

# AMSER Case of the Month

## October 2023

80-year-old male with bilateral breast pain

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# Patient Presentation

- HPI – 80-year-old male with a past medical history of resected pheochromocytoma in 1992, prostate cancer in 2002 on continuous anti-testosterone treatment presents in July 2023 with bilateral breast pain and fullness since October 2020 and palpable R breast mass since December 2022 without discharge.
- ROS – Positive for breast tenderness and enlargement, hot flashes. Negative for changes in energy and appetite, denies fever, chills. Negative for other constitutional, cardiopulmonary, GI/GU genitourinary symptoms.

# Patient Presentation

- Physical Exam (Negatives)
  - Constitutional – Normal
  - HENT – Normal
  - CV – Normal rate/rhythm
  - Pulmonary – Normal effort, no distress
  - Abdominal – Flat, no distention
  - MSK – No swelling, no deformity, normal ROM
  - Skin – Warm, no jaundice
  - Neuro – No focal deficit, AOx3
  - Psych – Normal mood, behavior, thought content, and judgement

# Patient Presentation

- Physical Exam (Positives)
  - Breast: male pattern distribution and bilateral gynecomastia, asymmetrical with right side bigger than left, ptosis grade 2
  - RIGHT: palpable retro-areolar mass, 5 cm in size, mobile, hard, regular borders with a small post-biopsy ecchymosis and no other skin changes, nipple discharge or retraction. No lymphadenopathy
  - LEFT: moderate gynecomastia without palpable masses, skin changes, nipple discharge or retraction. No lymphadenopathy

# Pertinent Labs

- The patient's PSAs have been predominantly within normal limits since he was treated and maintained on anti-androgen therapy for his prostate cancer.

Ref.	Range & Units	0.0 - 4.0 ng/mL
06/28/23	09:48	3.2
03/24/23	10:05	1.8
12/22/22	09:54	0.9
09/27/22	09:51	0.5
03/04/22	10:39	<0.1
09/16/21	10:10	<0.1
05/12/21	09:59	<0.1
01/14/21	10:15	<0.1
10/12/20	09:56	<0.1
05/26/20	11:48	<0.1
01/07/20	09:51	0.2
10/10/19	09:31	0.4
08/29/19	09:52	5.1
05/29/19	10:03	2.7
02/25/19	09:46	1.1
11/23/18	10:09	0.1
09/19/18	10:39	0.3
08/23/18	10:37	0.7
07/24/18	09:01	5.3

What Imaging Should We Order?

