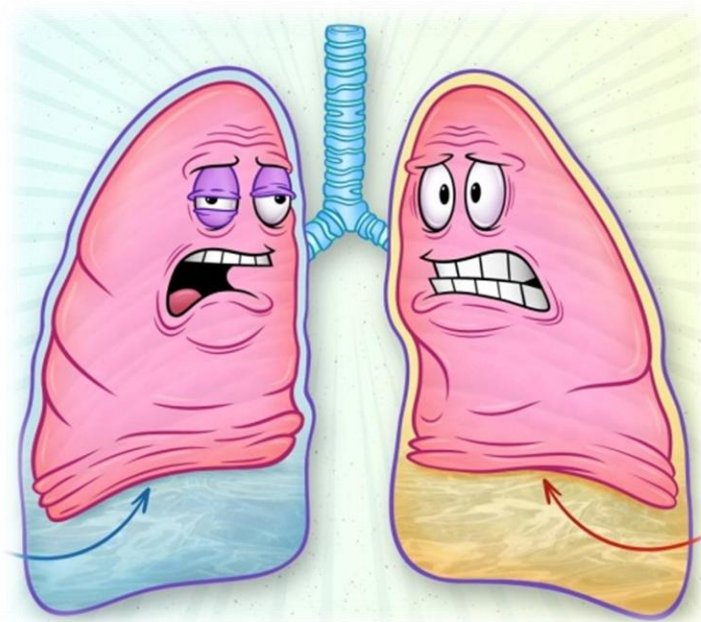


ΥΠΕΡΗΧΟΣ ΠΝΕΥΜΟΝΩΝ

Υπεζωκοτική Συλλογή



Ευθυμία Παπαδοπούλου MD, MSc, Πνευμονολόγος-Φυματιολόγος



Lung Ultrasound: The Essentials

Thomas J. Marini, MD • Deborah J. Rubens, MD • Yu T. Zhao, BA • Justin Weis, MD • Timothy P. O'Connor, MD • William H. Novak, MD • Katherine A. Kaproth-Joslin, MD, PhD

From the Departments of Imaging Sciences (T.J.M., D.J.R., Y.T.Z., K.A.K.J.), Medicine (J.W., W.H.N.), and Emergency Medicine (T.P.O.), University of Rochester Medical Center, School of Medicine and Dentistry, 601 Elmwood Ave, Box 655, Rochester, NY 14642. Received October 24, 2020; revision requested January 5, 2020; revision received January 16; accepted February 5. Address correspondence to T.M. (e-mail: RochesterRadiology2021@gmail.com).

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Radiology: Cardiothoracic Imaging 2021; 3(2):e200564 • <https://doi.org/10.1148/ryct.2021200564> • Content codes: CH US

Sensitivity and Specificity of Lung US versus Chest Radiography

Indication	Study Type	No. of Patients	Lung US		Chest Radiography	
			Sensitivity (%)	Specificity (%)	Sensitivity (%)	Specificity (%)
Pleural effusion (5)	Prospective	32	92	93	39	85
Pneumonia (7)	Systematic review with meta-analysis	742	95	90	77	91
Pneumothorax (4)	Systematic review with meta-analysis	5314	87	99	46	100
Pulmonary edema (6)	Systematic review with meta-analysis	1827	88	90	73	90

Note.—Sensitivity and specificity values vary slightly from study to study. The pleural effusion statistics are drawn from a sample of critically ill patients.

Χαμηλός φωτισμός χώρου

Επιλογή κατάλληλου ηχοβολέα – παραθύρου

Άφθονο τζελ!

**LET'S
GET READY**

Αναγνώριση δείκτη προσανατολισμού

Κατάλληλο βάθος πεδίου και εστίαση σήματος

Χαμηλή ένταση σήματος για αναγνώριση ευρημάτων

ΗΧΟΒΟΛΕΙΣ



Linear



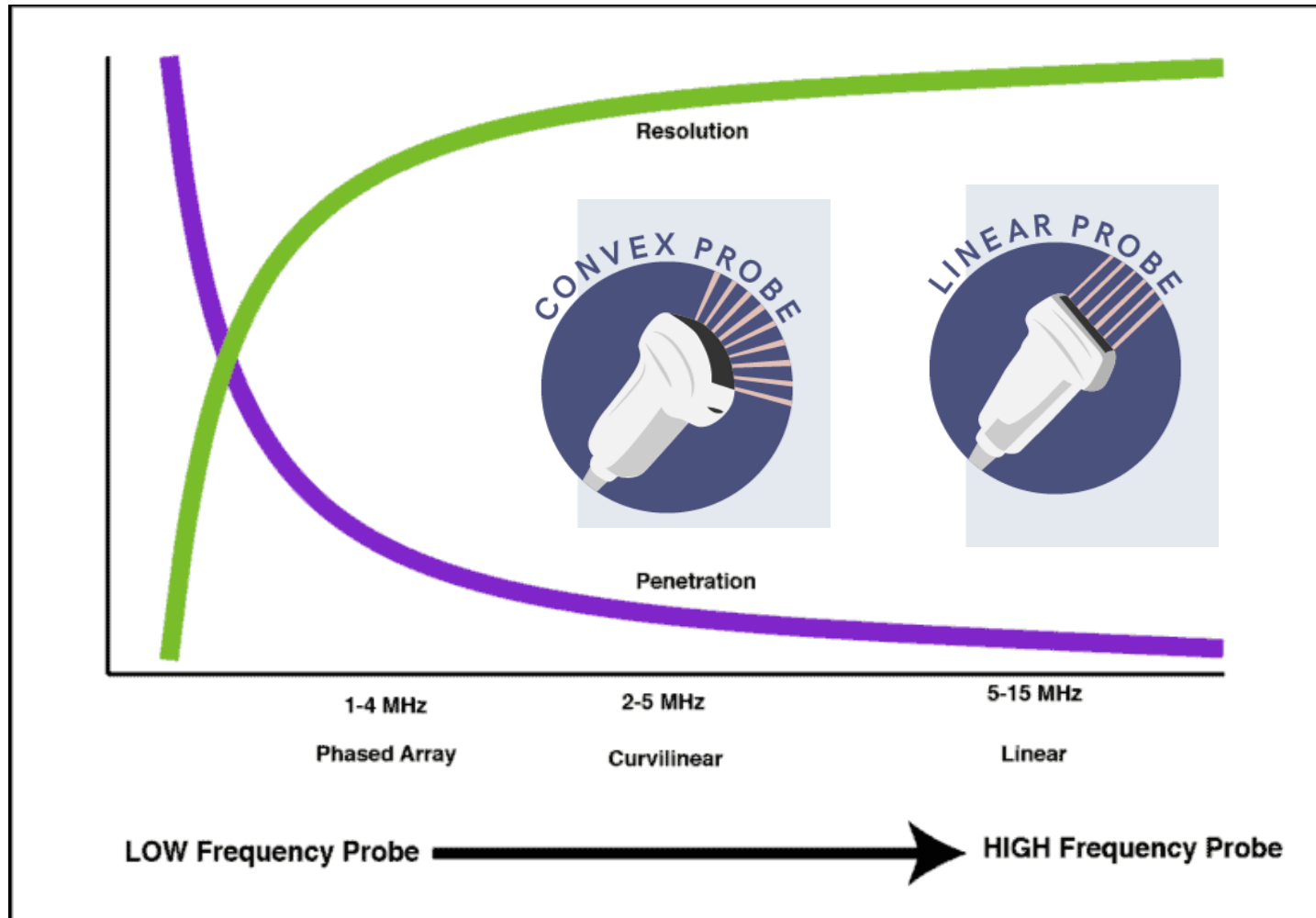
Curvilinear



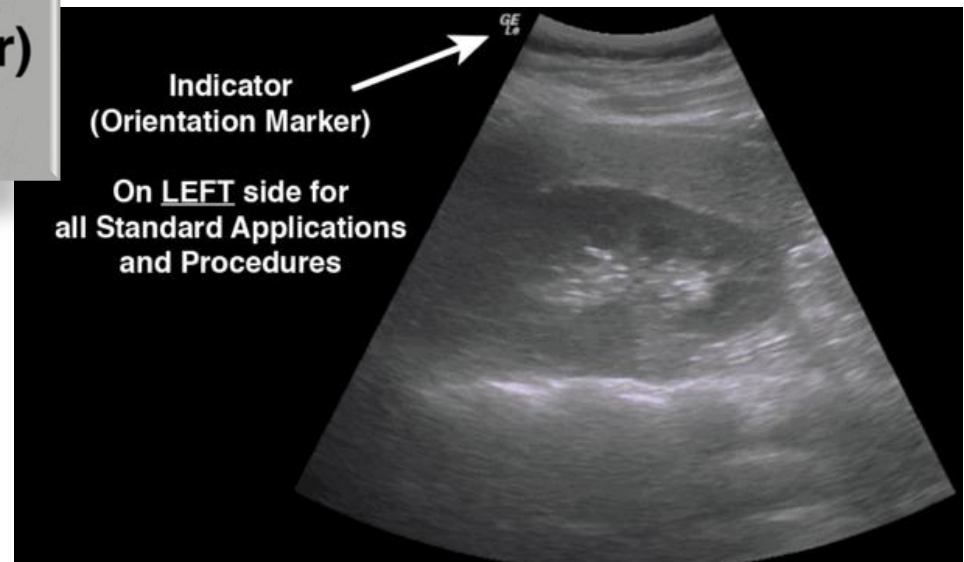
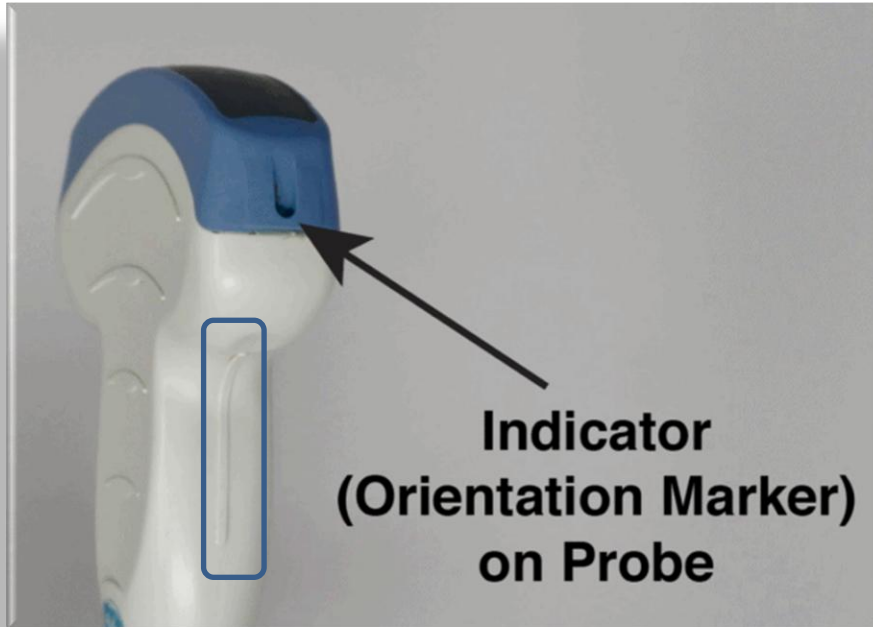
**Phased
Array**



