

AMSER Case of the Month

September 2023

75-year-old female presents with deflation of her left breast with nightly coughing episodes, concurrent SOB, and left chest/back pain.



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Patient Presentation

- HPI: 75-year-old female with myasthenia gravis and thymoma status post treatment with thymectomy and radiation presents with shortness of breath (SOB) and left sided chest pain. Prior to presentation, she had a night-time coughing episode with sudden shortness of breath, back pain, and deflation of her left breast implant.
- Pertinent PSH: Pre-pectoral breast implantation
- Physical Exam: The left implant was no longer palpable and is asymmetric with the other side.

Pertinent Labs

- None

What Imaging Should We Order?

ACR Appropriateness Criteria

Variant 1: Nontraumatic chest wall pain. No history of malignancy. Initial imaging.

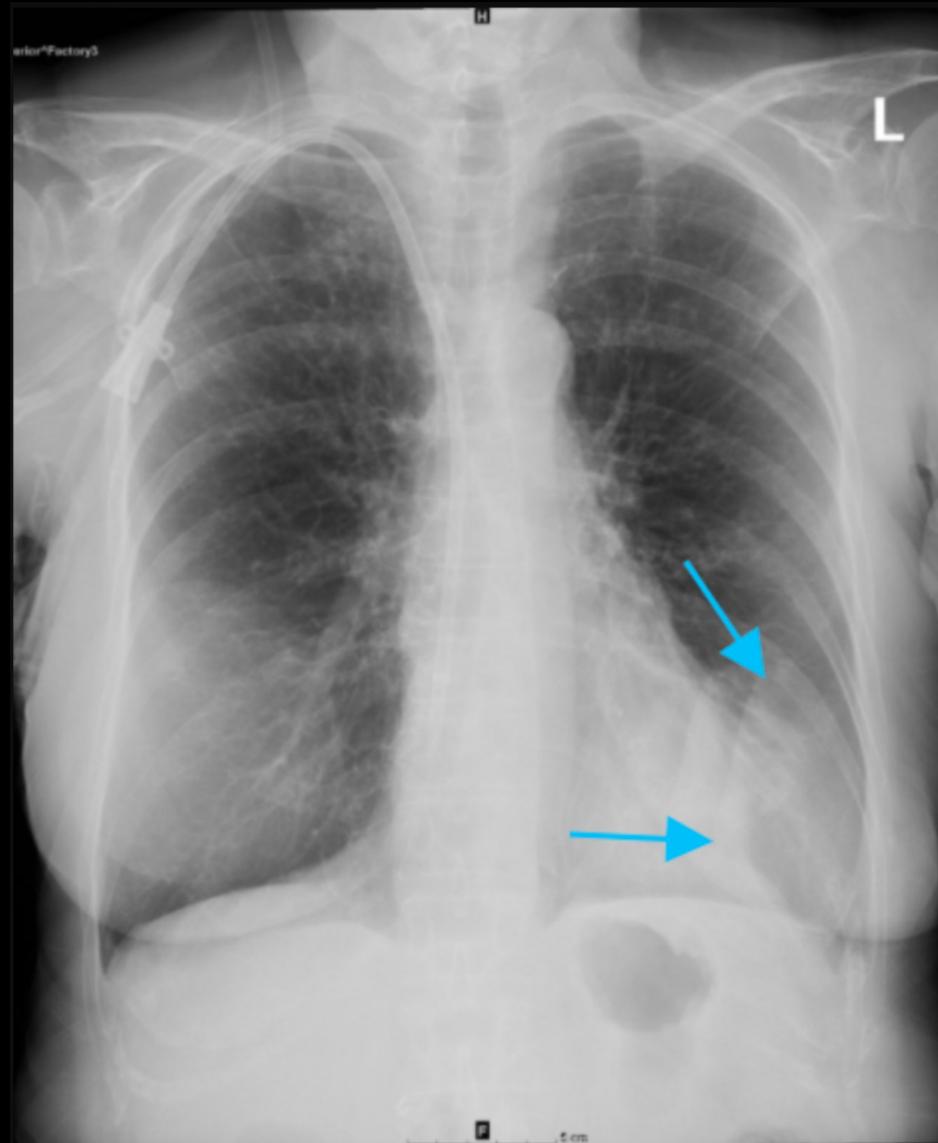
Procedure	Appropriateness Category	Relative Radiation Level
Radiography chest	Usually Appropriate	☢
US chest	May Be Appropriate	○
Radiography rib views	May Be Appropriate	☢☢☢
MRI chest without and with IV contrast	Usually Not Appropriate	○
MRI chest without IV contrast	Usually Not Appropriate	○
Bone scan whole body	Usually Not Appropriate	☢☢☢
CT chest with IV contrast	Usually Not Appropriate	☢☢☢
CT chest without and with IV contrast	Usually Not Appropriate	☢☢☢
CT chest without IV contrast	Usually Not Appropriate	☢☢☢
FDG-PET/CT skull base to mid-thigh	Usually Not Appropriate	☢☢☢☢
WBC scan chest	Usually Not Appropriate	☢☢☢☢

