Malignant Phyllodes Tumor

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July 24, 2019

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HPI

- 31 y/o white F presents to ED with 1-month hx of SOB and nonproductive cough, especially when lying down
- Reports 2-day hx of N/V and fever
- Recently experienced a spontaneous abortion 1 week ago

PMH

- Phyllodes breast cancer s/p L mastectomy + XRT, currently in remission for 1 year
- Family hx of breast, ovarian, and uterine cancer in mother
- HIV (CD4 264, compliant with HAART)
- Multiple miscarriages

- Endorses alcohol and marijuana use
- Former smoker – 5 pack-year

ROS

Gen: **(+) fever, chills, weight loss**; (-) sick contacts

HEENT: (-) sore throat, dysphagia, deafness rhinorrhea, congestion, diplopia, blurred vision, loss of vision

Resp: **(+) SOB, cough, wheezing**, (-) hemoptysis

CV: **(+) chest pain, orthopnea, DOE, palpitations**

GI: **(+) N/V, constipation**; (-) abd pain, melena

GU: (-) changes in urine output, dysuria, hematuria, urgency, frequency, incontinence

Endo: (-) polyuria, polydipsia, heat/cold intolerance

MSK: (-) joint swelling, joint pain

Neuro: **(+) headache, dizziness**; (-) weakness, numbness

Skin: (-) rash, hives, breast pain

PE

VS:	**T**	**100.9 °F**	**HR**	**133**	**BP**	**137/62**
	RR	**28**	**SpO_2**	**92%**		

Gen: A&O x4, obese, **moderate distress**

HEENT: EOMI, PERRL, no scleral icterus, nares patent, no nasal discharge, oropharynx clear

CV: **tachycardic**; no murmurs gallops or rubs; 2+ pulses bilat; cap refill < 2 sec

Lungs: **Decreased lung sounds on R**; L lung CTA

Abd: soft, non-tender, non-distended

MSK: no deformities, FROM on all 4 extremities

Neuro: Alert, normal strength & tone, CN II-XII grossly intact. Clear speech

Skin: No rash, nevi, lesions

Labs

CMP

Na^+	**134 (L)**
K^+	4.3
Cl^-	98
Ca^{2+}	9.4
Cr	0.82
BUN	**5 (L)**
Glu	**105 (H)**
Alb	**2.5 (L)**
Globulin	**5.2 (H)**
ALT	12
AST	19
TB	0.4

Lactic Acid 1.9

CBC

WBC	**21.0 (H)**
Hgb	**10.6 (L)**
Plt	396K

UA

Leuk Est Neg

Nitrites Neg

Pregnancy Test Neg

Differential Diagnosis

- **Pneumonia** – hx of HIV, febrile, leukocytosis, decreased breath sounds of R lower lobe
- **Lung cancer/metastasis** – hx of malignant breast cancer, F Hx of cancer, former smoker
- **PE** – hx of multiple miscarriages (concern for antiphospholipid syndrome), hx of cancer
- **Endometritis/Retained placenta tissue** – recent spontaneous abortion w/ fever; less likely due to lack of abdominal or pelvic pain

Clinical Course

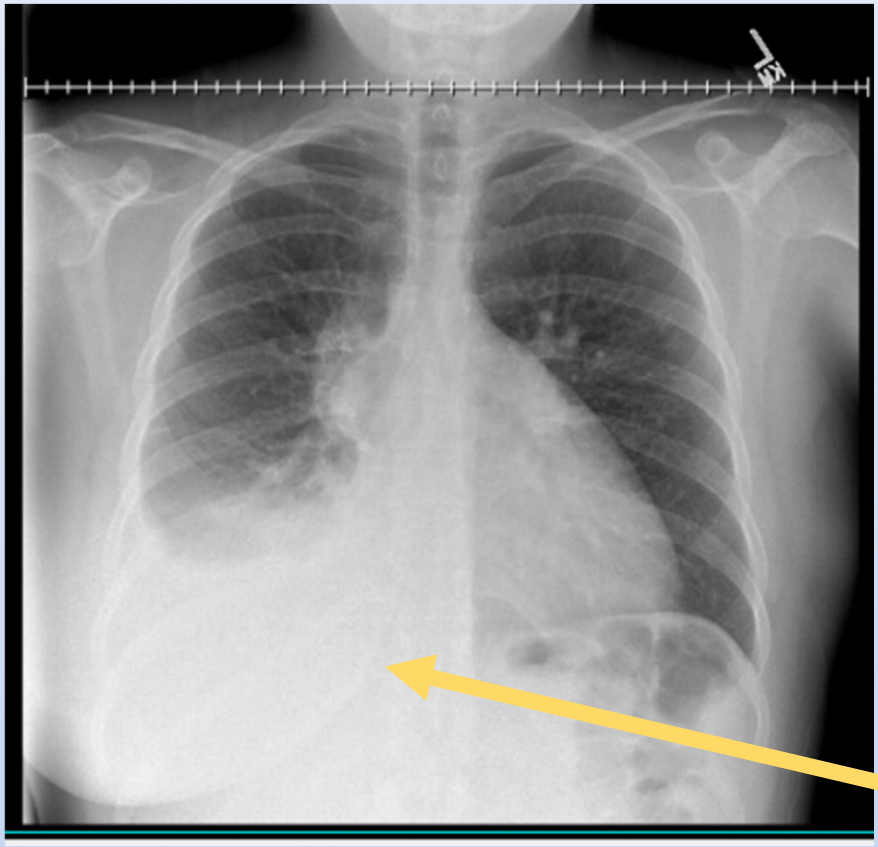
Transabdominal U/S was performed in the ED and showed normal-sized uterus.

