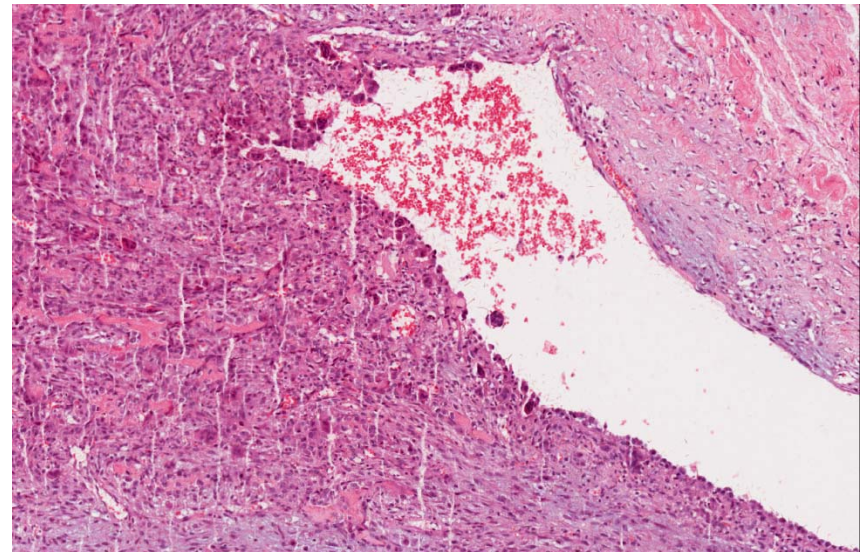
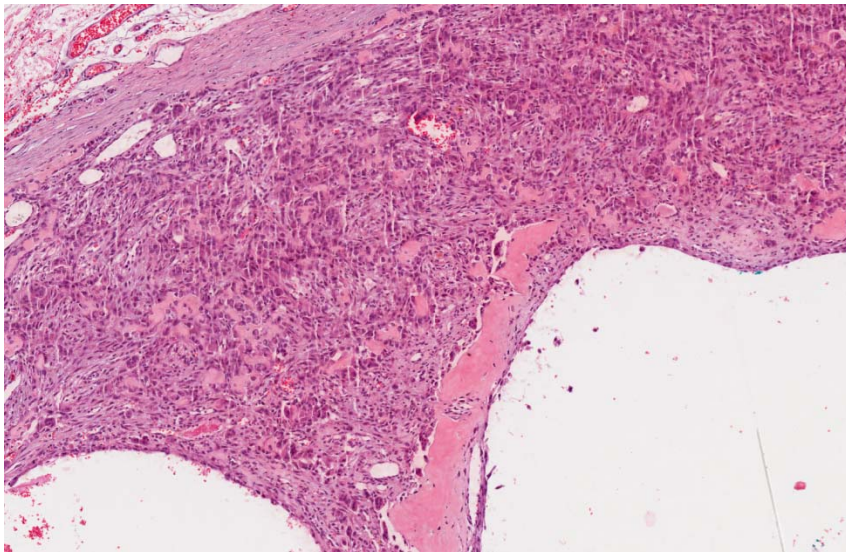
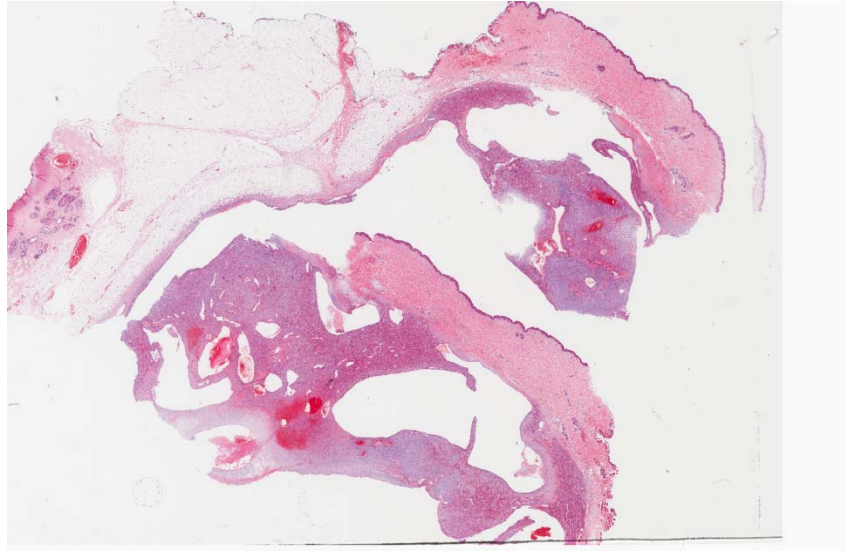