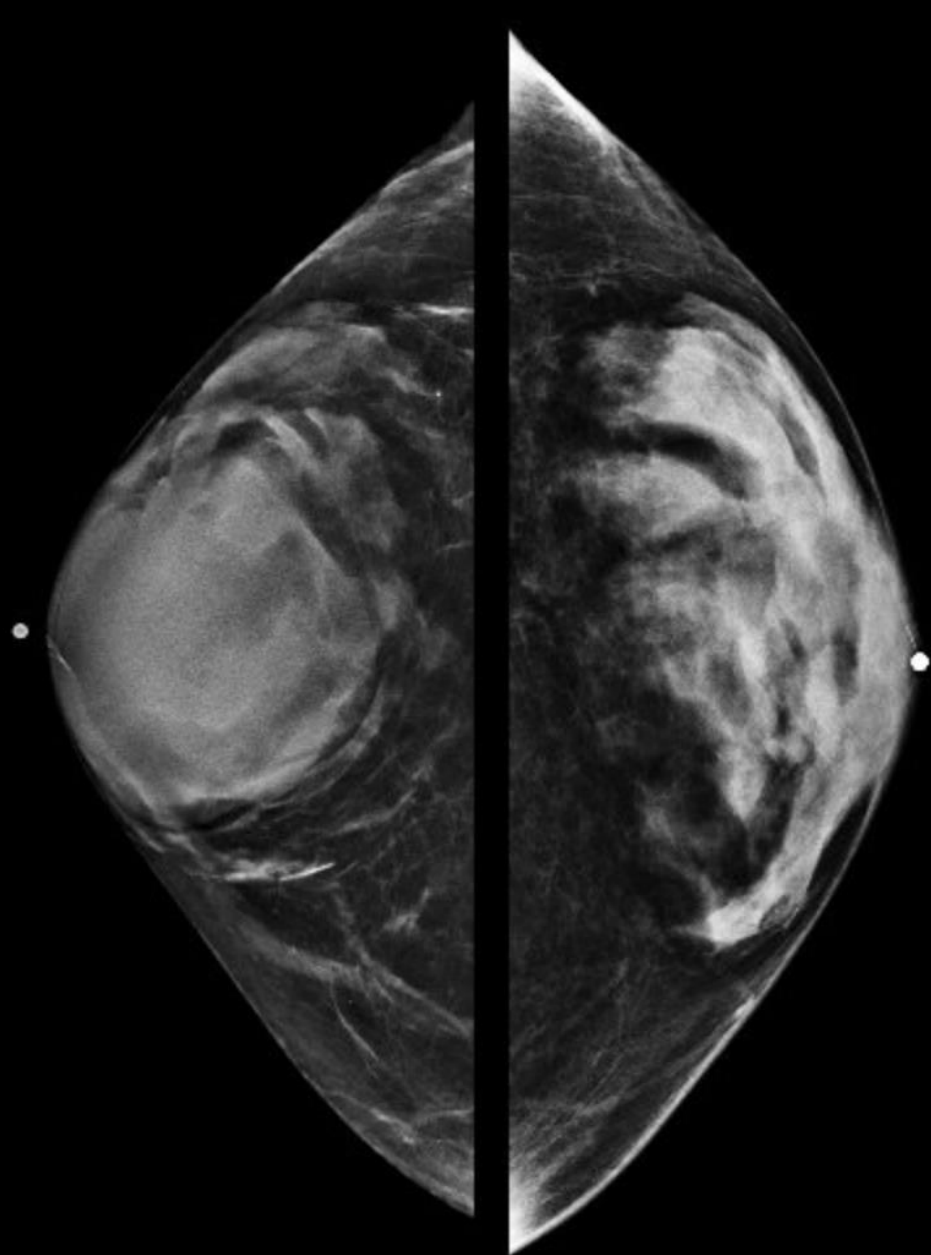
# Select the applicable ACR Appropriateness Criteria

## Variant 5:

Male of any age with physical examination suspicious for breast cancer (suspicious palpable breast mass, axillary adenopathy, nipple discharge, or nipple retraction). Initial imaging.

Procedure	Appropriateness Category	Relative Radiation Level
Mammography diagnostic	Usually Appropriate	☢☢
Digital breast tomosynthesis diagnostic	Usually Appropriate	☢☢
US breast	Usually Appropriate	○
MRI breast without and with IV contrast	Usually Not Appropriate	○
MRI breast without IV contrast	Usually Not Appropriate	○

These imaging modalities was ordered by the oncology team.



