



Comment je m'en sors, moi pauvre  
néphrologue, avec une sténose  
veineuse centrale ?



# Cas clinique

**Homme 41ans**

*Néphropathie IgA*

*Hémodialyse 21ans*

*1ere greffe à 22ans*

*Retour en hémodialyse à 24ans*

*2eme greffe à 30ans*

*Retour en hémodialyse à 35ans*

**Cathéter tunnelisé droit**

2016 : thromboses multiples perte de l'abord après plusieurs reprises

Sténoses multiples, allongement de la prothèse

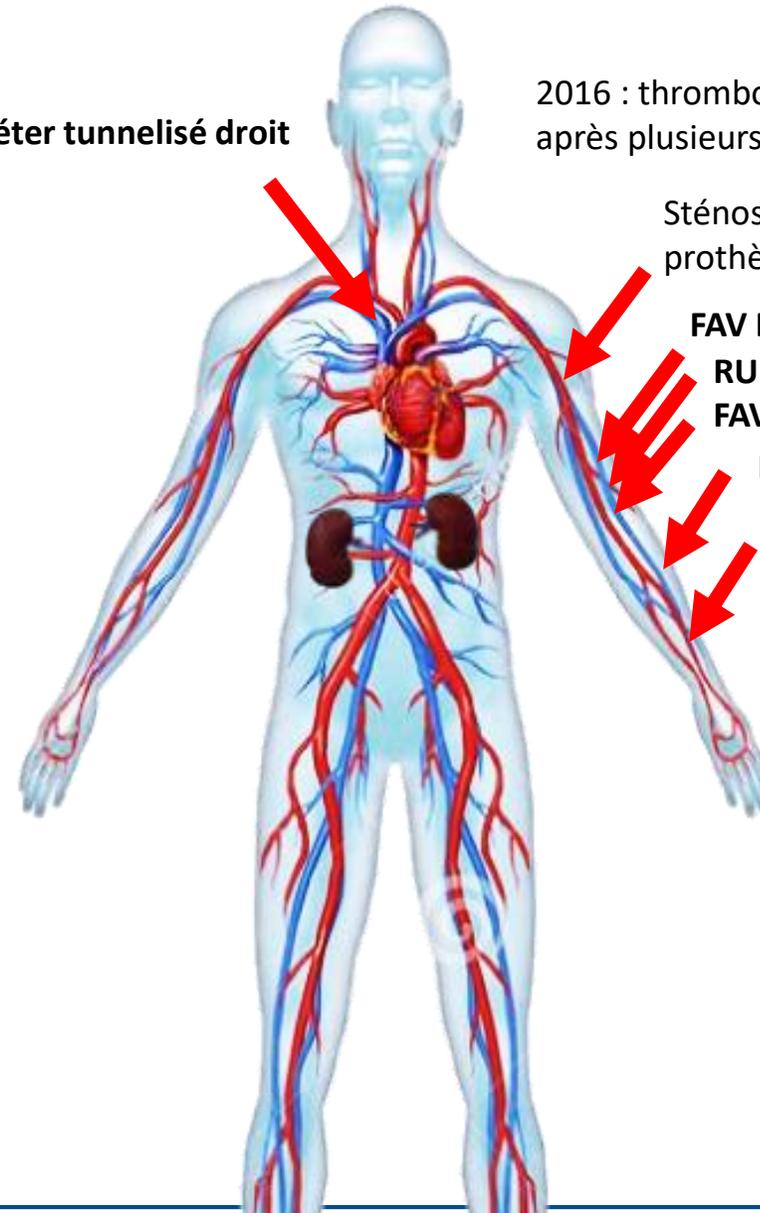
**FAV Brachio-céphalique**

**RUDI : radio-céphalique**

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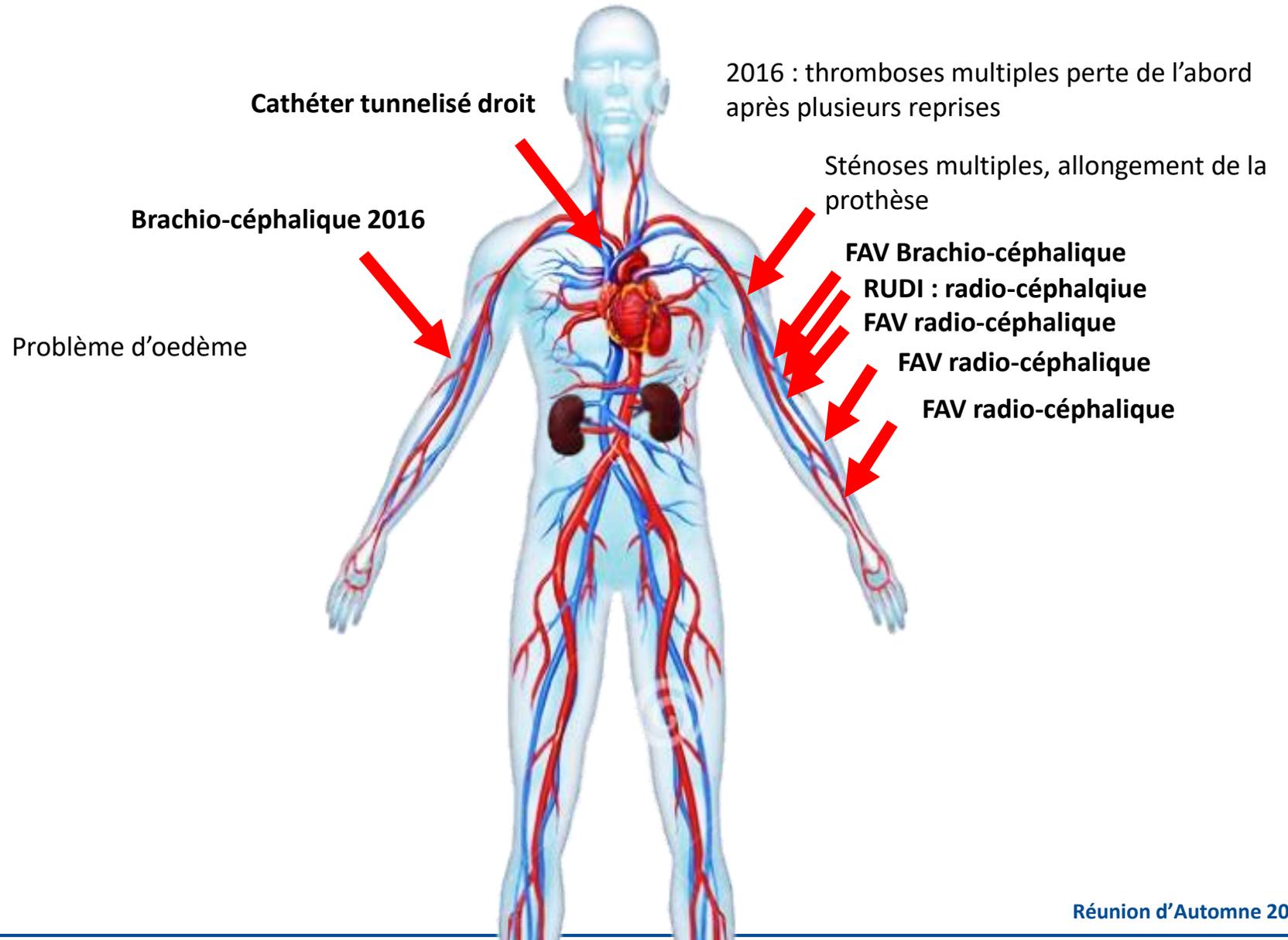
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Problème d'oedème

Brachio

2017 : Occlusion complète TVBC



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Banding 2017

Problème d'oedème

Avril 2020 : déthrombose

FAV + dilatation TVBC

**FAV Brachio-céphalique**

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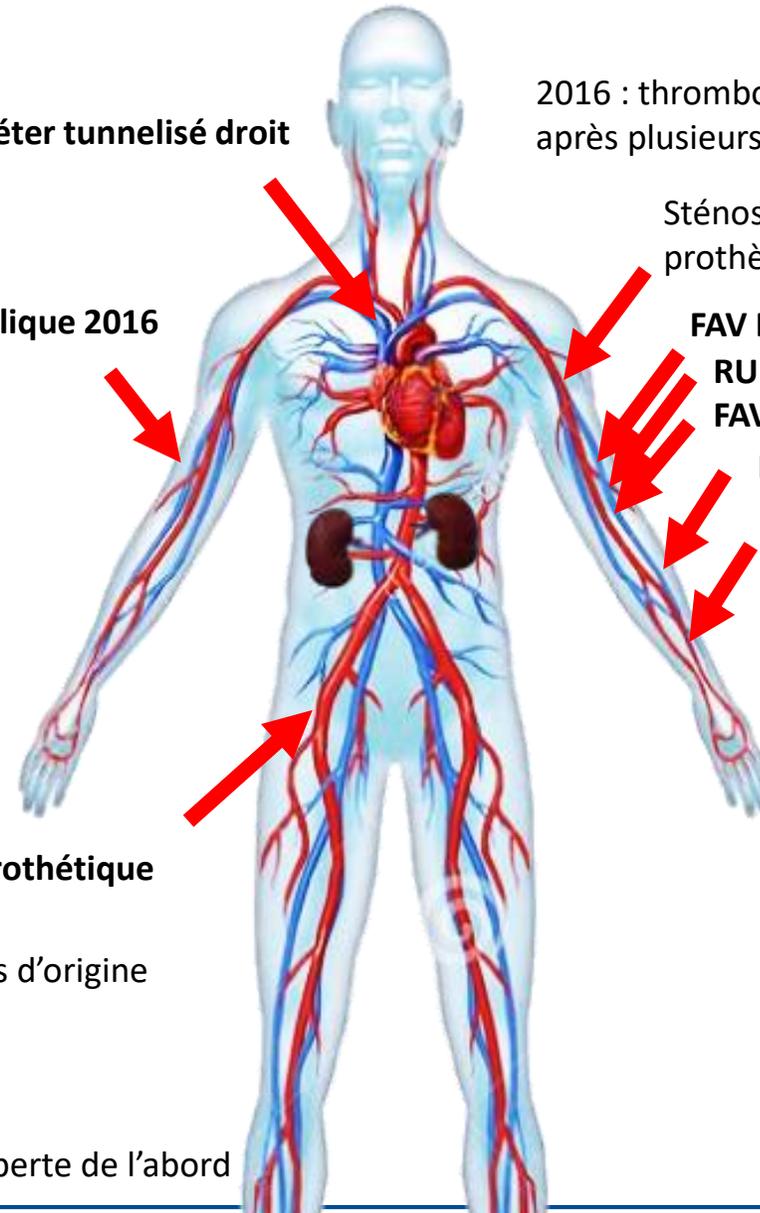
Juin 2020 : **loop prothétique fémoro-fémoral**

Juillet 2020 : sepsis d'origine prothétique

Thrombose :

Octobre 2020

Novembre 2020 : perte de l'abord



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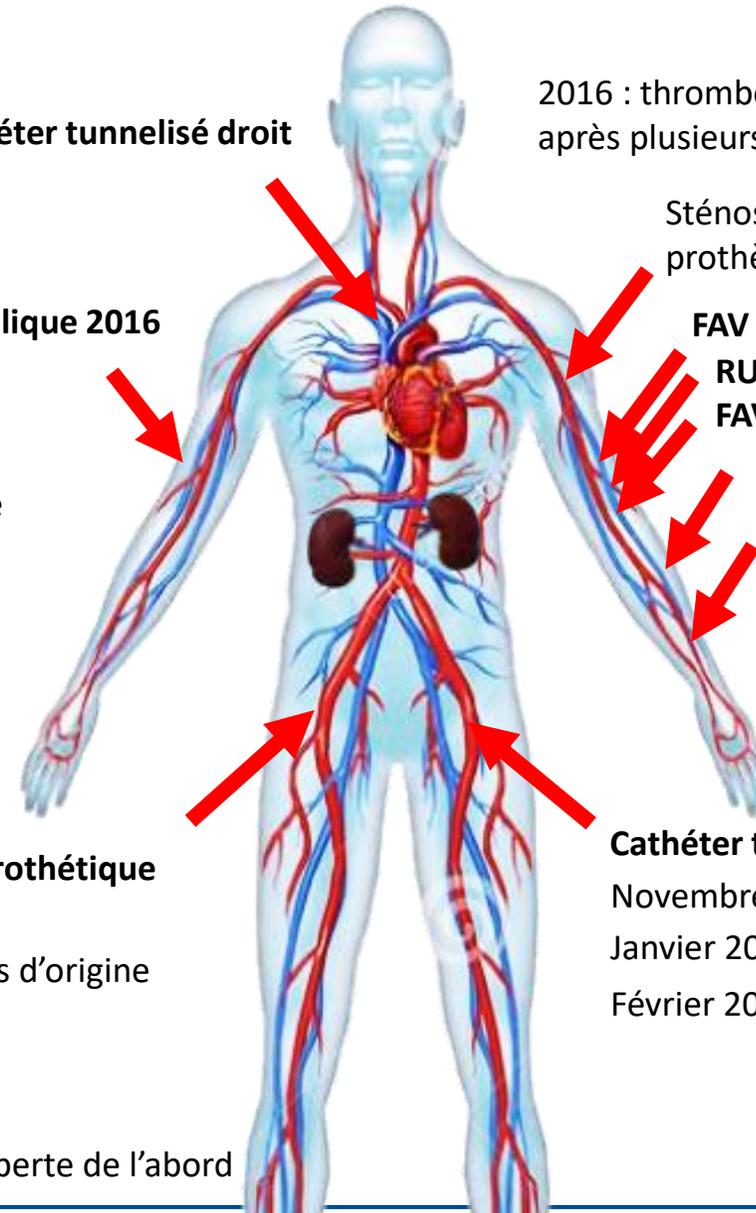
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**Cathéter tunnelisé fémoral gauche**

Novembre 2020

Janvier 2021

Février 2021



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**Solution ?**

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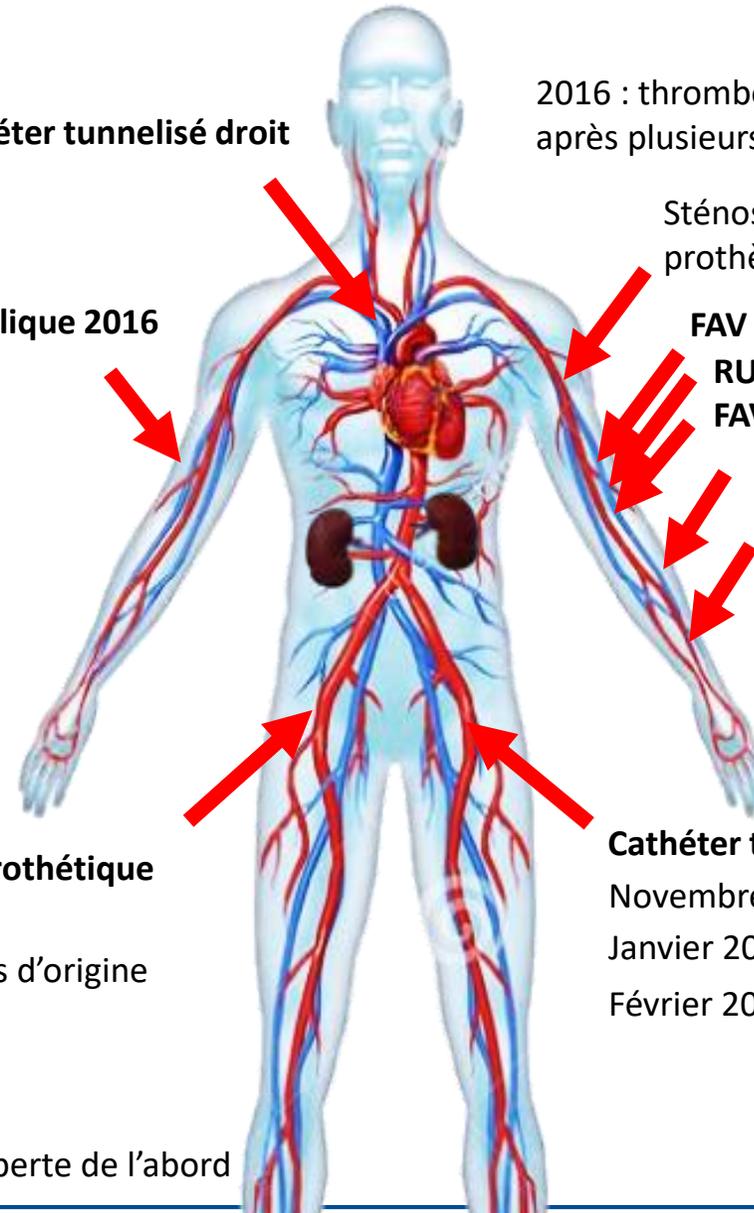
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Novembre 2020

Janvier 2021

Février 2021



# Cas clinique

Solution ?