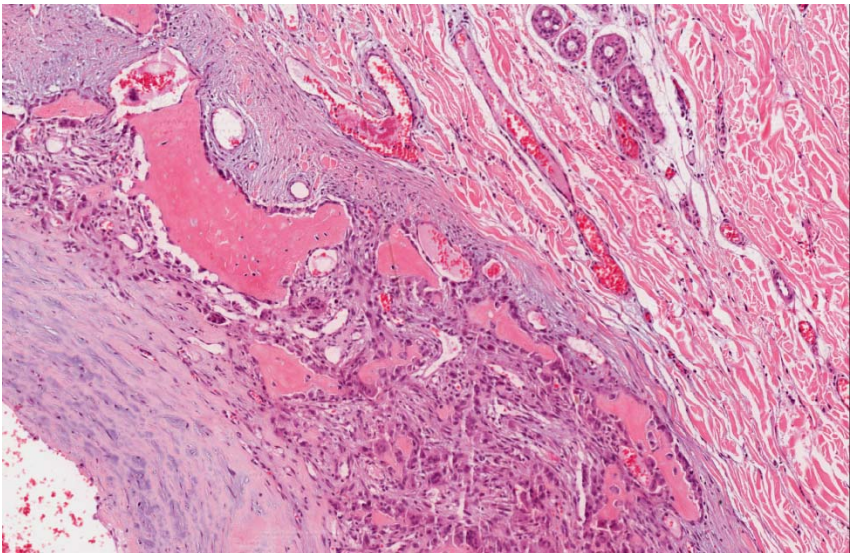
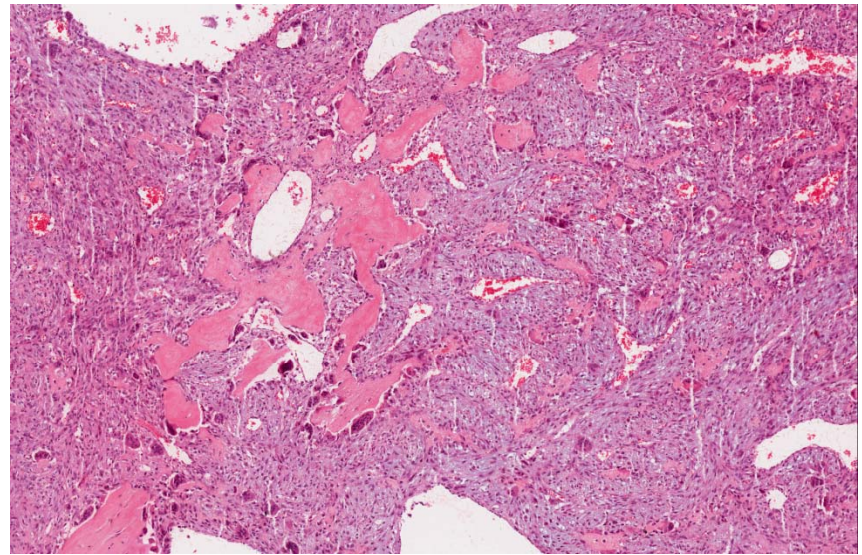
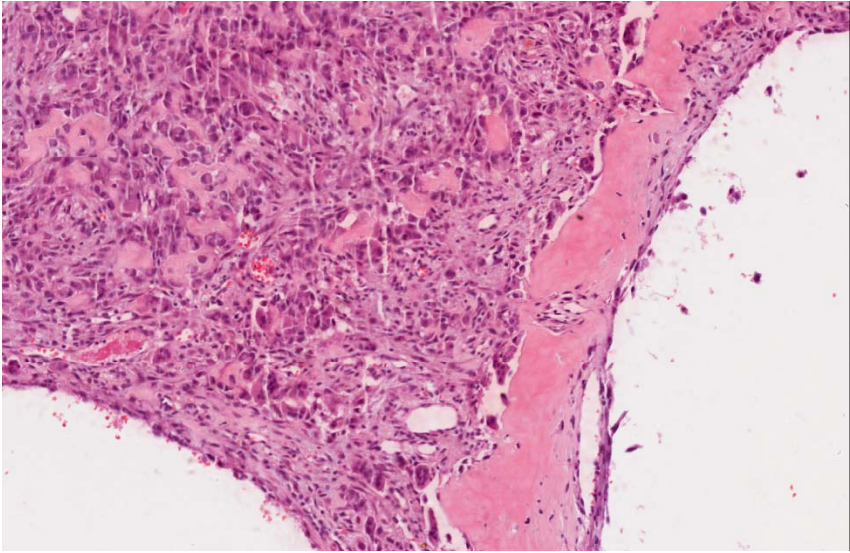
Set D.13

