Que retenir de l'Actualité En Réanimation? Echographie

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Liens/conflits d’intérêt

Entreprises	Déclaration	Date	Objet convention / Nature avantage	Montant	Demande de rectification en cours	Détails
SANOFI AVENTIS FRANCE	avantage	13 mars 2014	Autre	15€	Non	Détails
SANOFI AVENTIS FRANCE	avantage	22 juin 2017	Autre	16€	Non	Détails
PFIZER PFE FRANCE	avantage	29 mai 2018	Autre	60€	Non	Détails
VYGON	avantage	11 septembre 2018	Autre	323€	Non	Détails
VYGON	avantage	11 septembre 2018	Autre	157€	Non	Détails
VYGON	avantage	11 septembre 2018	Autre	235€	Non	Détails
VYGON	convention	1 octobre 2018	Hospitalité	Non renseigné	Non	Détails
MSD France	convention	6 février 2019	Hospitalité	Non renseigné	Non	Détails
MSD France	avantage	6 février 2019	Autre	24€	Non	Détails
EUMEDICA s.a.	avantage	18 juin 2019	Autre	99€	Non	Détails

Entreprises	Déclaration	Date	Objet convention / Nature avantage	Montant	Demande de rectification en cours	Détails
FRESENIUS KABI FRANCE	avantage	19 juin 2019	Autre	14€	Non	Détails
FRESENIUS KABI FRANCE	avantage	19 juin 2019	Autre	14€	Non	Détails
GILEAD SCIENCES	avantage	24 octobre 2019	Autre	31€	Non	Détails
GILEAD SCIENCES	avantage	24 octobre 2019	Autre	180€	Non	Détails
SANOFI AVENTIS FRANCE	convention	31 décembre 2019	Contrat d'intervenant à une manifestation	Non renseigné	Non	Détails
WorldOne Research Limited (2)	convention	24 mars 2021	Autre	Non renseigné	Non	Détails
FRESENIUS KABI FRANCE	avantage	9 novembre 2022	Hospitalité - restauration	29€	Non	Détails
AOP ORPHAN PHARMACEUTICALS FRANCE	avantage	29 novembre 2022	Hospitalité - restauration	25€	Non	Détails
AOP ORPHAN PHARMACEUTICALS FRANCE	avantage	12 décembre 2022	Hospitalité - restauration	29€	Non	Détails
Dräger France SAS	convention	28 février 2023	Contrat d'intervenant à une manifestation	50€	Non	Détails

Informations du bénéficiaire

Bénéficiaire (Nom Prénom) : MAURY ERIC

Catégorie : Professionnel de santé

Profession : Médecin

Commune(s) d'exercice :
- PARIS
- PARIS 12E ARRONDISSEMENT

Semestre: Sélectionner un semestre | Type de déclaration: Sélectionner un type de décl... | Commune d'exercice: Sélectionner une commune ... | Entreprise: Sélectionner une entreprise

Entreprises	Déclaration	Date	Objet convention / Nature avantage	Montant	Demande de rectification en cours	Détails
SHIONOGI SAS	avantage	8 mars 2023	Hospitalité - restauration	26€	Non	Détails
Dräger France SAS	avantage	21 mars 2023	Hospitalité - restauration	50€	Non	Détails
SHIONOGI SAS	avantage	24 mai 2023	Hospitalité - restauration	24€	Non	Détails
Axess Research	convention	1 juin 2023	Enquête, étude, étude de marché (hors recherche)	40€	Non	Détails
Axess Research	convention	1 juin 2023	Enquête, étude, étude de marché (hors recherche)	40€	Non	Détails

Liens/conflits d'intérêt

- 1440 €de 2014 à 2023

- Pas d'avantage pendant la présidence de la SRLF

- Support technique *General Electric*

  (mise à disposition d'échographes pour l'organisation d'un DU initiation à l'échographie)

RECENT ADVANCES IN ICU

Using ultrasound in ICU

Adrian Wong[1*], Michelle Chew[2,3] and Glenn Hernandez[4]

Des progrès technologiques…

- Speckle tracking
- Strain imaging
- Echographie de contraste
- Echographie 3D
- Peu d'applications en soins critiques

Whilst generally accepted as a more sensitive and objective marker of cardiac contractility, the clinical applications of strain analysis within critical care is still in its infancy. Certainly, early studies suggest abnormal left ventricular strain may be associated with poorer

Intensive Care Med
https://doi.org/10.1007/s00134-023-07023-w

A New Global Definition of Acute Respiratory Distress Syndrome

Michael A. Matthay[1,2,3], Yaseen Arabi[5], Alejandro C. Arroliga[6], Gordon Bernard[7], Andrew D. Bersten[9], Laurent J. Brochard[10], Carolyn S. Calfee[1,2,3], Alain Combes[11], Brian M. Daniel[4], Niall D. Ferguson[12,13], Michelle N. Gong[14], Jeffrey E. Gotts[15], Margaret S. Herridge[16], John G. Laffey[17], Kathleen D. Liu[1,2], Flavia R. Machado[18], Thomas R. Martin[19], Danny F. McAuley[20], Alain Mercat[21], Marc Moss[22], Richard A. Mularski[23], Antonio Pesenti[24,25], Haibo Qiu[26], Nagarajan Ramakrishnan[27], V. Marco Ranieri[28], Elisabeth D. Riviello[29], Eileen Rubin[30], Arthur S. Slutsky[10], B. Taylor Thompson[31], Theogene Twagirumugabe[32], Lorraine B. Ware[8], and Katherine D. Wick[33]

Conceptual model: ARDS is an acute, diffuse, inflammatory lung injury precipitated by a predisposing risk factor, such as pneumonia, nonpulmonary infection, trauma, transfusion, burn, aspiration, or shock. The resulting injury leads to increased pulmonary vascular and epithelial permeability, lung edema, and gravity-dependent atelectasis, all of which contribute to loss of aerated lung tissue. The clinical hallmarks are arterial hypoxemia and diffuse radiographic opacities associated with increased shunting, increased alveolar dead space, and decreased lung compliance. The clinical presentation is influenced by medical management (position, sedation, paralysis, positive end-expiratory airway pressure, and fluid balance). Histological findings vary and may include intraalveolar edema, inflammation, hyaline membrane formation, and alveolar hemorrhage.

Criteria That Apply to All ARDS Categories	
Risk factors and origin of edema	Precipitated by an acute predisposing risk factor, such as pneumonia, nonpulmonary infection, trauma, transfusion, aspiration, or shock. Pulmonary edema is not *exclusively or primarily* attributable to cardiogenic pulmonary edema/fluid overload, and hypoxemia/gas exchange abnormalities are not primarily attributable to atelectasis. However, ARDS can be diagnosed in the presence of these conditions if a predisposing risk factor for ARDS is also present.
Timing	Acute onset or worsening of hypoxemic respiratory failure within 1 week of the estimated onset of the predisposing risk factor or new or worsening respiratory symptoms.
Chest imaging	Bilateral opacities on chest radiography and computed tomography or bilateral B lines and/or consolidations on ultrasound* not fully explained by effusions, atelectasis, or nodules/masses.

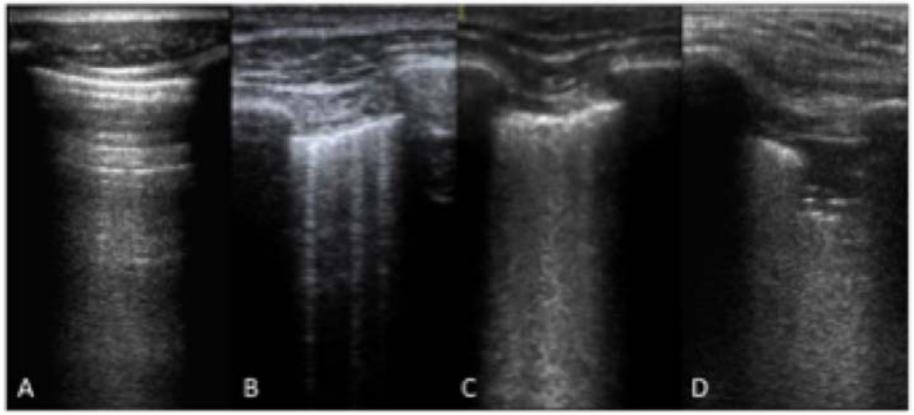
Criteria That Apply to Specific ARDS Categories			
	Nonintubated ARDS†	**Intubated ARDS**	**Modified Definition for Resource-Limited Settings‡**
Oxygenation§‖	$Pa_{O_2}:FI_{O_2} \leq 300$ mm Hg or $Sp_{O_2}:FI_{O_2} \leq 315$ (if $Sp_{O_2} \leq 97\%$) on HFNO with flow of ⩾30 L/min or NIV/CPAP with at least 5 cm H_2O end-expiratory pressure	Mild¶: $200 < Pa_{O_2}:FI_{O_2} \leq 300$ mm Hg or $235 < Sp_{O_2}:FI_{O_2} \leq 315$ (if $Sp_{O_2} \leq 97\%$) Moderate: $100 < Pa_{O_2}:FI_{O_2} \leq 200$ mm Hg or $148 < Sp_{O_2}:FI_{O_2} \leq 235$ (if $Sp_{O_2} \leq 97\%$) Severe: $Pa_{O_2}:FI_{O_2} \leq 100$ mm Hg or $Sp_{O_2}:FI_{O_2} \leq 148$ (if $Sp_{O_2} \leq 97\%$)	$Sp_{O_2}:FI_{O_2} \leq 315$ (if $Sp_{O_2} \leq 97\%$)†. Neither positive end-expiratory pressure nor a minimum flow rate of oxygen is required for diagnosis in resource-limited settings.

Am J Respir Crit Care Med 2023 Jul 24. DOI: 10.1164/rccm.202303-0558WS.

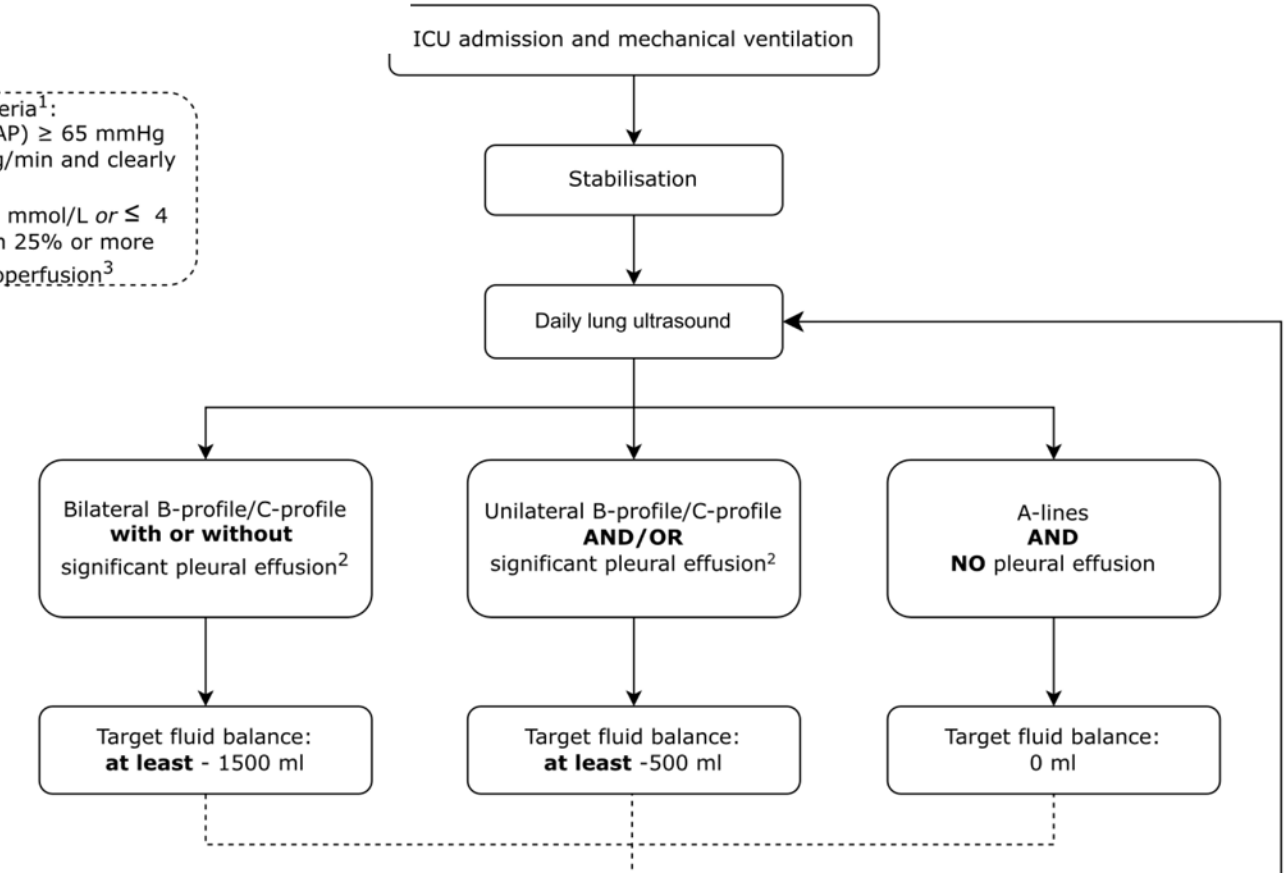
Trials

STUDY PROTOCOL Open Access

Effect of lung ultrasound-guided fluid deresuscitation on duration of ventilation in intensive care unit patients (CONFIDENCE): protocol for a multicentre randomised controlled trial