This imaging modality was ordered

Findings (unlabeled)



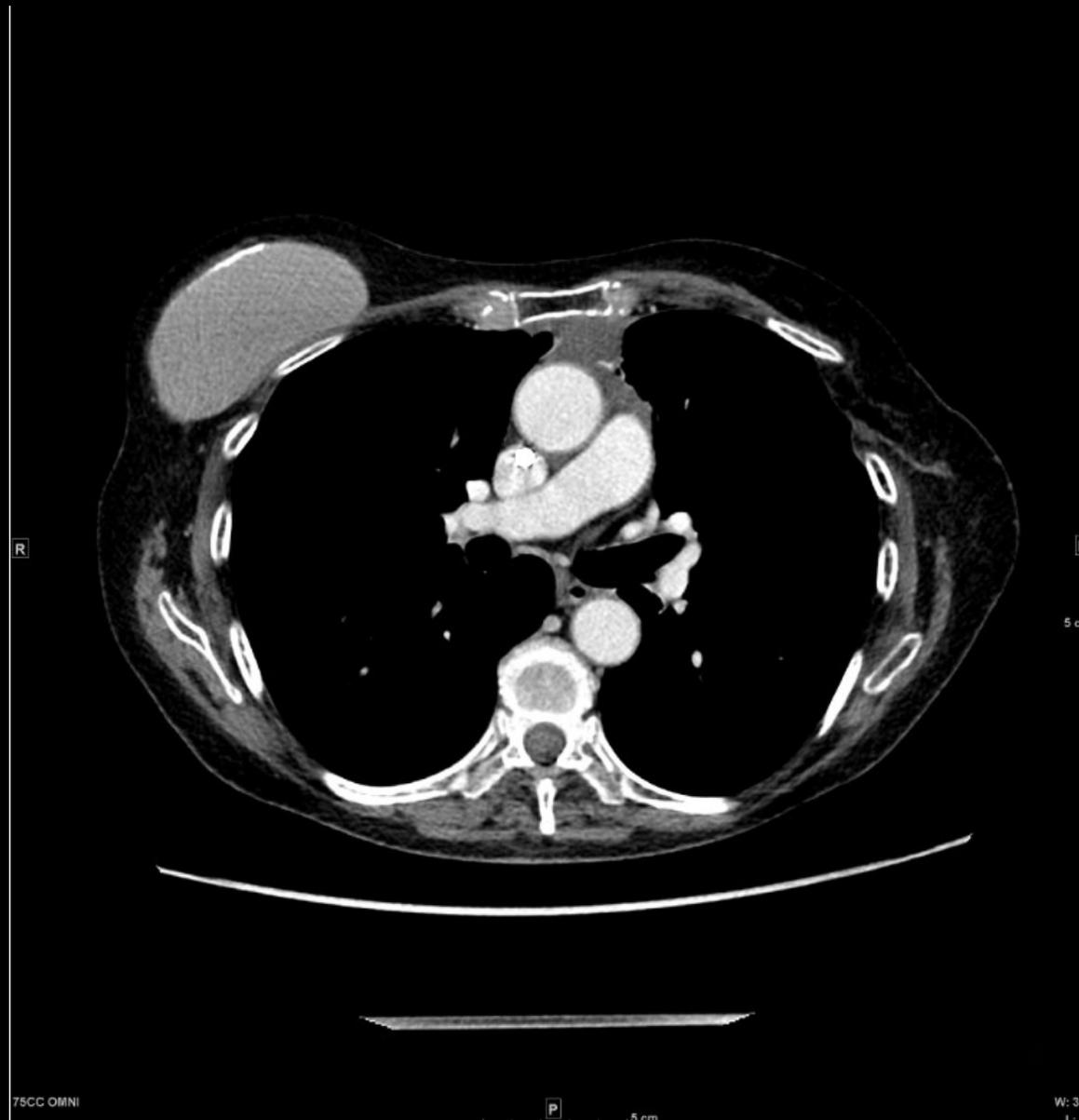
Findings: (labeled)