- 46 year old Chinese female presented with a large right breast mass.
- Current section is a representative area of the resected mass.

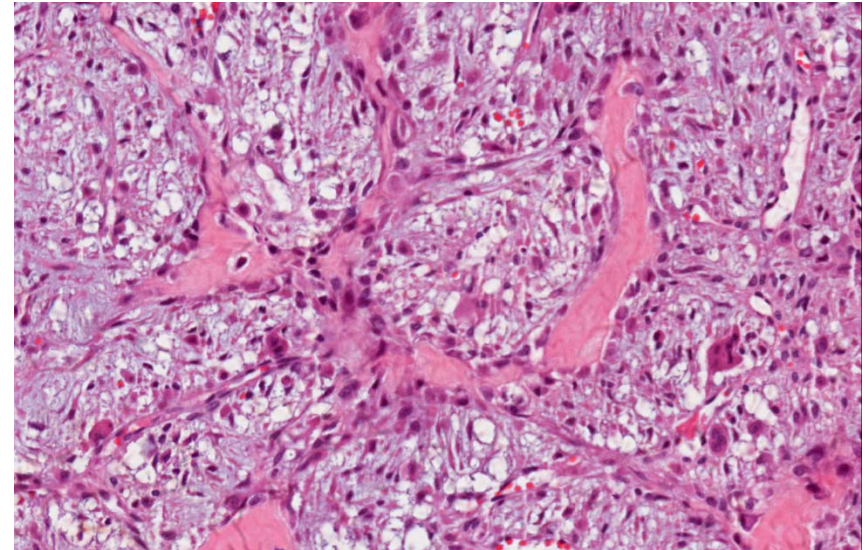
