



X 10TH Congresso GAVeCeLT Congress

4-5 Dicembre December 4th - 5th

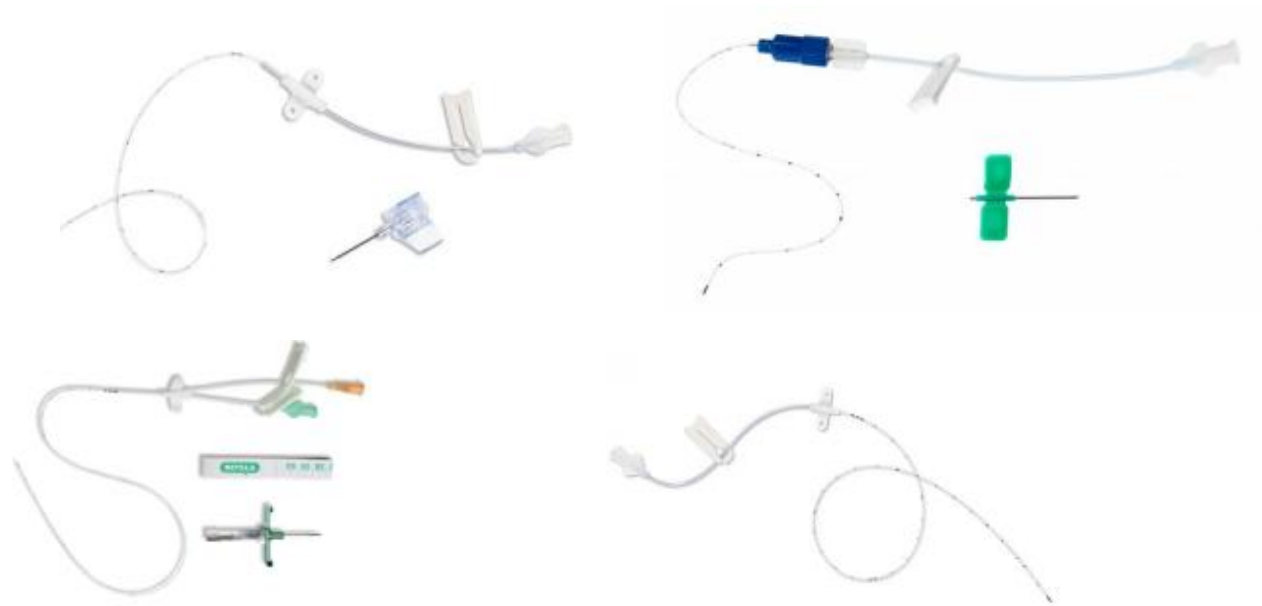


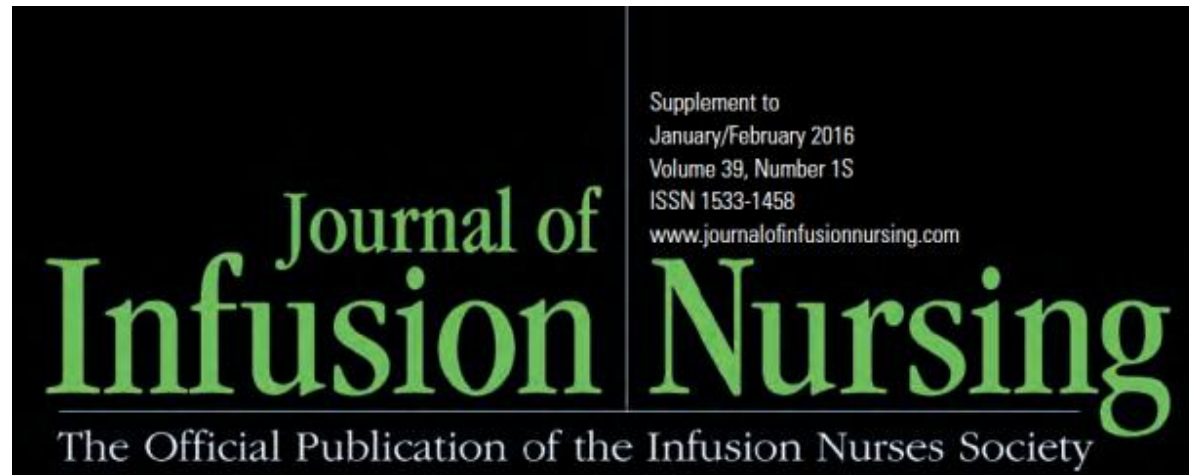
Uso della ecografia ed ecocardiografia nel posizionamento di CVO e ECC

Vito D'Andrea

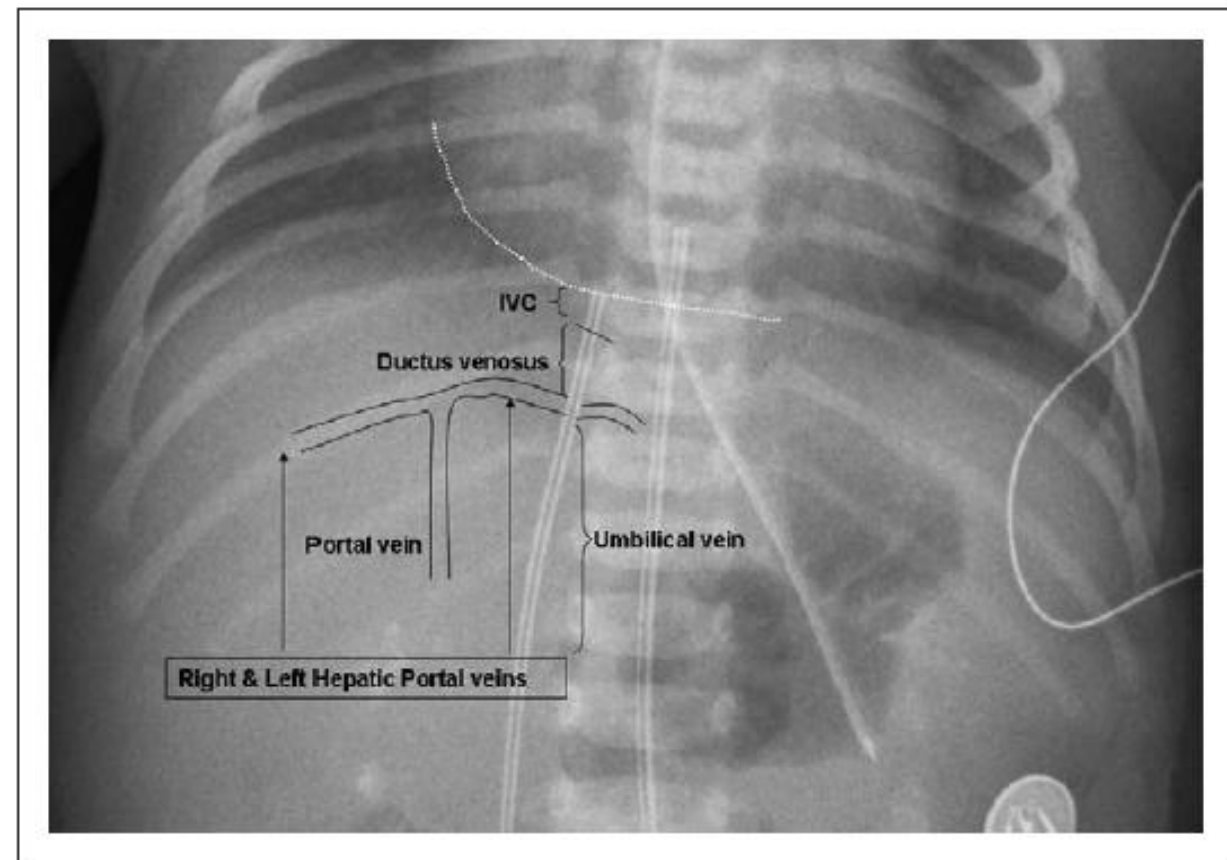
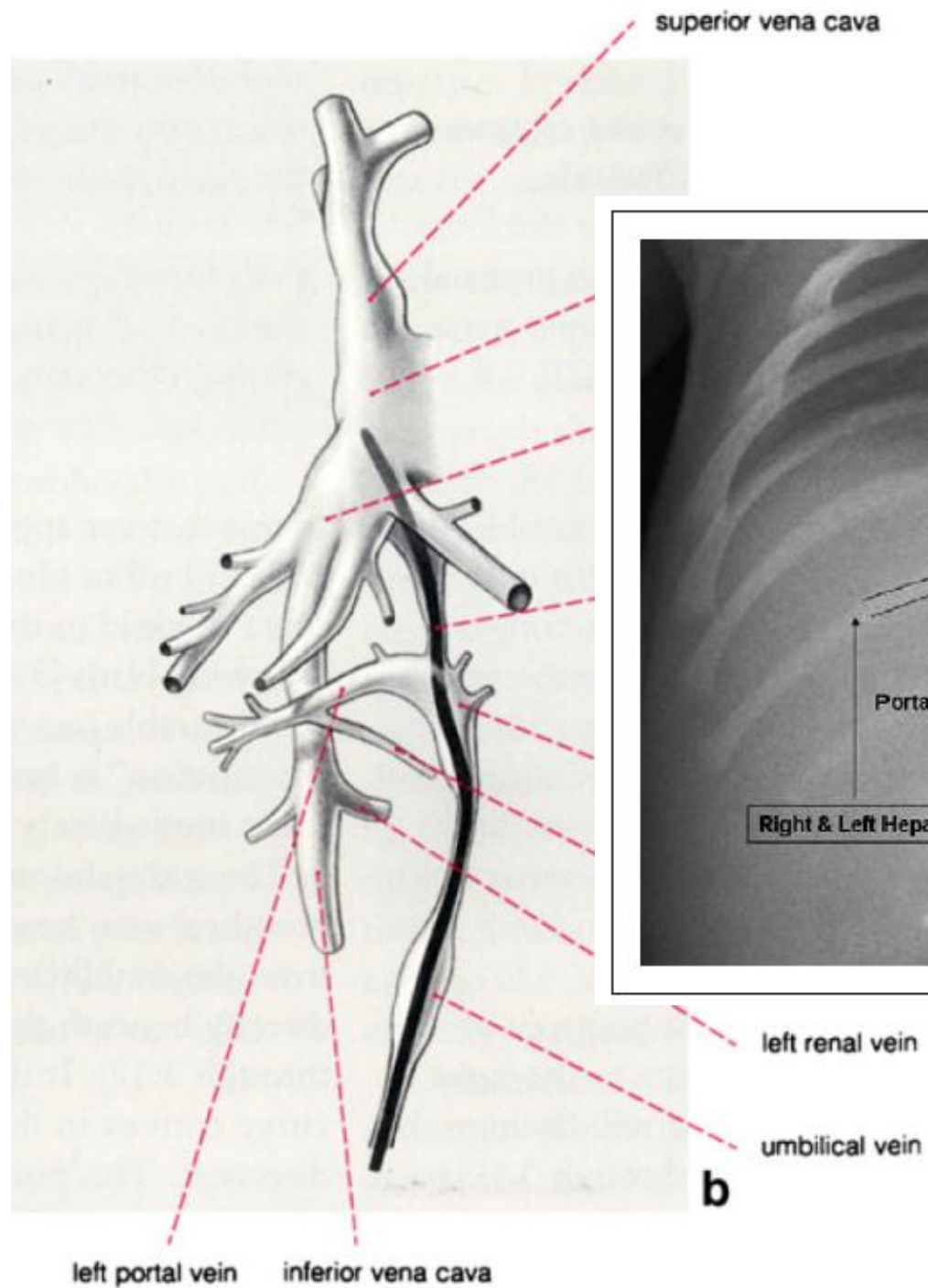
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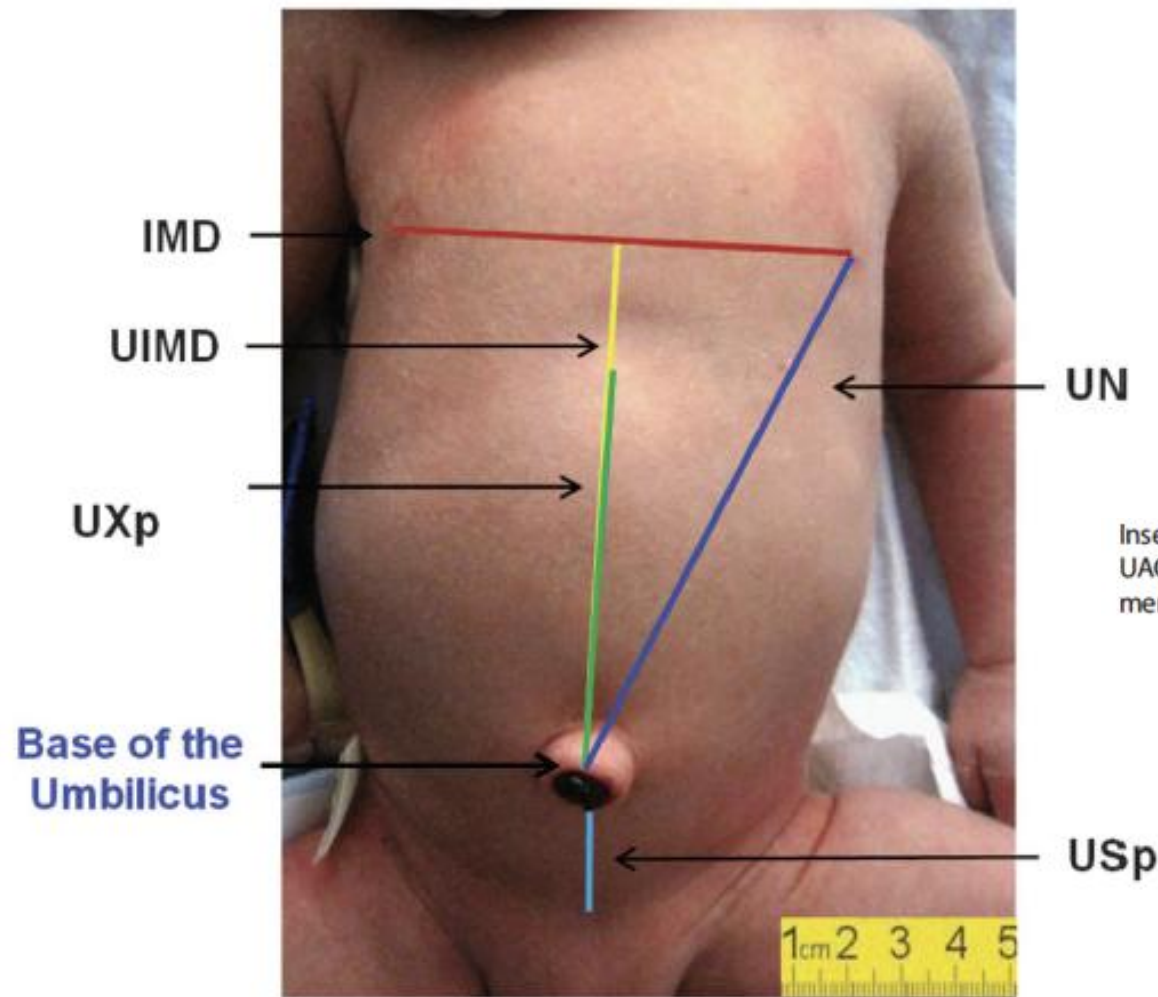
- CVO
- EEC





