LES JEUDIS DE L'URGENCE

JEUDI **15 JANVIER** 2026

UN JDU Á COUPER LE SOUFFLE

EN PRÉSENTIEL (KEDGE BUSINES SCHOOL)

Coordinateur : MC MARTINEZ-LORENZI (BMPM) • **Président :** Pr COMBES (SAMU 33, CHU, Bordeaux)

MATIN

- **"Une seule solution: l'échographie du poumon".** Pr BOBBIA (CHU, Montpellier)
- **"Dyspnée chez l'enfant : quand la taille du malade ne vous fera plus peur...".** Dr WASIER (CHU Timone, Marseille)
- **"Abord cervical de l'*Airway*. Cricothyroïdotomie et Trachéotomie. Techniques, indications, complications".** Pr MORVAN (HNIA Ste-Anne, Toulon)
- **"Comment les nouvelles RFE sur l'intubation difficile peuvent vous faciliter la vie...".** Pr COMBES (CHU, Bordeaux)
- **Ventilation non invasive au cours de la PEC de la dyspnée : les réglages de première ligne.** Dr BOURENNE / Dr LEMOIGNE (CHU Timone, APHM)

APRÈS-MIDI : ATELIERS PRATIQUES

- **"Quizz échographie dans la dyspnée : ferez-vous un sans faute?".** Pr BOBBIA (CHU, Montpellier)
- **Je n'arrive pas à intuber mon patient : oupsi.. Comment je fais ?**
  - **"Atelier IOT difficile : ça passe... ou ça passe".** Dr MARTINET (HIA Laveran, Marseille)
  - **"Faire une cricothyroïdotomie sans partir en barigoule...".** Pr MORVAN (HNIA Ste-Anne, Toulon)
  - **"IOT chez l'enfant et le nouveau-né : vous pouvez le faire !"** Dr WASIER (CHU Timone, APHM)

LES JEUDIS DE L'URGENCE

Une seule solution :

l'échographie du poumon

X. BOBBIA

CHU MONTPELLIER CENTRE HOSPITALIER UNIVERSITAIRE

FACULTÉ DE MÉDECINE MONTPELLIER-NÎMES DEPUIS 1220

UNIVERSITÉ MONTPELLIER

CHU NIMES

Conflits d'intérêts

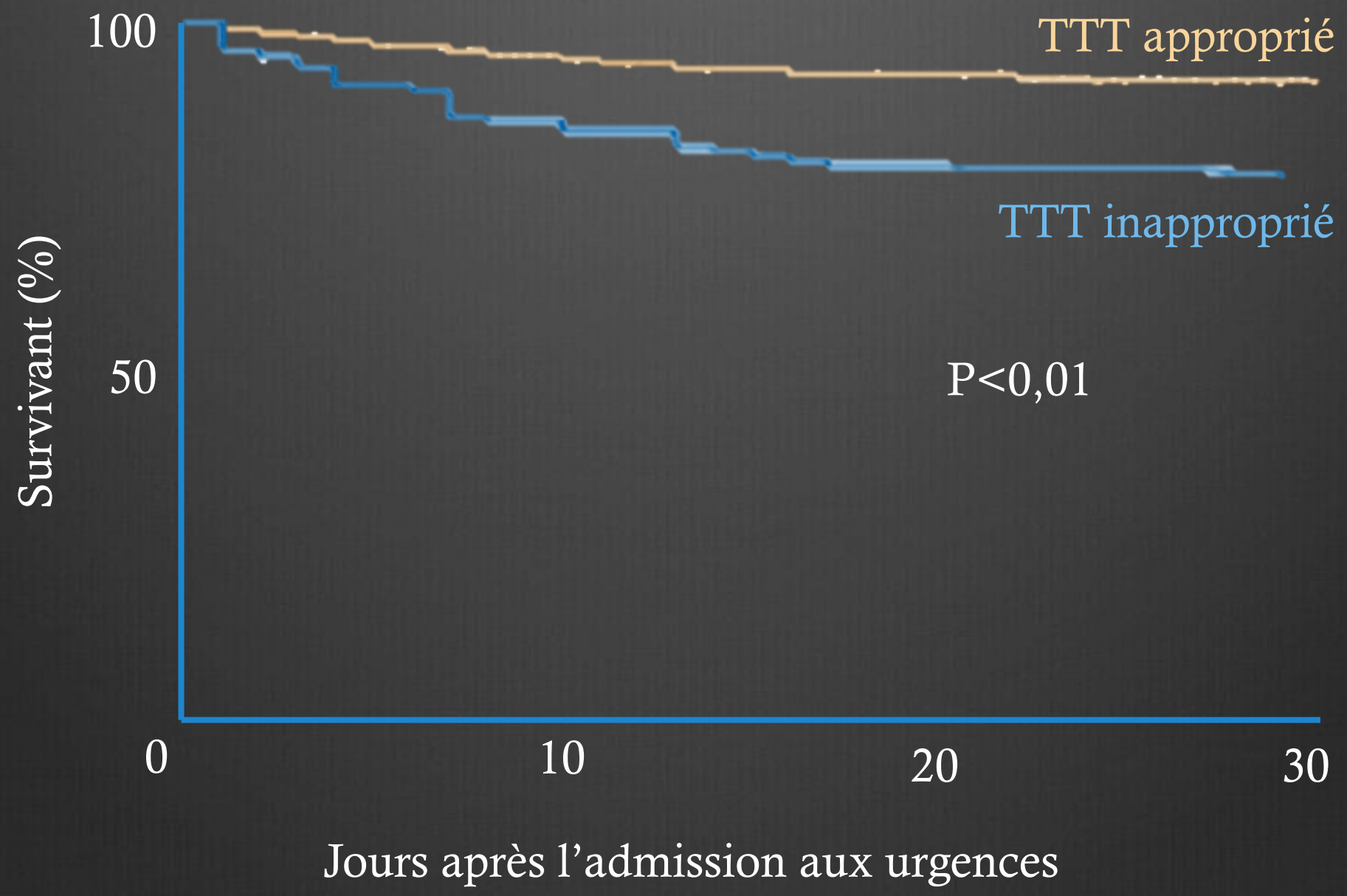
Premier niveau de compétence pour l'échographie clinique en médecine d'urgence.
Recommandations de la Société française de médecine d'urgence par consensus formalisé.

TEXTE COURT

Société française de médecine d'urgence

2016

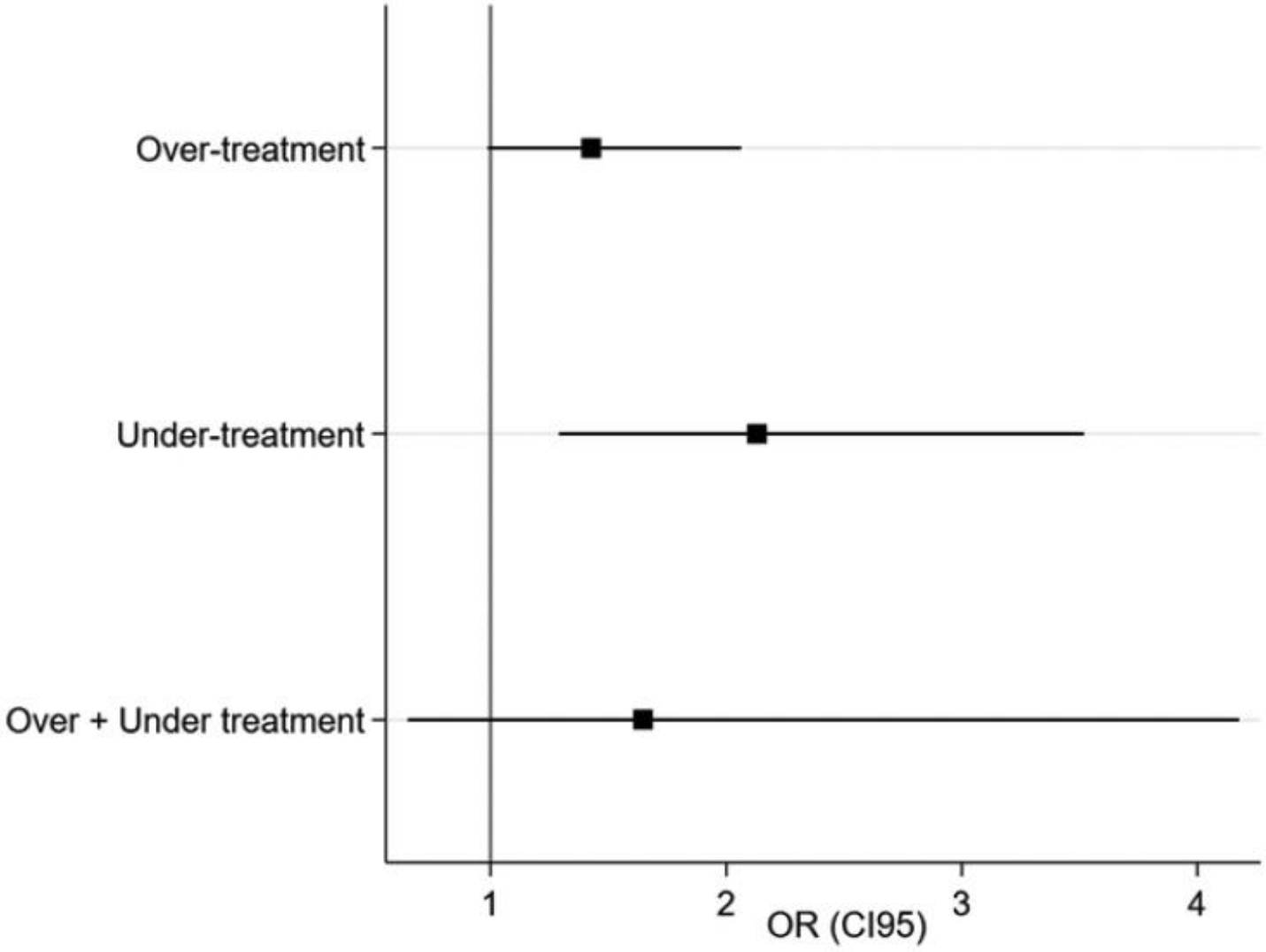
- Il faut que l'urgentiste soit capable d'intégrer l'échographie dans un algorithme de prise en charge d'un **état de choc** (appropriée, accord fort).
- Il faut que l'urgentiste soit capable d'intégrer l'échographie dans un algorithme de prise en charge d'une **dyspnée** (appropriée, accord fort).
- Il faut que l'urgentiste soit capable d'intégrer l'échographie dans un algorithme de prise en charge d'une **douleur thoracique** (appropriée, accord fort).
- Il faut que l'urgentiste soit capable d'intégrer l'échographie dans un algorithme de prise en charge du **traumatisé grave** (appropriée, accord fort).



Ray et al, Crit Care 2006

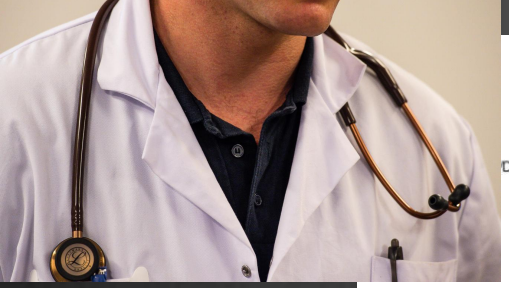
2123 Dyspnée

38% TTT inapproprié

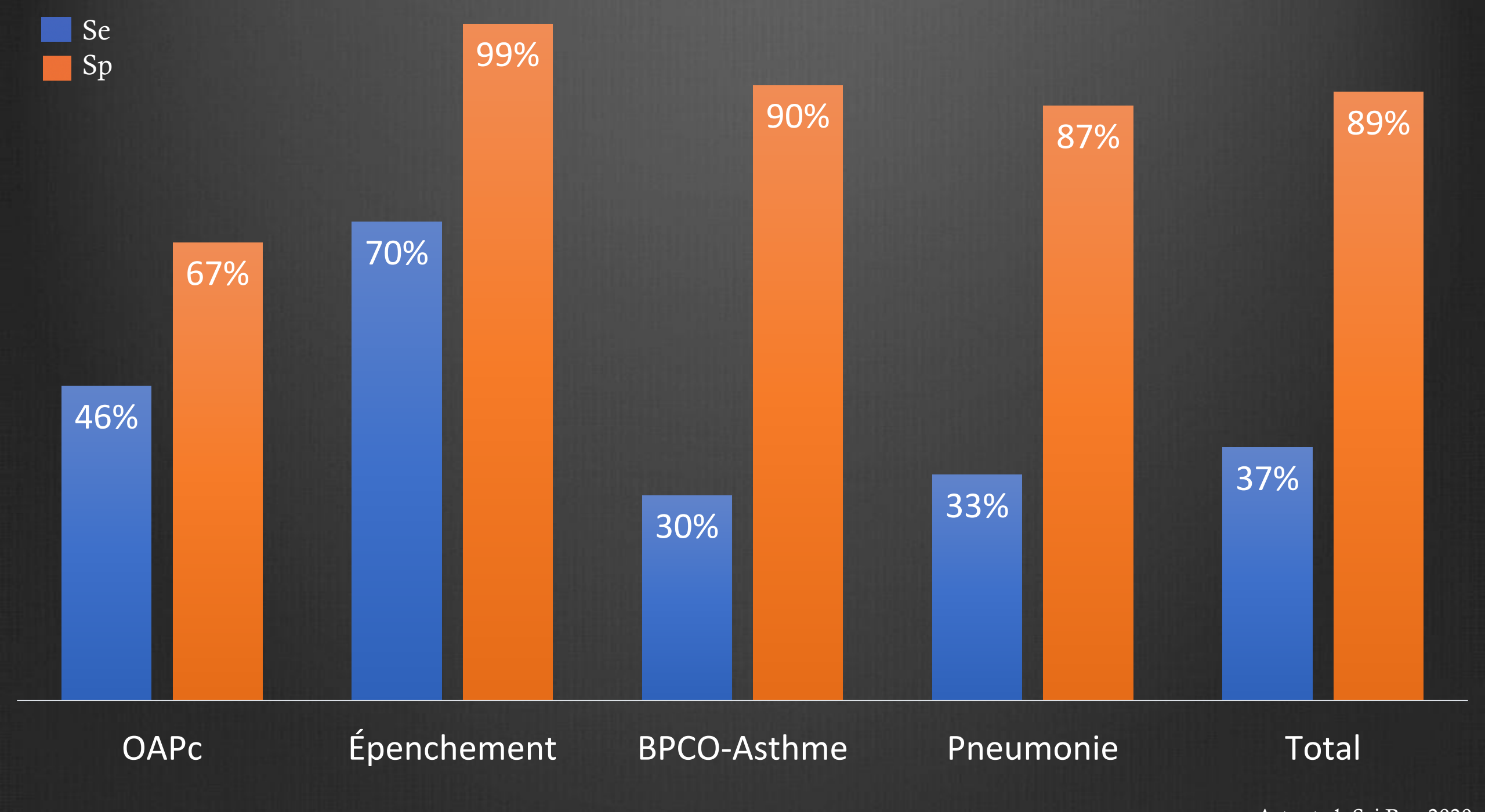


Effect of inappropriate treatment compared to appropriate treatment in multivariate analysis.

Balen et al. Eur J Emerg Med 2024



Arts et al. Sci Rep 2020



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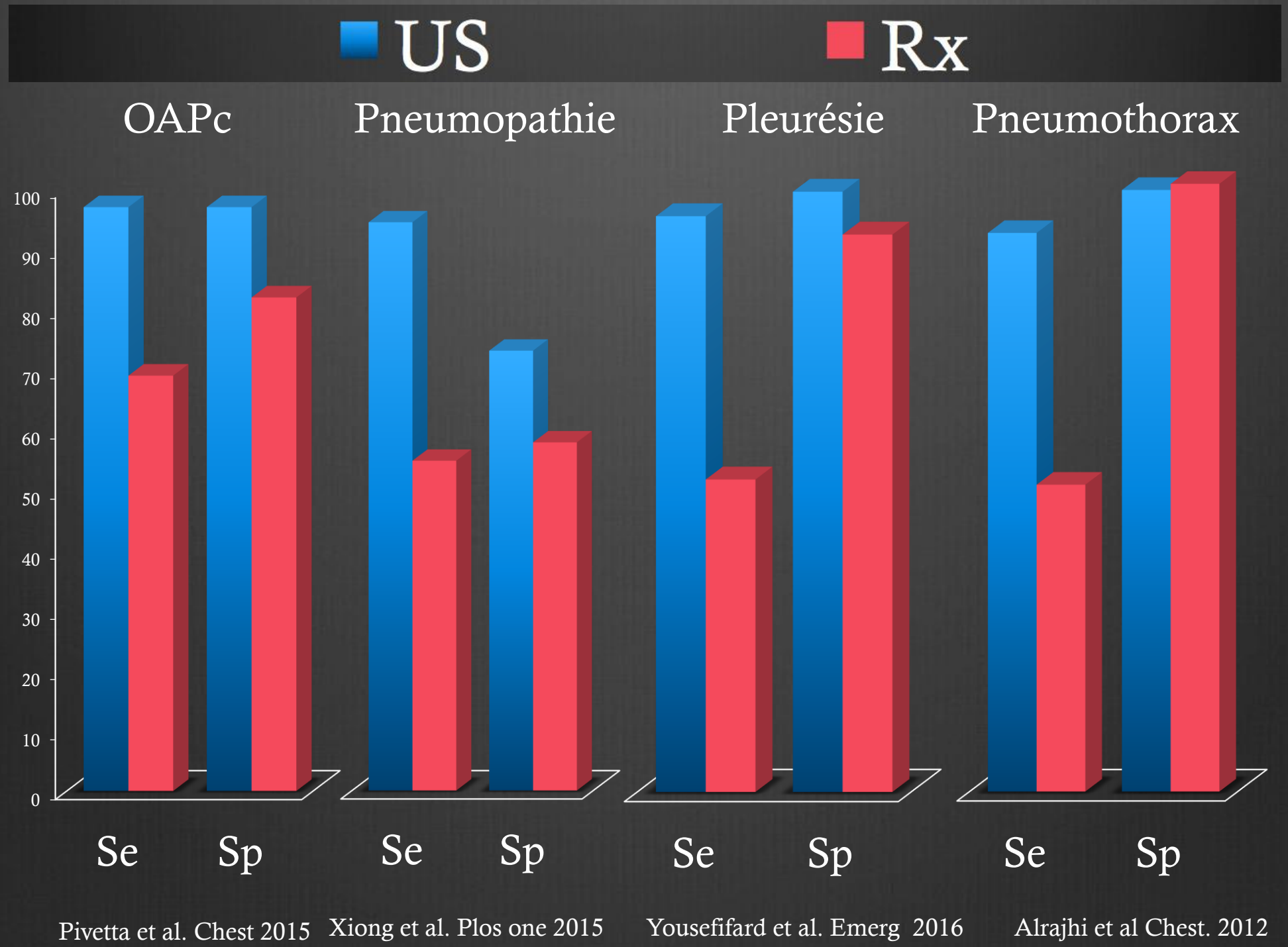
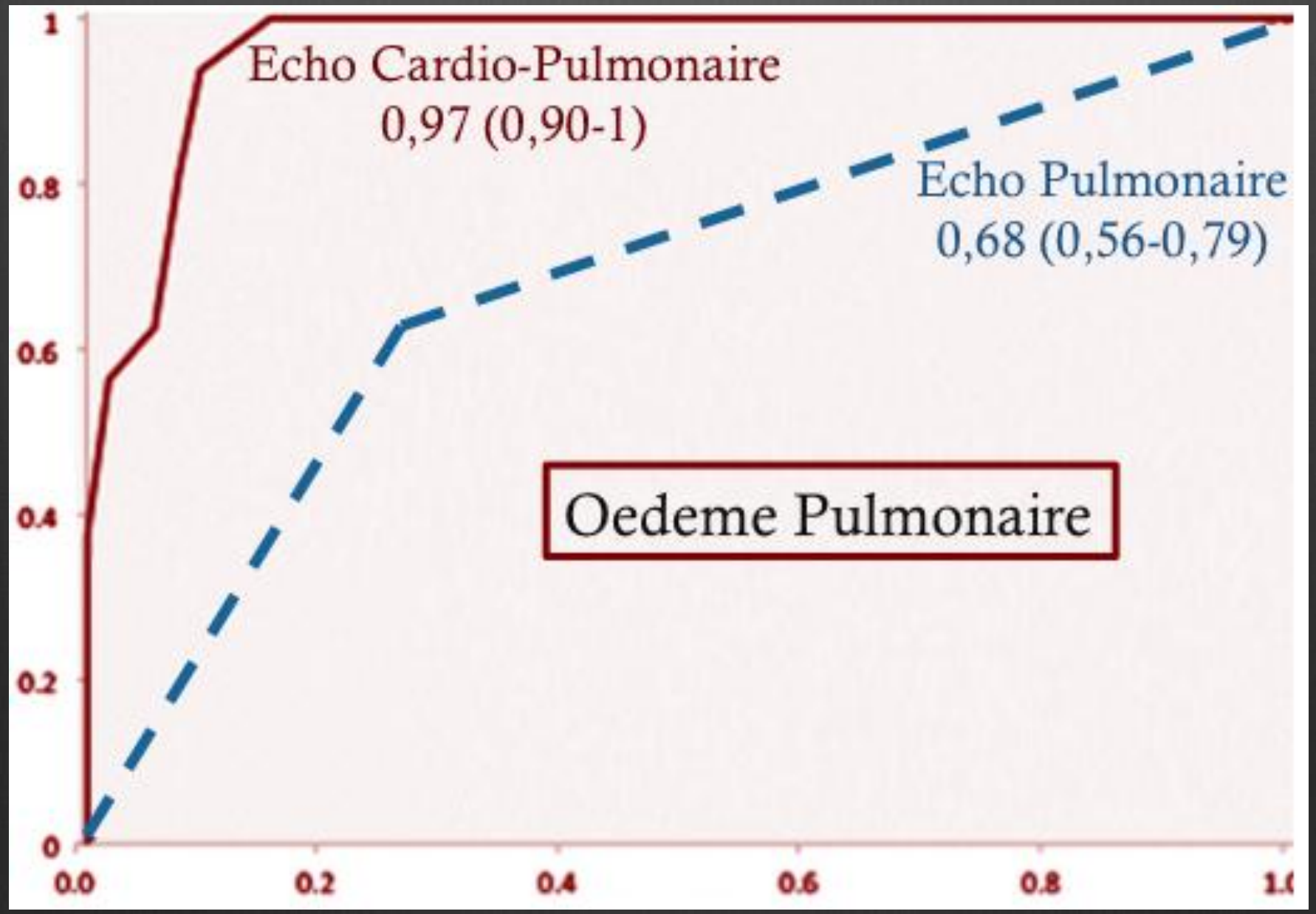
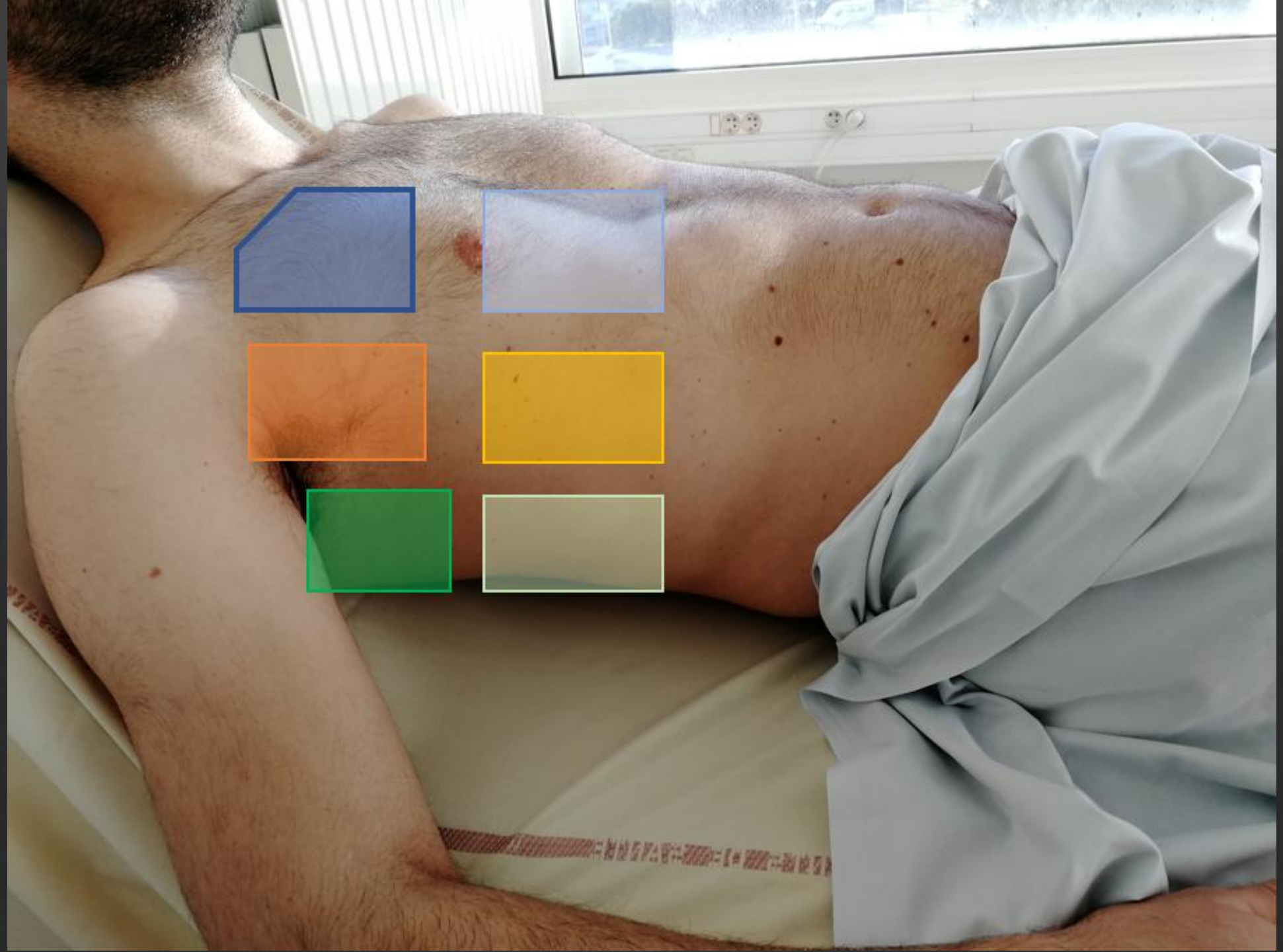

US
Rx
OAPc
Pneumopathie
Pleurésie
Pneumothorax
100
90
80
70
60
50
40
30
20
10
0
Se
Sp
Se
Sp
Se
Sp
Se
Sp
Pivetta et al. Chest 2015
Xiong et al. Plos one 2015
Yousefifard et al. Emerg 2016
Alrajhi et al Chest. 2012

