Cathétérisme des anomalies de connexion des artères coronaires

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CARDIORÉLIANCE

DIU cardiologie interventionnelle

Coronary intervention in anomalous origin of the right coronary artery (ARCA) from the left sinus of valsalva (LSOV): A single center experience

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Table 1 – Summary of 17 cases of PCI in Anomalous RCA originating from LSOV. The type of Take off, sequence of catheter tried and the successful catheter for engagement presented.

Patient no	Type of take off	Sequence of catheters	Successfully cannulated catheter	Amt of contrast (ml)	Fluoro time
1	A	JR 3.5,AR2; AL1; JL 4.0; JL 5.0	JL 5.0	210	17.5
2	C	JR 3.5; AR2; AL1	AL 1	120	12.2
3	B	JR 3.5; AR 2.0; AL 1; JL 4.0; JL 5.0; EBU 3.0	EBU 3.5	320	63.3
4	C	JR 3.5; AR 2.0; AL 1.0; JL 5.0; AL 2.0	AL -2	220	17.3
5	A	JR 3.5; AL 1.0; JL 4.0	JL 4.0	130	12.2
6	A	JR 3.5; JL 4.0; JL 5.0	JL 5.0	150	13.5
7	C	JR 3.5; AR 2; JL 5.0; AL 1	AL 1	200	17.8
8	B	JR 3.5; AR 2.0; AL 1; JL 5.0; EBU 3.5	EBU 3.5	280	23.8
9	A	JR 3.5; AR 2; AL 1; JL 4.0; JL 5.0	JL 5.0	270	22.5
10	C	JR 3.5; AR 2.0; JL 5.0; AL 1	AL1	180	15.4
11	C	JR 3.5; AR 2.0; AL1; AL 2.0, JL 4.0	JL 4.0	300	51.3
12	A	JR 3.5; AL 1; JL 4.0	JL 4.0	150	12.5
13	B	JR 3.5; AR 2.0; AL 1, JL 4.0	JL 4.0	180	21.5
14	A	JR 3.5; AL 1; JL 4.0; JL 5.0	JL 5.0	200	17.4
15	A	JR 3.5; JL 4.0; JL 5.0	JL 5.0	170	14.2
16	C	JR 3.5; AR 2.0; JL 5.0; AL 1	AL 1	180	15.6
17	A	JR 3.5; AL 1; JL 4.0: JL 5.0	JL 5.0	200	15.7

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- Les problèmes posés :
  - nombre de cathéters ?
  - qualité de l'imagerie : diagnostic fait ? opacification correcte ?
  - quantité de produit de contraste administrée ?
  - durée de l'examen : longueur ? dose de rayons X délivrée ?
  - retard de traitement (SCA ST+)

- Les moyens et les solutions :
  - y penser et connaître les principales anomalies (types de connexion, trajets)
  - avoir une démarche basée sur ces connaissances

- Anomalie connue (coronarographie antérieure, scanner coronaire)

  - se repérer à partir de l'artère normalement connectée

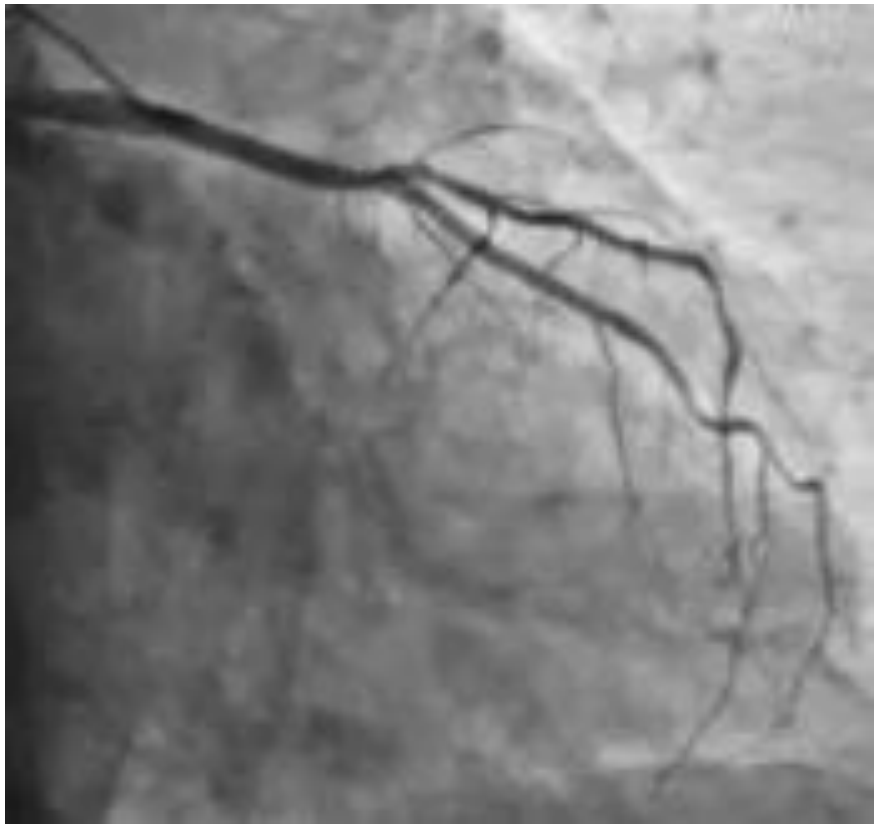
- Anomalie non connue

  - l'anatomie coronaire présentée doit m'y faire penser

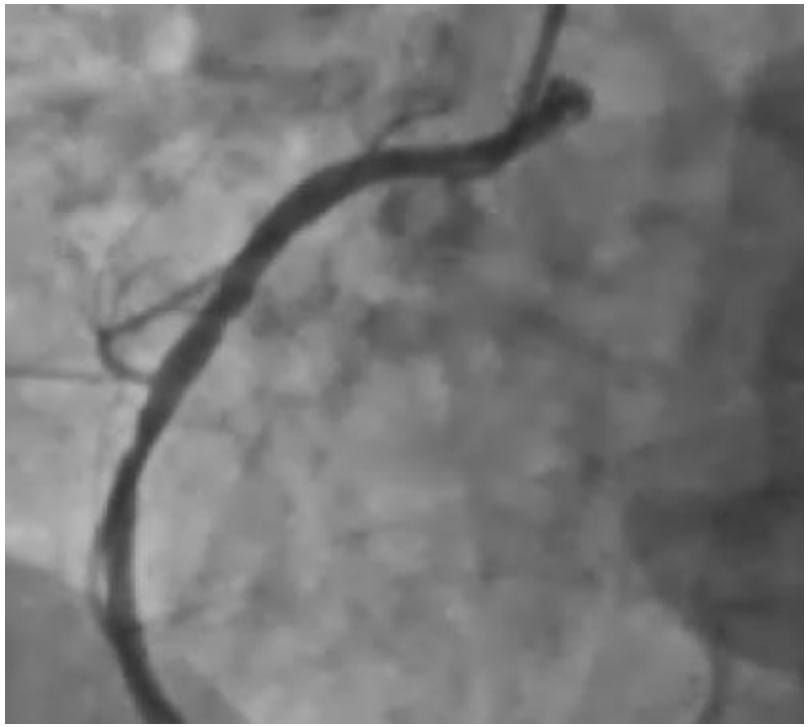
  - je ne la trouve pas

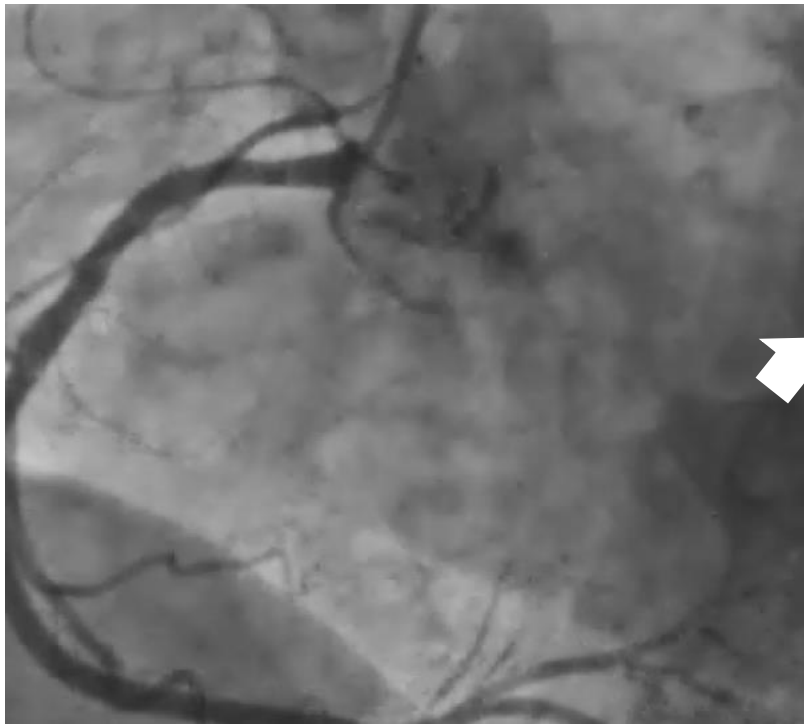
Connaître les caractéristiques des ANOCOR les plus fréquentes