Fluid balance recommendations



Stabilisation criteria[1]:
- Mean Arterial Pressure (MAP) ≥ 65 mmHg
- Norepinephrine ≤ 0.2 ug/kg/min and clearly decreasing
- Arterial lactate level ≤ 2.5 mmol/L *or* ≤ 4 mmol/L and decreased with 25% or more
- No clear signs of hypoperfusion[3]

Varón-Vega et al. Critical Care (2023) 27:414
https://doi.org/10.1186/s13054-023-04708-y

Critical Care

RESEARCH Open Access

Utilization of spontaneous breathing trial, objective cough test, and diaphragmatic ultrasound results to predict extubation success: COBRE-US trial

- 367 patients
- SBT
- Succès Extubation

Successful spontaneous breathing trial, *n* (%)	349/456 (76.5)
Objective measurement of cough, *n* (%)	
0	6/451 (1.3)
1	34/451 (7.6)
2	151/451 (33.5)
3	260/451 (57.6)
Cuff leak test, ml, median (IQR)	238 (193–327)
RSBI, median (IQR)	56 (43–75)
Displacement diaphragmatic excursion cm, median (IQR)	1.9 (1.4–2.5)
Diaphragmatic inspiratory time s, median (IQR)	0.8 (0.62–1.01)
Duration of the diaphragmatic cycle s, median (IQR)	2.3 (1.8–2.9)
Diaphragmatic thickening fraction %, Median (IQR)	37 (20–52)
Velocity of diaphragmatic contraction cm/s, median (IQR)	2.3 (1.6–3.8)

SBT :(0.56 × cough) − (0.13 × DCV) + 0.25. > 1.03

Extubation: (5,7x SBT)+ (0,75x cough) –(0,25xDCV) > 1,25

REVIEW Open Access

Expert consensus-based clinical practice guidelines management of intravascular catheters in the intensive care unit

Jean-François Timsit[1,2], Julien Baleine[3], Louis Bernard[4], Silvia Calvino-Gunther[5], Michael Darmon[6], Jean Dellamonica[7], Eric Desruennes[8,9], Marc Leone[10], Alain Lepape[11,12], Olivier Leroy[13,14], Jean-Christophe Lucet[15,16], Zied Merchaoui[17], Olivier Mimoz[18,19,20], Benoit Misset[21], Jean-Jacques Parienti[22,23], Jean-Pierre Quenot[24,25,26], Antoine Roch[27,28], Matthieu Schmidt[29,30], Michel Slama[31], Bertrand Souweine[32], Jean-Ralph Zahar[33,34], Walter Zingg[35], Laetitia Bodet-Contentin[36] and Virginie Maxime[37*]

Recommandations Formalisées d'Experts

Gestion des abords vasculaires en réanimation

RFE sous l'égide de la SRLF

Société de Réanimation de Langue Française

R1.9 - Il faut insérer les cathéters veineux jugulaires internes sous contrôle échographique pour réduire le nombre de complications mécaniques.
GRADE 1+ ACCORD FORT

R1.10 - Il faut probablement insérer les cathéters veineux sous-claviers sous contrôle échographique pour diminuer le nombre de complications mécaniques.
GRADE 2+ ACCORD FORT

R1.11 - Les experts suggèrent d'insérer les cathéters veineux fémoraux sous contrôle échographique pour diminuer le nombre de complications mécaniques.
AVIS D'EXPERTS

Timsit *et al. Ann. Intensive Care* (2020) 10:118
https://doi.org/10.1186/s13613-020-00713-4

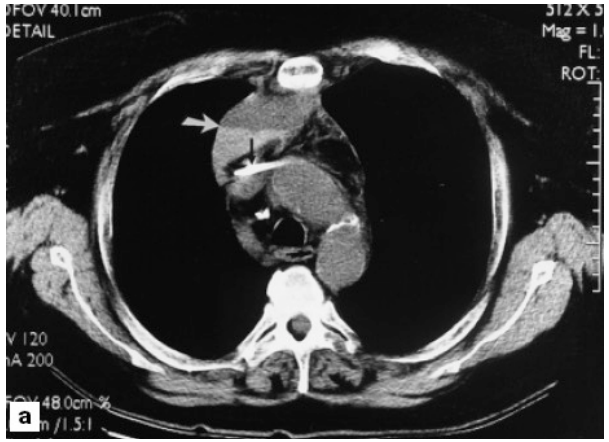
Eur Radiol (2002) 12:901–907
DOI 10.1007/s003300101018

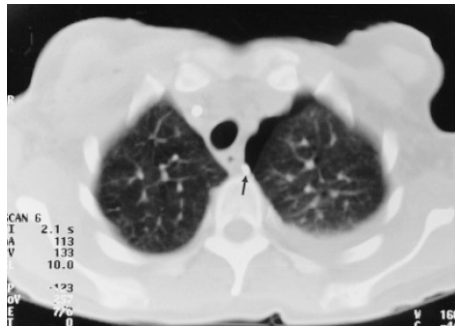
VASCULAR-INTERVENTIONAL

S. Wicky
J.-Y. Meuwly
F. Doenz
A. Uské
P. Schnyder
A. Denys

Life-threatening vascular complications after central venous catheter placement

Case	Gender, age (years)	BMI	Indication	Site of vascular trauma	Catheter involved	TP/PC	Operators
1	F, 57	25	Renal failure	LBCV	D 7F	TP 40 PC 70	Senior fellow
2	F, 60	>30	Renal failure	LBCV	D 7F	Normal	Senior fellow
3	M, 69	>30	Renal failure	LBCV	D 7F	Normal	Senior fellow
4	F, 53	>30	Heart failure	LSCA	S.-G. 7F	Normal	Senior staff
5	F, 43	>30	Renal failure	LSCA	D 7F	Normal	Senior fellow
6	M, 73	20	Heart failure Renal failure	LSCA	D 7F	TP 50 PC 60	Senior staff
7	F, 65	>30	Renal failure	LSCA	D 7F	TP 40 PC 88	Senior fellow
8	M, 81	>30	Renal failure	RSCA	D 7F	Normal	Senior fellow
9	M, 24	30	Trauma	RSCA	S.-G. 7F	TP 50 PC 116	Senior fellow
10	F, 39	>30	Renal failure	RSCA	S.-G. 7F	Normal	Senior staff
11	F, 25	20	Renal failure	LSCA	D 7F	TP 38 PC 76	Senior fellow



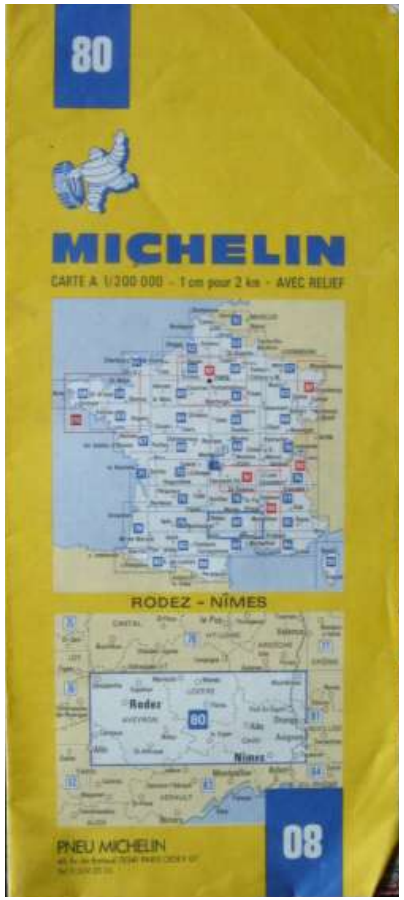


Case no.	Site of trauma	Delay prior to recognition (h)	Radiology	Treatment	Outcome
1	Venous	6	CR, CT, A	Pericardiocentesis	Uneventful
2	Venous	1	CR, CT	Withdrawal	Uneventful
3	Venous	4	CR, CT, A	Pericardiocentesis	Uneventful
4	Arterial	2	CR, CT	Withdrawal	Uneventful
5	Arterial	0	CR, CT	Resuscitation	Death
6	Arterial	72	CR	Withdrawal	Uneventful
7	Arterial	0	CR	Resuscitation	Death
8	Arterial	12	CR	Withdrawal	Uneventful
9	Arterial	0	CR, CT	Chest tube	Uneventful
10	Arterial	1	CR, A	Covered stent	Uneventful
11	Arterial	1	CR, A	SE	Uneventful

Landmark

Ultrasonography

Static/skin mark

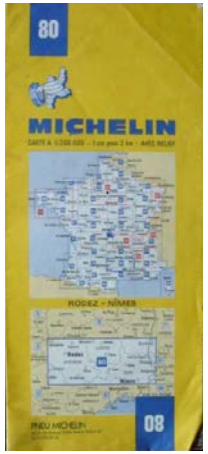


Dynamic

COMPLICATIONS AND FAILURES OF SUBCLAVIAN-VEIN CATHETERIZATION

PAUL F. MANSFIELD, M.D., DAVID C. HOHN, M.D., BRUNO D. FORNAGE, M.D.,
MARY ANN GREGURICH, M.P.H., PH.D., AND DAVID M. OTA, M.D.

RISK FACTOR (NO. OF PATIENTS)	COMPLICATIONS (N = 80)	P VALUE*	FAILURES (N = 100)	P VALUE*
	no. of patients (%)		*no. of patients (%)*	
Vein localization		0.98		0.84
None (410)	40 (9.8)		49 (12.0)	
Ultrasound guidance (411)	40 (9.7)		51 (12.4)	



N Engl J Med 1994

Norair Airapetian
Julien Maizel
François Langelle
Santhi Samy Modeliar
Dimitrios Karakitsos
Herve Dupont
Michel Slama

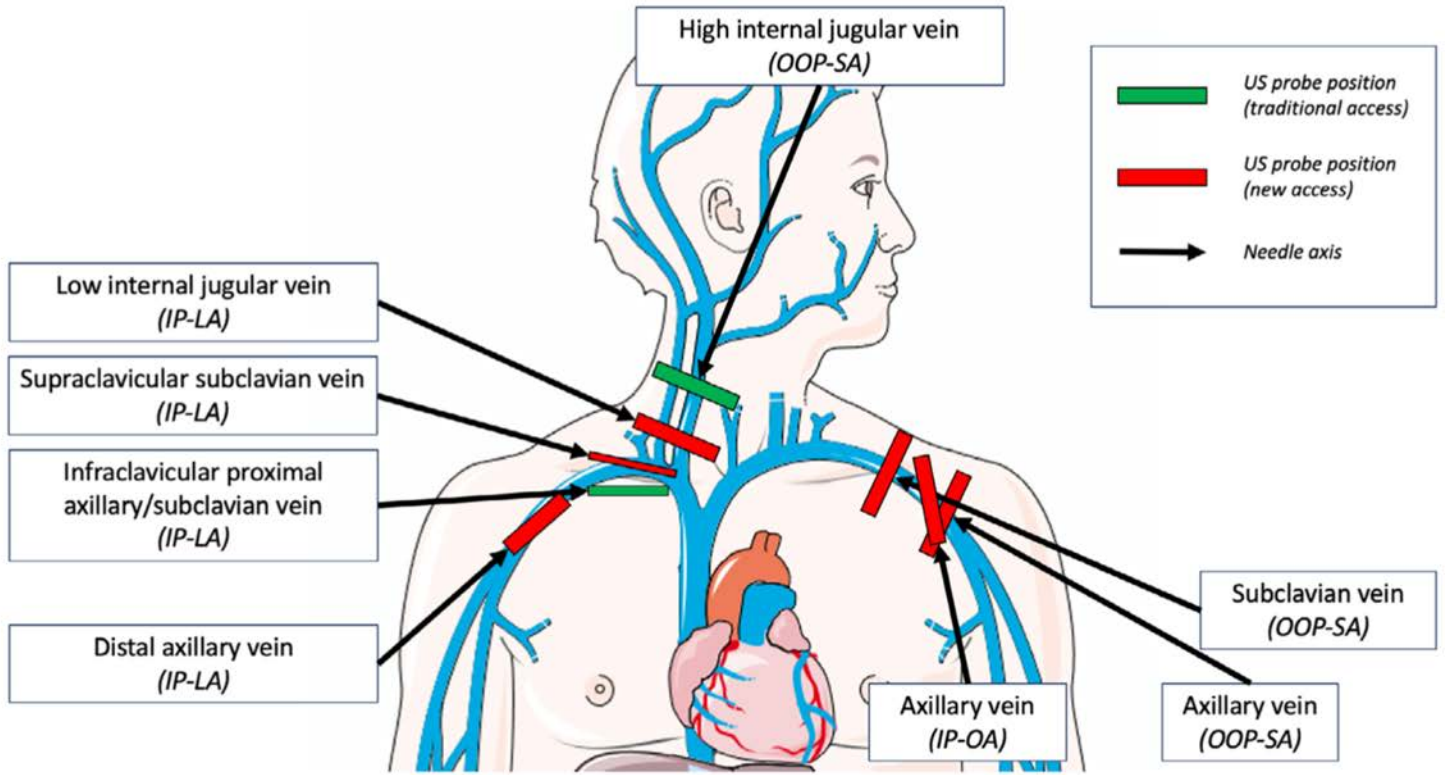
Ultrasound-guided central venous cannulation is superior to quick-look ultrasound and landmark methods among inexperienced operators: a prospective randomized study