## Surfacer® Inside-Out® Access Catheter System



# Surfacer® Inside-Out® Access Catheter System

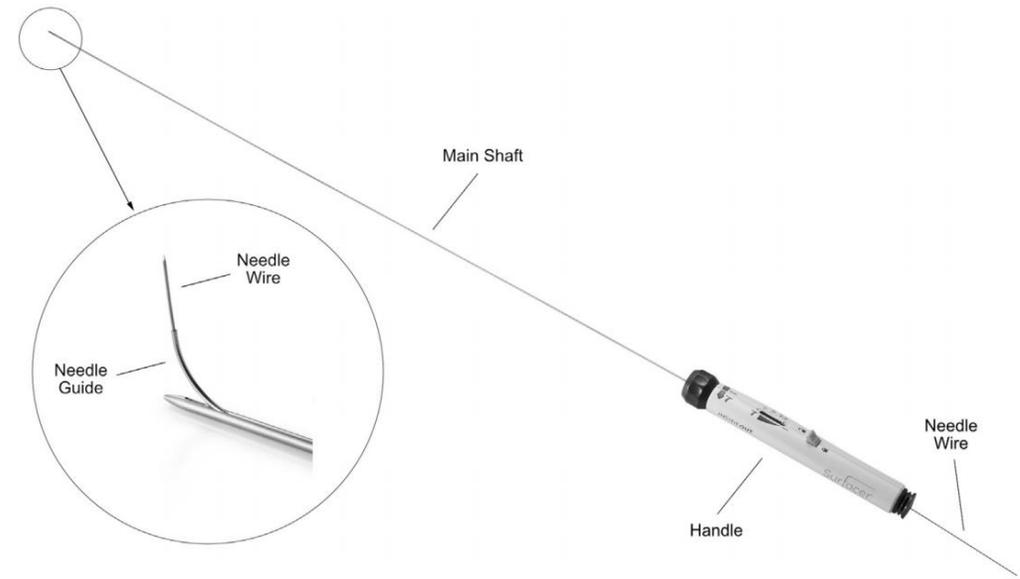
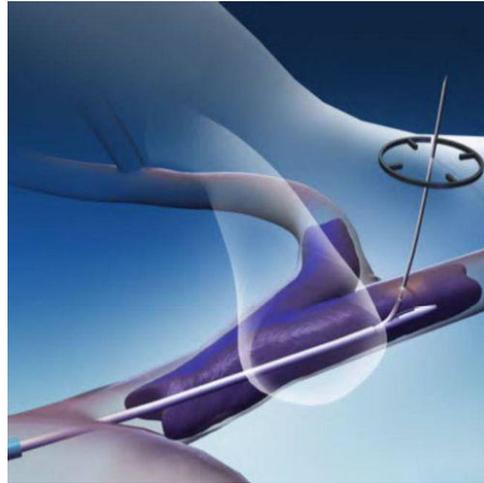
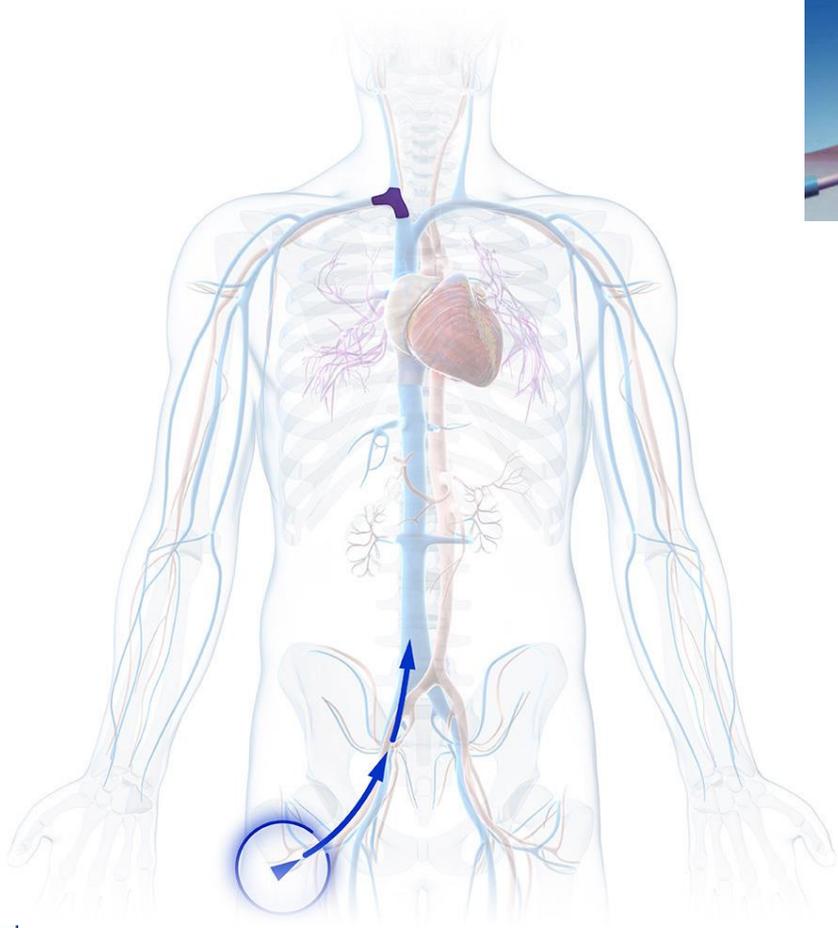
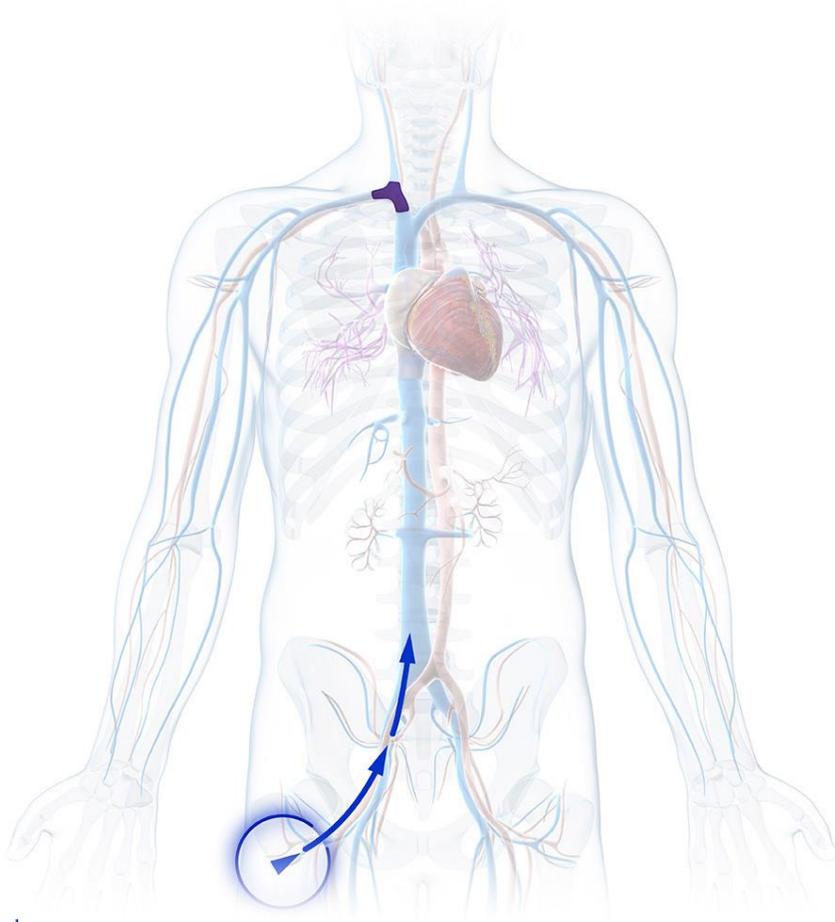


Figure 2. The Surfacer device (courtesy of Bluegrass Vascular Technologies).

# Surfacer® Inside-Out® Access Catheter System



## Indication :

Thrombose veineuse du système cave supérieur

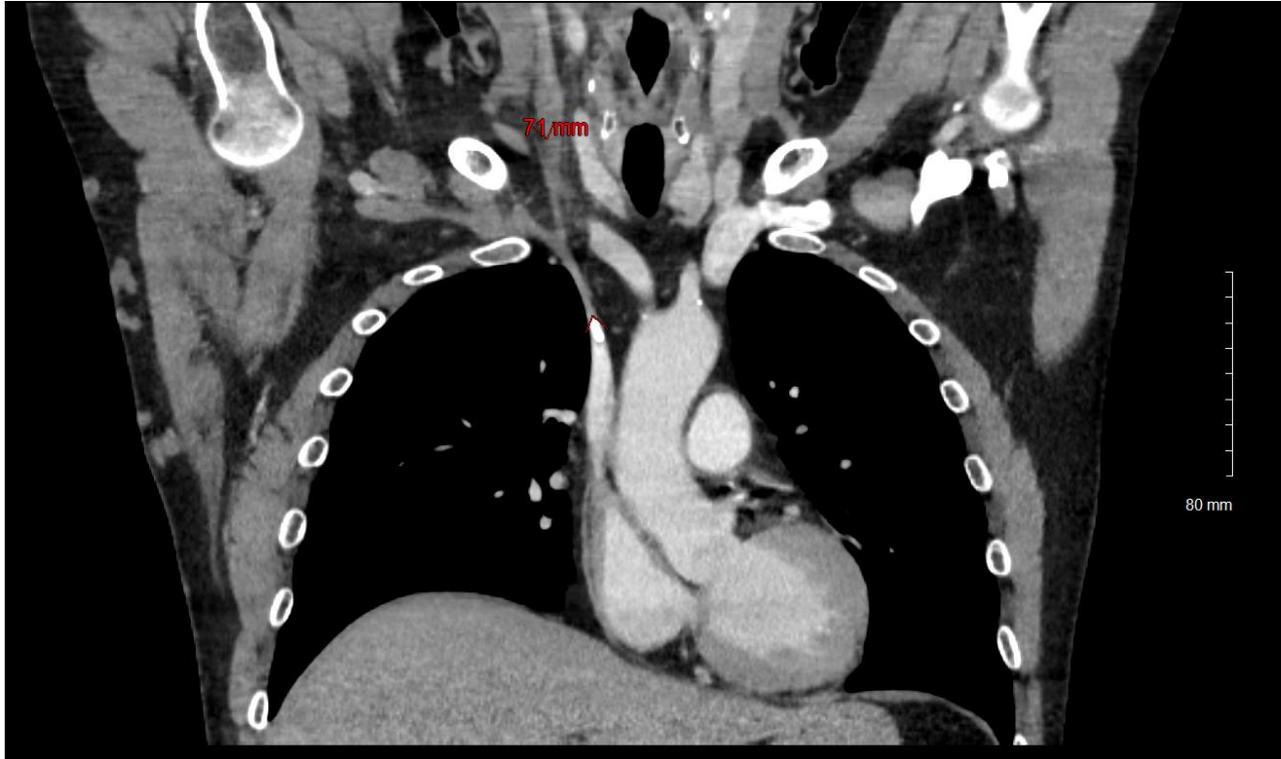
## Contre indication :

- Occlusion de la veine fémorale droite
- Occlusion de la veine illiaque droite,
- Occlusion de la veine cave inférieure.
- Thrombose aiguë.