Patient was admitted for suspected pneumonia and started on ABX.

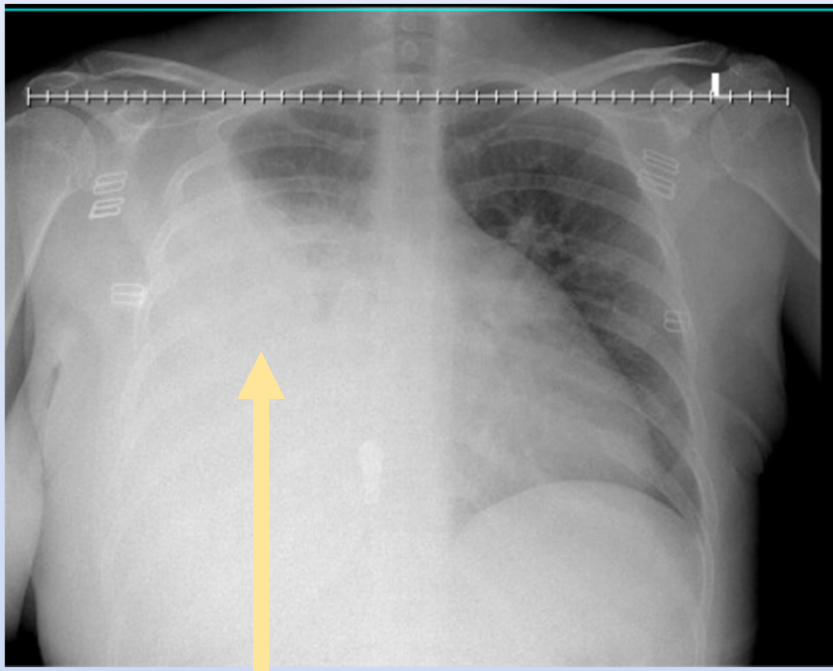
The patient showed no improvement while on broad-spectrum ABX so imaging was ordered.