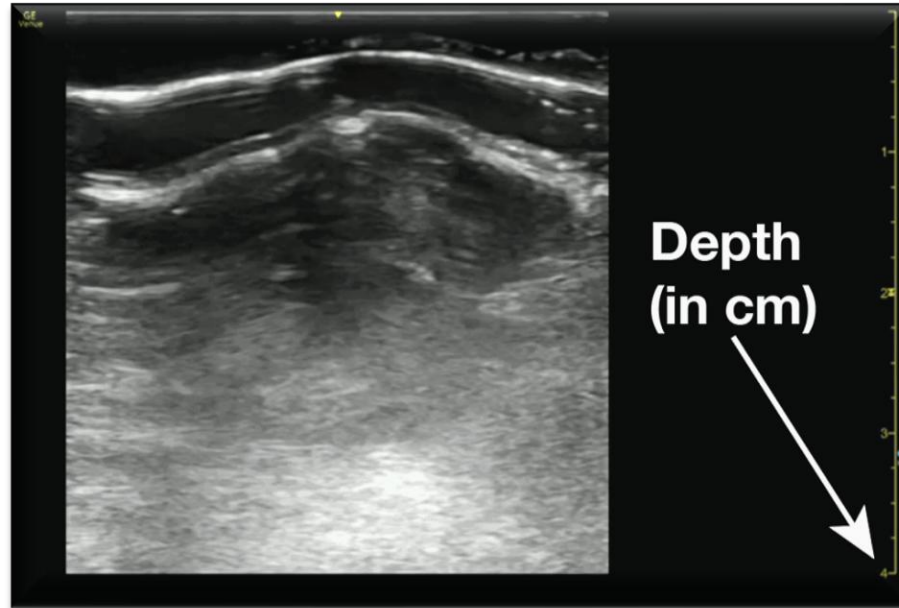
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ΠΡΟΣΑΝΑΤΟΛΙΣΜΟΣ

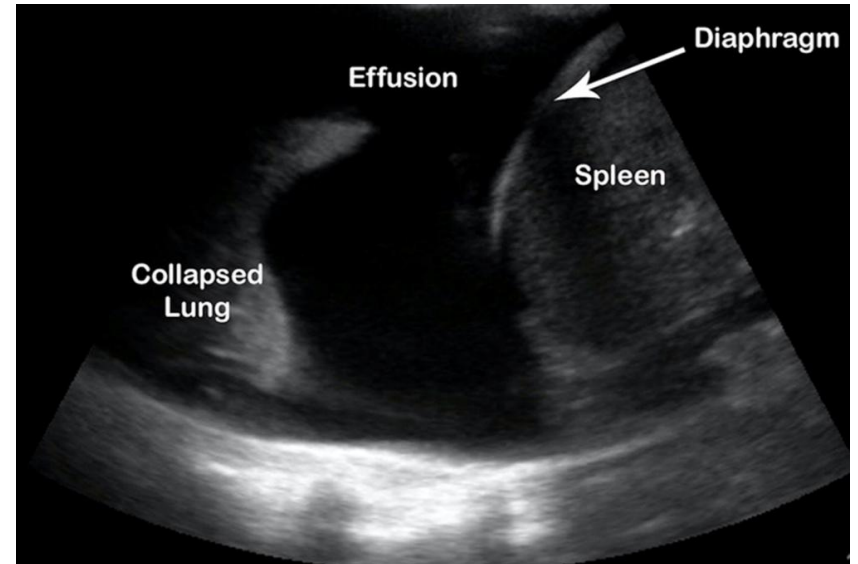
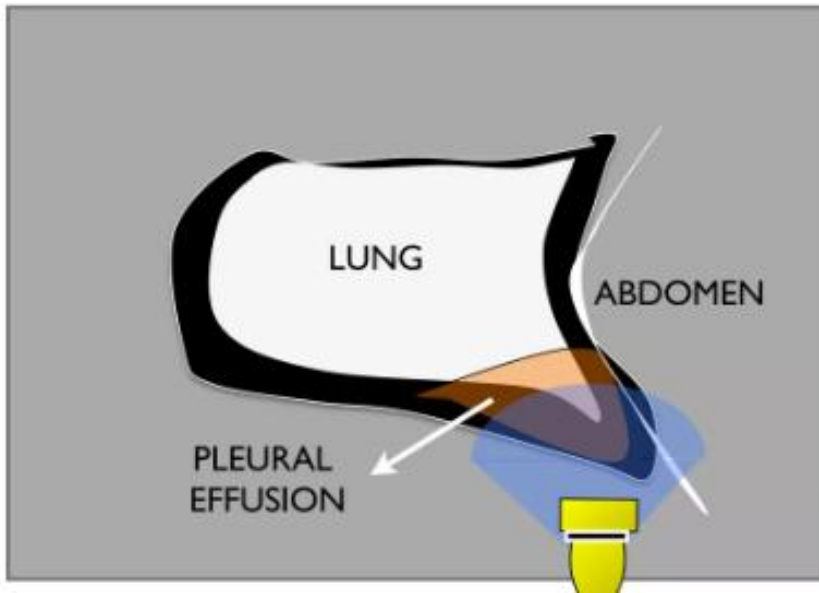


ΡΥΘΜΙΣΗ ΠΑΡΑΜΕΤΡΩΝ



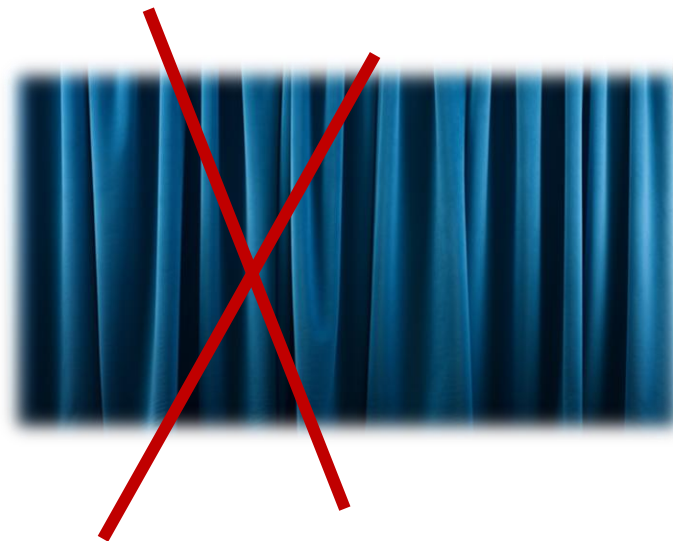
DEPTH is how far into tissue the US is imaging

ΥΠΕΖΩΚΟΤΙΚΗ ΣΥΛΛΟΓΗ



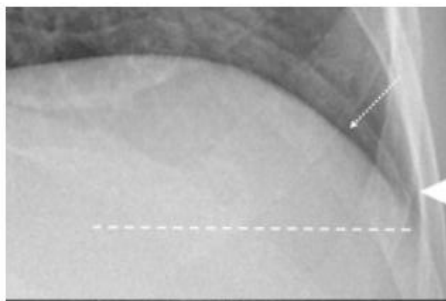
US ΣΗΜΕΙΑ ΑΝΑΓΝΩΡΙΣΗΣ ΣΥΛΛΟΓΗΣ

- Curtain sign



- Spine sign



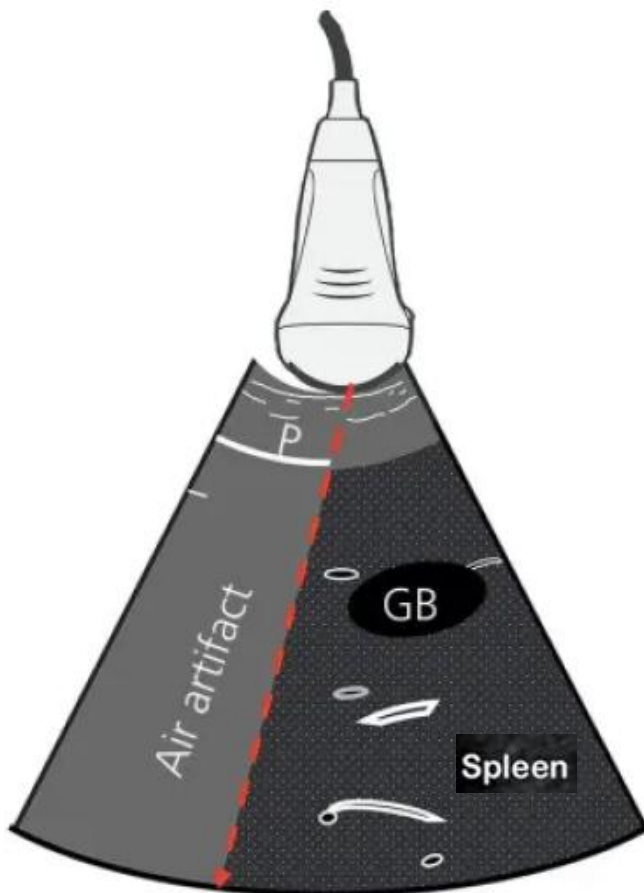
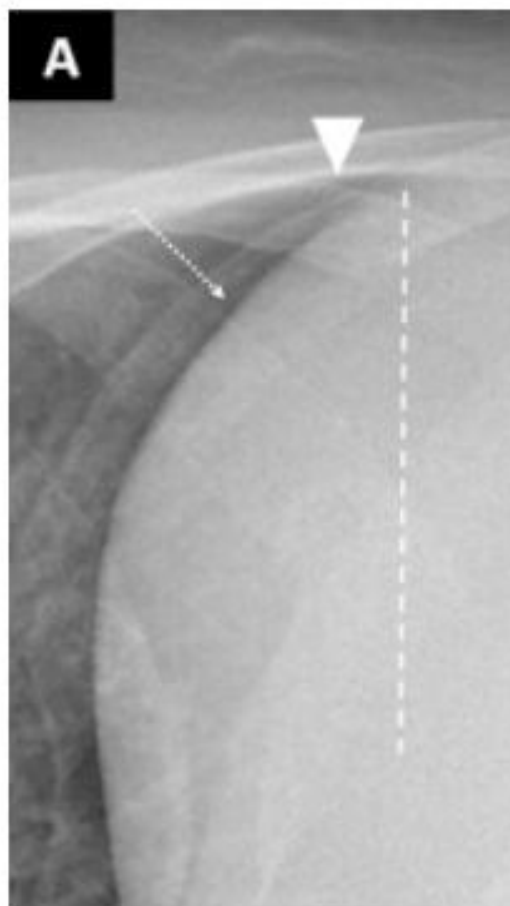