# Surfacer® Inside-Out® Access Catheter System

Bilan pré-opératoire spécifique : Angioscanner du cou jusqu'à l'aîne

1/ confirmer le thrombose veineuse

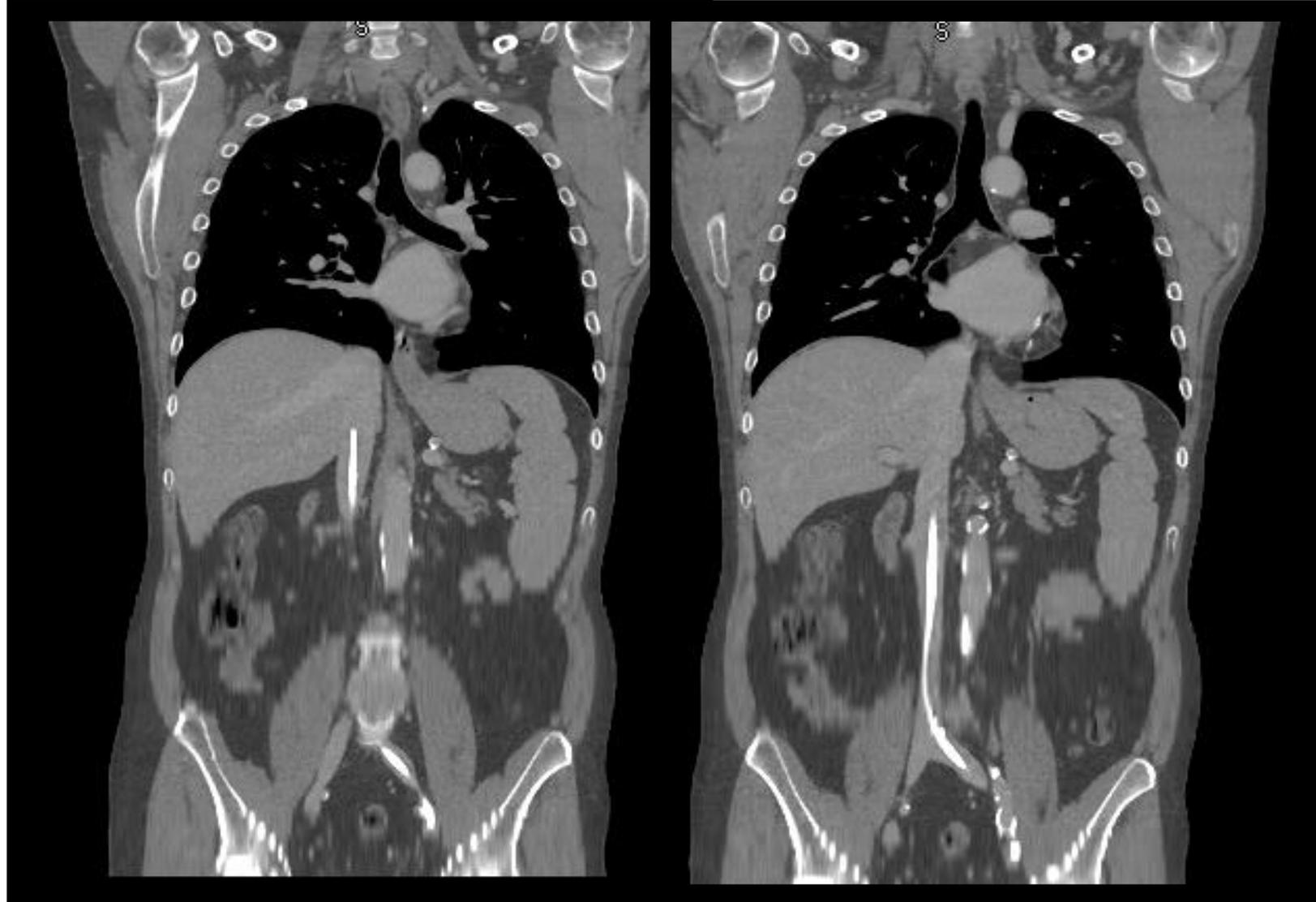


# Surfacer® Inside- Out® Access Catheter System

Bilan pré-opératoire spécifique : Angioscanner du cou jusqu'à l'aîne

1/ confirmer le thrombose veineuse

2/ confirmer la perméabilité des  
veines fémorale + iliaque + VCI + VCS



# Surfacer® Inside- Out® Access Catheter System

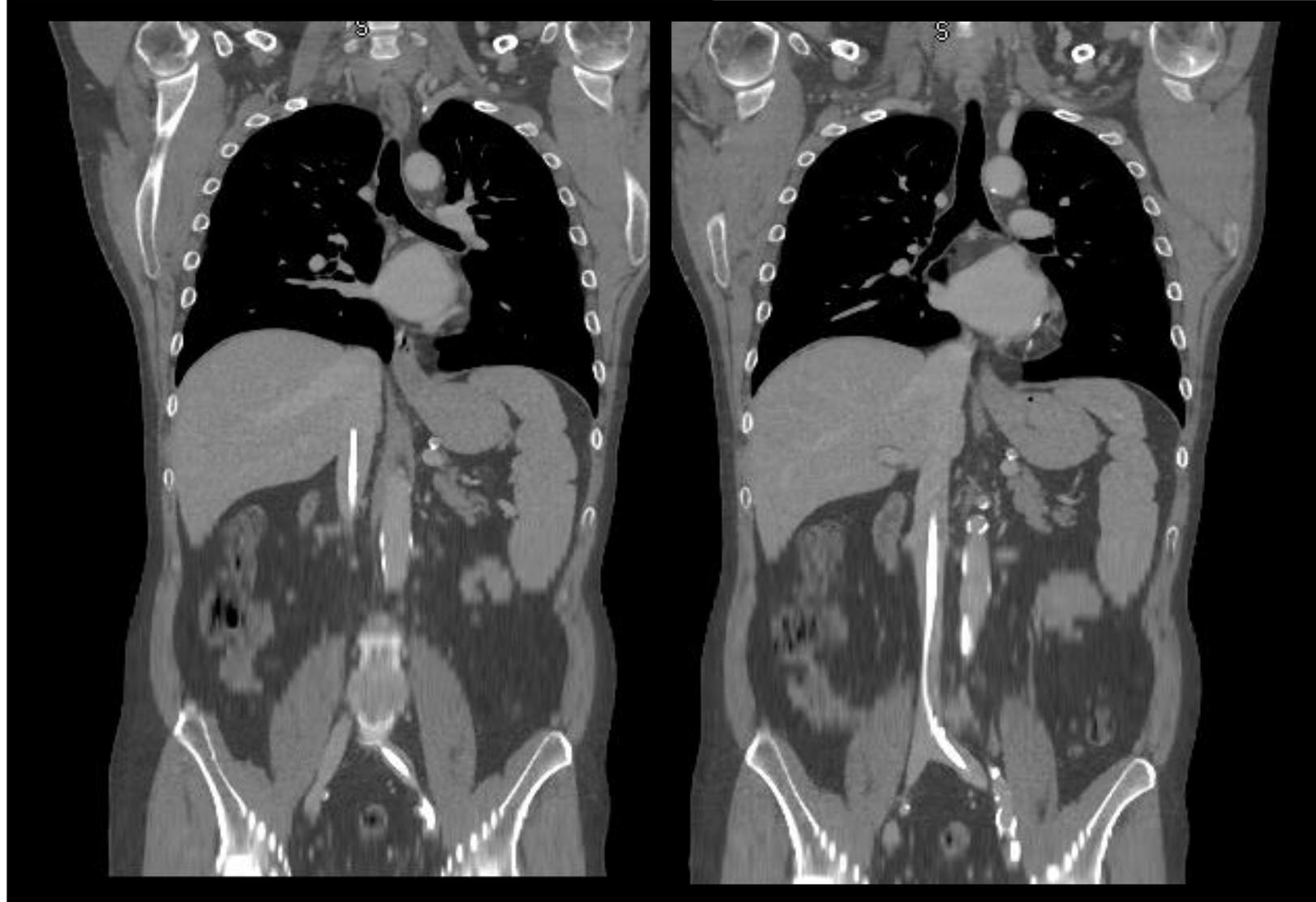
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1/ confirmer le thrombose veineuse

2/ confirmer la perméabilité des  
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3/ éliminer une malformation  
artérielle ou veineuse

4/ éliminer malformation osseuse



# Intervention



# Intervention



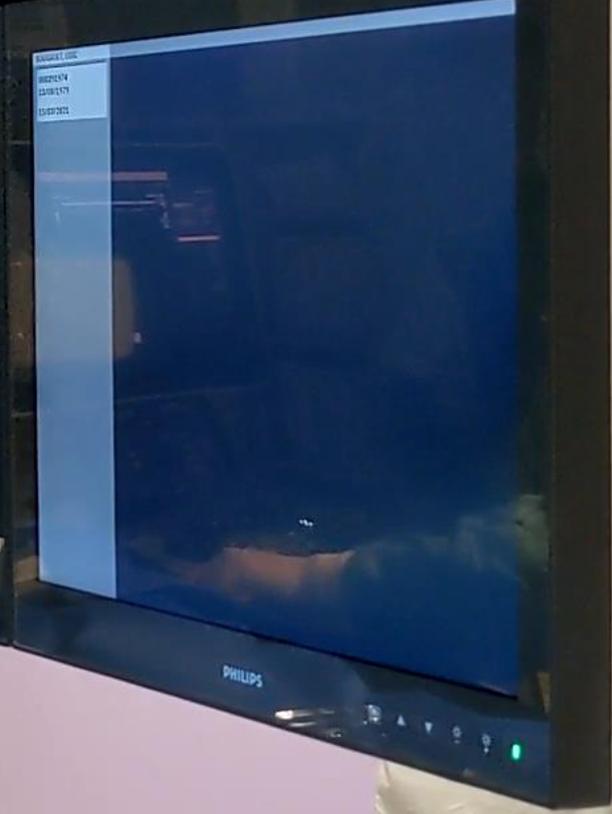
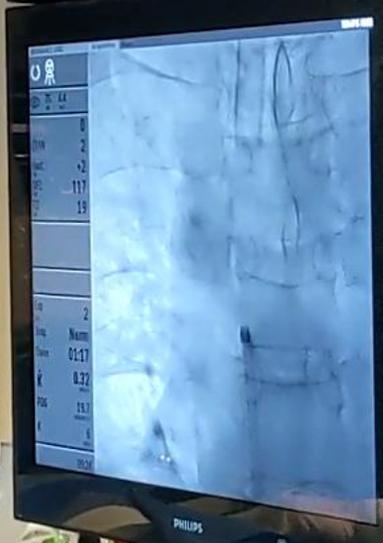