Anatomie coronaire évocatrice



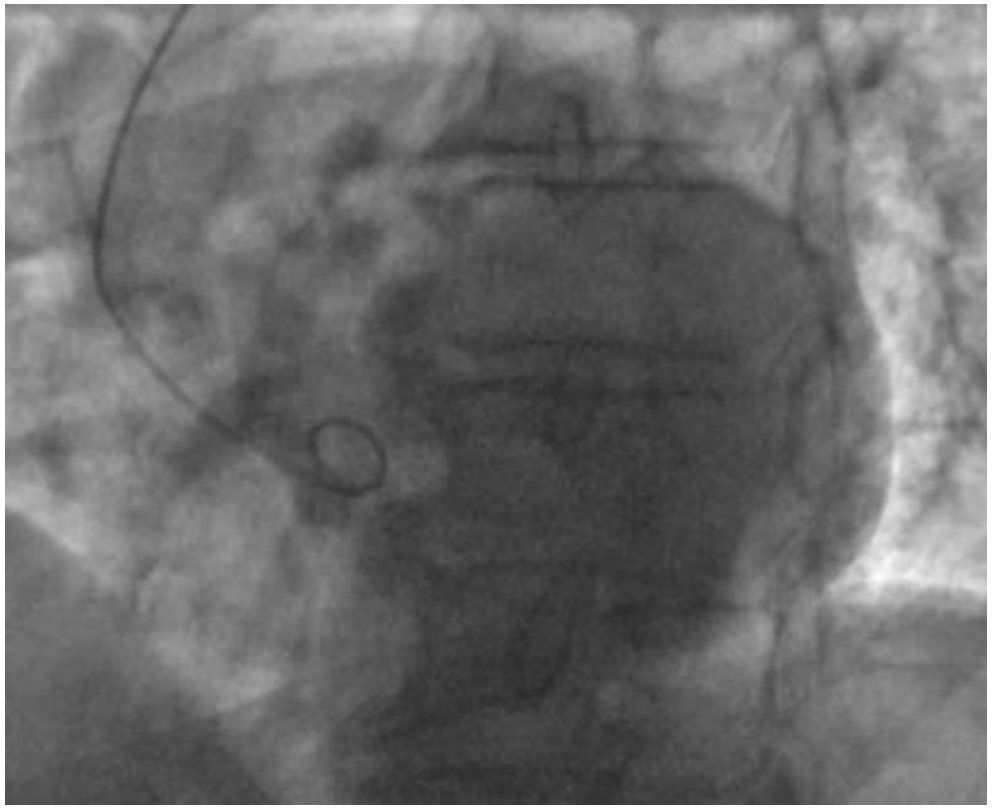
Attention aux intubations sélectives





Passer à l'artère controlatérale

Aortographie



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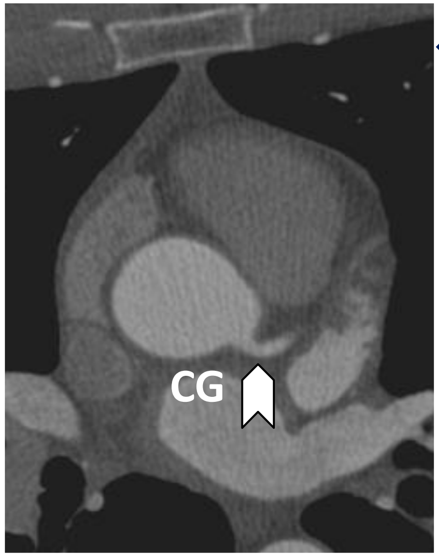
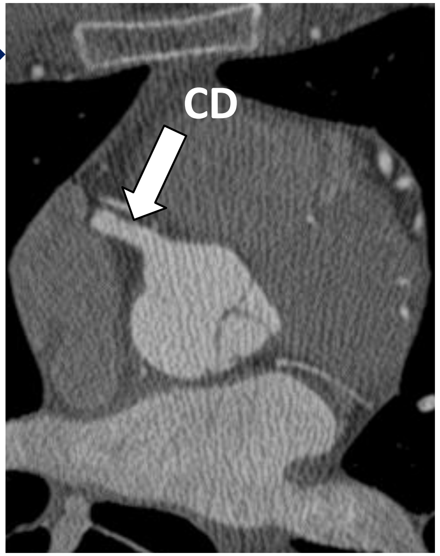
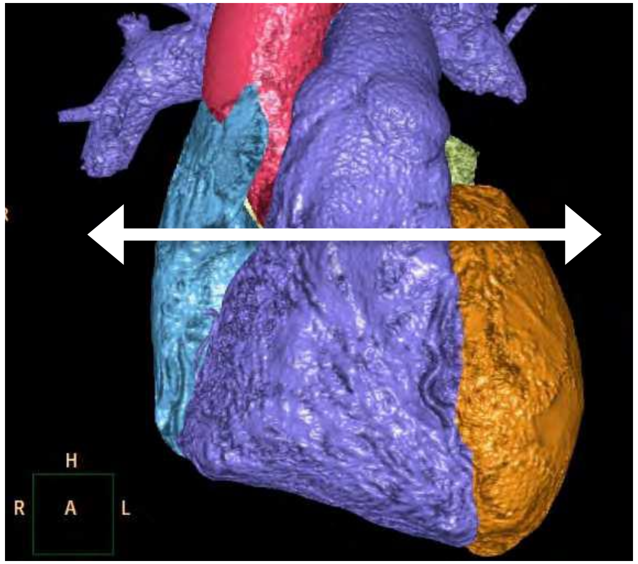
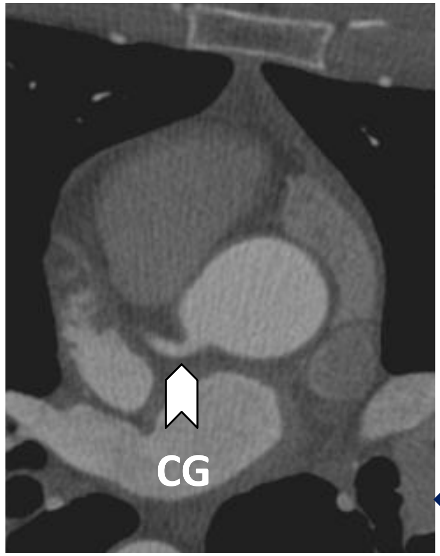
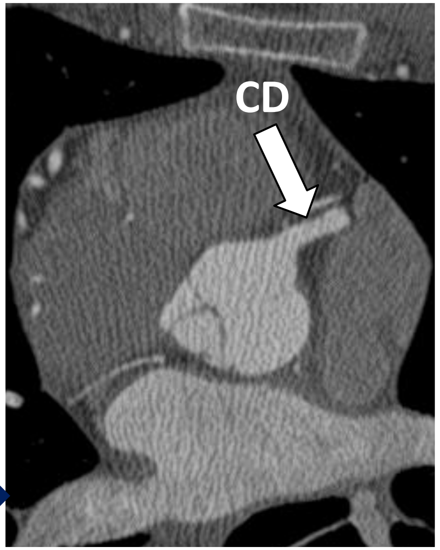
Radiologue











Interventionnel

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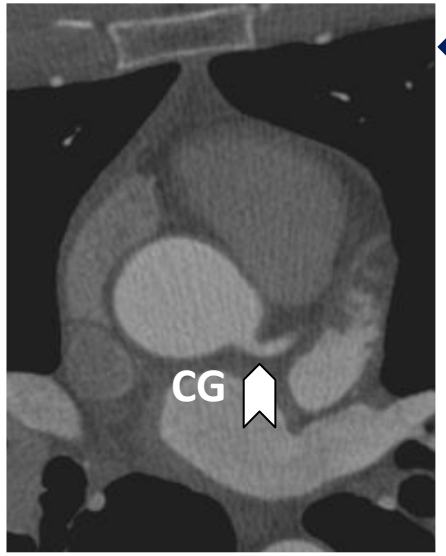
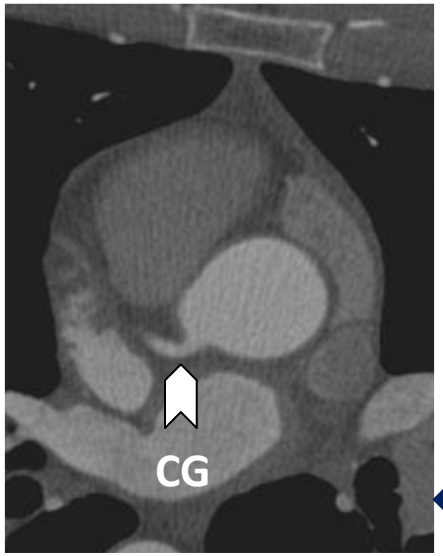
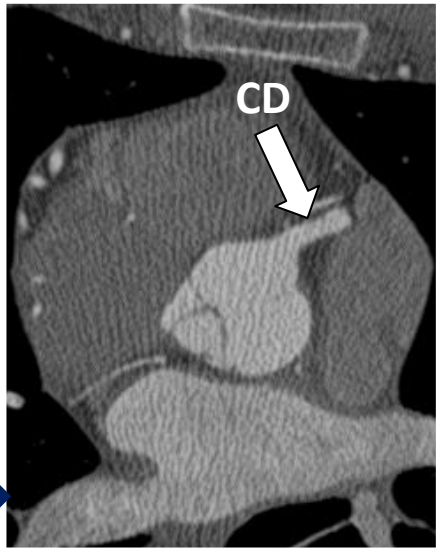
Radiologue







Interventionnel

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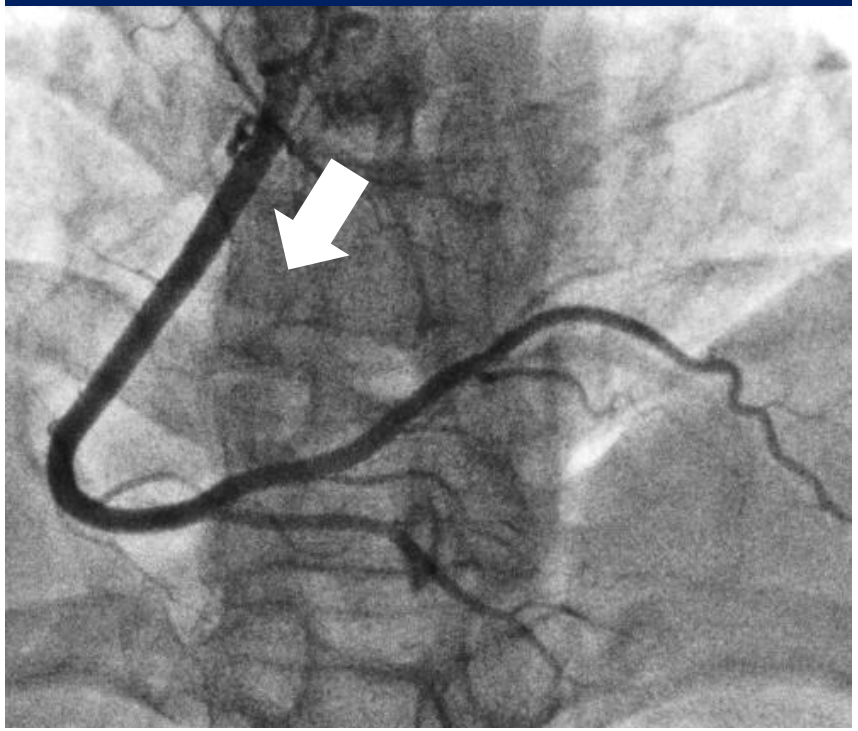
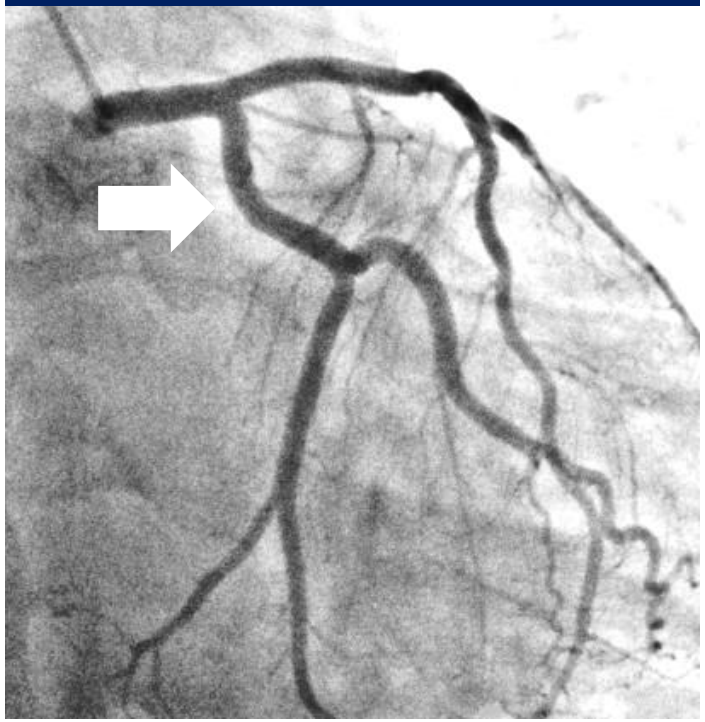
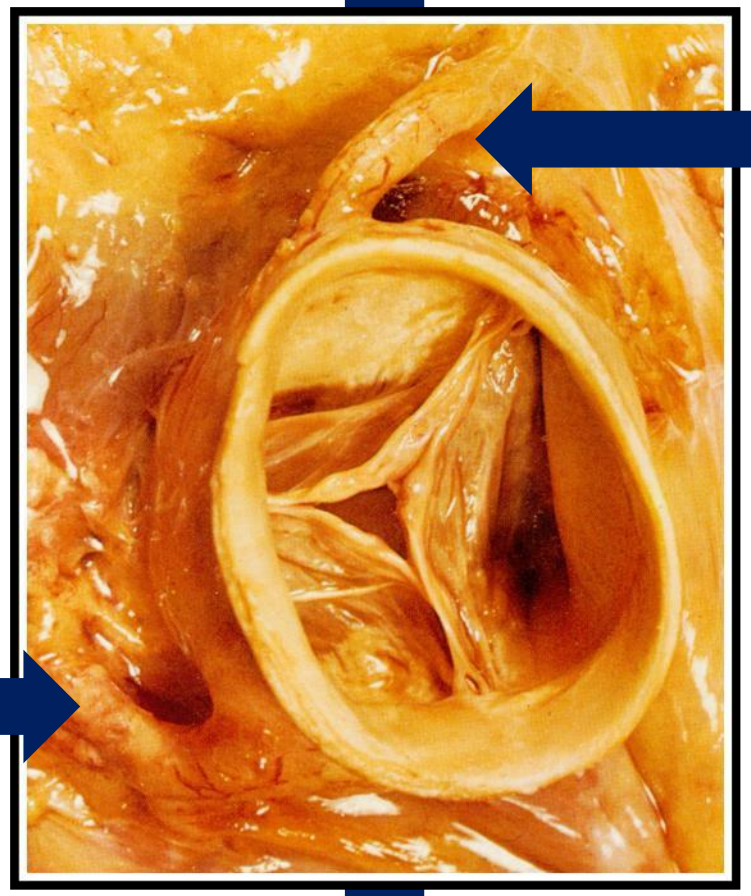
Se méfier des intituitions