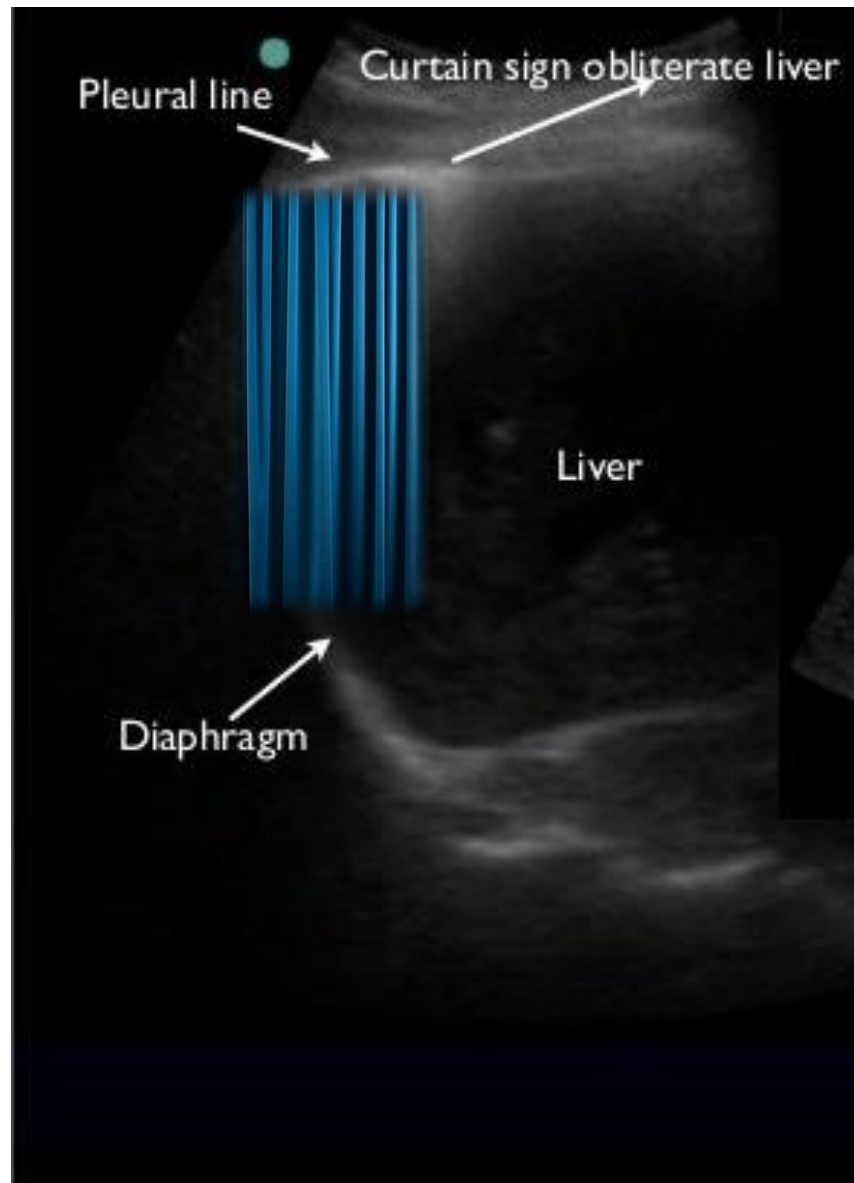
Brief Communication

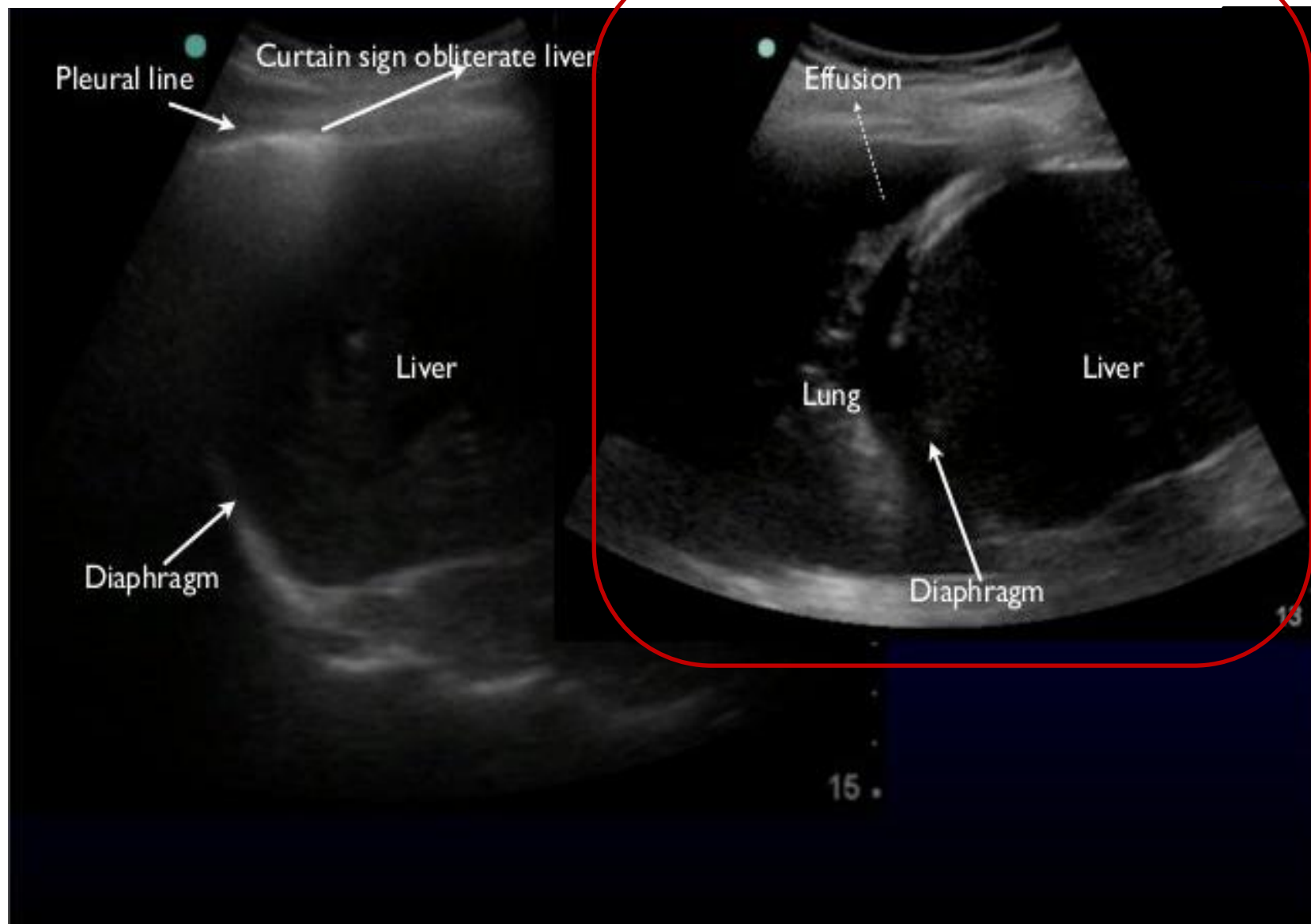
The Curtain Sign in Lung Ultrasound

Francis Chun Yue Lee ^{1,2*}

¹ Acute & Emergency Care Centre, Khoo Teck Puat Hospital, Singapore, and ² Yong Loo Lin School of Medicine, National University of Singapore, Singapore







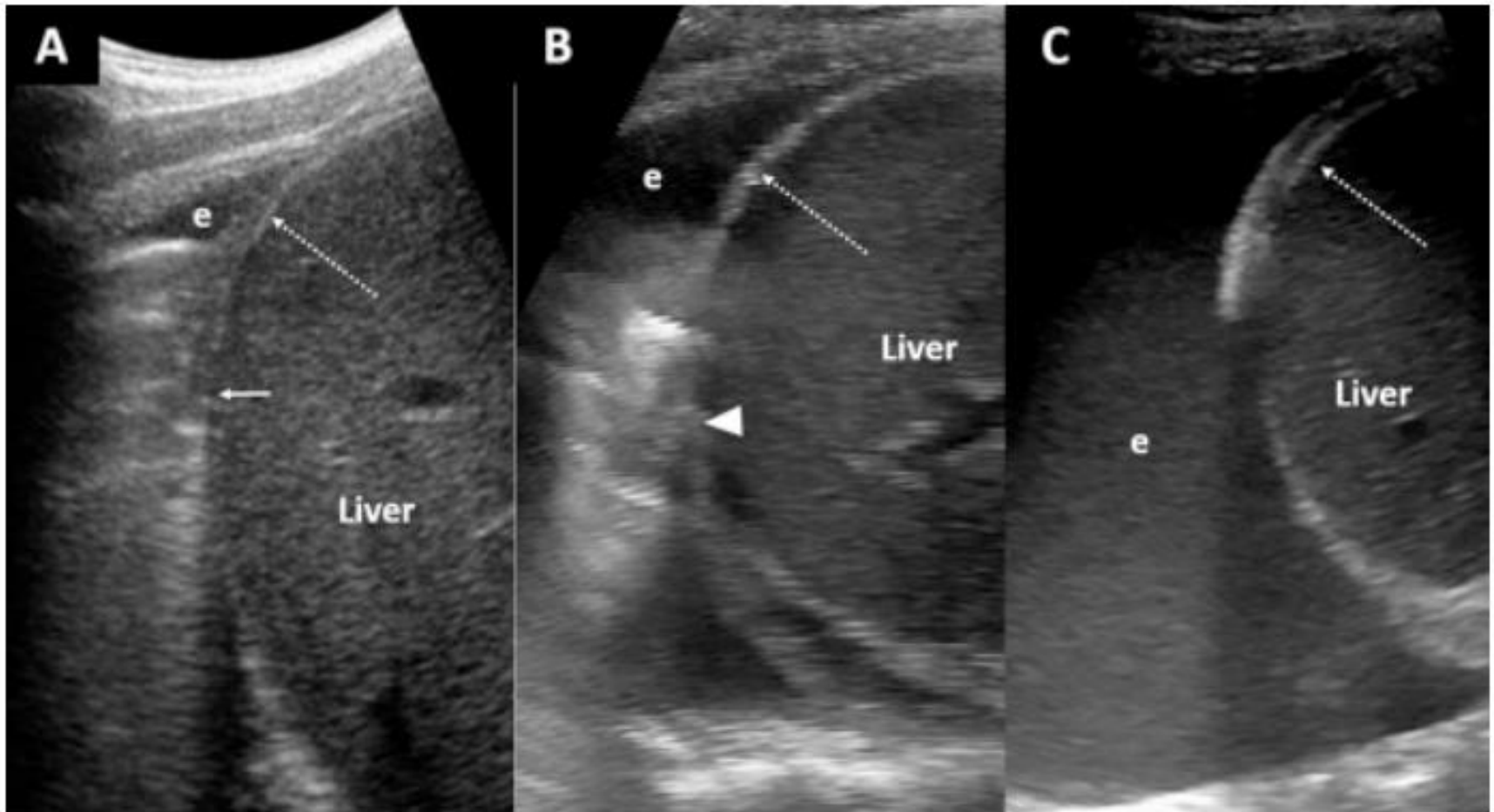


Brief Communication

The Curtain Sign in Lung Ultrasound

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¹ Acute & Emergency Care Centre, Khoo Teck Puat Hospital, Singapore, and ² Yong Loo Lin School of Medicine, National University of Singapore, Singapore