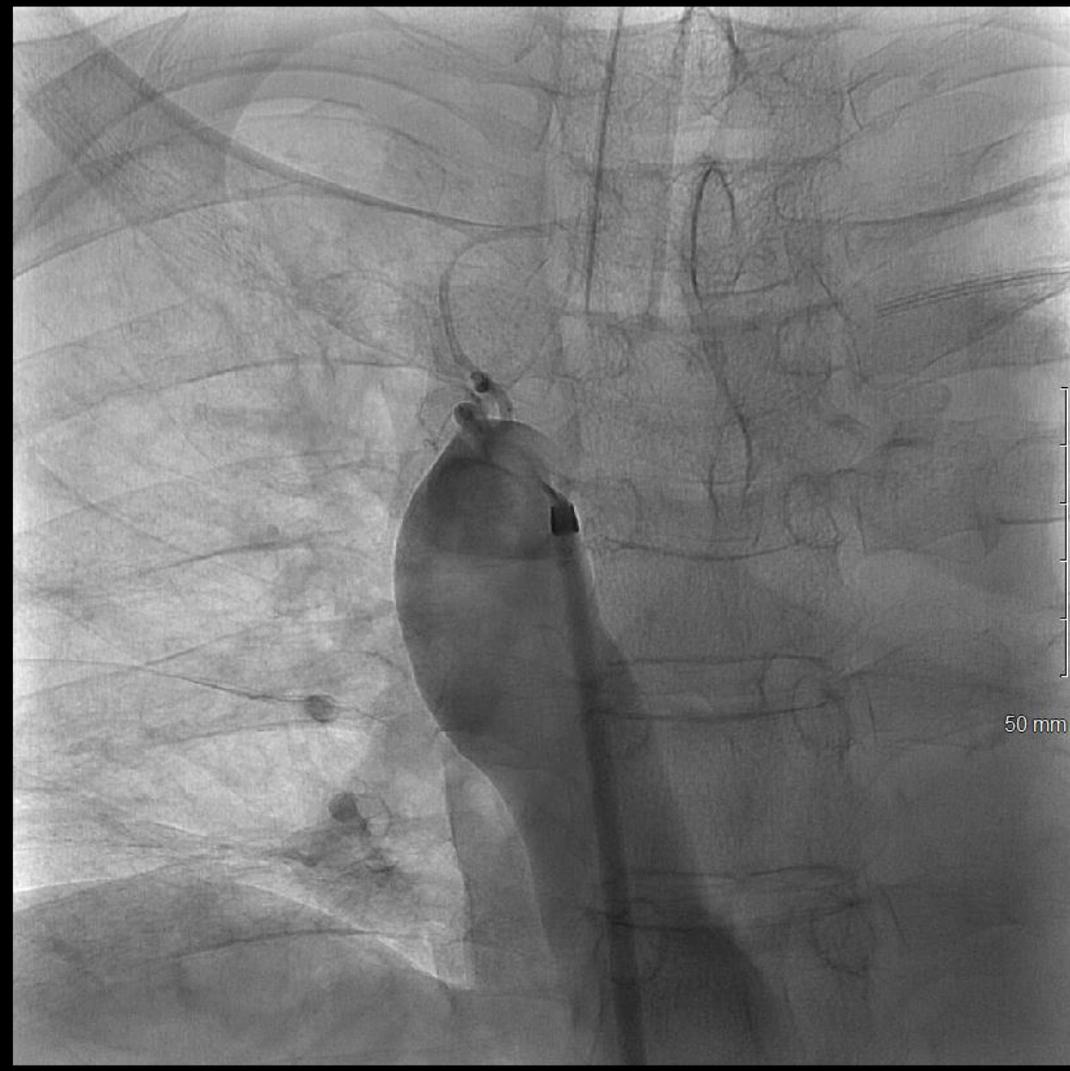
PHILIPS



PATIENT NAME	MRN	DOB	SEX	ETHNICITY	RELIGION	LANGUAGE	HEALTH CARE PROVIDER	PHYSICIAN	PHYSICIAN ASSISTANT	NURSE	PHARMACEUTIC	DIETITIAN	RESPIRATORY THERAPIST	RECORDS MANAGER	CHIEF OF STAFF	CHIEF OF CLERICAL	CHIEF OF LABORATORY	CHIEF OF RADIOLOGY	CHIEF OF SURGERY	CHIEF OF MEDICINE	CHIEF OF PEDIATRICS	CHIEF OF OBSTETRICS	CHIEF OF GYNECOLOGY	CHIEF OF PSYCHIATRY	CHIEF OF NEUROLOGY	CHIEF OF ORTHOPEDICS	CHIEF OF OPHTHALMOLOGY	CHIEF OF OTOLARYNGOLOGY	CHIEF OF PLASTIC SURGERY	CHIEF OF UROLOGY	CHIEF OF RADIOLOGY	CHIEF OF PATHOLOGY	CHIEF OF LABORATORY	CHIEF OF PHARMACY	CHIEF OF NURSING	CHIEF OF ALLIED HEALTH	CHIEF OF SUPPORT SERVICES	CHIEF OF INFORMATION TECHNOLOGY	CHIEF OF FACILITY MANAGEMENT	CHIEF OF FINANCE	CHIEF OF LEGAL	CHIEF OF COMPLIANCE	CHIEF OF QUALITY IMPROVEMENT	CHIEF OF RISK MANAGEMENT	CHIEF OF COMMUNITY ENGAGEMENT	CHIEF OF PUBLIC AFFAIRS	CHIEF OF GOVERNANCE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
JOHN DOE	123456	1980-01-01	M	W	C	E	J. Smith	Dr. J. Smith	Mr. A. Brown	Ms. C. Green	Mr. D. White	Ms. E. Black	Mr. F. Gray	Ms. G. Blue	Mr. H. Red	Ms. I. Purple	Mr. K. Yellow	Ms. L. Pink	Mr. M. Orange	Ms. N. Silver	Mr. O. Gold	Ms. P. Bronze	Mr. Q. Copper	Ms. R. Iron	Mr. S. Steel	Ms. T. Lead	Mr. U. Zinc	Ms. V. Tin	Mr. W. Nickel	Ms. X. Cobalt	Mr. Y. Platinum	Ms. Z. Palladium	Mr. AA. Silver	Ms. AB. Gold	Mr. AC. Bronze	Ms. AD. Copper	Mr. AE. Iron	Ms. AF. Steel	Mr. AG. Lead	Ms. AH. Zinc	Mr. AI. Tin	Ms. AJ. Nickel	Mr. AK. Cobalt	Ms. AL. Platinum	Mr. AM. Palladium	Ms. AN. Silver	Mr. AO. Gold	Ms. AP. Bronze	Mr. AQ. Copper	Ms. AR. Iron	Mr. AS. Steel	Ms. AT. Lead	Mr. AU. Zinc	Ms. AV. Tin	Mr. AW. Nickel	Ms. AX. Cobalt	Mr. AY. Platinum	Ms. AZ. Palladium	Mr. BA. Silver	Ms. BB. Gold	Mr. BC. Bronze	Ms. BD. Copper	Mr. BE. Iron	Ms. BF. Steel	Mr. BG. Lead	Ms. BH. Zinc	Mr. BI. Tin	Ms. BJ. Nickel	Mr. BK. Cobalt	Ms. BL. Platinum	Mr. BM. Palladium	Ms. BN. Silver	Mr. BO. Gold	Ms. BP. Bronze	Mr. BQ. Copper	Ms. BR. Iron	Mr. BS. Steel	Ms. BT. Lead	Mr. BU. Zinc	Ms. BV. Tin	Mr. BW. Nickel	Ms. BX. Cobalt	Mr. BY. Platinum	Ms. BZ. Palladium	Mr. CA. Silver	Ms. CB. Gold	Mr. CC. Bronze	Ms. CD. Copper	Mr. CE. Iron	Ms. CF. Steel	Mr. CG. Lead	Ms. CH. Zinc	Mr. CI. Tin	Ms. CJ. Nickel	Mr. CK. Cobalt	Ms. CL. Platinum	Mr. CM. Palladium	Ms. CN. Silver	Mr. CO. Gold	Ms. CP. Bronze	Mr. CQ. Copper	Ms. CR. Iron	Mr. CS. Steel	Ms. CT. Lead	Mr. CU. Zinc	Ms. CV. Tin	Mr. CW. Nickel	Ms. CX. Cobalt	Mr. CY. Platinum	Ms. CZ. Palladium	Mr. DA. Silver	Ms. DB. Gold	Mr. DC. Bronze	Ms. DD. Copper	Mr. DE. Iron	Ms. DF. Steel	Mr. DG. Lead	Ms. DH. Zinc	Mr. DI. Tin	Ms. DJ. Nickel	Mr. DK. Cobalt	Ms. DL. Platinum	Mr. DM. Palladium	Ms. DN. Silver	Mr. DO. Gold	Ms. DP. Bronze	Mr. DQ. Copper	Ms. DR. Iron	Mr. DS. Steel	Ms. DT. Lead	Mr. DU. Zinc	Ms. DV. Tin	Mr. DW. Nickel	Ms. DX. Cobalt	Mr. DY. Platinum	Ms. DZ. Palladium	Mr. EA. Silver	Ms. EB. Gold	Mr. EC. Bronze	Ms. ED. Copper	Mr. EE. Iron	Ms. EF. Steel	Mr. EG. Lead	Ms. EH. Zinc	Mr. EI. Tin	Ms. EJ. Nickel	Mr. EK. Cobalt	Ms. EL. Platinum	Mr. EM. Palladium	Ms. EN. Silver	Mr. EO. Gold	Ms. EP. Bronze	Mr. EQ. Copper	Ms. ER. Iron	Mr. ES. Steel	Ms. ET. Lead	Mr. EU. Zinc	Ms. EV. Tin	Mr. EW. Nickel	Ms. EX. Cobalt	Mr. EY. Platinum	Ms. EZ. Palladium	Mr. FA. Silver	Ms. FB. Gold	Mr. FC. Bronze	Ms. FD. Copper	Mr. FE. Iron	Ms. FF. Steel	Mr. FG. Lead	Ms. FH. Zinc	Mr. FI. Tin	Ms. FJ. Nickel	Mr. FK. Cobalt	Ms. FL. Platinum	Mr. FM. Palladium	Ms. FN. Silver	Mr. FO. Gold	Ms. FP. Bronze	Mr. FQ. Copper	Ms. FR. Iron	Mr. FS. Steel	Ms. FT. Lead	Mr. FU. Zinc	Ms. FV. Tin	Mr. FW. Nickel	Ms. FX. Cobalt	Mr. FY. Platinum	Ms. FZ. Palladium	Mr. GA. Silver	Ms. GB. Gold	Mr. GC. Bronze	Ms. GD. Copper	Mr. GE. Iron	Ms. GF. Steel	Mr. GG. Lead	Ms. GH. Zinc	Mr. GI. Tin	Ms. GJ. Nickel	Mr. GK. Cobalt	Ms. GL. Platinum	Mr. GM. Palladium	Ms. GN. Silver	Mr. GO. Gold	Ms. GP. Bronze	Mr. GQ. Copper	Ms. GR. Iron	Mr. GS. Steel	Ms. GT. Lead	Mr. GU. Zinc	Ms. GV. Tin	Mr. GW. Nickel	Ms. GX. Cobalt	Mr. GY. Platinum	Ms. GZ. Palladium	Mr. HA. Silver	Ms. HB. Gold	Mr. HC. Bronze	Ms. HD. Copper	Mr. HE. Iron	Ms. HF. Steel	Mr. HG. Lead	Ms. HH. Zinc	Mr. HI. Tin	Ms. HJ. Nickel	Mr. HK. Cobalt	Ms. HL. Platinum	Mr. HM. Palladium	Ms. HN. Silver	Mr. HO. Gold	Ms. HP. Bronze	Mr. HQ. Copper	Ms. HR. Iron	Mr. HS. Steel	Ms. HT. Lead	Mr. HU. Zinc	Ms. HV. Tin	Mr. HW. Nickel	Ms. HX. Cobalt	Mr. HY. Platinum	Ms. HZ. Palladium	Mr. IA. Silver	Ms. IB. Gold	Mr. IC. Bronze	Ms. ID. Copper	Mr. IE. Iron	Ms. IF. Steel	Mr. IG. Lead	Ms. IH. Zinc	Mr. II. Tin	Ms. IJ. Nickel	Mr. IK. Cobalt	Ms. IL. Platinum	Mr. IM. Palladium	Ms. IN. Silver	Mr. IO. Gold	Ms. IP. Bronze	Mr. IQ. Copper	Ms. IR. Iron	Mr. IS. Steel	Ms. IT. Lead	Mr. IU. Zinc	Ms. IV. Tin	Mr. IW. Nickel	Ms. IX. Cobalt	Mr. IY. Platinum	Ms. IZ. Palladium	Mr. JA. Silver	Ms. JB. Gold	Mr. JC. Bronze	Ms. JD. Copper	Mr. JE. Iron	Ms. JF. Steel	Mr. JG. Lead	Ms. JH. Zinc	Mr. JI. Tin	Ms. JJ. Nickel	Mr. JK. Cobalt	Ms. JL. Platinum	Mr. JM. Palladium	Ms. JN. Silver	Mr. JO. Gold	Ms. JP. Bronze	Mr. JQ. Copper	Ms. JR. Iron	Mr. JS. Steel	Ms. JT. Lead	Mr. JU. Zinc	Ms. JV. Tin	Mr. JW. Nickel	Ms. JX. Cobalt	Mr. JY. Platinum	Ms. JZ. Palladium	Mr. KA. Silver	Ms. KB. Gold	Mr. KC. Bronze	Ms. KD. Copper	Mr. KE. Iron	Ms. KF. Steel	Mr. KG. Lead	Ms. KH. Zinc	Mr. KI. Tin	Ms. KJ. Nickel	Mr. KK. Cobalt	Ms. KL. Platinum	Mr. KM. Palladium	Ms. KN. Silver	Mr. KO. Gold	Ms. KP. Bronze	Mr. KQ. Copper	Ms. KR. Iron	Mr. KS. Steel	Ms. KT. Lead	Mr. KU. Zinc	Ms. KV. Tin	Mr. KW. Nickel	Ms. KX. Cobalt	Mr. KY. Platinum	Ms. KZ. Palladium	Mr. LA. Silver	Ms. LB. Gold	Mr. LC. Bronze	Ms. LD. Copper	Mr. LE. Iron	Ms. LF. Steel	Mr. LG. Lead	Ms. LH. Zinc	Mr. LI. Tin	Ms. LJ. Nickel	Mr. LK. Cobalt	Ms. LL. Platinum	Mr. LM. Palladium	Ms. LN. Silver	Mr. LO. Gold	Ms. LP. Bronze	Mr. LQ. Copper	Ms. LR. Iron	Mr. LS. Steel	Ms. LT. Lead	Mr. LU. Zinc	Ms. LV. Tin	Mr. LW. Nickel	Ms. LX. Cobalt	Mr. LY. Platinum	Ms. LZ. Palladium	Mr. MA. Silver	Ms. MB. Gold	Mr. MC. Bronze	Ms. MD. Copper	Mr. ME. Iron	Ms. MF. Steel	Mr. MG. Lead	Ms. MH. Zinc	Mr. MI. Tin	Ms. MJ. Nickel	Mr. MK. Cobalt	Ms. ML. Platinum	Mr. MM. Palladium	Ms. MN. Silver	Mr. MO. Gold	Ms. MP. Bronze	Mr. MQ. Copper	Ms. MR. Iron	Mr. MS. Steel	Ms. MT. Lead	Mr. MU. Zinc	Ms. MV. Tin	Mr. MW. Nickel	Ms. MX. Cobalt	Mr. MY. Platinum	Ms. MZ. Palladium	Mr. NA. Silver	Ms. NB. Gold	Mr. NC. Bronze	Ms. ND. Copper	Mr. NE. Iron	Ms. NF. Steel	Mr. NG. Lead	Ms. NH. Zinc	Mr. NI. Tin	Ms. NJ. Nickel	Mr. NK. Cobalt	Ms. NL. Platinum	Mr. NM. Palladium	Ms. NN. Silver	Mr. NO. Gold	Ms. NP. Bronze	Mr. NQ. Copper	Ms. NR. Iron	Mr. NS. Steel	Ms. NT. Lead	Mr. NU. Zinc	Ms. NV. Tin	Mr. NW. Nickel	Ms. NX. Cobalt	Mr. NY. Platinum	Ms. NZ. Palladium	Mr. OA. Silver	Ms. OB. Gold	Mr. OC. Bronze	Ms. OD. Copper	Mr. OE. Iron	Ms. OF. Steel	Mr. OG. Lead	Ms. OH. Zinc	Mr. OI. Tin	Ms. OJ. Nickel	Mr. OK. Cobalt	Ms. OL. Platinum	Mr. OM. Palladium	Ms. ON. Silver	Mr. OO. Gold	Ms. OP. Bronze	Mr. OQ. Copper	Ms. OR. Iron	Mr. OS. Steel	Ms. OT. Lead	Mr. OU. Zinc	Ms. OV. Tin	Mr. OW. 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Palladium	Ms. RN. Silver	Mr. RO. Gold	Ms. RP. Bronze	Mr. RQ. Copper	Ms. RR. Iron	Mr. RS. Steel	Ms. RT. Lead	Mr. RU. Zinc	Ms. RV. Tin	Mr. RW. Nickel	Ms. RX. Cobalt	Mr. RY. Platinum	Ms. RZ. Palladium	Mr. SA. Silver	Ms. SB. Gold	Mr. SC. Bronze	Ms. SD. Copper	Mr. SE. Iron	Ms. SF. Steel	Mr. SG. Lead	Ms. SH. Zinc	Mr. SI. Tin	Ms. SJ. Nickel	Mr. SK. Cobalt	Ms. SL. Platinum	Mr. SM. Palladium	Ms. SN. Silver	Mr. SO. Gold	Ms. SP. Bronze	Mr. SQ. Copper	Ms. SR. Iron	Mr. SS. Steel	Ms. ST. Lead	Mr. SU. Zinc	Ms. SV. Tin	Mr. SW. Nickel	Ms. SX. Cobalt	Mr. SY. Platinum	Ms. SZ. Palladium	Mr. TA. Silver	Ms. TB. Gold	Mr. TC. Bronze	Ms. TD. Copper	Mr. TE. Iron	Ms. TF. Steel	Mr. TG. Lead	Ms. TH. Zinc	Mr. TI. Tin	Ms. TJ. Nickel	Mr. TK. Cobalt	Ms. TL. Platinum	Mr. TM. Palladium	Ms. TN. Silver	Mr. TO. Gold	Ms. TP. Bronze	Mr. TQ. Copper	Ms. TR. Iron	Mr. TS. Steel	Ms. TT. Lead	Mr. TU. Zinc	Ms. TV. Tin	Mr. TW. Nickel	Ms. TX. Cobalt	Mr. TY. Platinum	Ms. TZ. Palladium	Mr. UA. Silver	Ms. UB. Gold	Mr. UC. Bronze	Ms. UD. Copper	Mr. UE. Iron	Ms. UF. Steel	Mr. UG. Lead	Ms. UH. Zinc	Mr. UI. Tin	Ms. UJ. Nickel	Mr. UK. Cobalt	Ms. UL. Platinum	Mr. UM. Palladium	Ms. UN. Silver	Mr. UO. Gold	Ms. UP. Bronze	Mr. UQ. Copper	Ms. UR. Iron	Mr. US. Steel	Ms. UT. Lead	Mr. UU. Zinc	Ms. UV. Tin	Mr. UW. Nickel	Ms. UX. Cobalt	Mr. UY. Platinum	Ms. UZ. Palladium	Mr. VA. Silver	Ms. VB. Gold	Mr. VC. Bronze	Ms. VD. Copper	Mr. VE. Iron	Ms. VF. Steel	Mr. VG. Lead	Ms. VH. Zinc	Mr. VI. Tin	Ms. VJ. Nickel	Mr. VK. Cobalt	Ms. VL. Platinum	Mr. VM. Palladium	Ms. VN. Silver	Mr. VO. Gold	Ms. VP. Bronze	Mr. VQ. Copper	Ms. VR. Iron	Mr. VS. Steel	Ms. VT. Lead	Mr. VU. Zinc	Ms. VV. Tin	Mr. VW. Nickel	Ms. VX. Cobalt	Mr. VY. Platinum	Ms. VZ. Palladium	Mr. WA. Silver	Ms. WB. Gold	Mr. WC. Bronze	Ms. WD. Copper	Mr. WE. Iron	Ms. WF. Steel	Mr. WG. Lead	Ms. WH. Zinc	Mr. WI. Tin	Ms. WJ. Nickel	Mr. WK. Cobalt	Ms. WL. Platinum	Mr. WM. Palladium	Ms. WN. Silver	Mr. WO. Gold	Ms. WP. Bronze	Mr. WQ. Copper	Ms. WR. Iron	Mr. WS. Steel	Ms. WT. Lead	Mr. WU. Zinc	Ms. WV. Tin	Mr. WW. Nickel	Ms. WX. Cobalt	Mr. WY. Platinum	Ms. WZ. Palladium	Mr. XA. Silver	Ms. XB. Gold	Mr. XC. Bronze	Ms. XD. Copper	Mr. XE. Iron	Ms. XF. Steel	Mr. XG. Lead	Ms. XH. Zinc	Mr. XI. Tin	Ms. XJ. Nickel	Mr. XK. Cobalt	Ms. XL. Platinum	Mr. XM. Palladium	Ms. XN. Silver	Mr. XO. Gold	Ms. XP. Bronze	Mr. XQ. Copper	Ms. XR. Iron	Mr. XS. Steel	Ms. XT. Lead	Mr. XU. Zinc	Ms. XV. Tin	Mr. XW. Nickel	Ms. XX. Cobalt	Mr. XY. Platinum	Ms. XZ. Palladium	Mr. YA. Silver	Ms. YB. Gold	Mr. YC. Bronze	Ms. YD. Copper	Mr. YE. Iron	Ms. YF. Steel	Mr. YG. Lead	Ms. YH. Zinc	Mr. YI. Tin	Ms. YJ. Nickel	Mr. YK. Cobalt	Ms. YL. Platinum	Mr. YM. Palladium	Ms. YN. Silver	Mr. YO. Gold	Ms. YP. Bronze	Mr. YQ. Copper	Ms. YR. Iron	Mr. YS. Steel	Ms. YT. Lead	Mr. YU. Zinc	Ms. YV. Tin	Mr. YW. Nickel	Ms. YX. Cobalt	Mr. YY. Platinum	Ms. YZ. Palladium	Mr. ZA. Silver	Ms. ZB. Gold	Mr. ZC. Bronze	Ms. ZD. Copper	Mr. ZE. Iron	Ms. ZF. Steel	Mr. ZG. Lead	Ms. ZH. Zinc	Mr. ZI. Tin	Ms. ZJ. Nickel	Mr. ZK. Cobalt	Ms. ZL. Platinum	Mr. ZM. Palladium	Ms. ZN. Silver	Mr. ZO. Gold	Ms. ZP. Bronze	Mr. ZQ. Copper	Ms. ZR. Iron	Mr. ZS. Steel	Ms. ZT. Lead	Mr. ZU. Zinc	Ms. ZV. Tin	Mr. ZW. Nickel	Ms. ZX. Cobalt	Mr. ZY. Platinum	Ms. ZZ. Palladium