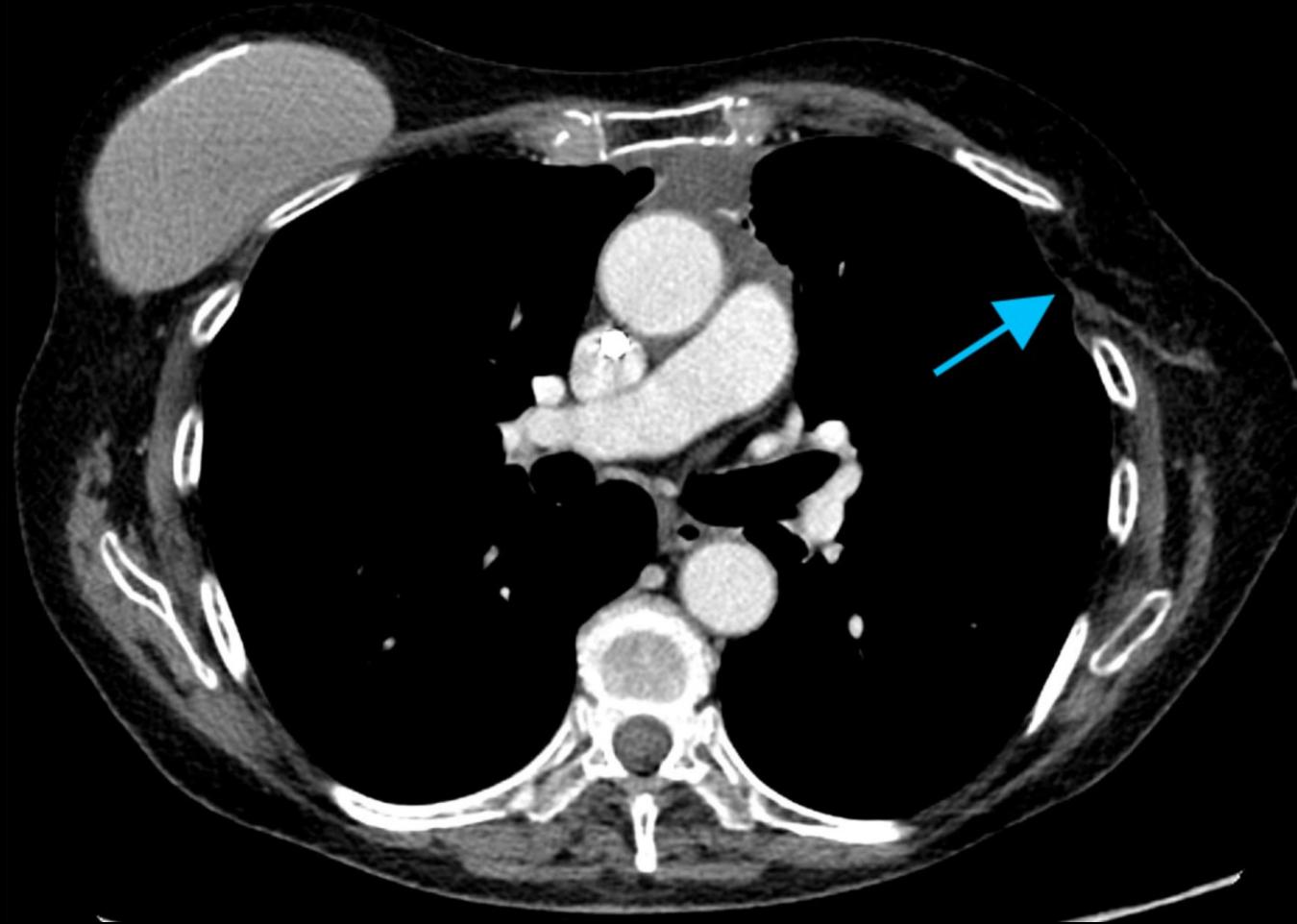
AP chest radiograph showing left breast implant deformity (blue arrows).