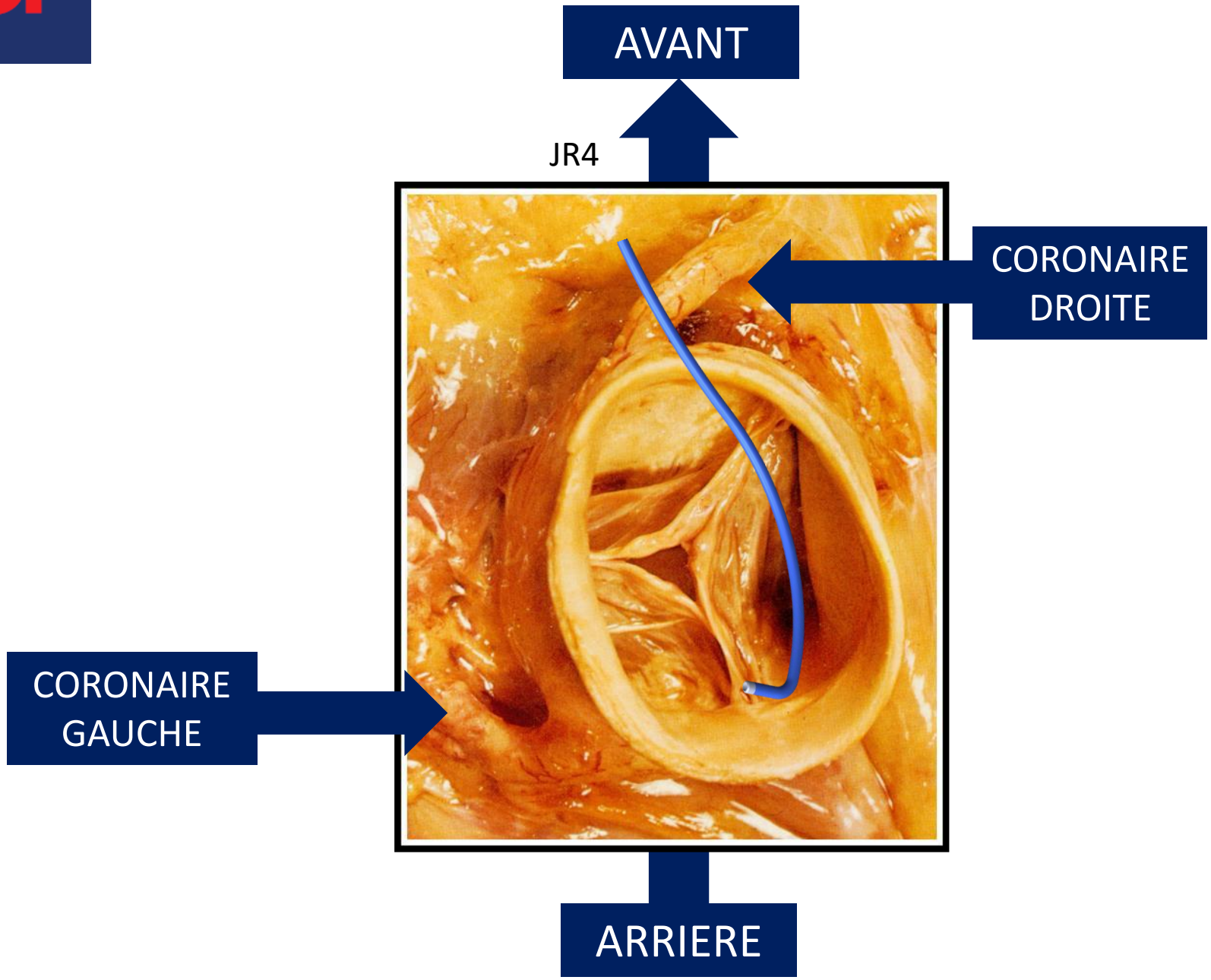
Coronaire droite

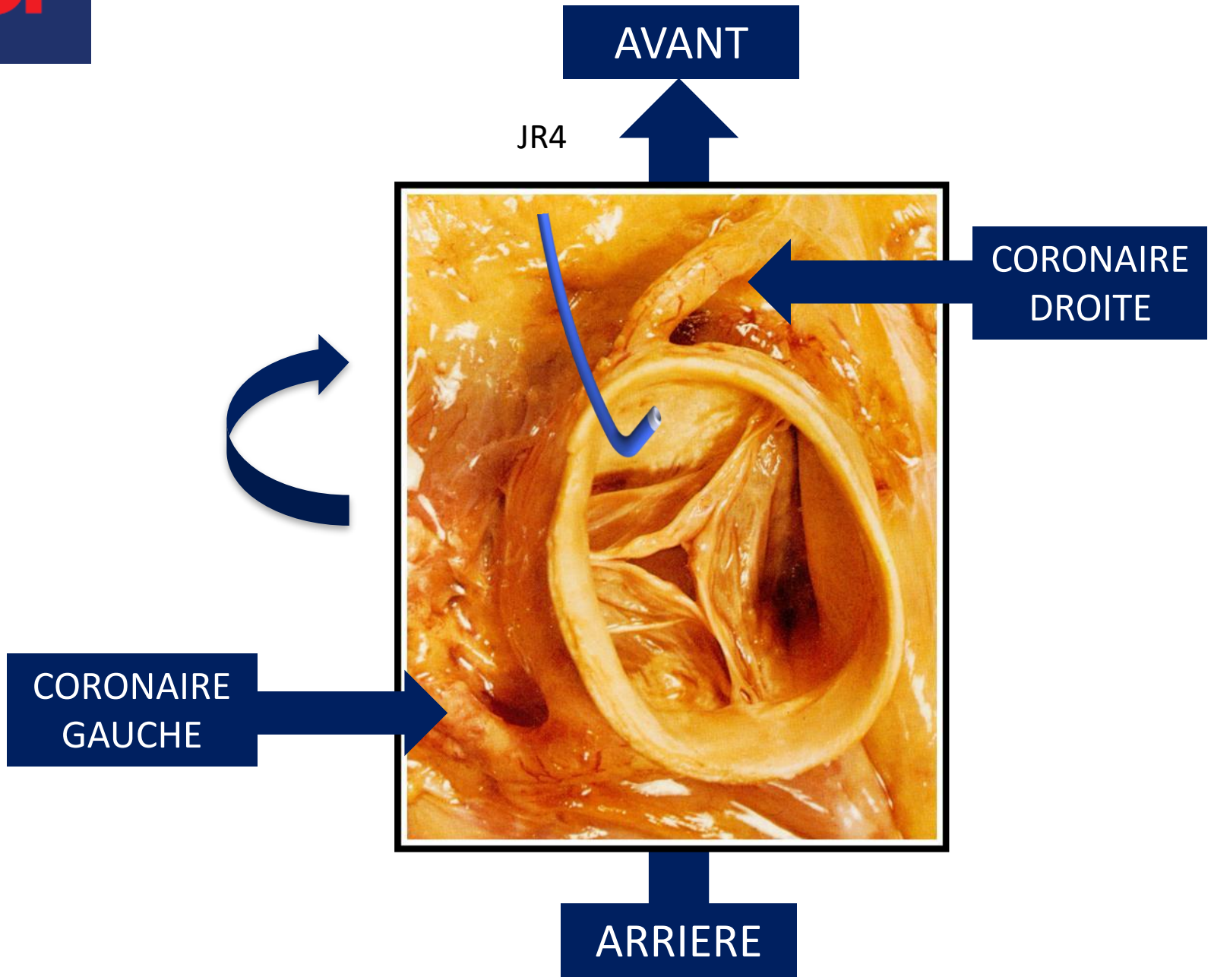


Coronaire gauche




AVANT
CORONAIRE DROITE
CORONAIRE GAUCHE
ARRIERE


AVANT
JR4
CORONAIRE DROITE
CORONAIRE GAUCHE
ARRIERE


AVANT
JR4
CORONAIRE DROITE
CORONAIRE GAUCHE
ARRIERE

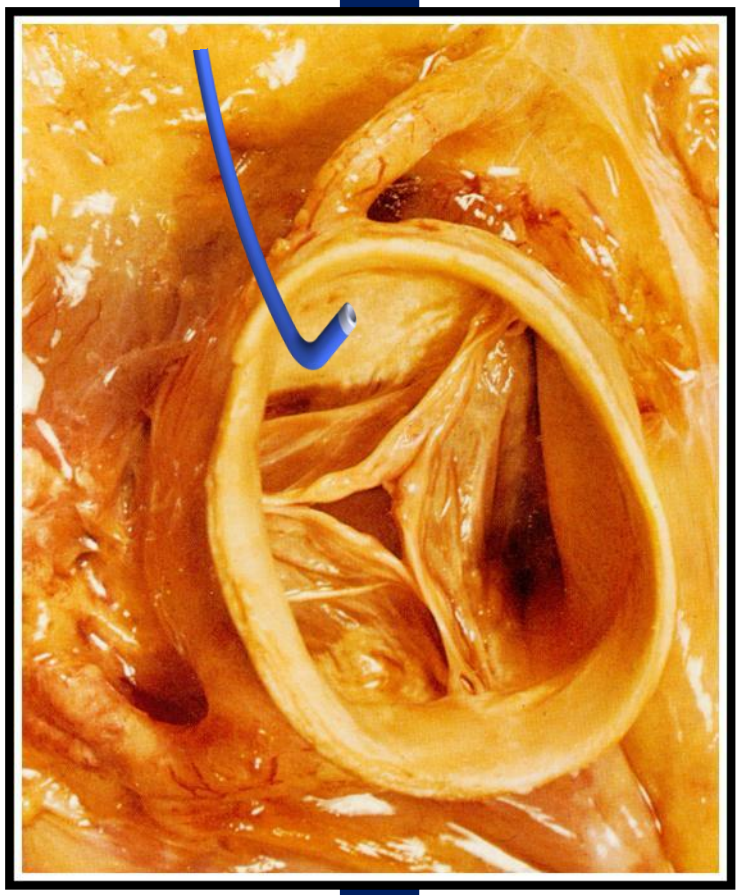
AVANT

JR4

DIRECTION ANTERIEURE

ROTATION HORAIRE

GAUCHE DROITE



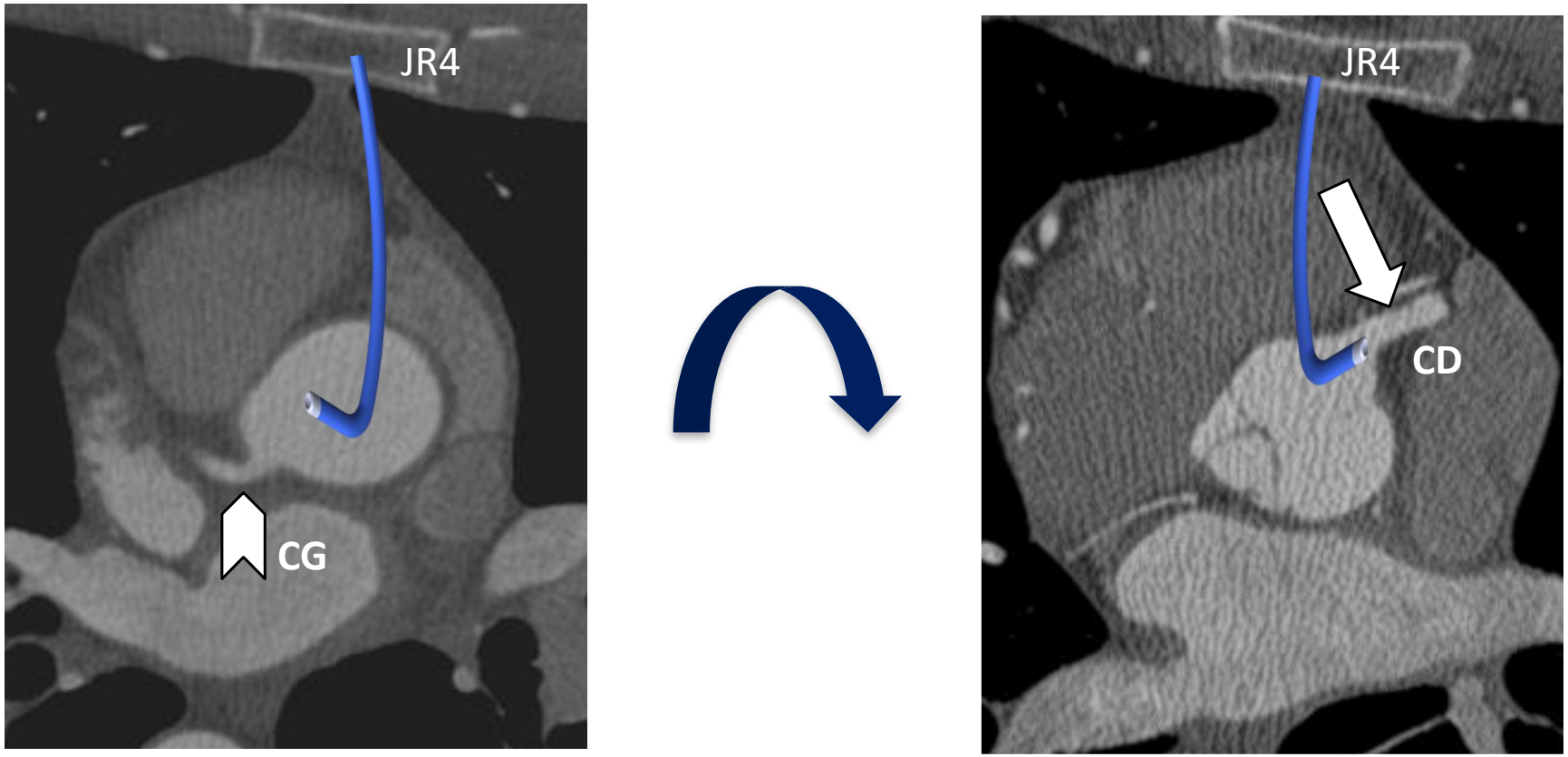
DROITE GAUCHE

ROTATION ANTI- HORAIRE

DIRECTION POSTERIEURE

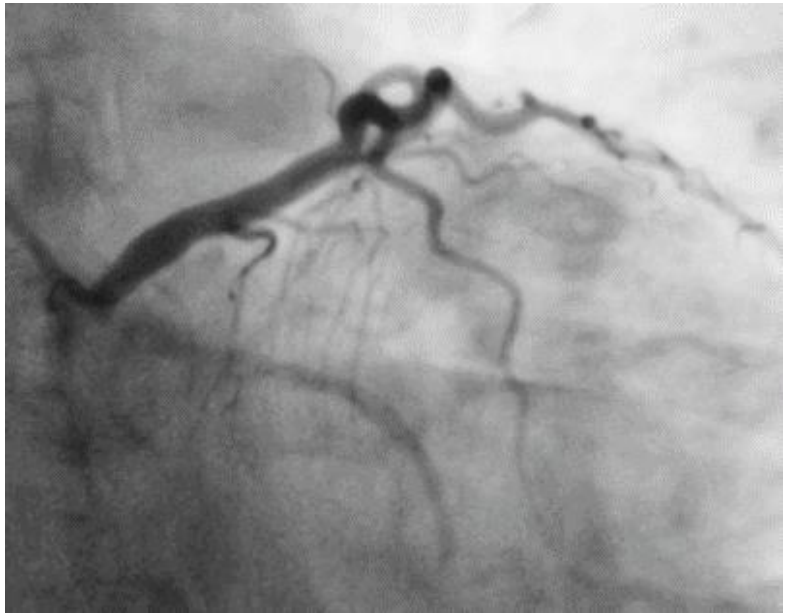
ARRIERE

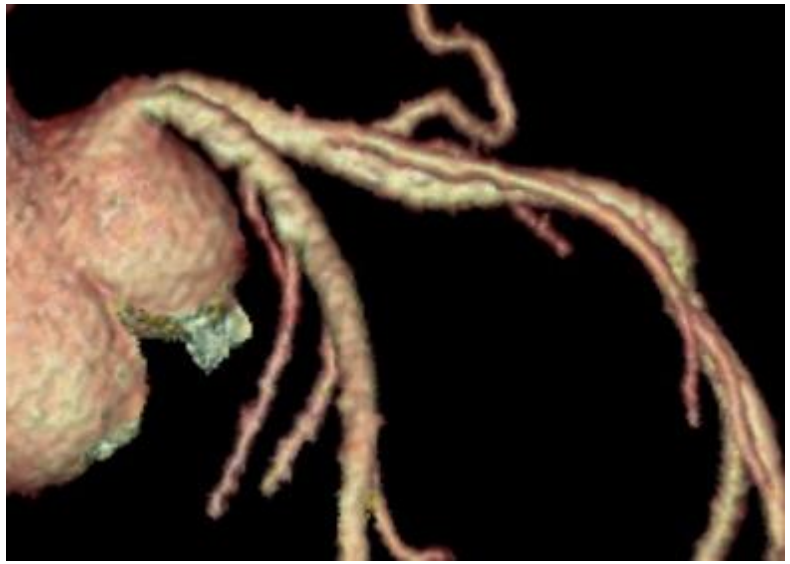
Rotation horaire du sinus gauche vers la coronaire droite