- E. Confirm the catheter tip location by radiography, echocardiography, or ultrasonography before catheter use.
- 5. Neonatal echocardiography may be superior to chest and abdominal radiography for identifying malpositioned catheters or in extremely low-birth-weight neonates.^{24,25} (V)

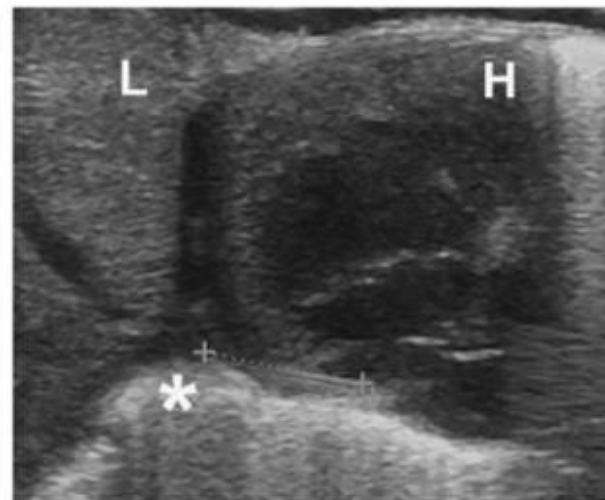
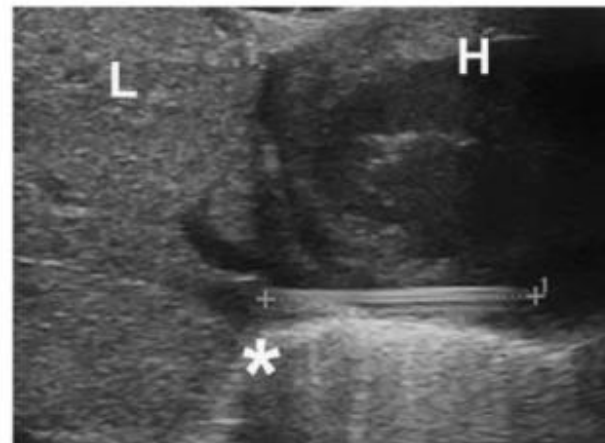
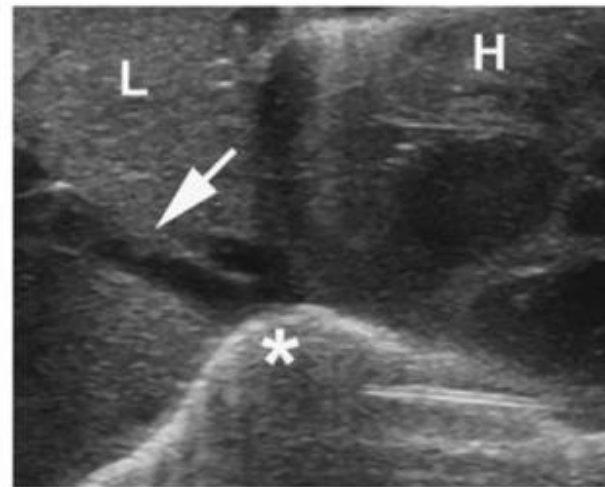




Insertion length of UVC can be best estimated by $UN - 1\text{ cm}$ and UAC by $UN - 1 + 2\text{ USp}$. Validity of these morphometric measurements will be studied prospectively.

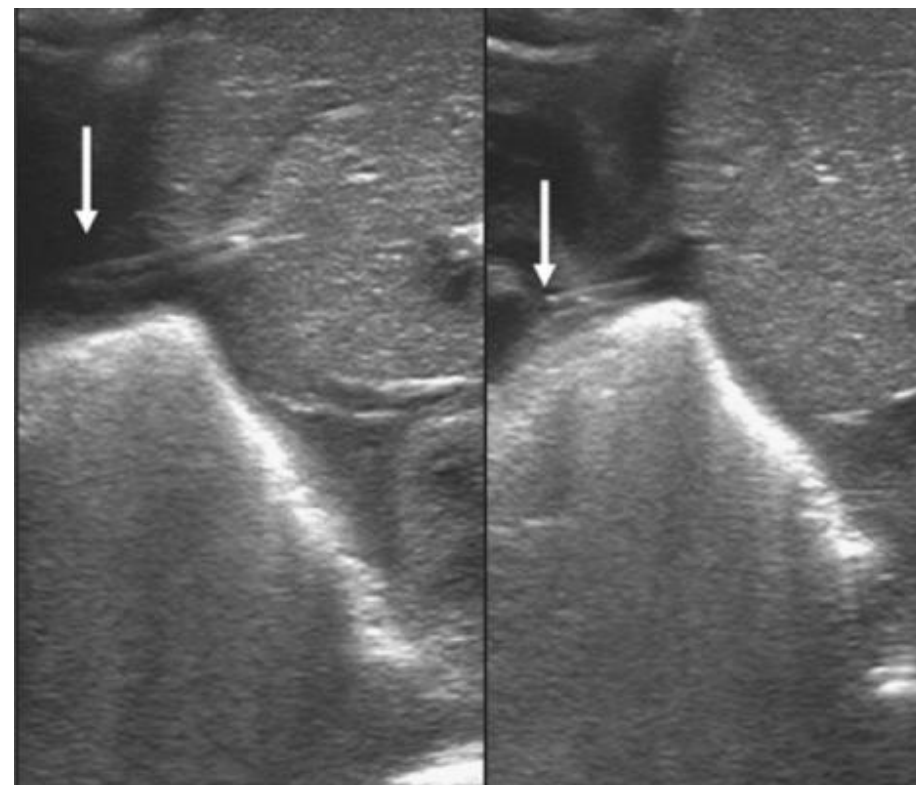
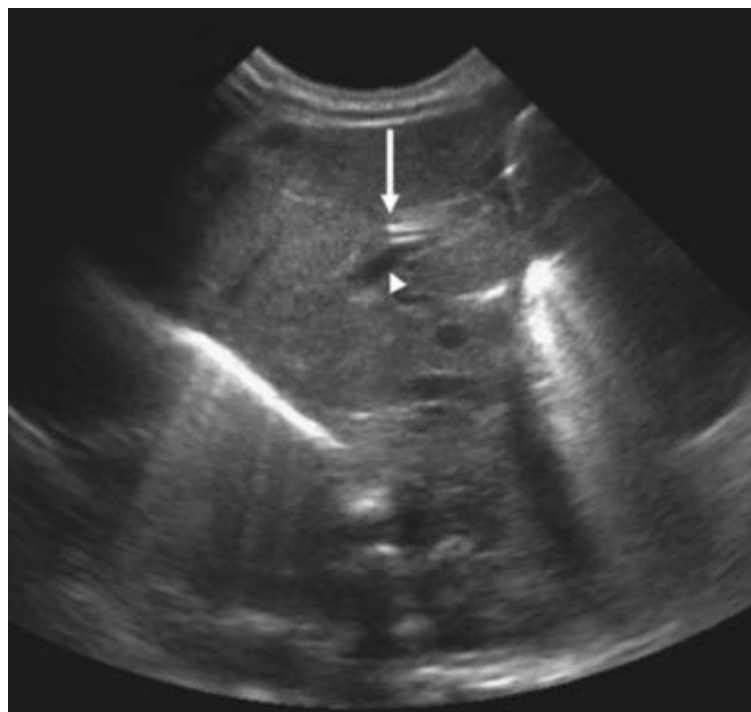
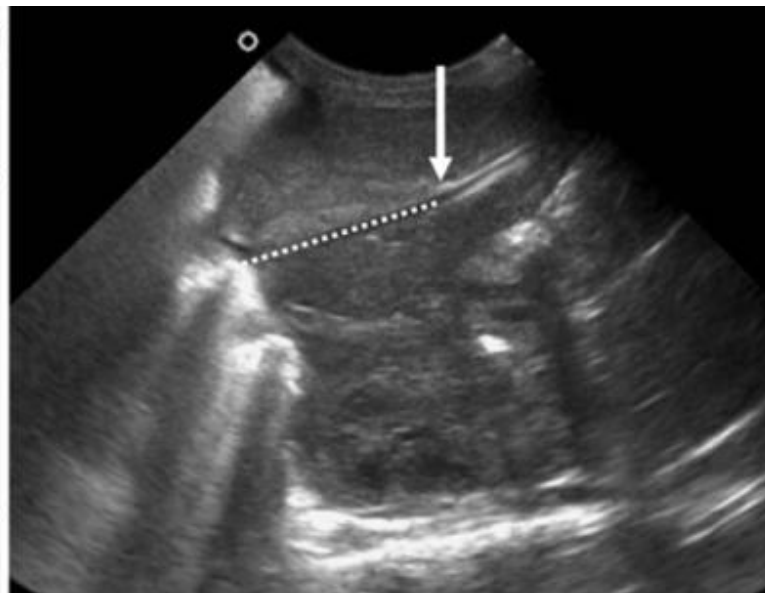
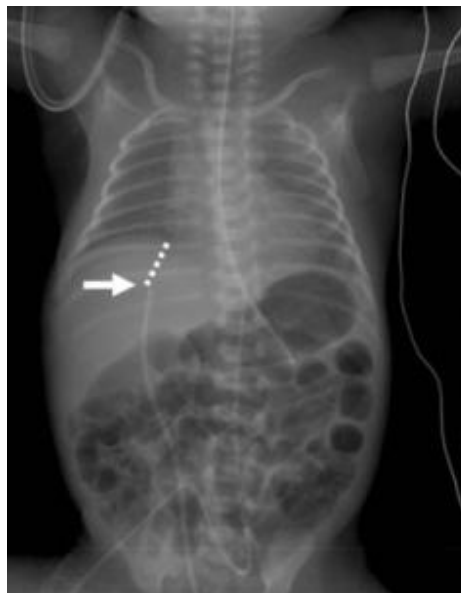
Umbilical catheter placement using surface anatomy
AO Gupta *et al*