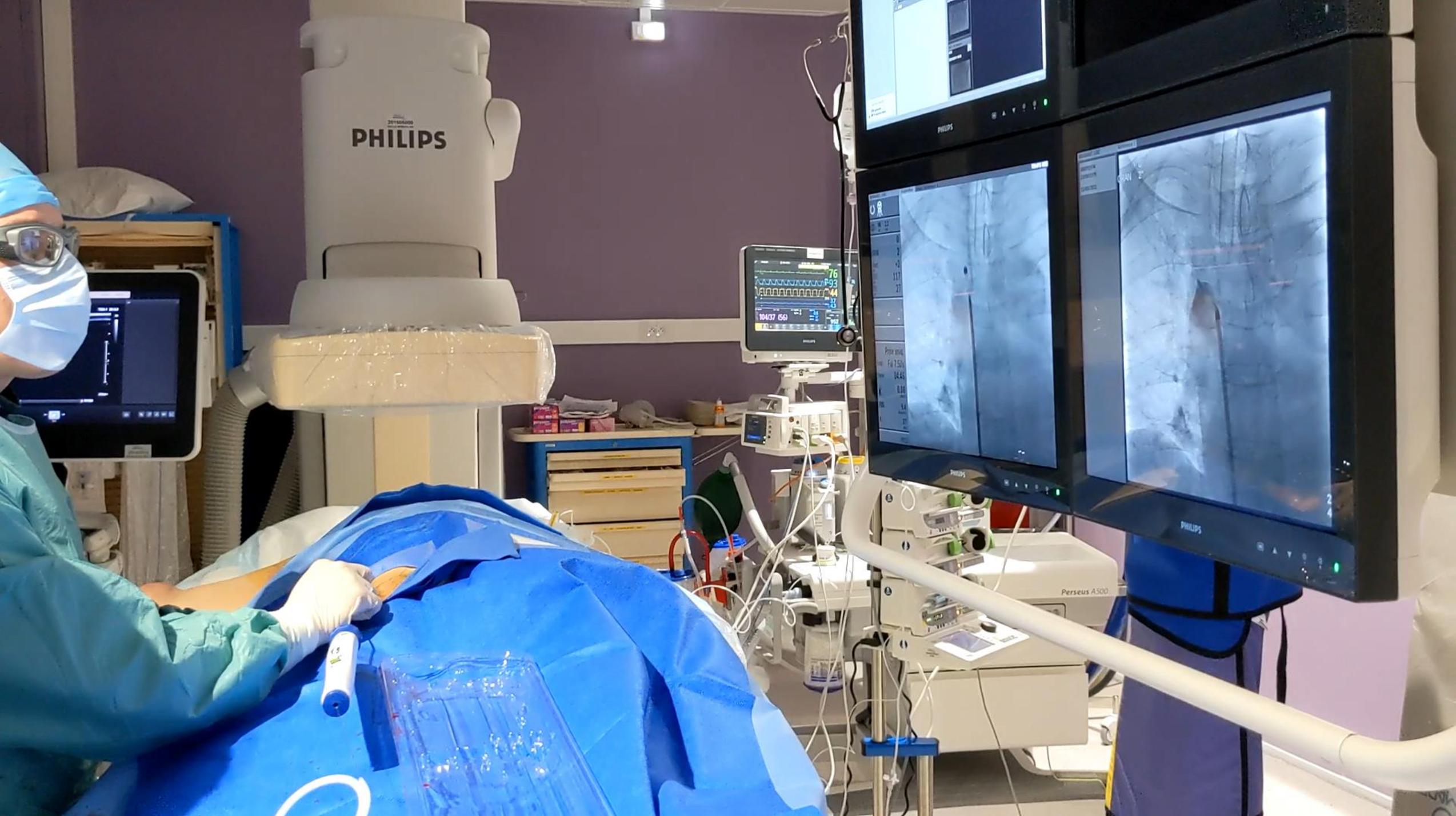
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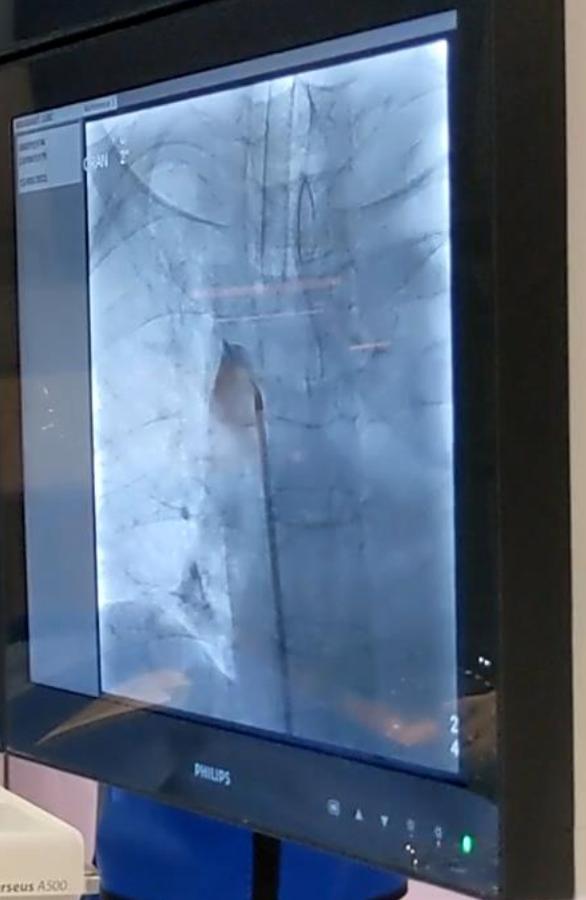
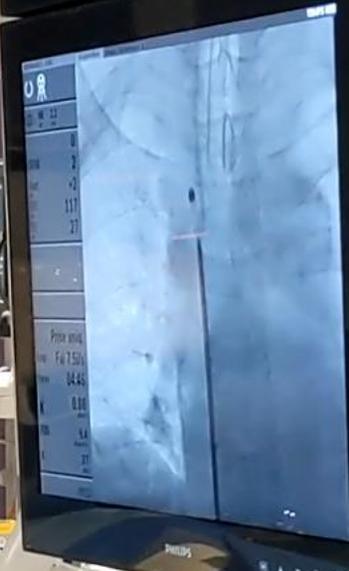
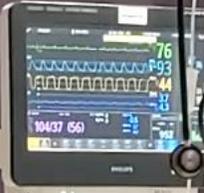




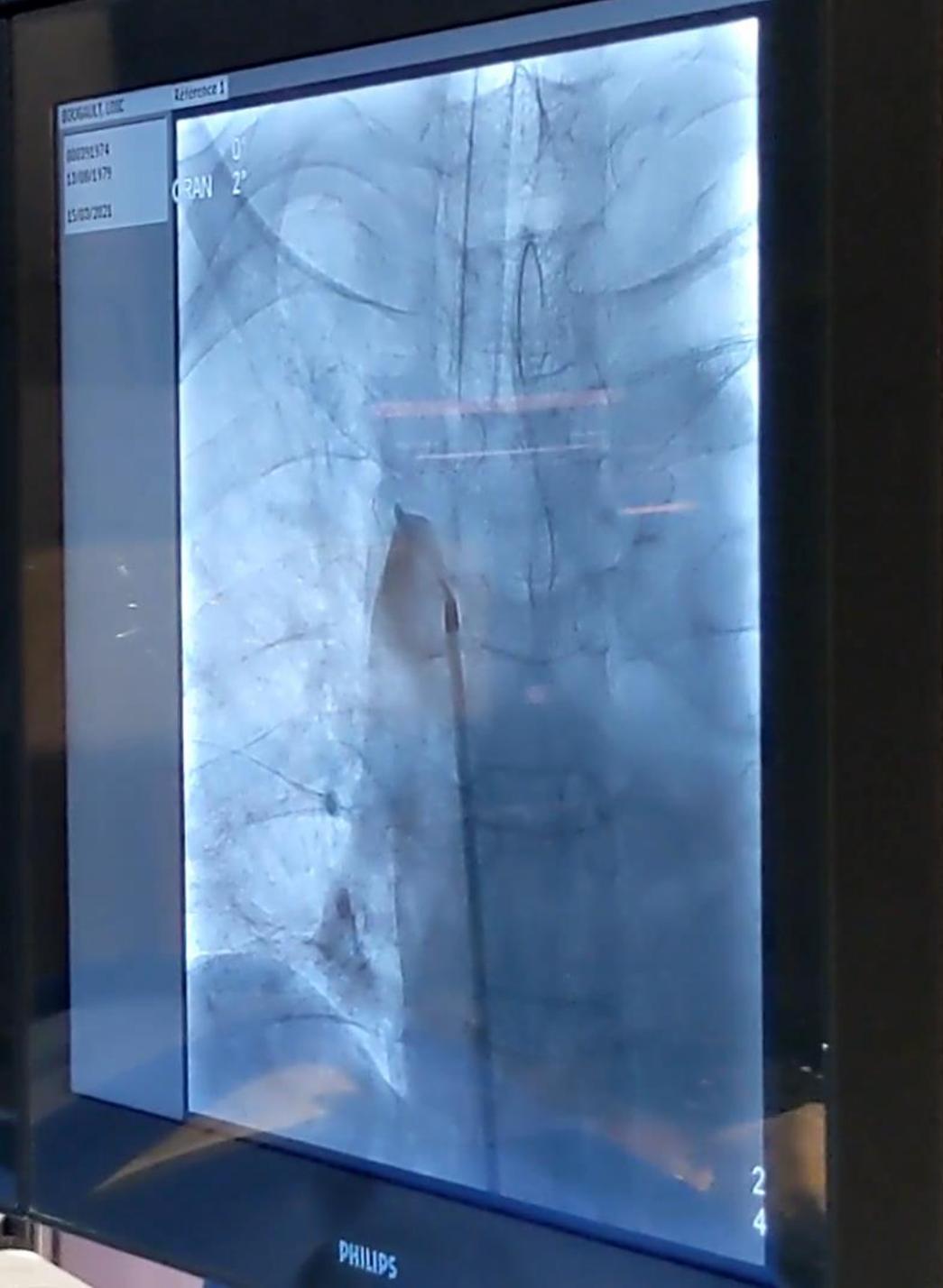
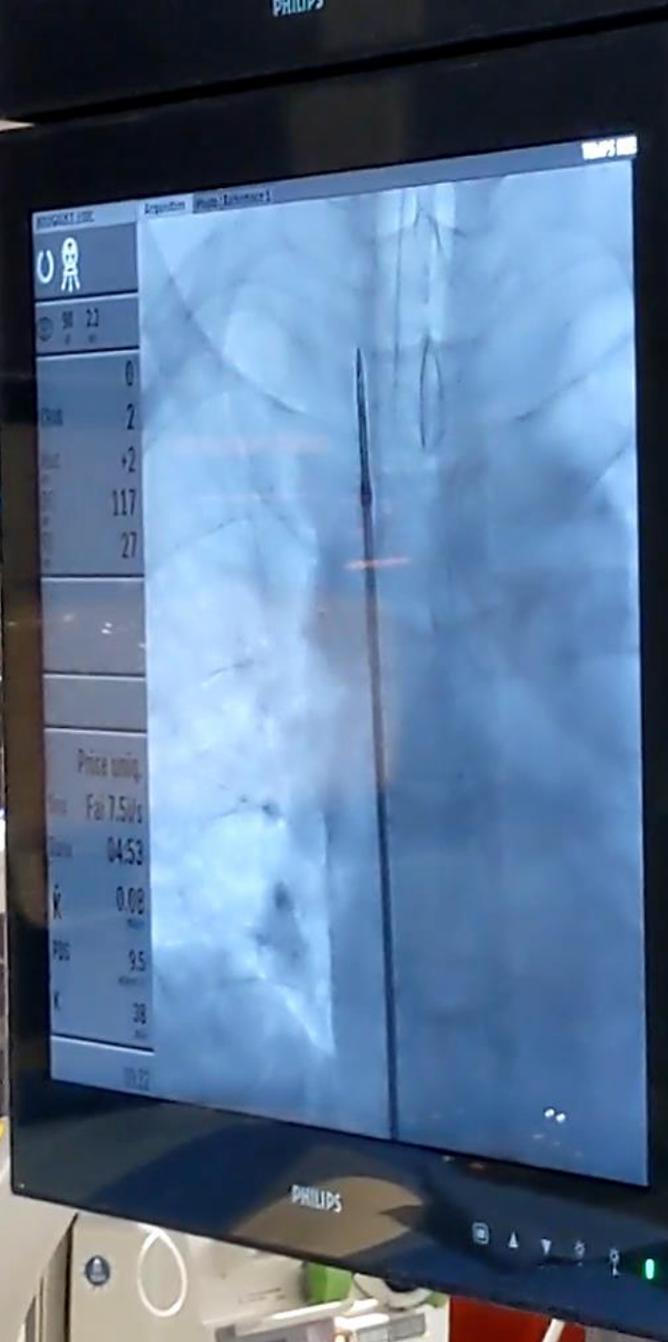
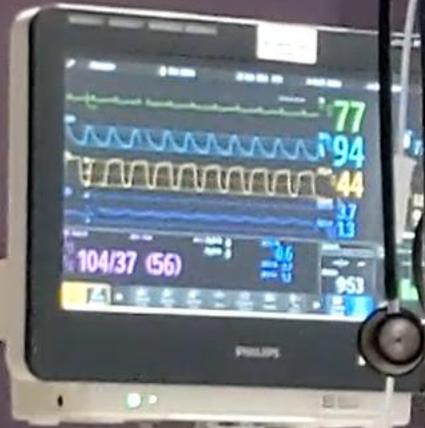
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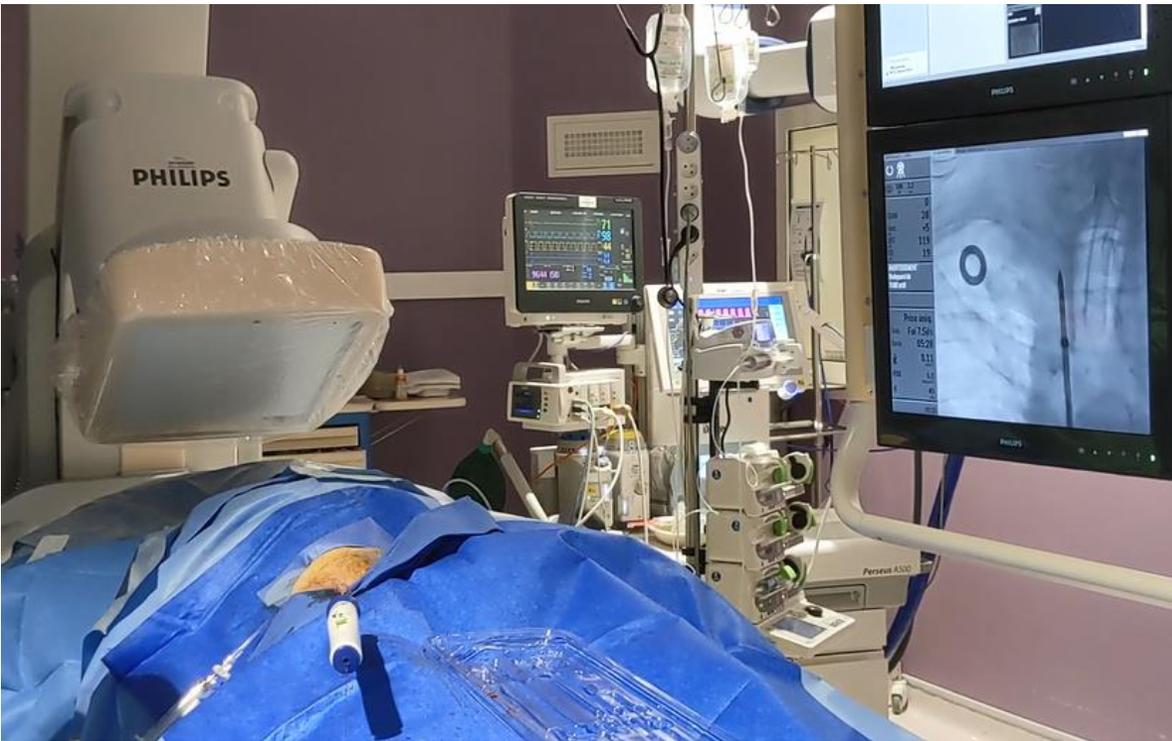
# Intervention