ΚΑΘΙΣΤΗ ΘΕΣΗ



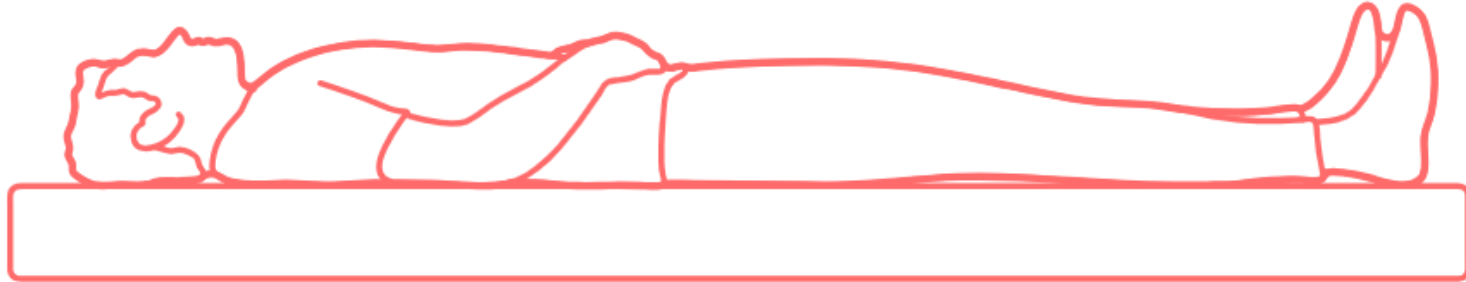
Βαρυτοεξαρτώμενη εντόπιση
(ελεύθερη συλλογή)

Κατώτερες ζώνες
5, 3, 2 (FLUS)

Ανάλογα με την έκταση της συλλογής
ίσως και στις ανώτερες ζώνες

Άμεση αξιολόγηση για “curtain sign”

ΚΛΙΝΗΡΕΙΣ ΑΣΘΕΝΕΙΣ

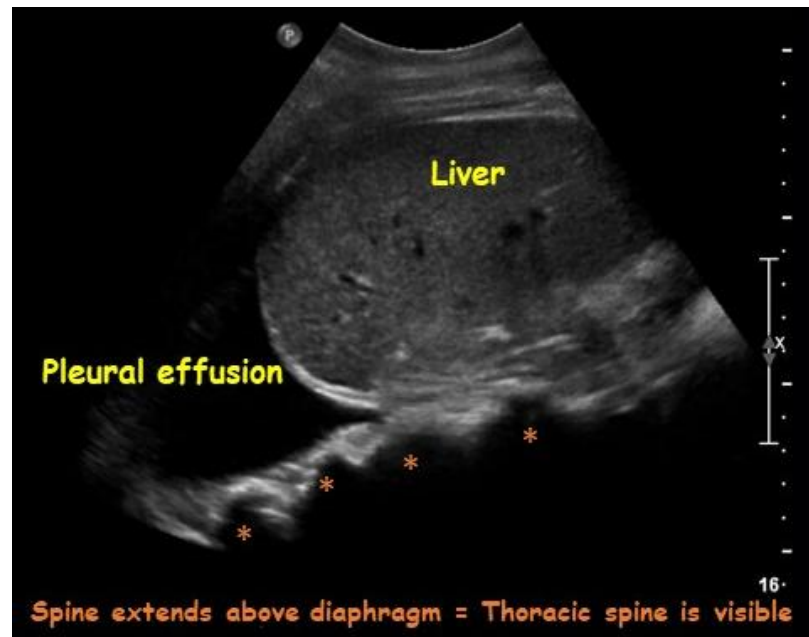
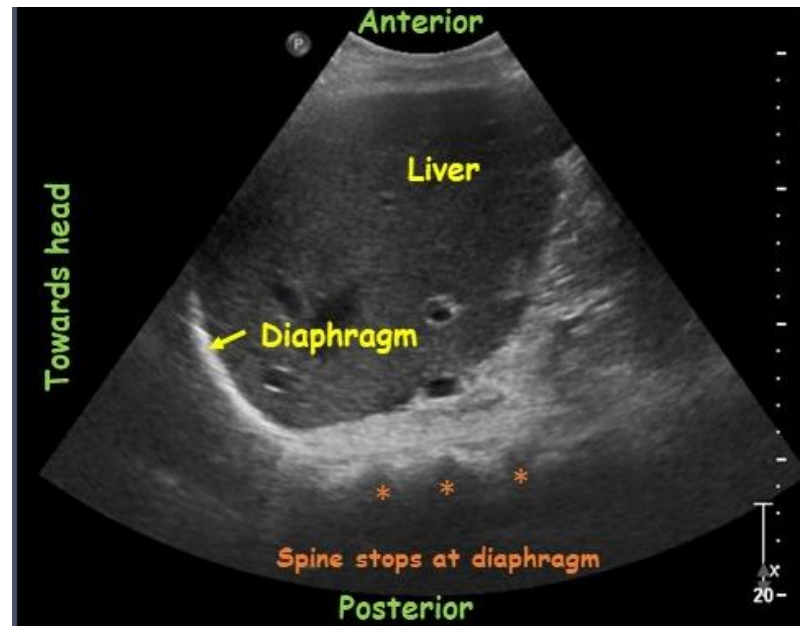


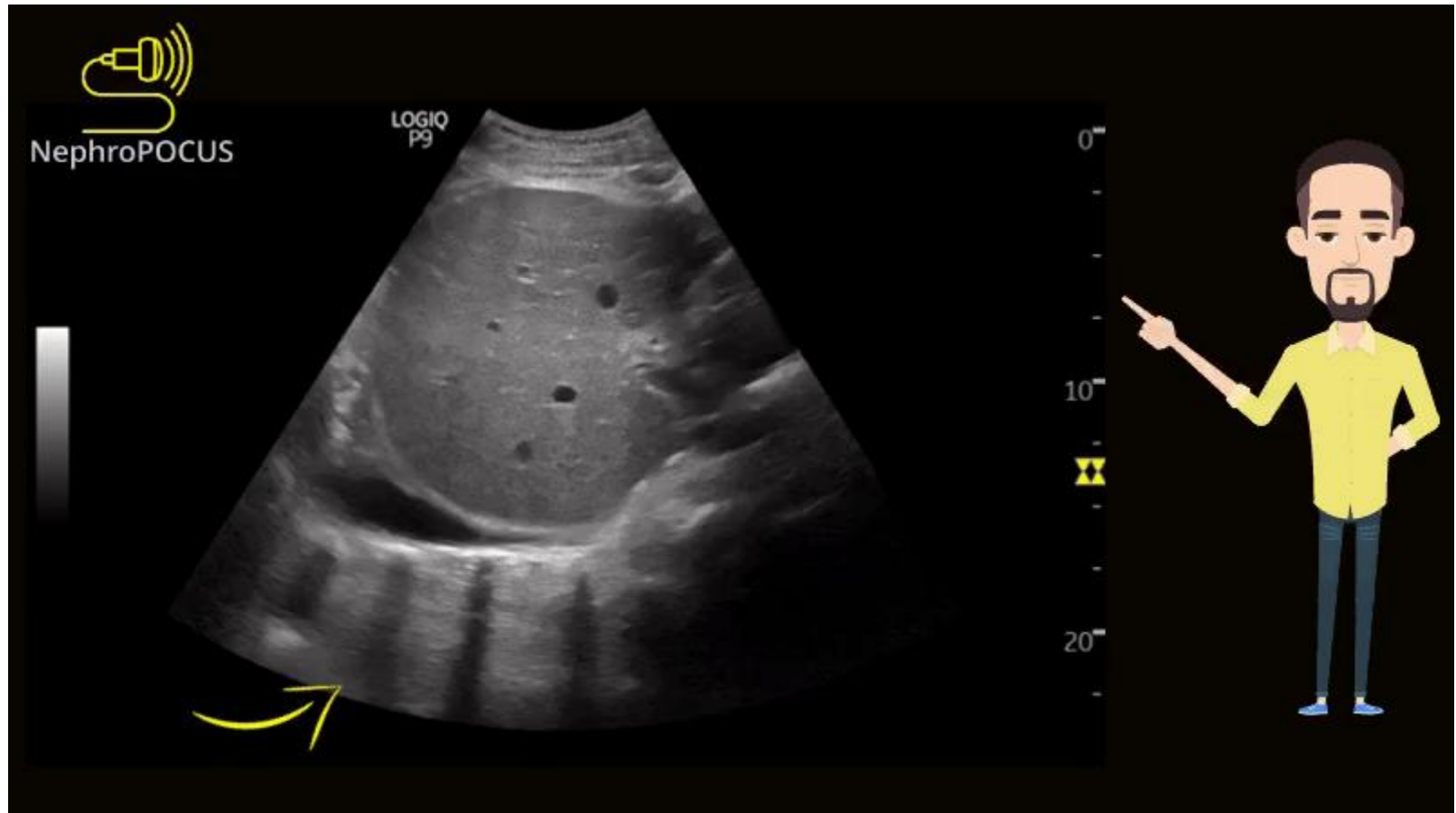
Βαρυτοεξαρτώμενη εντόπιση (ελεύθερη συλλογή)
οπίσθιες ζώνες (5,6,7, FLUS)

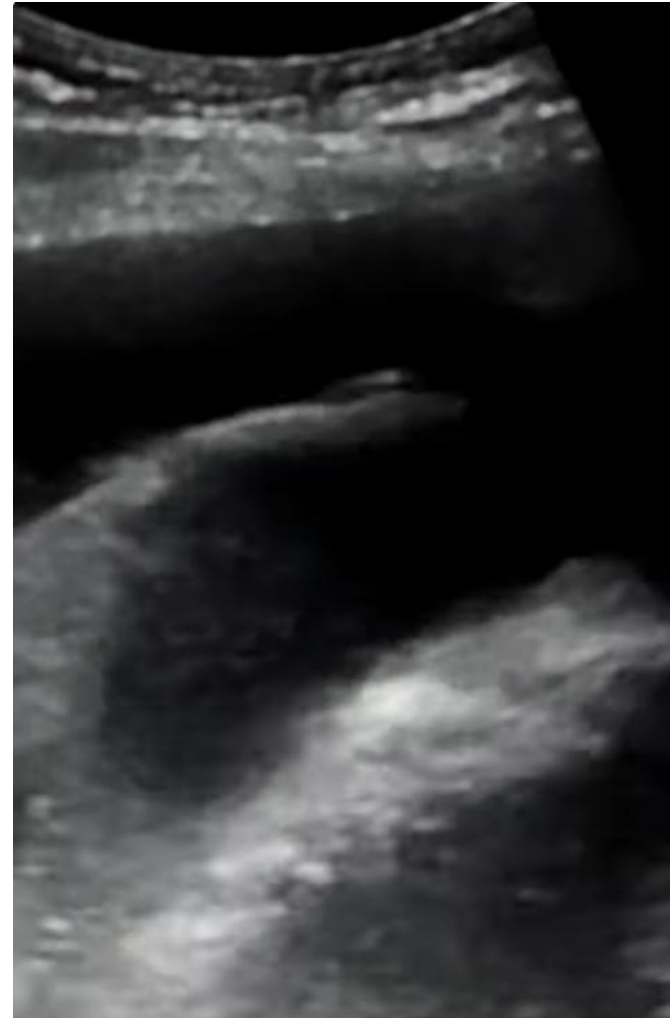
Ανάλογα με την έκταση της συλλογής πλάγιες ή και πρόσθιες ζώνες