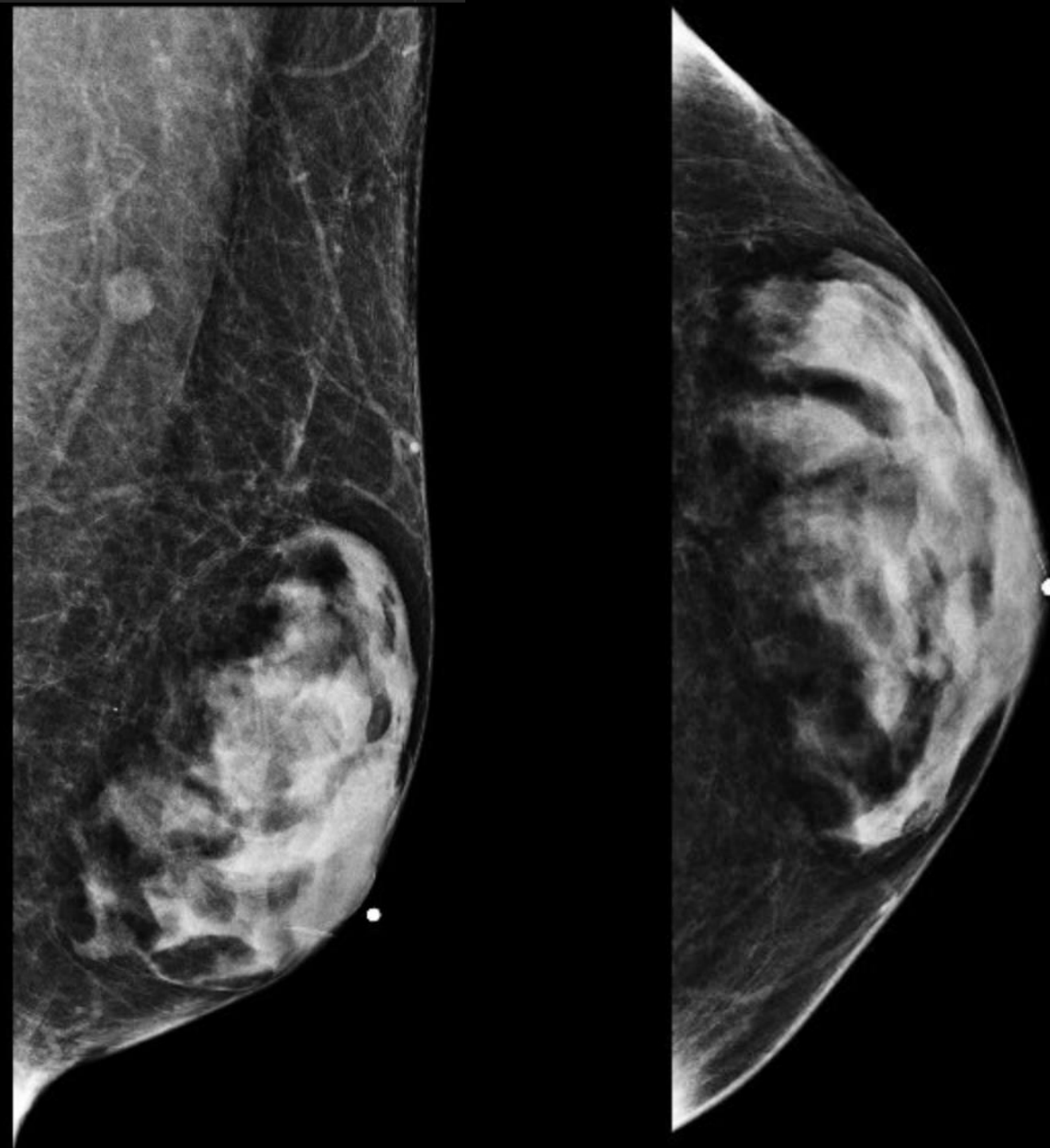
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