Rotation horizontale images

Connexion séparée IVA/circonflexe





Connexion séparée IVA/circonflexe

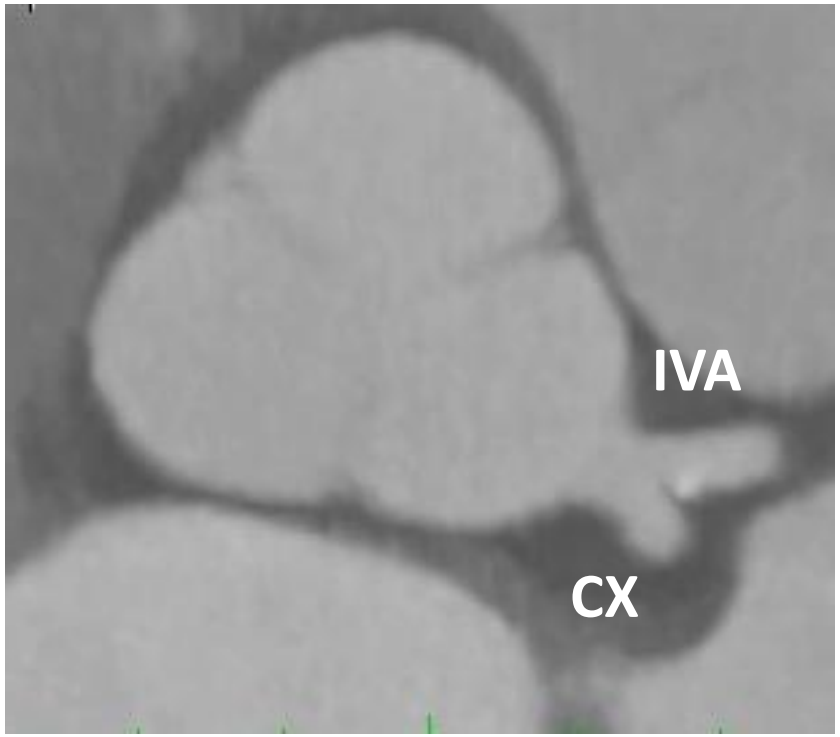
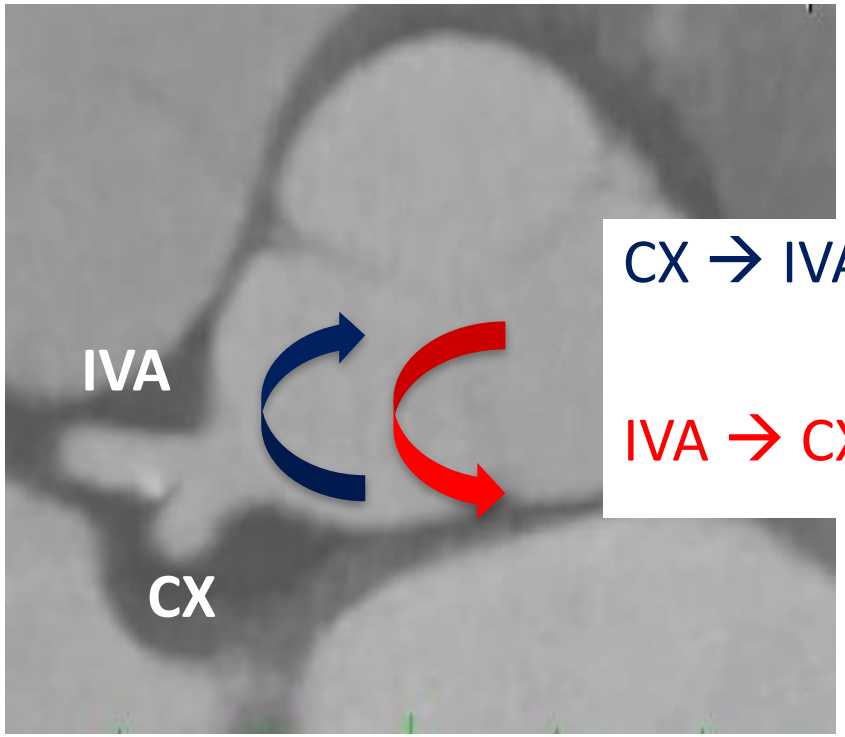


Image scanner axiale



Rotation horizontale image

CX → IVA : rotation horaire

IVA → CX : rotation anti-horaire

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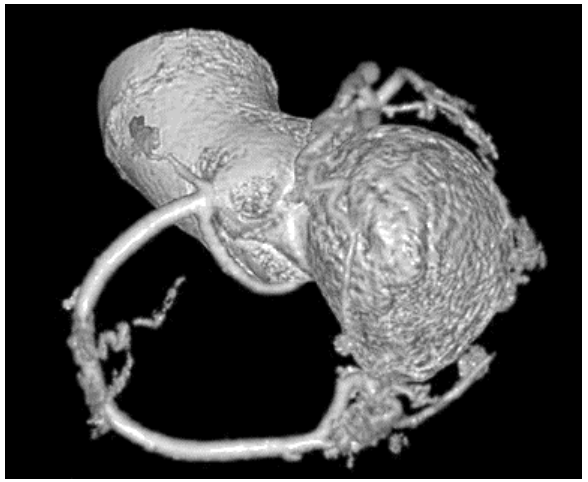
Circonflexe ectopique

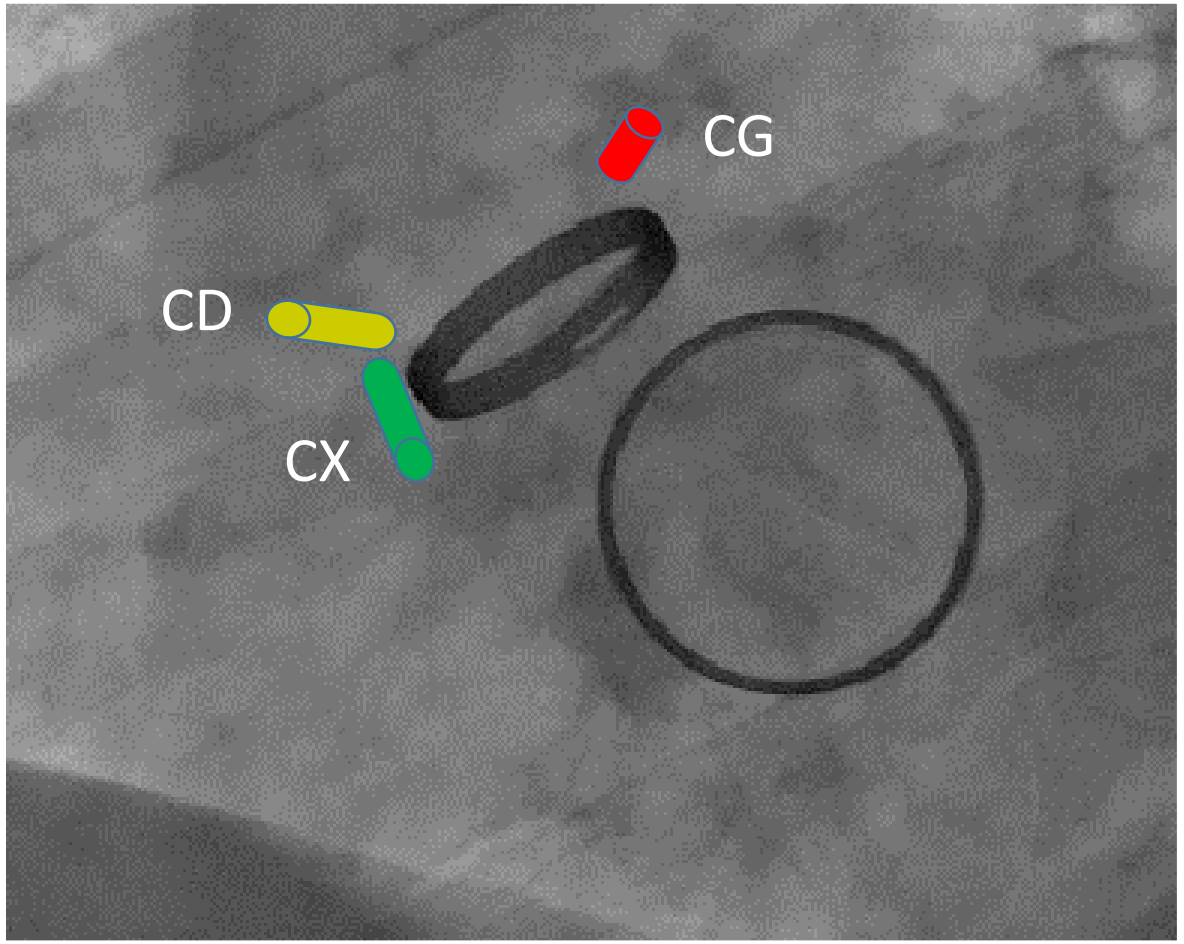
- Connexion
- artère coronaire droite (50%) : risque de méconnaitre l'ANOCOR
- sinus droit (50%)

- Trajet : rétroaortique (99%) et descendant



Circonflexe ectopique

Incidence OAG 40°



Circonflexe ectopique

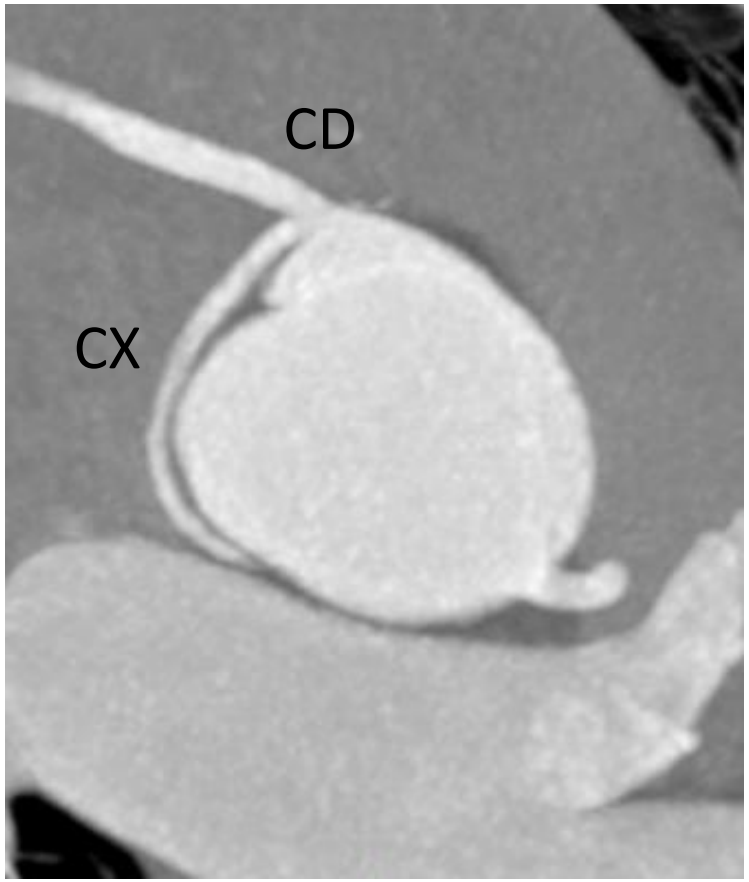
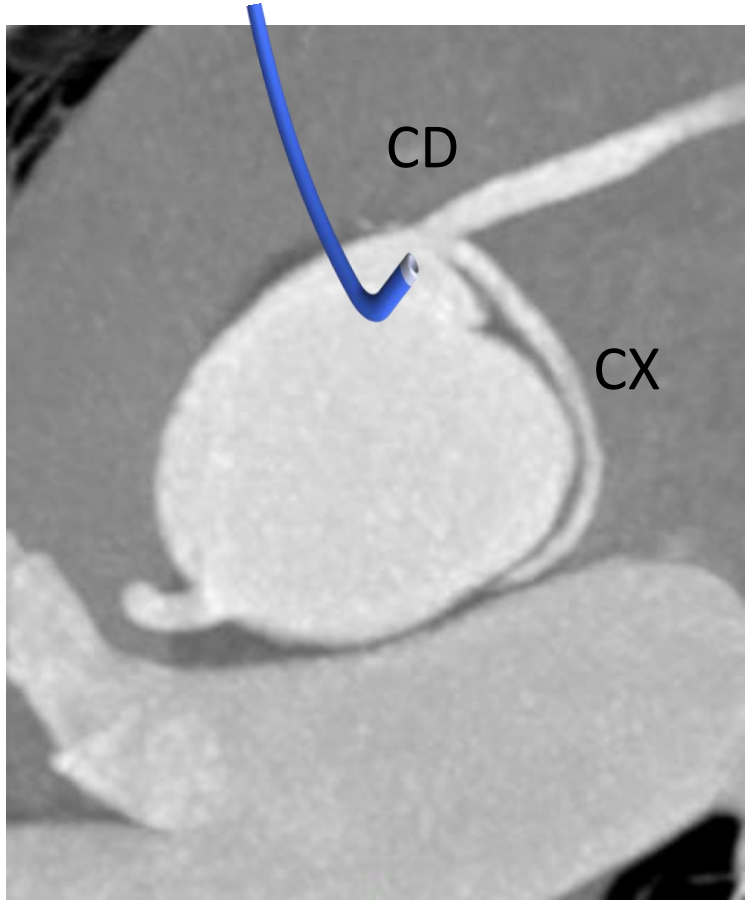


