Unilateral Ovarian Metastasis from Lung Adenocarcinoma with Fibroma-like Stroma: Mimicking a Primary Tumour and Possible Tumour-to-Tumour Metastasis

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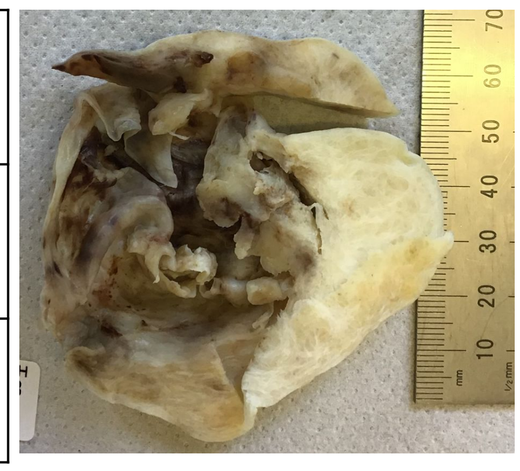
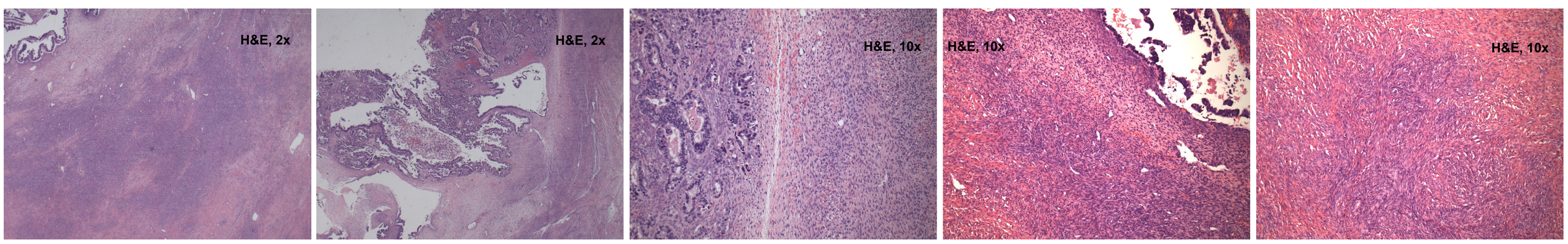
LEARNING POINT
Fibroma-like stroma in an ovarian mass does not exclude metastasis- careful evaluation is essential.

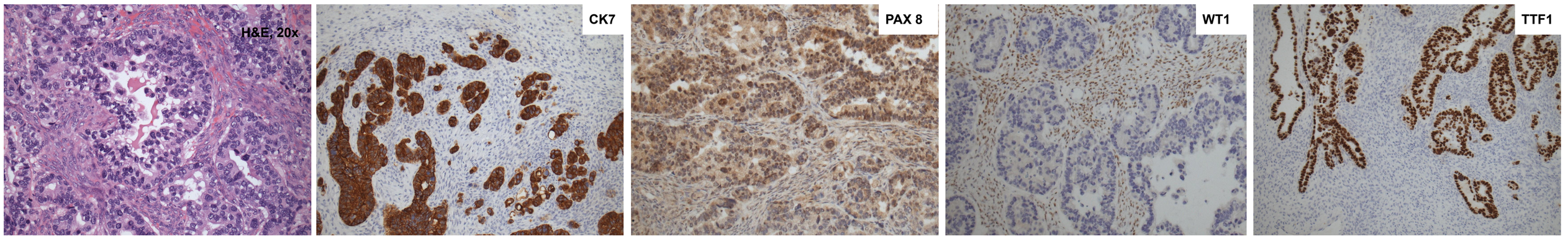
Background: Metastatic involvement of the ovary from primary lung carcinoma is uncommon. Unilateral large solid–cystic tumours may closely mimic primary ovarian neoplasms. Tumour-to-tumour metastasis to a pre-existing ovarian tumour is very rare.

Case: A 71-year-old woman with 4-month history of severe back pain. She had L2 compression fracture with lytic lesions and a complex left ovarian mass. Serum CA-125 mildly elevated (105 U/mL).

Radiology: **MRI pelvis: Bulky heterogeneous solid-cystic ovarian tumour. CT thorax showed a spiculated mass in the left lower lobe with nodal deposits.**	Bilateral oophorectomy omental sampling: Gross: Left ovarian mass measured **80 x 30 mm in greatest dimension and comprised of solid (50 x 30 mm)** and collapsed cystic components.	
	Cystic component	Infiltrative epithelial neoplasm with papillary & cribriform architecture. Immunohistochemistry supporting metastatic lung adenocarcinoma (CK7, TTF-1 positive; PAX8, WT1, ER and PR negative).
	Solid component	Stromal proliferation resembling fibroma with sex cord–stromal immunophenotype (Calretinin, WT1 & inhibin positive).







Discussion: Ovarian metastasis from lung cancer is rare (<5% of cases) and may present as solid or cystic masses. A marked stromal response can closely mimic a primary ovarian tumour. Rarely, tumour-to-tumour metastasis may occur within a pre-existing ovarian neoplasm. In this case, the stromal component showed fibroma-like morphology with sex cord–stromal immunophenotype; the extent and architectural coherence in this case raised the possibility of a pre-existing fibroma rather than a purely reactive stromal proliferation. Our patient had **Lung adenocarcinoma, Stage IVB disease with ovarian metastasis.**

Conclusion: Metastatic carcinoma may present as a unilateral ovarian mass with fibroma-like stromal proliferation, closely mimicking a primary ovarian tumour. Metastasis to a pre-existing fibroma is very rare. Careful morphological assessment, adequate sampling & immunohistochemistry are essential to avoid misdiagnosis.

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