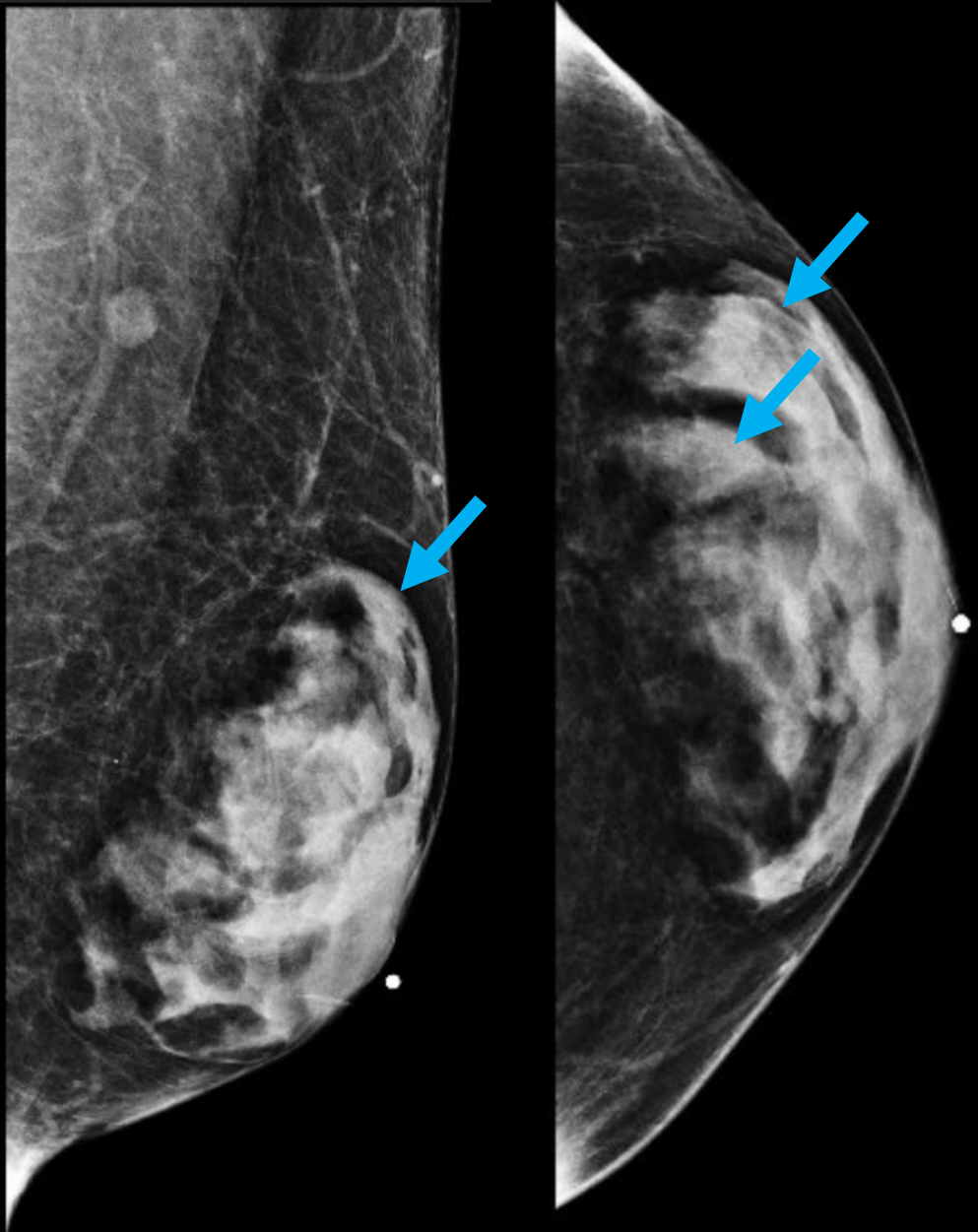
MLO