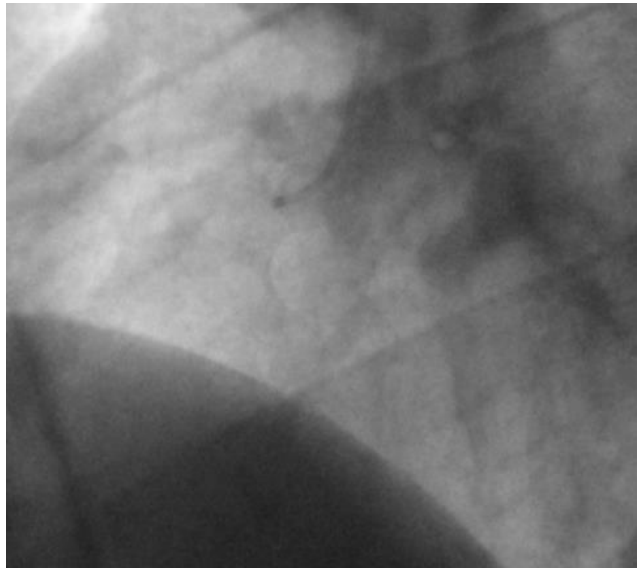
Image scanner axiale

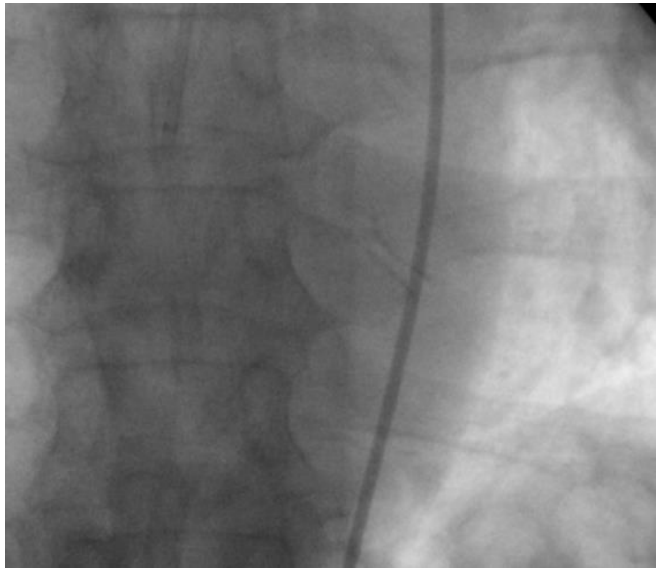


Rotation horizontale image

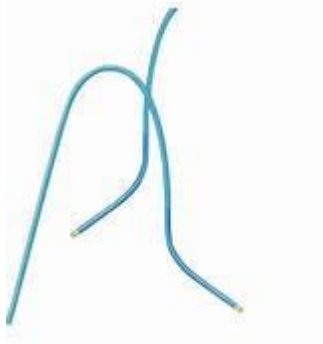
CD → CX rotation horaire

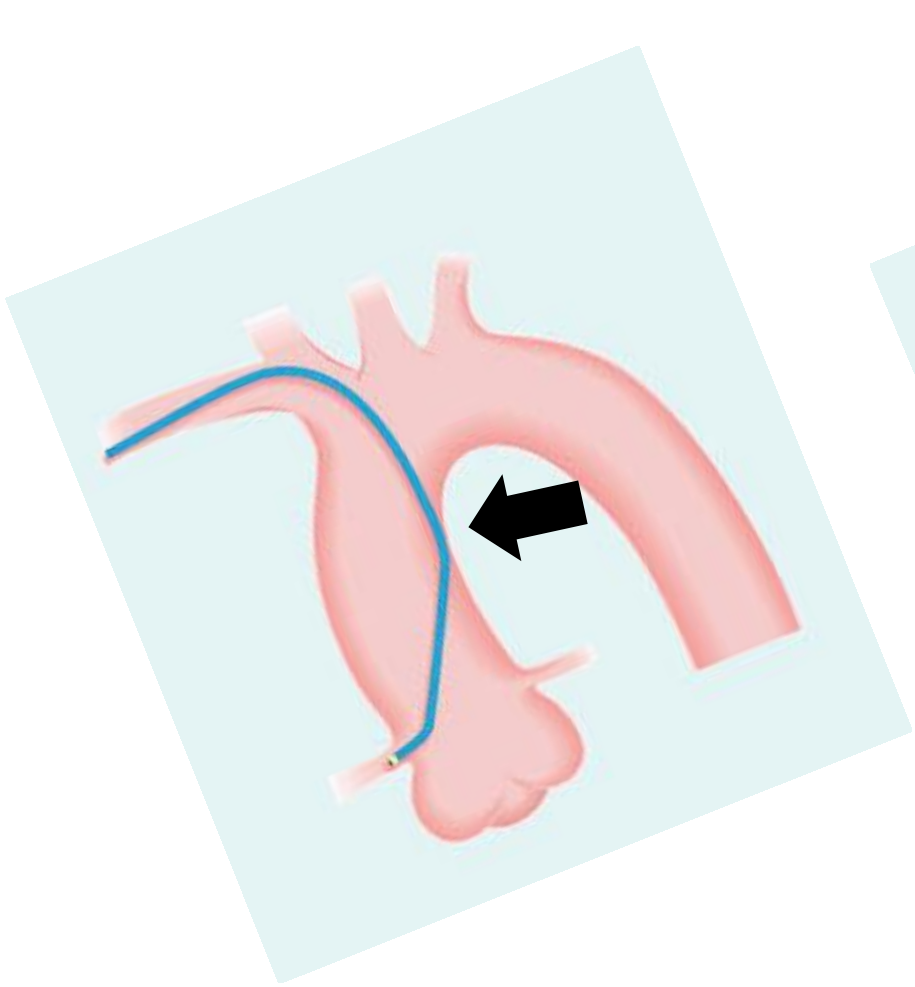
Circonflexe ectopique

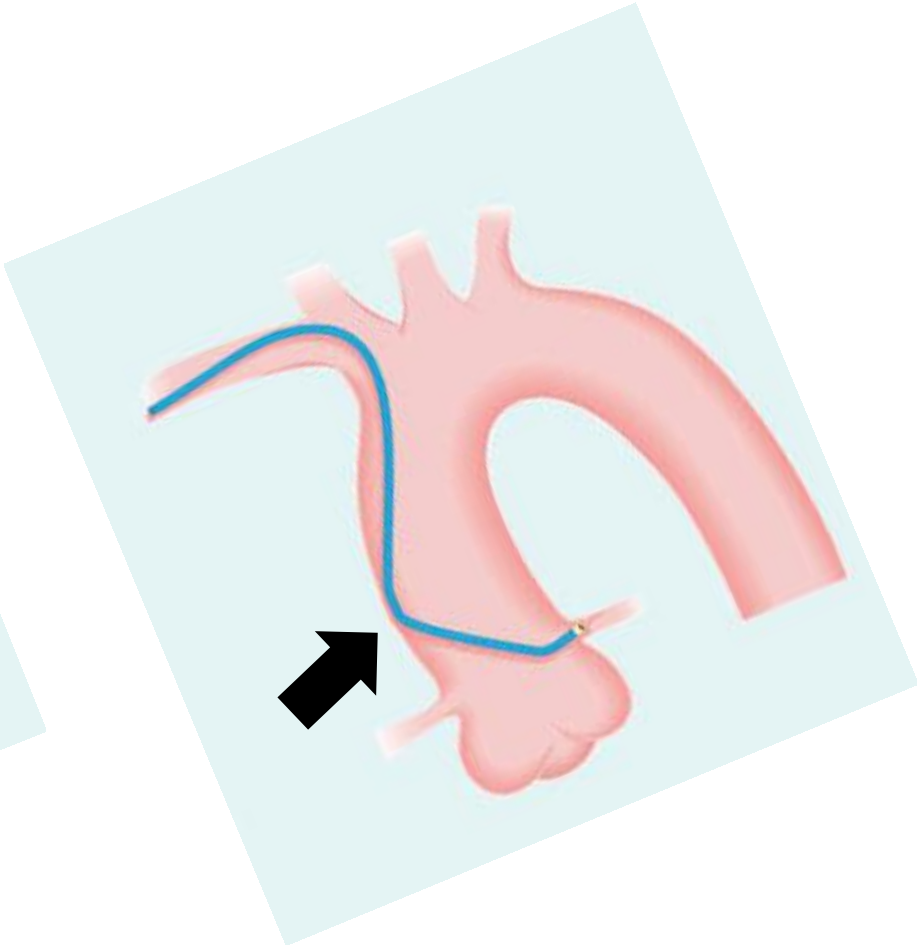


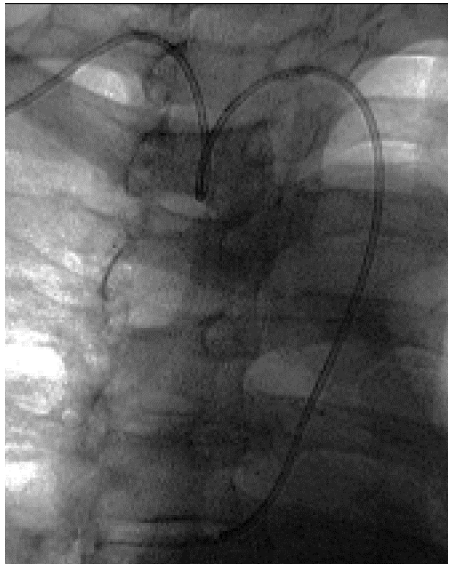


MP









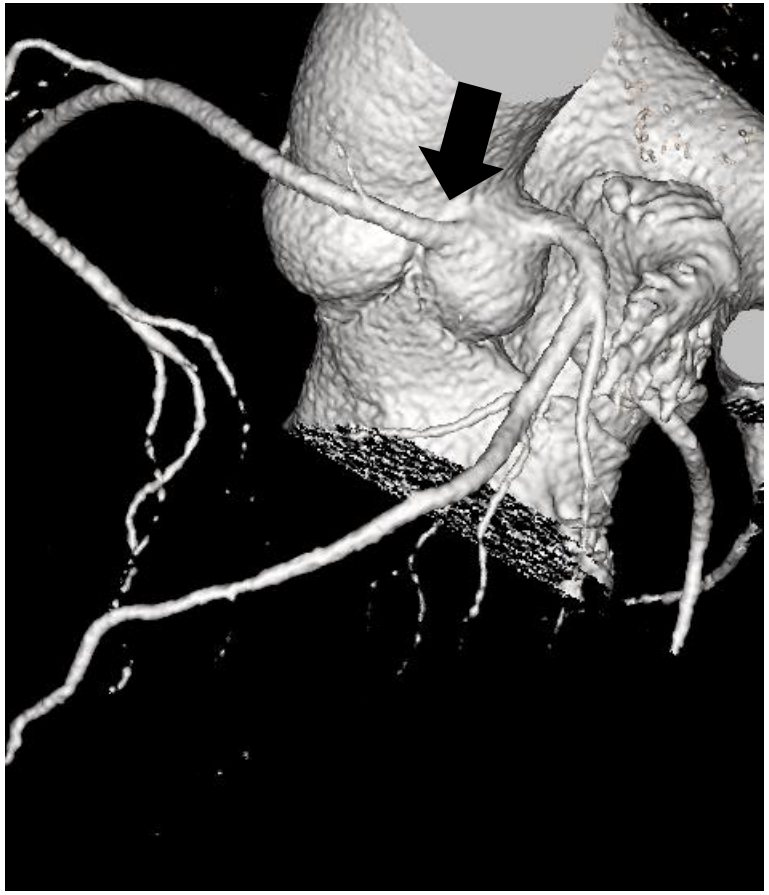
Circonflexe ectopique

- Connexion : coronaire droite ou sinus droit
- Sondes : JR +++, MP ++, AR ++, AL
- Retrait de la sonde de la coronaire droite et rotation horaire
- Positionnement au-dessous et à droite de l'ostium droit (sinus droit)
- Si difficulté :
  - cathéter-guide
  - guide 0.014 dans la coronaire droite
  - guide dans circonflexe