Parameter	Overall population $n = 118$	LM $n = 38$	UM $n = 44$	UG $n = 36$	p-Value
Success rate, n (%)	96 (81)	28 (74)	32 (73)	36 (100)*	0.003
Mechanical complications, n (%)	25 (21)	9 (24)	16 (36)	0*	0.0004
Hematoma, n (%)	17 (14)	6 (16)	11 (25)	0*	0.006
Arterial puncture, n (%)	16 (13)	5 (13)	11 (25)	0*	0.005
Number of attempts		3 ± 1	3 ± 2	1*	<0.0001
Access time (min)		8 ± 7	10 ± 9	4 ± 2 *	0.0008
Catheter colonization, n (%)	24 (20)	7 (18)	8 (18)	9 (25)	0.72

Intensive Care Med (2013) 39:1938–1944

REVIEW Open Access

How to improve the efficiency and the safety of real-time ultrasound-guided central venous catheterization in 2023: a narrative review



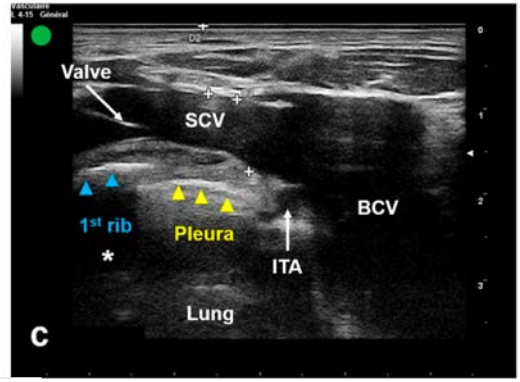
Boulet *et al. Annals of Intensive Care (2023) 13:46* https://doi.org/10.1186/s13613-023-01141w

Trabelsi et al. Annals of Intensive Care (2022) 12:91
https://doi.org/10.1186/s13613-022-01065-x

Annals of Intensive Care

RESEARCH Open Access

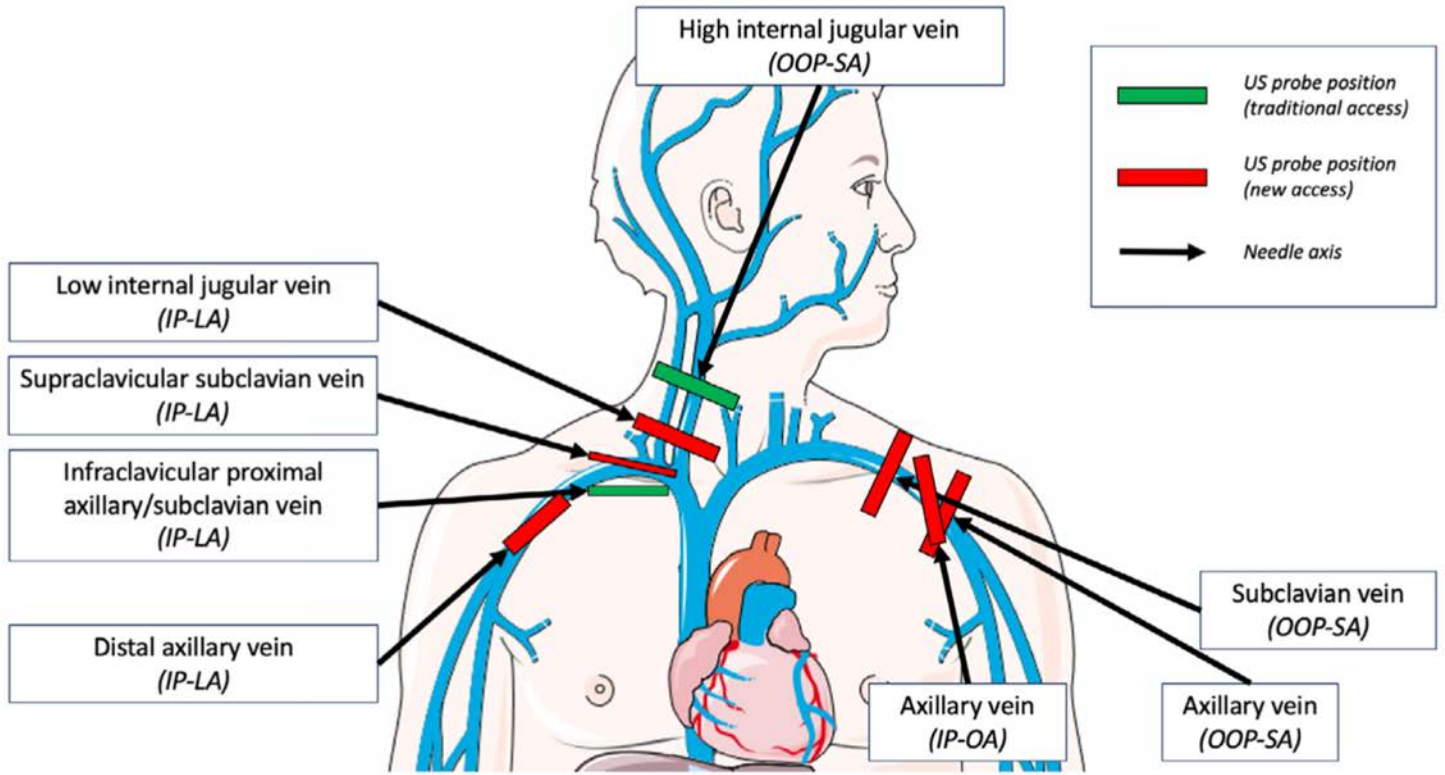
Comparison of ultrasound-guided internal jugular vein and supraclavicular subclavian vein catheterization in critically ill patients: a prospective, randomized clinical trial



	OOP-IJV group ($n=125$)	IP-SSCV group ($n=125$)	p
Primary outcome			
First attempt success rate (%)	63.2	83.2	0.001
Secondary outcomes			
US scanning time (s)	5.26 ± 4.05	16.54 ± 13.51	< 0.001
Venous puncture time (s)	19.55 ± 15.71	22.41 ± 18.68	0.19
Insertion time (s)	53.12 ± 40.21	43.98 ± 26.77	0.038
Overall access time (s)	57.95 ± 40.78	59.68 ± 36.13	0.73
Mean number of puncture attempts	1.47 ± 0.71	1.16 ± 0.39	< 0.001
Mean number of needle redirections	1.17 ± 0.95	0.69 ± 0.58	< 0.001
Success rate (%)	96.8	98.4	0.68
Guidewire advancing difficulties (*n* (%))	34 (27.4)	3 (2.4)	< 0.001
Venous collapse (*n* (%))	23 (18.4)	3 (2.4)	< 0.001
Adverse events (*n* (%))	17 (13.6)	11 (8.8)	0.22
Pneumothorax	0	1 (0.8)	0.31
Hemothorax	0	0	–
Arterial puncture	3 (2.4)	4 (3.2)	0.7
Hematoma	14 (11.2)	5 (4)	0.03
Catheter malposition	0	1 (0.8)	0.31

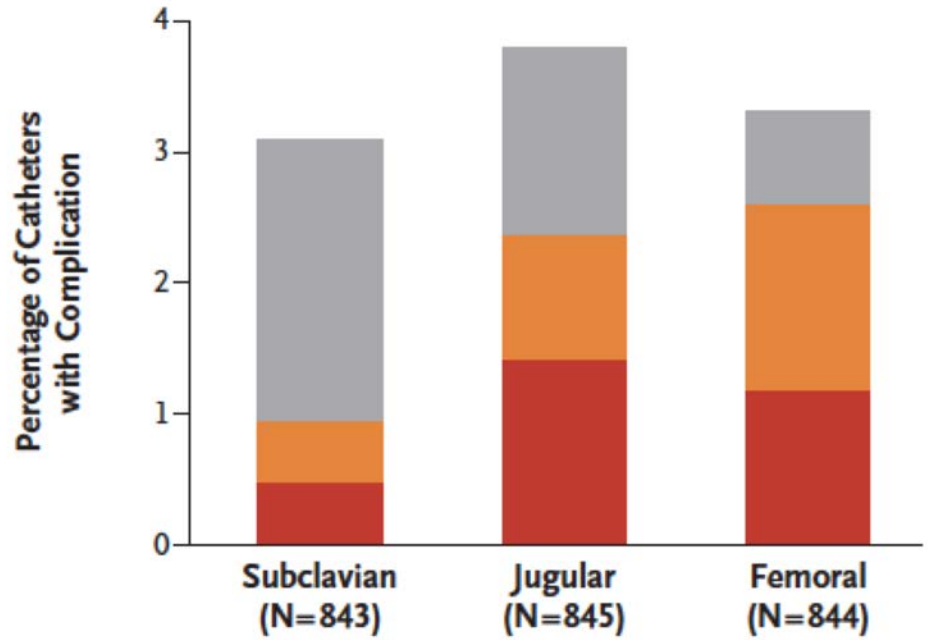
REVIEW Open Access

How to improve the efficiency and the safety of real-time ultrasound-guided central venous catheterization in 2023: a narrative review



Boulet *et al. Annals of Intensive Care (2023) 13:46* https://doi.org/10.1186/s13613-023-01141w

Intravascular Complications of Central Venous Catheterization by Insertion Site



	Subclavian (N=843)	Jugular (N=845)	Femoral (N=844)
Mechanical (grade ≥3)	18 (2.1%)	12 (1.4%)	6 (0.7%)
Symptomatic deep-vein thrombosis	4 (0.5%)	8 (0.9%)	12 (1.4%)
Bloodstream infection	4 (0.5%)	12 (1.4%)	10 (1.2%)

Parienti JJ, *NEJM 2015;373:1220*

Intravascular Complications of Central Venous Catheterization by Insertion Site

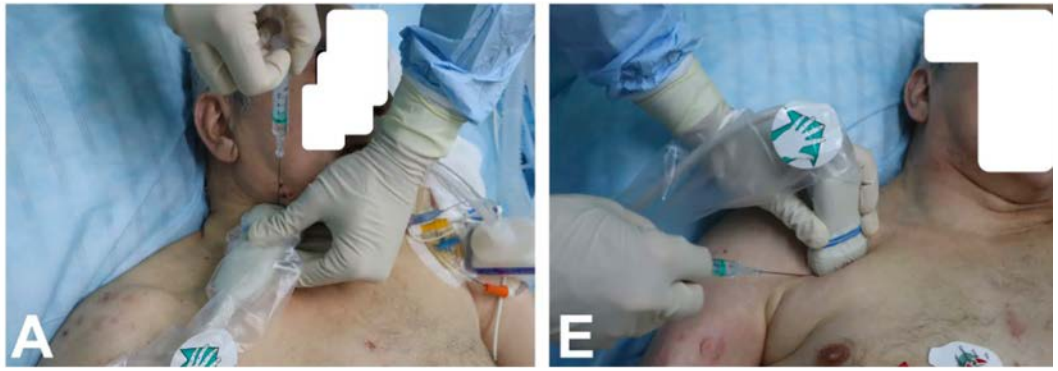
Table 2. Catheter-Related and Procedural Characteristics.*