We used the level of the diaphragm for determination of accurate insertion length of UVCs, as the appropriate location of the UVC tip should be at the cavo-atrial junction, which is close to the level

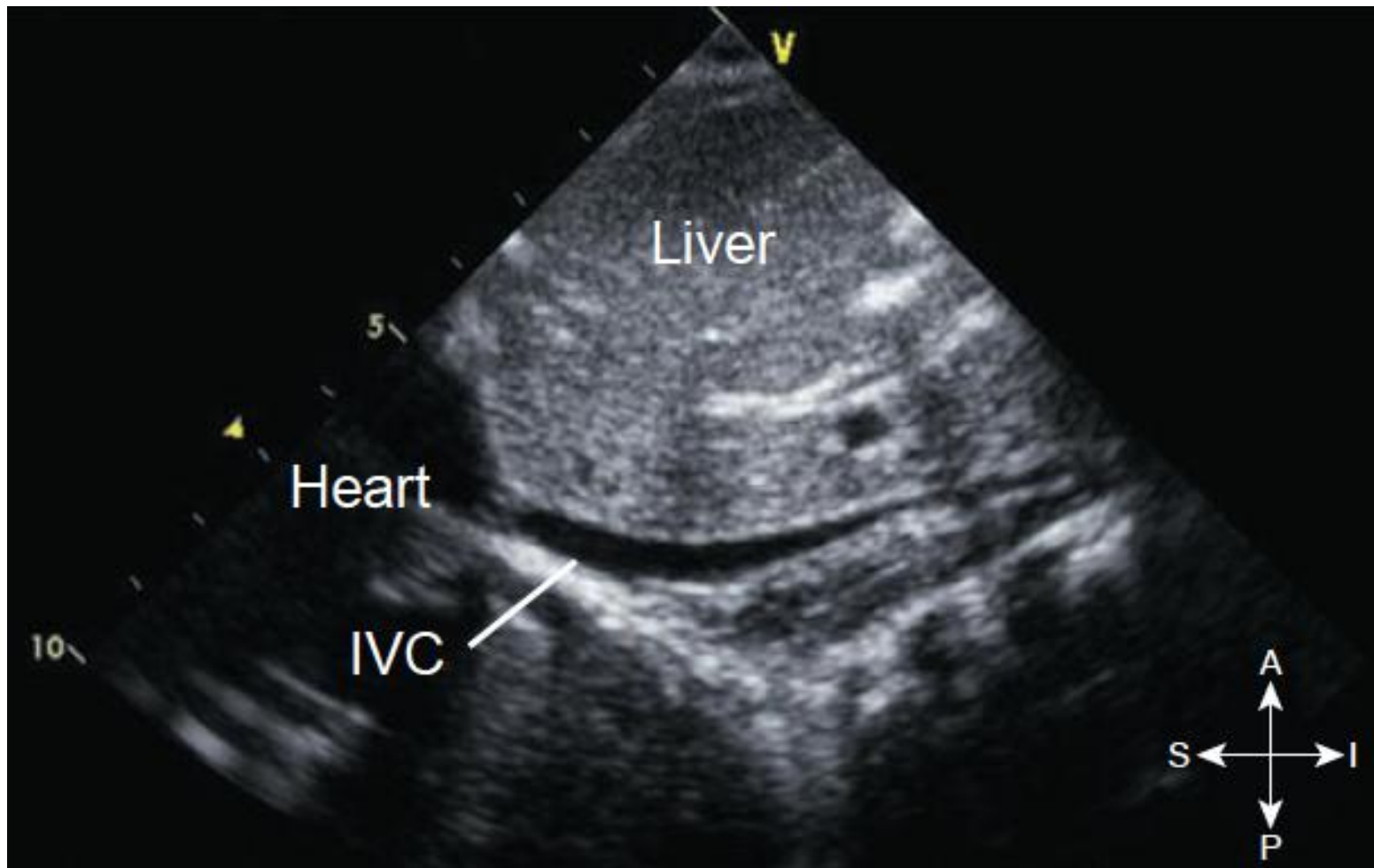


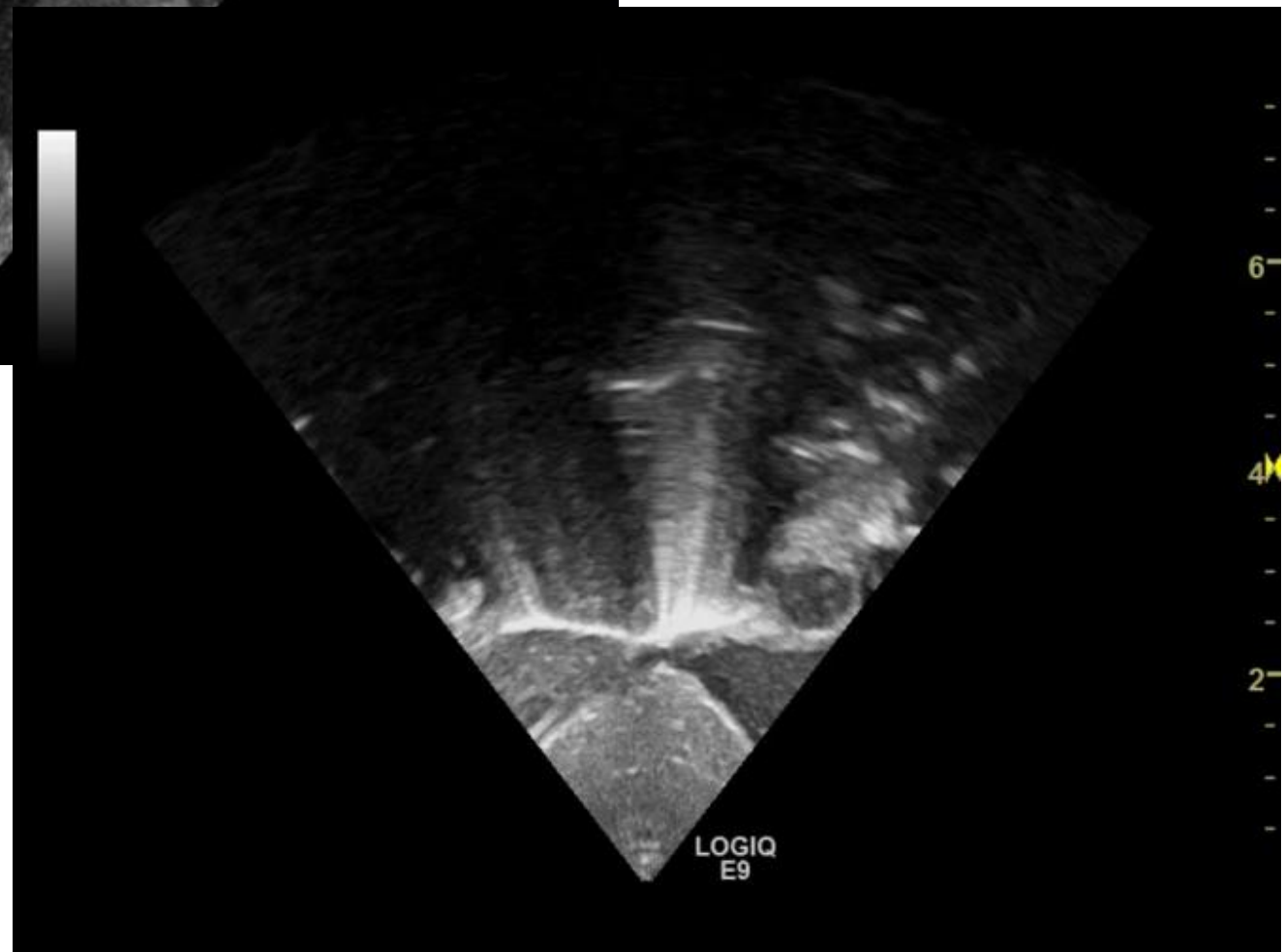
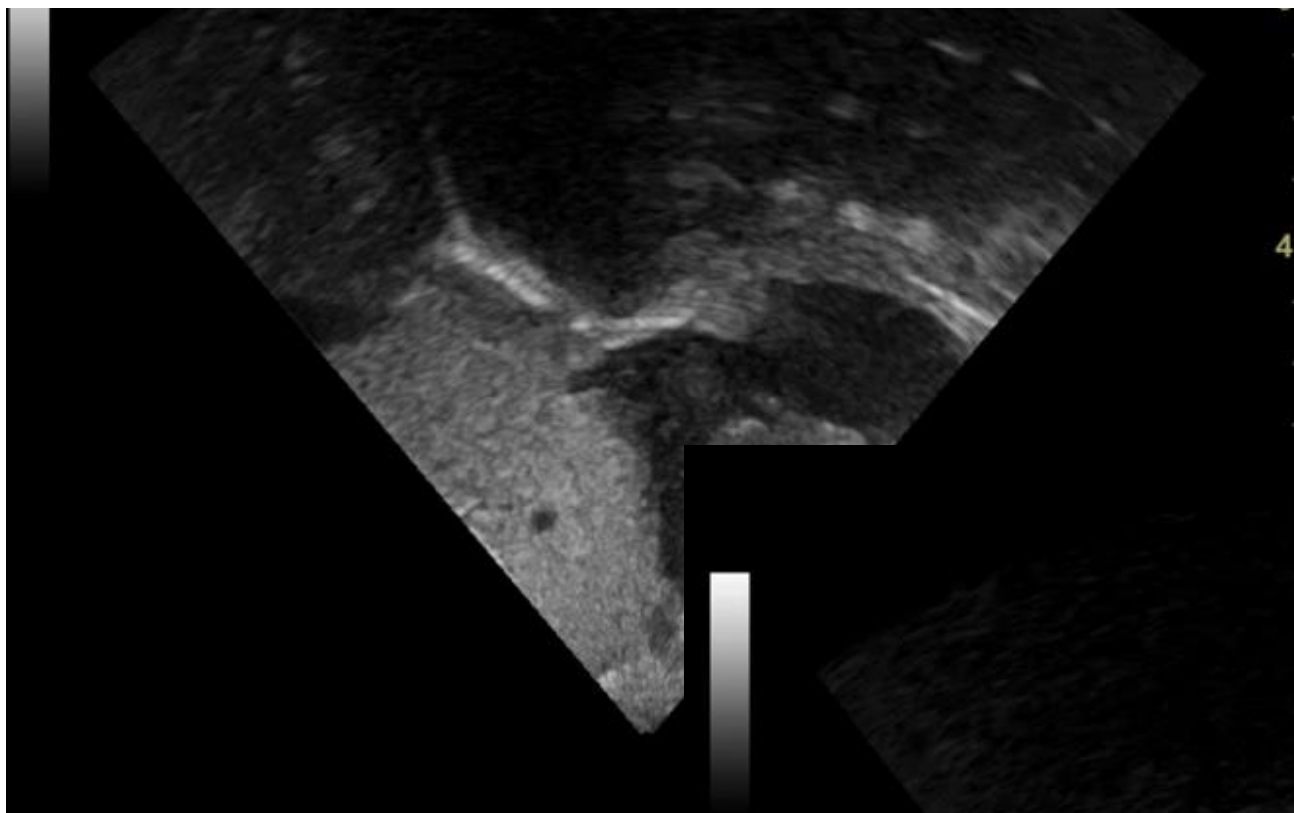
	<i>Ultrasound group</i>	<i>Standard group</i>	<i>P-value</i>
Mean time to final placement in minutes	75 ± 25	139 ± 49	<0.001
X-rays taken	2.3 ± 0.6	4.1 ± 1.4	0.003
Manipulations of UAC	1.64 ± 0.81	1.87 ± 0.83	0.447
Manipulations of UVC	1.6 ± 0.74	2.8 ± 1.01	0.002
Infant temperature before procedure	97.7 ± 0.7	98.6 ± 1.47	0.105
Infant temperature after procedure	97.8 ± 1.5	98.4 ± 0.7	0.270