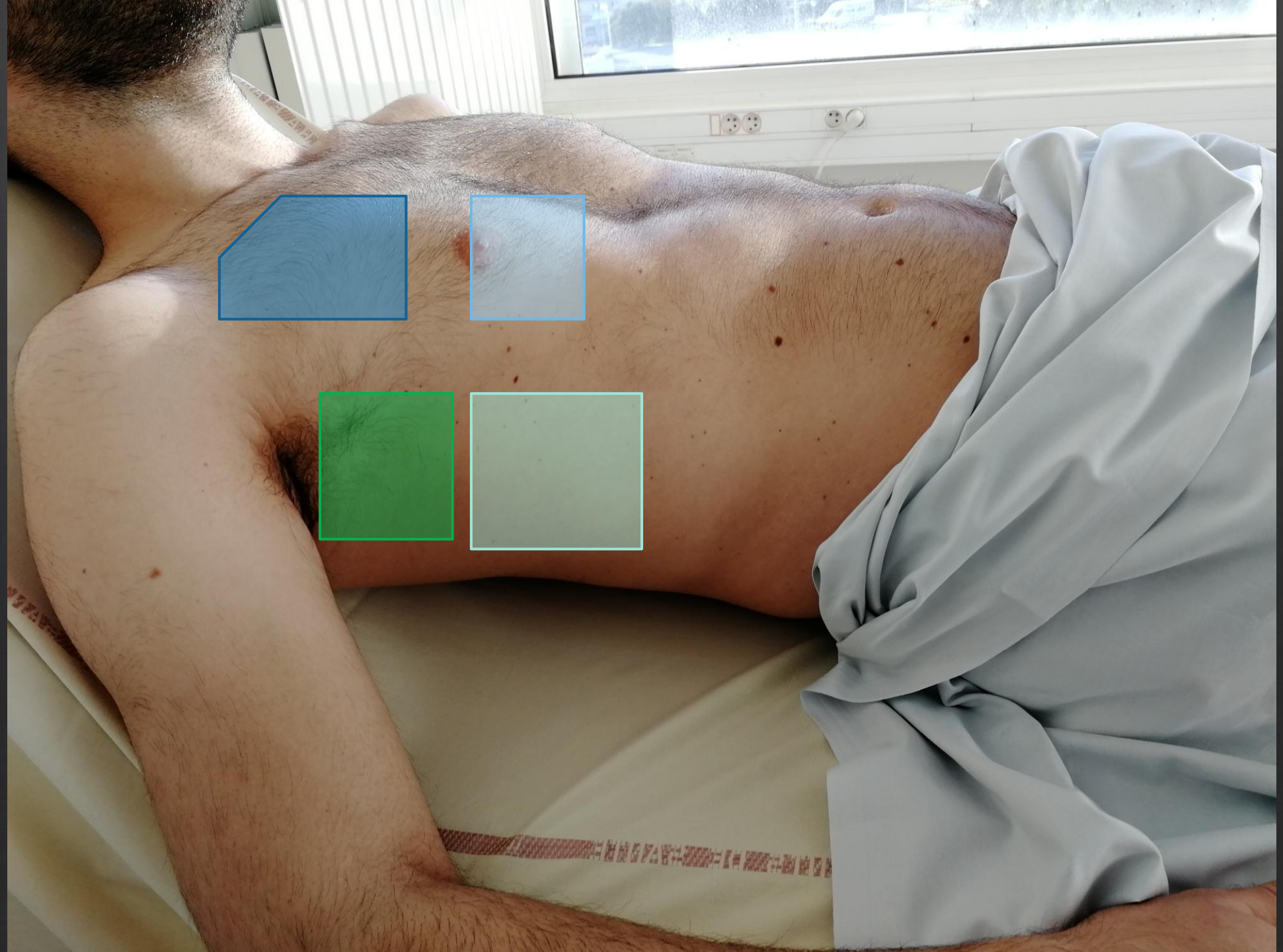
Techniques couplées

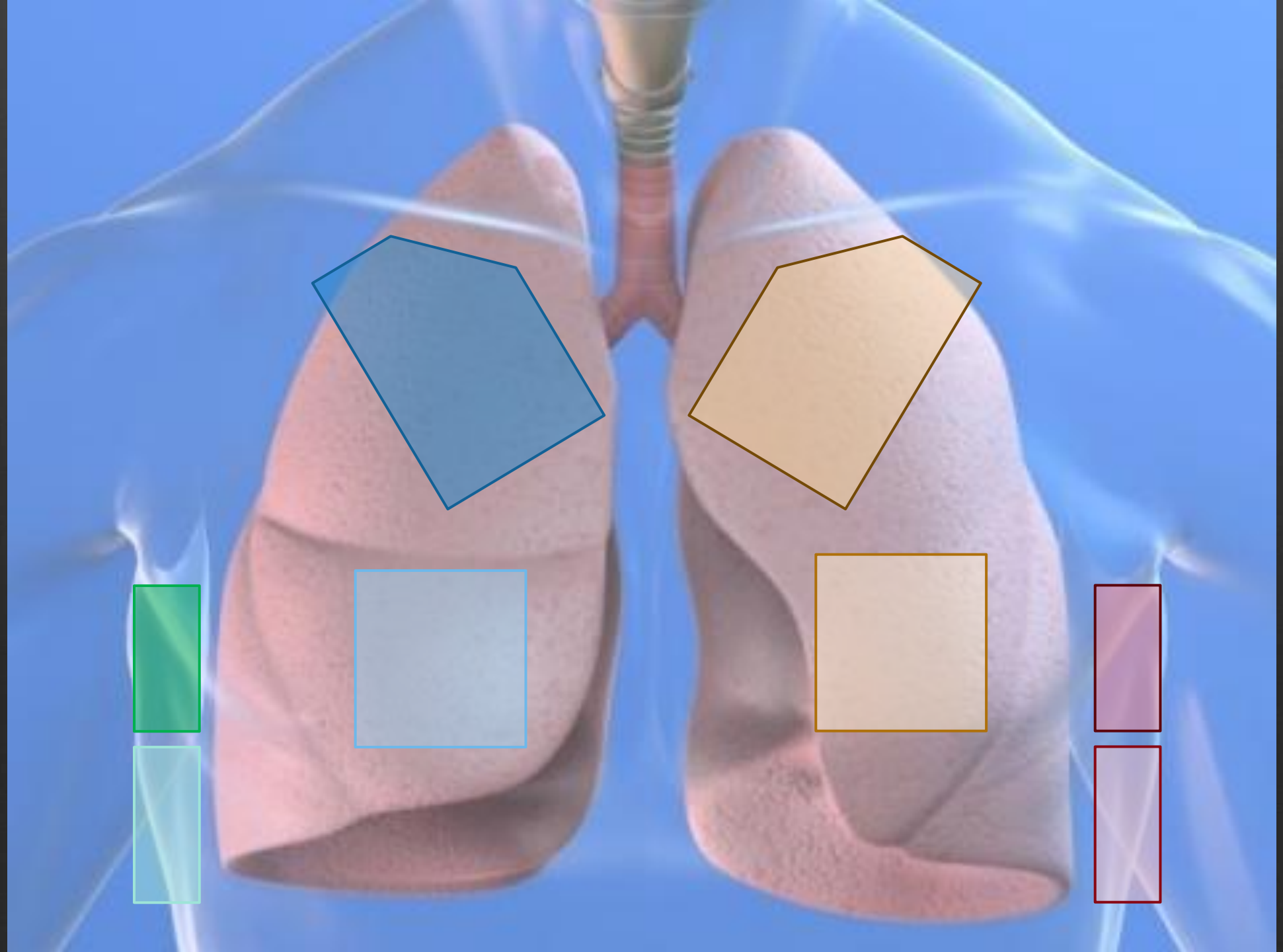


Bataille et al Chest 2014

9L
C1-5
3Sc

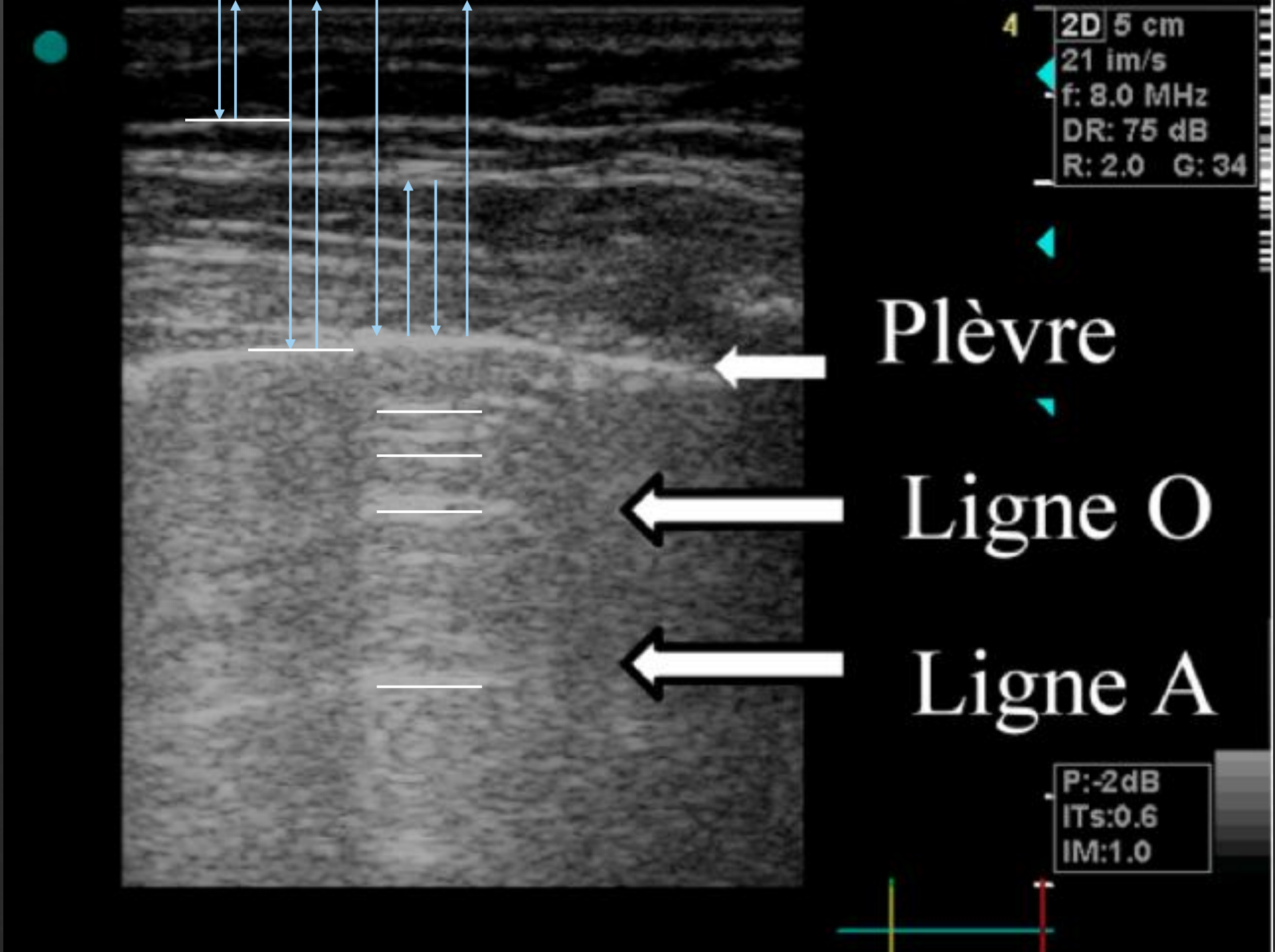


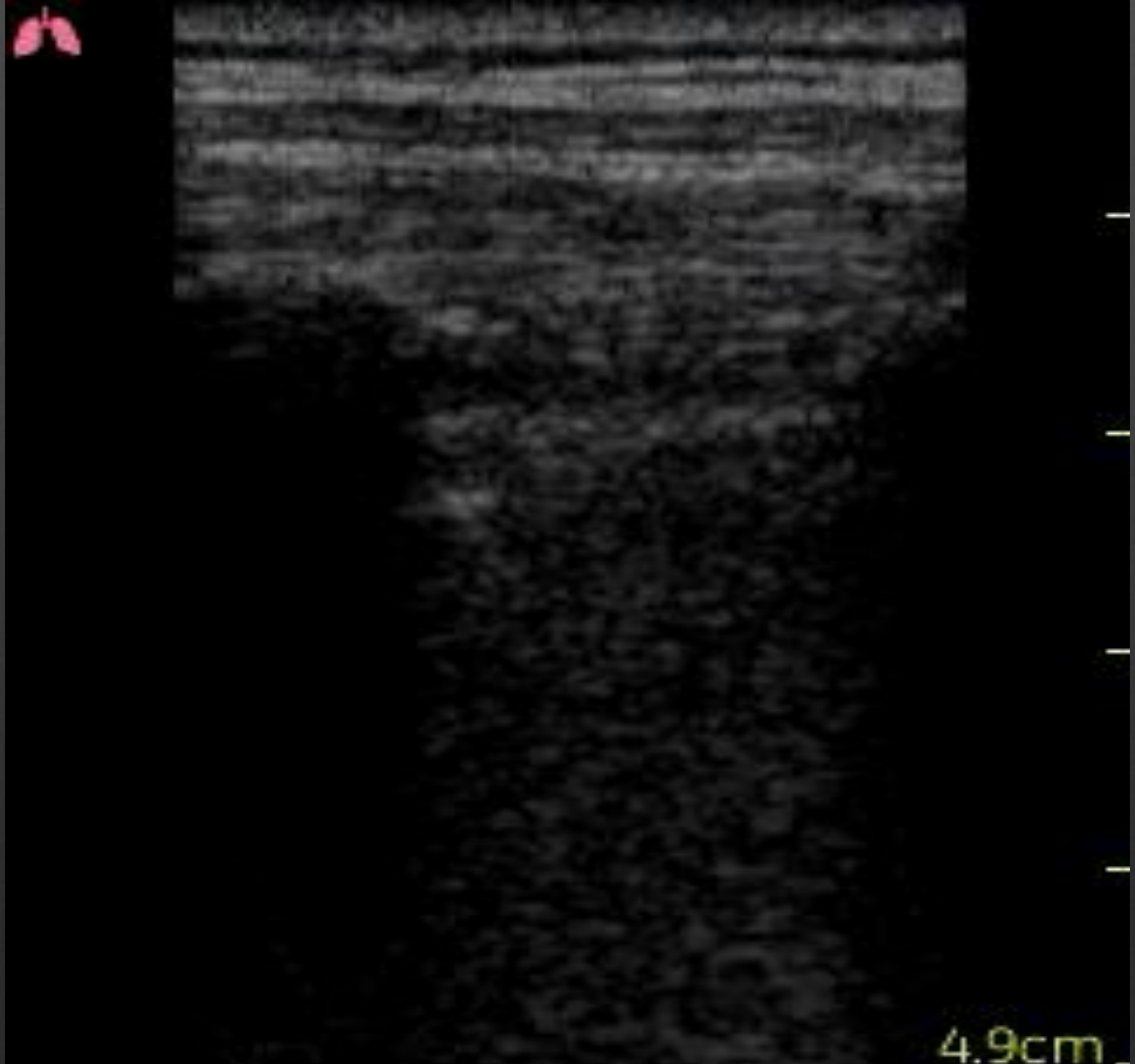


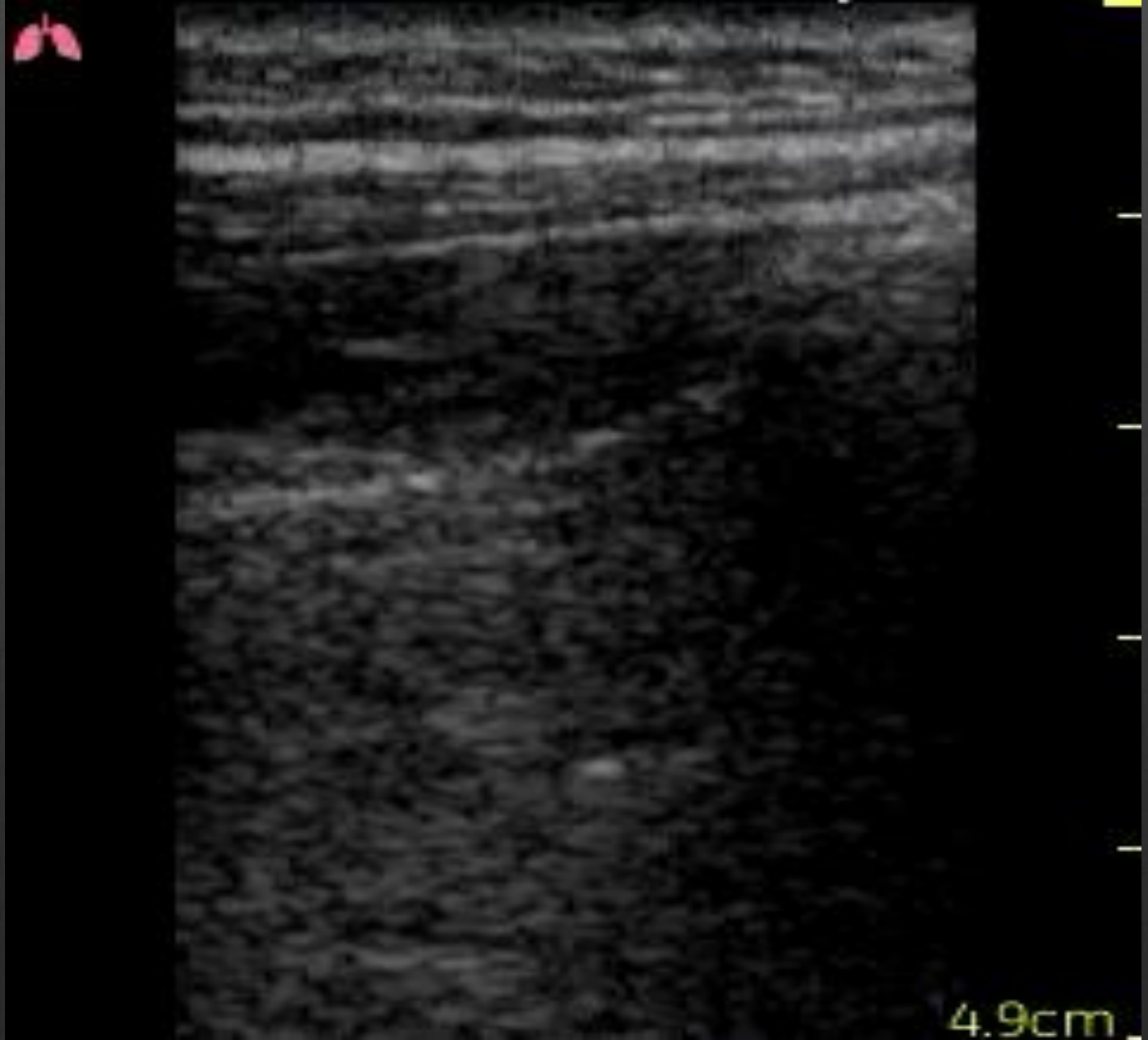


C1-5

3.5M S-H
22Hz DVA: 100%
MI = 0.6
R15 G57 C4
1:Abdomen


4
2D 5 cm
21 im/s
f: 8.0 MHz
DR: 75 dB
R: 2.0 G: 34
Plèvre
Ligne O
Ligne A
P:-2dB
ITs:0.6
IM:1.0

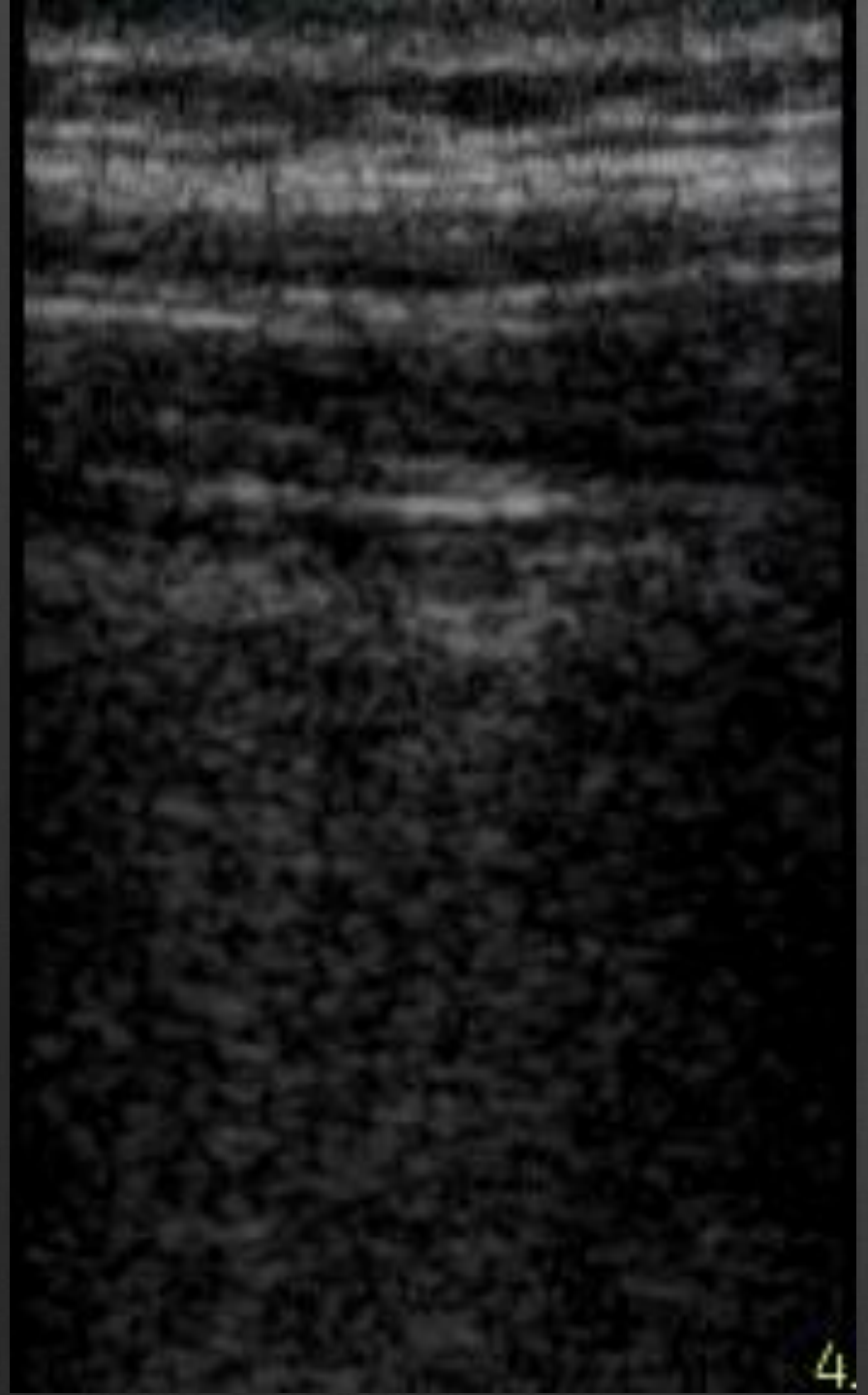

4.9cm


4.9cm

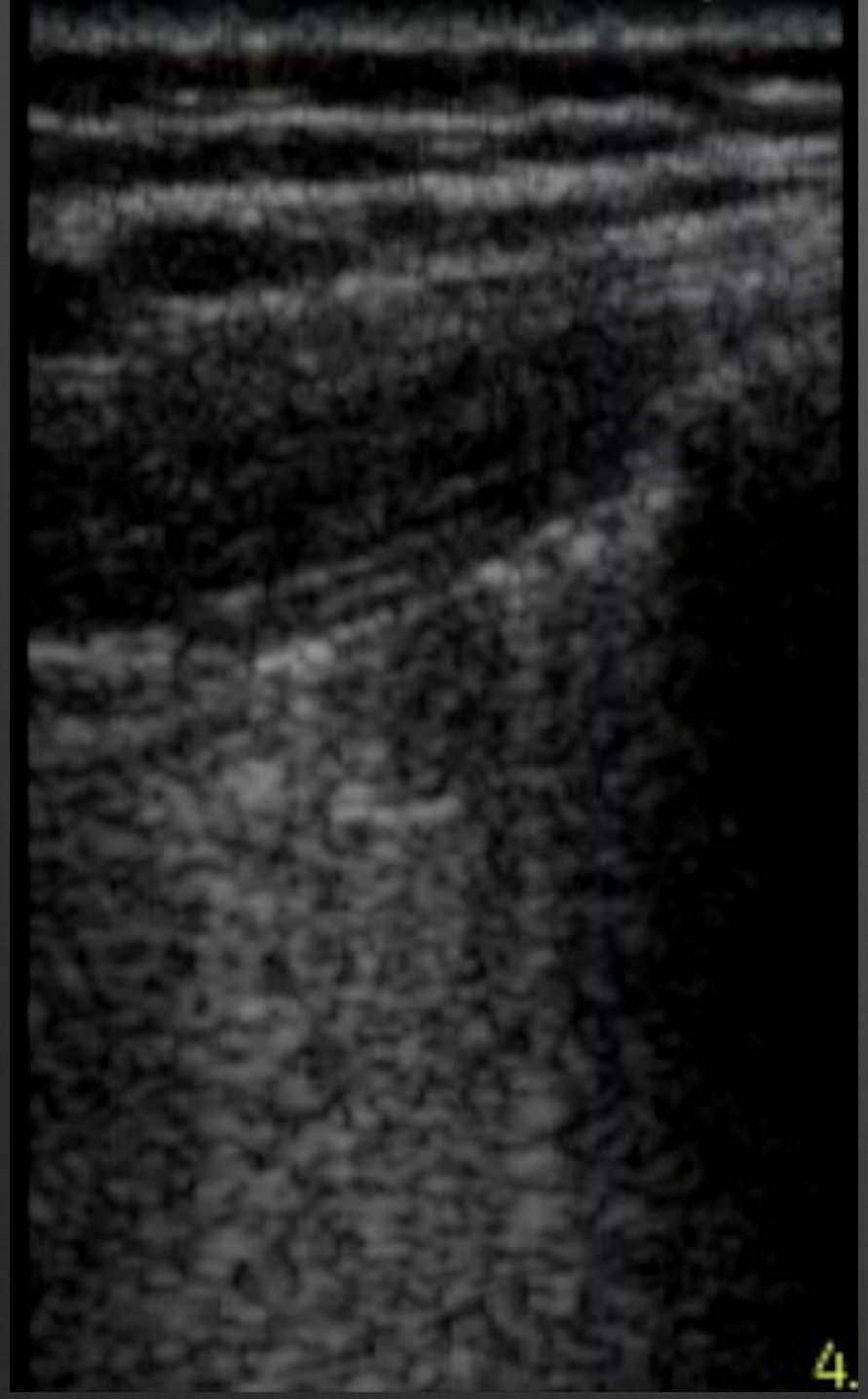
Pneumothorax

Pneumothorax

Glissement Pleural?


4.

Pneumothorax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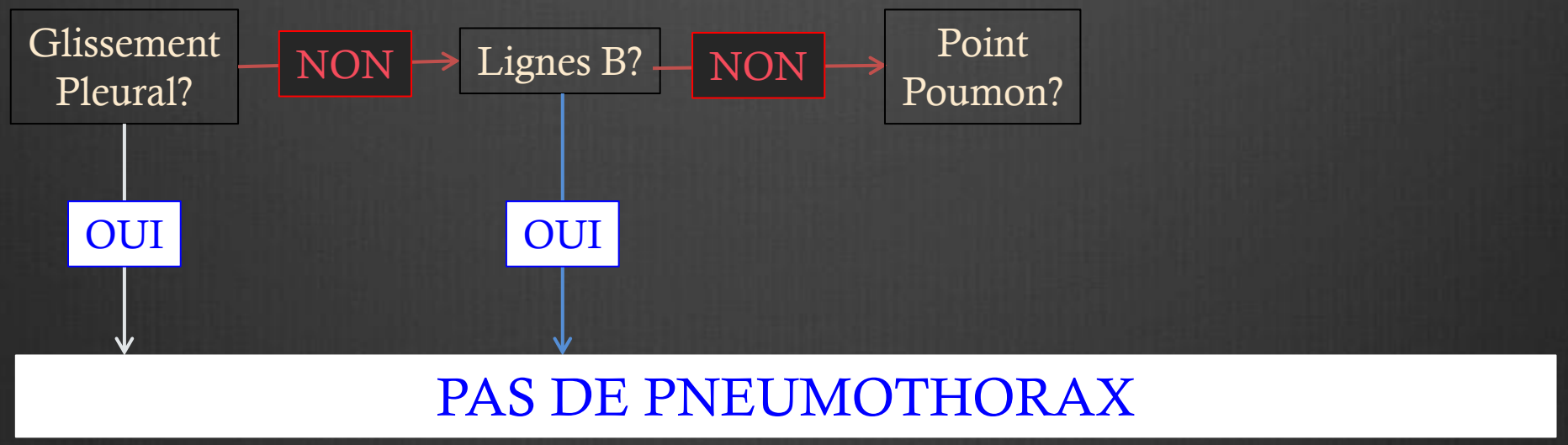
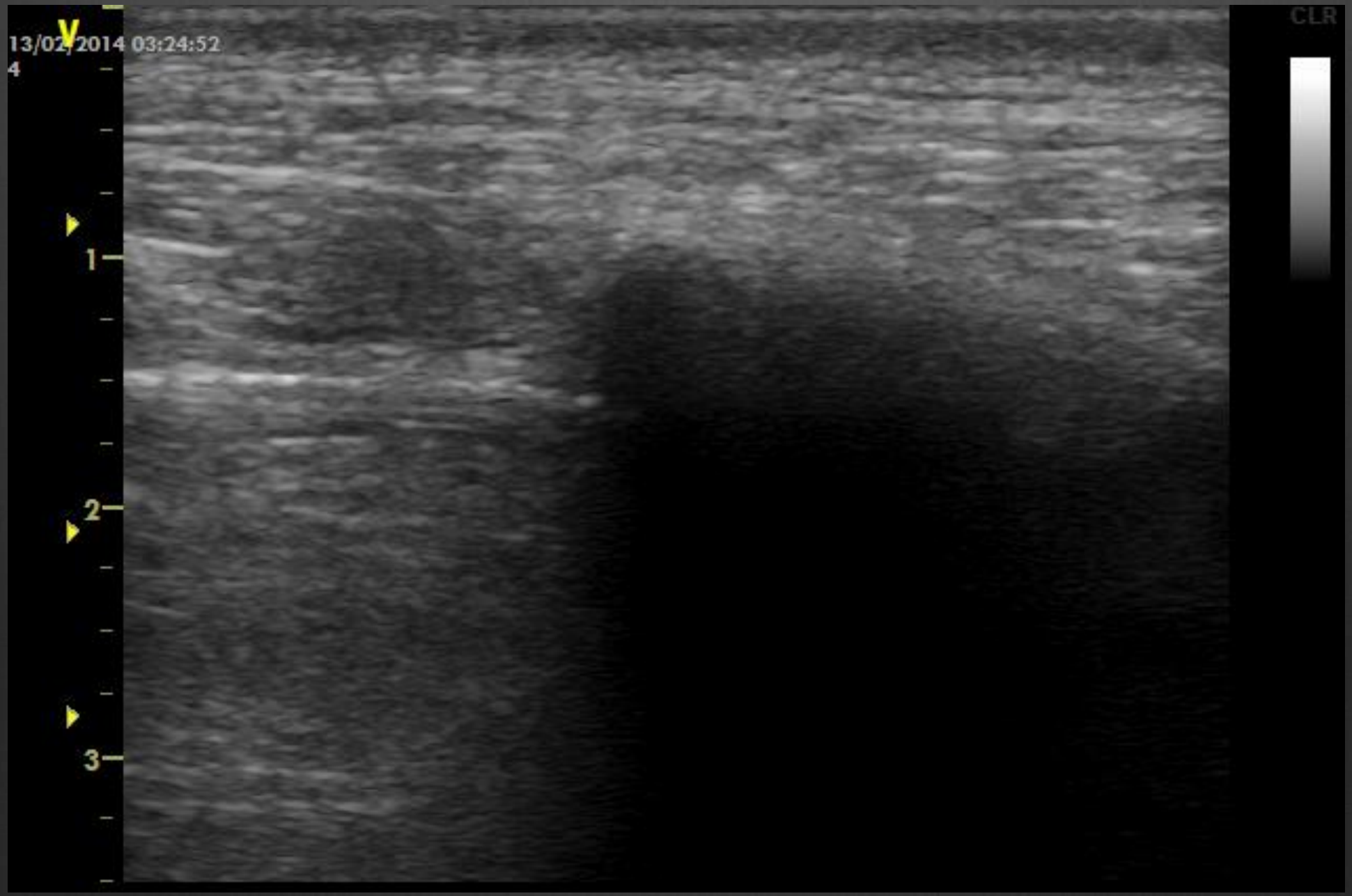
Pneumothorax