# Findings - L Breast Mammogram (unlabeled)

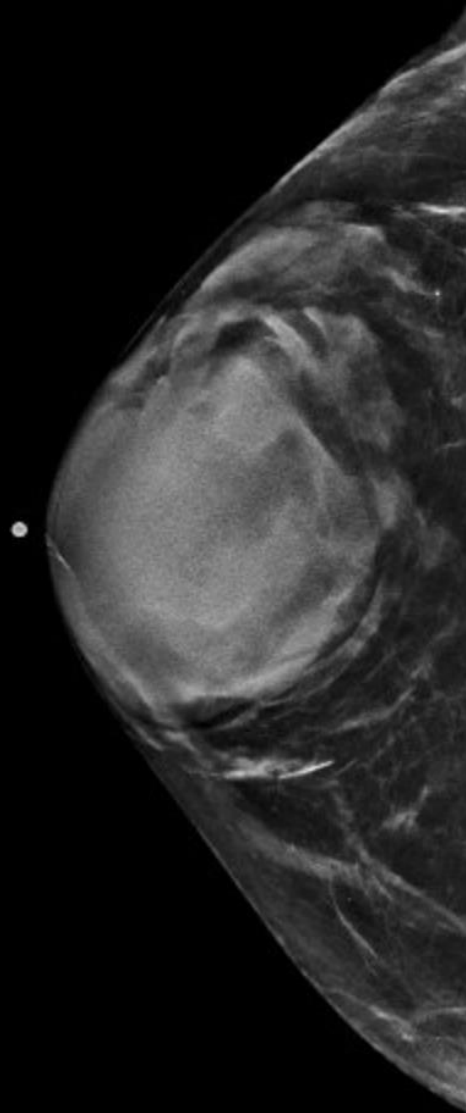


# Findings – L Breast Mammogram (labeled)



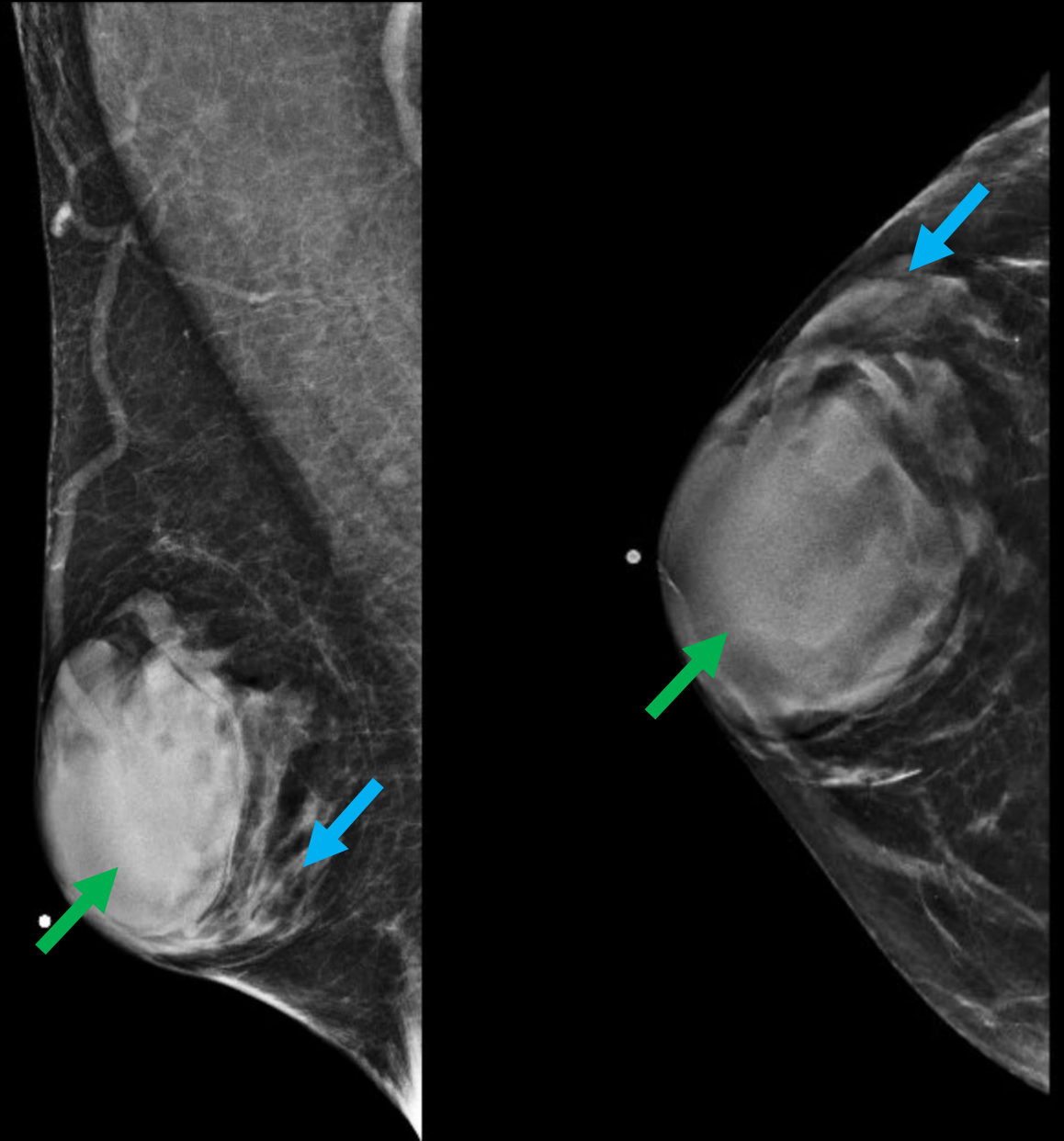
This 2-view mammogram of the left breast demonstrates severe gynecomastia with dendritic pattern of ductal and stromal proliferation (blue arrows). Small white circle indicates location of the nipple.