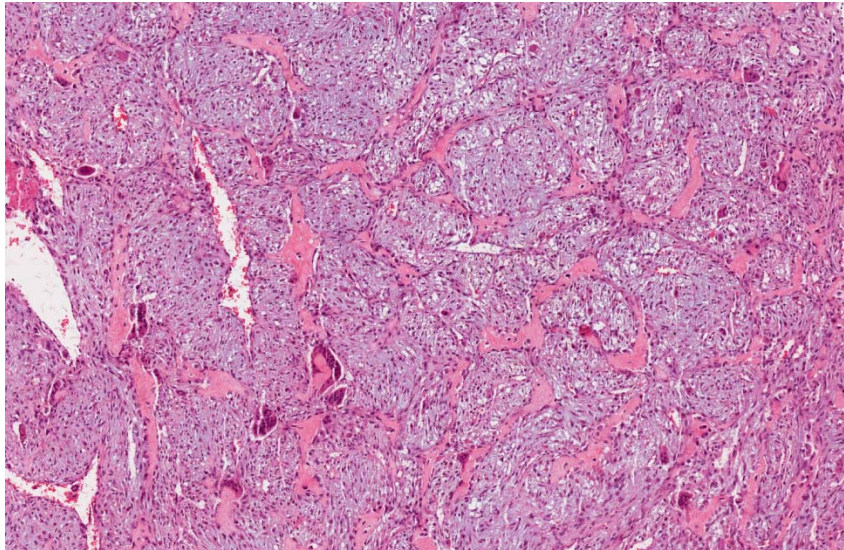
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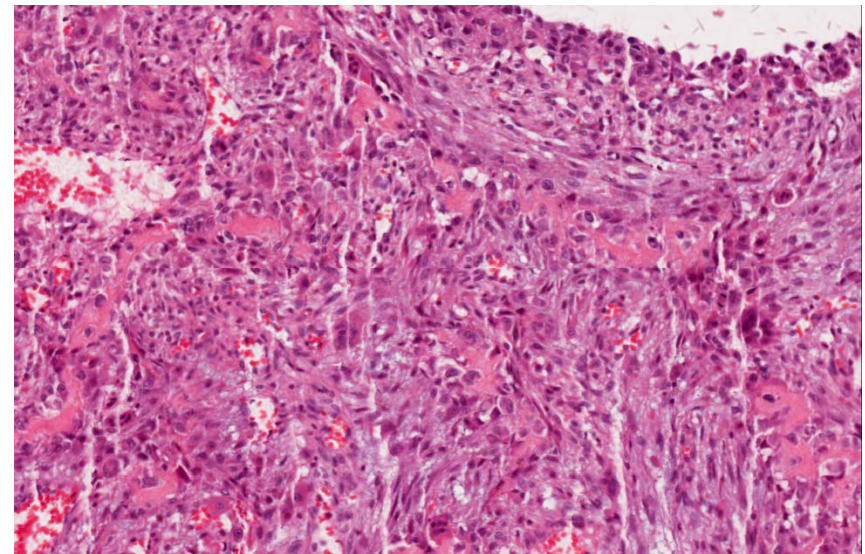