Characteristic	Three-Choice Comparison			Pairwise Comparison†		Pairwise Comparison†		Pairwise Comparison†	
	Jugular (N=845)	Femoral (N=844)	Subclavian (N=843)	Femoral (N=875)	Subclavian (N=878)	Jugular (N=984)	Subclavian (N=981)	Femoral (N=1140)	Jugular (N=1145)
Skin antisepsis and catheter care — no. (%)‡									
Alcoholic chlorhexidine	366 (43.3)	363 (43.0)	380 (45.1)	372 (42.5)	391 (44.5)	439 (44.6)	435 (44.3)	468 (41.1)	477 (41.7)
Alcoholic povidone–iodine	364 (43.1)	361 (42.8)	355 (42.1)	383 (43.8)	374 (42.6)	426 (43.3)	421 (42.9)	500 (43.9)	498 (43.5)
Aqueous povidone–iodine	83 (9.8)	86 (10.2)	82 (9.7)	86 (9.8)	87 (9.9)	86 (8.7)	95 (9.7)	134 (11.8)	131 (11.4)
Other or unknown	32 (3.8)	34 (4.0)	26 (3.1)	34 (3.9)	26 (3.0)	33 (3.4)	30 (3.1)	38 (3.3)	39 (3.4)
Use of anatomical landmarks to guide insertion — no. (%)§	276 (32.7)¶	623 (73.8)¶	723 (85.8)¶	648 (74.1)¶	758 (86.3)¶	314 (31.9)¶	847 (86.3)¶	825 (72.4)¶	360 (31.4)¶

Parienti JJ, *NEJM 2015;373:1220*

Ultrasound-Guided Infraclavicular Axillary Vein Versus Internal Jugular Vein Cannulation in Critically Ill Mechanically Ventilated Patients: A Randomized Trial

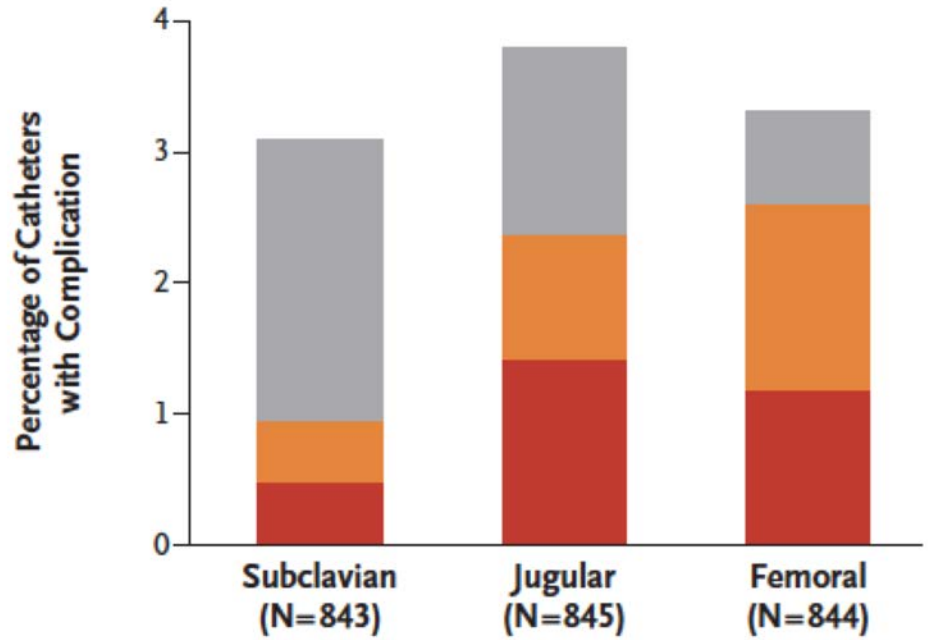
Variables	Internal Jugular Vein Group ($N = 304$), n (%)	Axillary Vein Group ($N = 306$), n (%)	p
Needle visibility	282 (92.8)	302 (98.7)	0.0003
Tenting effect visibility	289 (95.1)	296 (98.7)	0.2993
Number of venipuncture attempts			0.1903
1	243 (79.9)	226 (74.1)	
2	48 (15.8)	54 (17.7)	
3	11 (3.6)	21 (6.9)	
4	2 (0.7)	4 (1.3)	
Catheterization success rate	300 (98.7)	296 (96.7)	0.1074
Guidewire visibility	297 (99)	292 (98.6)	0.6906
Cannula visibility	265 (88.3)	256 (86.5)	0.4967
Early mechanical complication rate	9 (3)	8 (2.6)	0.7951
Cannula tip positions			0.6735
Superior vena cava	269 (90.0)	265 (89.5)	
Right atrium	25 (8.4)	23 (7.8)	
Right internal jugular vein	2 (0.7)	4 (1.4)	
Right ventricle	1 (0.3)	0 (0.0)	
Left internal jugular vein	0 (0.0)	1 (0.3)	



Complications	Ponction artérielle		Pneumothorax	Hematome
IJV	Carotide (4)	Art vertébrale(1)	1	2
AXV	Art axillaire (4)		0	4

Czarnik T ,Crit Care Med 2023 , 51:2

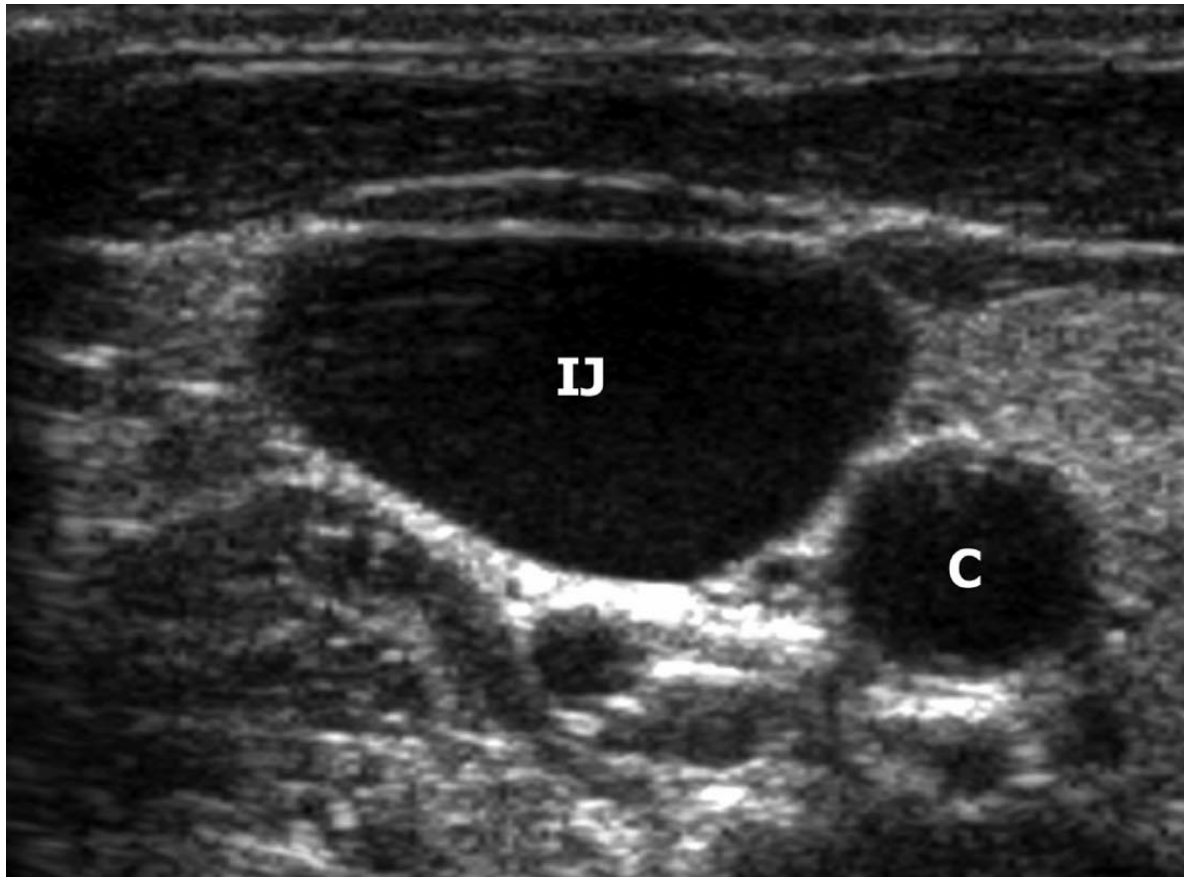
Intravascular Complications of Central Venous Catheterization by Insertion Site



	Subclavian (N=843)	Jugular (N=845)	Femoral (N=844)
Mechanical (grade ≥3)	18 (2.1%)	12 (1.4%)	6 (0.7%)
Symptomatic deep-vein thrombosis	4 (0.5%)	8 (0.9%)	12 (1.4%)
Bloodstream infection	4 (0.5%)	12 (1.4%)	10 (1.2%)

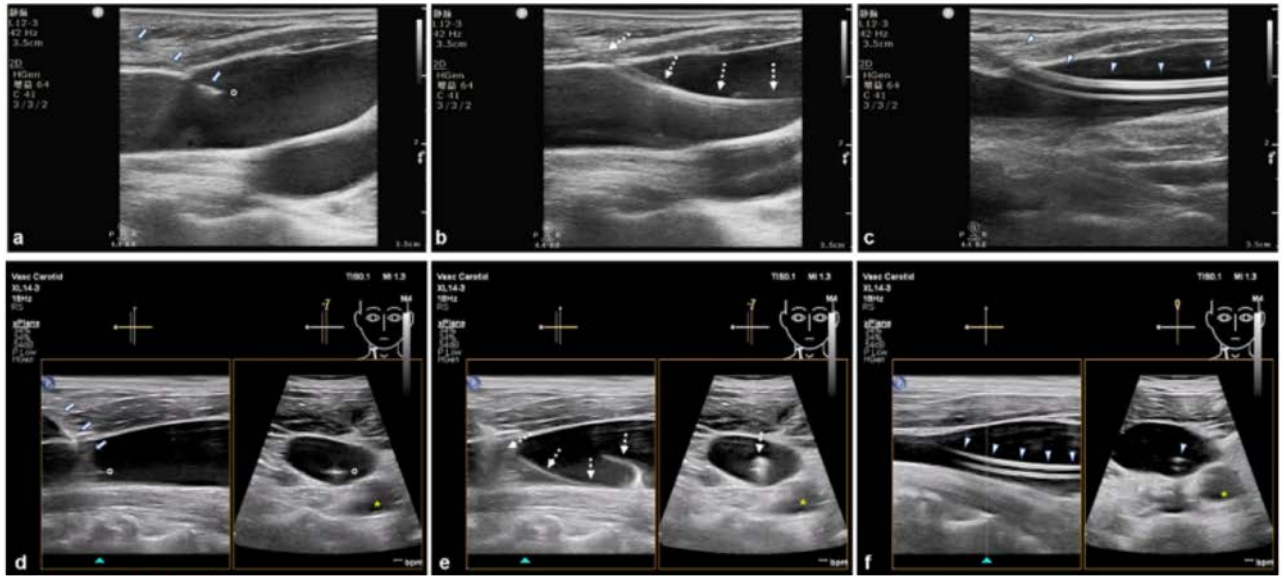
Parienti JJ, *NEJM 2015;373:1220*

J’utilise les US, comme recommandé
Je vois la veine mais pas l’aiguille!!



RESEARCH Open Access

Single-plane versus real-time biplane approaches for ultrasound-guided central venous catheterization in critical care patients: a randomized controlled trial



Coût: 4000€

IJVC	*n* = 87	*n* = 95			
First-puncture success	65 (74.7%)	87 (91.6%)	0.002	1.226	1.069–1.405
First-puncture single-pass catheterization success	60 (69.0%)	83 (87.4%)	0.003	1.267	1.079–1.487
Successful final catheterization	87/87 (100%)	95/95 (100%)	-		
Puncture attempts (n)	1 [1–2 (1–4)]	1 [1–1 (1–2)]	< 0.001		
Puncture time (s)	70 [45–143 (18–1,079)]	43 [23–100 (9–802)]	< 0.001		
Total catheterization time	311 [243–401 (136–1,223)]	205 [162–283 (66–1,526)]	< 0.001		

Li *et al. Critical Care* (2023) 27:366
https://doi.org/10.1186/s13054-023-04635-y

Il y a peut être moins cher….