# Findings - R Breast Mammogram (unlabeled)

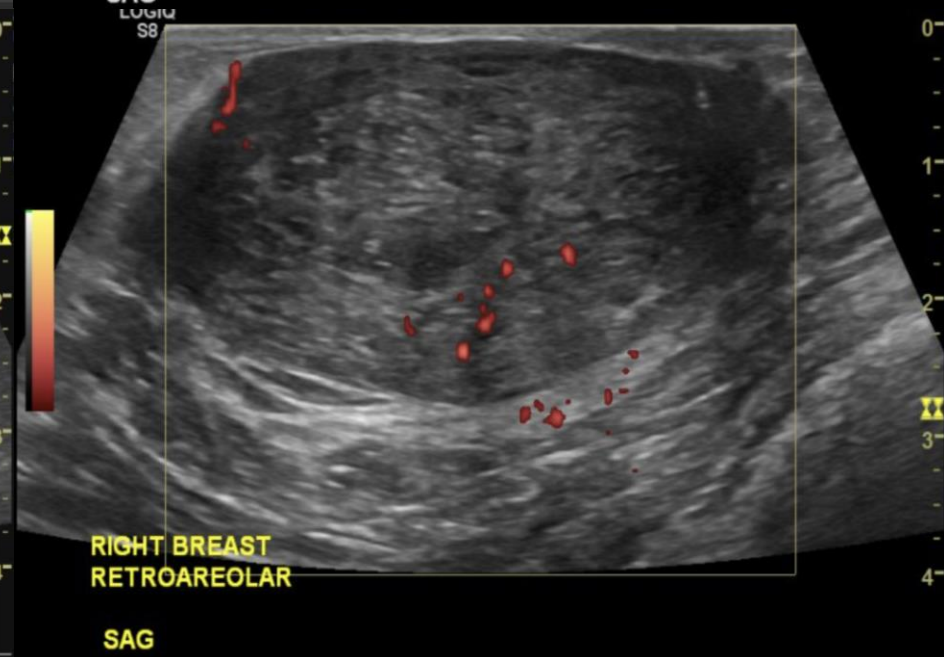
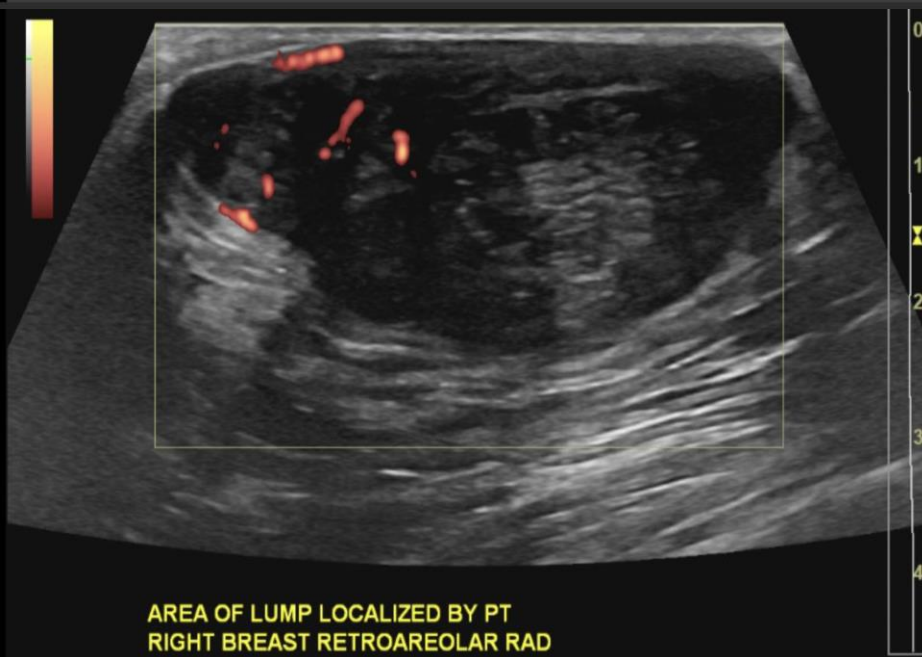