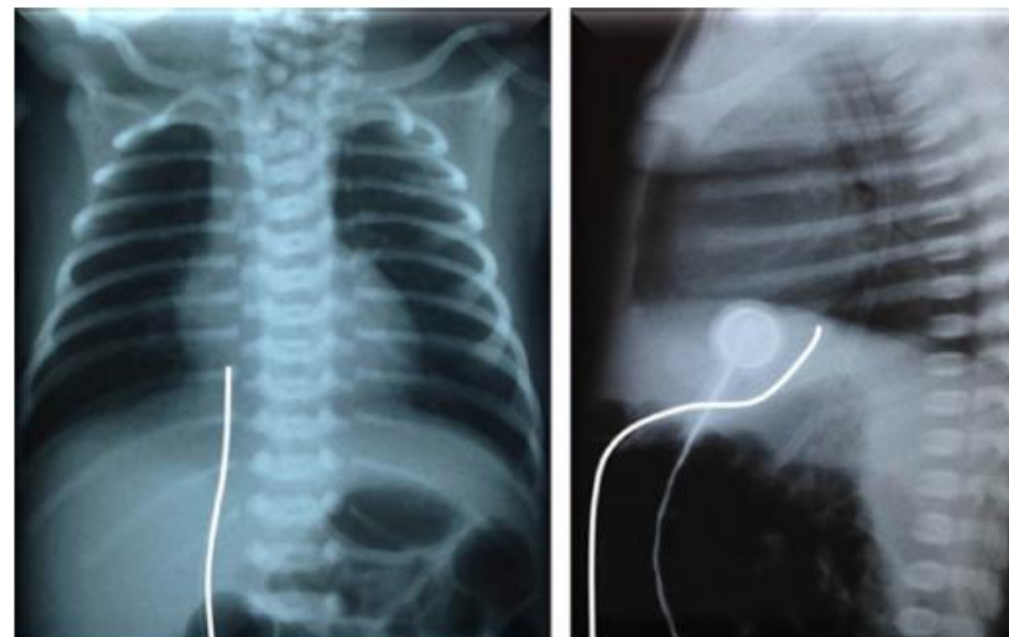
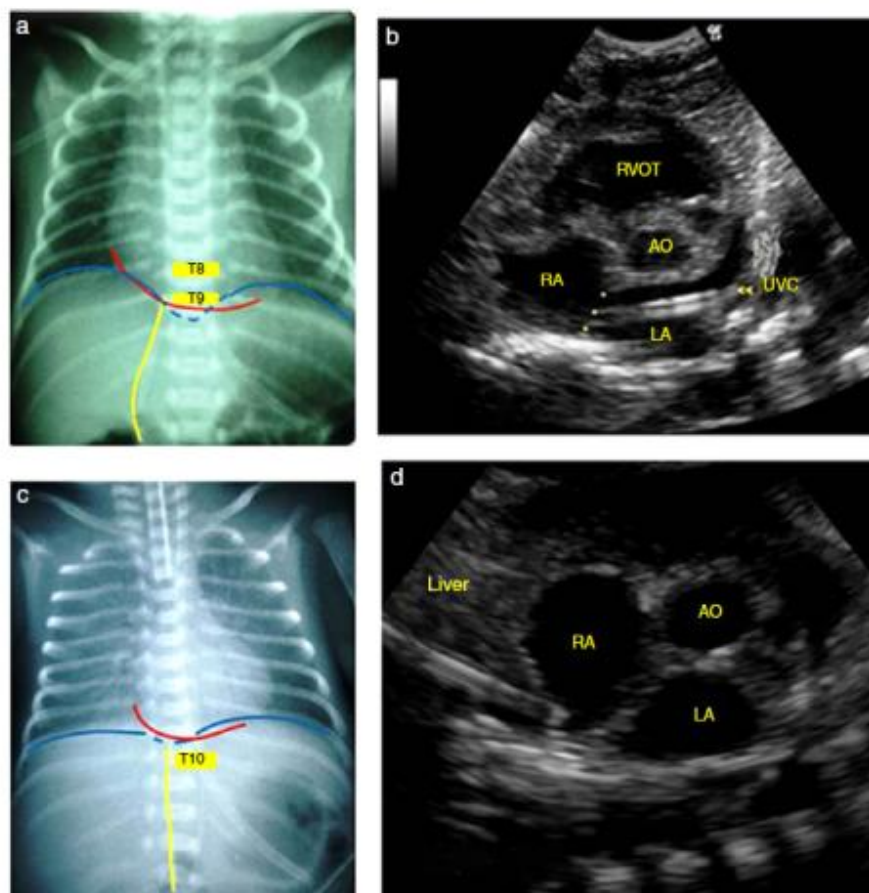
Ultrasound-guided umbilical catheter insertion in neonates
SE Fleming and JH Kim