Imaging – CXR

Initial CXR



2 Week Follow Up



R pleural effusion w/ interval worsening

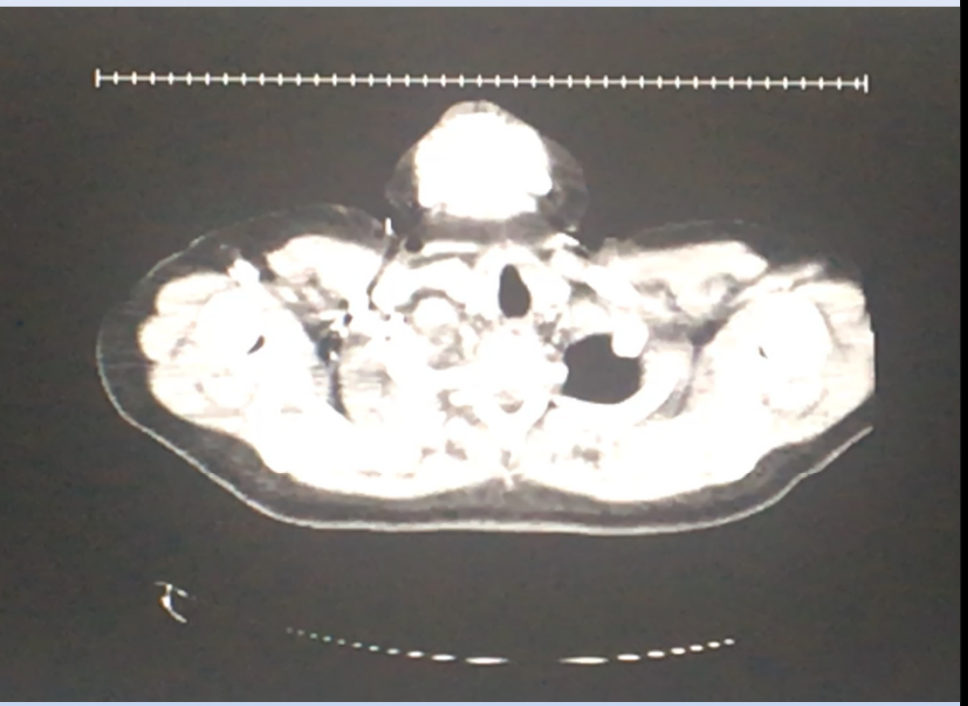
Impressions

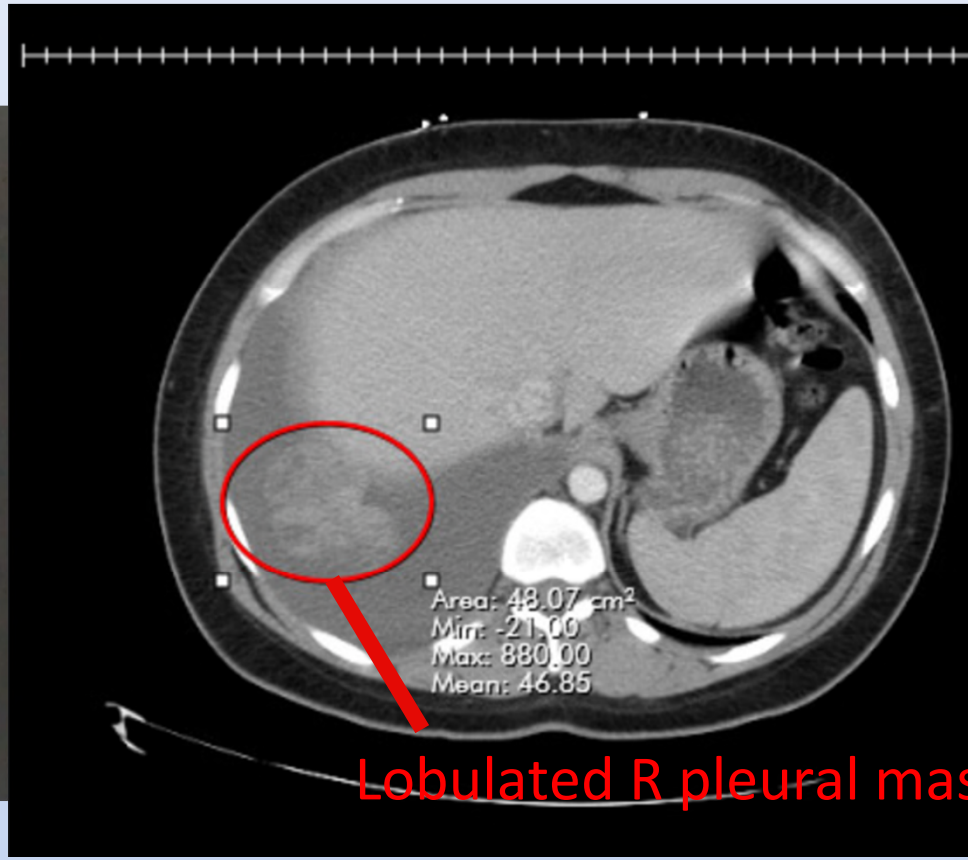
Initial CXR: Consolidation in the right lower lobe and small right pleural effusion.

Follow-up CXR: Large volume right pleural effusion, markedly increased since the previous examination with associated infiltrate versus atelectasis. Only the right upper lung field remains aerated.

ACR Appropriateness: Usually appropriate for initial imaging of acute respiratory distress eval

CT w/ contrast





Impressions

1. Large right pleural effusion associated with pleural-based masses anteromedially in the right lung apex and posteriorly in the right lung base suspicious for metastatic breast cancer given the left mastectomy. Subsegmental atelectasis seen in the right parahilar region.

2. Normal sized heart associated with trace pericardial effusion.

ACR Appropriateness: May be appropriate for follow-up of a large pleural effusion (CT w/o contrast preferred)

Biopsy – Right Pleural Mass

H&E morphology is compatible with sarcomatoid/metaplastic carcinoma of the breast or lung primary (sarcomatoid mesothelioma or melanoma), or soft tissue sarcoma. Malignant lymphoma is unlikely.

Further Findings

1) Sacomatoid/metaplastic high-grade carcinoma favored based on morphology and immunophenotype of tumor. Current biopsy will be compared to material from breast primary if possible.