# Intervention

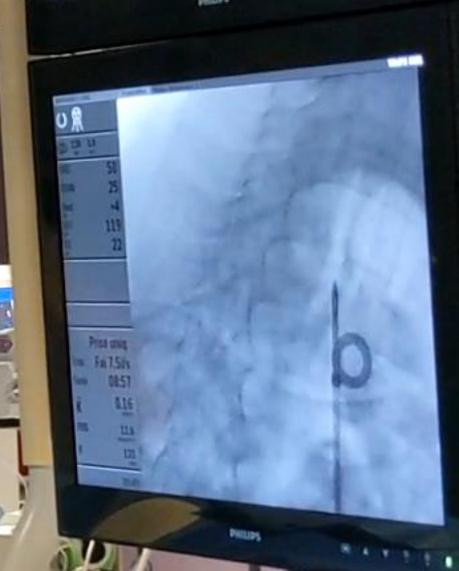
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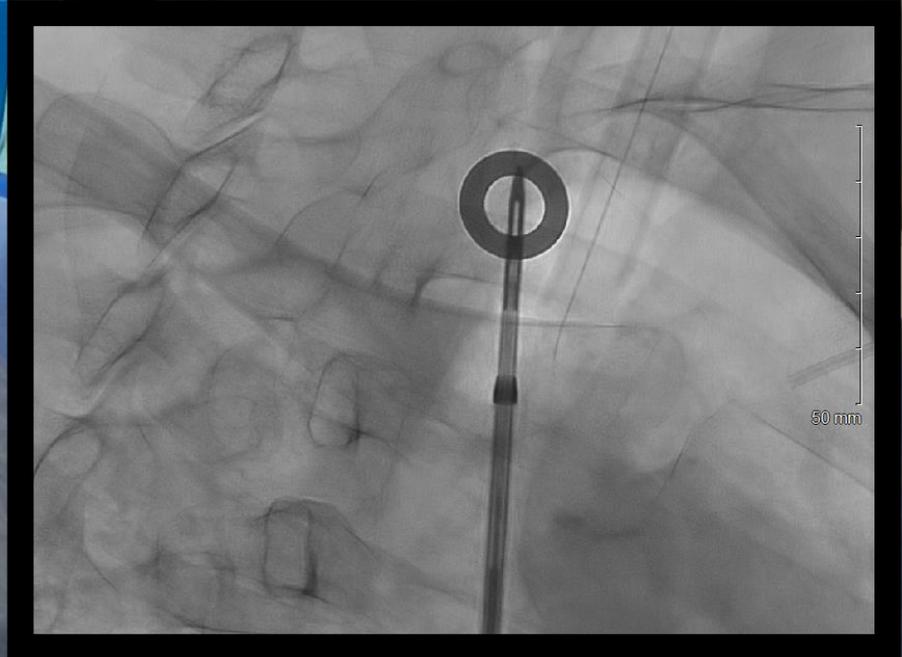
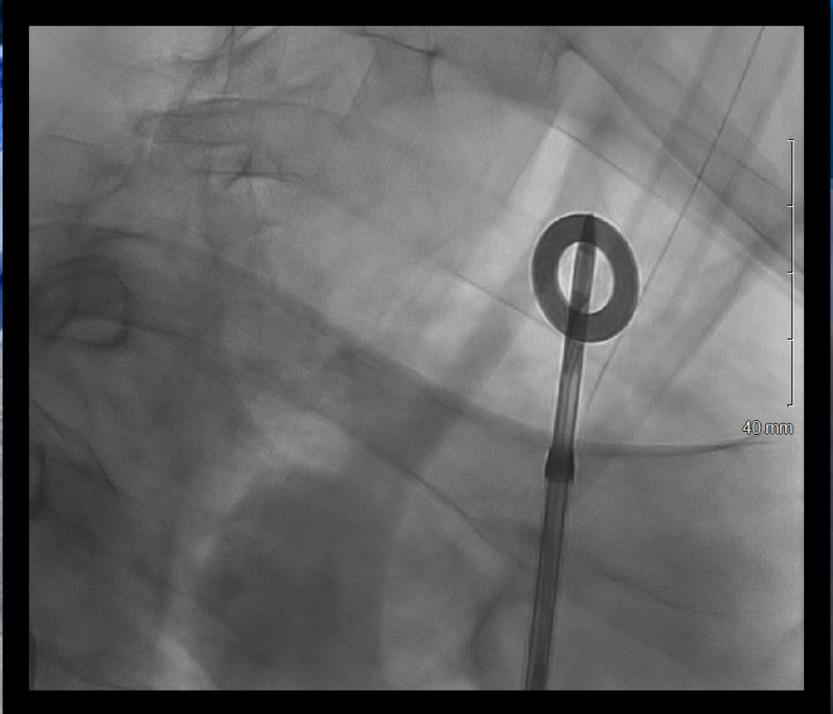
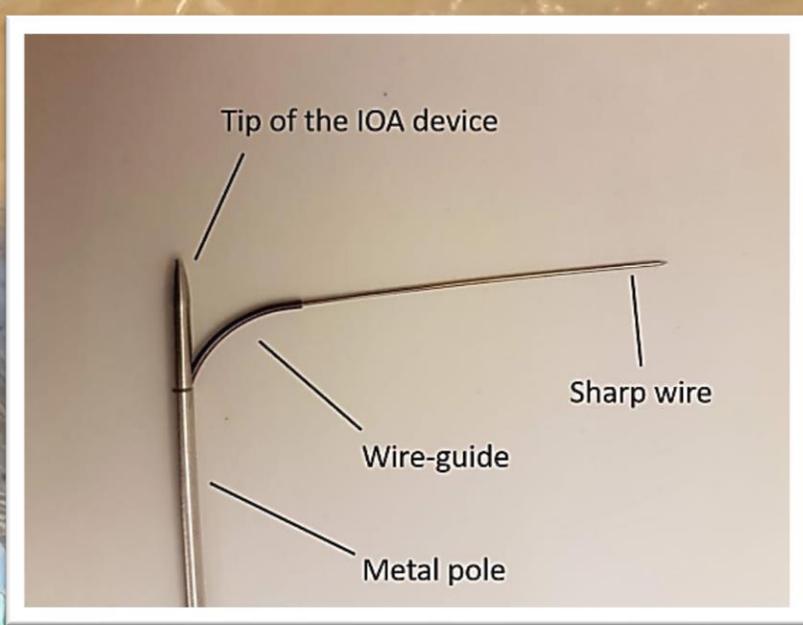




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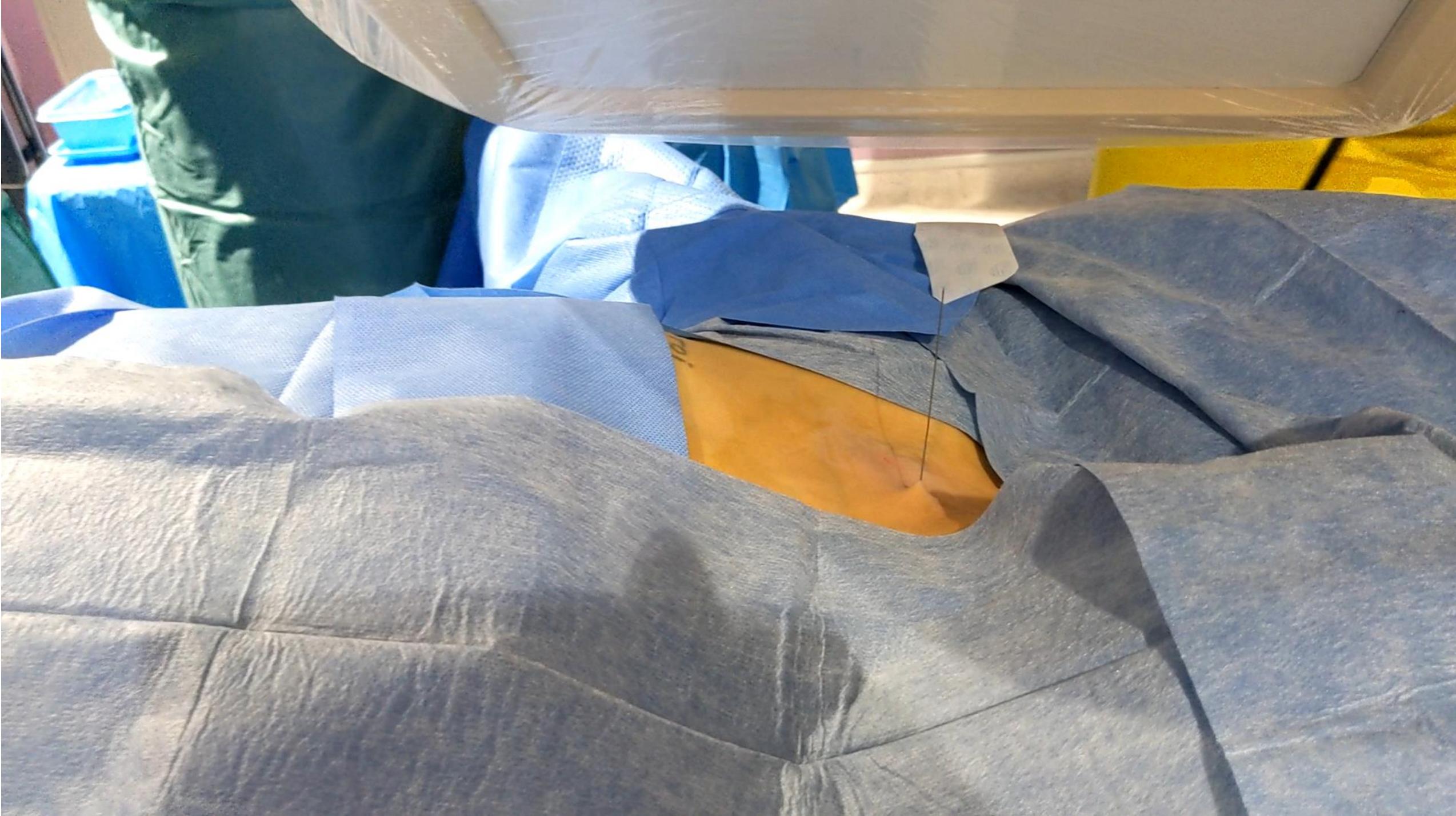