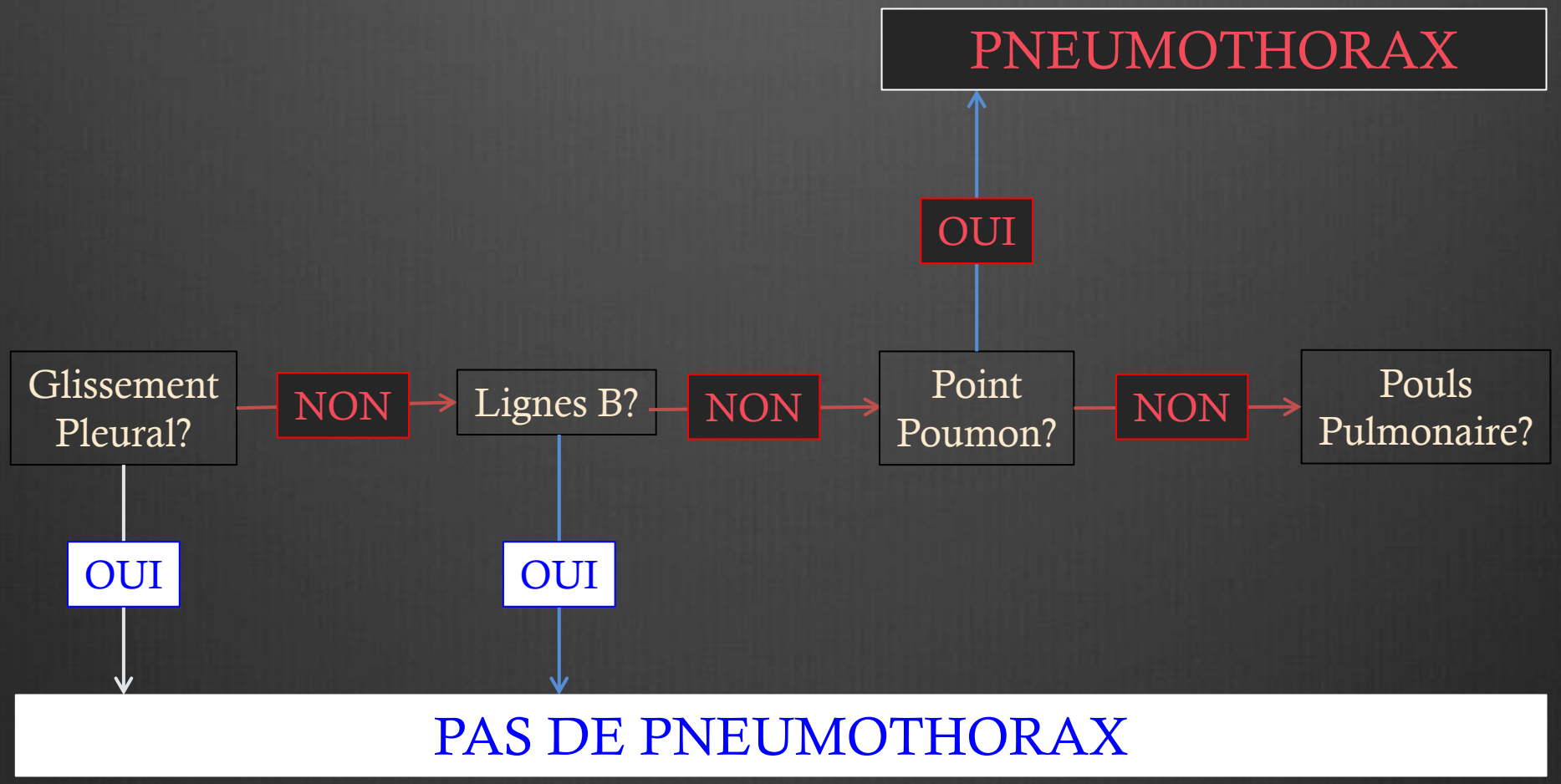


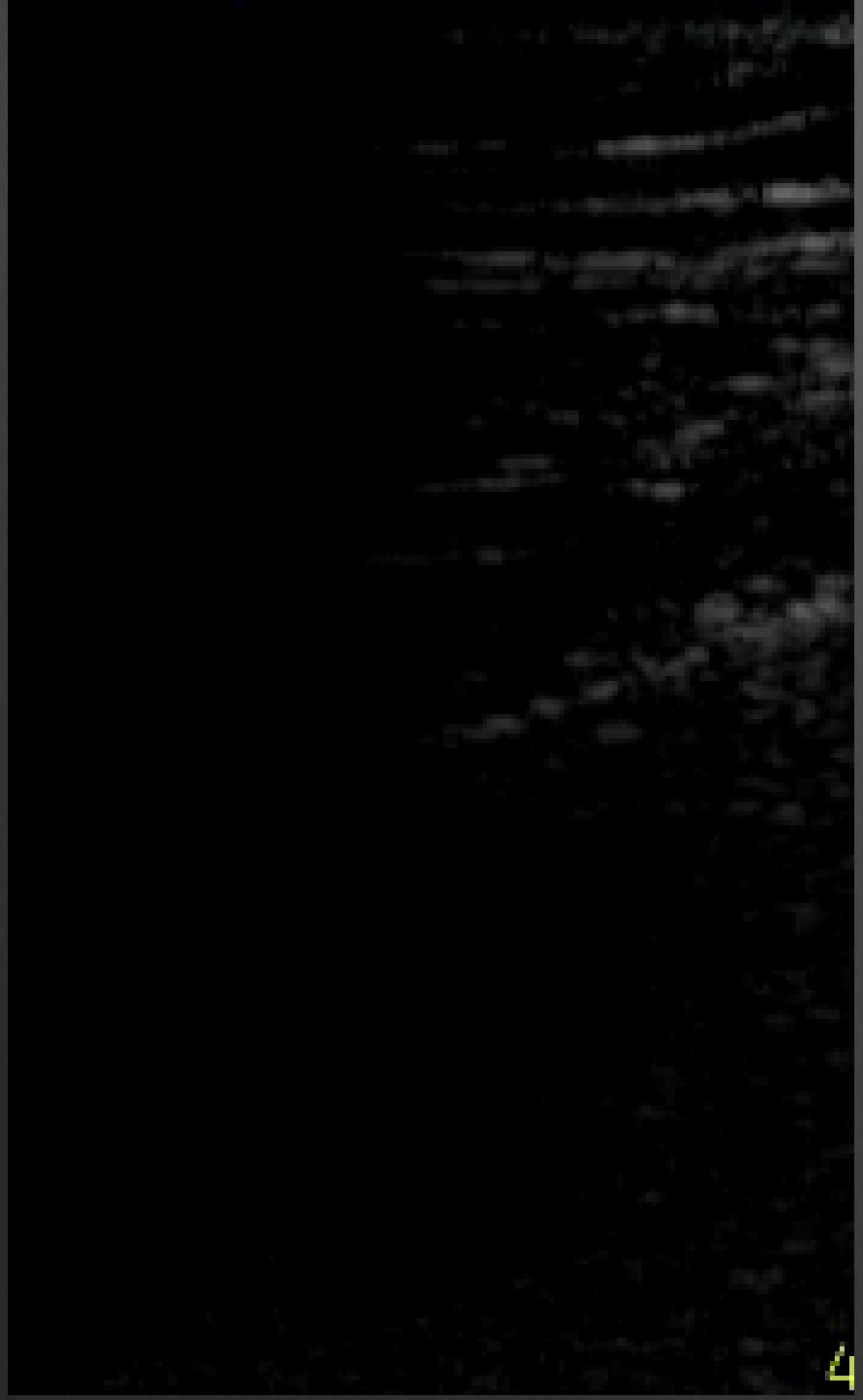
120kV,2
SC 4
SW

4

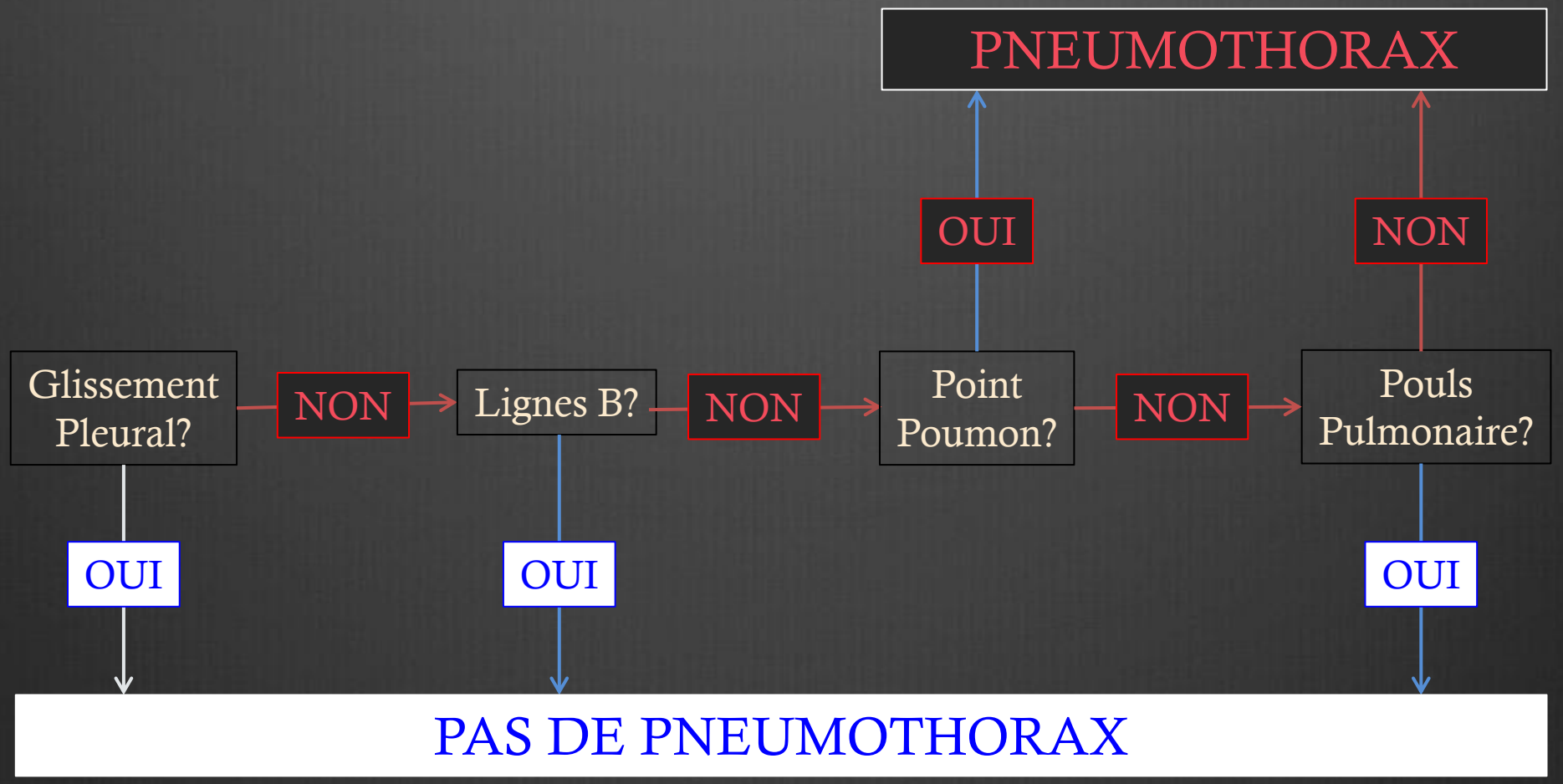

13/02/2014 03:24:52
4
1
2
3
CLR

Pneumothorax



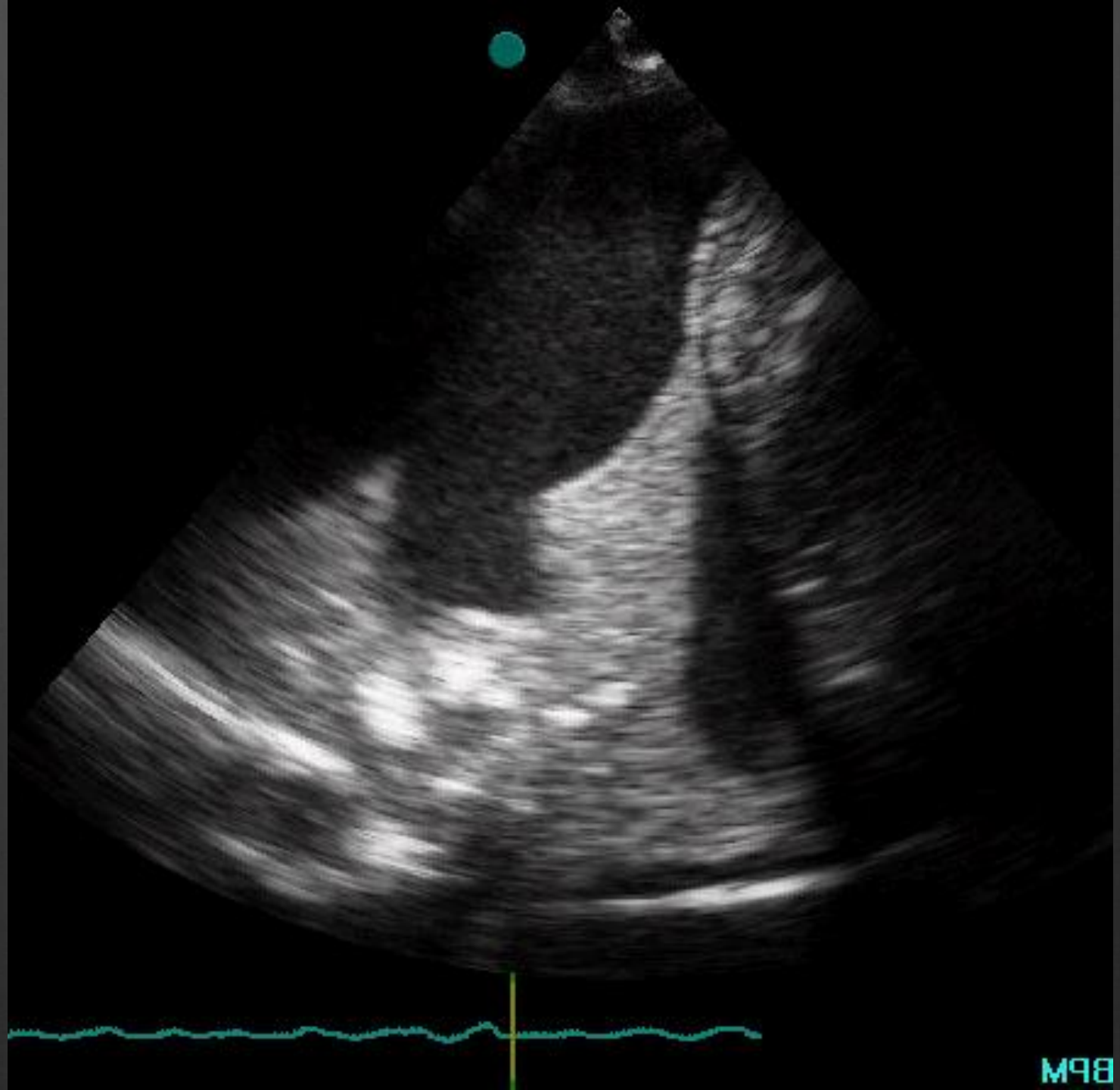


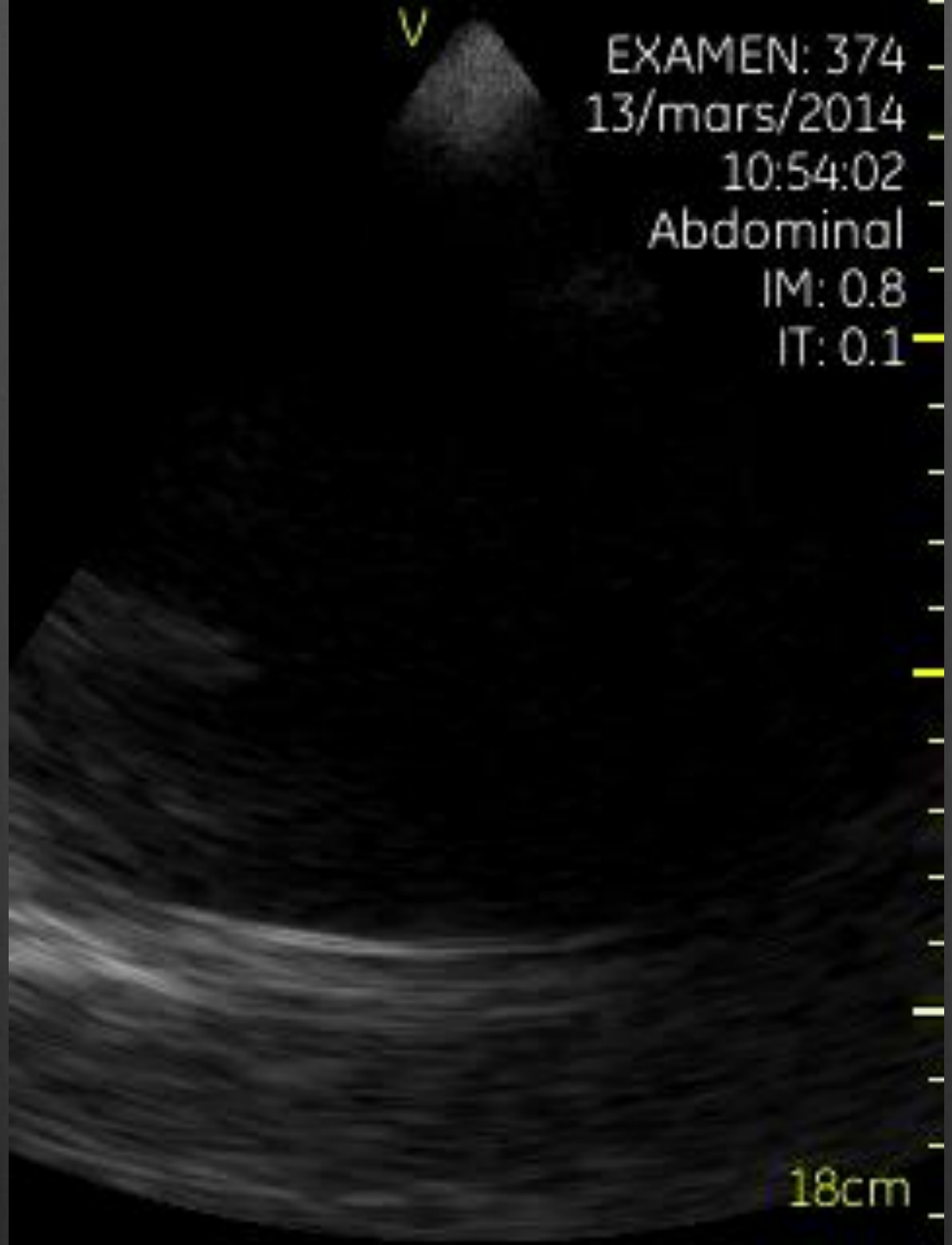
Pneumothorax

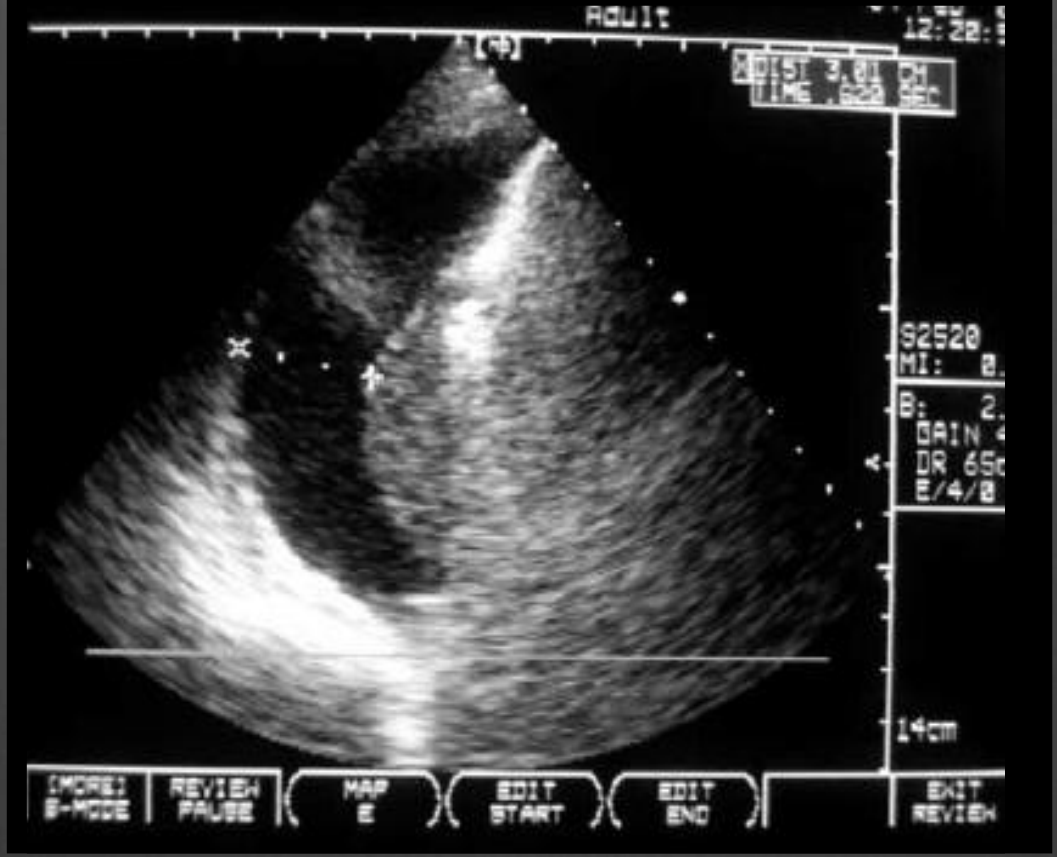


Volpicelli et al. Intensive Care Med 2012

Épanchement pleural


BPM


EXAMEN: 374
13/mars/2014
10:54:02
Abdominal
IM: 0.8
IT: 0.1
18cm



$$V\ (mL) = 20 \times DIP$$

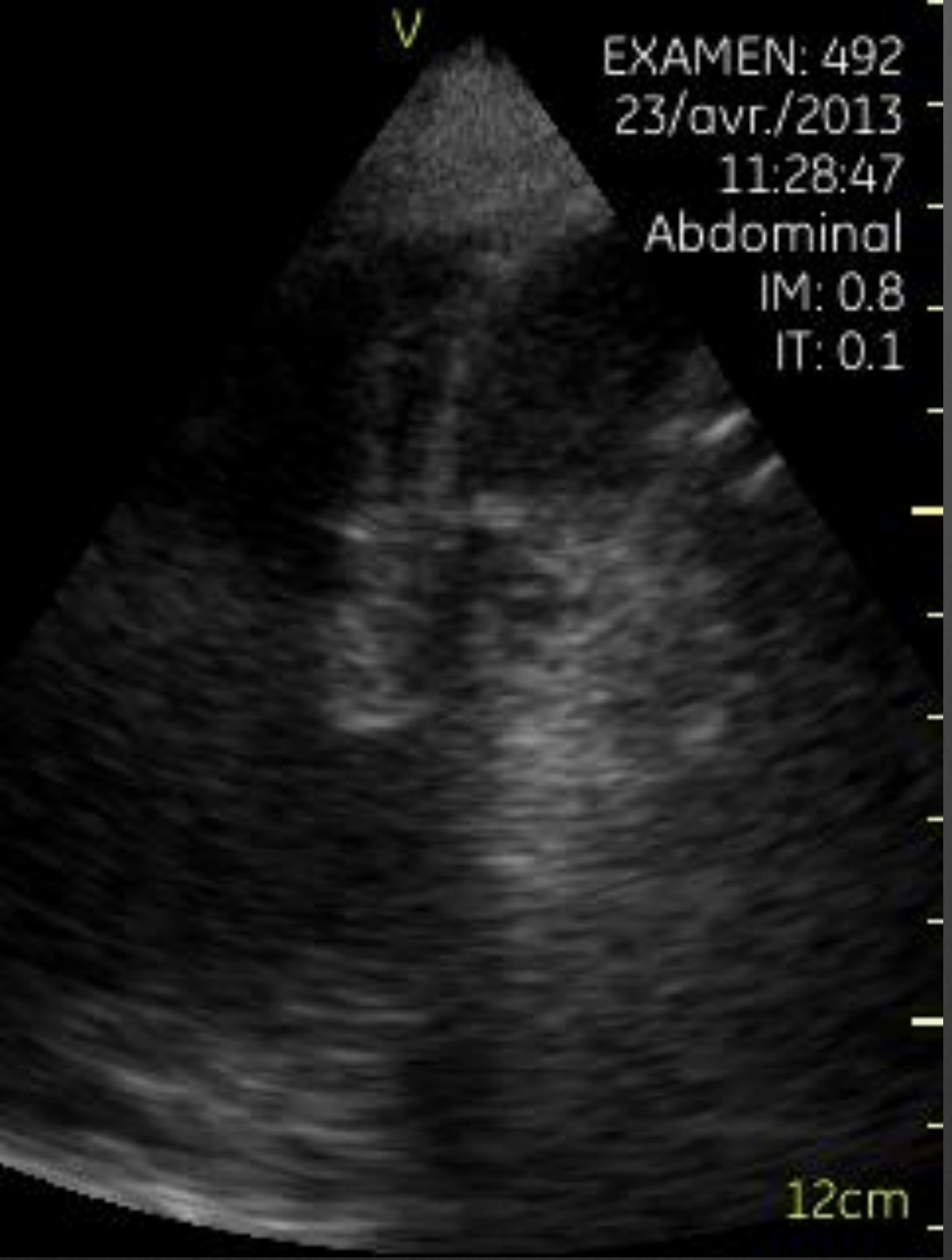
$$V = 16 \times D$$

ou

$$V = (15{,}06 \times D) + 21{,}45$$

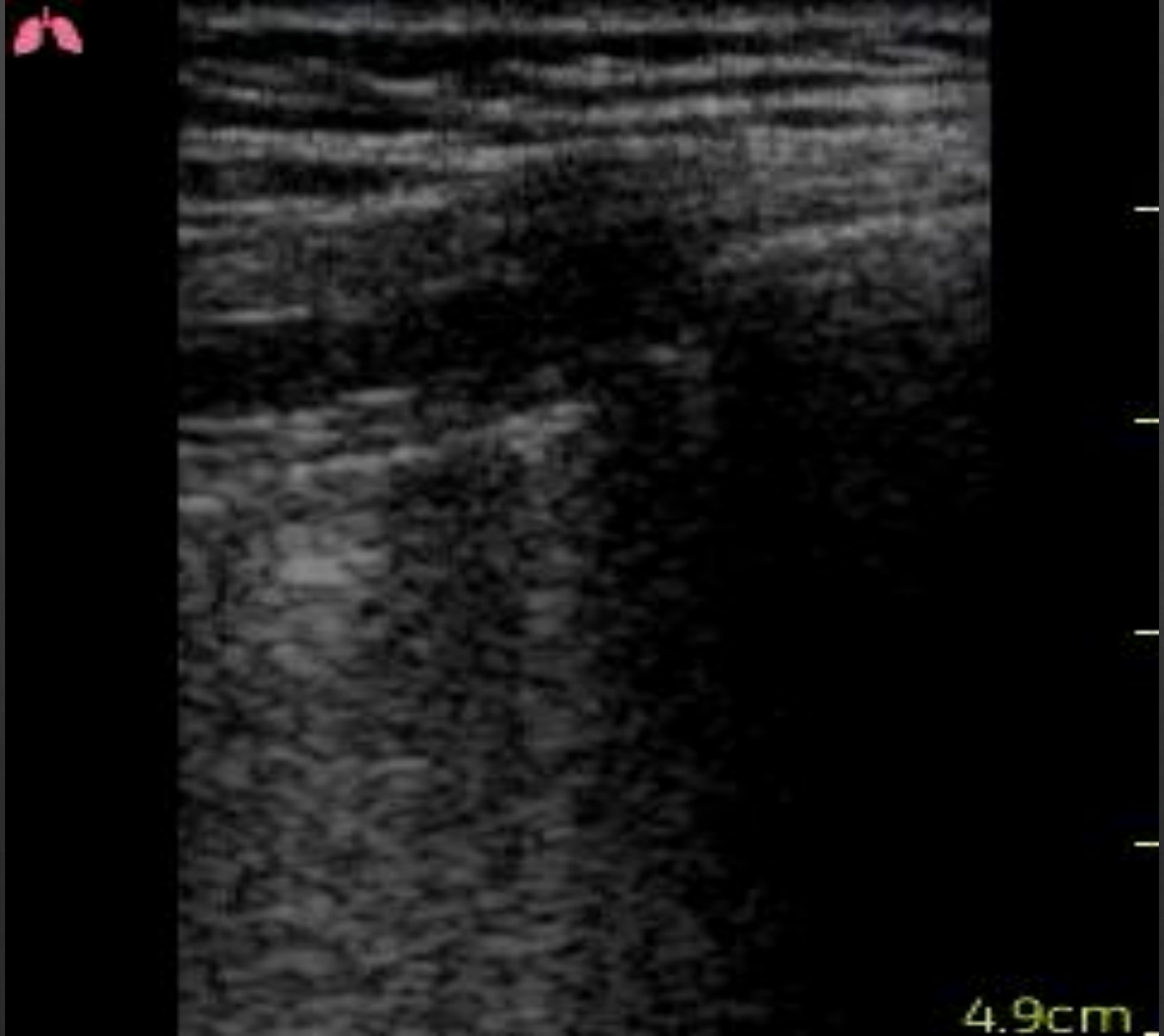