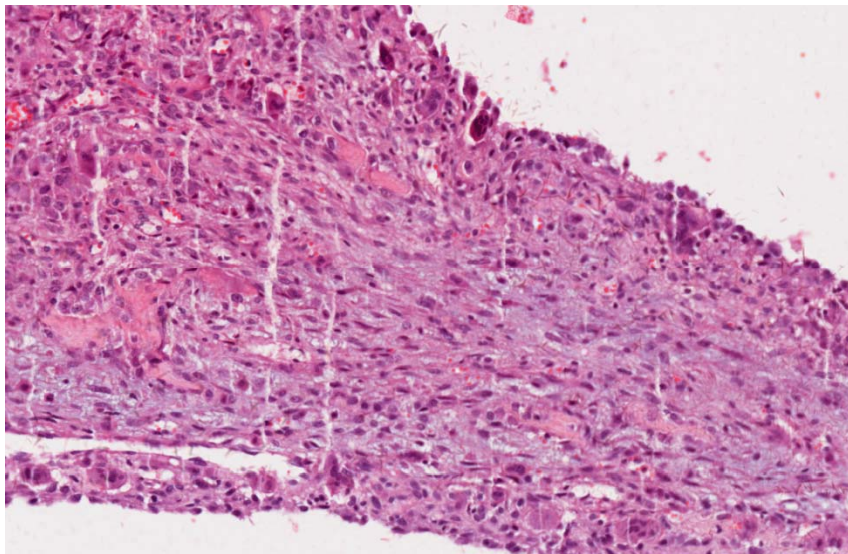
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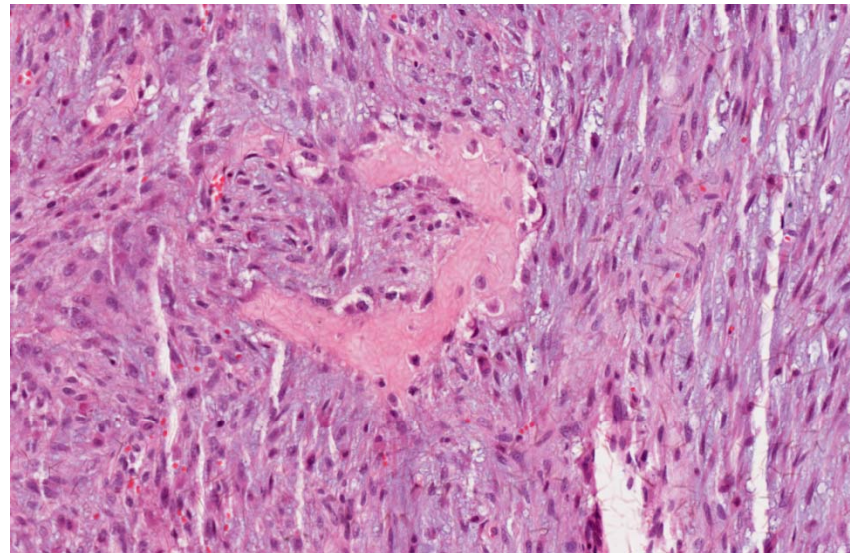
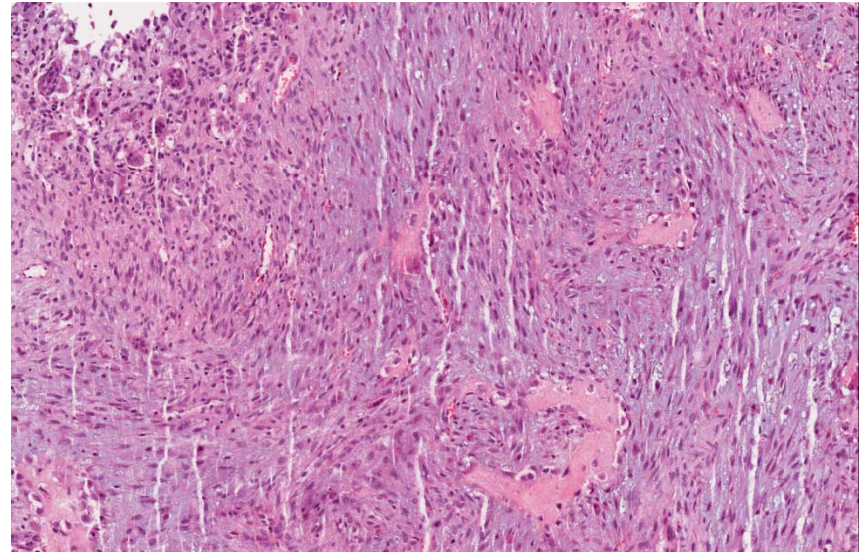