A series of follow-up CTs of the chest were ordered.

Findings (unlabeled)

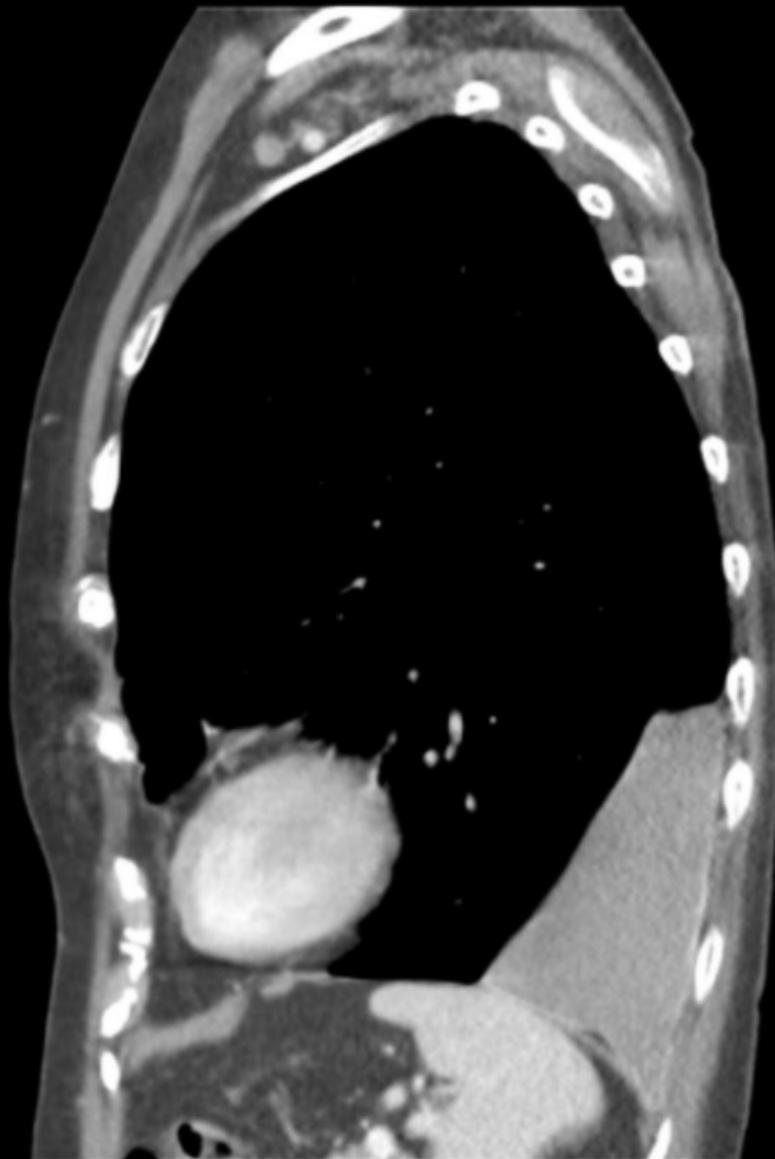


Findings: (labeled)



Axial IV and oral contrast-enhanced CT image shows absence of the left breast implant (blue arrow).

Findings (unlabeled)



Findings: (labeled)