- Dispositif de guidage in plane
- Imprimante 3 D

- Coût 1 euro
- Temps nécessaire à la fabrication 20 heures

BRIEF REPORT Open Access

Improvement of central vein ultrasound-guided puncture success using a homemade needle guide—a simulation study

Antoine Villa[1], Vladimir Hermand[2], Vincent Bonny[1,3], Gabriel Preda[1], Tomas Urbina[1], Maxime Gasperment[1], Paul Gabarre[1,3], Louai Missri[1], Jean-Luc Baudel[1], Daniel Zafimahazo[1], Jérémie Joffre[1,3,4], Hafid Ait-Oufella[1,3,5] and Eric Maury[1,3,6*]

- Prospective, randomisée en crossover sur mannequin
- Avec 30 médecins de Saint Antoine (Interne & Séniors ; MIR et Urgence)
- Cathétérisme veineux en 3 sites: Jugulaire, Sous-clavier, Fémoral
- Out-of-plane (OOP-FH); In-plane (IP-FH); In-plane avec guide (IP-NG)
- Critères de jugements:
  - Succès au premier passage
  - Temps entre contact cutané et ponction ; Temps entre ponction et retour sang veineux seringue
  - Temps entre contact cutané et retour sang veineux seringue
  - Nombre de redirections ; Nombre de ponction artère

Villa et al. Critical Care 2023

BRIEF REPORT Open Access

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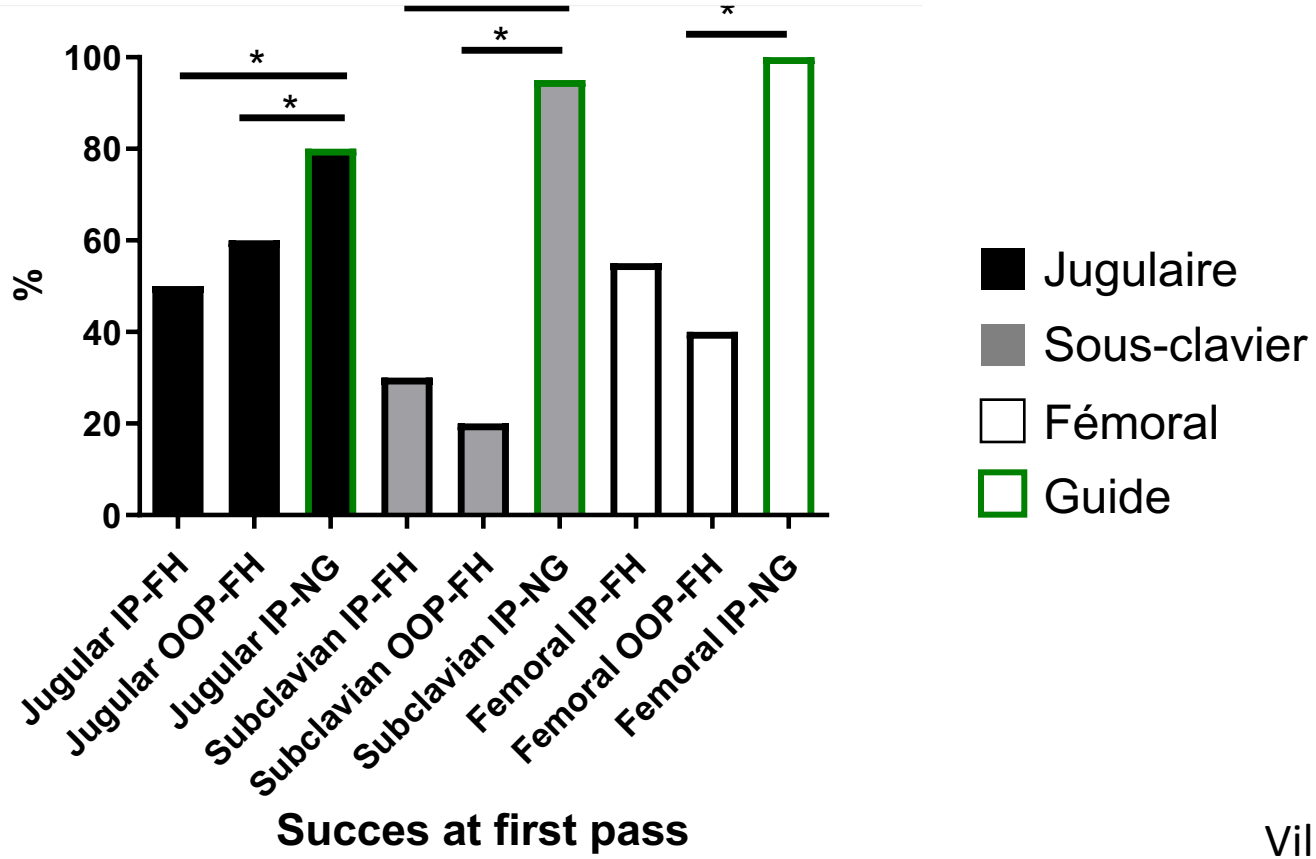
Antoine Villa[1], Vladimir Hermand[2], Vincent Bonny[1,3], Gabriel Preda[1], Tomas Urbina[1], Maxime Gasperment[1], Paul Gabarre[1,3], Louai Missri[1], Jean-Luc Baudel[1], Daniel Zafimahazo[1], Jérémie Joffre[1,3,4], Hafid Ait-Oufella[1,3,5] and Eric Maury[1,3,6*]

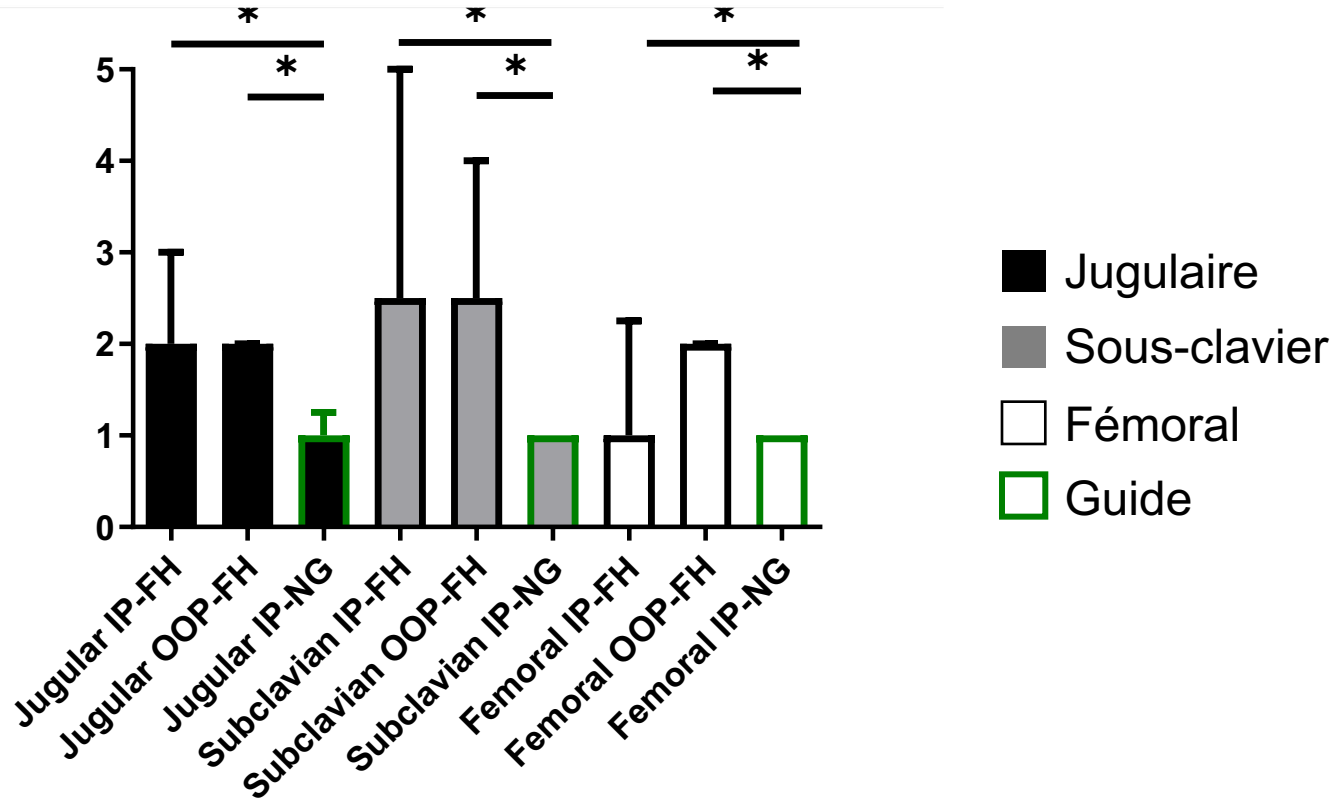


Villa et al. Critical Care 2023

BRIEF REPORT Open Access

Improvement of central vein ultrasound-guided puncture success using a homemade needle guide—a simulation study

Antoine Villa[1], Vladimir Hermand[2], Vincent Bonny[1,3], Gabriel Preda[1], Tomas Urbina[1], Maxime Gasperment[1], Paul Gabarre[1,3], Louai Missri[1], Jean-Luc Baudel[1], Daniel Zafimahazo[1], Jérémie Joffre[1,3,4], Hafid Ait-Oufella[1,3,5] and Eric Maury[1,3,6*]



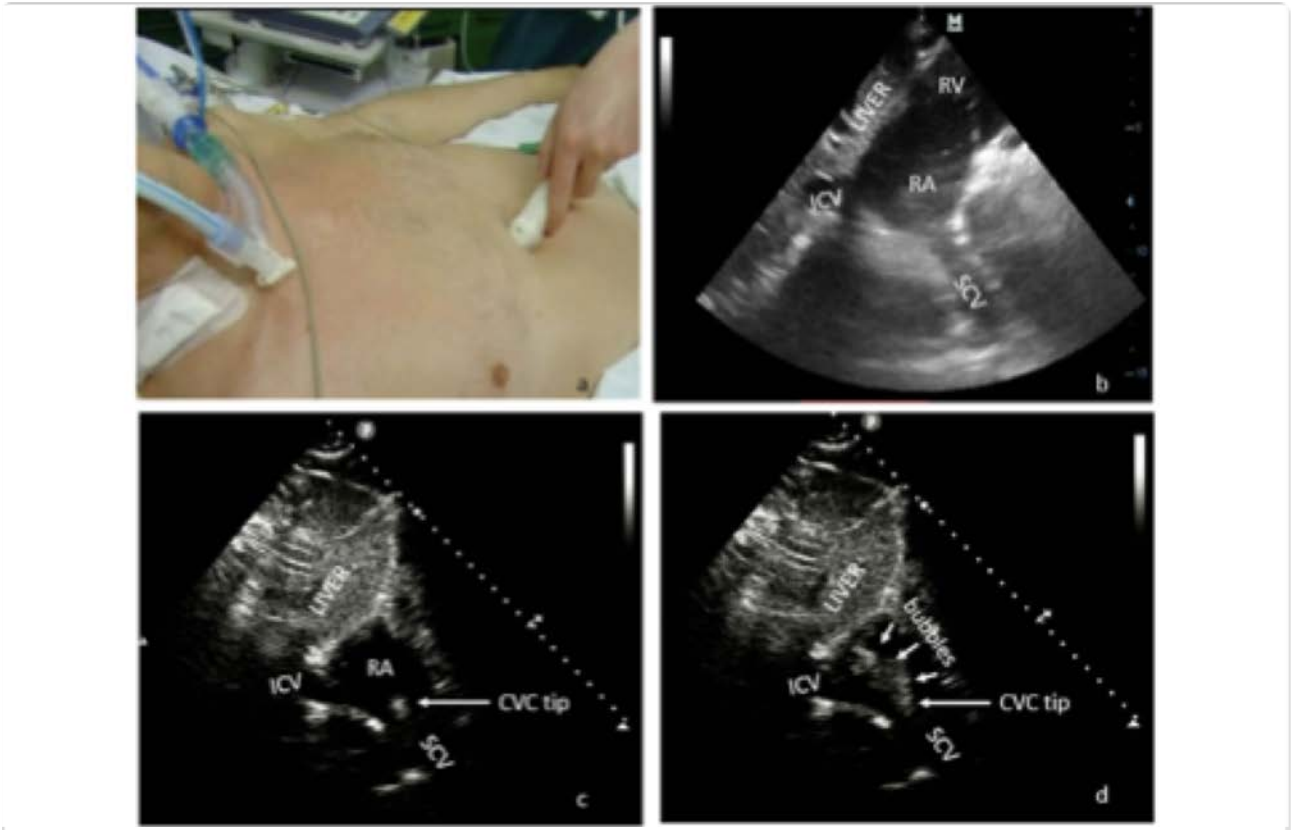
Redirection and skin breaches

Villa et al. Critical Care 2023

Method 1 :