2) ER/PR/HER2 Negative

3) There is H&E morphologic similarity between the current biopsy and the malignant stromal component of the phyllodes tumor of the left breast.

Long-term Follow Up

The patient was evaluated as a poor surgical candidate due to poor respiratory function.

Multiple trials of chemotherapy were initiated but no response was observed.

The patient was admitted multiple times to MH-TMC for respiratory distress and pleural effusion drainage but continued to worsen.

Hospice care was discussed and initiated on the most recent visit.

Cost of Imaging for Patient

1-View CXR x5 =	$3415.00
CT Chest w/ Contrast x2 =	$7872.50
CT-Guided Needle Biopsy =	$2434.00
US Guided Thoracentesisx2=	$2220.50
Chest Tube Placement =	$1667.00
Total	**$17609**

Values determined by MH TMC uninsured pric

Phyllodes Tumors

Fig. 1: Credit to PathologyOutlines.com

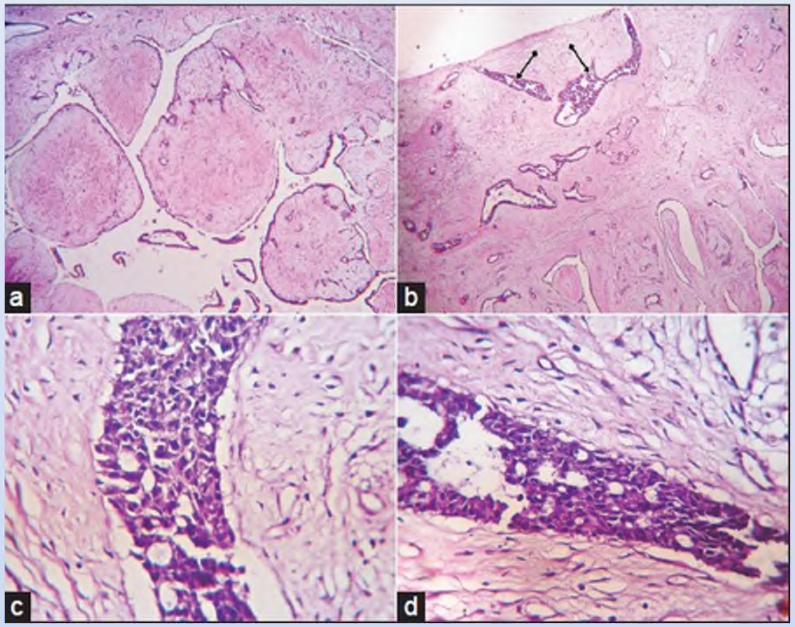


Fig. 2: Credit to Journal of Natural Science, Biology and Medicine

Phyllodes Tumor

- Phyllodes= “leaflike”
- Phyllodes tumors are fibroepithelial tumors (similar to fibroadenomas)
- Metastasis occurs in 13-40% of patients w/ mean survival time of 30 months

Etiology

- Fibroepithelial tumors are associated with MED12 exon 2 mutations
- Associated with Li-Fraumeni syndrome

Clinical presentation

- Present similar to fibroadenomas – smooth, multinodular, well-defined, firm, painless mass
- Distinguishing factors: large (>3 cm), rapidly growing

- Radiology – non-specific, large, oval or lobulated mass with well-circumscribed margins

Treatment

- Surgical resection is the gold standard
- +/- Adjuvant radiation therapy for borderline or malignant
- Chemotherapy has limited studies but soft tissue sarcoma therapies are used for recurrent malignancies

Complications/Recurrence

- Typically recur locally within 1-2 years of resection
- Spread hematogenously
- Metastasis usually presents in the lungs as a large (>5 cm) mass
- Five-year survival for malignant phyllodes tumors is 60-80%

References

- UpToDate – Phyllodes Tumors of the Breast
- Radiopaedia – Phyllodes Tumor
- Pareja, F., Geyer, F. C., Kumar, R., Selenica, P., Piscuoglio, S., Ng, C. K., . . . Reis-Filho, J. S. (2017). Phyllodes tumors with and without fibroadenoma-like areas display distinct genomic features and may evolve through distinct pathways. *Npj Breast Cancer, 3*(1). doi:10.1038/s41523-017-0042-6

Figures

- Fig. 1: Nassar H Phyllodes benign. PathologyOutlines.com website. http://www.pathologyoutlines.com/topic/breastphyllodesbenign.html.
- Fig 2: Saha, K., & Ghosh, P. (2014). Ductal carcinoma in situ in a benign phyllodes tumor of breast: A rare presentation. *Journal of Natural Science, Biology and Medicine, 5*(2), 470. doi:10.4103/0976-9668.136261

Questions?