Balik et al, Intensive Care Med, 2006

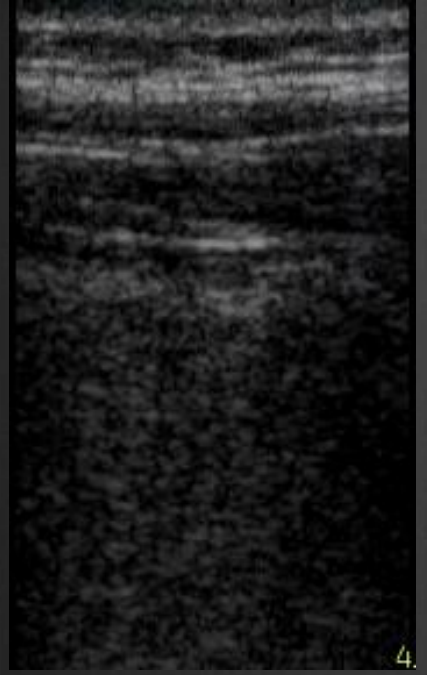
Usta et al, ICTS 2010

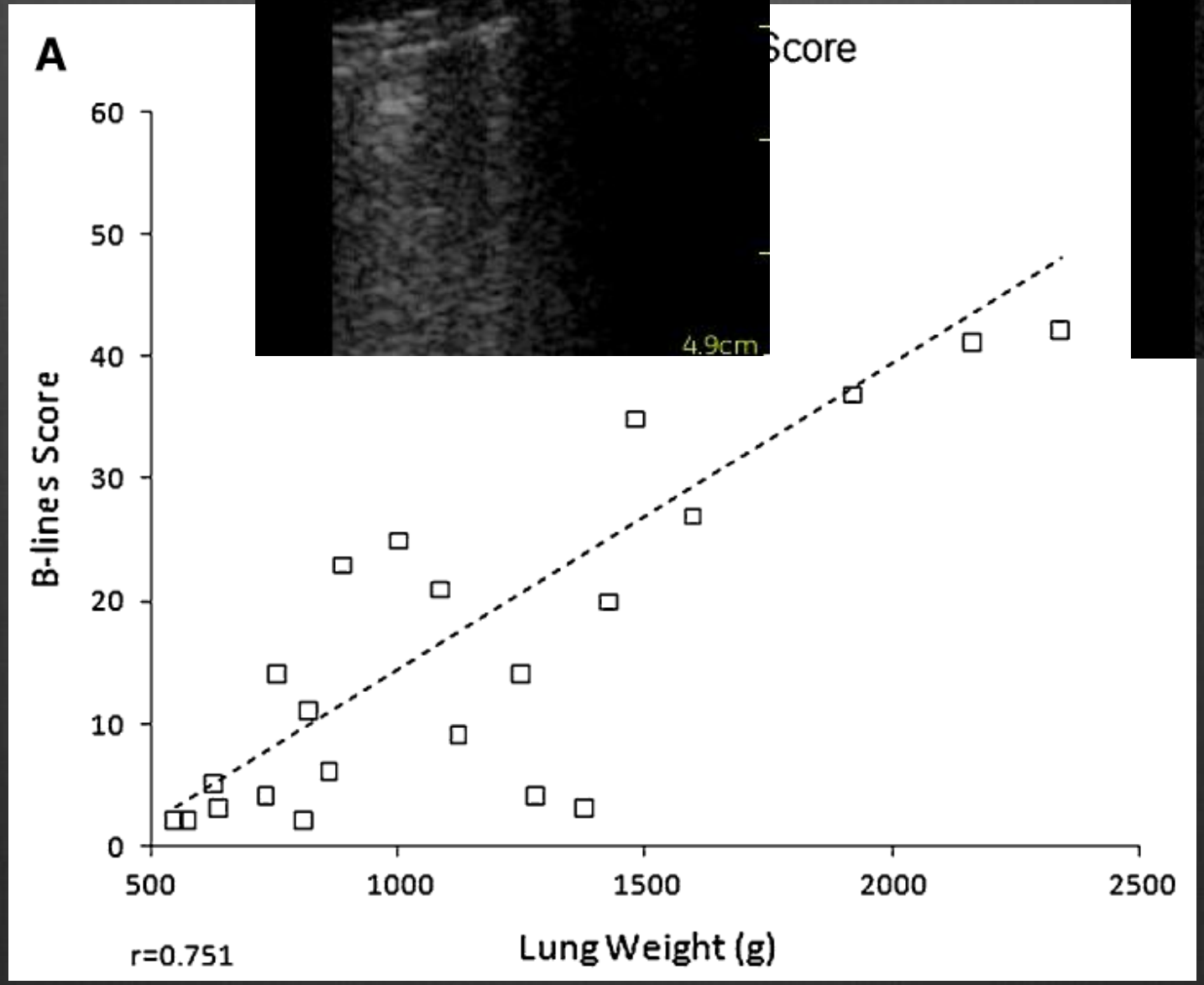

V
EXAMEN: 492
23/avr./2013
11:28:47
Abdominal
IM: 0.8
IT: 0.1
12cm

P
5
6,0cm

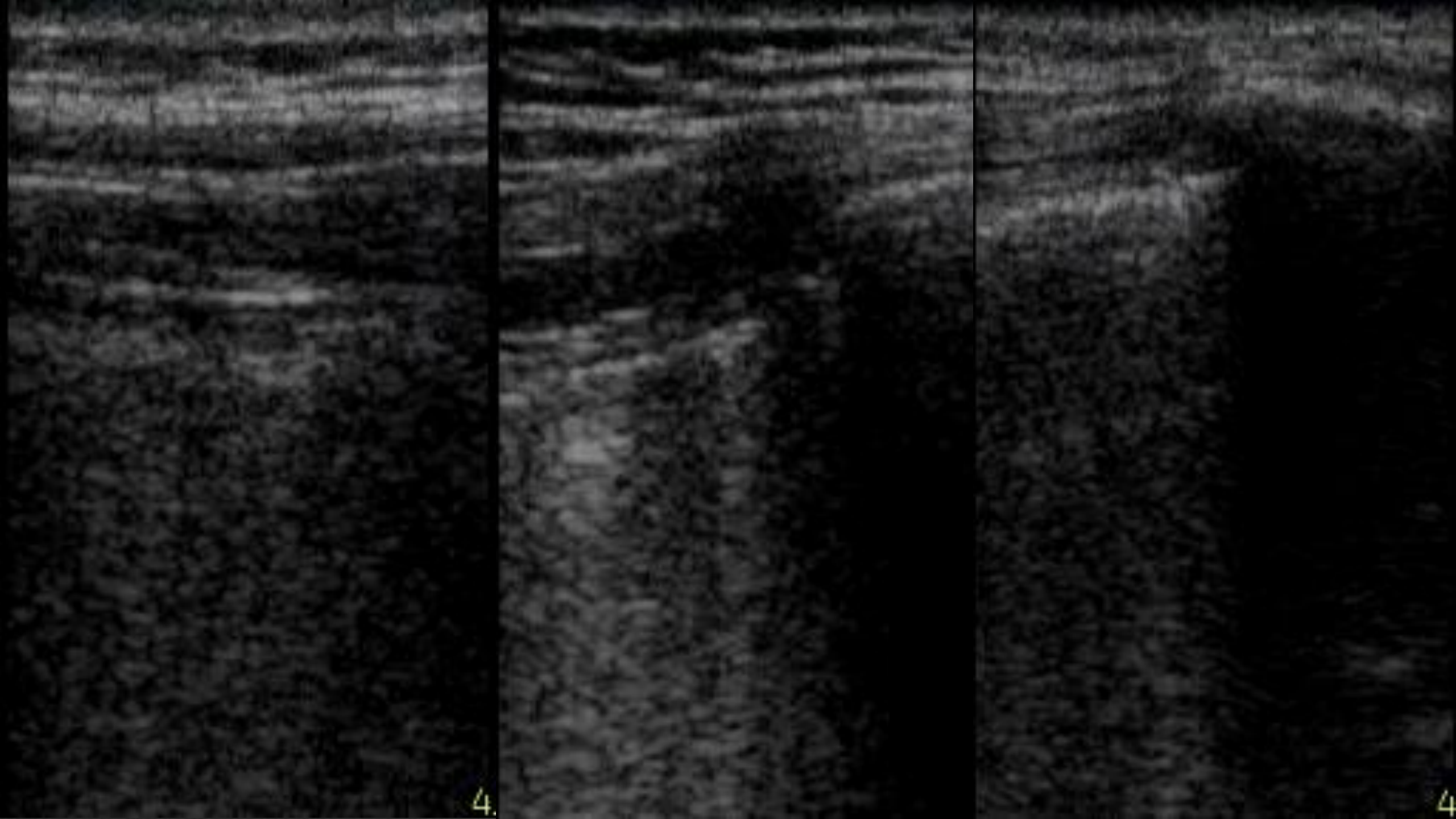
Le syndrome interstitiel

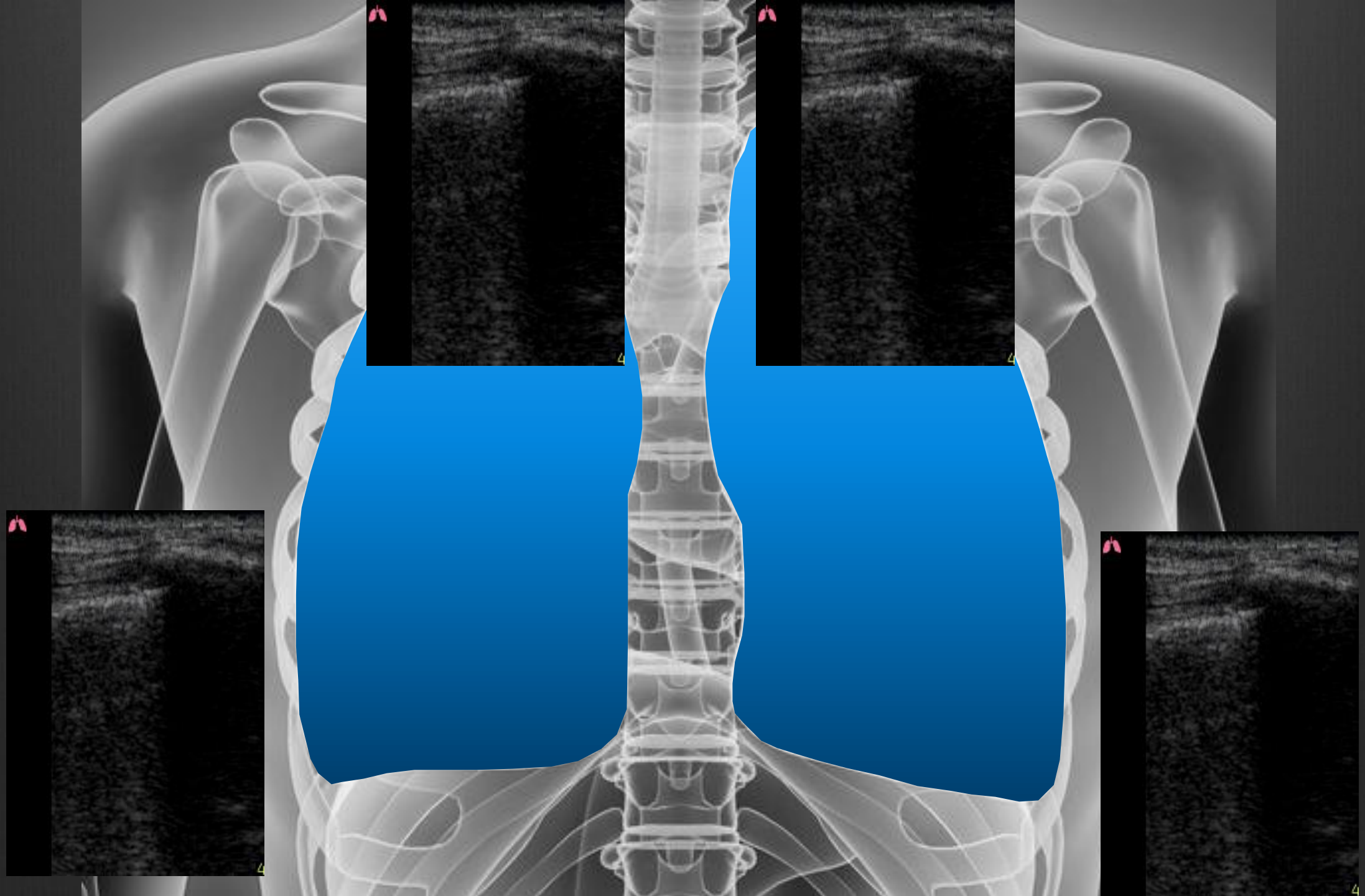

4.9cm



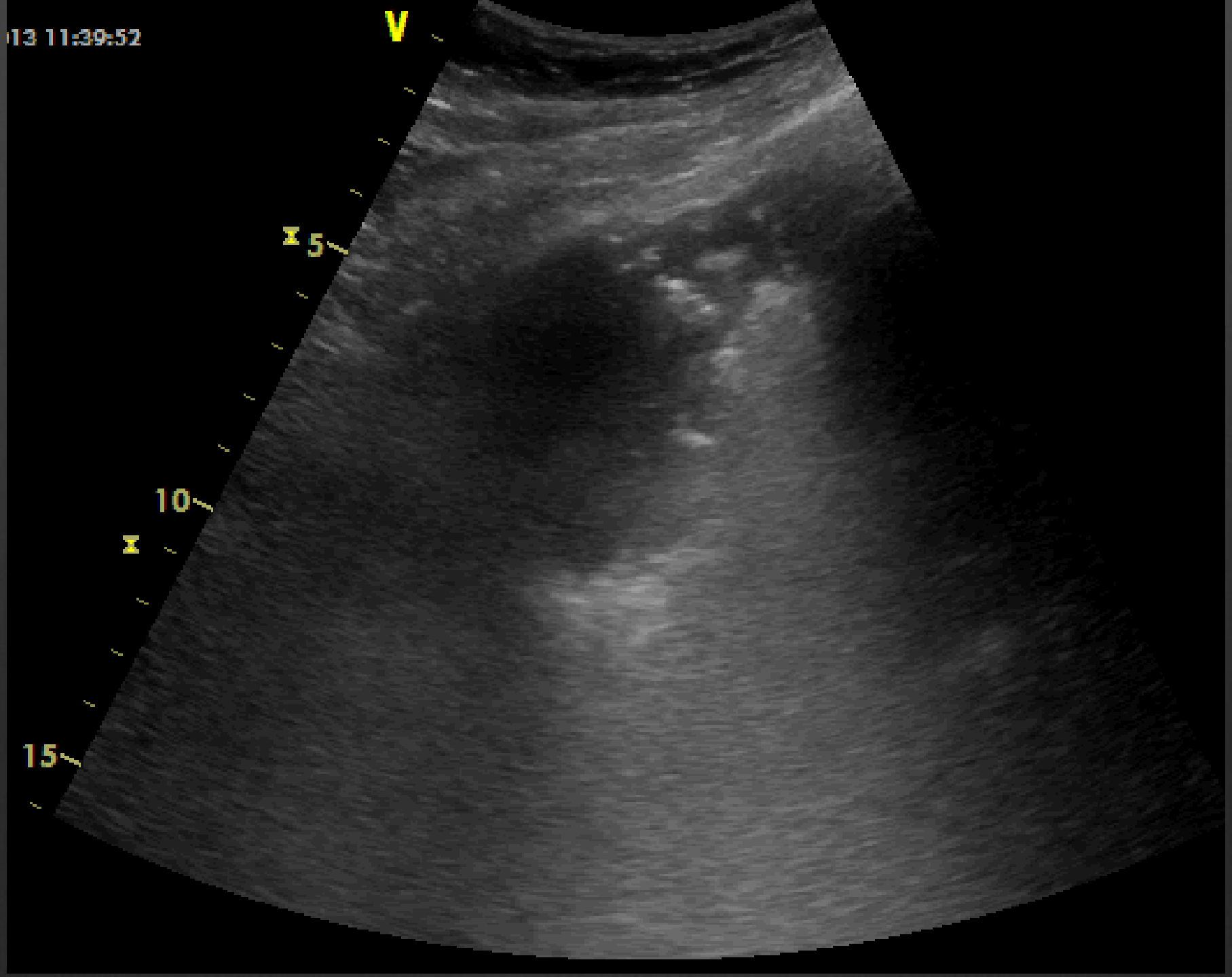


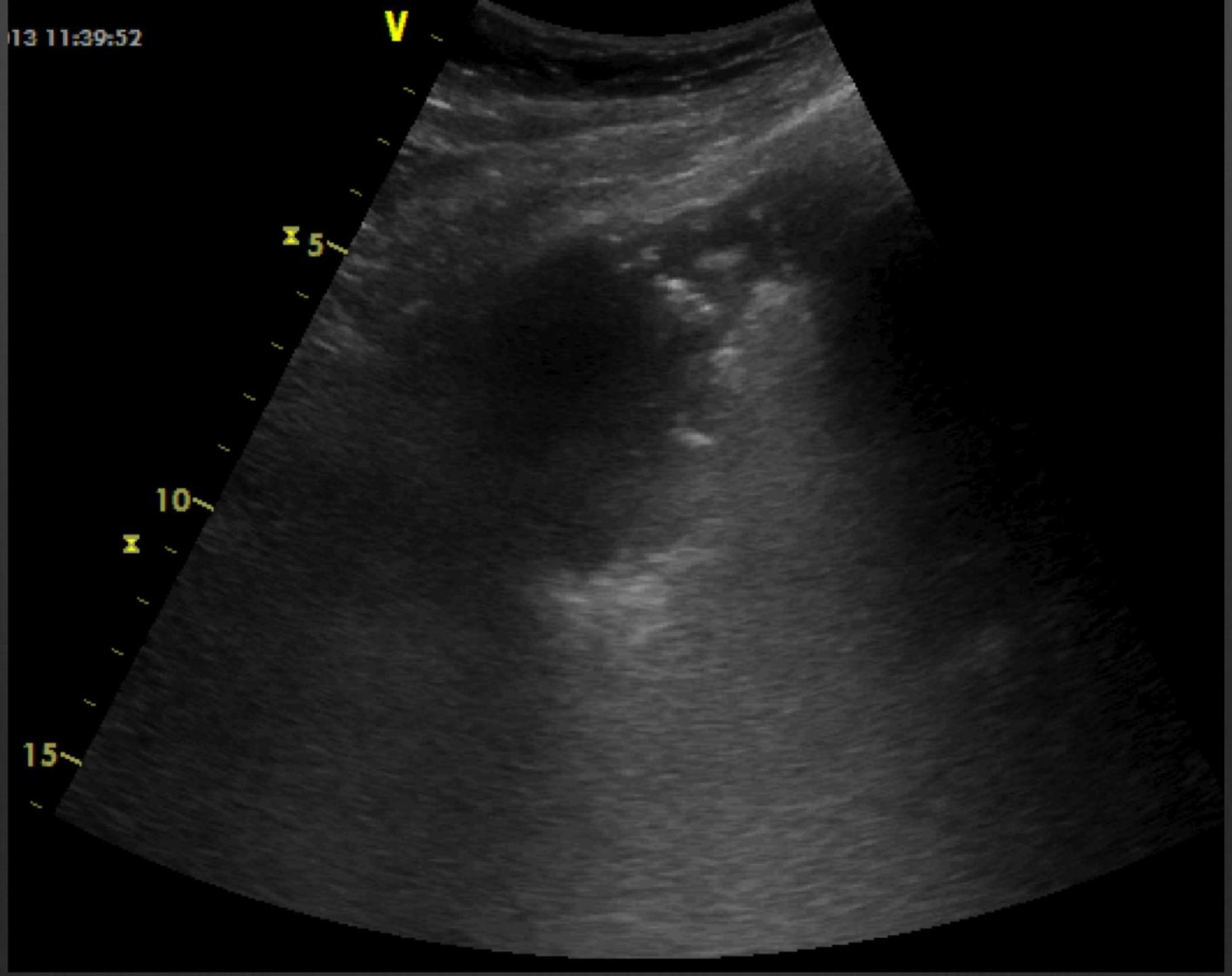
Baldi et al. Int Care Med 2013


4.
4



Condensation


13 11:39:52
V
5
10
15


13 11:39:52
V
5
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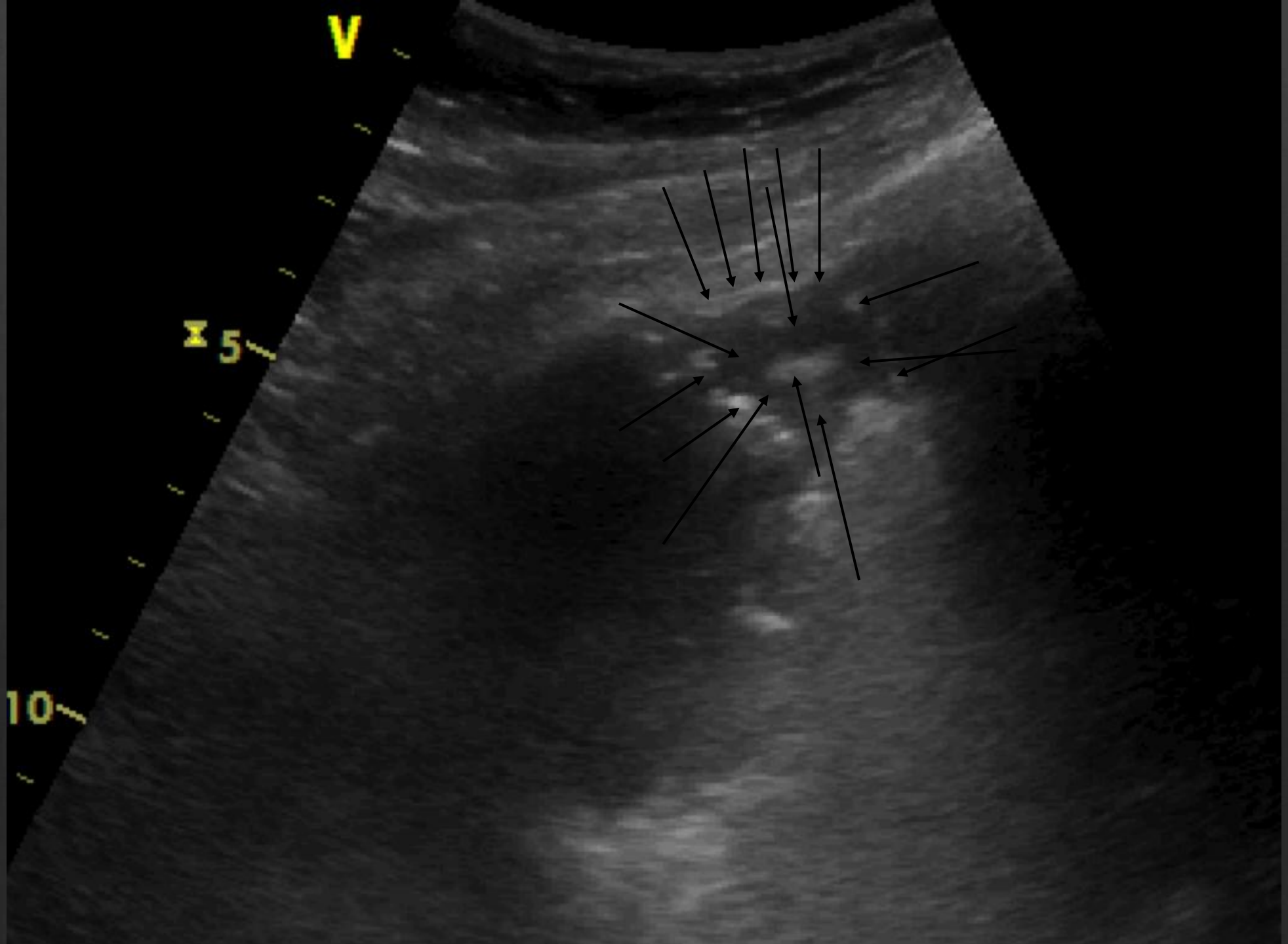
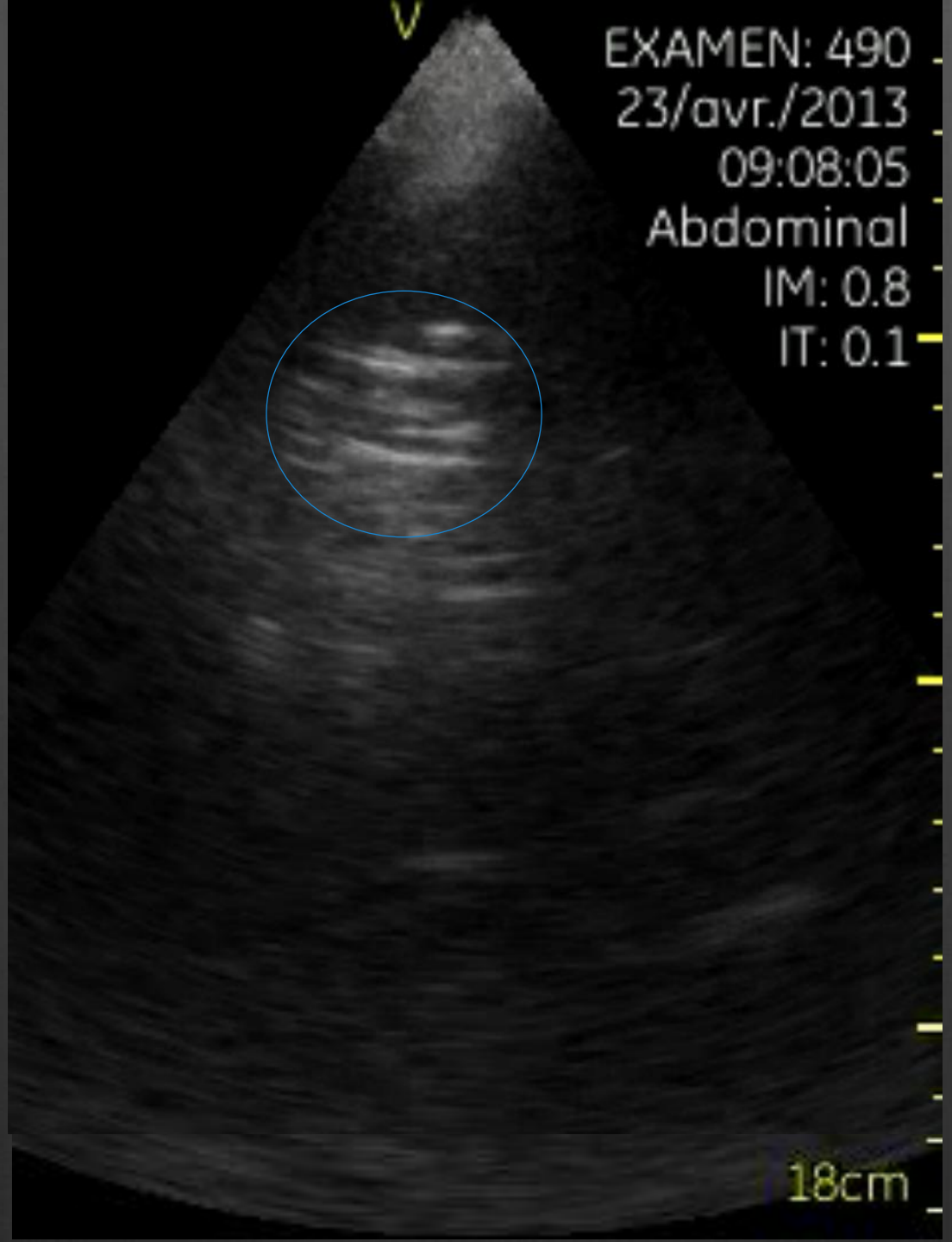