TnEcho

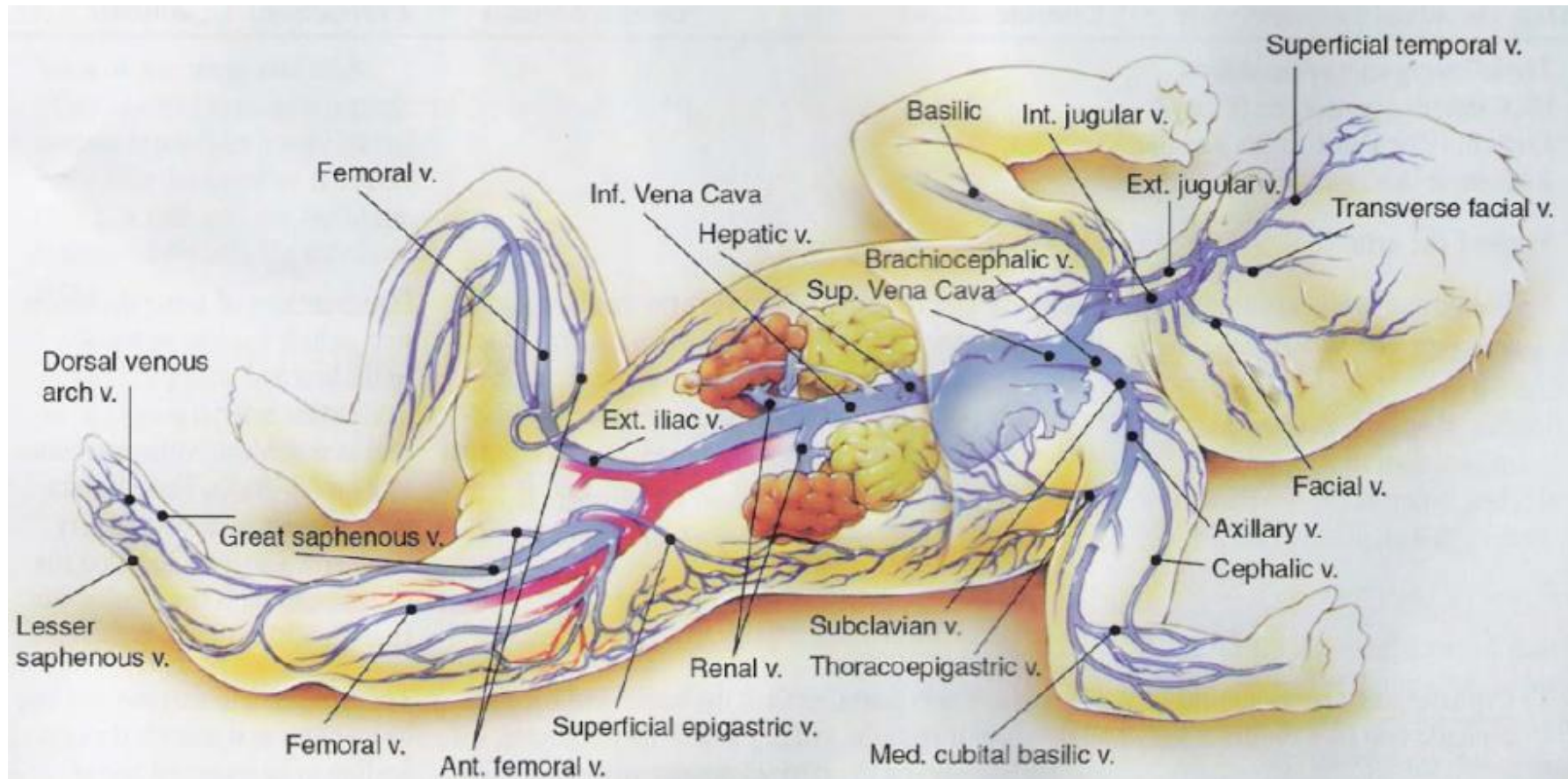




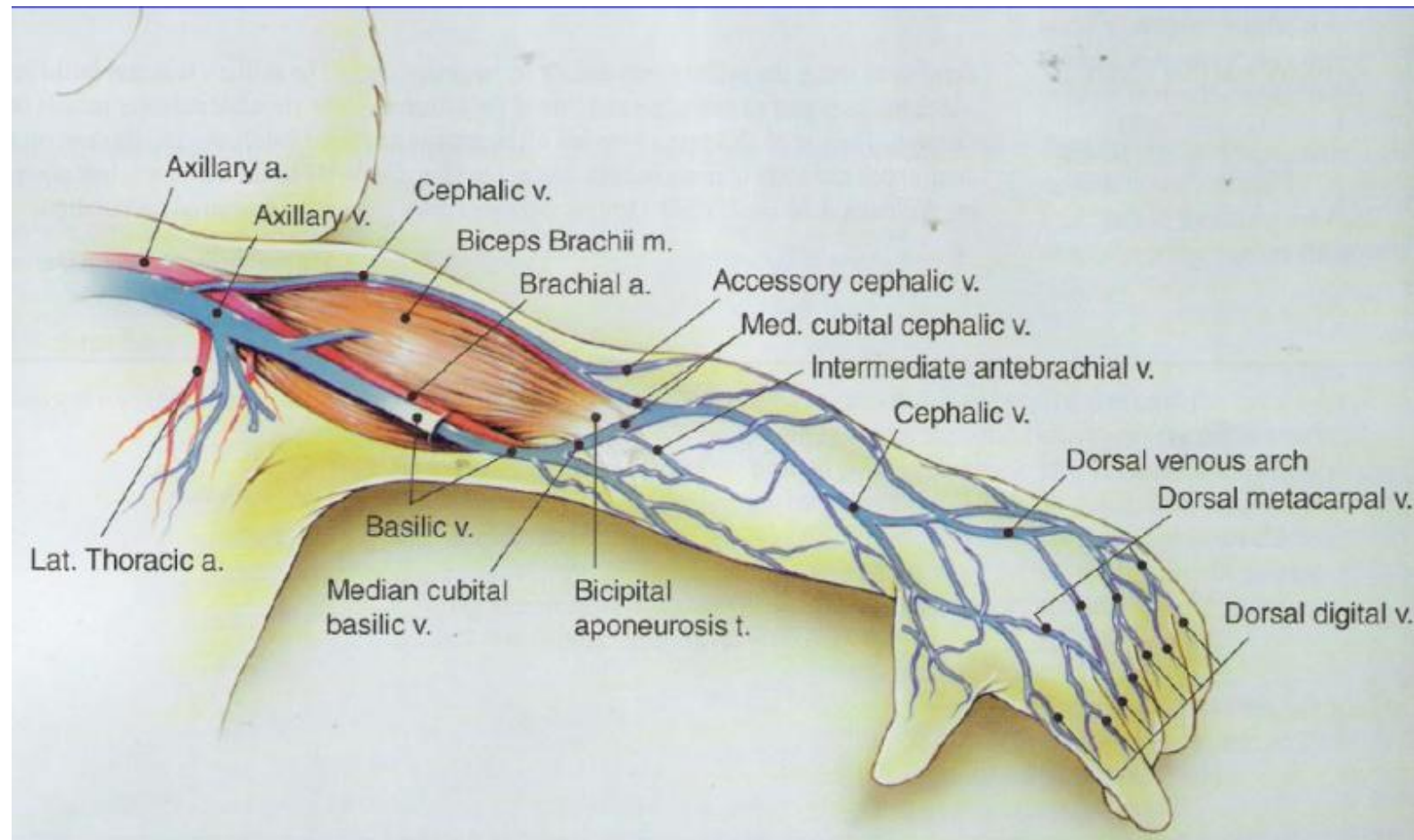


UVC in the target zone by echocardiography				
UVC in the target zone by radiographic image	YES	YES	NO	
	NO	25	34	59
		19	84	103
		44 (27.16%)	118	162

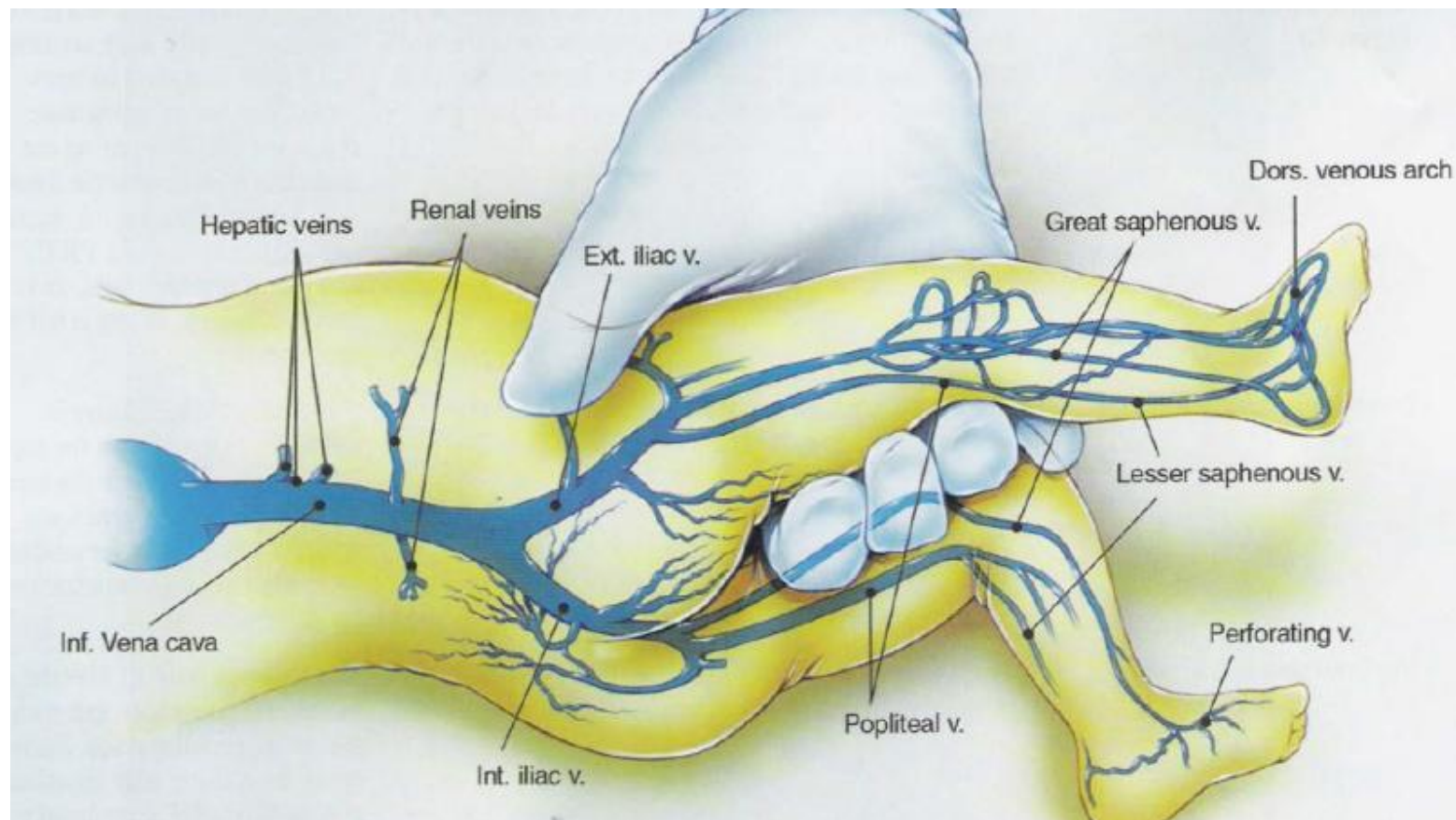
Vene



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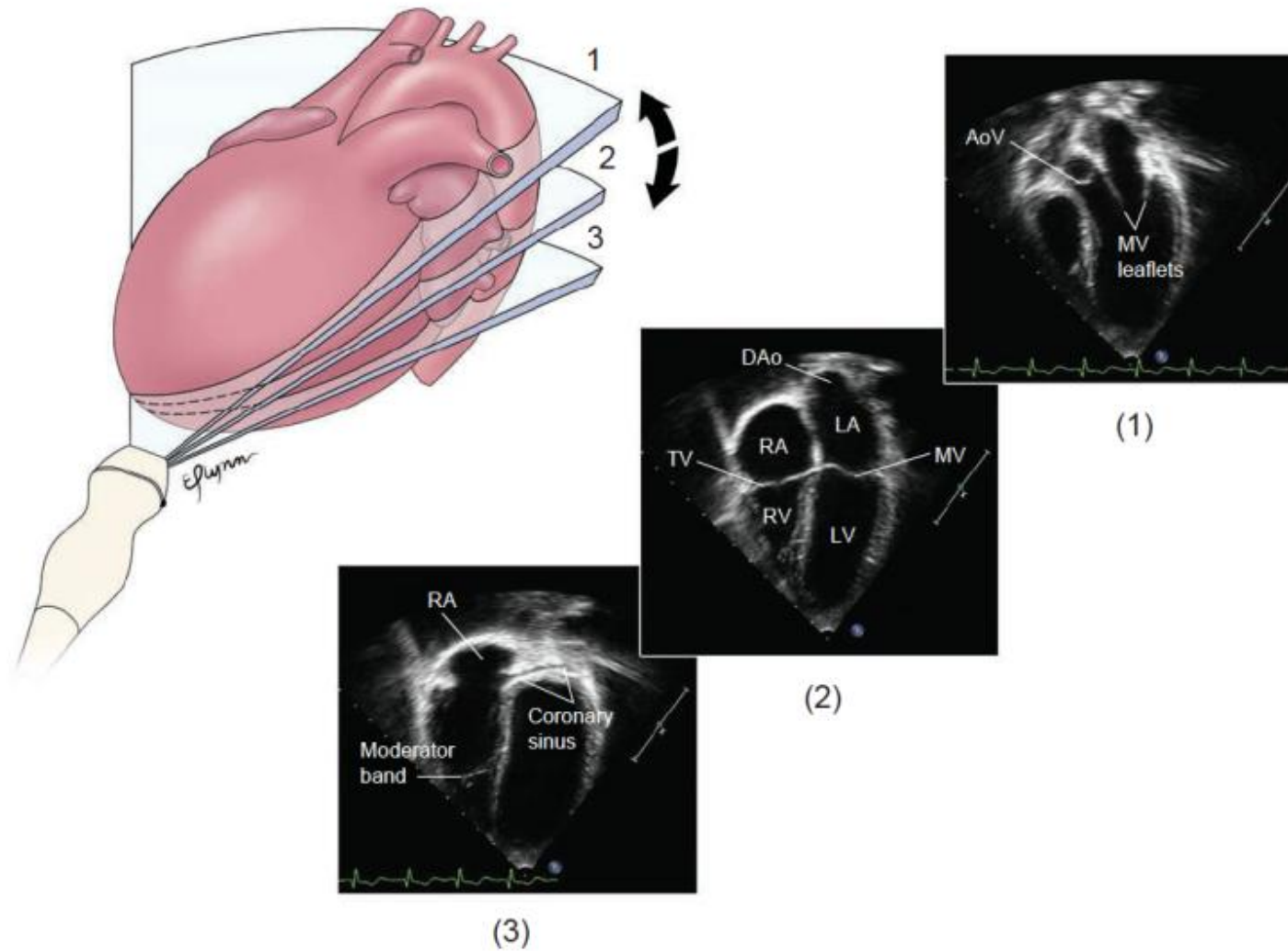