Άμεση αξιολόγηση ζώνης 3 για “curtain sign”

Έμμεση αξιολόγηση οπίσθιων ζωνών “spine sign” για μικρότερες συλλογές
με κοιλιακά όργανα ως ακουστικό παράθυρο

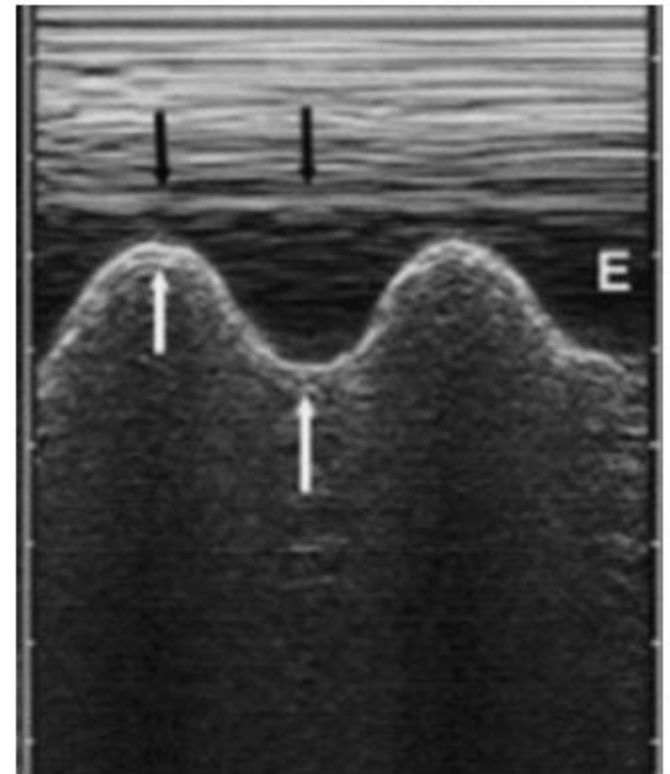
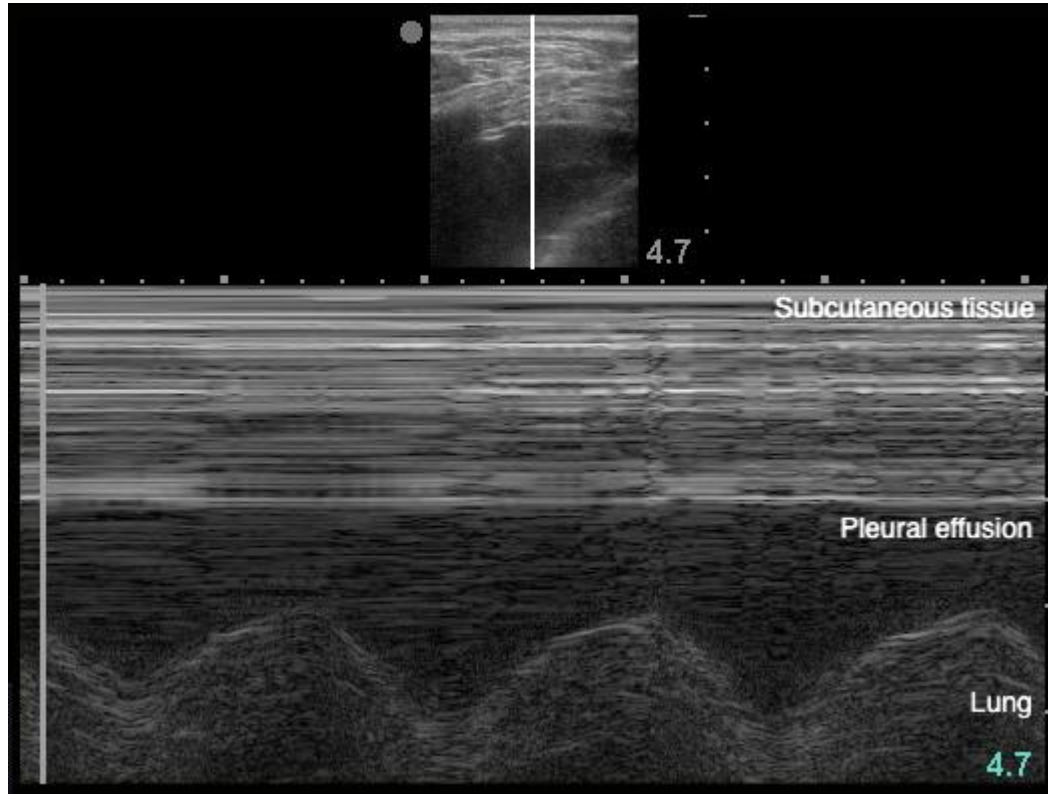








Sinusoid sign



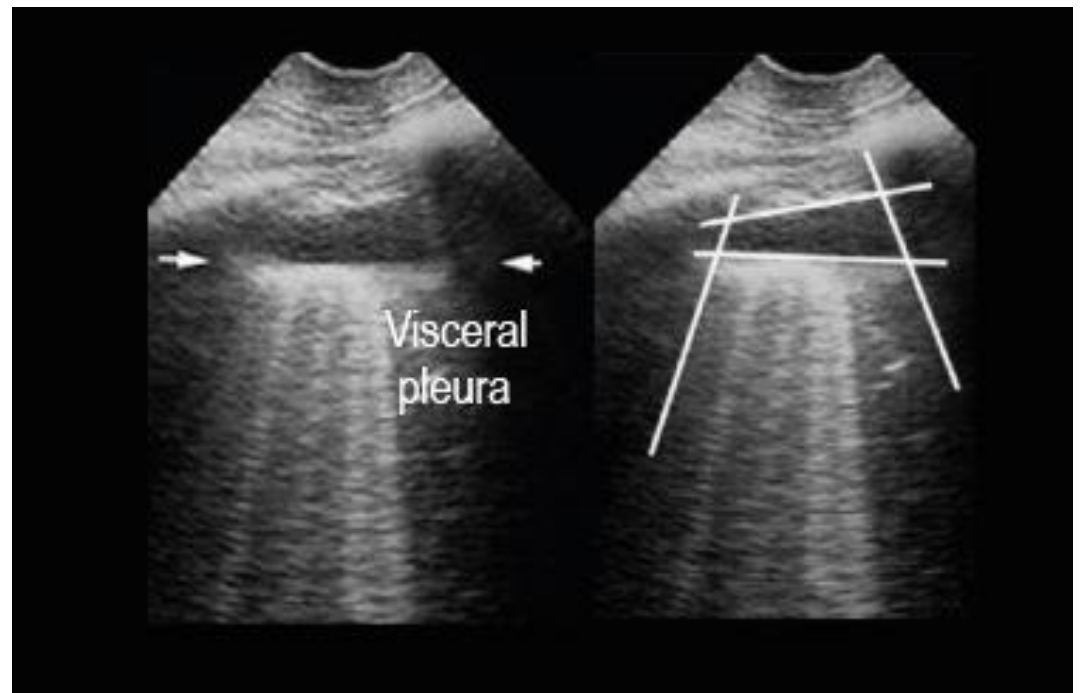
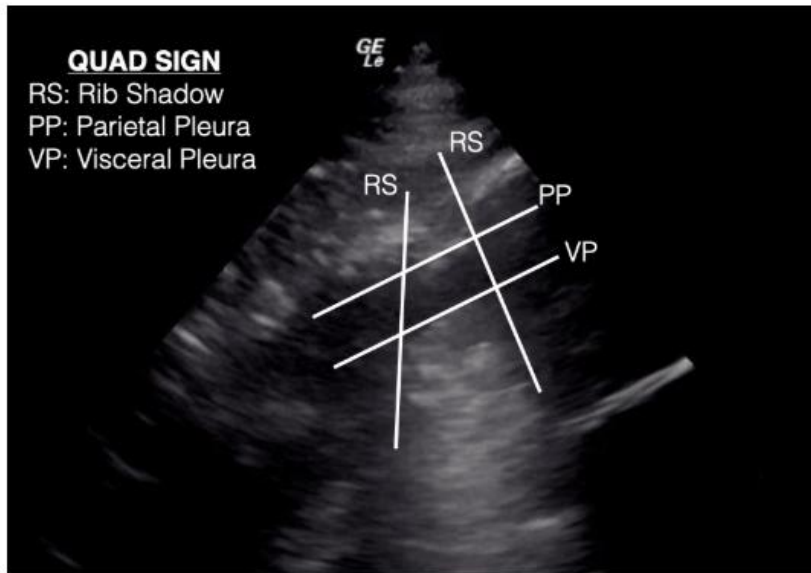
Sinusoid Sign ([Lichenstein, 2014](#)).

QUAD SIGN

RS: Rib Shadow

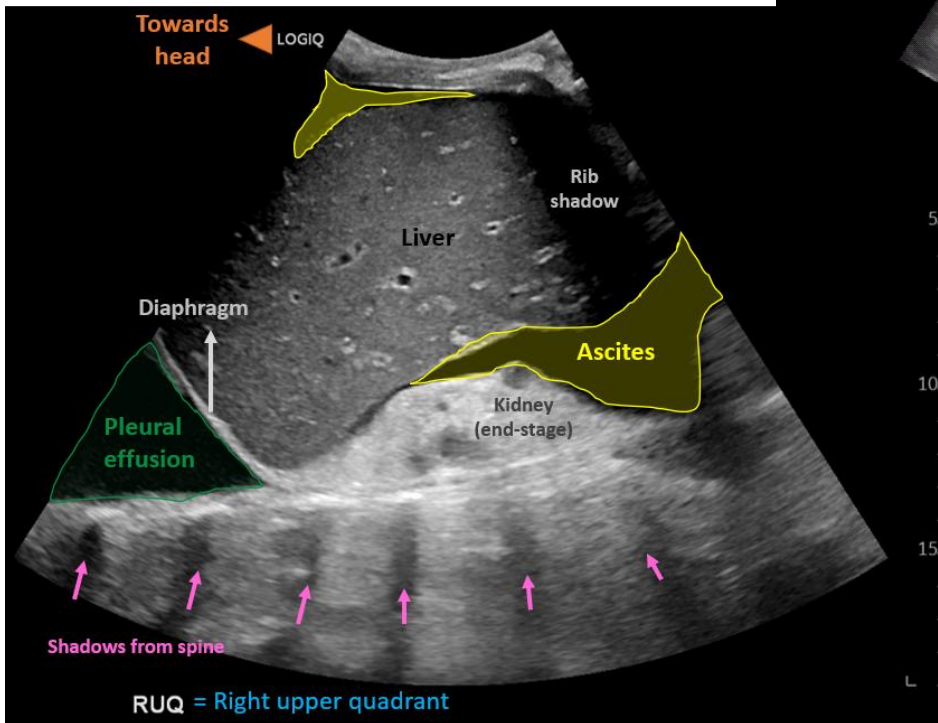
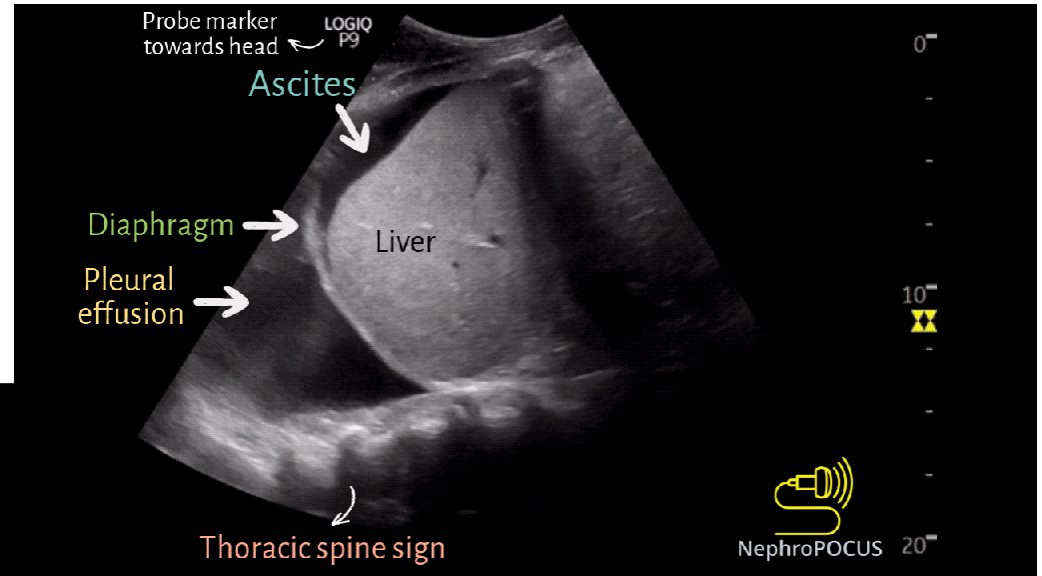
PP: Parietal Pleura