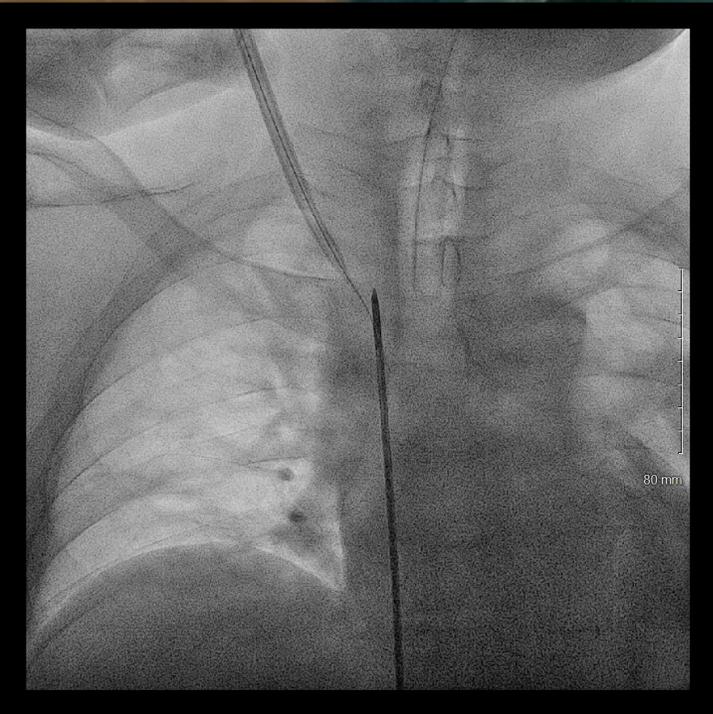


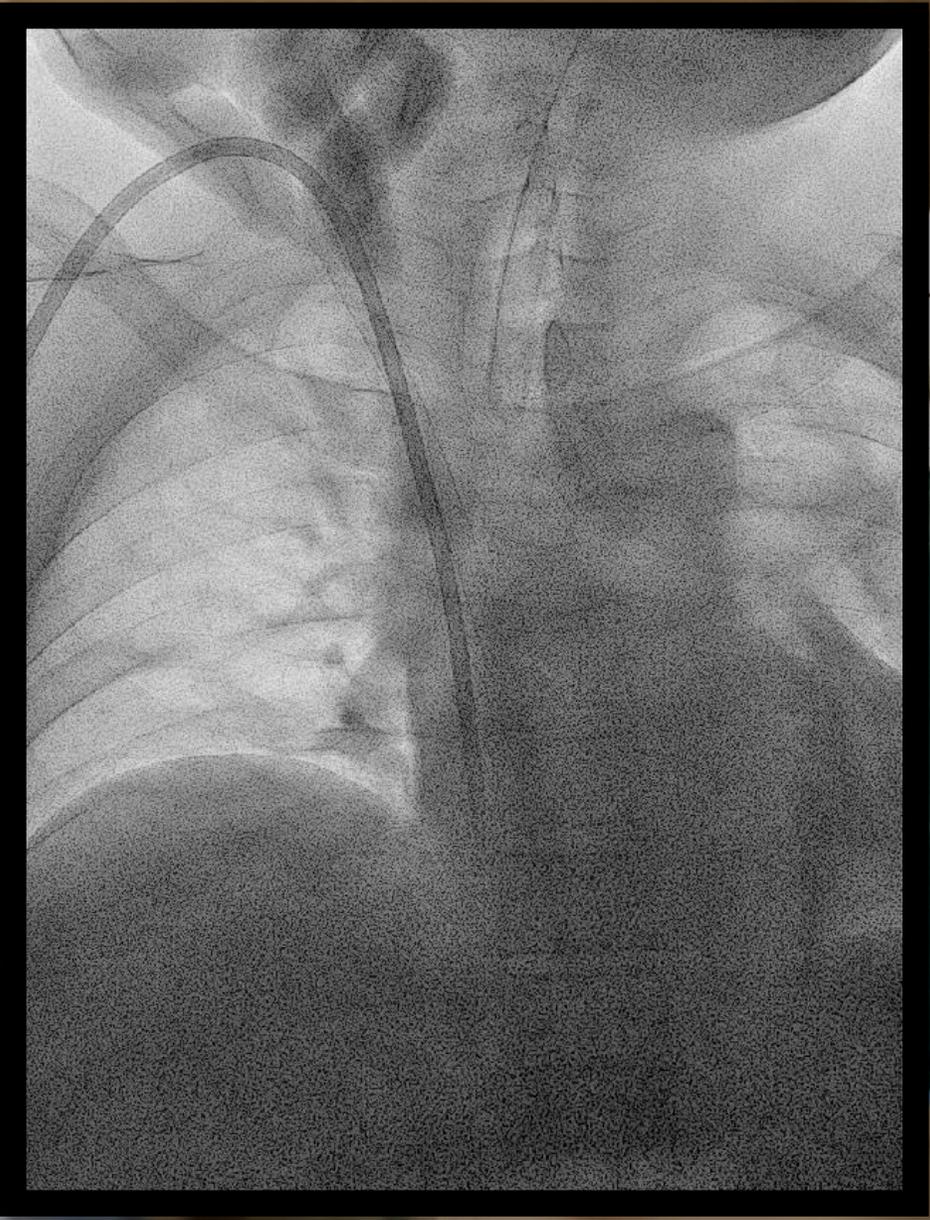
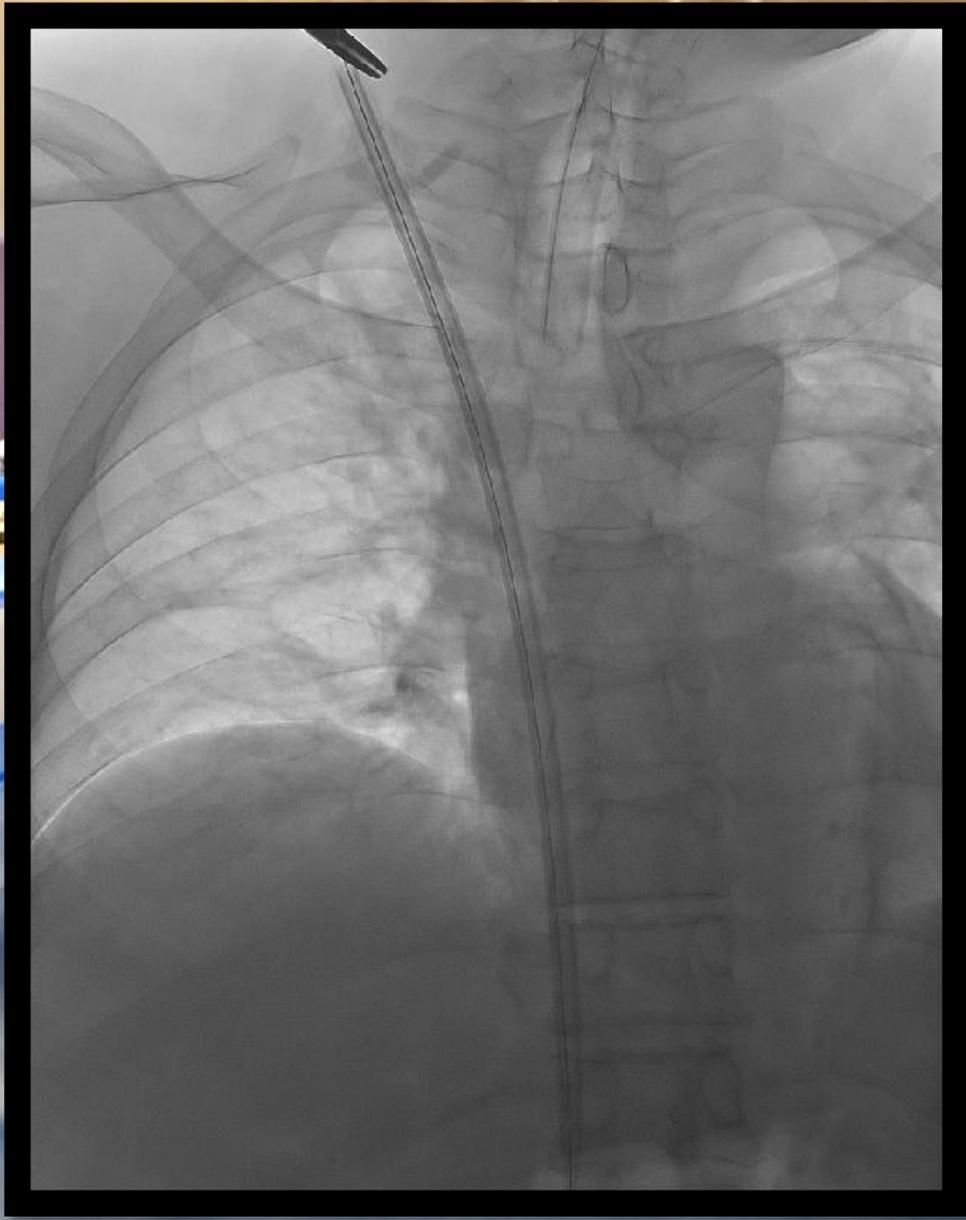




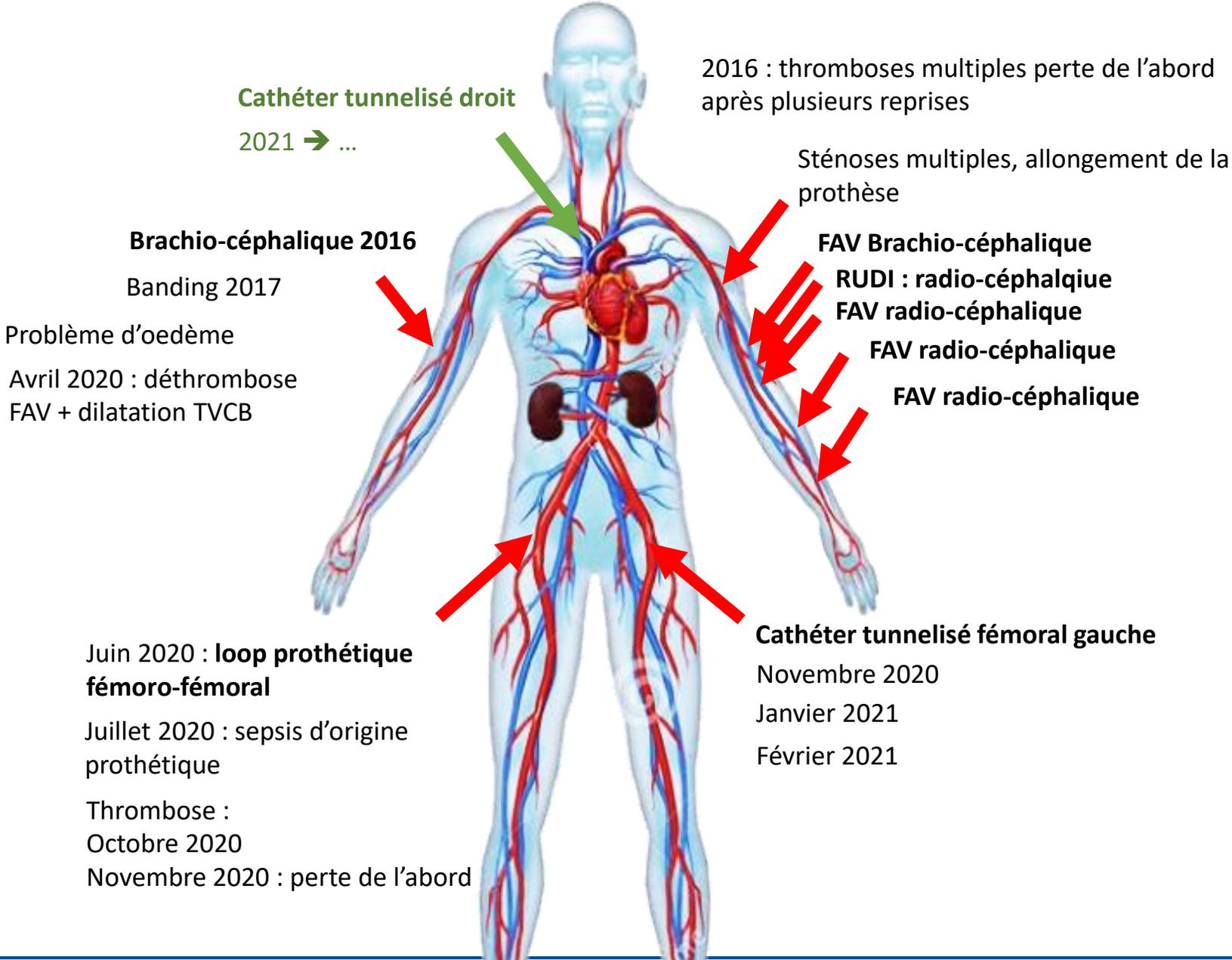








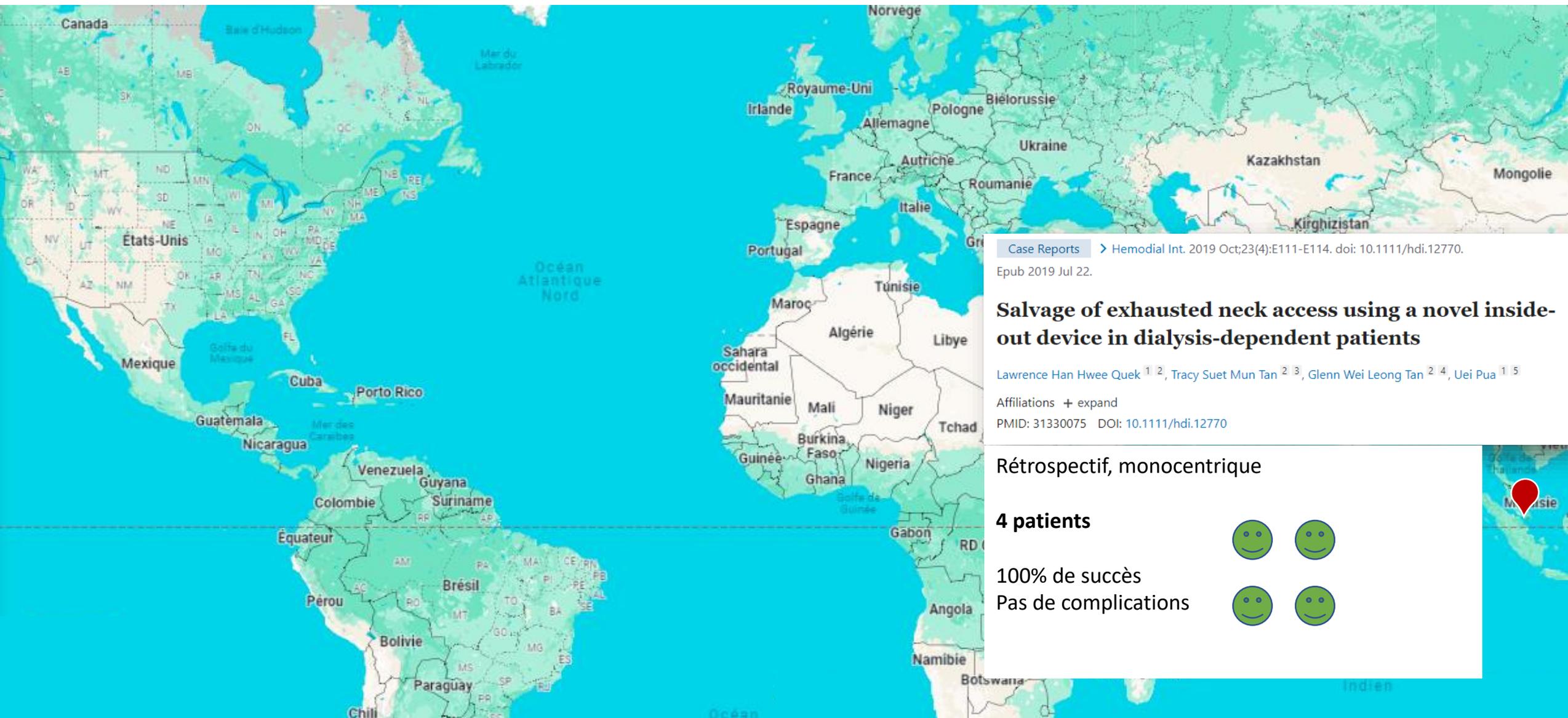
# Littérature sur le SURFACER



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Observational Study > Am J Kidney Dis. 2020 Apr;75(4):480-487. doi: 10.1053/j.ajkd.2019.08.024.

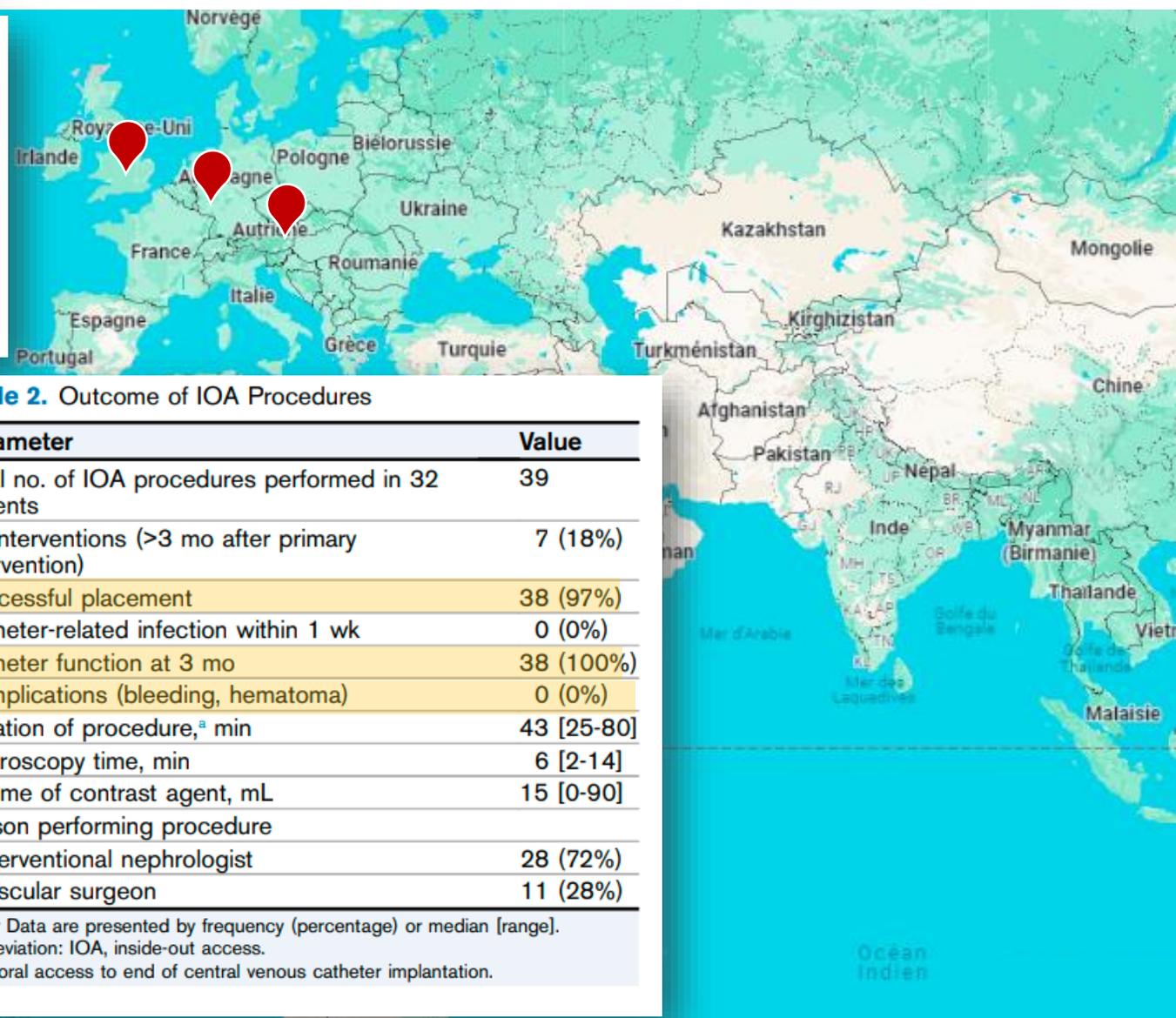
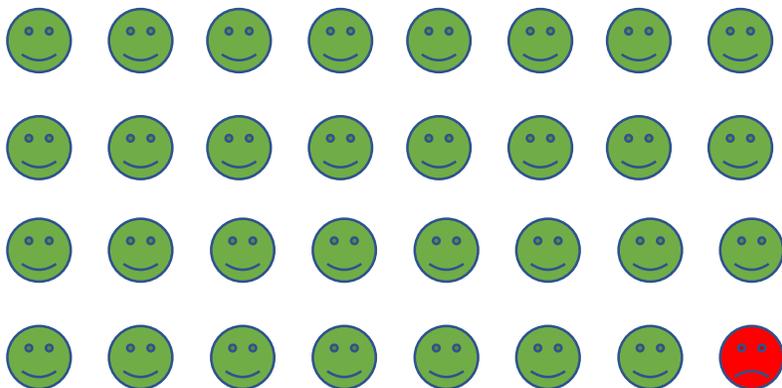
Epub 2019 Nov 29.