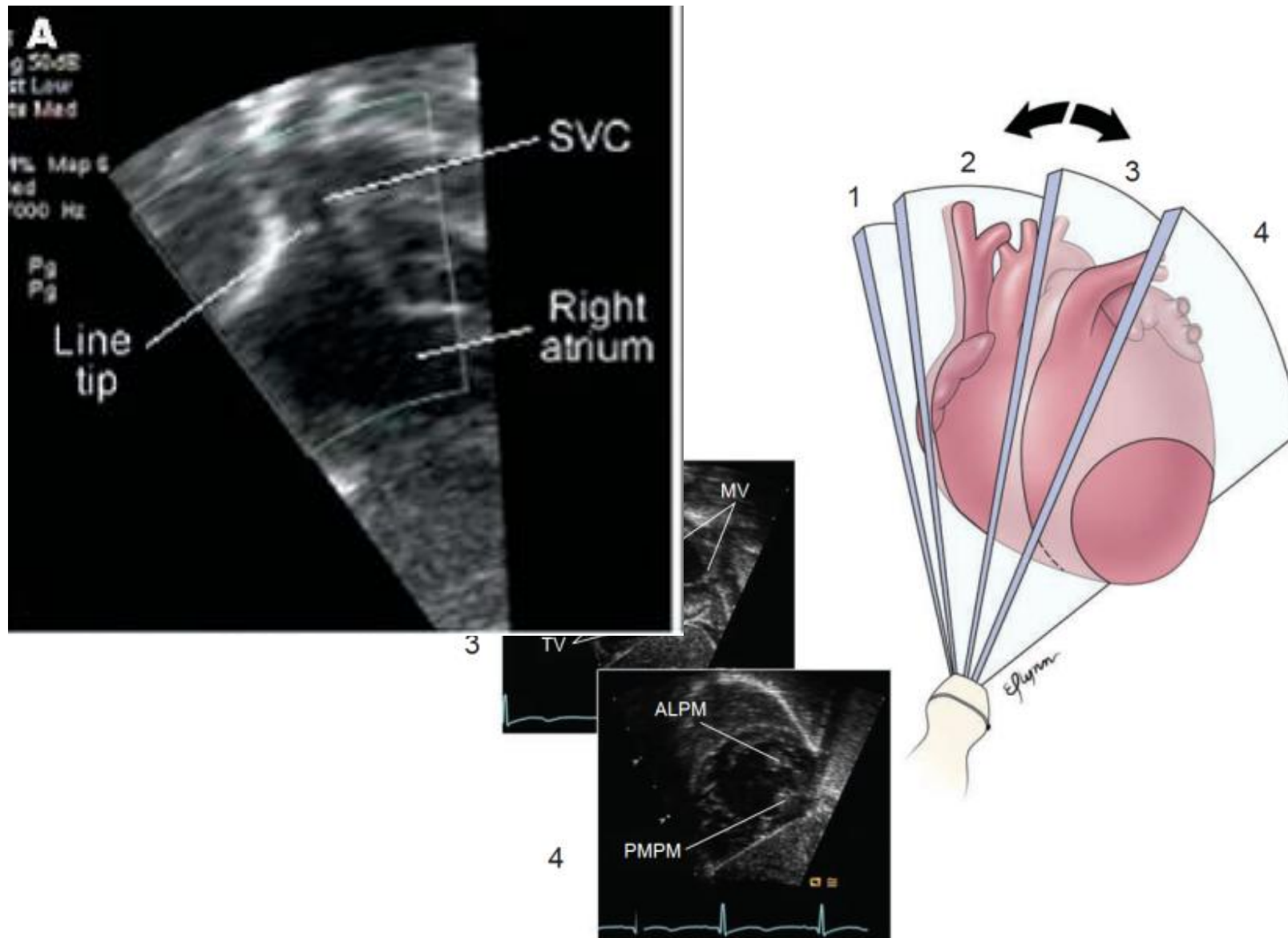




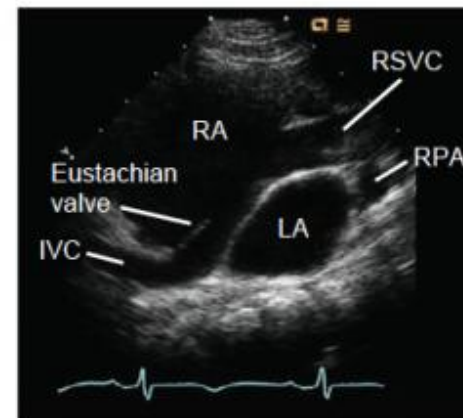
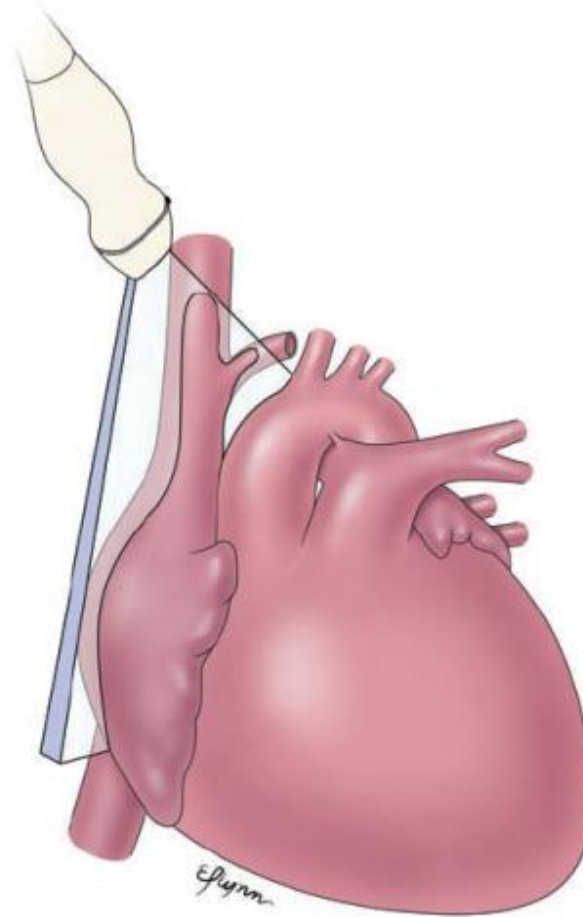
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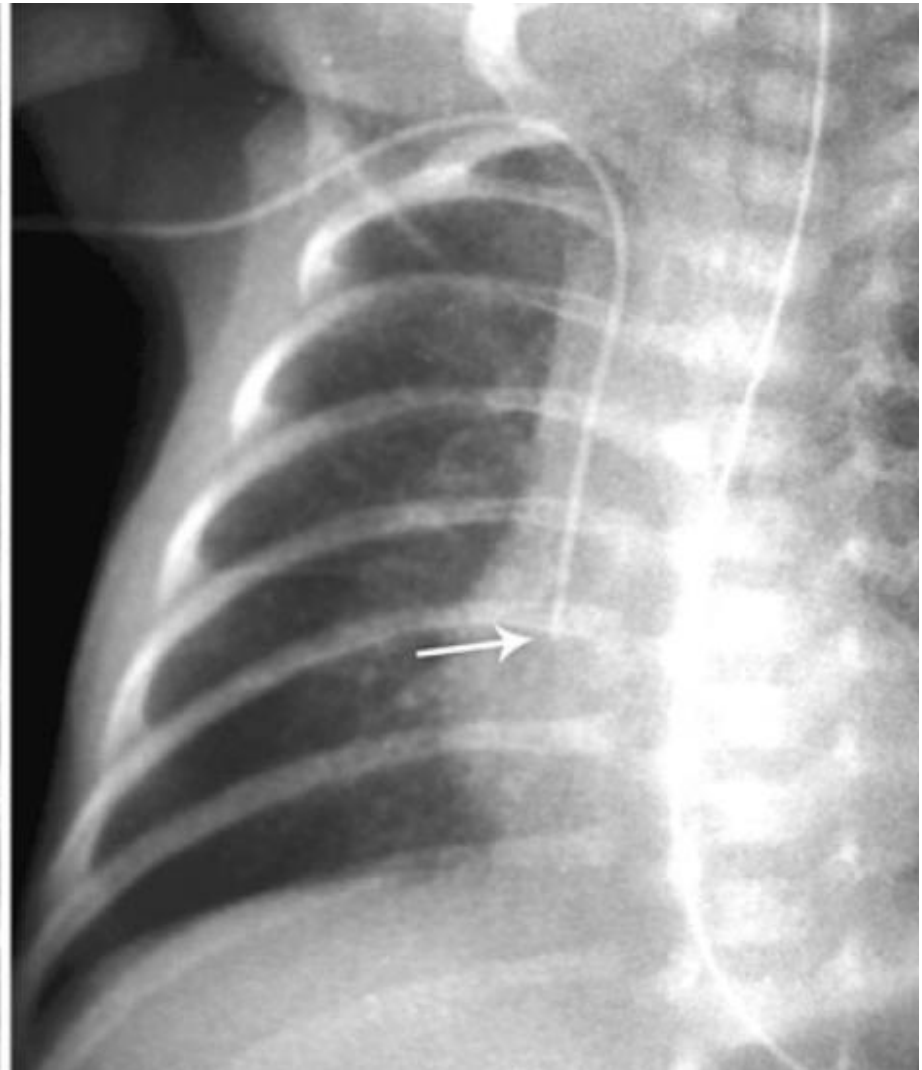
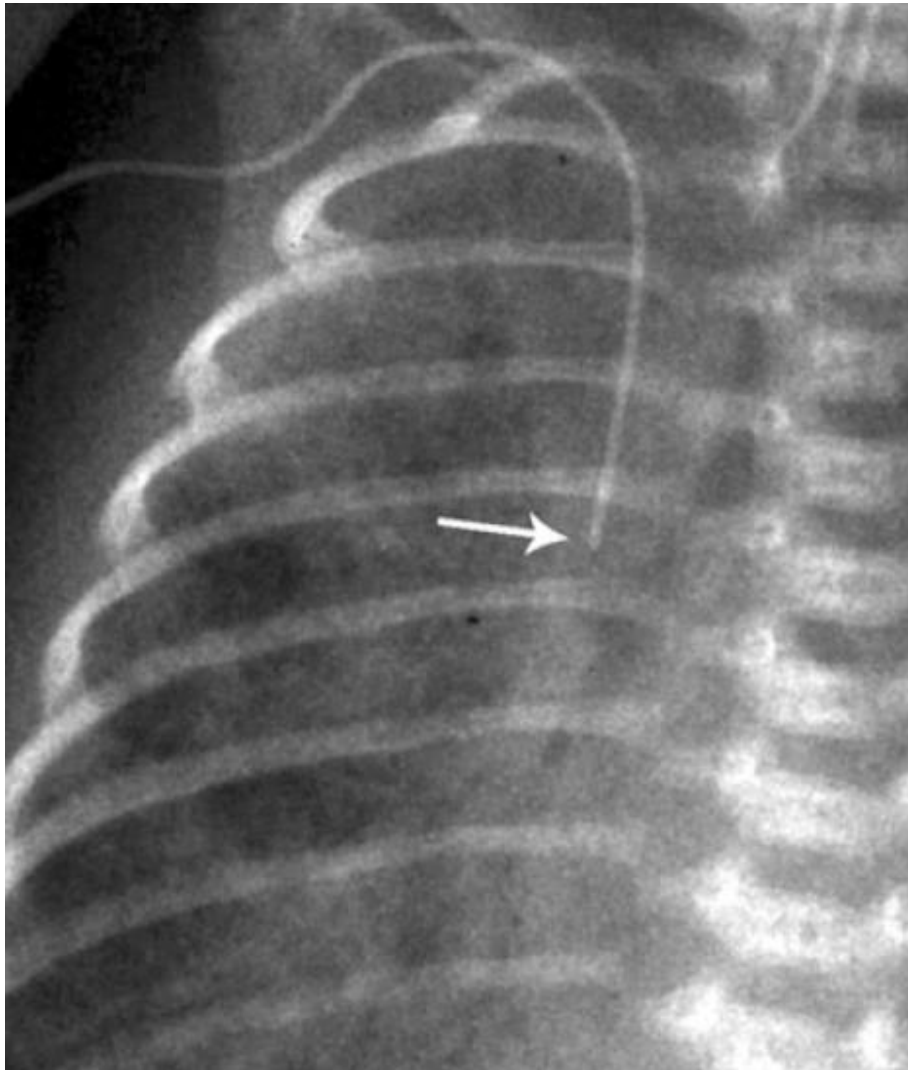


