (H&E)	Female 67 y, wide local excision of breast mass in the left LIQ. Triple negative, SMA, SMM GCDFP-15 ngative.	Clear cell glycogen-rich carcinoma.	
Case 11	TS665a (H&E) TS665b (H&E)	Female 54 y, lumpectomy, Large sold mass.	Malignant phyllodes tumour with osseous heterologous differentiation, (DD metaplastic carcinoma with osteosarcomatous differentiation).	
Case 12	TS666a (H&E) TS666b (Ecadherin) TS666c (P63) TS666d (CK5/6) TS666e (S100)	Female 46 y, VAB.	Atypical microglandular adenosis with invasive NST resembling pleomorphic invasive lobular.	
Case 13	TS667a (H&E) TS667b (Cam 5.2) TS667c (AE1/3) TS667d (S100)	Female 58 y, wide local excision of a 35 mm rounded tumour.	Extraskeletal myxoid chondrosarcoma (vs myoepithelial carcinoma).	
Case 14	TS668 (H&E)	Female 81 y, mastectomy.	Solid variant of adenoid cystic carcinoma.	

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Case 15	TS669 (H&E)	Female 74 y, lumpectomy .	Grade 3 metaplastic carcinoma with spindle cell and squamous (intracystic components).	
Case 16	TS670 (H&E)	Female 70 y, duct excision.	Low grade adenosquamous carcinoma.	
Case 17	TS672a (H&E) TS672b (H&E) TS672c (ER)	Female 78 y, left mastectomy; previous left wide local excision of DCIS 5 years before.	Solid papillary carcinoma and invasive solid papillary.	
Case 18	TS654 (H&E)	Female 76 y.o., history of left mastectomy with LD reconstruction and right wide local excision; now bilateral mastectomy.	Post radiotherapy angiosarcoma - poorly differentiated.	
Case 19	TS679 (H&E)	Female 26 y.o., nipple biopsy.	Syringomatous tumour of the nipple.	
Case 20	TS680 (H&E)	Female 64 y.o., clinically malignant mass.	DLBCL.	
Case 21	TS183a (H&E) TS183b (H&E)	Female 46 y.o., Right breast lump.	EPC.	
Case 22	TS511a (H&E) TS511c (ER) TS511d (Synaptophysin) TS511e (P63) TS511f (SMM)	Female 54y old with left breast lump.	SPC with invasive solid papillary features.	

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Case 23	TS512a (H&E)	Female 90y old with nipple discharge.	SPC showing features overlapping between in situ and invasive.	
	TS512b (H&E)			
	TS512c (P63)			
	TS512d (SMM)			
	TS512e (CK14)			
	TS512f (CD10)			
Case24	TS514 (H&E)	Female 40y old with right breast lump	Fibromatosis.	
	TS514 b (B catenin)			
	TS514c (CK5/6)			
	TS514d (CD34)			
	TS514e (AE1/AE3)			
	TS514f (CK14)			
Case 25	TS287a (H&E)	F 80y with left breast lump. B5a core biopsy. Excision specimen shows two adjacent lesions (representative section with IHC).	Solid papillary carcinoma + Benign papilloma.	
	TS287b (H&E)			
	TS287c (ER)			
	TS287d (SMM)			
	TS287e (CK5/6)			
	TS287f (P63)			
	TS287g (CK14)			