V
5
10

V
EXAMEN: 393
18/mai/2014
22:26:52
Abdominal
IM: 0.8
IT: 0.1
16cm

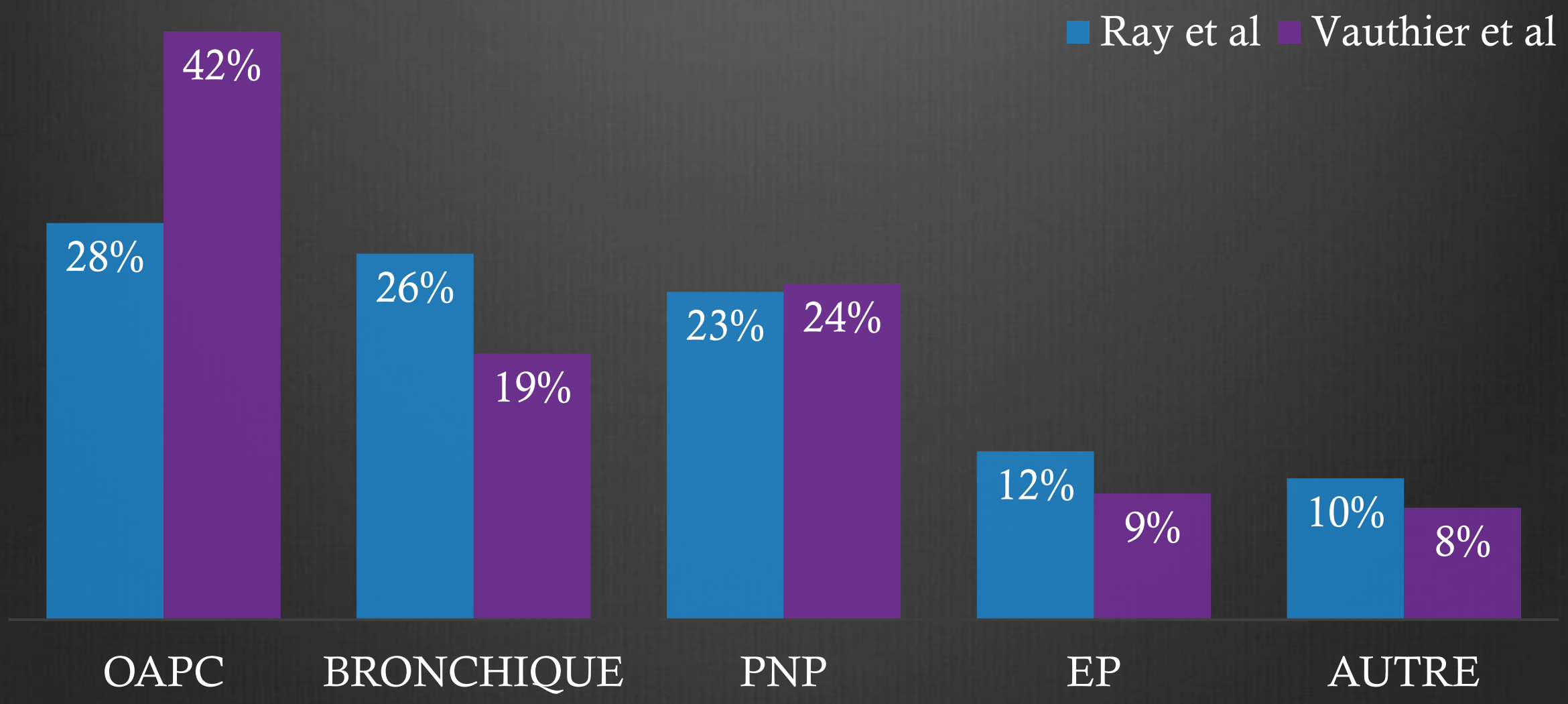

EXAMEN: 490
23/avr./2013
09:08:05
Abdominal
IM: 0.8
IT: 0.1
18cm

Etiologie

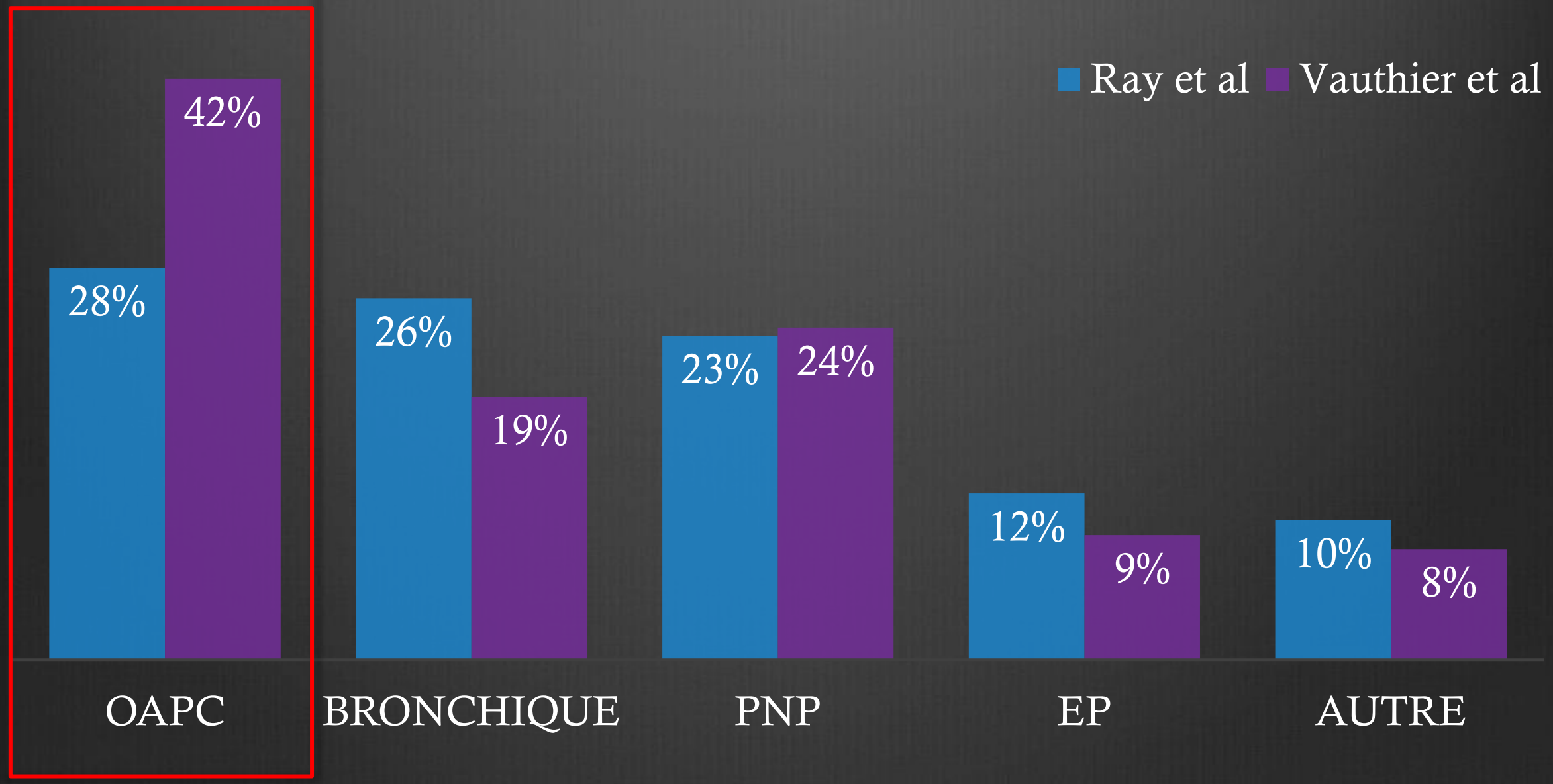
- Pneumopathie
- EP
- Néo
- Atélectasies
- Contusion

Volpicelli et al. Intensive Care Med 2012

Cause Dyspnée



Cause Dyspnée



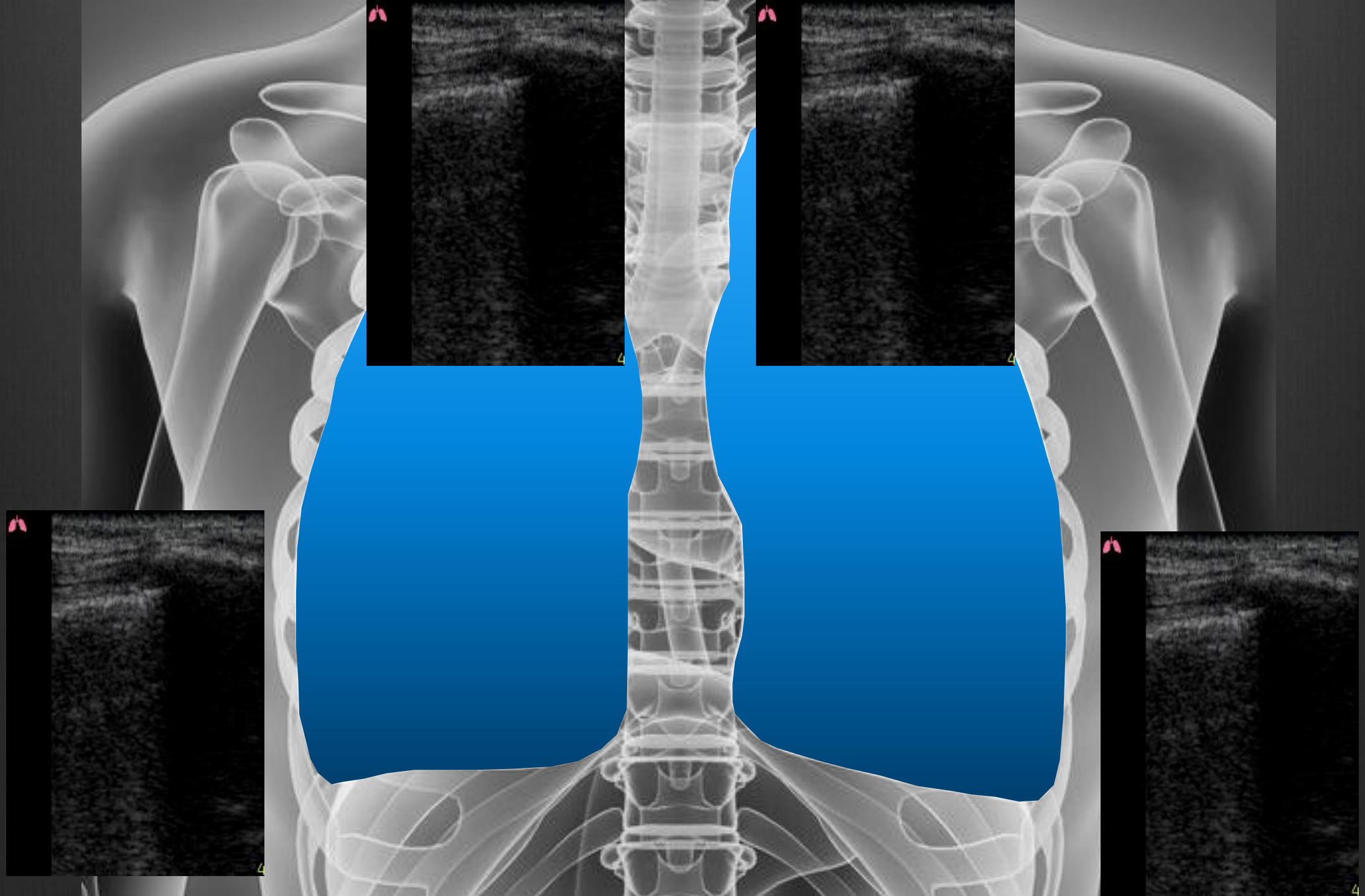


Table 2. Diagnosis analysis

	AUC (95% CI)	Se (95% CI)	Sp (95% CI)	PPV (95% CI)	NPV (95% CI)	PLR (95% CI)	NLR (95% CI)	Non-classified patients (%)
B-profile	0.70 (0.64-0.77)	100 (0.92-100)	41 (28-54)	53 (39-NC)	100 (86-100)	1.7 (1.4-2.1)	0.00 (0.00-100)	0 (0)
MAPSE < 10	0.64 (0.55-0.73)	38 (23-55)	89 (77-97)	74 (53-85)	65 (47-86)	3.6 (1.4-9.0)	0.70 (0.53-0.91)	0 (0)
E/A	0.82 (0.67-0.97)	70 (35-93)	94 (79-99)	78 (47-95)	91 (69-99)	10.9 (2.7-44.0)	0.32 (0.12-0.83)	62 (60)
E/e'	0.96 (0.92-1.00)	100 (85-100)	92 (79-98)	88 (70-NC)	100 (90-100)	12.7 (4.3-37.5)	0.00 (0.00-100)	78 (76)
Algorithm	0.94 (0.88-1.00)	96 (78-100)	93 (82-98)	85 (67-100)	98 (88-100)	12.7 (4.9-32.7)	0.05 (0.01-0.32)	27 (26)

AUC: area under the curve; Se: sensitivity; Sp: specificity; PPV: positive predictive value; NPV: negative predictive value; PLR: positive likelihood ratio; NLR: negative likelihood ratio; NaN: not a Number; MAPSE: mitral annular plane systolic excursion (in mm).

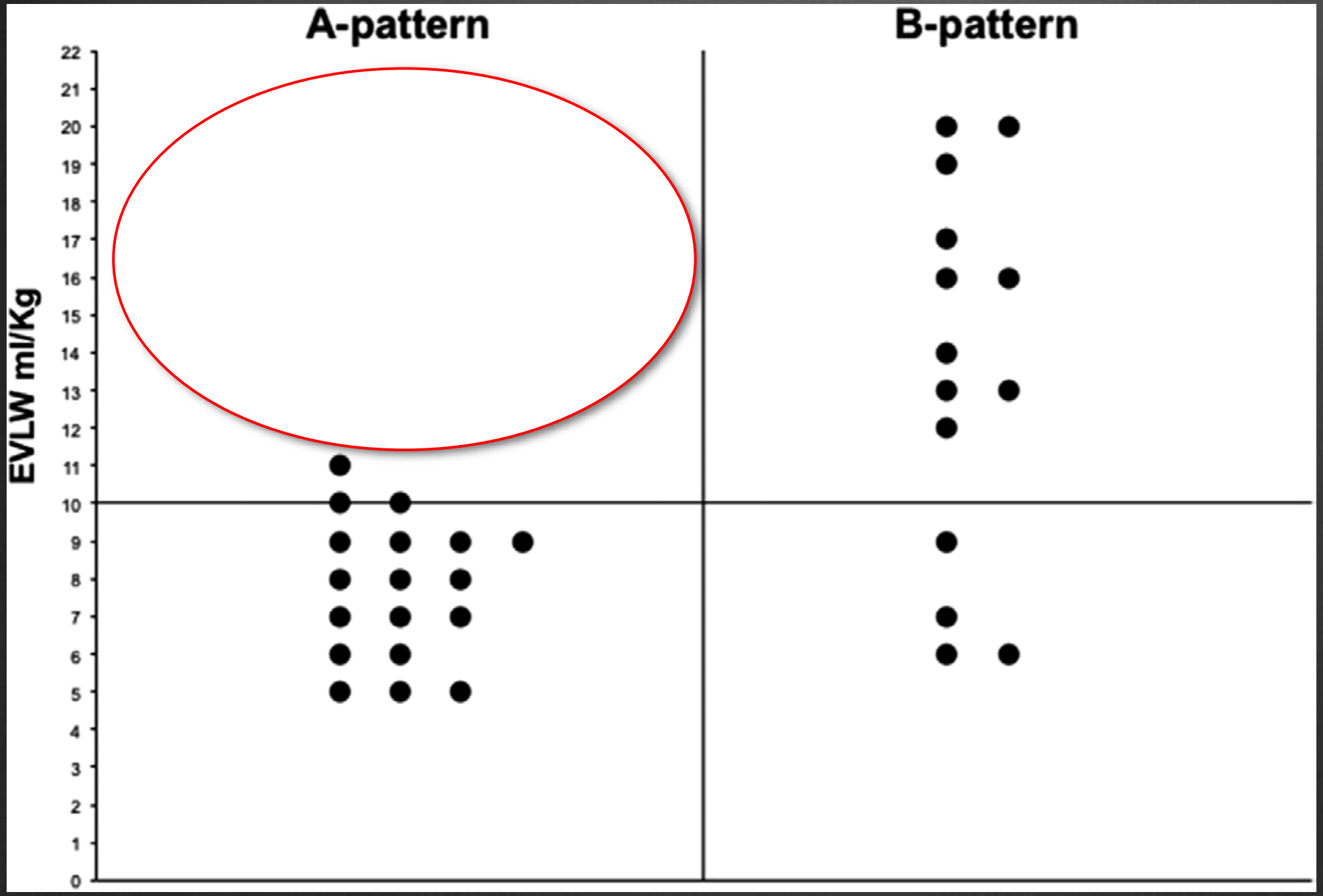
Vauthier et al. Emergencias 2021

Tabla 3. Rendimiento diagnóstico de cada una de las variables del algoritmo

	Área bajo la curva (IC 95%)	Sensibilidad (IC 95%)	Especificidad (IC 95%)	Valor predictivo positivo (IC 95%)	Valor predictivo negativo (IC 95%)	Razón de verosimilitud positiva (IC 95%)	Razón de verosimilitud negativa (IC 95%)	Pacientes no clasificados (%)
Perfil B	0,71 (0,66-0,77)	92 (82-97)	51 (41-61)	53 (43-78)	91 (81-94)	1,9 (1,5-2,3)	0,16 (0,07-0,37)	0 (0)
E/A	0,82 (0,62-1,03)	67 (22-96)	98 (90-100)	80 (41-98)	96 (80-100)	36,7 (4,9-28)	0,34 (0,11-1,05)	105 (63)
E /e'	0,98 (0,96-1,01)	100 (91-100)	97 (89-100)	95 (84-100)	100 (94-100)	31 (7,9-121)	0 (0-100)	64 (39)
TD (165 ms)	0,58 (0,48-0,67)	63 (49-76)	55 (45-65)	44 (35-59)	73 (60-80)	1,4 (1,1-1,9)	0,66 (0,45-0,97)	0 (0)
TD (130 ms)	0,58 (0,48-0,67)	37 (24-50)	76 (67-84)	47 (35-60)	68 (54-78)	1,6 (1-2,5)	0,83 (0,66-1,03)	0 (0)

E/A: relación entre onda de llenado ventricular temprano y contracción auricular; E/e': relación entre onda de llenado ventricular temprano y la velocidad del tejido durante la diástole; ms: milisegundos; TD: tiempo de desaceleración precoz del flujo mitral.

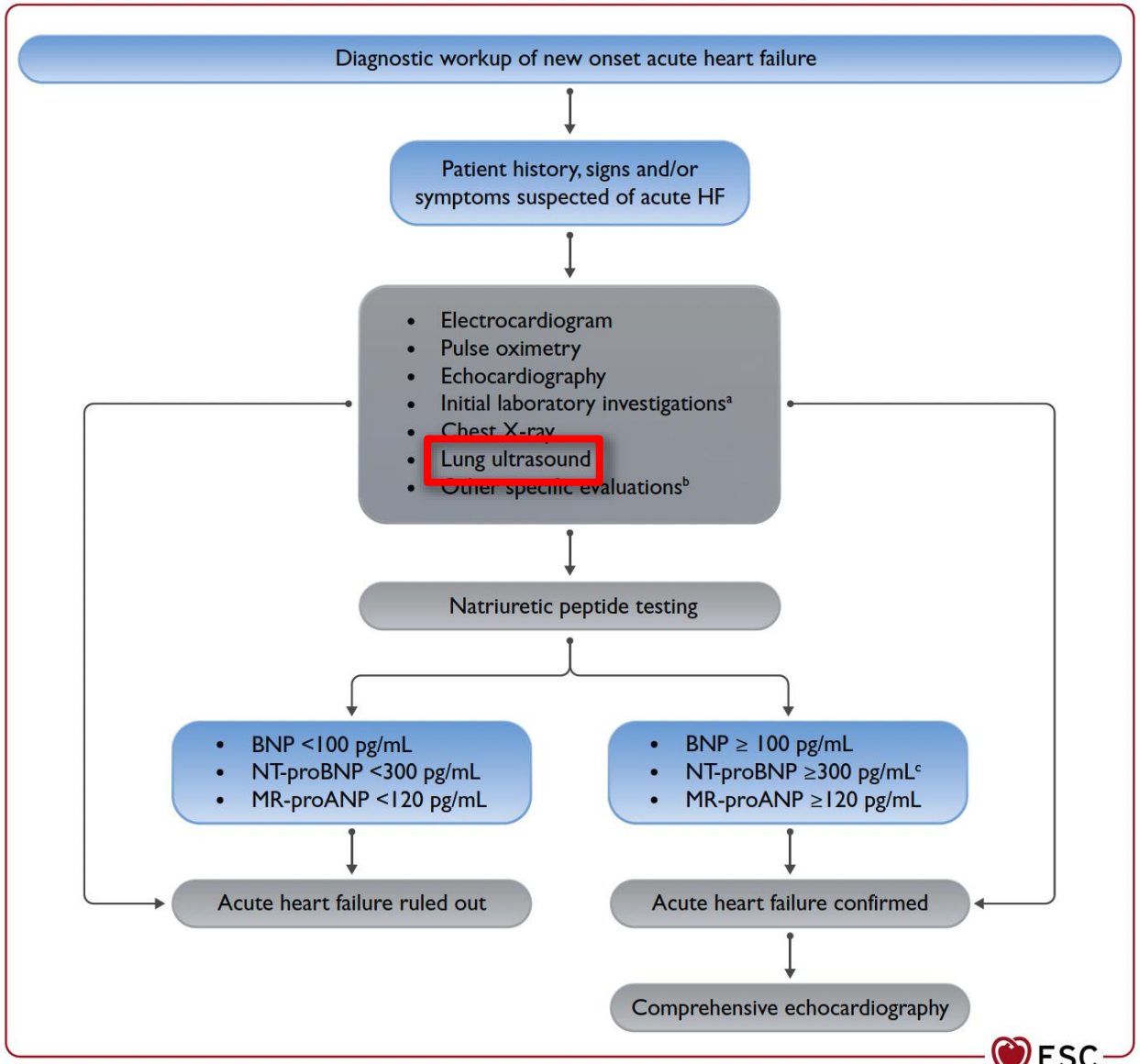
L'Hermitte et al. Emergencias 2024



Volpicelli et al. Crit Care Med 2014

2021 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure

Developed by the Task Force for the diagnosis and treatment of acute and chronic heart failure of the European Society of Cardiology (ESC)

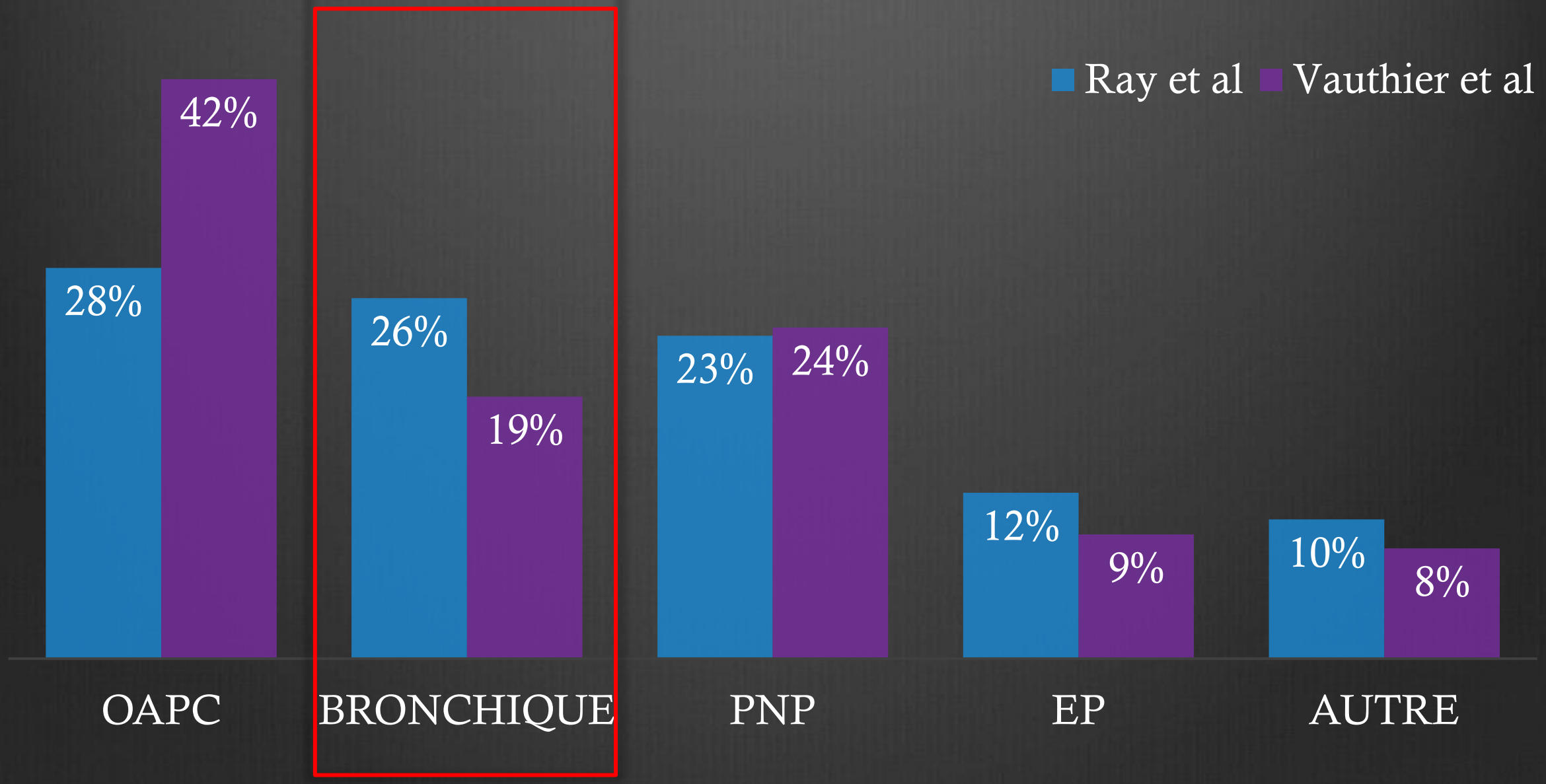


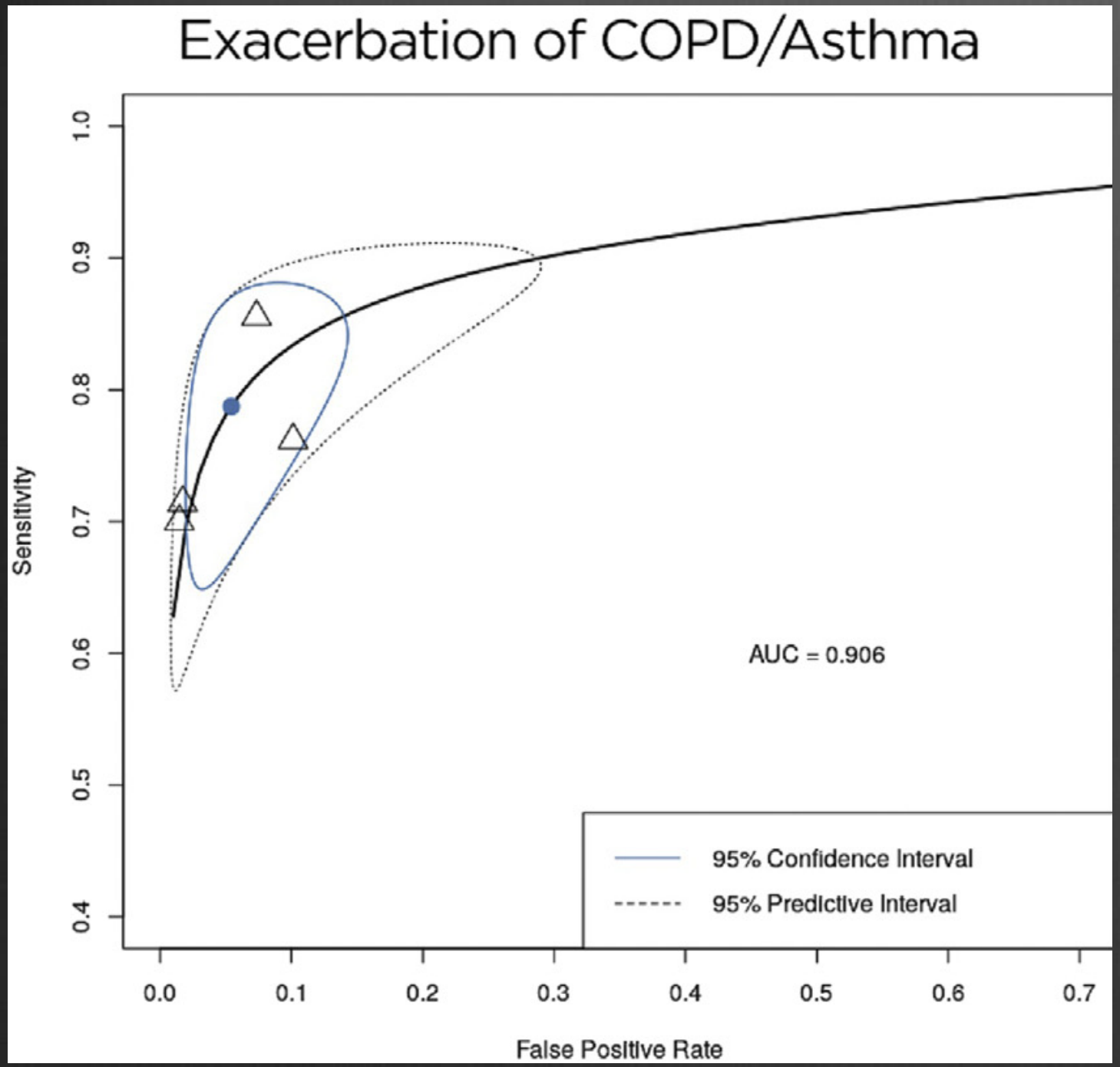
2023 SFMU/GICC-SFC/SFGG expert recommendations for the emergency management of older patients with acute heart failure

Experts' answer: Clinical point-of-care thoracic ultrasound (pulmonary and cardiac) is probably required to diagnose AHF in older patients with dyspnoea in the ED.

Grade: G2+.