Droite ectopique

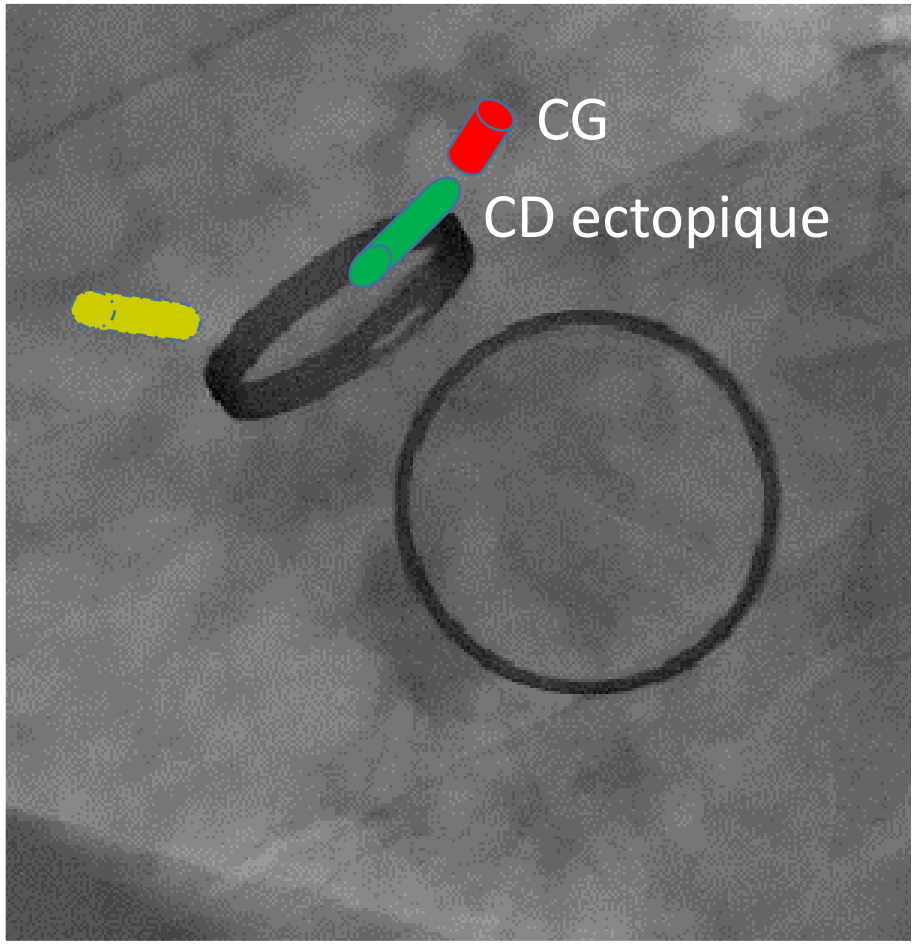
- <u>Connexion</u>
  - sinus gauche ++++
  - aorte ascendante +
  - tronc ou IVA +