# Findings – R Breast Mammogram (labeled)

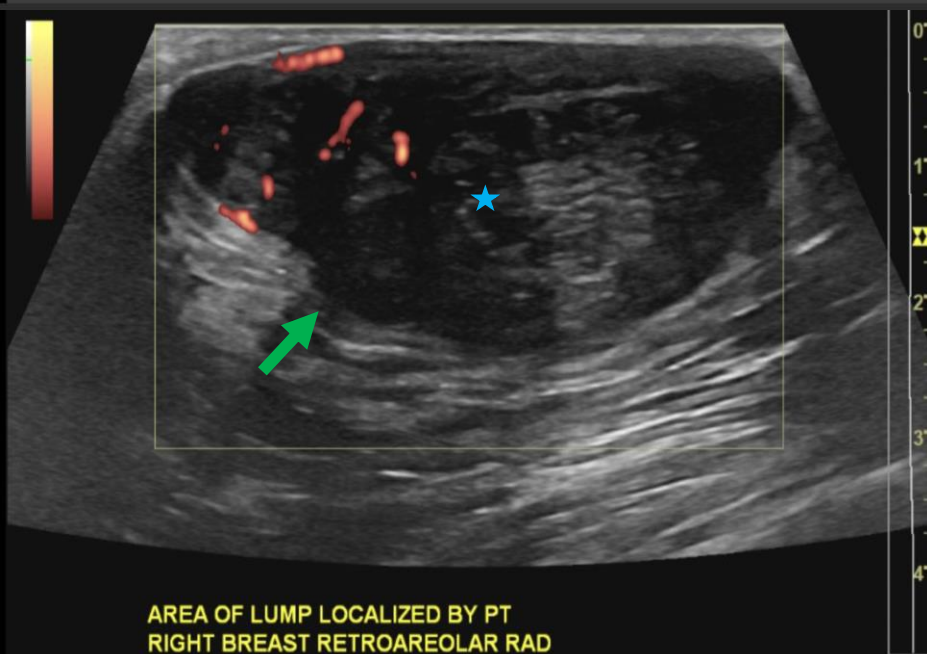
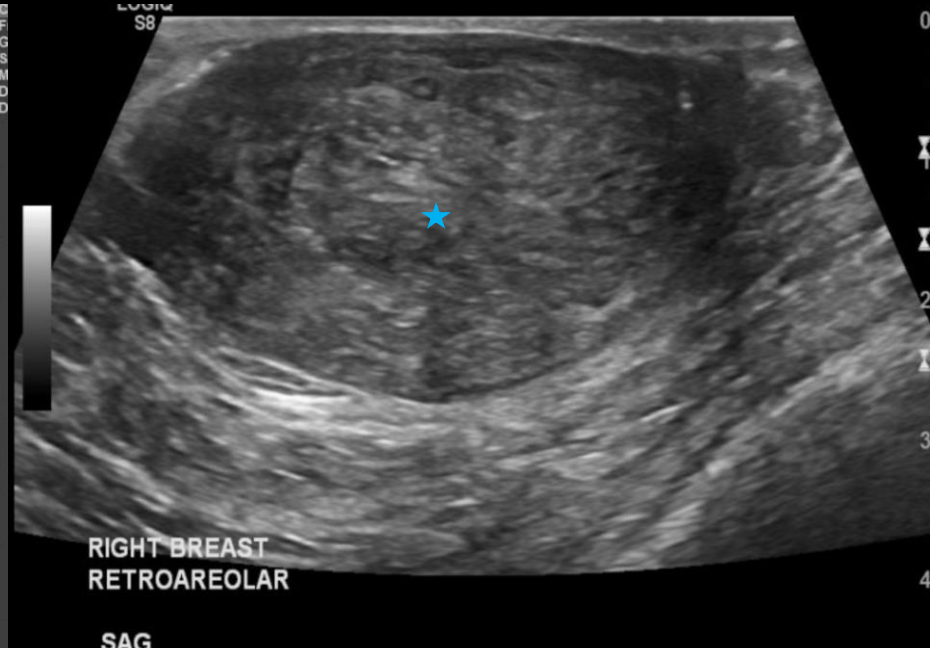
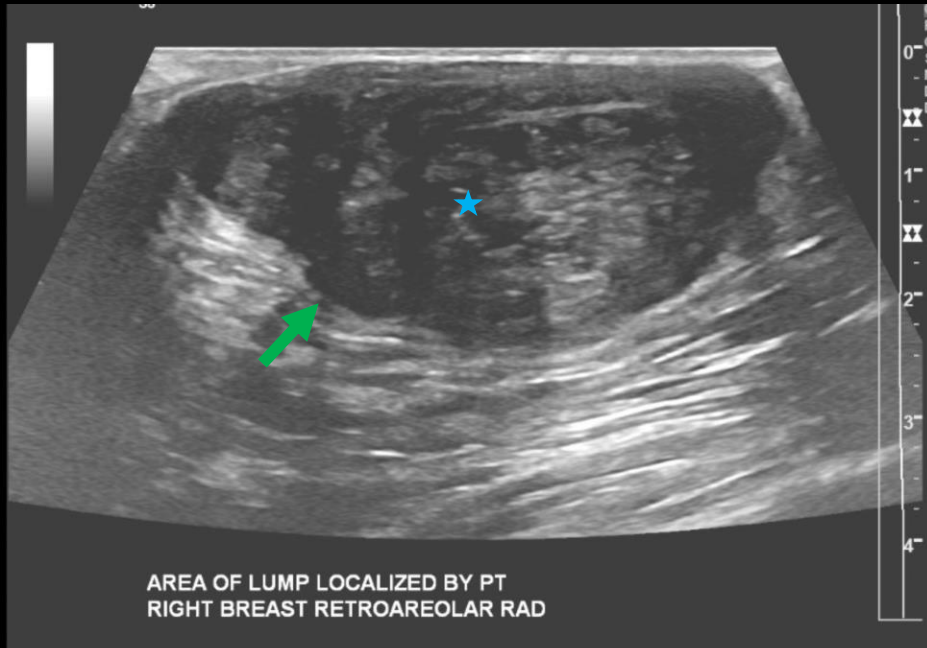
- This mammogram of the right breast demonstrates severe gynecomastia with dendritic pattern of ductal and stromal proliferation (blue arrows), as seen on the left. Small white circle indicates location of the nipple.
- Also present is a retroareolar dense oval circumscribed 5cm mass (green), without associated microcalcifications.