Cause Dyspnée





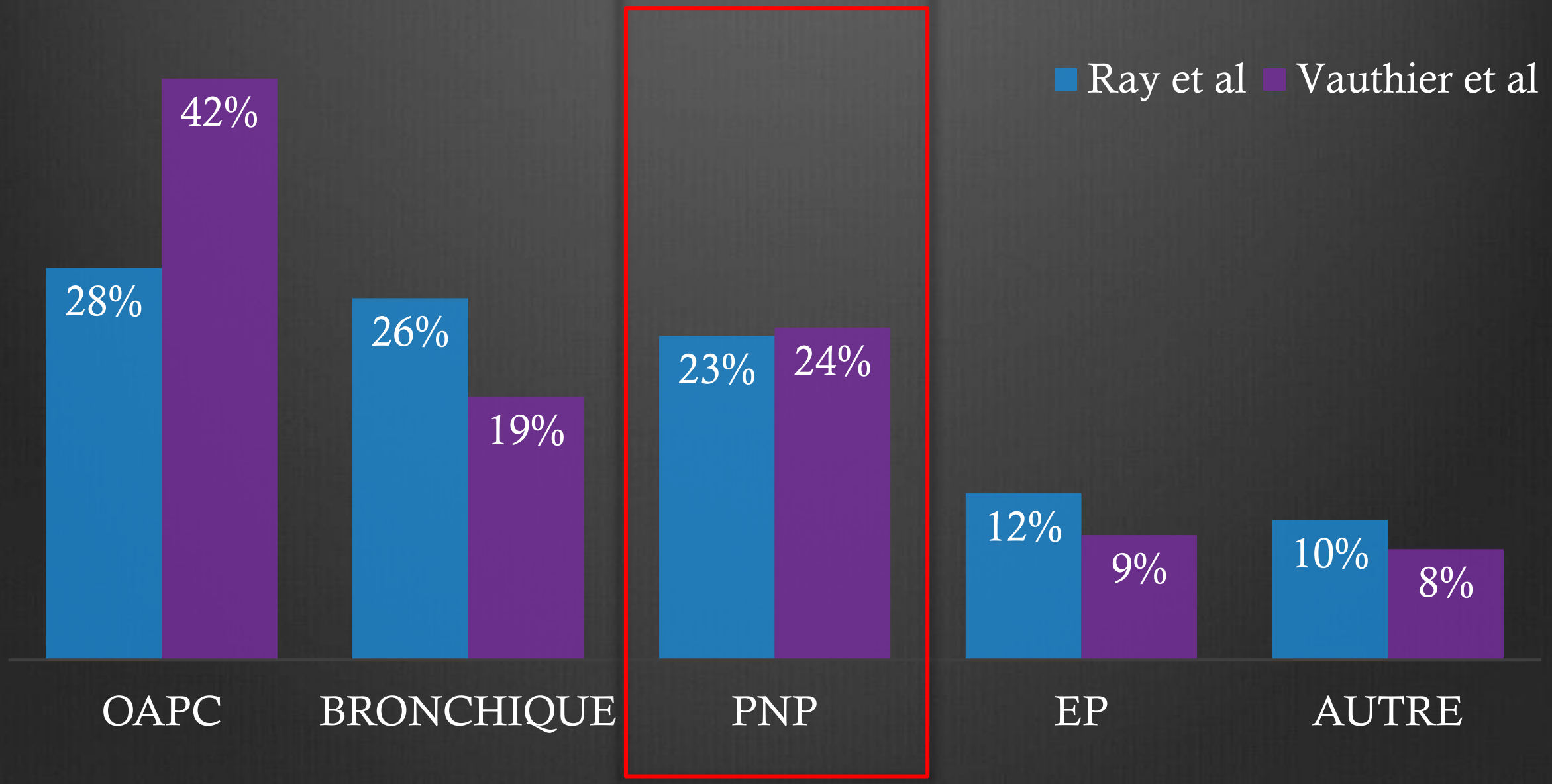
4 études

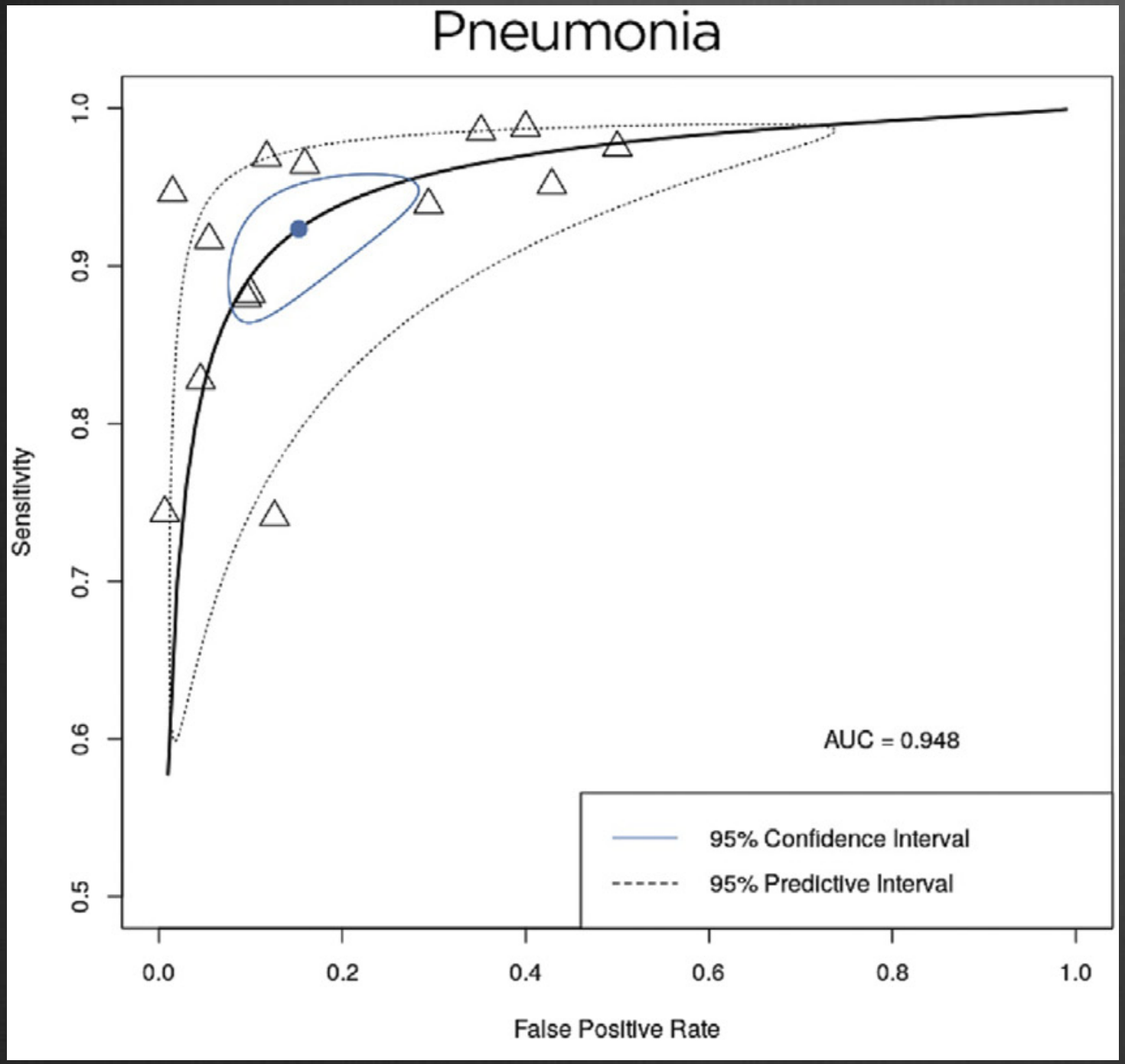
Se 78% [67%; 86%]

Sp 94% [89%; 97%]

Staub et al. J Emerg Med 2018

Cause Dyspnée





14 études

Staub et al. J Emerg Med 2018

Médecine et Maladies Infectieuses Formation 4 (2025) 119–137

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EM|consulte
www.em-consulte.com

RECOMMENDATIONS

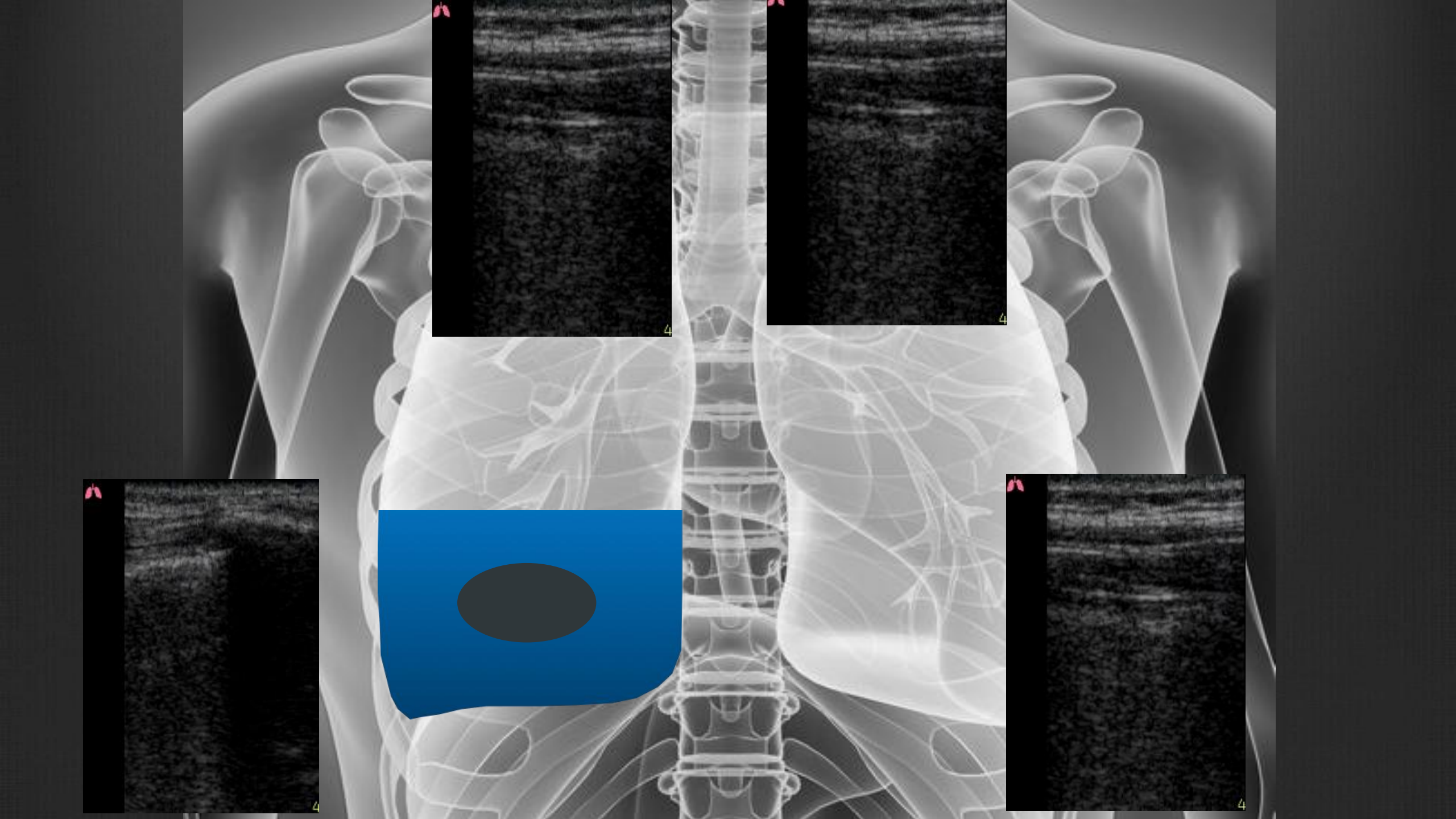
Actualisation des recommandations de prise en charge des pneumonies aiguës communautaires chez l'adulte par la Société de Pathologie Infectieuse de Langue Française (SPILF) et la Société de Pneumologie de Langue Française (SPLF). Avec le soutien de la Société de Réanimation de Langue Française, (SRLF), de la Société Française de Microbiologie (SFM), de la Société Française de Radiologie (SFR) et de la Société Française de Médecine d'Urgence (SFMU)

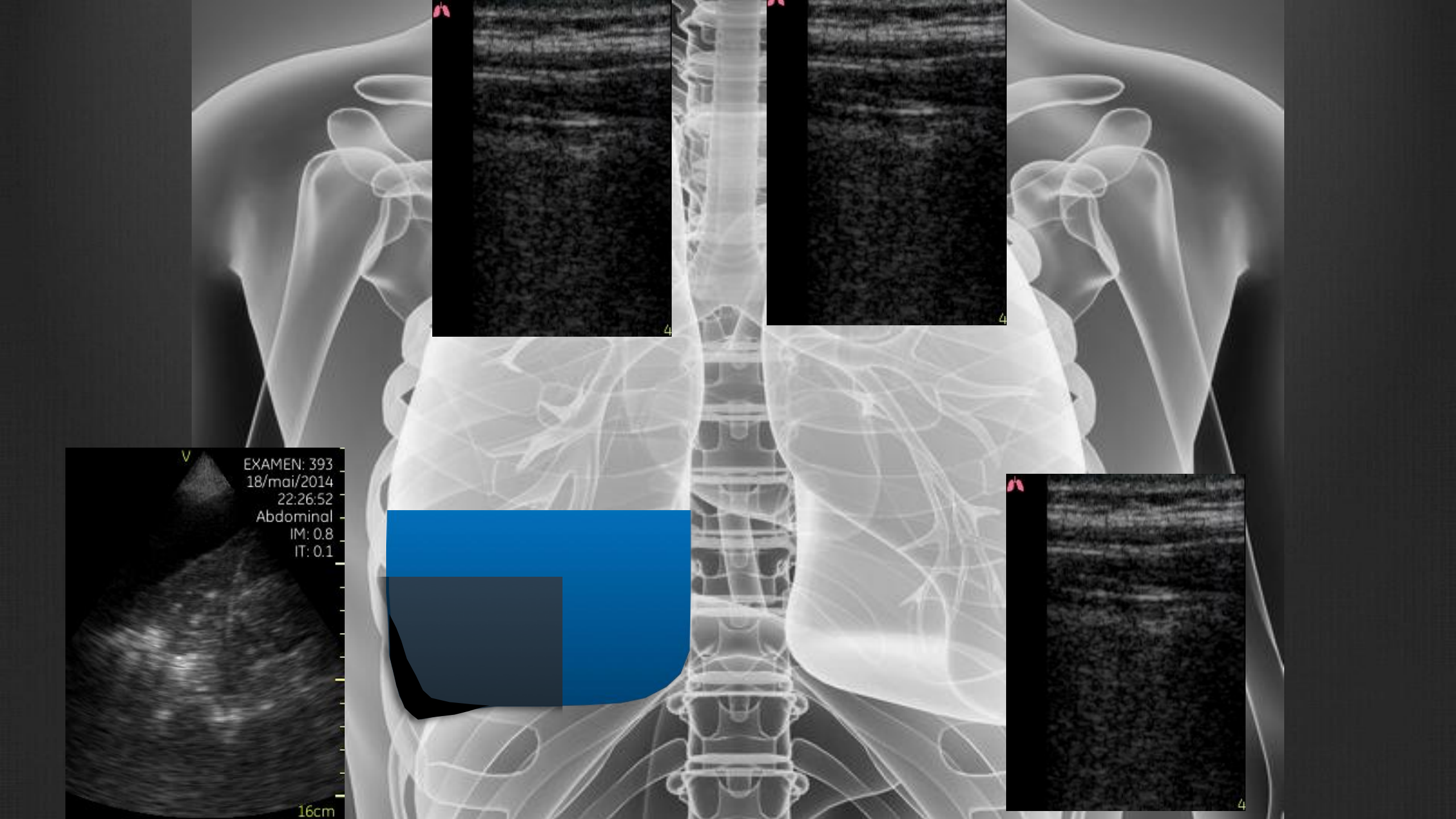
Update of guidelines for management of community acquired pneumonia in adults by French infectious disease society (SPILF) and the French speaking society of respiratory diseases (SPLF). Endorsed by French Intensive care society (SRLF), French microbiology society (SFM), French radiology society (SFR), French emergency society (SFMU)

Aurélien Dinh [a,*], François Barbier [b], Jean-Pierre Bedos [c], Mathieu Blot [d], Vincent Cattoir [e],

Dans les suspicions de PAC ambulatoires et hospitalisées (graves et non graves), l'échographie pleuropulmonaire clinique est un outil fiable du diagnostic de pneumonie et peut être proposée en première intention en alternative à la radiographie thoracique, sous réserve d'une formation préalable validée du praticien.

Elle est particulièrement indiquée chez les patients présentant une insuffisance respiratoire aiguë rendant difficile la réalisation d'une radiographie de thorax de bonne qualité (**Grade B-2**).

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18/mai/2014
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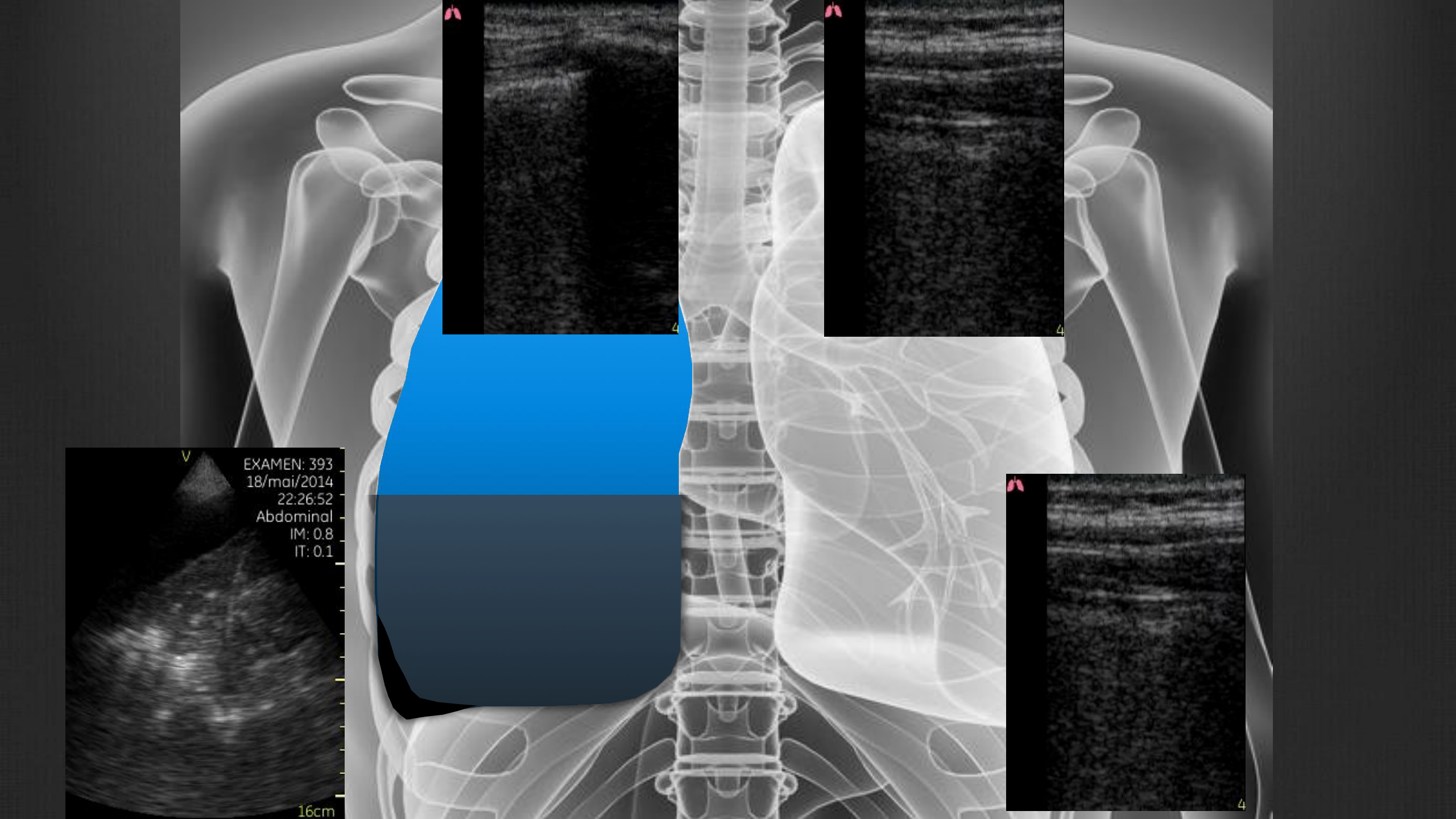
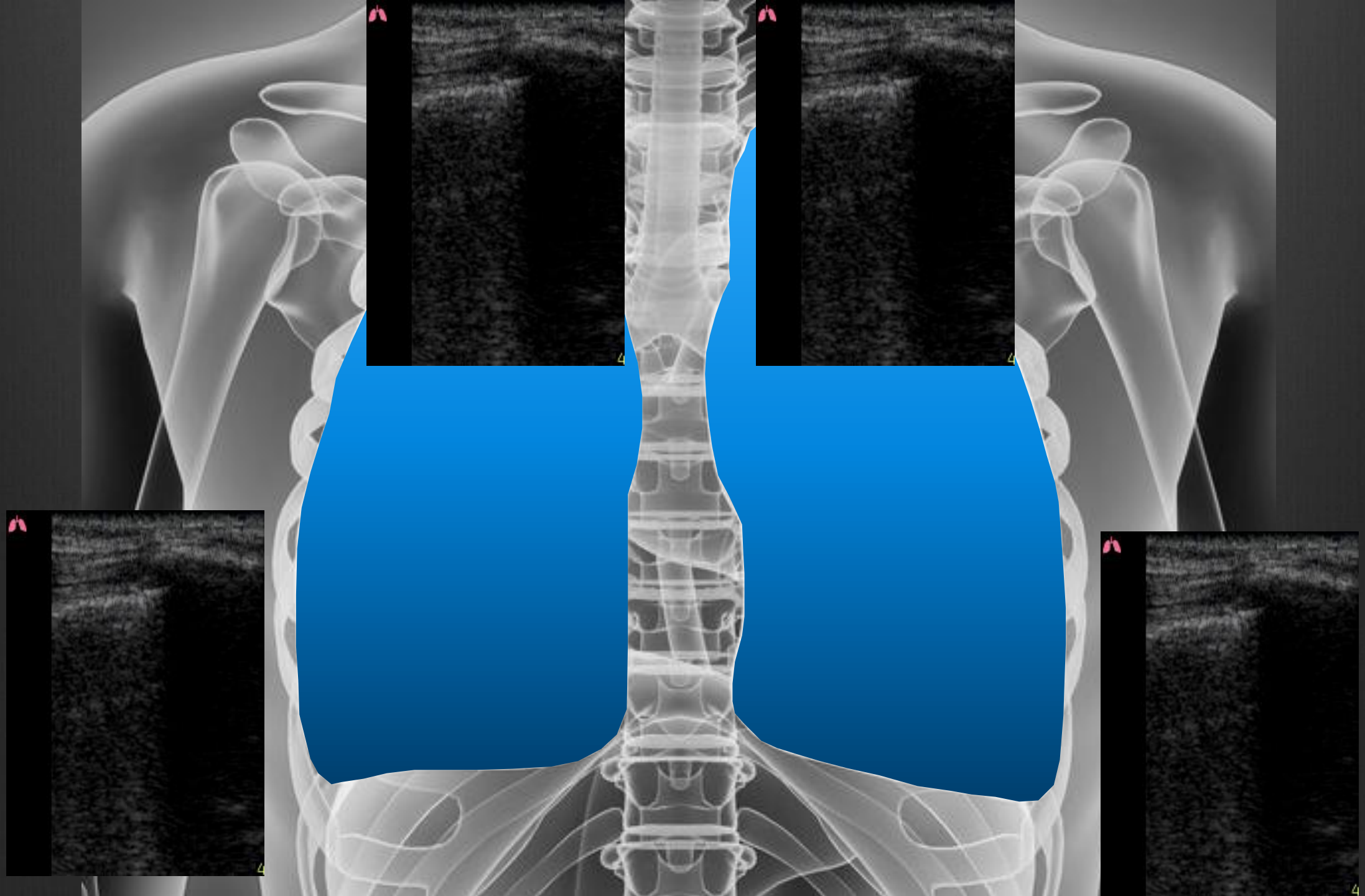
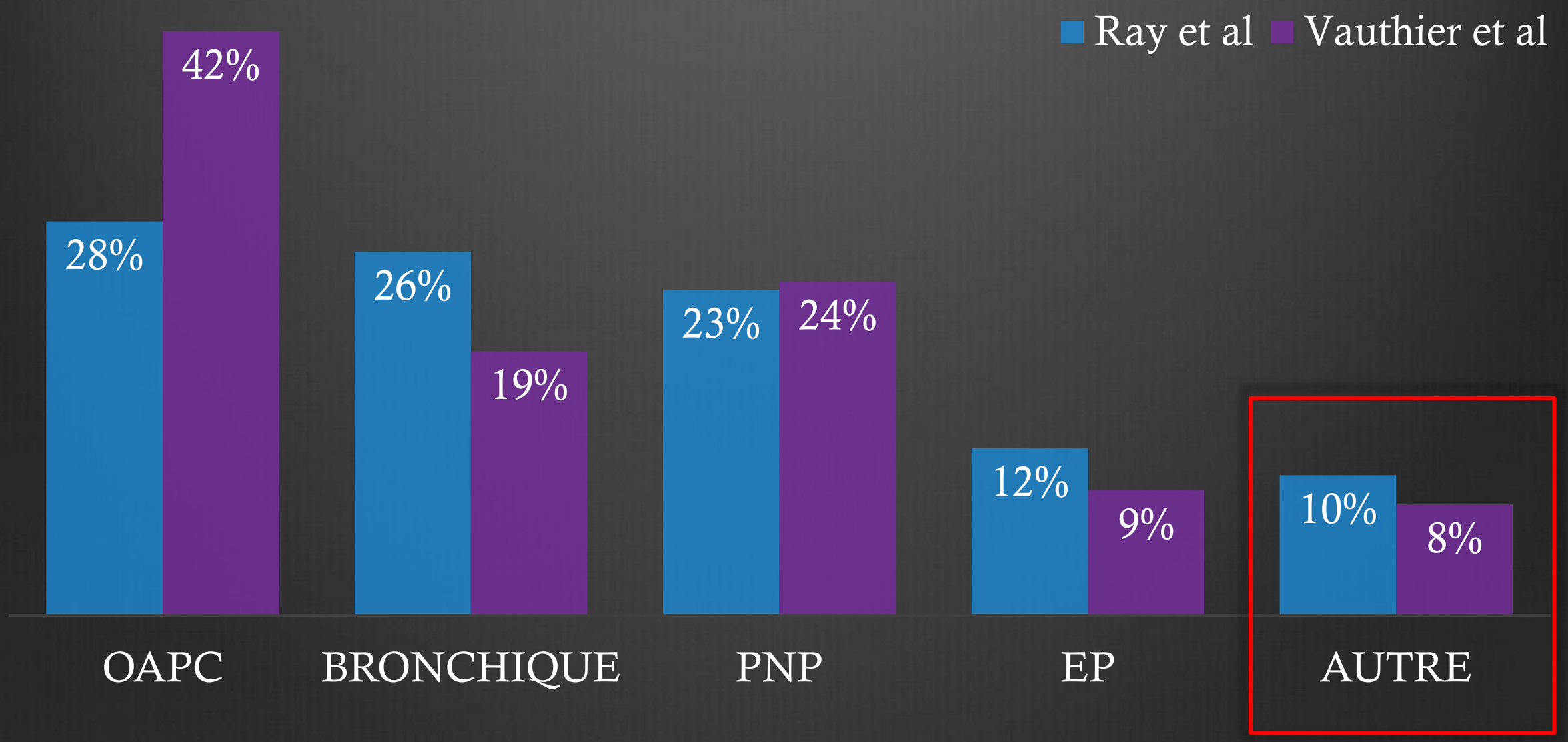
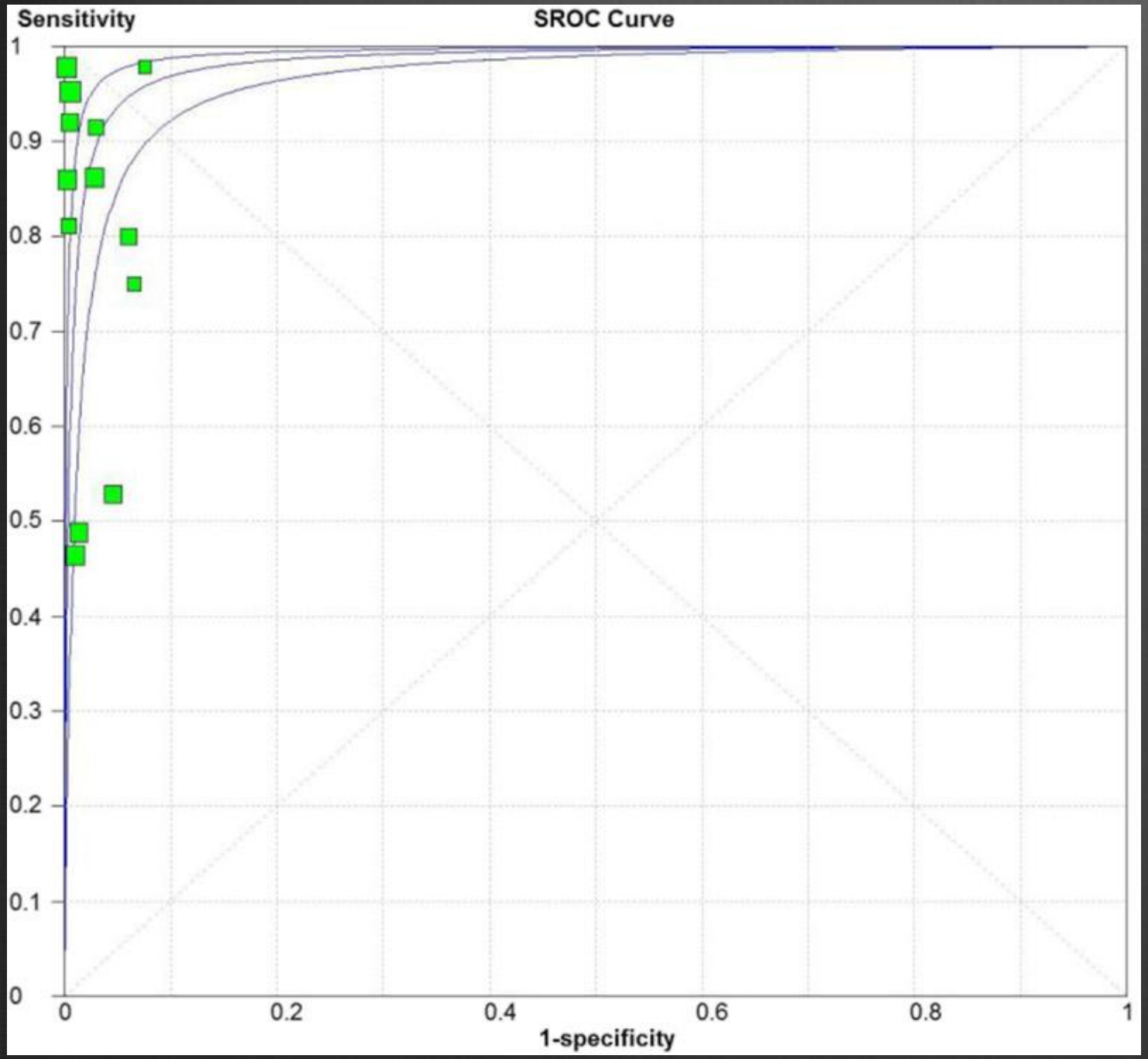
Abdominal
IM: 0.8
IT: 0.1
16cm


EXAMEN: 393
18/mai/2014
22:26:52
Abdominal
IM: 0.8
IT: 0.1
16cm



Cause Dyspnée





13 études

Se 79% [68%; 98%]

Sp 98% [97%; 99%]