- <u>Trajet</u>
  - interartériel ++++
  - autre +

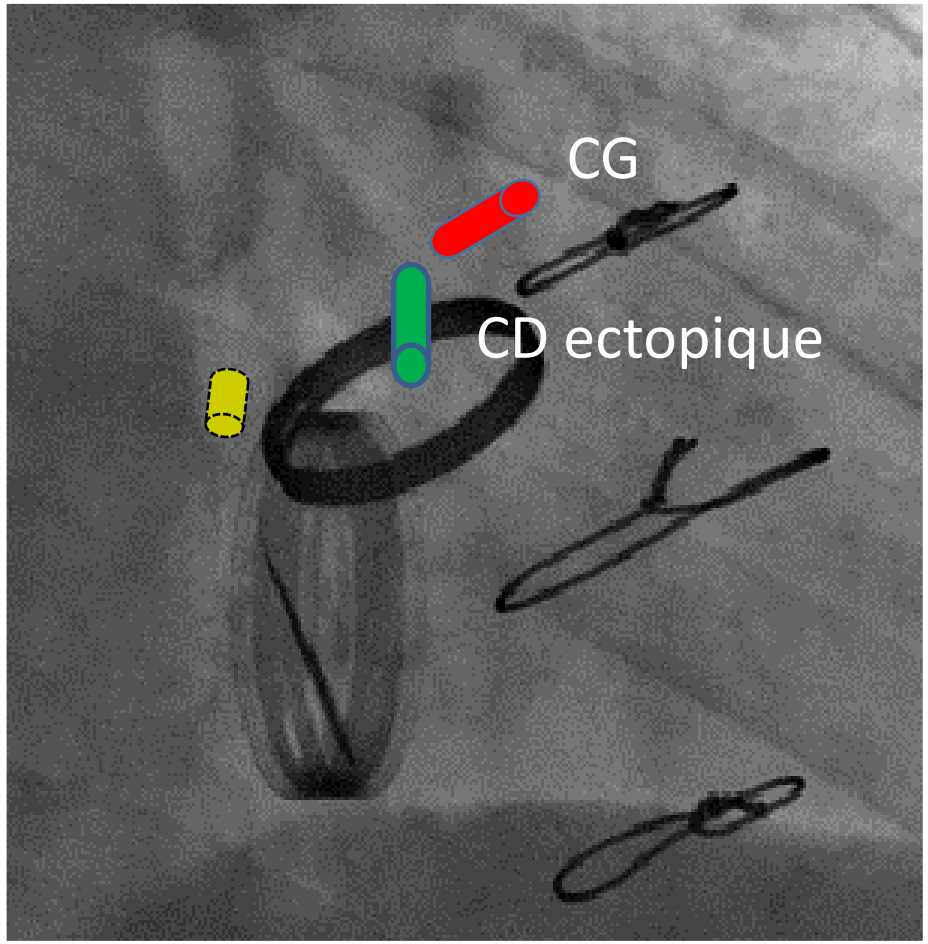


Droite ectopique

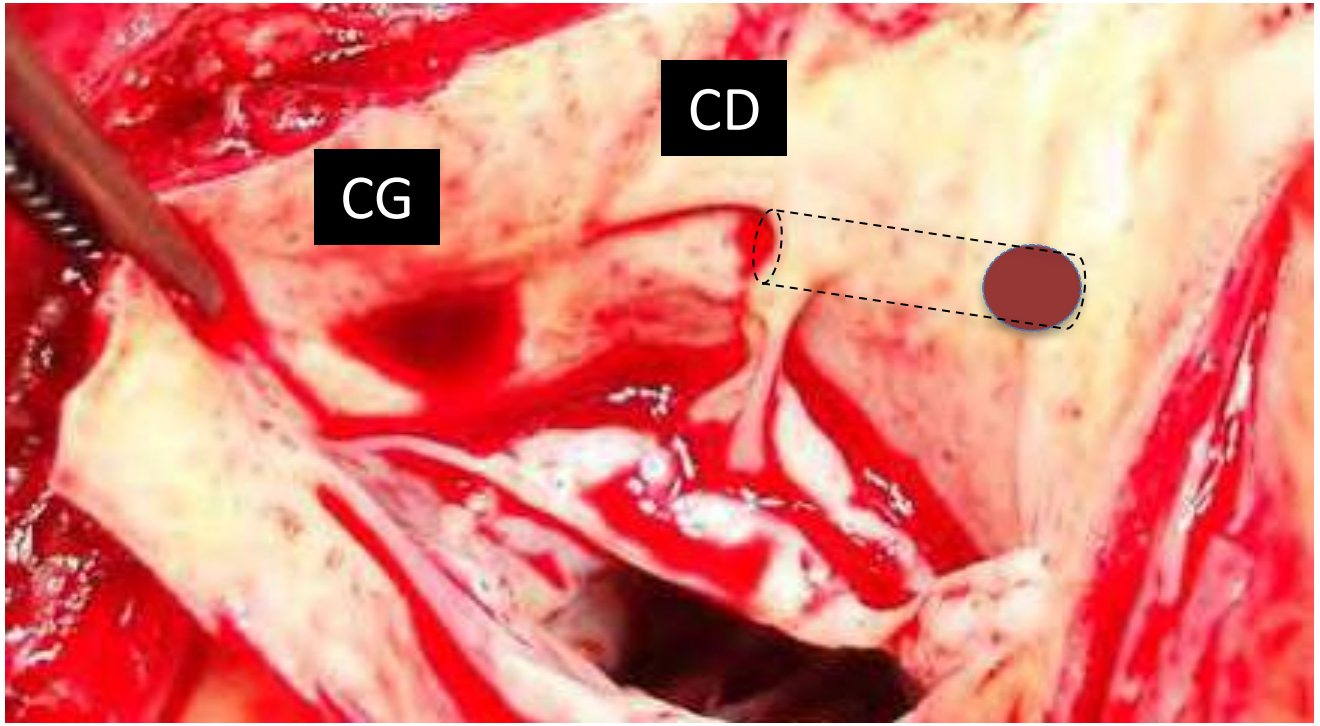
Incidence OAG 40°



Incidence OAD 40°

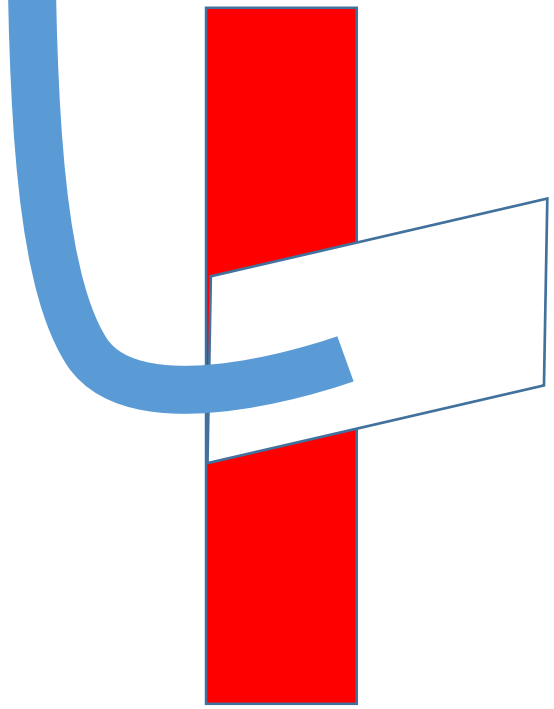


Droite ectopique

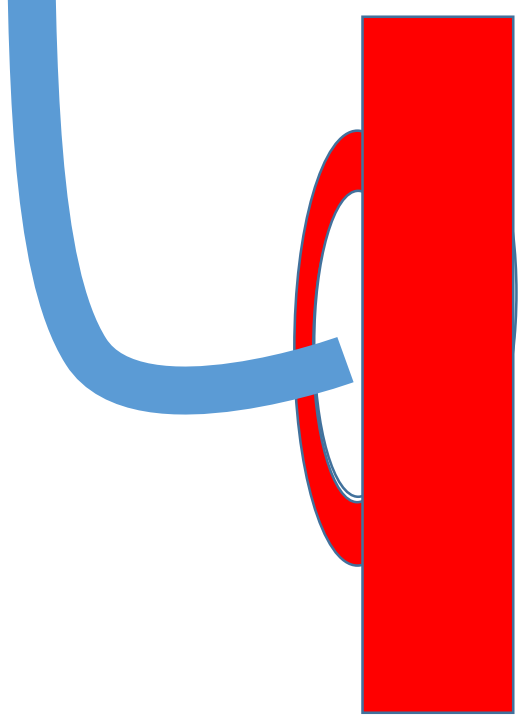


Situation habituelle ostium CD

Connexion normale



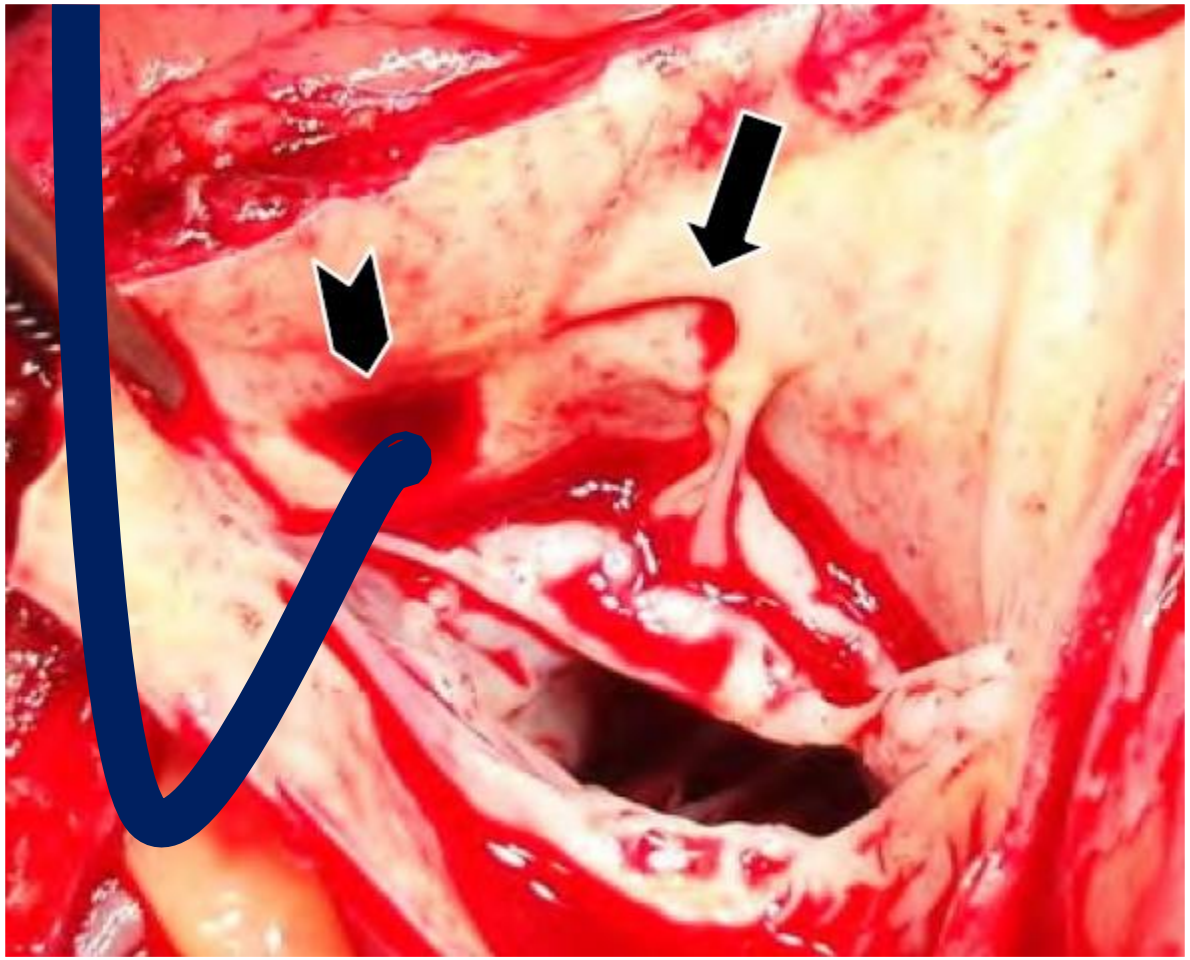
Connexion ectopique



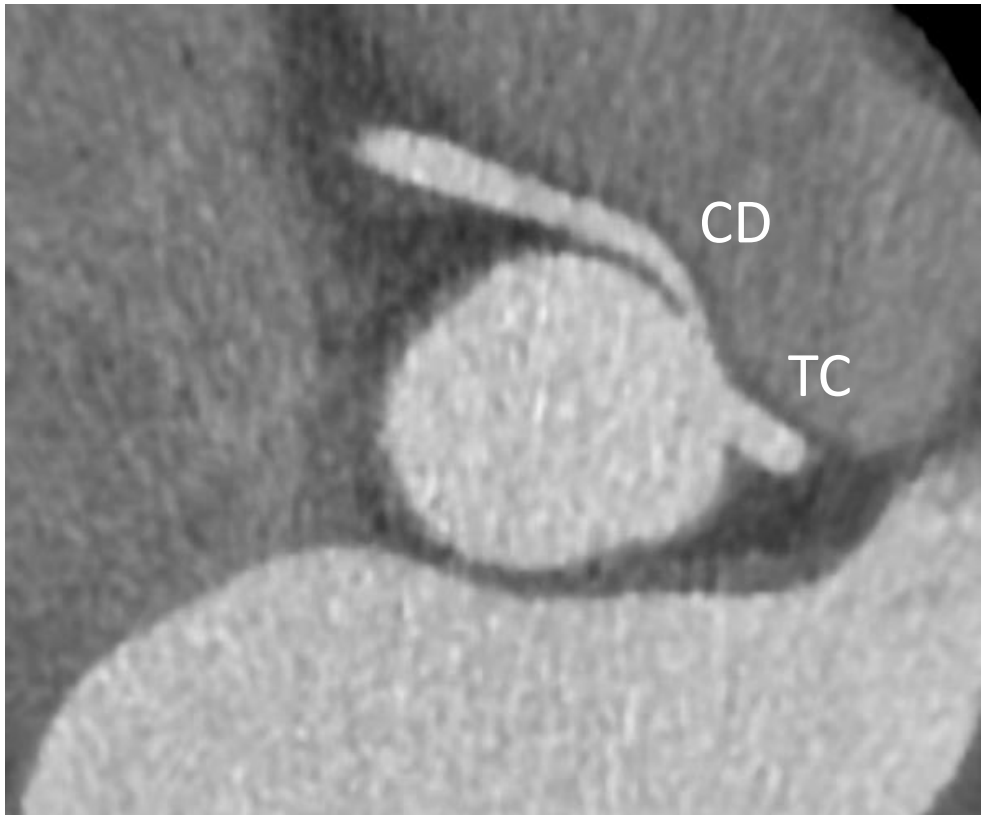
Position coaxiale

Position coaxiale

Droite ectopique



Droite ectopique



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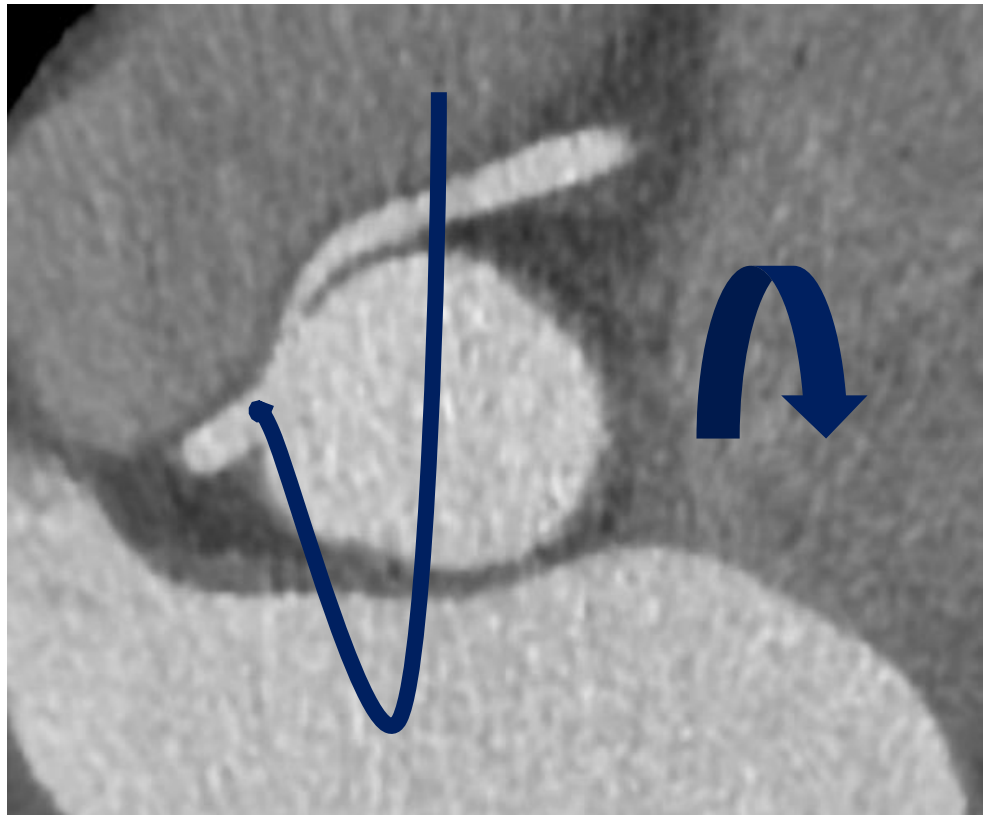
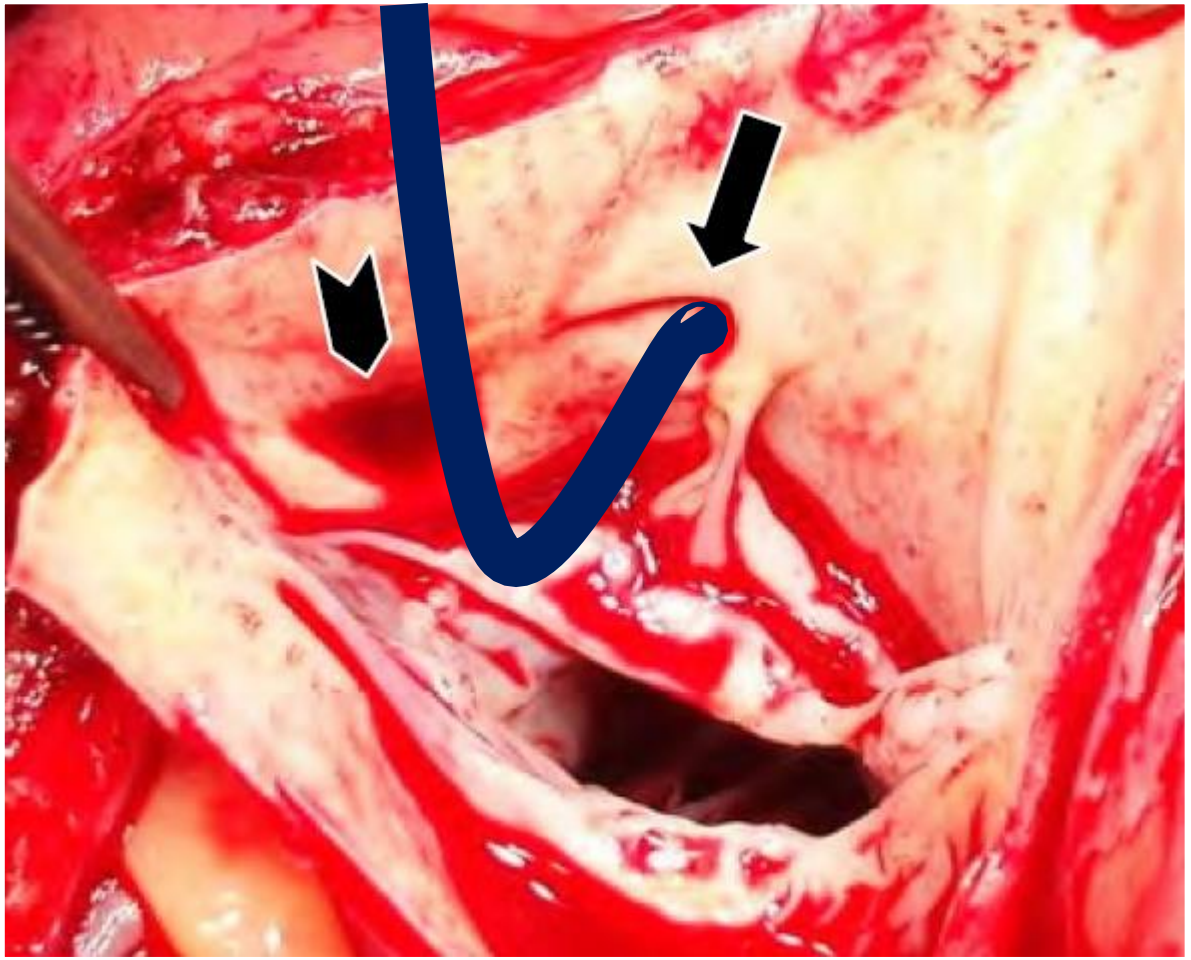