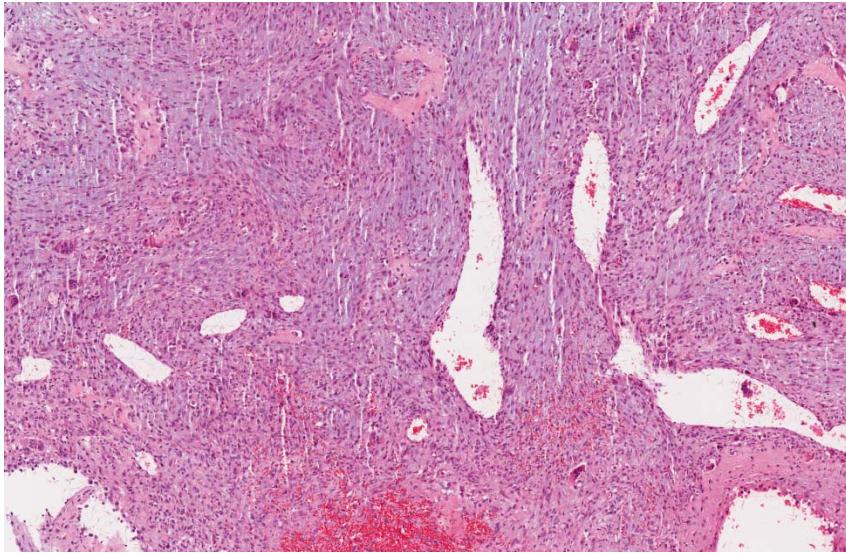
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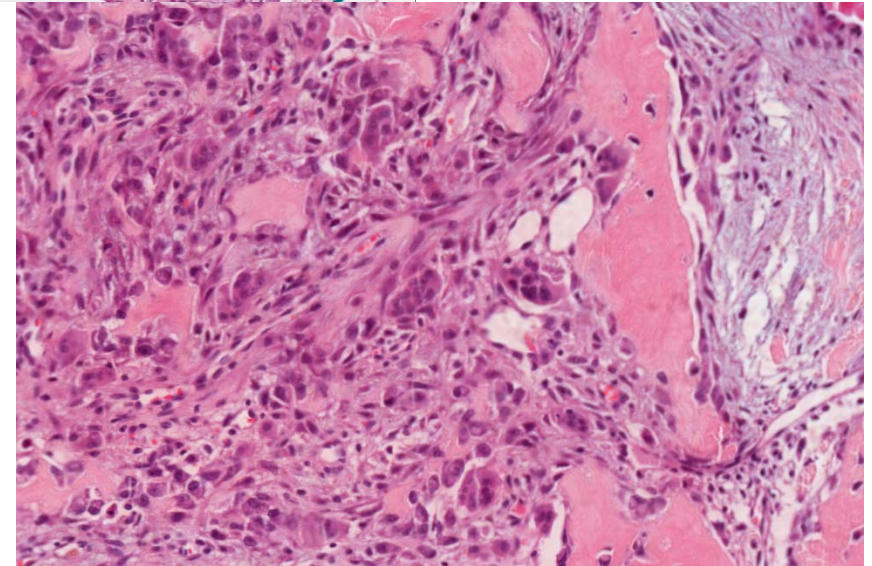
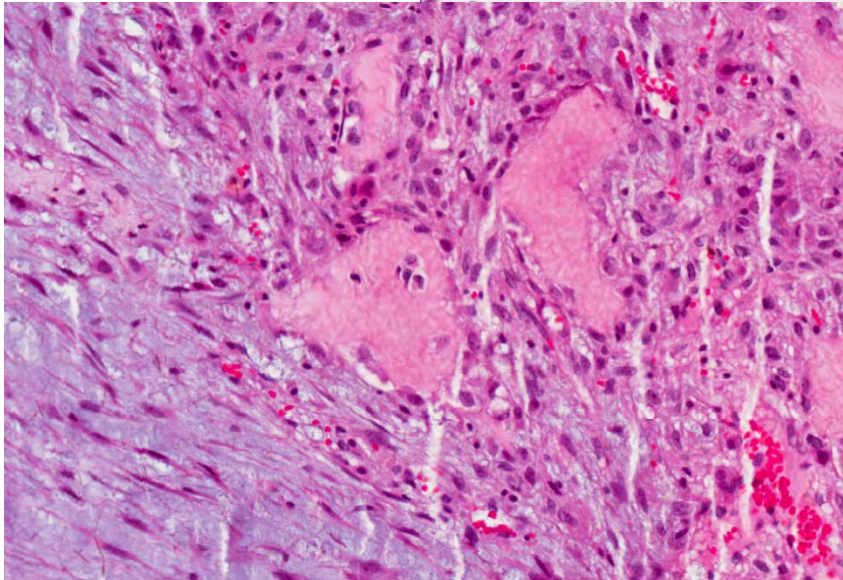