VP: Visceral Pleura



Ασκίτης

ATTENTION

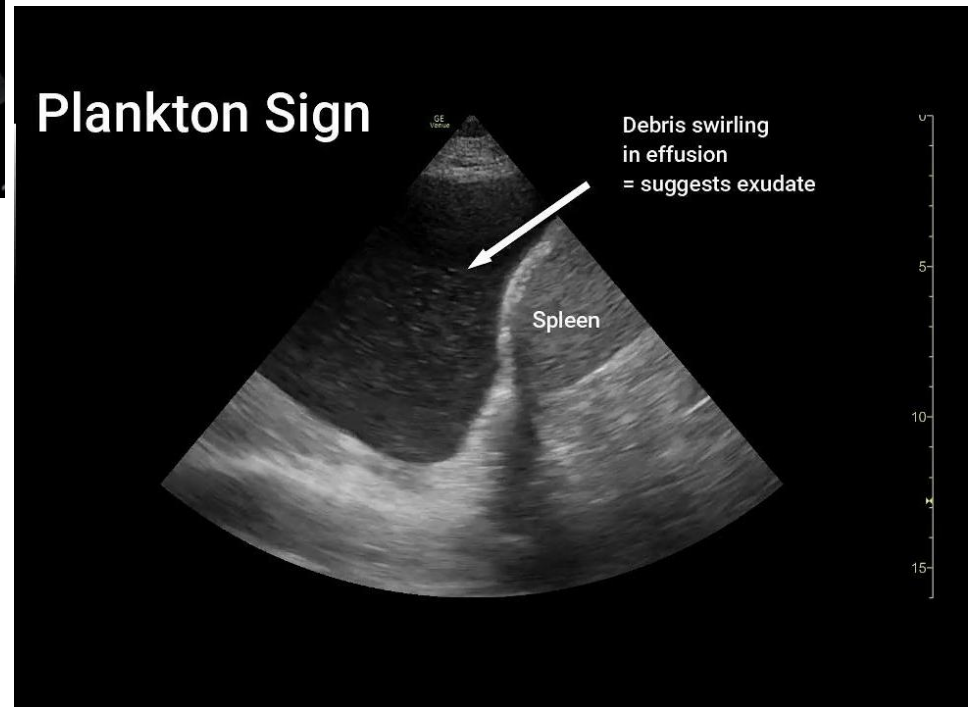
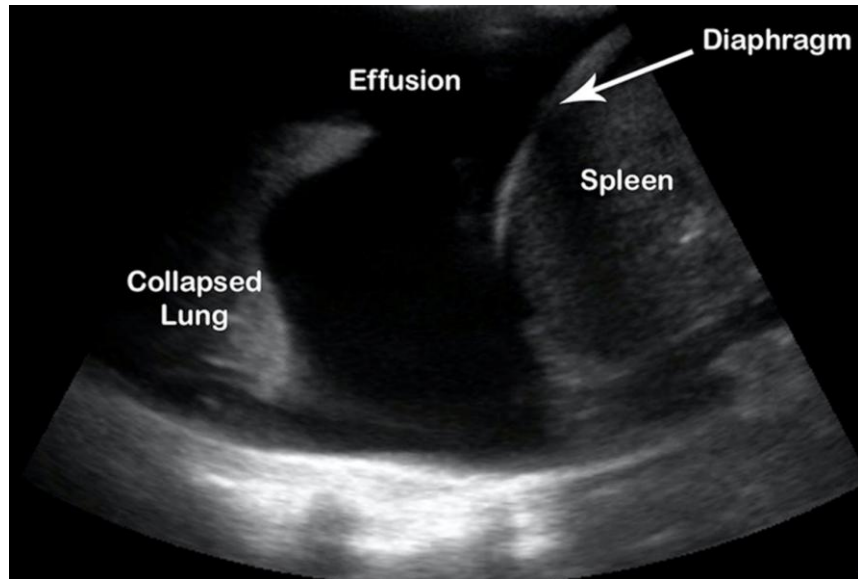


Υπερδιάταση

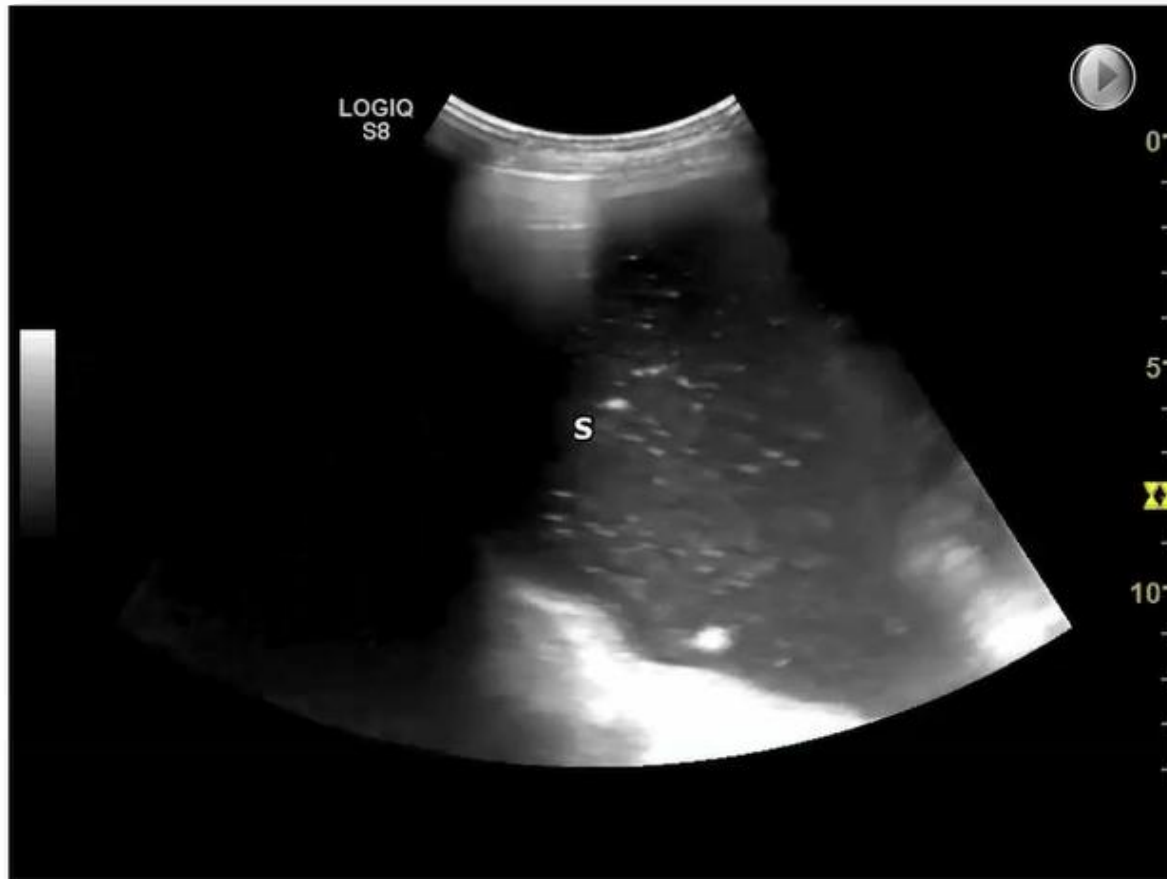
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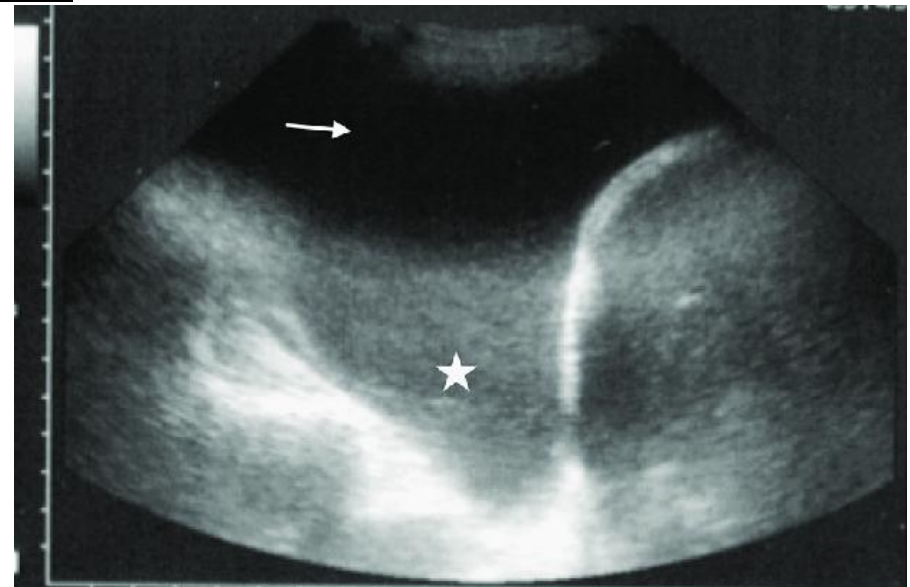
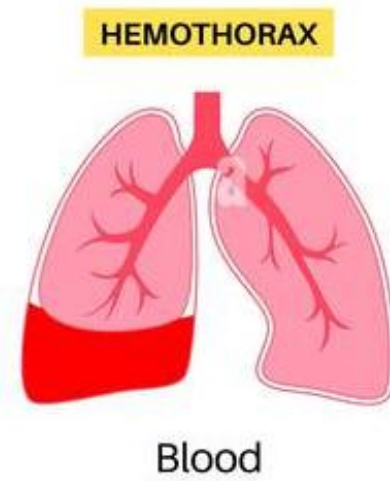
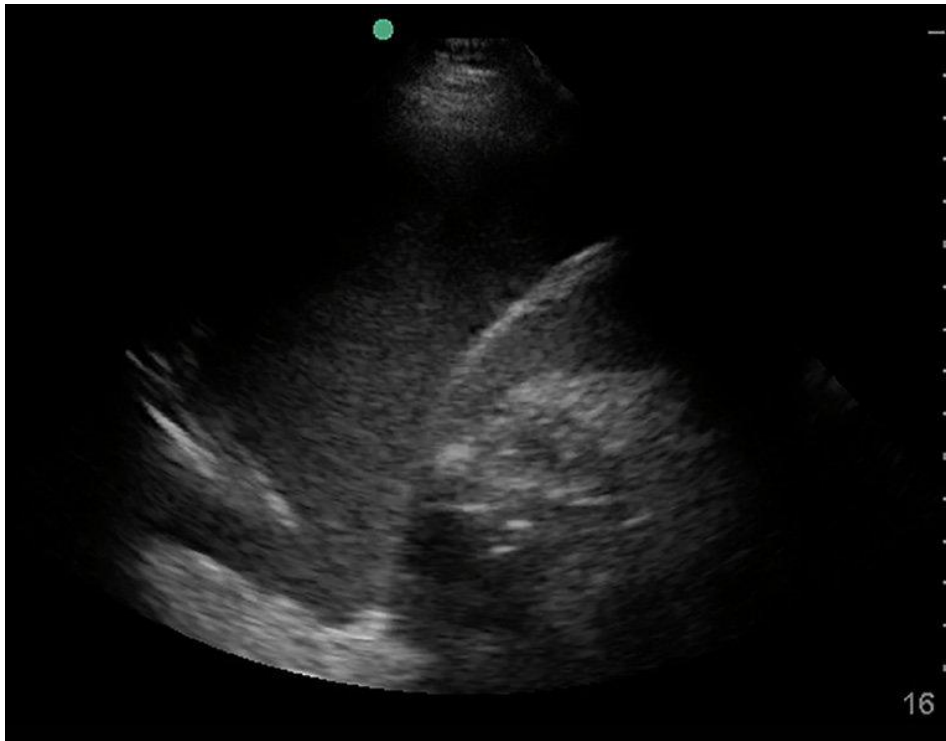
ΗΧΟΓΕΝΕΙΑ ΣΥΛΛΟΓΗΣ