Alrajab et al. Crit Care 2013

C1-5

Apex

Droite

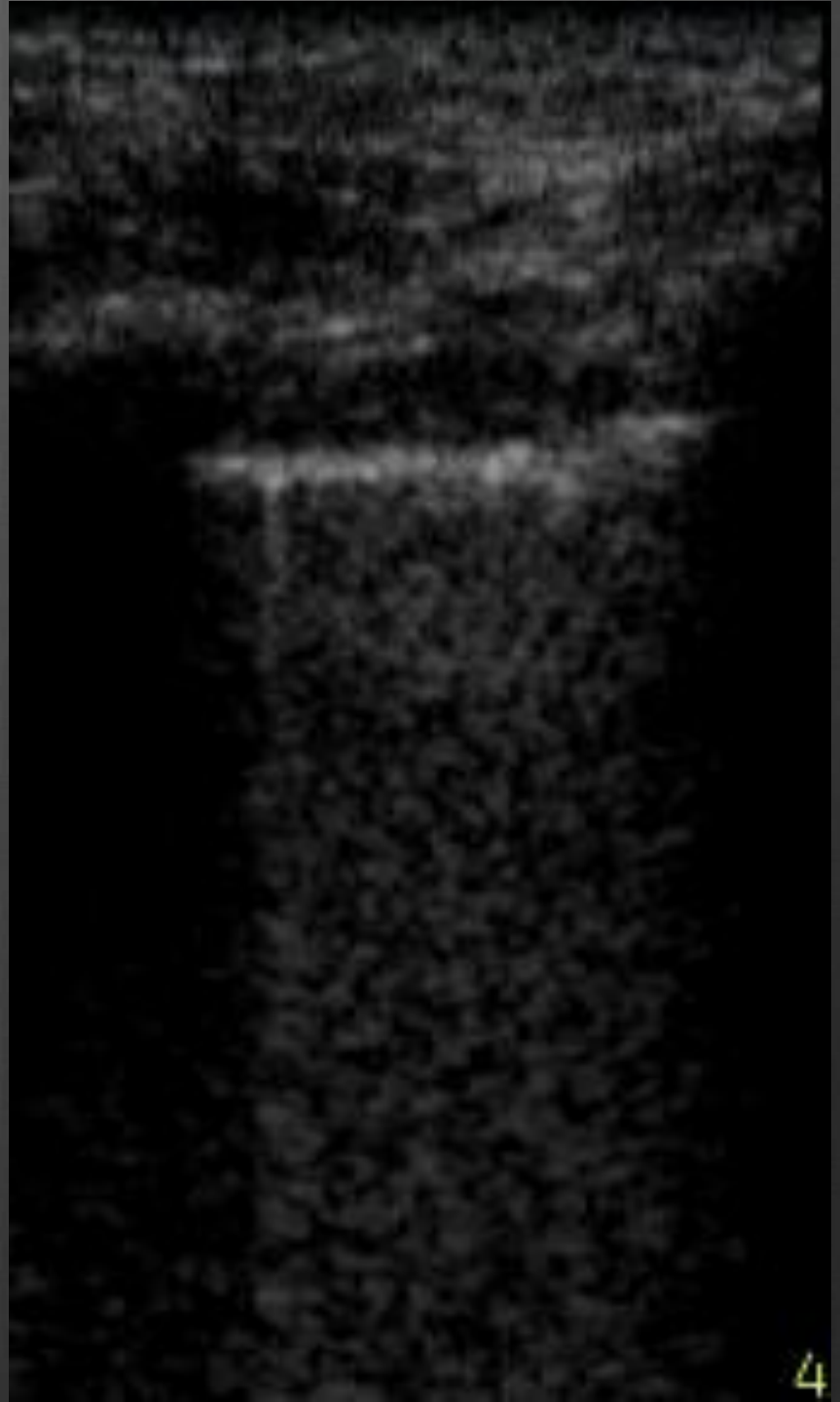
Lignes B

Profil B

Gauche

Lignes B

4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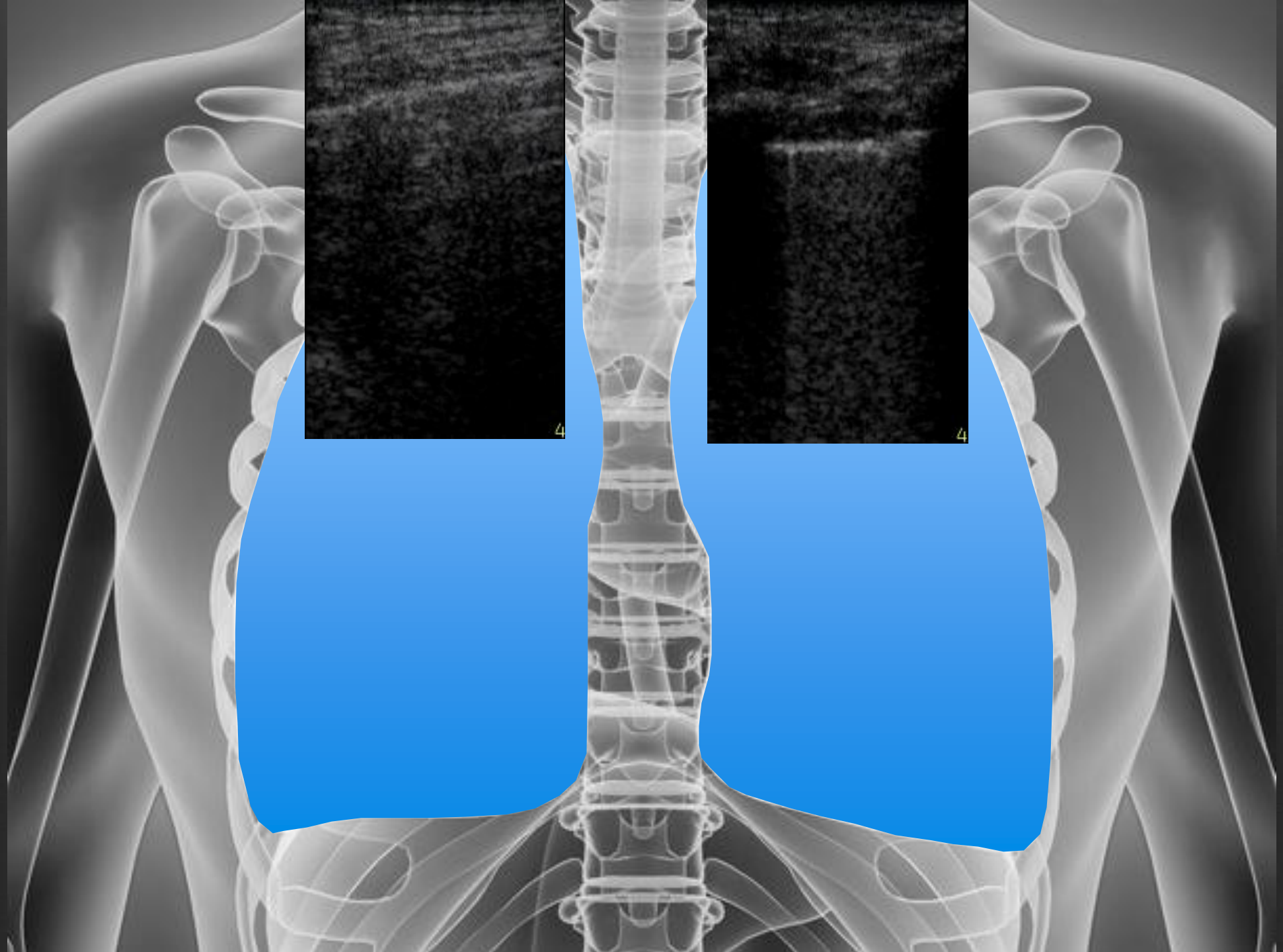
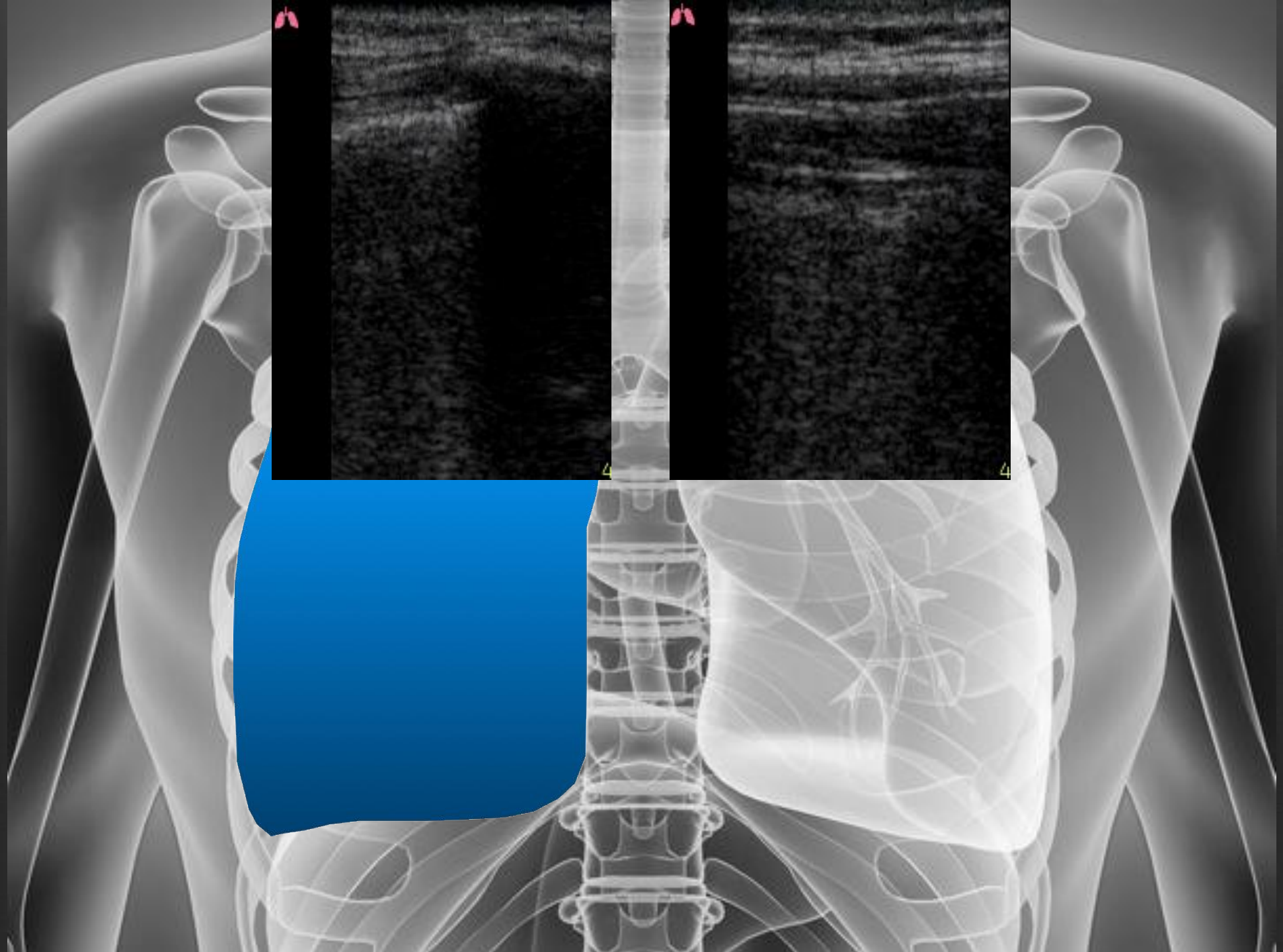
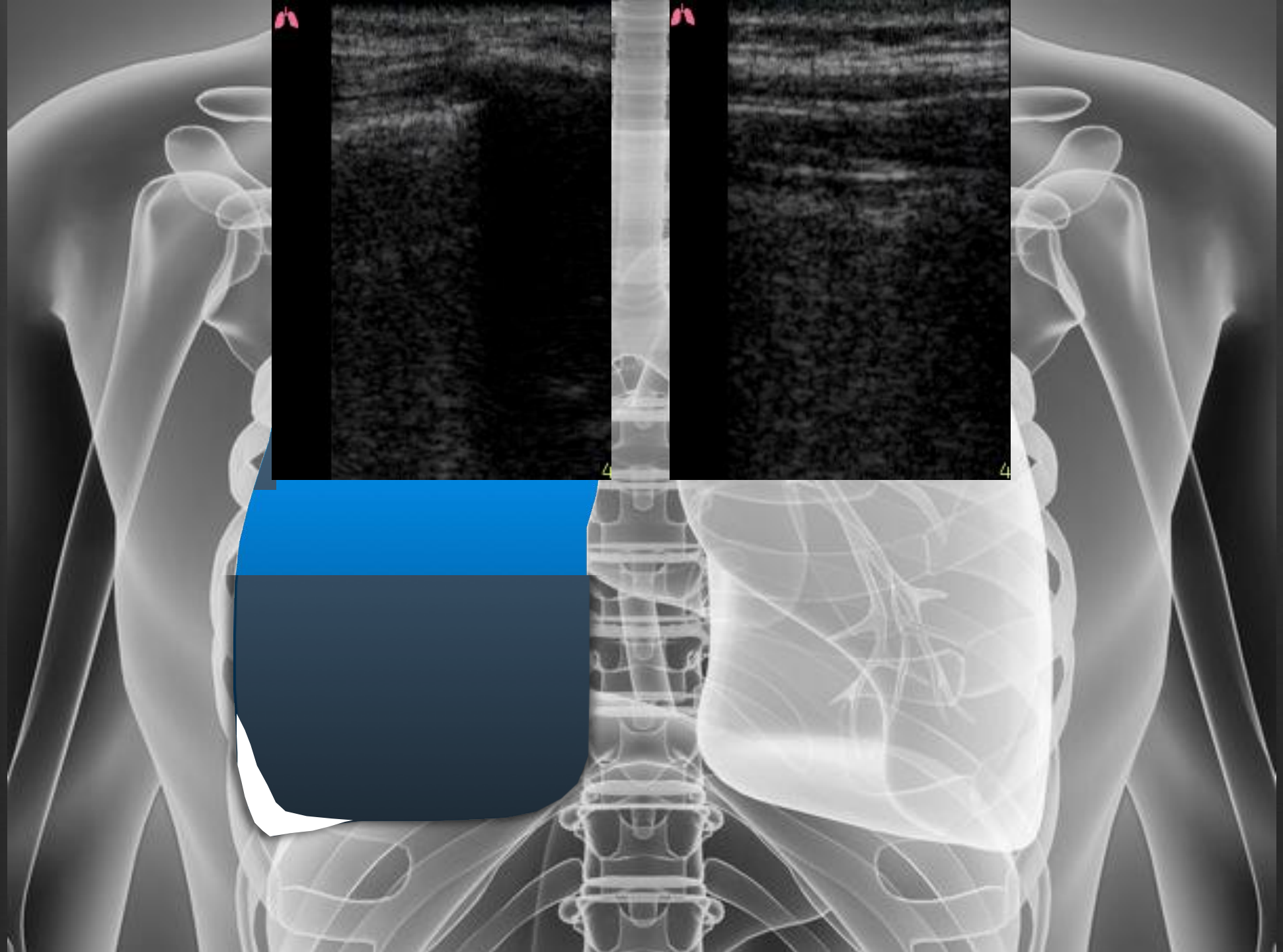

4
4

Apex

Droite		Gauche
Lignes B	Profil B	Lignes B
Lignes B	Profil A/B	Lignes A

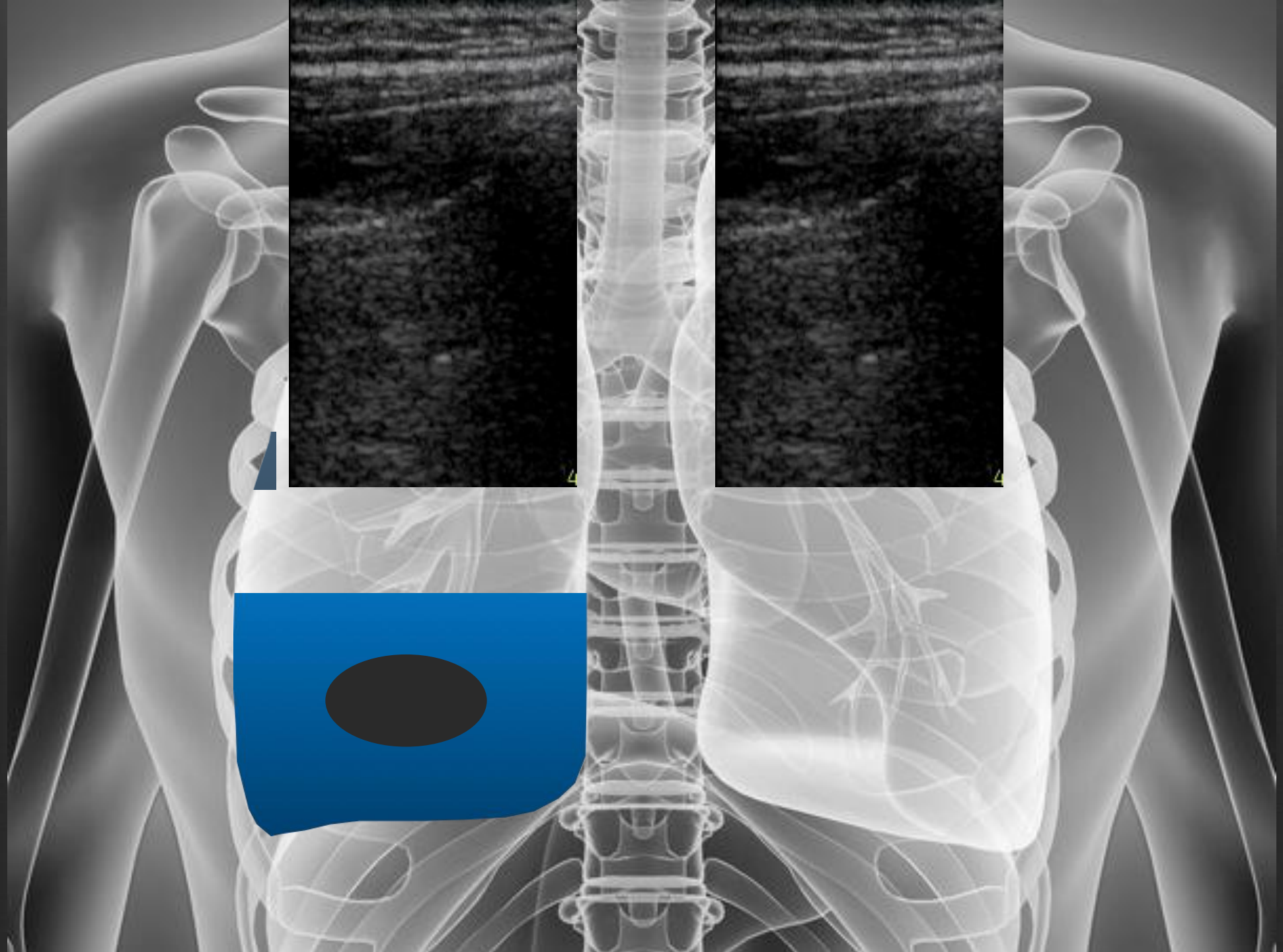
OAPc ?
PNP interstitielle bilatérale ?
SDRA ? – Fibrose ?

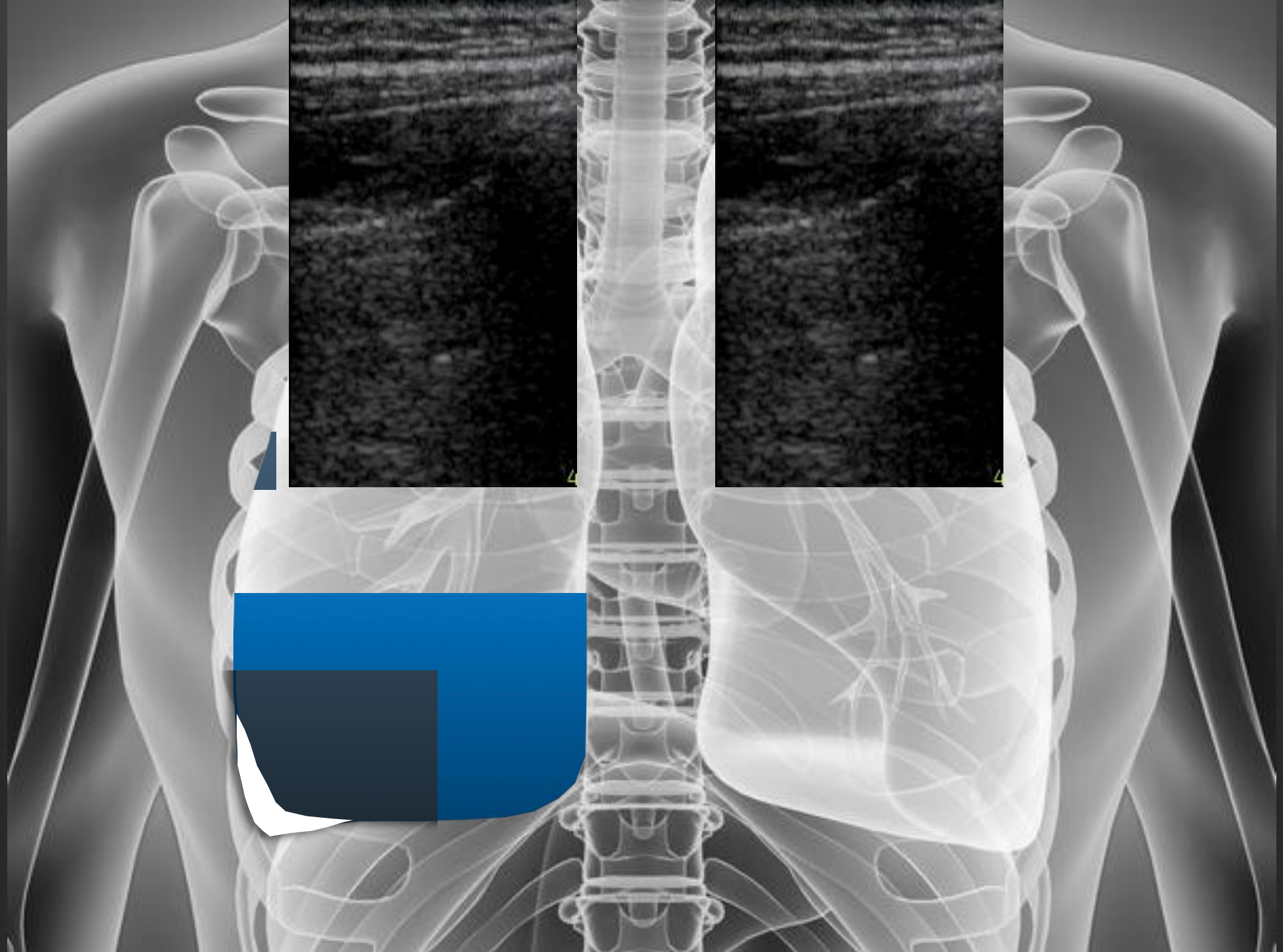




Apex

Droite		Gauche	
Lignes B	Profil B	Lignes B	OAPc ? PNP interstitielle bilatérale ? SDRA ? – Fibrose ?
Lignes B	Profil A/B	Lignes A	PNP
Lignes A	Profil A	Lignes A	





Apex

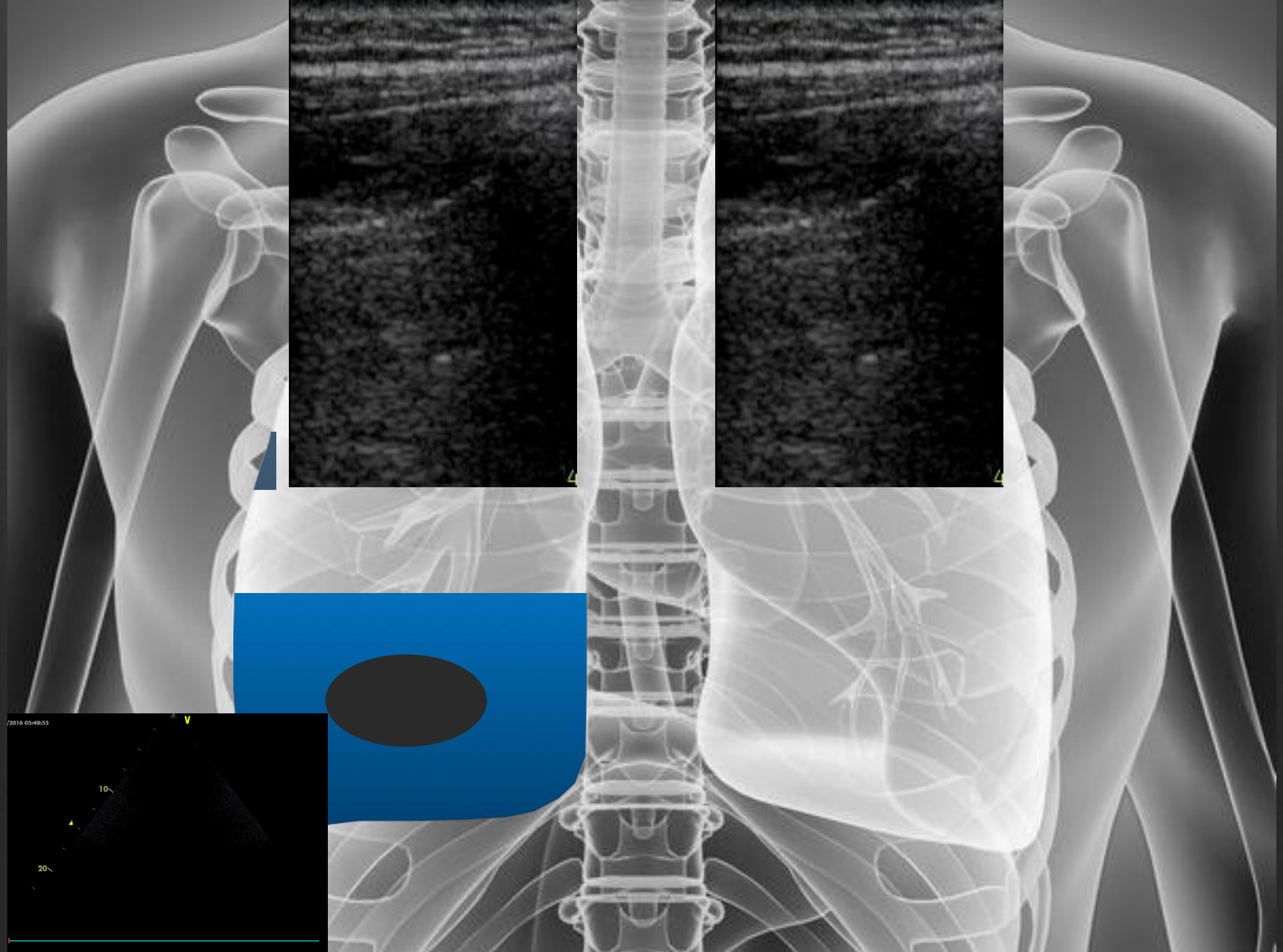
Droite		Gauche
Lignes B	Profil B	Lignes B
Lignes B	Profil A/B	Lignes A
Lignes A	Profil A	Lignes A

OAPc ?
PNP interstitielle bilatérale ?
SDRA ? – Fibrose ?

PNP

Exploration vers les bases

Foyer de lignes B


/2016 05:49:55
10
20

Apex

Droite		Gauche
Lignes B	Profil B	Lignes B
Lignes B	Profil A/B	Lignes A
Lignes A	Profil A	Lignes A

OAPc ?
PNP interstitielle bilatérale ?
SDRA ? – Fibrose ?