# Findings – R Breast U/S (unlabeled)



# Findings – R Breast U/S (labeled)



- A 5.4 x 2.3 x 5.9 cm ovoid hypo to isoechoic circumscribed parallel mass (blue star) is present in the right breast, corresponding to the area of palpable concern. The mass has no posterior shadowing, demonstrates mild internal vascularity on color doppler assessment and slightly irregular border along the posterior wall (green arrow).
- Both breasts were evaluated at the time of this examination, without discrete abnormality in the left breast.
- No abnormal axillary lymph nodes were present on either side.

Final Dx:

Right Benign Phyllodes Tumor

# Case Discussion – Characterization and Etiology

- A phyllodes tumor is an uncommon tumor composed of fibro-epithelial elements.
  - Phyllodes tumors range from relatively benign tumors, not dissimilar to fibroadenomas, to tumors that can metastasize and contain sarcoma-like elements.
- With exception of cancer syndromes like Li Fraumeni, there are no other notable predisposing factors.



# Case Discussion – Differential Diagnosis

- DDx for phyllodes tumor includes fibroadenoma with cellular elements as well as sarcoma of the breast, or periductal stromal tumors.
  - Fibroadenoma with cellular elements is a common biopsy result – this was seen in our patient at the time of initial biopsy.
  - Of note, this result should prompt surgical excision of the lesion, regardless of its appearance on imaging studies.
  - Periductal stromal tumor is consistent with malignant phyllodes tumor. It can be differentiated, however, with the absence of the characteristic leaf like projections seen in phyllodes tumors.

# Case Discussion – Treatment/Surveillance

- All phyllodes tumors should be surgically excised.
  - Negative margins are necessary, but wide margins >1cm are needed for malignant Phyllodes tumors.
  - Lymph node dissection is not necessary.
- In addition to surgical resection, NCCN guidelines do not recommend patients with larger, higher-risk lesions or malignant Phyllodes undergo radiation chemotherapy unless it is recurrent.
  - Because phyllodes tumors can exhibit sarcoma-like behavior, they are poor responders to chemo or XRT - surgical excision with wide margins (>1cm) is the main form of treatment.
- While there is no evidence-based recommendations for surveillance (for both malignant and benign tumors), commonly patients with malignant tumors are closely monitored for 2 years post treatment as that time period is when recurrence happens most frequently.

# Our Case/Clinical Course

- Post biopsy, the mass was surgically resected and confirmed to represent a phyllodes tumor of the breast.
- The mass contained more benign elements:
  - Intermediate cellularity, low mitotic activity (<2/hpf) with the tumor border being predominantly circumscribed.
- Patient is doing well postoperatively – he has no new breast complaints, no palpable masses or lumps, no nipple discharge or retraction and no skin changes.

# References

1. Limaiem F, Kashyap S. Phyllodes Tumor of the Breast. [Updated 2023 Jan 1]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK541138/>
2. El Hag IA, Aodah A, Kollur SM, Attallah A, Mohamed AA, Al-Hussaini H. Cytological clues in the distinction between phyllodes tumor and fibroadenoma. *Cancer Cytopathol*. 2010 Feb 25;118(1):33-40. doi: 10.1002/cncy.20057. PMID: 20094997.
3. Barth RJ Jr, Wells WA, Mitchell SE, Cole BF. A prospective, multi-institutional study of adjuvant radiotherapy after resection of malignant phyllodes tumors. *Ann Surg Oncol*. 2009 Aug;16(8):2288-94. doi: 10.1245/s10434-009-0489-2. Epub 2009 May 8. PMID: 19424757; PMCID: PMC5053421.
4. Barth RJ Jr. Histologic features predict local recurrence after breast conserving therapy of phyllodes tumors. *Breast Cancer Res Treat*. 1999 Oct;57(3):291-5. doi: 10.1023/a:1006260225618. PMID: 10617306.
5. Grau, AM. Phyllodes tumors of the breast. In: UpToDate, UpToDate, Waltham, N