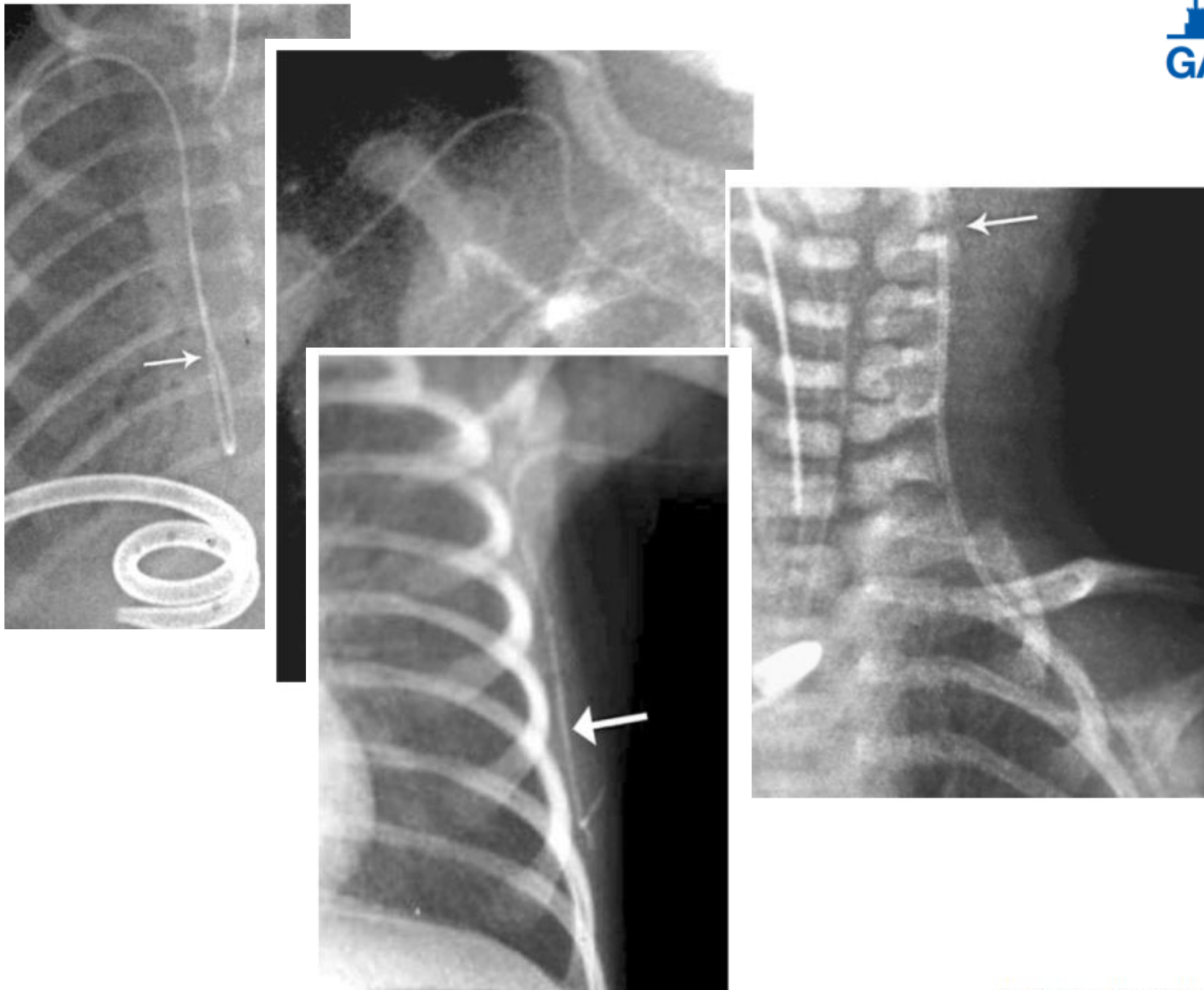
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Post-impianto

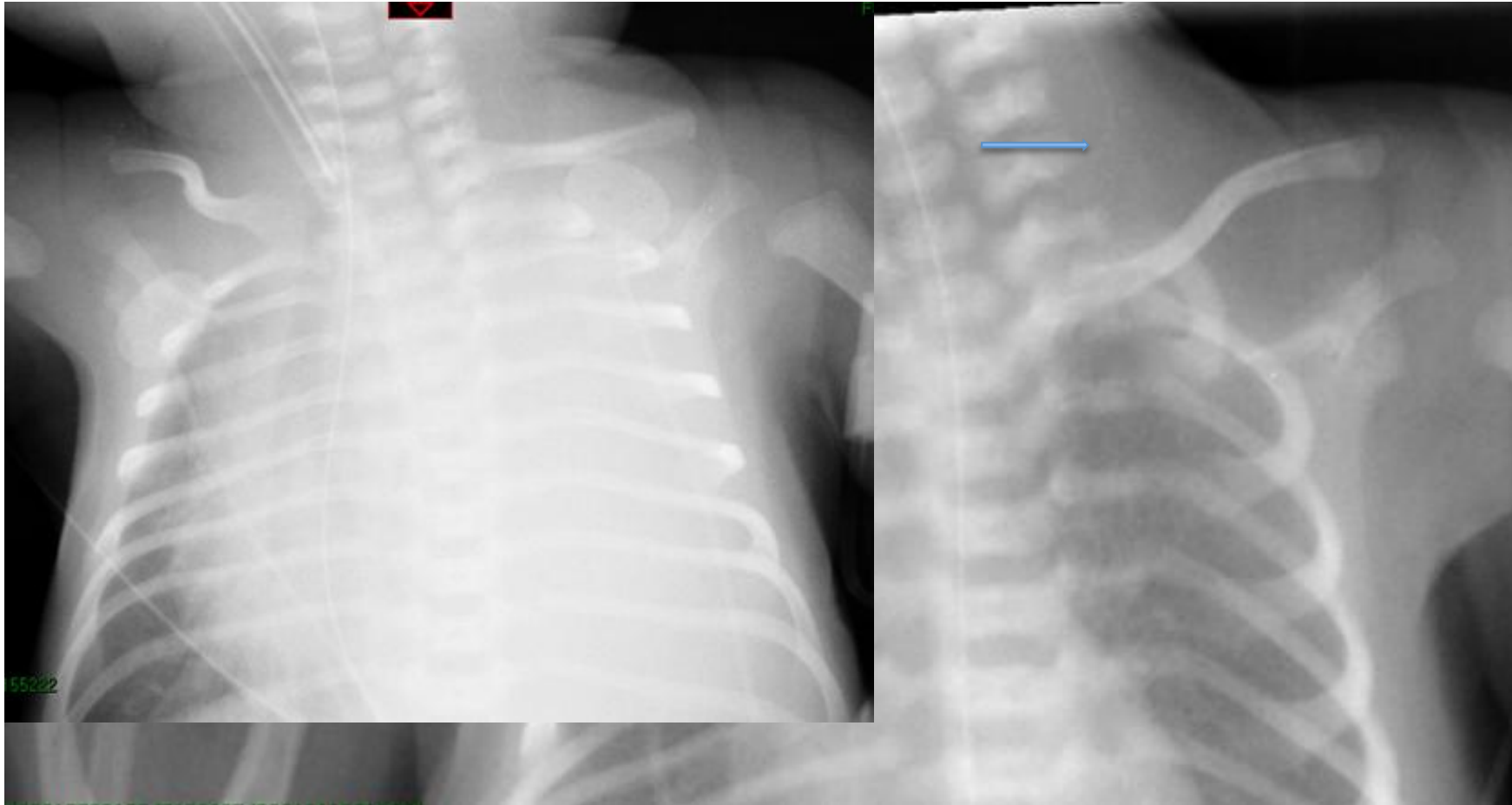
Table 1 Ultrasound findings of catheter tip position

	First ultrasound, n=65	Second ultrasound, n=52	Third ultrasound, n=42	Fourth ultrasound, n=24
Good position, n (%)	25 (38.5)	40 (77)	24 (57)	13 (54.2)
Malposition, n (%)	40 (61.5)	12 (23)	18 (43)	11 (45.8)
Right atrium, n (%)	17 (26.2)	6 (11.5)	9 (21)	1 (4.2)
Foramen ovale, n (%)	6 (9.2)	1 (2)	2 (5)	2 (8.3)
Left atrium, n (%)	15 (23.1)	3 (5.7)	–	1 (4.2)
Hepatic vessels, n (%)	2 (3)	2 (3.8)	7 (17)	7 (29.1)
Migration rate, n (%)	–	9 (17)	13 (31)	7 (29.1)

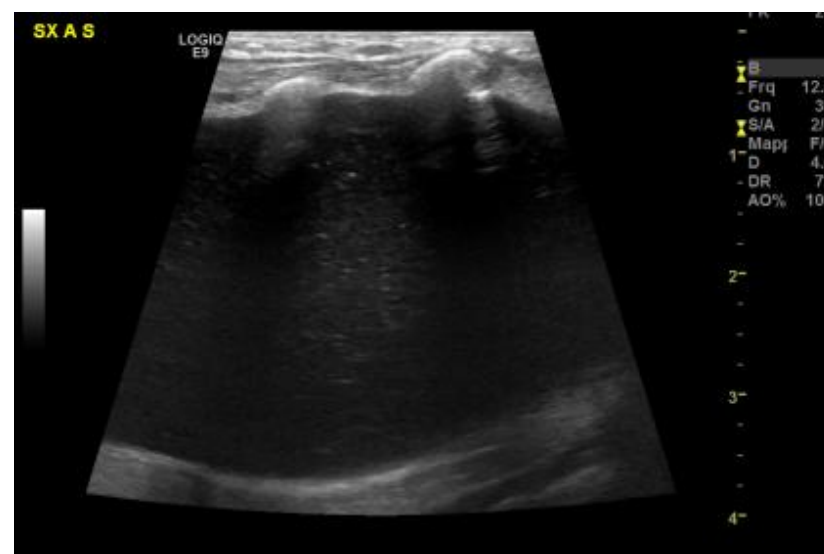
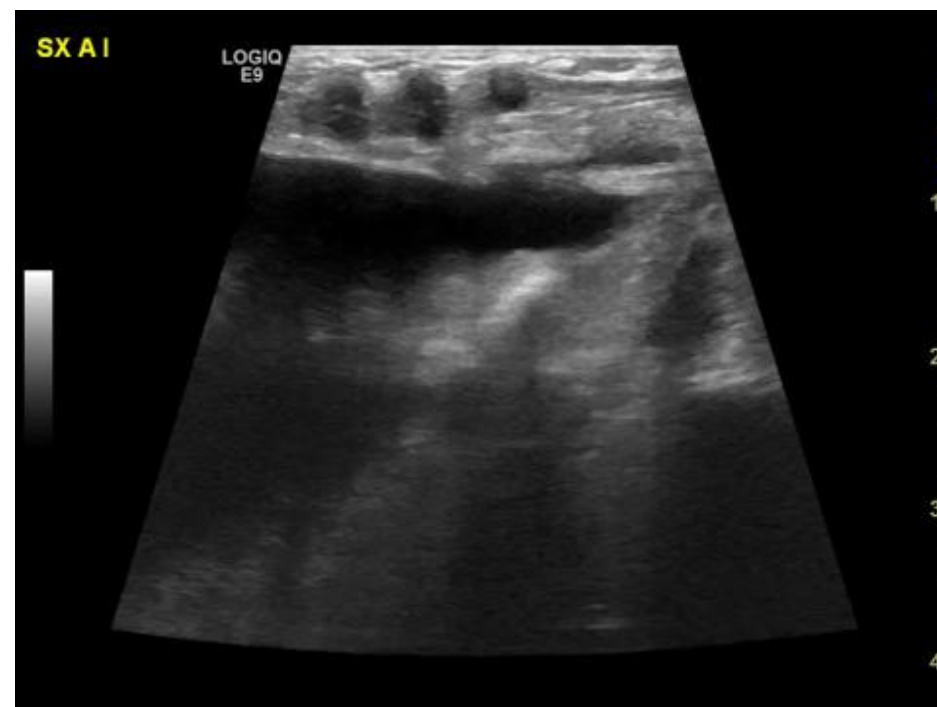
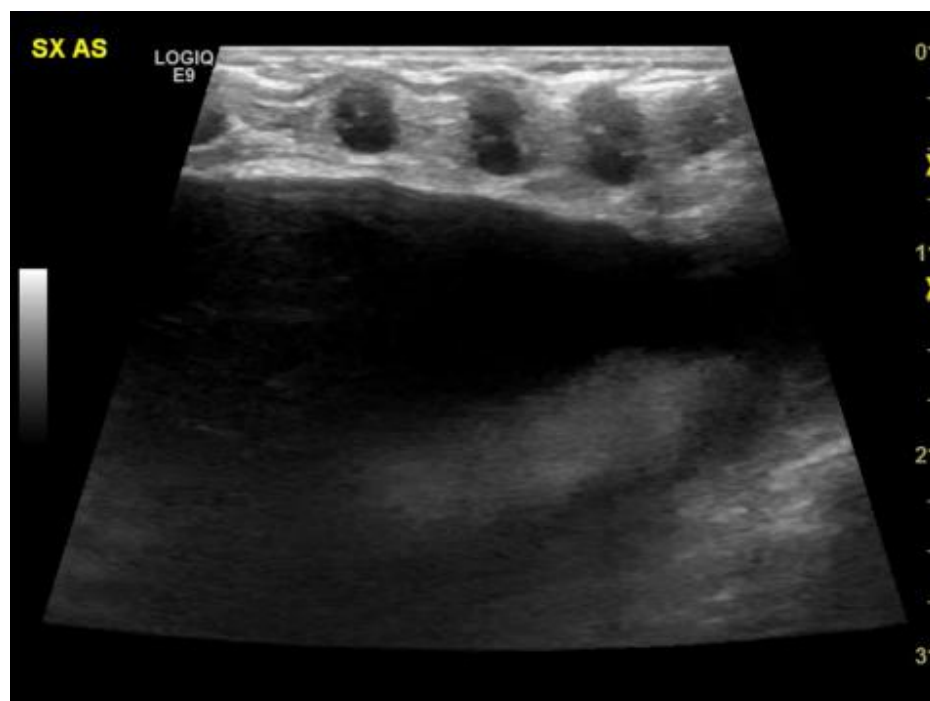
Franta J, et al. *Arch Dis Child Fetal Neonatal Ed* 2017;**102**:F251–F255. doi:10.1136/archdischild-2016-311202