Out of plane

Ultrasound localization of central vein catheter tip by contrast-enhanced transthoracic ultrasonography: a comparison study with trans-esophageal echocardiography

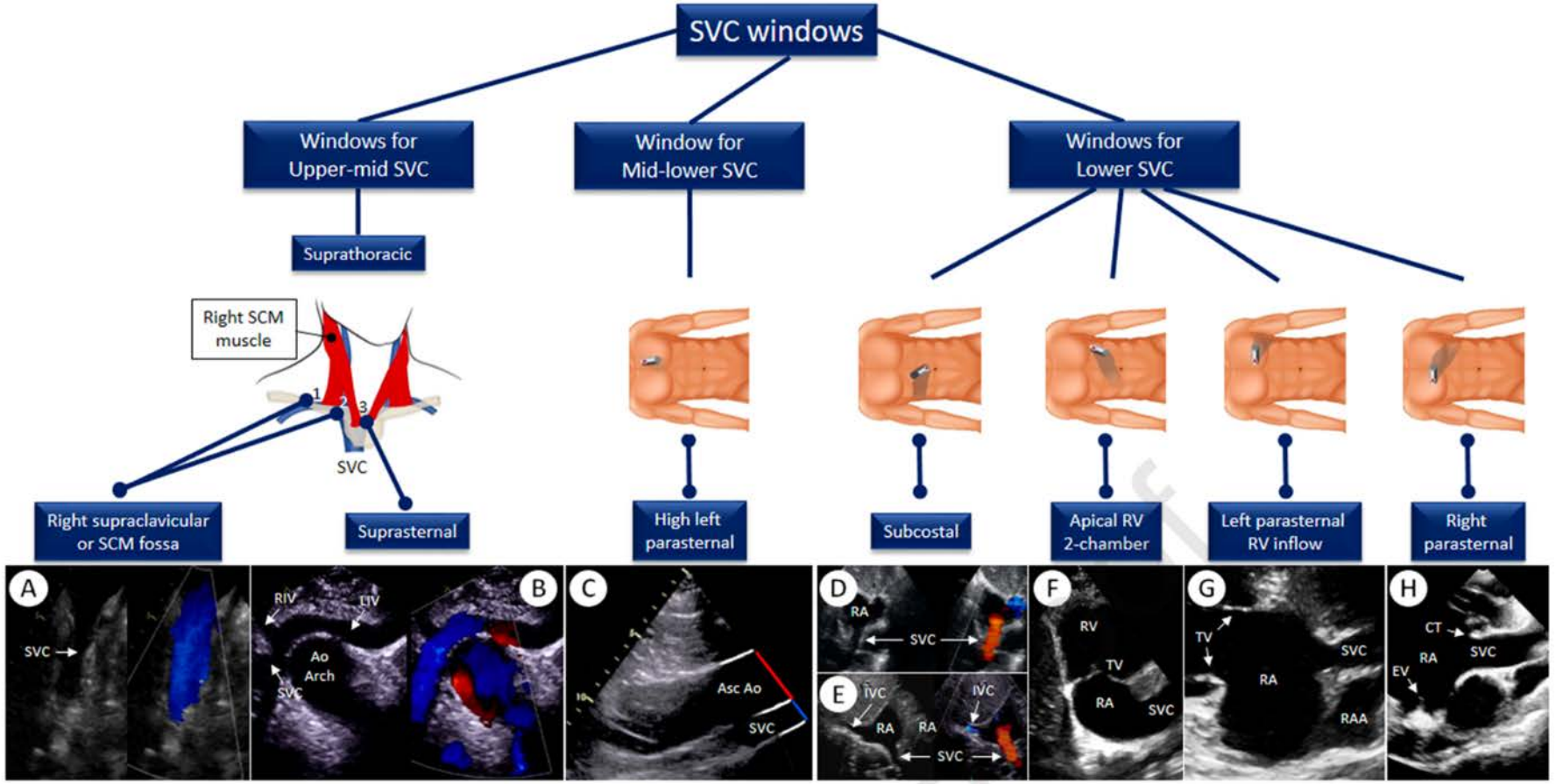


Corradi *et al. Critical Care (2022) 26:113* https://doi.org/10.1186/s13054-022-03985-3

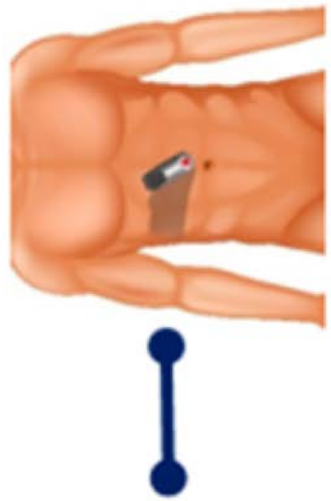
Ultrasound Imaging of the Superior Vena Cava:

A State-of-the-Art Review

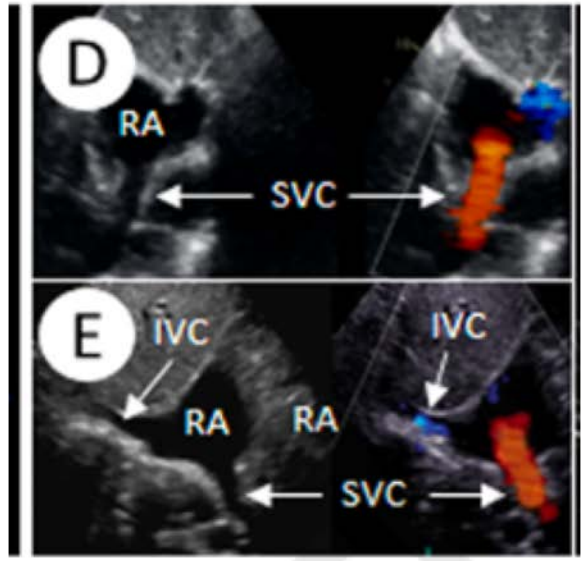
Bahaa M. Fadel, MD*[1,2], Bahaa Kazzi[3], Dania Mohty, MD, PhD[1,2,4]



J Am Soc Echocardiogr. 2023 May;36(5):447-463.



Subcostal



Ten Influential Point-of-Care Ultrasound Papers: 2022 in Review

Journal of Intensive Care Medicine
2023, Vol. 38(6) 566-570

DOI: 10.1177/08850666231166898
journals.sagepub.com/home/jic
SAGE

Scott J. Millington, MD[1], Robert T. Arntfield, MD[2], Seth J. Koenig, MD[3], Paul H. Mayo, MD[4], and Antoine Vieillard-Baron, MD[5]

Schott CK, LoPresti CM, Boyd JS, et al. Retention of Point-of-Care Ultrasound Skills Among Practicing Physicians: Findings of the VA National POCUS Training Program. Am J Med. 2021;134(3):391-399.e8

Narang A, Bae R, Hong H, et al. Utility of a Deep-Learning Algorithm to Guide Novices to Acquire Echocardiograms for Limited Diagnostic Use. JAMA Cardiol. 2021;6(6):624-632.

Robba C, Wong A, Poole D, et al. Basic ultrasound head-to-toe skills for intensivists in the general and neuro intensive care unit population: Consensus and expert recommendations of the European Society of Intensive Care Medicine. Intensive Care Med. 2021;47(12):1347-1367.

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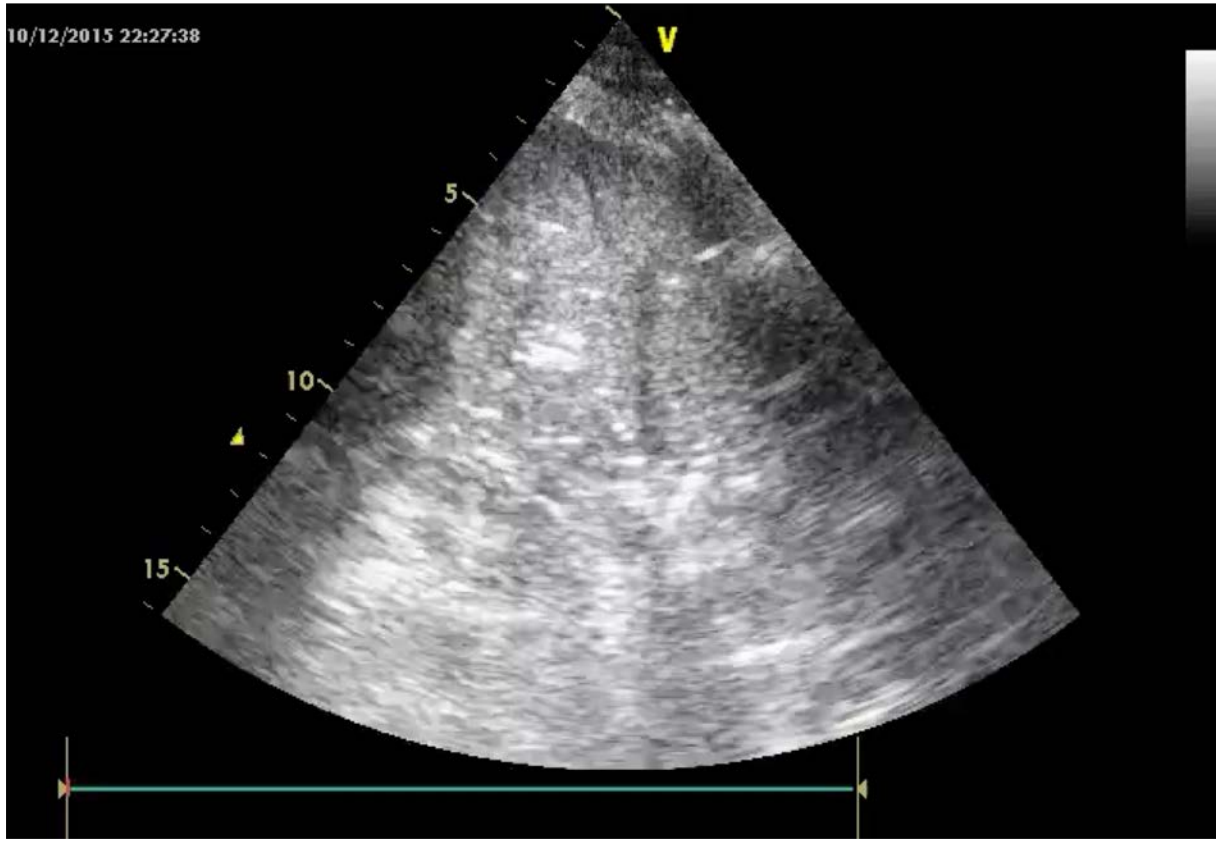
Haaksma ME, Smit JM, Heldeweg MLA, et al. Extended Lung Ultrasound to Differentiate Between Pneumonia and Atelectasis in Critically Ill Patients: A Diagnostic Accuracy Study. Crit Care Med. 2022;50(5):750-759