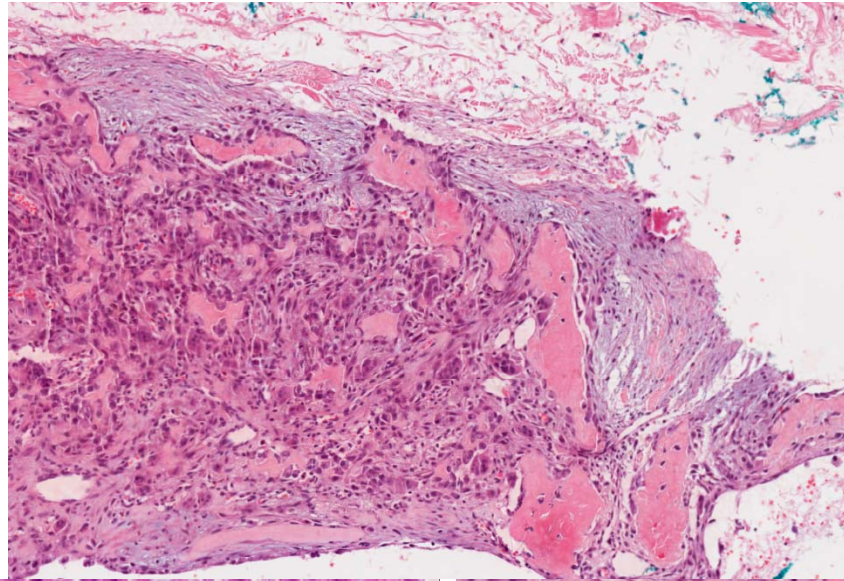
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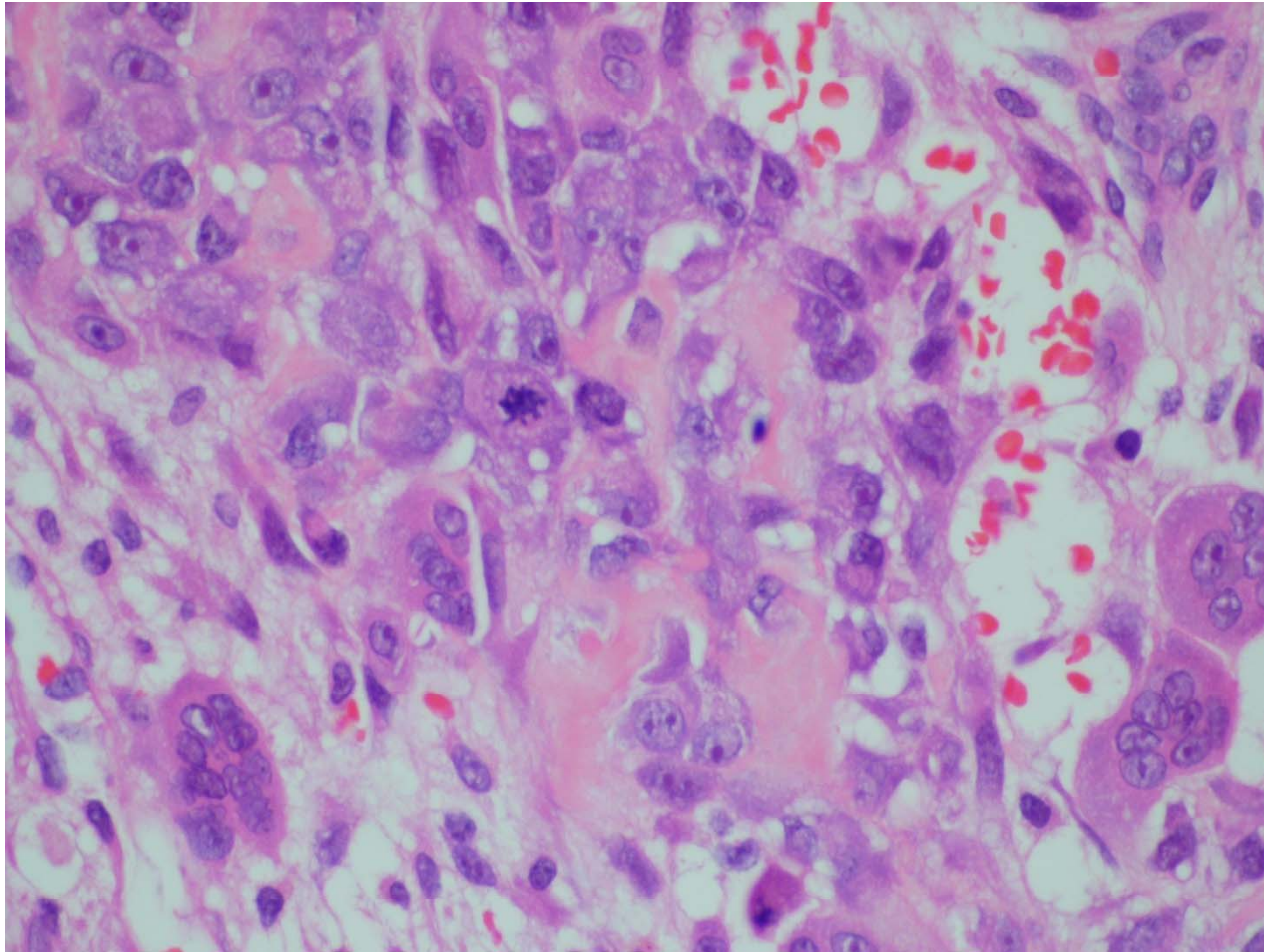
Set D.13