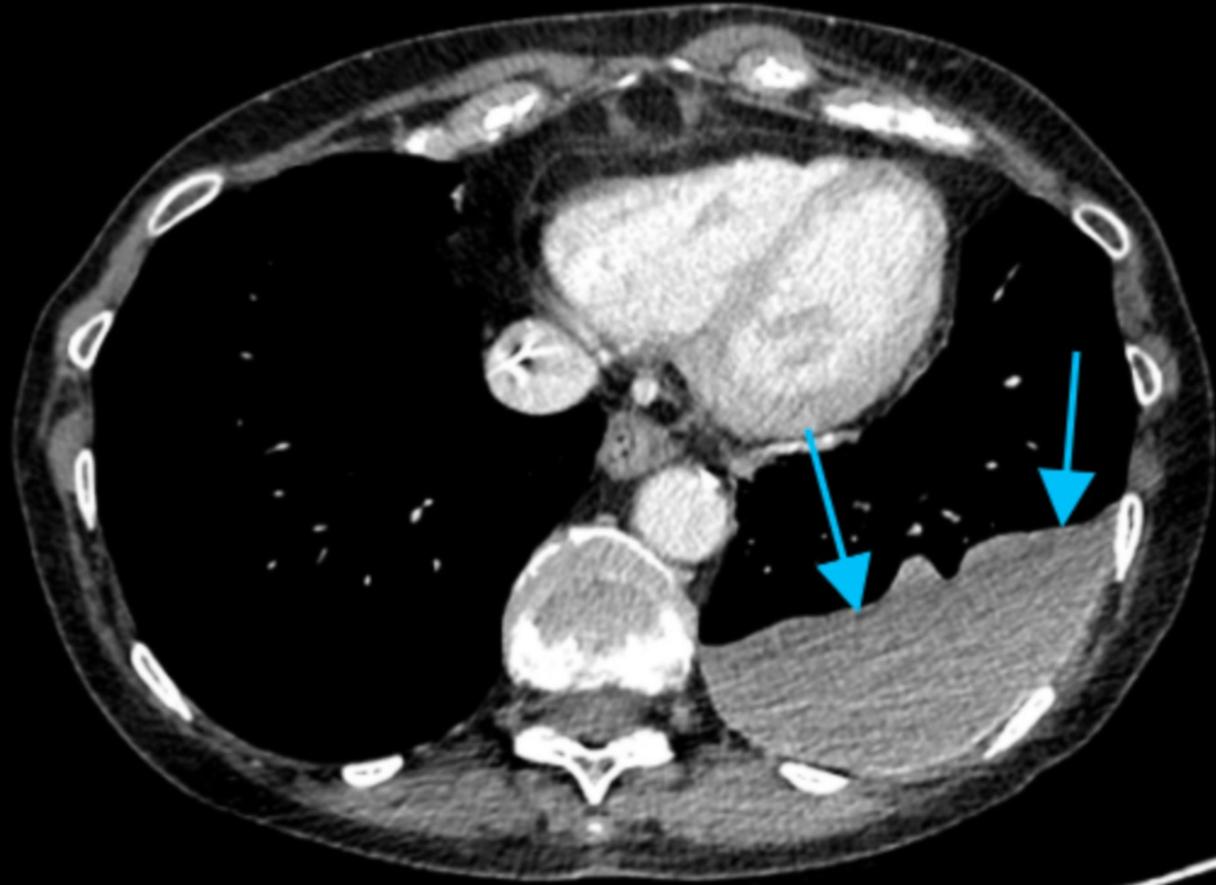
Sagittal reformatted IV contrast-enhanced CT through the chest showing the left breast implant in the posterior left chest cavity (blue arrows).



Findings (unlabeled)



Findings: (labeled)



Axial IV contrast-enhanced CT through the chest in mediastinal window showing the left breast implant in the posterior left chest cavity (blue arrows).

Final Dx:

Intrathoracic Intrapleural Migration of Left Breast
Implant

Case Discussion

- Silicone and saline prototypes are the most common types of breast implants and come in single-lumen and double-lumen variations (1).
- The main surgical location for implants is pre-pectoral or retro-pectoral (1).
- Intrathoracic migration of breast implants is a rare complication that has been described in a small handful of case reports(2).
- The most accepted cause of this complication is suction created by negative intrathoracic pressure causing the breast implant to migrate into the pleural cavity (3).

Case Discussion cont.

- The patient's clinical presentation may be asymptomatic and they may not notice a change in breast shape or size(3). Chest pain or discomfort can be present in the patient (3).
- Treatment: Implant migration is treated with thoracotomy for implant removal and closure of the thoracic wall defect. Any leakage of implant contents is removed, as intrathoracic silicone can cause inflammation or fistula formation (3).

References:

1. Shah AT, Jankharia BB. Imaging of common breast implants and implant-related complications: A pictorial essay. Indian J Radiol Imaging. 2016;26(2):216-225. doi:10.4103/0971-3026.184409
2. Chen ZY, Wang ZG, Kuang RX, Wang BT, Su YP. Implant found in thoracic cavity after breast augmentation. Plast Reconstr Surg 2005;116:1826-27.
3. Febbo JA, Gaddikeri RS, Shah P. Case 287: Intrathoracic Migration of a breast implant after video-assisted thoracoscopic surgery for right upper lobectomy. Radiology. 2021;298(3):713-716. doi:10.1148/radiol.2020192178