Feu d'artifice



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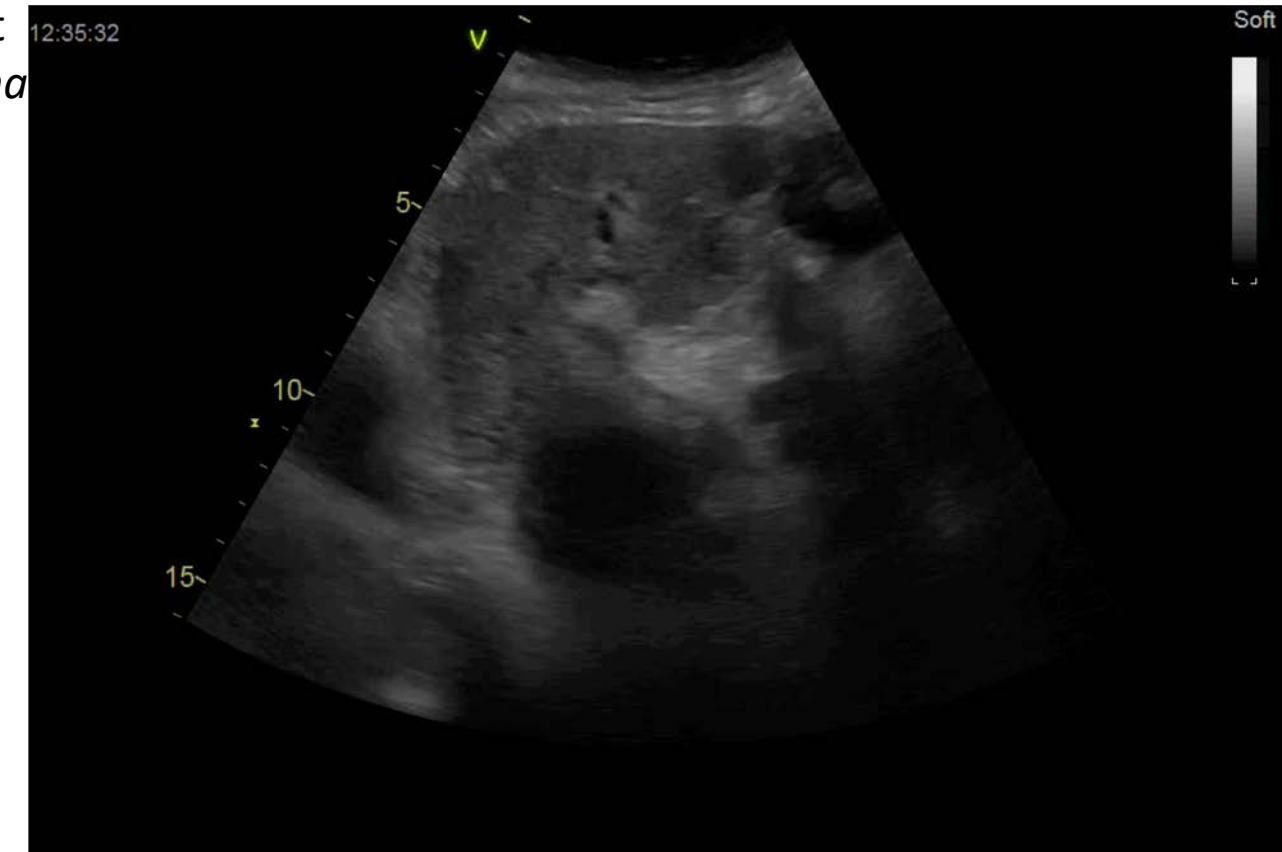
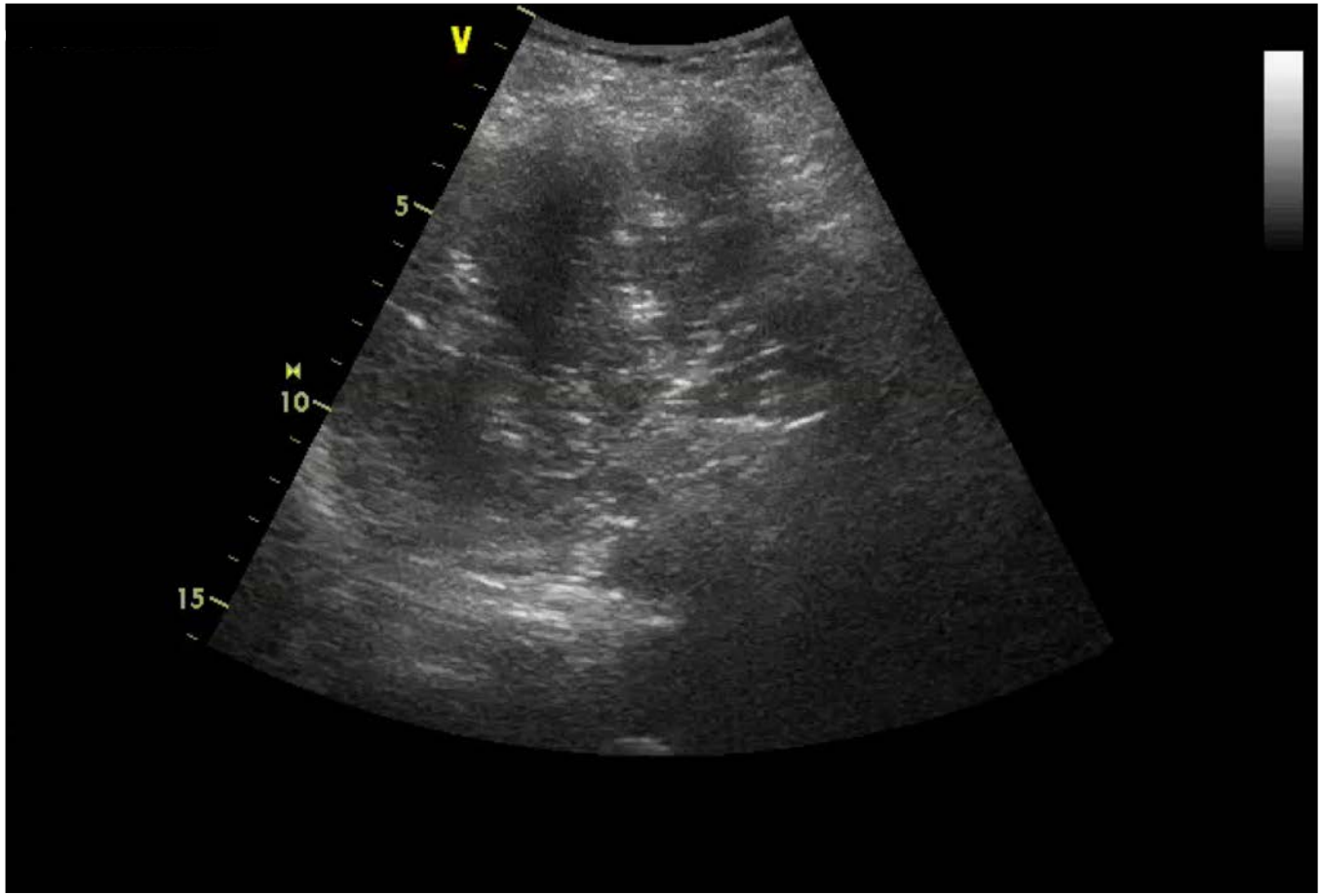
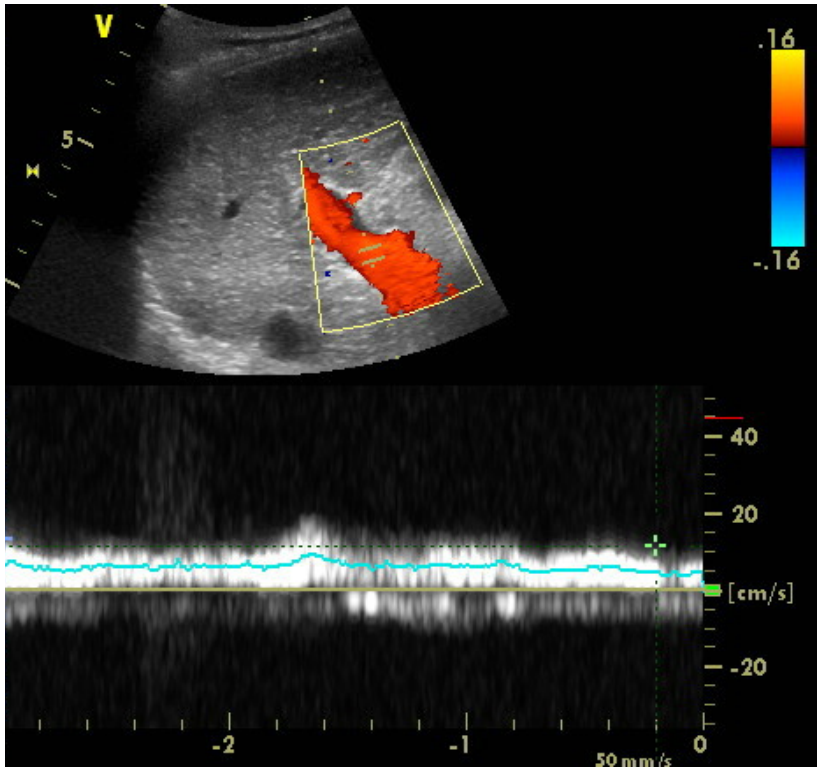
Hilsden R, Mitrou N, Hawel J, Leeper R, Thompson D, Myslik F. Point of care biliary ultrasound in the emergency department (BUSED) predicts final surgical management decisions. *Trauma Surg Acute Care Open*. 2022;7(1):e000944.

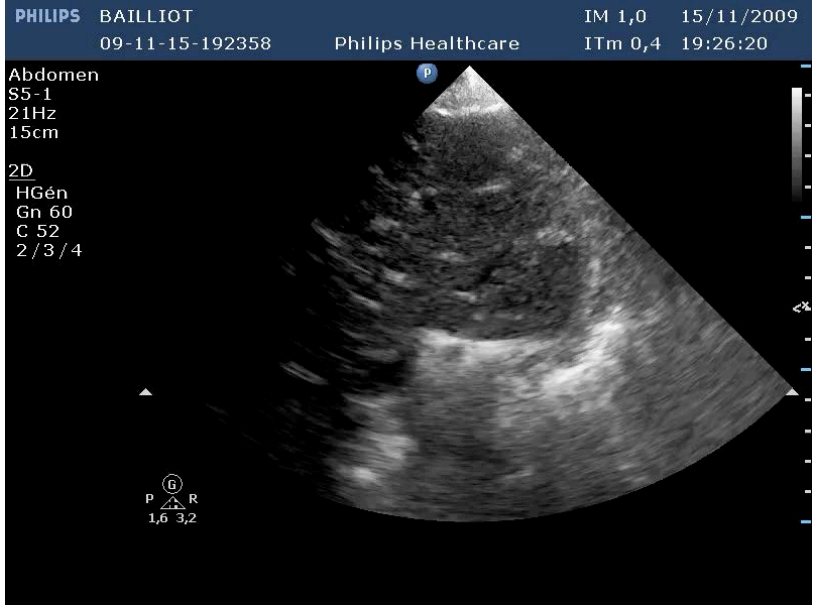
Image en canon de fusil



Tronc porte/ aeroprtie






PHILIPS BAILLIOT
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Philips Healthcare
IM 1,0 15/11/2009
ITm 0,4 19:26:20
Abdomen
S5-1
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2D
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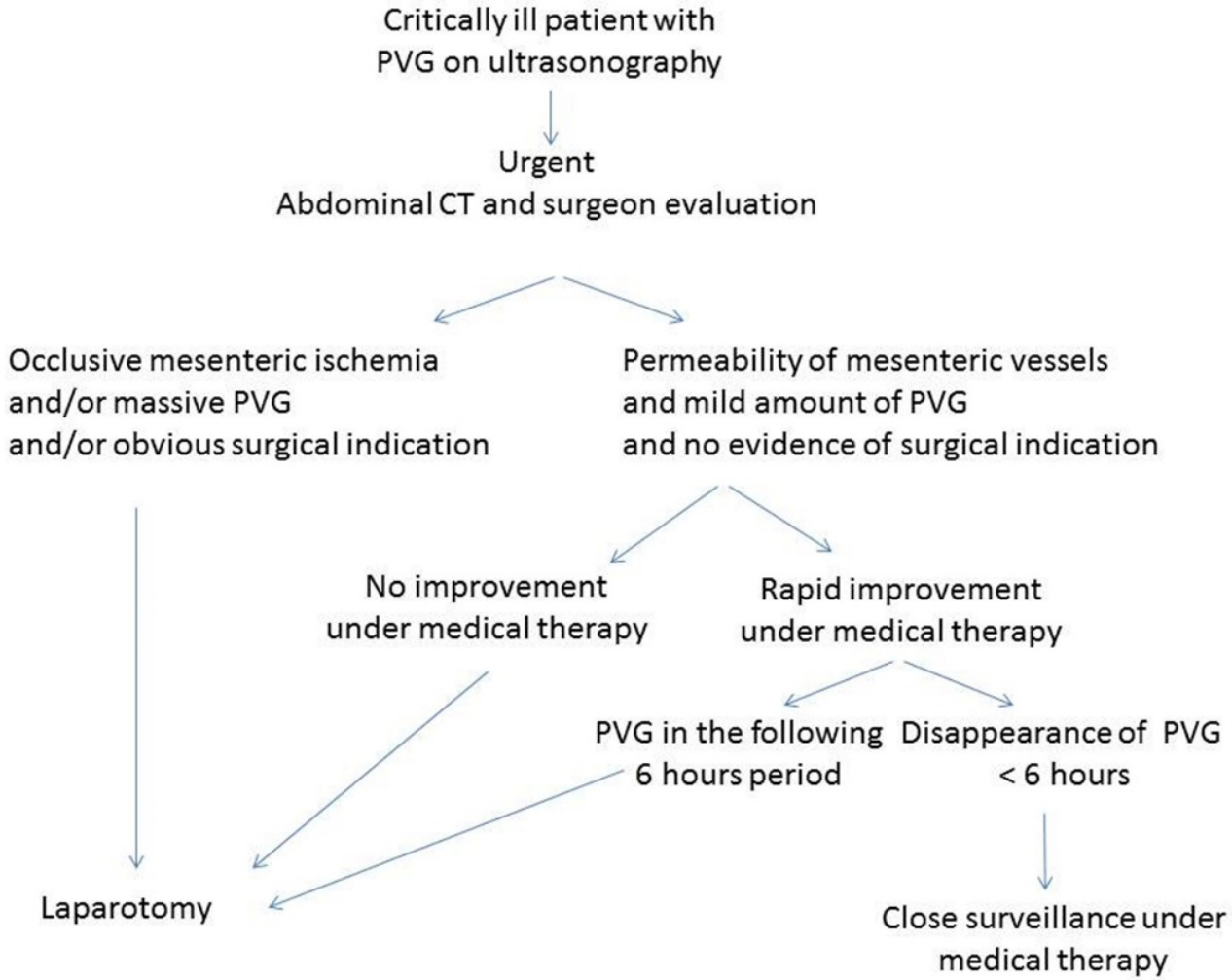
Gn 60
C 52
2/3/4
P R
1,6 3,2