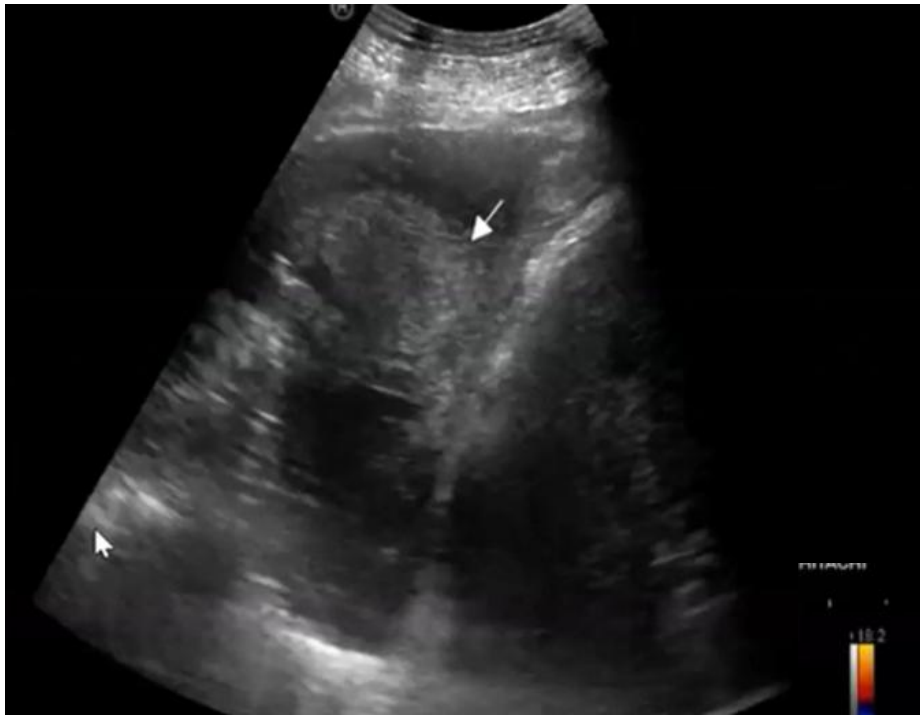


ATTENTION



Διάταση στομάχου – κατακράτηση περιεχομένου







Gen THI
S

2013Apr03 09:35

— Crd

P21



38%

MI

0.8

TIS

0.7

Septations in
pleural effusion

diaphragm

Spleen

A

B

16



Gen



0



Sector



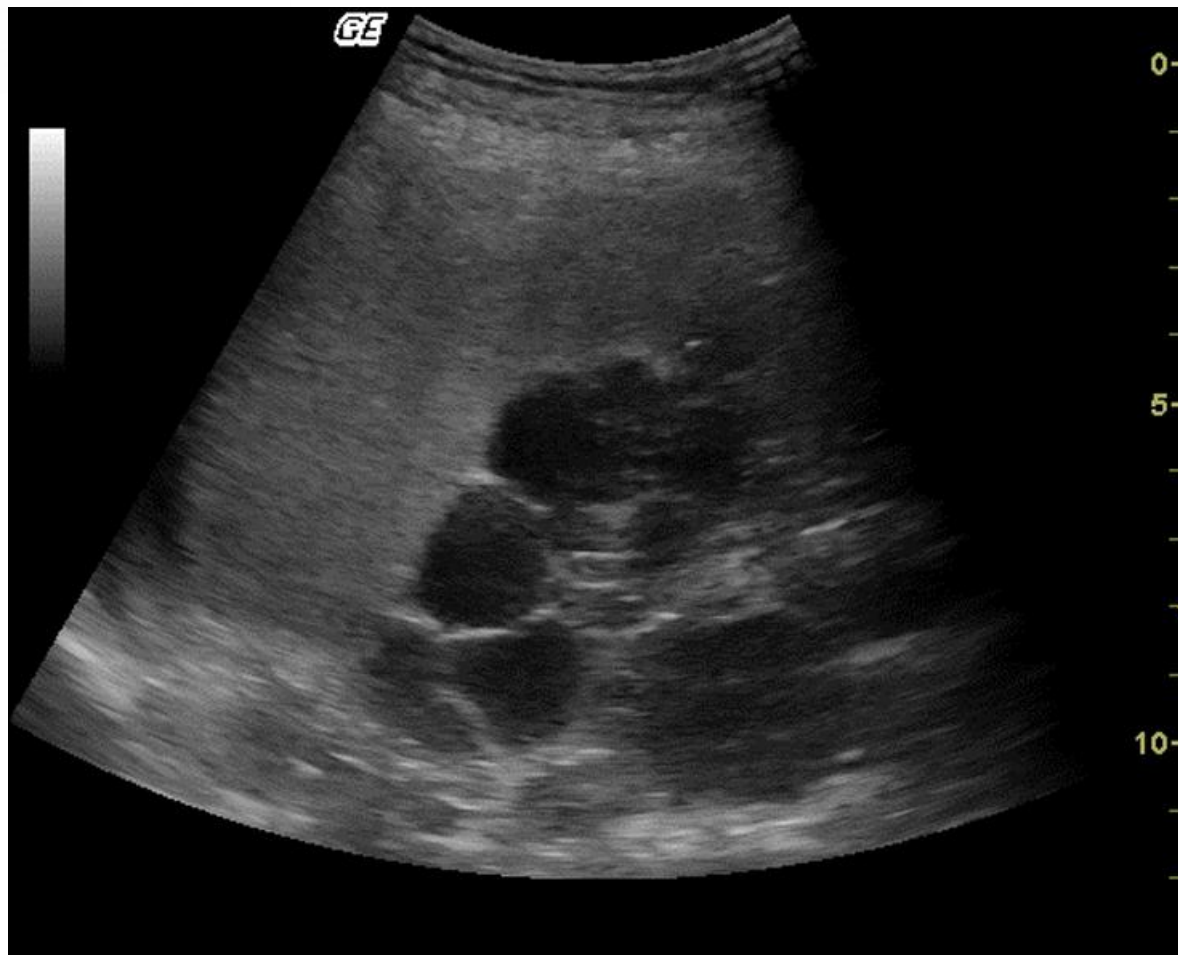
MB Off



On

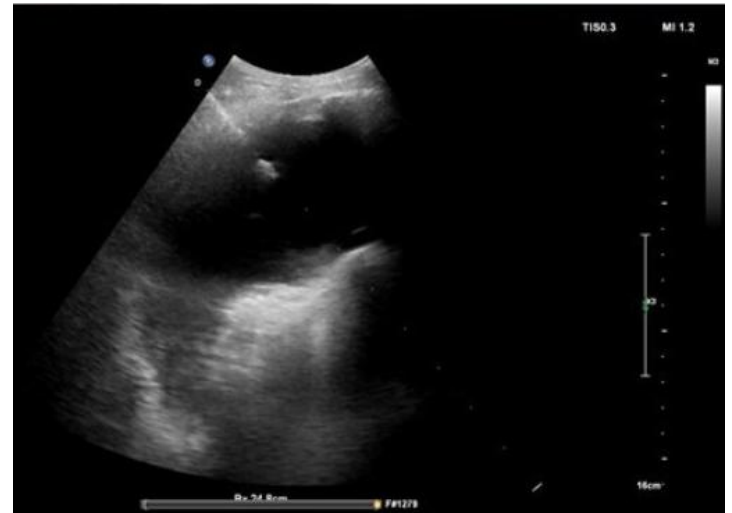
Page 1/3

ATTENTION



Πολυκυστική νόσος νεφρών

ΚΑΘΟΔΗΓΟΥΜΕΝΗ ΠΑΡΑΚΕΝΤΗΣΗ





Radiology: Cardiothoracic Imaging

IMAGING ESSAY

Lung Ultrasound: The Essentials

Thomas J. Marini, MD • Deborah J. Rubens, MD • Yu T. Zhao, BA • Justin Weiss, MD • Timothy P. O'Connor, MD • William H. Novak, MD • Katherine A. Kaproth-Julin, MD, PhD

From the Departments of Imaging Sciences (T.J.M., D.J.R., Y.T.Z., K.A.K.), Medicine (J.W., W.H.N.), and Emergency Medicine (T.P.O.), University of Rochester Medical Center, School of Medicine and Dentistry, 601 Elmwood Ave, Box 655, Rochester, NY 14642. Received October 24, 2020; revision requested January 5; revision received January 16; accepted February 5. Address correspondence to T.J.M. (e-mail: RochesterRadiology2021@gmail.com).