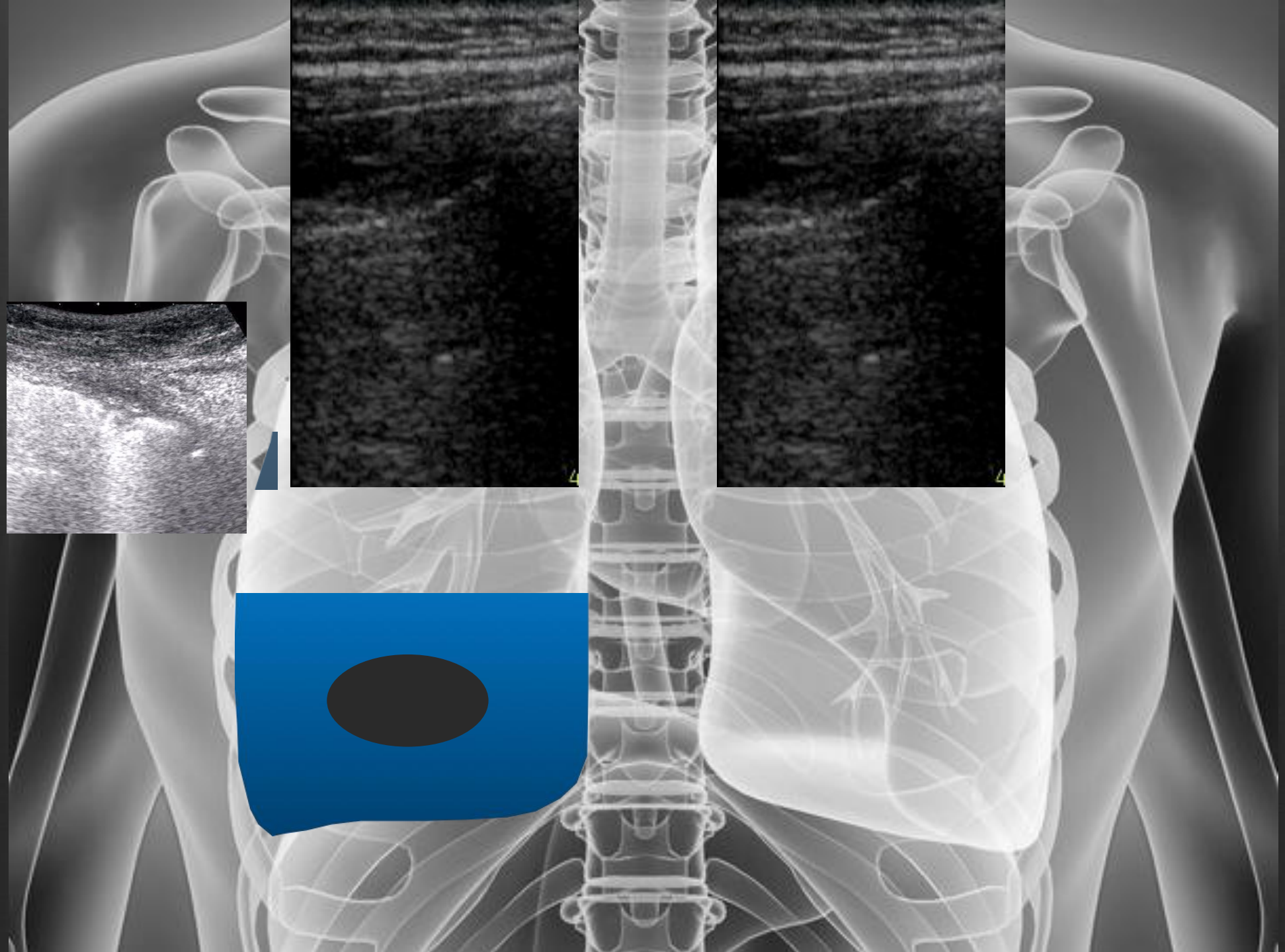
PNP

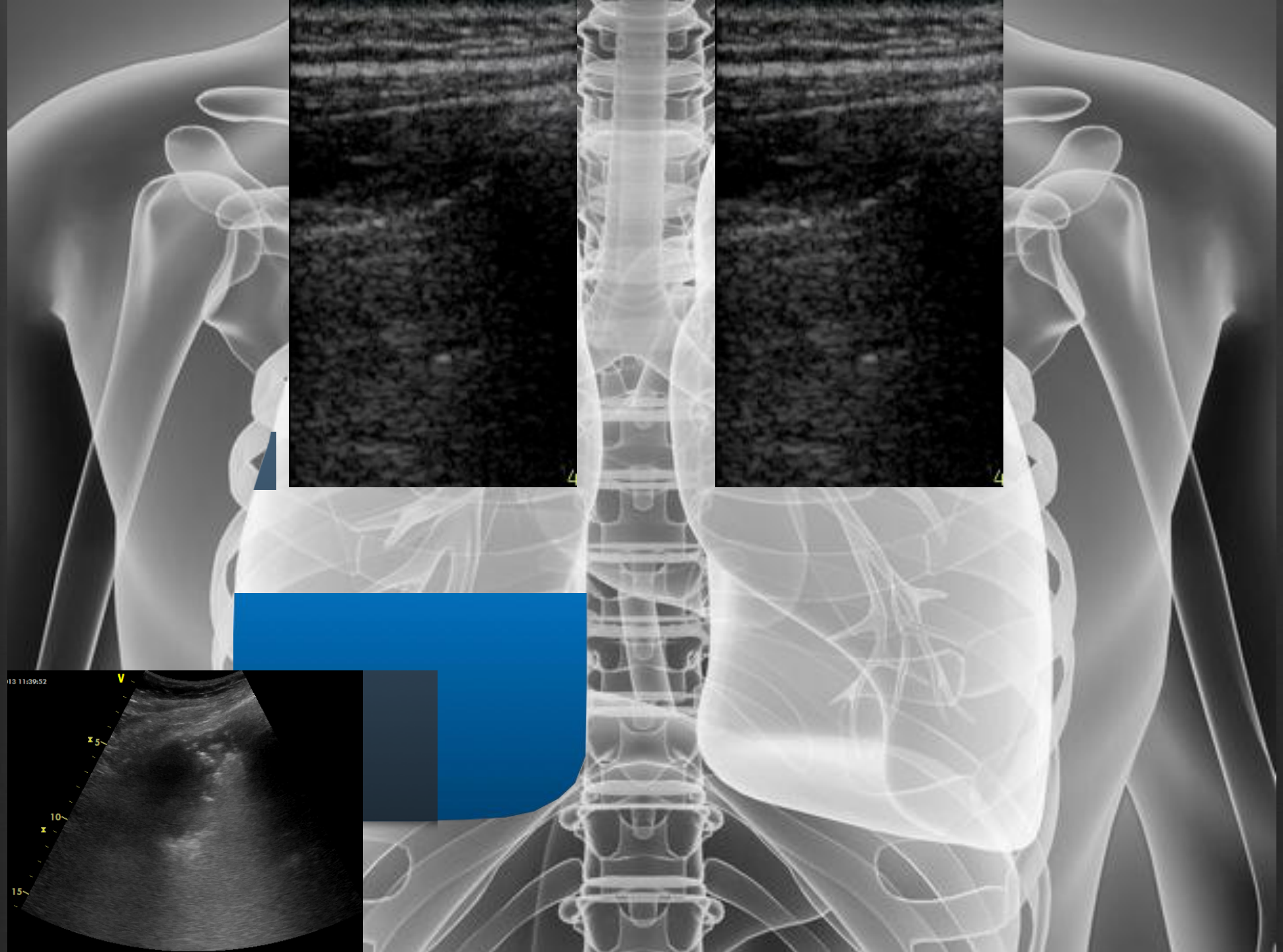
Exploration vers les bases

Foyer de lignes B

Sd de consolidation alvéolaire

PNP




13 11:39:52
V
5
10
15

Apex

Droite		Gauche	
Lignes B	Profil B	Lignes B	OAPc ? PNP interstitielle bilatérale ? SDRA ? – Fibrose ?
Lignes B	Profil A/B	Lignes A	PNP
Lignes A	Profil A	Lignes A	

Exploration vers les bases

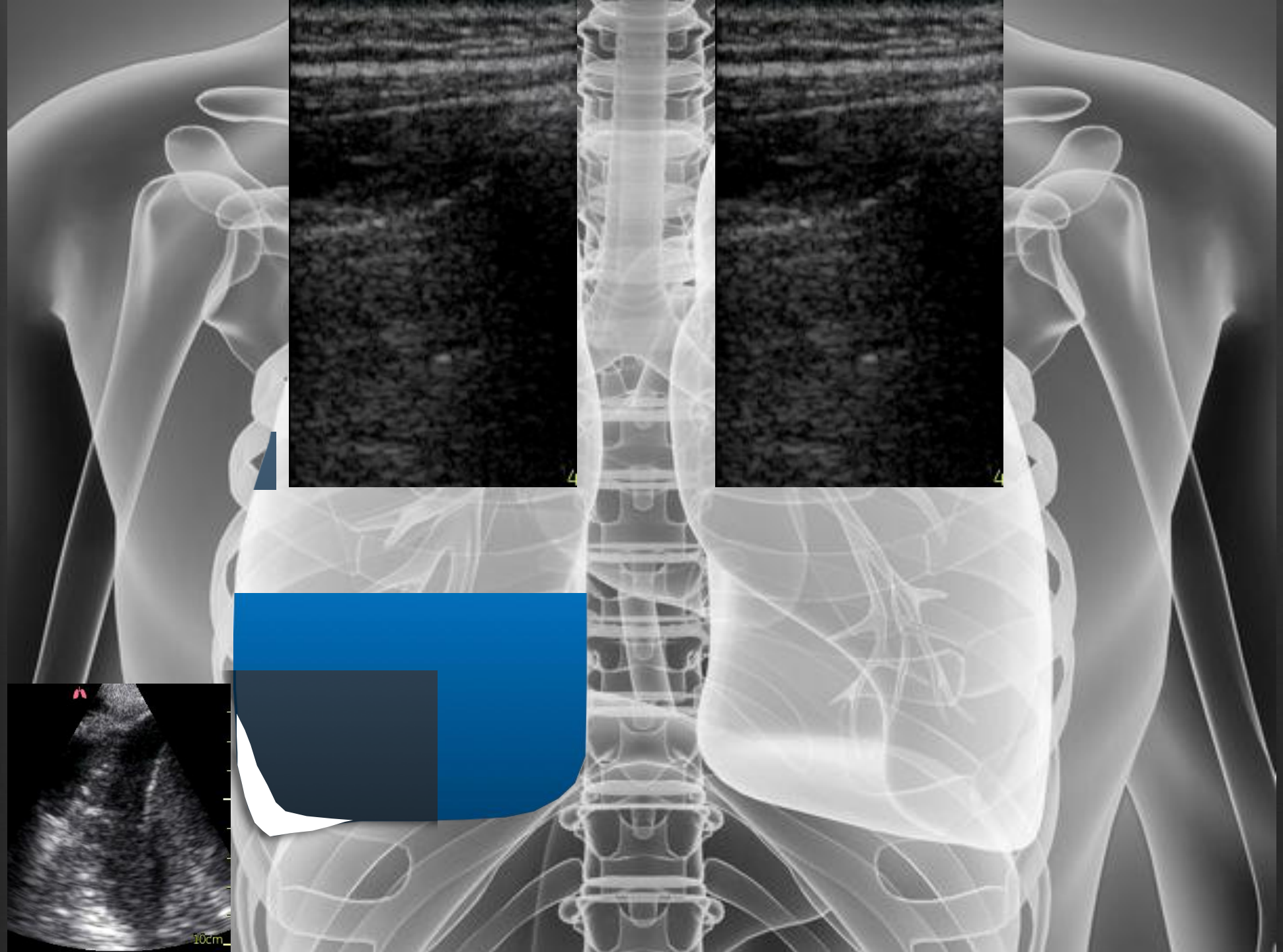
Foyer de lignes B

Sd de consolidation alvéolaire

PLAPS

PNP

Posterolateral alveolar and/or pleural syndrome (PLAPS)


10cm

Apex

Droite		Gauche	
Lignes B	Profil B	Lignes B	OAPc ? PNP interstitielle bilatérale ? SDRA ? – Fibrose ?
Lignes B	Profil A/B	Lignes A	PNP
Lignes A	Profil A	Lignes A	

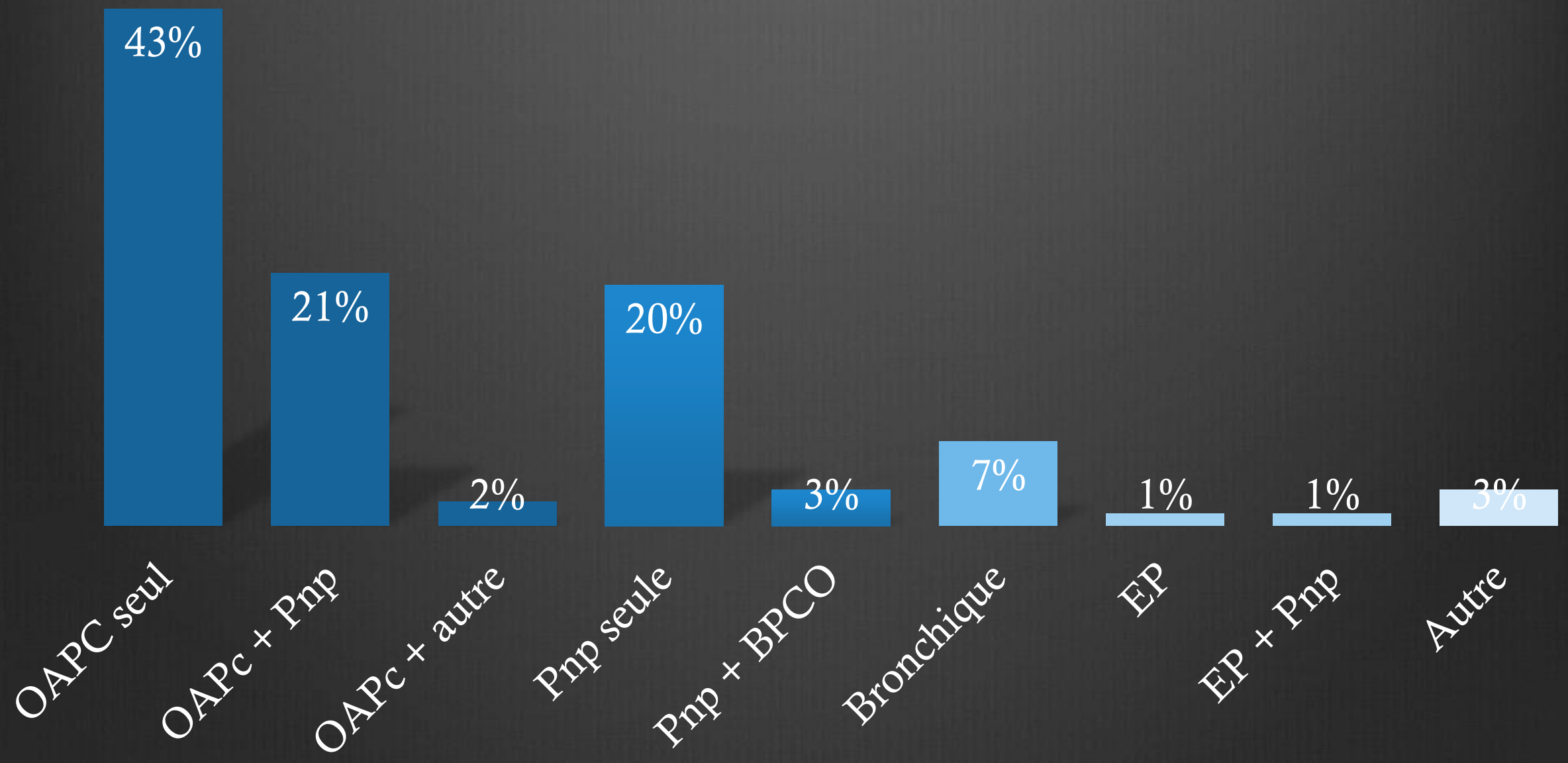
Exploration vers les bases

Foyer de lignes B

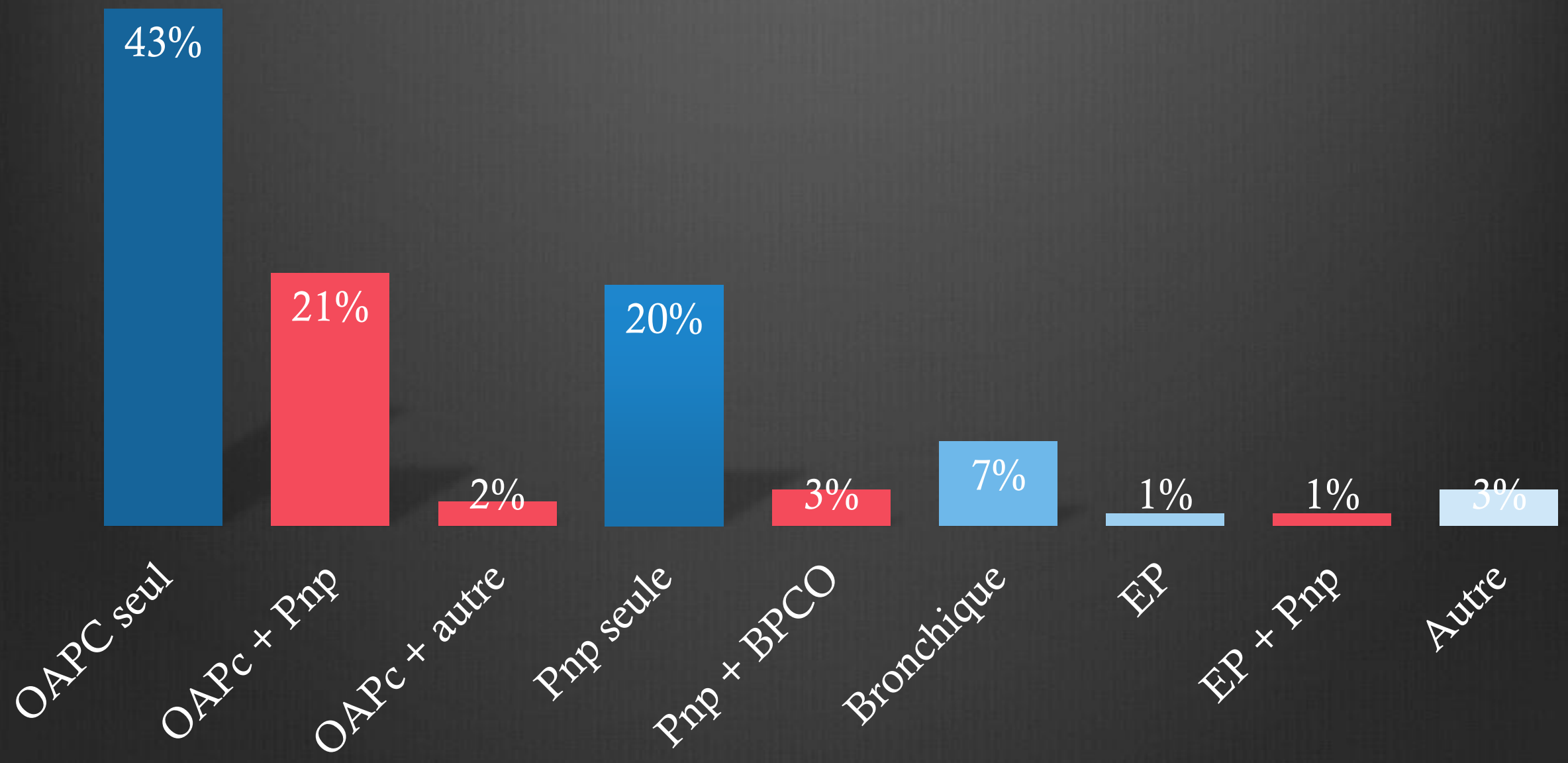
Sd de consolidation alvéolaire

PLAPS

PNP

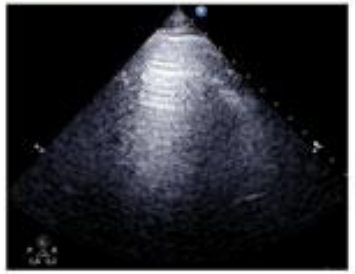
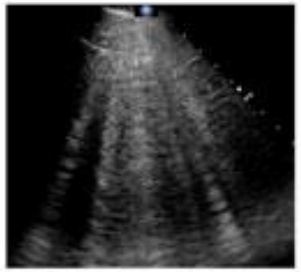


Selon Balen et al. Eur J Emerg Med 2021



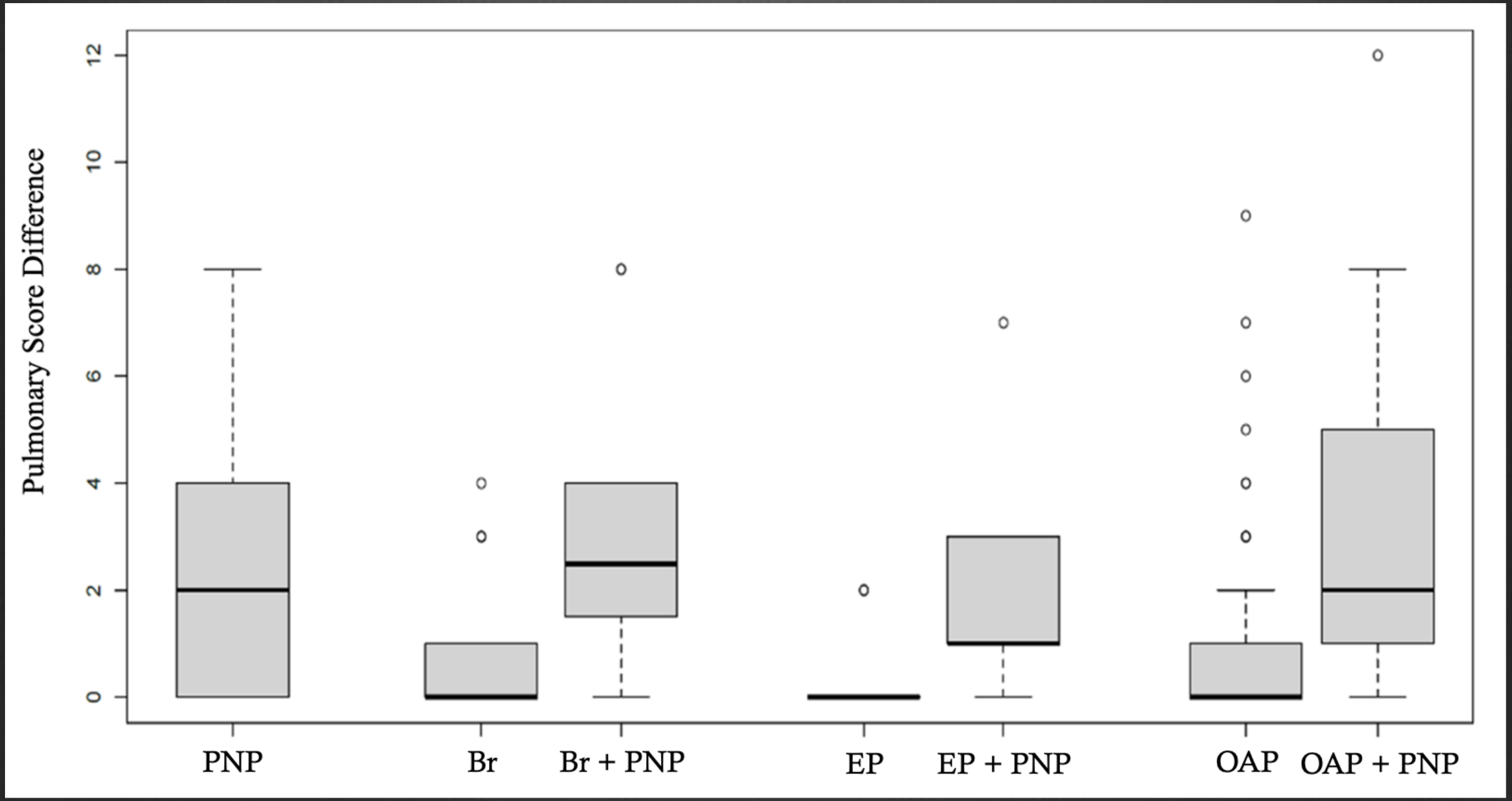
Selon Balen et al. Eur J Emerg Med 2021

		RIGHT Lung	LEFT Lung
Anterior Chest Wall (zone 1)	UPPER		
	LOWER		
Lateral Wall (zone 2)	UPPER		
	LOWER		
Posterolateral Wall (zone 3)	UPPER		
	LOWER		
TOTAL		/ 36	

				
	normal aeration	moderate damage	serious damage	pulmonary consolidation / pleural effusion
Score	0	1	2	3

Markarian et al. CJEM 2019

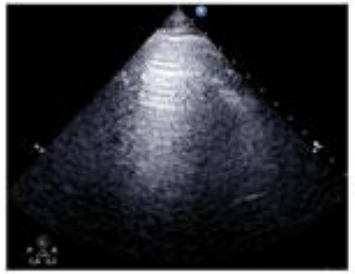
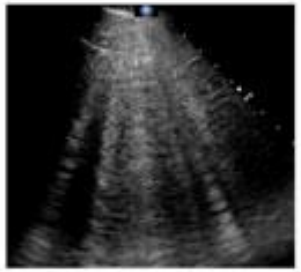
Différence de score pulmonaire



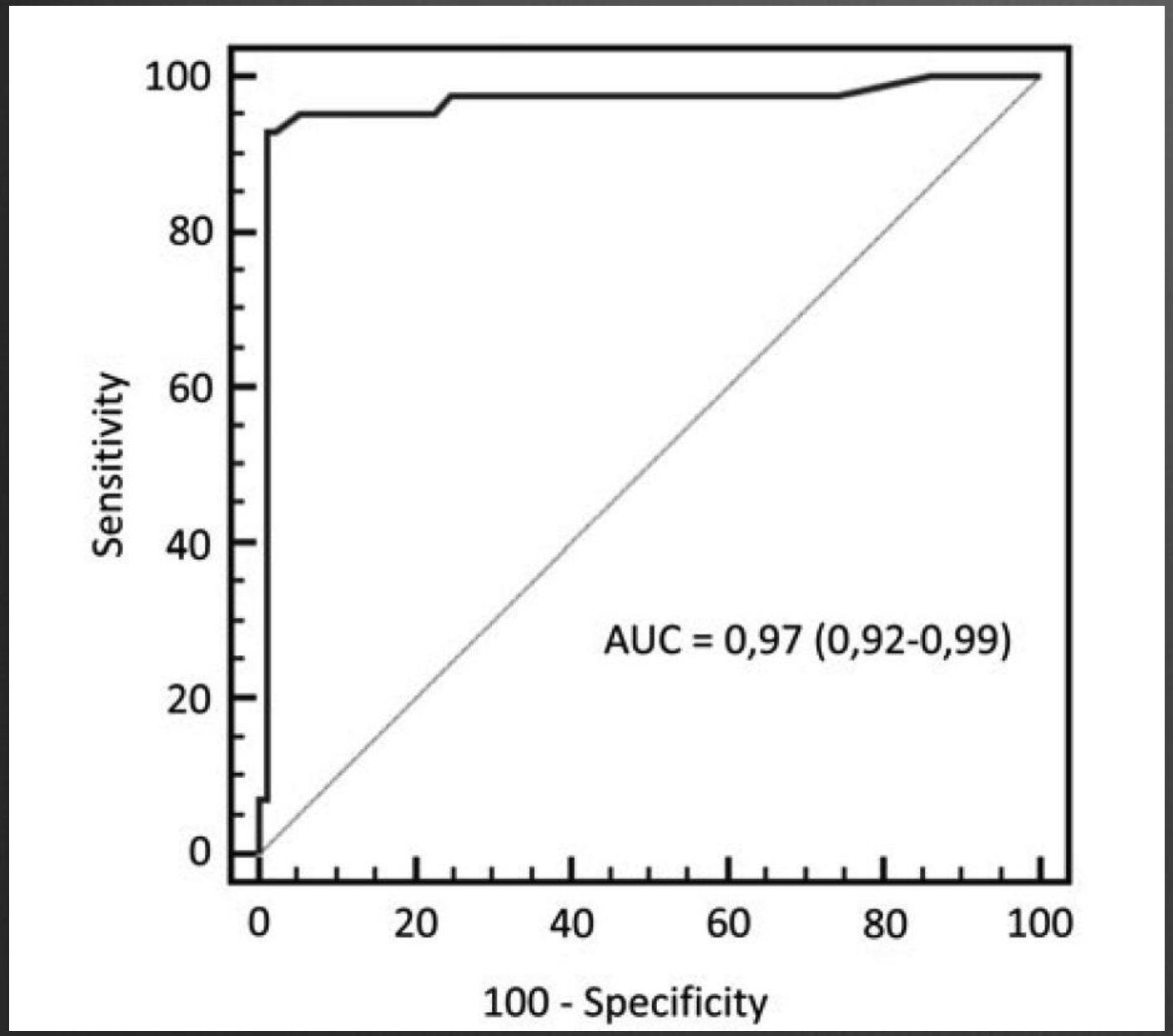
En cours d'écriture

Pronostic

		RIGHT Lung	LEFT Lung
Anterior Chest Wall (zone 1)	UPPER		
	LOWER		
Lateral Wall (zone 2)	UPPER		
	LOWER		
Posterolateral Wall (zone 3)	UPPER		
	LOWER		
TOTAL		/ 36	

				
	normal aeration	moderate damage	serious damage	pulmonary consolidation / pleural effusion
Score	0	1	2	3

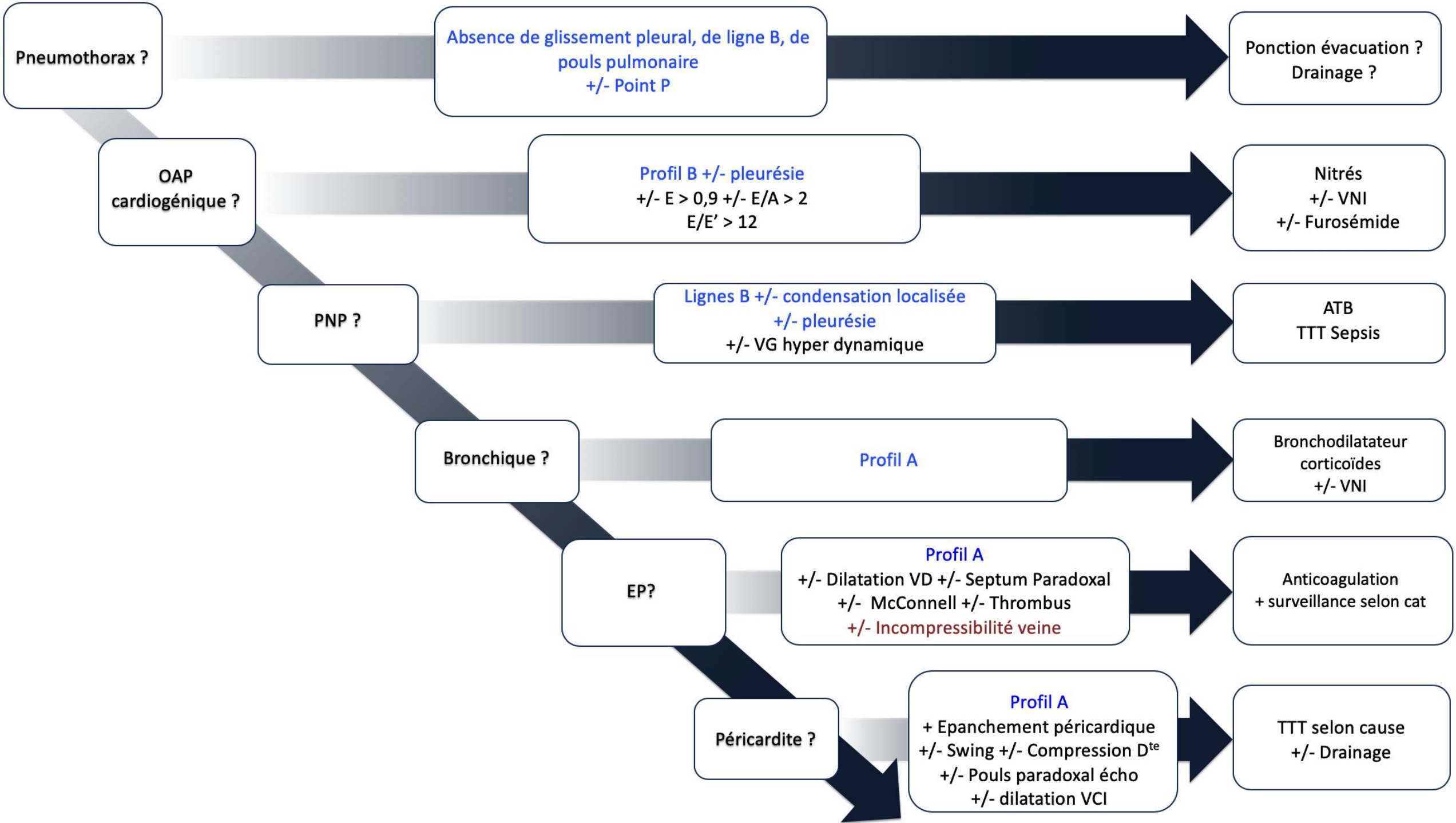
Markarian et al. CJEM 2019



Se 93% [81%; 99%]

Sp 99% [94%; 100%]

Markarian et al. CJEM 2019


Pneumothorax ?
Absence de glissement pleural, de ligne B, de pouls pulmonaire
+/- Point P
Ponction évacuation ?
Drainage ?
OAP cardiogénique ?
Profil B +/- pleurésie
+/- E > 0,9 +/- E/A > 2
E/E' > 12
Nitrés
+/- VNI
+/- Furosémide
PNP ?
Lignes B +/- condensation localisée
+/- pleurésie
+/- VG hyper dynamique
ATB
TTT Sepsis
Bronchique ?
Profil A
Bronchodilatateur
corticoïdes
+/- VNI
EP?
Profil A
+/- Dilatation VD +/- Septum Paradoxal
+/- McConnell +/- Thrombus
+/- Incompressibilité veine
Anticoagulation
+ surveillance selon cat
Péricardite ?
Profil A
+ Epanchement péricardique
+/- Swing +/- Compression Dte
+/- Pouls paradoxal écho
+/- dilatation VCI
TTT selon cause
+/- Drainage