P R
1.8 3.6


Critically ill patient with
PVG on ultrasonography
Urgent
Abdominal CT and surgeon evaluation
Occlusive mesenteric ischemia
and/or massive PVG
and/or obvious surgical indication
Permeability of mesenteric vessels
and mild amount of PVG
and no evidence of surgical indication
No improvement
under medical therapy
Rapid improvement
under medical therapy
PVG in the following
6 hours period
Disappearance of PVG
< 6 hours
Laparotomy
Close surveillance under
medical therapy

G Piton

A wearable cardiac ultrasound imager

https://doi.org/10.1038/s41586-022-05498-z

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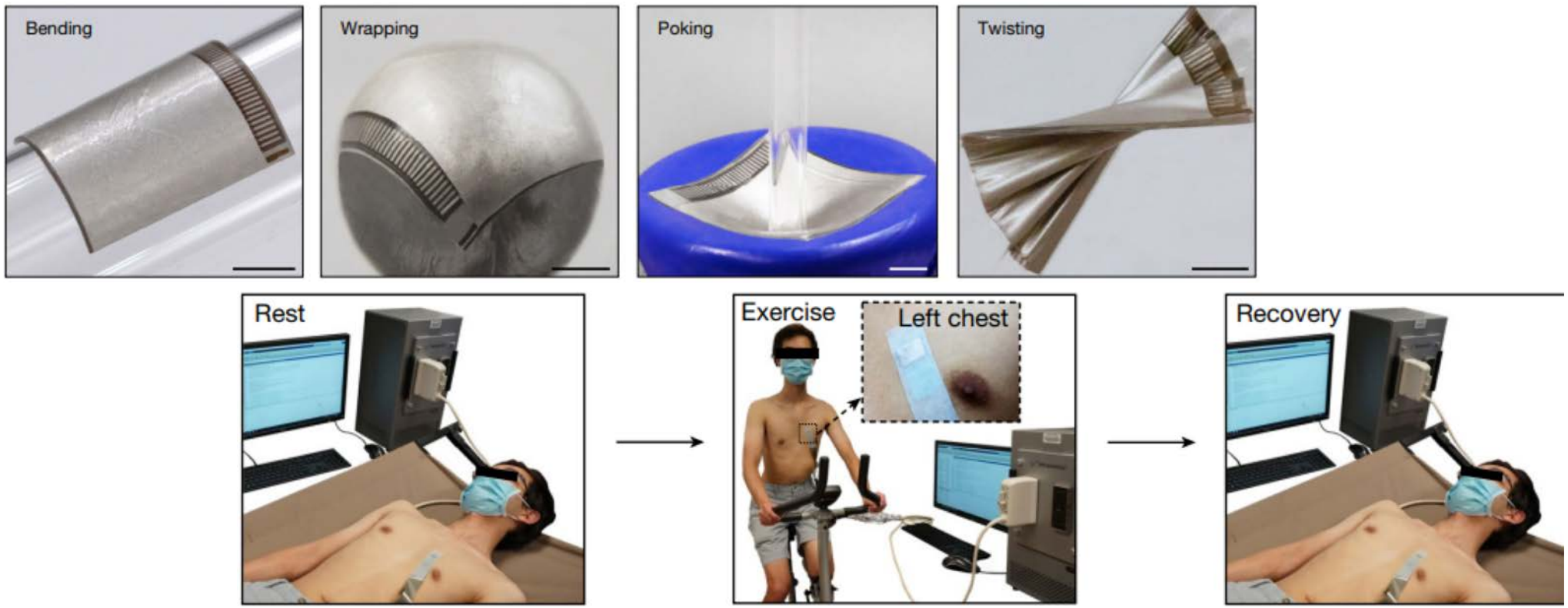
Hongjie Hu[1,15], Hao Huang[1,15], Mohan Li[2,15], Xiaoxiang Gao[1,15], Lu Yin[1], Ruixiang Qi[3], Ray S. Wu[1], Xiangjun Chen[4], Yuxiang Ma[1,5], Keren Shi[4,6], Chenghai Li[7], Timothy M. Maus[8], Brady Huang[9], Chengchangfeng Lu[2], Muyang Lin[1], Sai Zhou[4], Zhiyuan Lou[1], Yue Gu[4,10], Yimu Chen[1], Yusheng Lei[1,11], Xinyu Wang[1], Ruotao Wang[1], Wentong Yue[1], Xinyi Yang[4], Yizhou Bian[1], Jing Mu[4], Geonho Park[1], Shu Xiang[12], Shengqiang Cai[4,7], Paul W. Corey[13], Joseph Wang[1,4] & Sheng Xu[1,2,4,9,14] ✉



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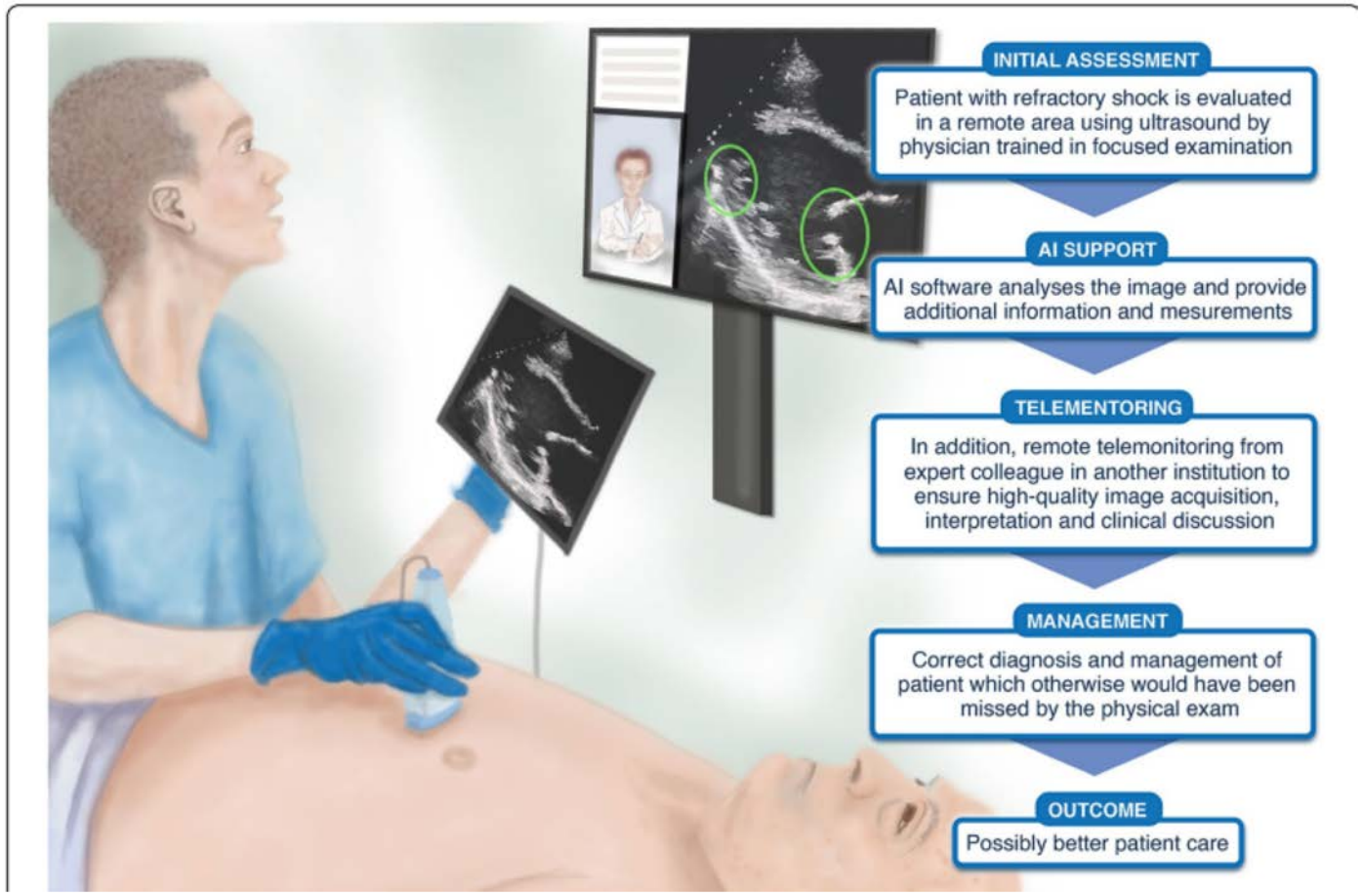
Imaging of the future



Que retenir de l'Actualité En Réanimation? Echographie

- Echographie qualitative plutôt que quantitative
- Dilatation des voies biliaires intrahépatiques
- Recherche d’une aéroportie
- Sécurisation des procédures

BMJ Open

Critical Care Cycling Study (CYCLIST) trial protocol: a randomised controlled trial of usual care plus additional in-bed cycling sessions versus usual care in the critically ill

Assessment component	Outcome measure	Description
Muscle morphology	Ultrasound	RF CSA, AP thickness of RF and VI. Measured in triplicate on right anterior thigh one-third distance from superior patella to ASIS. Patient positioned in supine, 30° head elevation[27]
Muscle strength	MRC sum score	Standardised sum of 12 MMTs, 3 MMTs per limb Score ≤48 indicative of ICU-acquired weakness[28]
	Handgrip strength dynamometry	Triplicate bilateral measurement using a Jamar Digital Dynamometer (Lafayette) with seated patient[29]
Physical function	ICU Mobility Scale	Best level of function achieved in ICU using an 11-point ordinal scale[30]
	FSS-ICU	Patients' function measured an 8-point ordinal scale[31 32]
	Functional milestones	Time to achieve functional milestones: sit out of bed, time to stand, mobilise with assistance and mobilise independently
	6 min walk test	Submaximal endurance test of distance walked by a patient in 6 min[33]
Cognition	CAM-ICU	Incidence and recorded episodes of acute delirium[34]
Quality of life	EQ-5D-5L	EQ-5D-5L[35]
Intervention acceptability	Customised questionnaires	Questionnaire about the acceptability of the in-bed cycling intervention

Patient characteristics at baseline	In-bed cycling group, n = 36	Usual-care group, n = 36	Cohort, n = 72
Age in years	56 (18)	57 (16)	56 (17)
Males, n (%)	23 (64%)	27 (75%)	50 (69%)
APACHE II score, median (IQR)	17 (13, 21)	19 (16, 24)	19 (15, 22)
SOFA (worst score), median (IQR)	9 (8, 12)	9 (7, 11)	9 (7, 12)
SOFA (most organs with dysfunction), median (IQR)	3 (3, 4)	4 (3, 5)	4 (3,4)
Height in centimetres	171 (11)	173 (10)	172 (10)
Weight in kilograms	85 (16)	88 (18)	86 (17)
BMI kg/m^2	29 (5)	30 (8)	29 (6)
Baseline RFCSA cm^2	3.8 (1.6)	4.3 (2.0)	4.0 (1.8)

Nickels MR, Aitken LM, Walsham J, et al. Critical Care Cycling Study (CYCLIST)

BMJ Open 2017;7:e017393. doi:10.1136/ bmjopen-2017-017393