## A Novel Inside-out Access Approach for Hemodialysis Catheter Placement in Patients With Thoracic Central Venous Occlusion

Roman Reindl-Schwaighofer<sup>1</sup>, Vladimir Matoussevitch<sup>2</sup>, Wolfgang Winnicki<sup>3</sup>, Egan Kalmykov<sup>2</sup>, James Gilbert<sup>4</sup>, Wolfgang Matzek<sup>5</sup>, Gürkan Sengölge<sup>1</sup>

Rétrospectif, multicentrique (Vienne, Cologne, Oxford)  
2016 – 2018

32 patients



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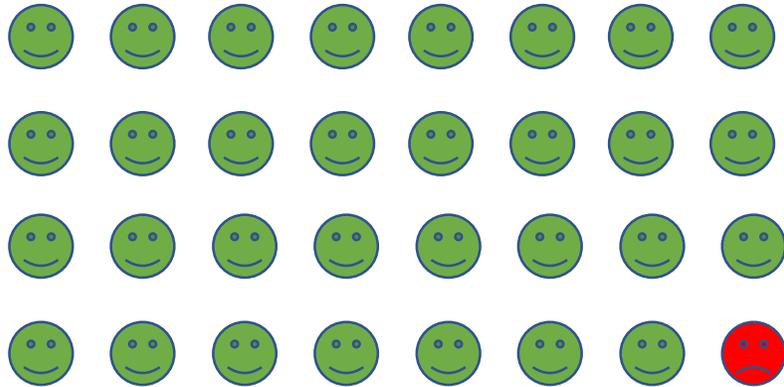


Table 2. Outcome of IOA Procedures

Parameter	Value
Total no. of IOA procedures performed in 32 patients	39

The only technical failure was in a patient with a high amputation of the right leg. The primary access site was the external iliac vein, thus causing a steep entry angle. The additional lumbar scoliosis made advancement of the stiff IOA device impossible after the guidewire and workstation were correctly and easily placed (Fig S13). The patient consequently was discharged with a tunneled femoral dialysis catheter.

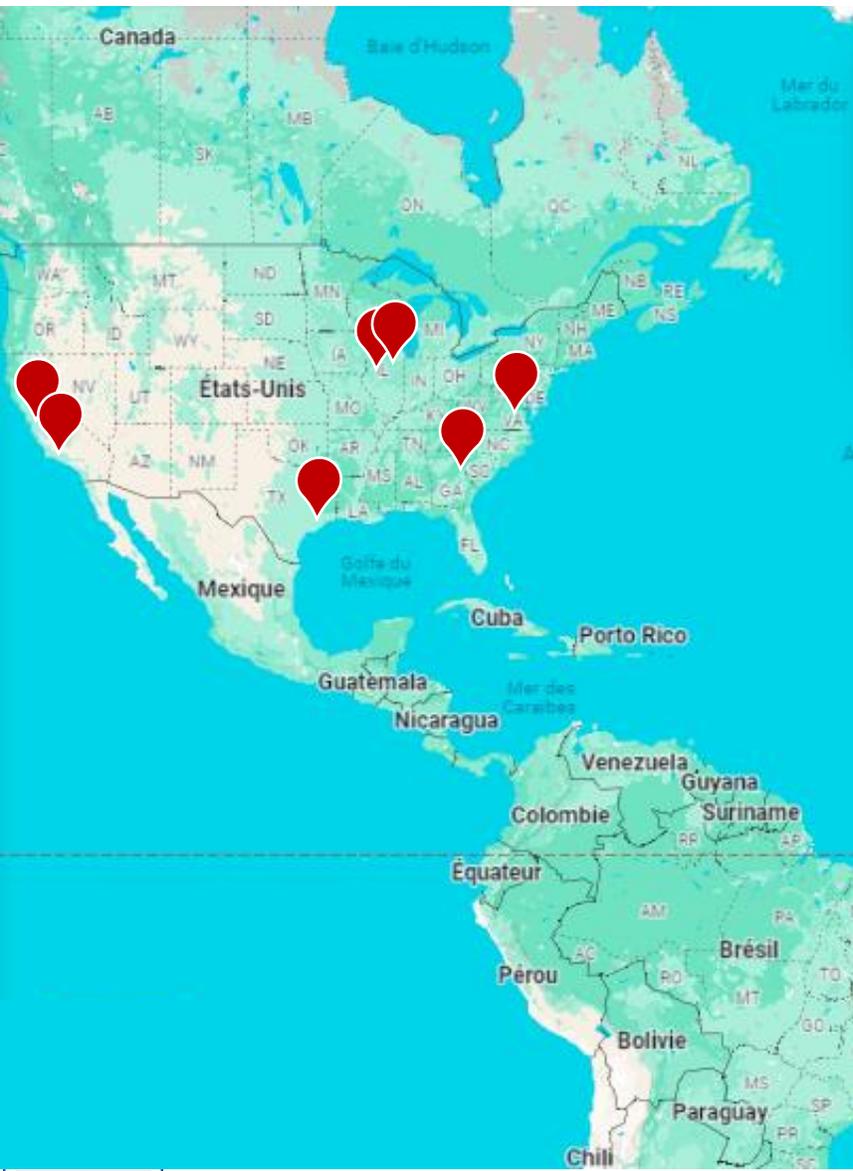
vascular surgeon 11 (28%)

Note: Data are presented by frequency (percentage) or median [range].

Abbreviation: IOA, inside-out access.

<sup>a</sup>Femoral access to end of central venous catheter implantation.

# Littérature sur le SURFACER



Efficacy and safety associated with the use of the Surfac<sup>®</sup> Inside-Out<sup>®</sup> Access Catheter System: Results from a prospective, multicenter Food and Drug Administration-approved Investigational Device Exemption study.

Razavi MK, Peden EK, Sorial E, Ross JR, Aruny JE, Pflederer TA, Wasse H, Haskal ZJ.  
J Vasc Access. 2021 Jan;22(1):141-146. doi: 10.1177/1129729820937121. Epub 2020 Jun 27.  
PMID: 32597356 [Free PMC article.](#) Clinical Trial.

Prospective, single-arm, multi-center (x7)  
2017 - 2019

**30 patients**

50% homme

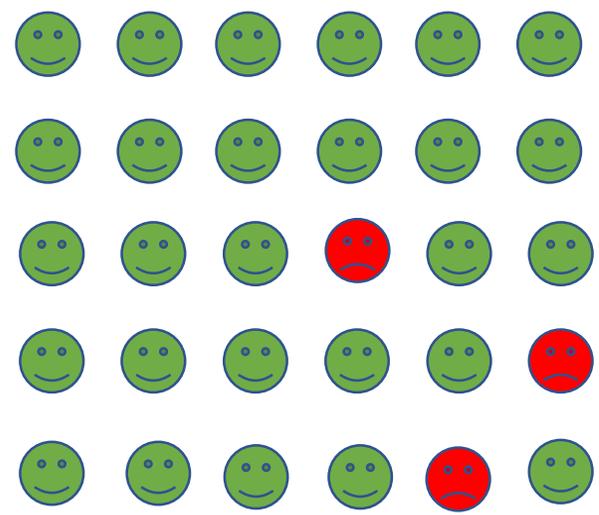
Moyenne d'âge 55,5 +/- 12,9

90% de succès (27/30)

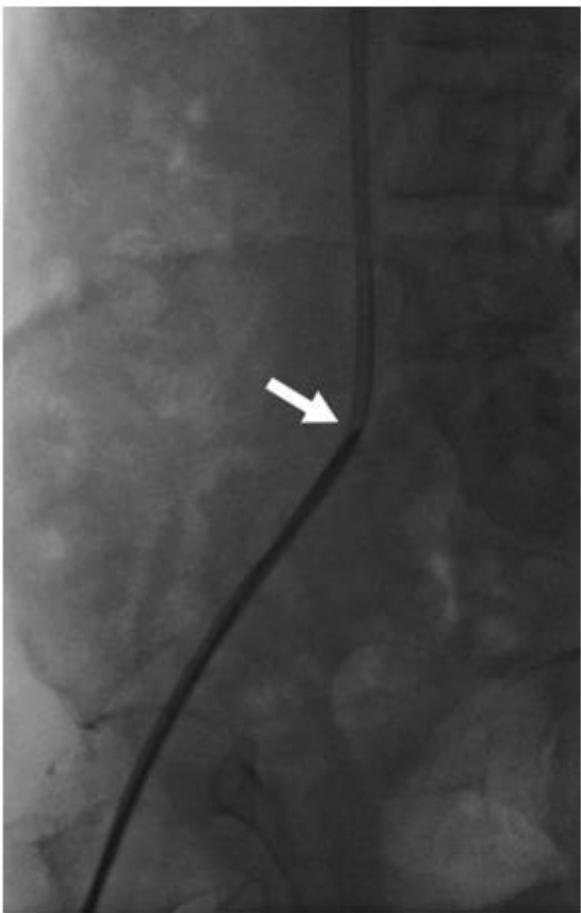
10% (n=3) : procédure arrêtée du fait d'une tortuosité anatomique veineuse

0% d'effet indésirable lié au dispositif

0% de malposition du cathéter



# Littérature sur le SURFACER



**Figure 4.** Anteroposterior fluoroscopic image shows the vessel tortuosity which prevented the Surfacer device from being advanced to the venous obstruction in the patient. The procedure was aborted.

efficacy and safety associated with the use of the Surfacer<sup>®</sup> Inside-Out<sup>®</sup> Access Catheter System: Results from a prospective, multicenter Food and Drug Administration-approved Investigational Device Exemption study.

Arora MK, Peden EK, Sorial E, Ross JR, Aruny JE, Pflederer TA, Wasse H, Haskal ZJ.

Stroke. 2021 Jan;22(1):141-146. doi: 10.1177/1129729820937121. Epub 2020 Jun 27.

PMID: 32597356 [Free PMC article.](#) [Clinical Trial.](#)

Prospective, single-arm, multi-center (x7)

2017 - 2019

30 patients

16 hommes

âge moyenne d'âge 55,5 +/- 12,9

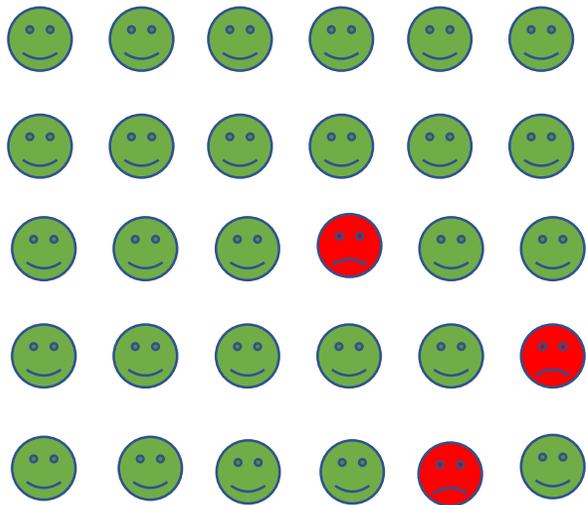
taux de succès (27/30)

échecs (n=3) : procédure arrêtée du fait

de la tortuosité anatomique veineuse

ou d'effet indésirable lié au dispositif

ou de malposition du cathéter



# Quel prix en France ?



4500-5000 euros

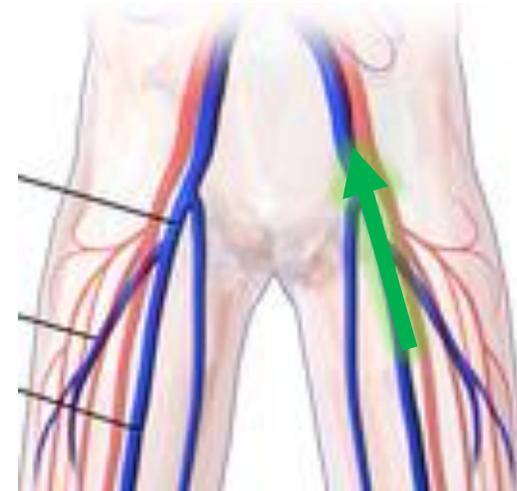
# Conclusion

**La voie d'abord vasculaire pour hémodialyse est une problématique majeure**



**Parmi l'éventail de possibilité dans les situations complexes, le Système SURFACER est une alternative intéressante**

**Dans l'arbre décisionnel, la pose d'un cathéter fémoral à gauche semble à privilégier pour éviter de léser la fémorale droite**



**Problème de coût**



Composant	Description	Spécifications <sup>1</sup>		Calibre Fr
		Syst. anglais (po)	Syst. métrique (cm)	
<b>Poste de travail</b> 	Diamètre de la tige	0,137	0,348	10,5
	Interne diamètre	0,096	0,244	7,3
	Longueur utile	25,4	64,5	
<b>Instrument de pose (dispositif Surfacer)</b> 	Diamètre de la tige	0,095	0,241	7,2
	Longueur utile	37,4	95,1	
	Aiguille-guide	0,041	0,104	3,1
	Taille de l'aiguille-fil	0,024	0,06	1,8
	Aiguille-fil Longueur utile	13,77 (Minimum)	35 (Minimum)	
<b>Cible de sortie</b> 	Extérieur diamtre	0,63	1,6	48
	Interne diamètre	0,335	0,85	25,5
<b>Gaine d'introduction de sortie (détachable)</b> 	Diamètre de la tige	0,241	0,612	18,4
	Interne diamètre	0,214	0,544	16,3
	Longueur utile	7,9	20	

<sup>1</sup> Les dimensions sont approximatives.