Line type	N	Migration 1 h	Migration 24 h
		% (n) (95% CI)	% (n) (95% CI)
UVC	41	36% (15) (21–51%)	23% (9) (9–36%)
PICC (total)	63	23% (15) (12–33%)	11% (7) (3–18%)
UE PICC	25	28% (7) (10–46%)	28% (7) (10–46%)
LE PICC	38	21% (8) (7–38%)	0

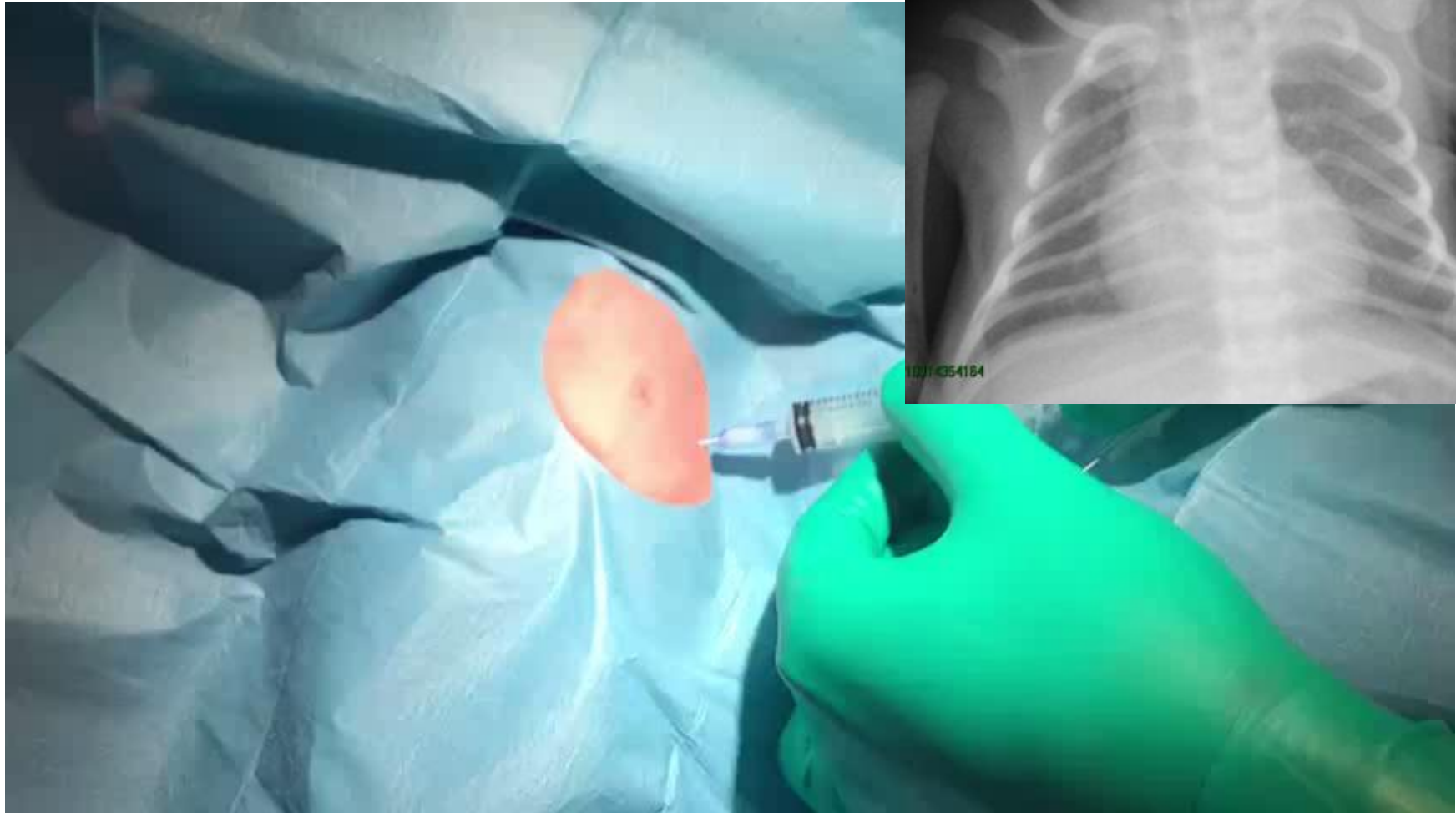
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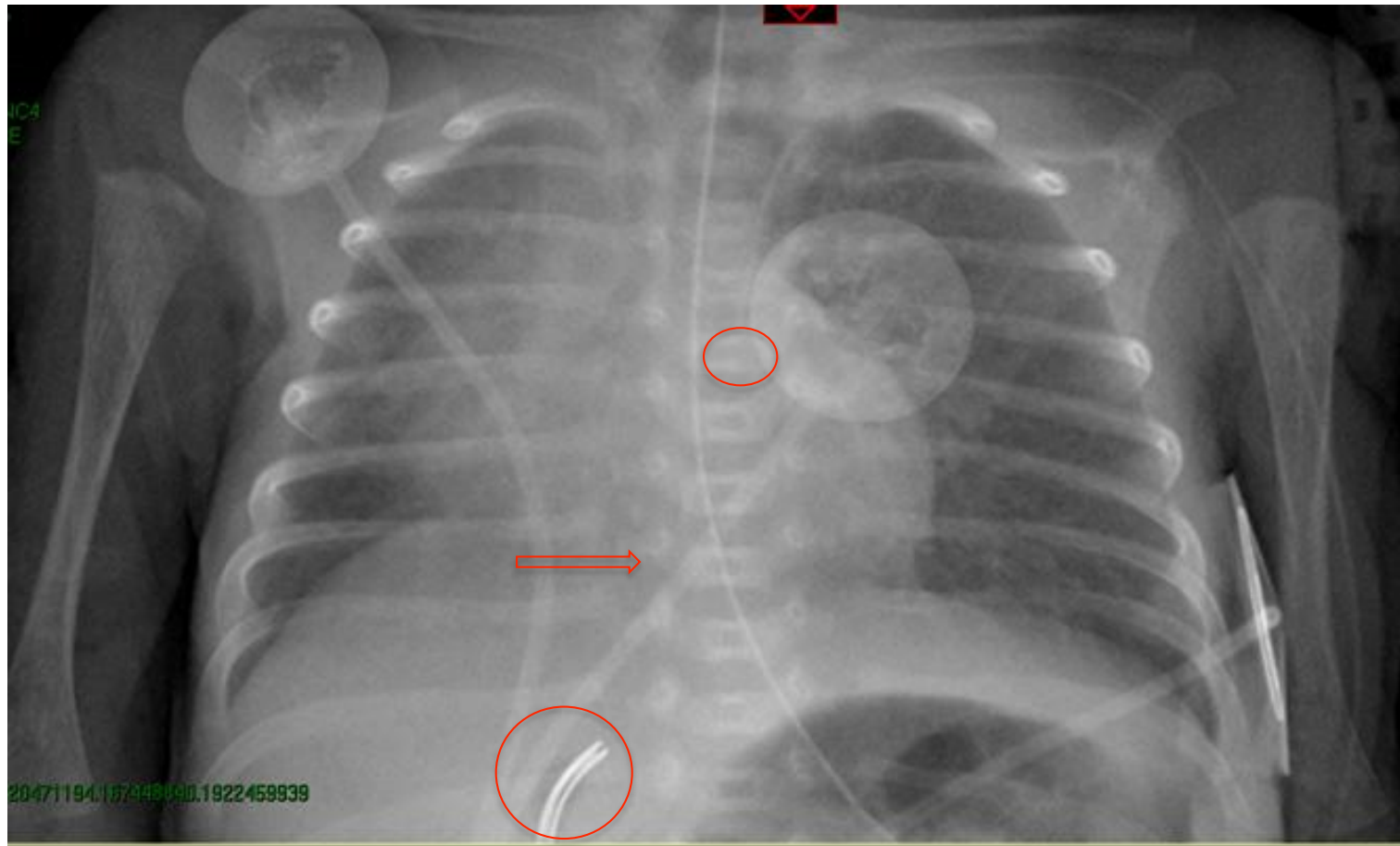
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Complicanze non infettive

Table 2. Reasons for Nonelective Removal of PICCs.

Reason	Definition	Incidence per 1,000 Catheter-days
Catheter-associated bloodstream infection	A laboratory-confirmed bloodstream infection where a PICC line was in use during the 48-hr period before development of the infection	11.5
Catheter occlusion	Inability to flush the catheter with saline solution using a 10 ml syringe	5.0
Catheter dislodgment	Inadvertent partial or complete removal of the catheter from the neonate's body	4.4
Catheter rupture	Rupture of the external segment of the catheter	4.0
Extravasation	Escape of potentially injurious solutions from the walls of the vein causing skin redness, edema, and discoloration	1.8
Extremity edema	Mild to severe edema in the area surrounding the catheter insertion site or in the extremity associated with the catheter	1.6
Phlebitis	Inflammatory reaction in the vein associated with the placement and dwell time of a catheter, identified by erythema or palpable venous cord at the vein	1.5

Reason	Definition	Incidence per 1,000 Catheter-days
Tip migration	Spontaneous movement of the tip of the catheter at any time while in situ, leading to a peripheral location as identified by radiograph	1.1
Infiltration	Escape of a solution from the walls of the vein causing skin redness, edema, and discoloration	0.3
Cardiac tamponade	Infusion of intravenous solution directly contacting the myocardium	0.2
Thrombosis	Mild to severe edema in extremity associated with the catheter followed by a blood clot visualized with ultrasound	0.2
Total		31.5

THM

- Training
- RTUS
- Controllo ecografico a 24h, 72h e a 7 giorni
- Limitare RX



GRAZIE