Conflicts of interest are listed at the end of this article.

Radiology: Cardiothoracic Imaging 2021; 3(2):e200564 • <https://doi.org/10.1148/ryct.2021200564> • Content codes: CH US





Radiology: Cardiothoracic Imaging

IMAGING ESSAY

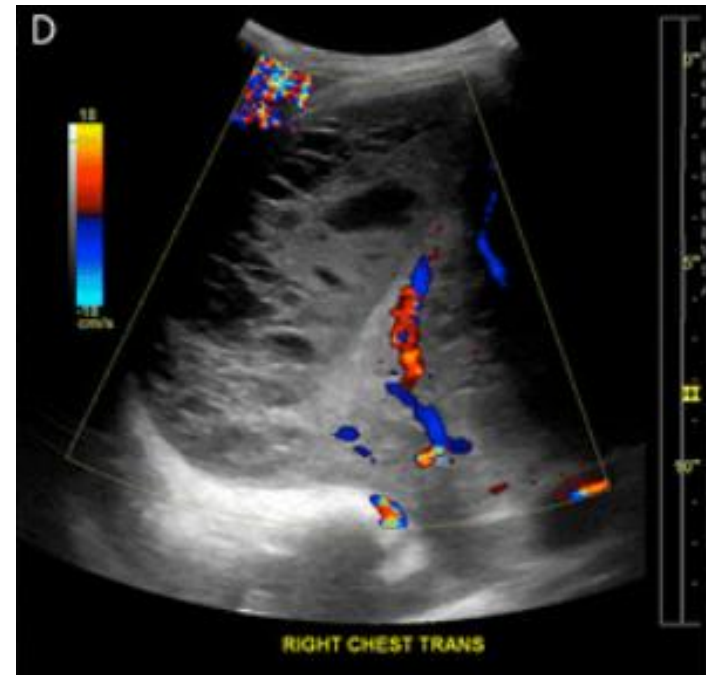
Lung Ultrasound: The Essentials

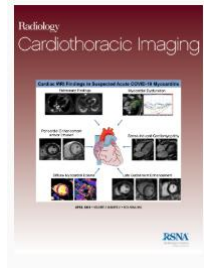
Thomas J. Marini, MD • Deborah J. Roberts, MD • Yu T. Zhao, BA • Justin Weiss, MD • Timothy P. O'Connor, MD • William H. Novak, MD • Katherine A. Kaproth-Julin, MD, PhD

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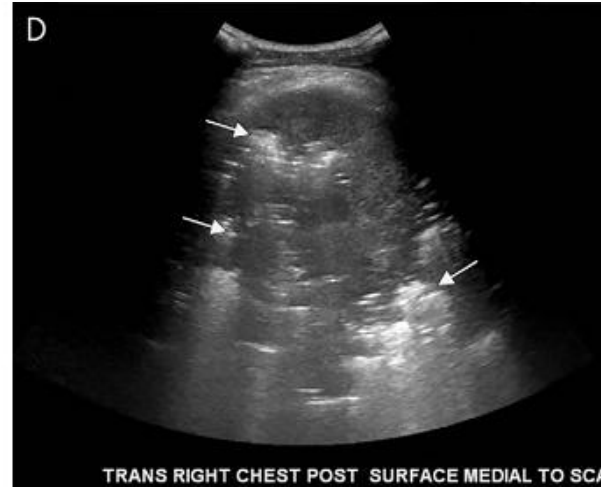
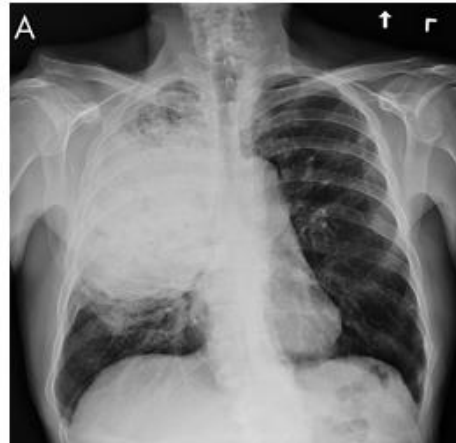
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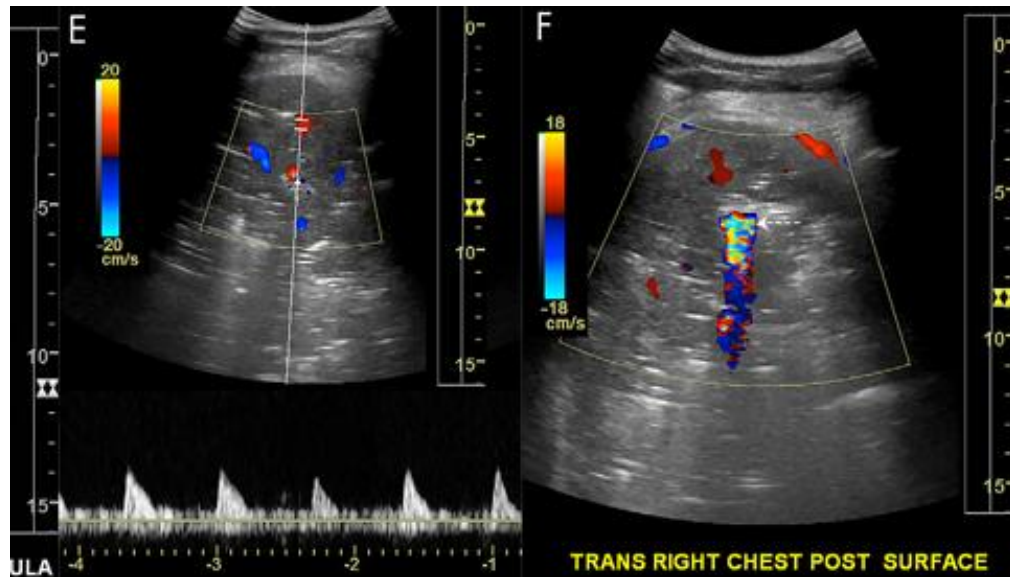
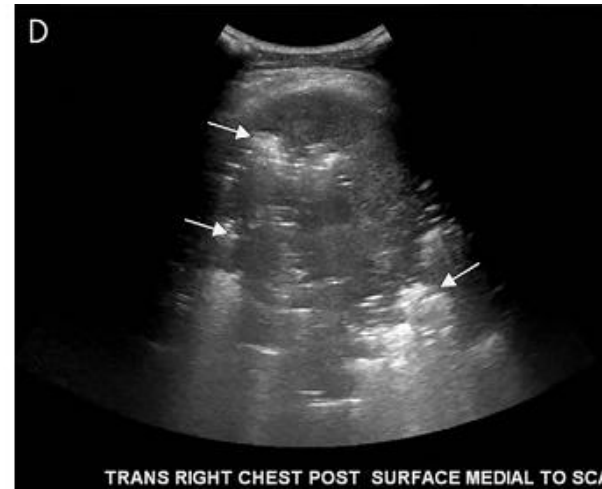
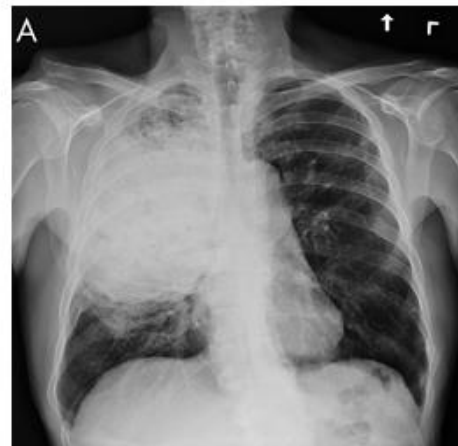
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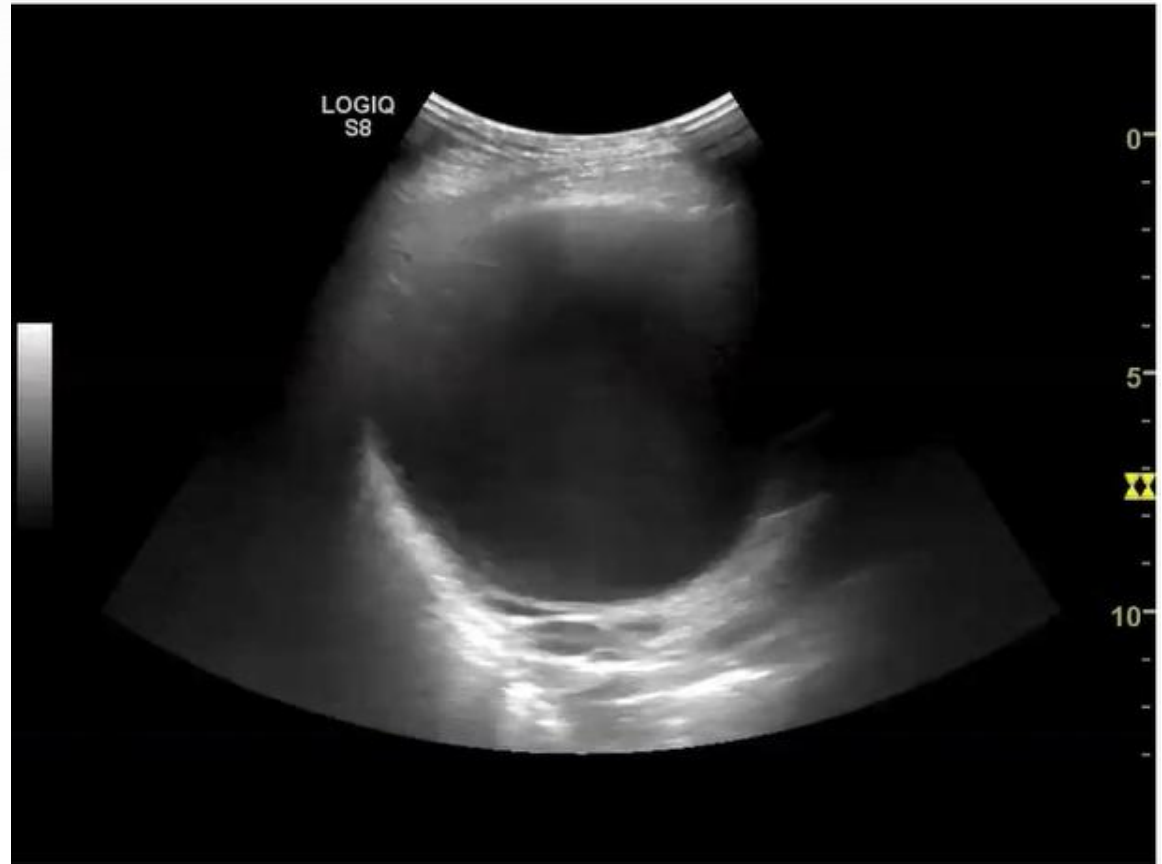
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ATTENTION



Ανεύρυσμα κατιούσας θωρακικής αορτής
Doppler!

Thoracic ultrasound in the diagnosis of malignant pleural effusion

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Dr F V Gleeson, Department of Radiology, Oxford Radcliffe Hospital, Headington, Oxford OX3 7LJ, UK