Set D.13



Set D.13



- Osteosarcoma.

(Consult case to exclude a phyllodes tumour, but no epithelial elements present in the submitted sections.)

Primary breast sarcoma

- Commonest primary breast sarcoma is angiosarcoma.
- Other primary breast sarcomas are very rare.
- Differential diagnoses of a histological appearance of 'sarcoma' in breast tissue:
 - Metaplastic carcinoma (immunohistochemical stains for keratins are needed).
 - Malignant phyllodes tumour (extensive sampling required to identify the clefted epithelial elements).
 - Primary breast sarcoma (least common).

Malignant spindle cell breast lesions

- Metaplastic carcinoma:
 - < 5% of breast cancers.
 - Metaplastic change to non-glandular elements.
 - Malignant epithelial elements, in-situ or invasive.
- Malignant phyllodes tumour with stromal predominance.

Malignant spindle cell breast lesions

- Sarcoma:
 - Angiosarcoma.
 - Liposarcoma.
 - Leiomyosarcoma.
 - Osteogenic, chondrosarcoma.
 - Fibrosarcoma.
 - Rhabdomyosarcoma.
 - Malignant peripheral nerve sheath tumour.
- Metastases:
 - Malignant melanoma.
 - Metastatic sarcomatoid carcinoma, eg RCC.
 - Others.

High grade spindle cell breast lesions

Antibody	Sarcoma	Malignant phyllodes tumour	Metaplastic carcinoma
Cytokeratins	-	-	+
p63	-	-	+
CD10	-	±	+
CD34	-	±	-
β-catenin	-	±	±
bcl2	-	±	-
S100	±	-/+	+
Vimentin	+	+	±

Additional mesenchymal markers: SMA, desmin, myogenin, endothelial markers, etc

Spindle Cell Breast Lesion

Low Grade

Reactive features

Fascicular appearance

h/o previous surgery

Scar

Nodular fasciitis

CK-
CD34-
βcatenin+

Fibromatosis

CK+, p63+

Metaplastic carcinoma

FronDED epithelial clefts

Phyllodes Tumour

High Grade

Malignant epithelial component or CK+, p63+

Metaplastic carcinoma

CK-
No malignant epithelial component

Sarcoma

FronDED epithelial clefts

Malignant phyllodes tumour

Learning points

- Diagnosis of phyllodes tumour - need the leafy epithelium lined fronds.
- No epithelium lined clefts in this section.
- Diagnostic approach to a high-grade malignant mesenchymal tumour (appearance of 'sarcoma') of the breast.