Rotation horizontale image

Rotation horaire

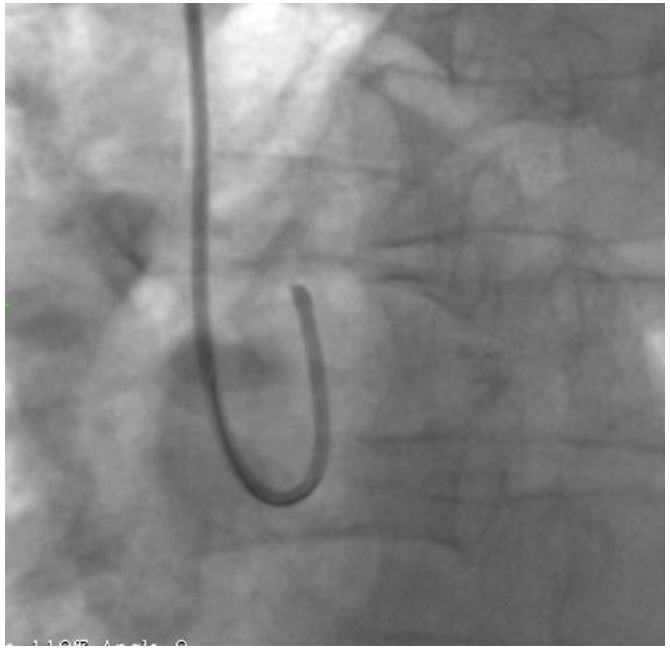
Droite ectopique



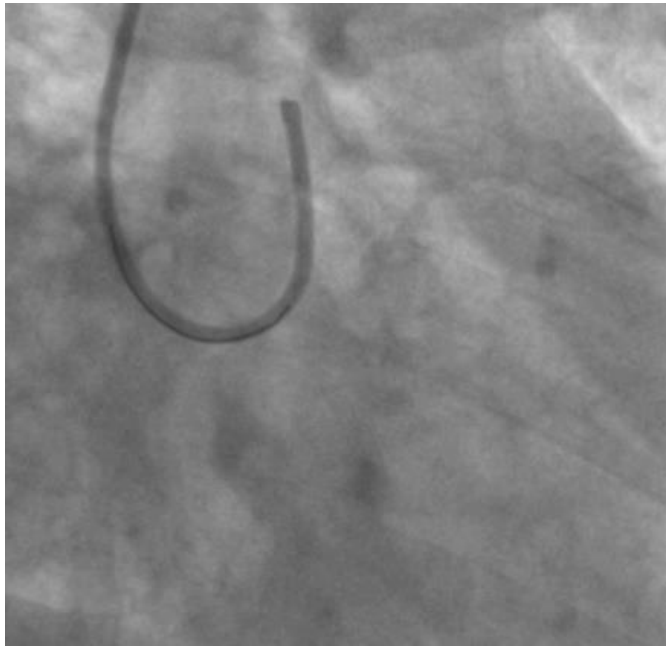
Push puis
lente rotation
horaire

Droite ectopique

Incidence OAG 40°

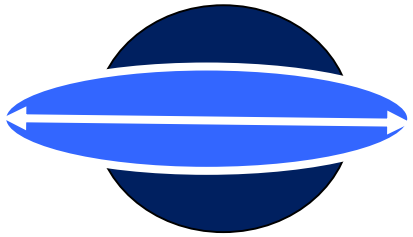


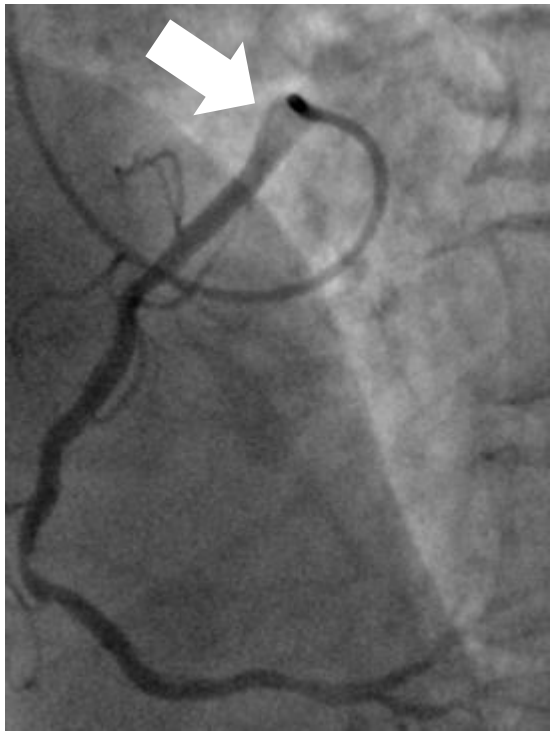
Incidence OAD 40°

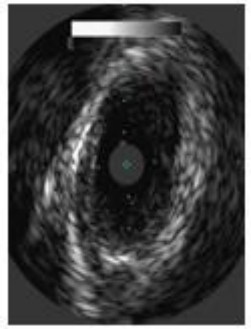


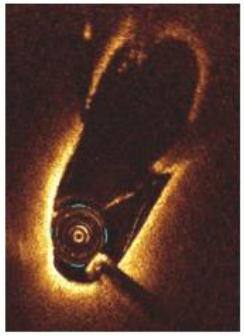
Droite ectopique

Incidence OAG 40°

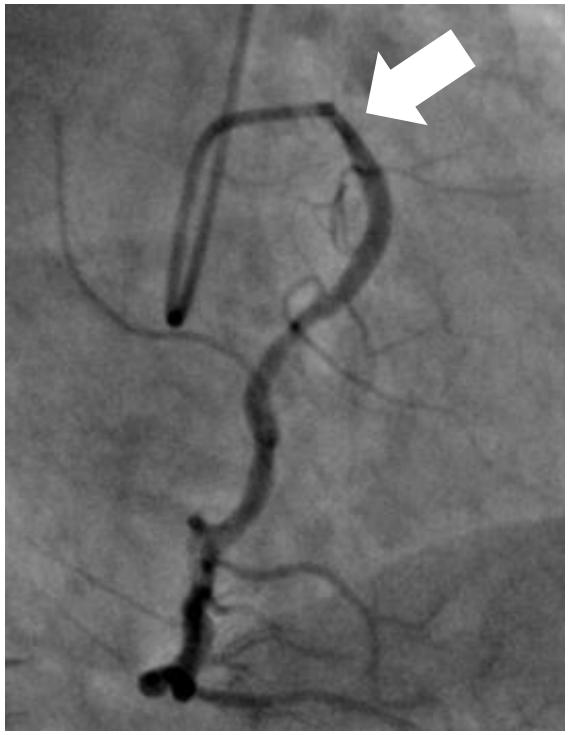


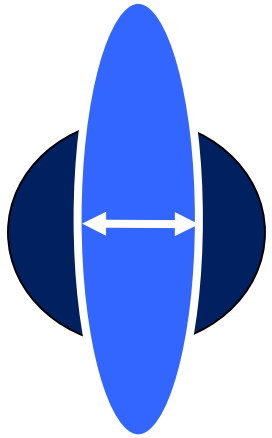






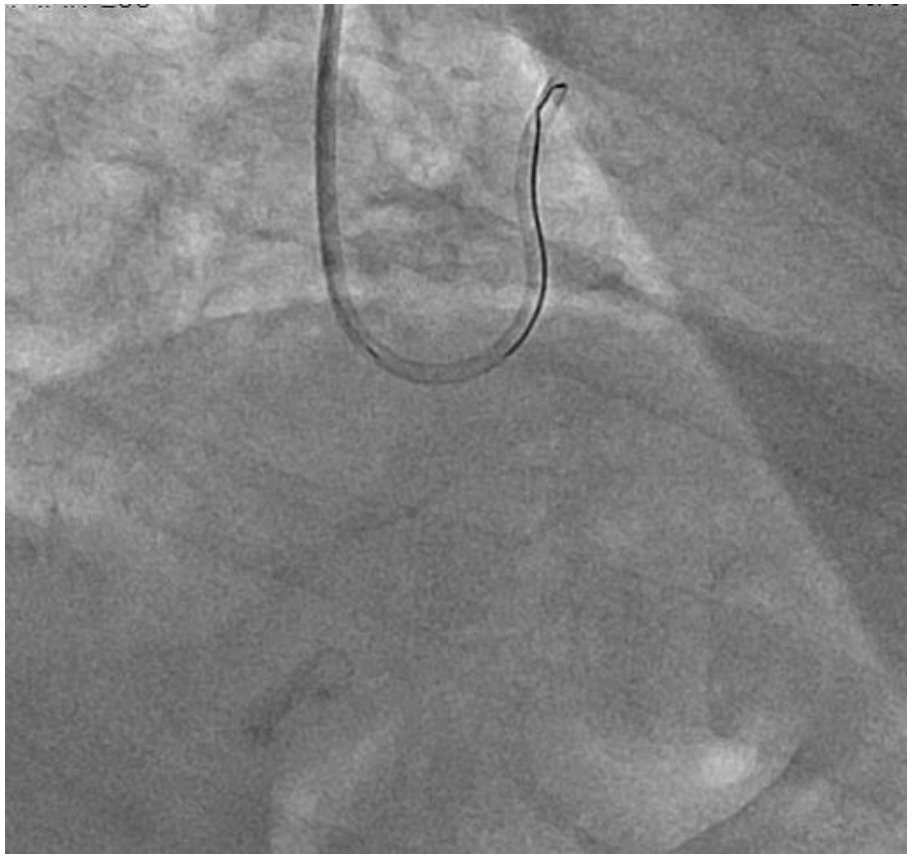
Incidence OAD 40°

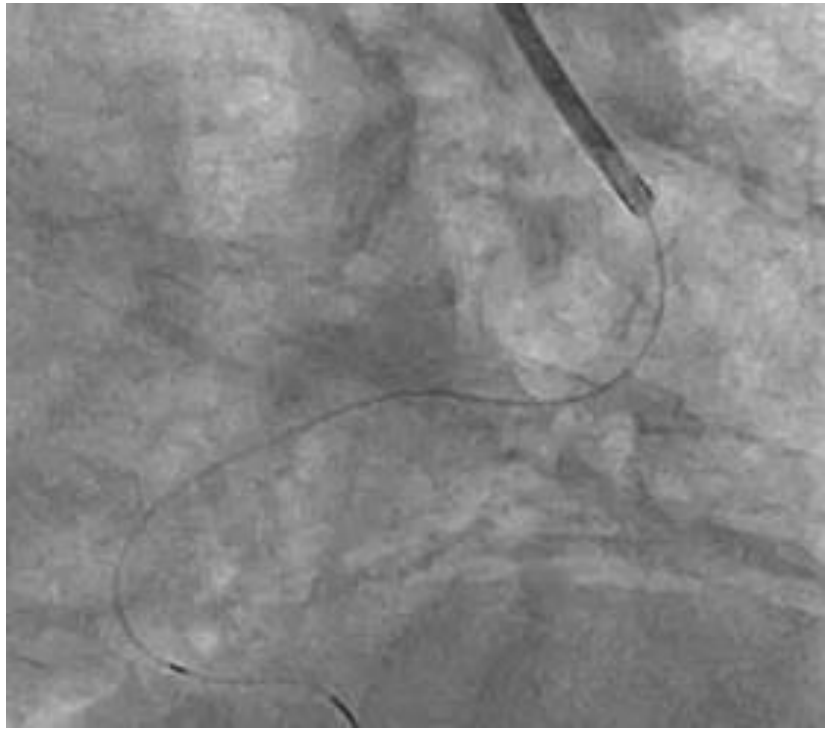




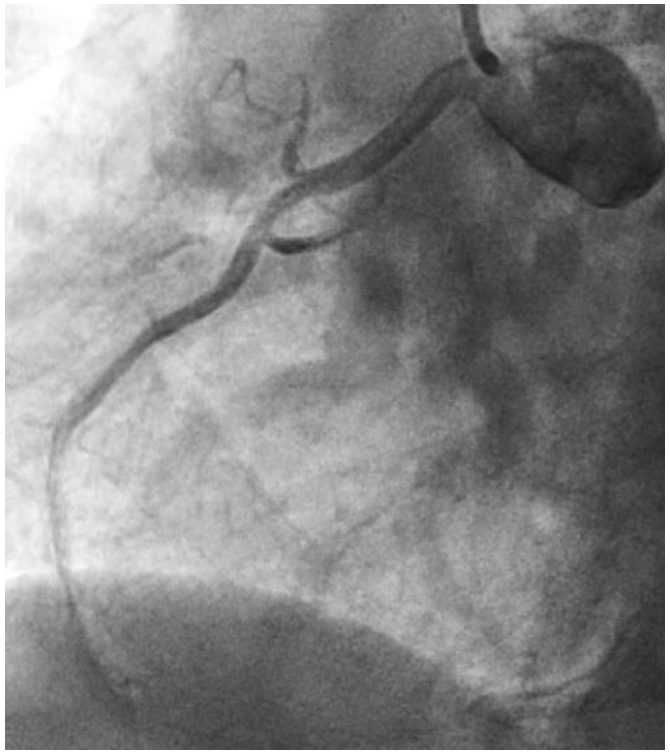
DIU cardiologie interventionnelle

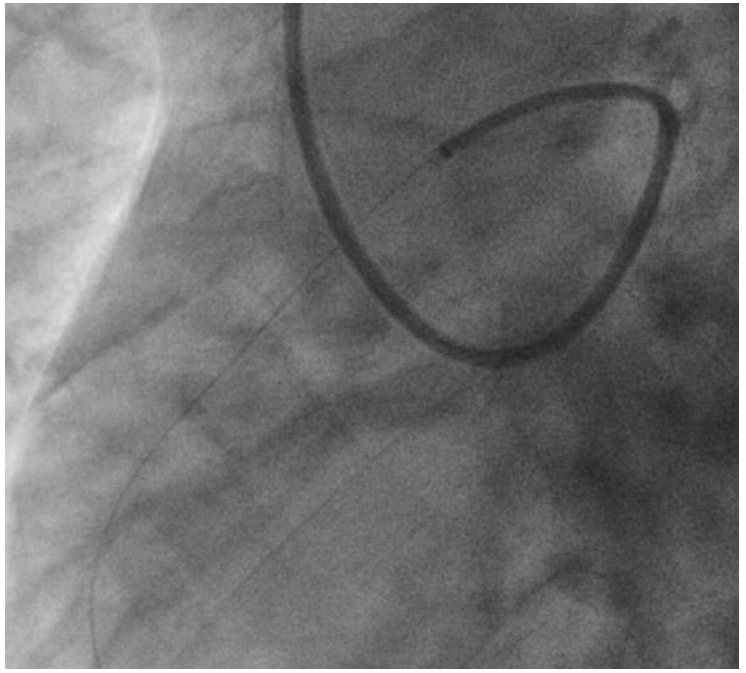
Droite ectopique

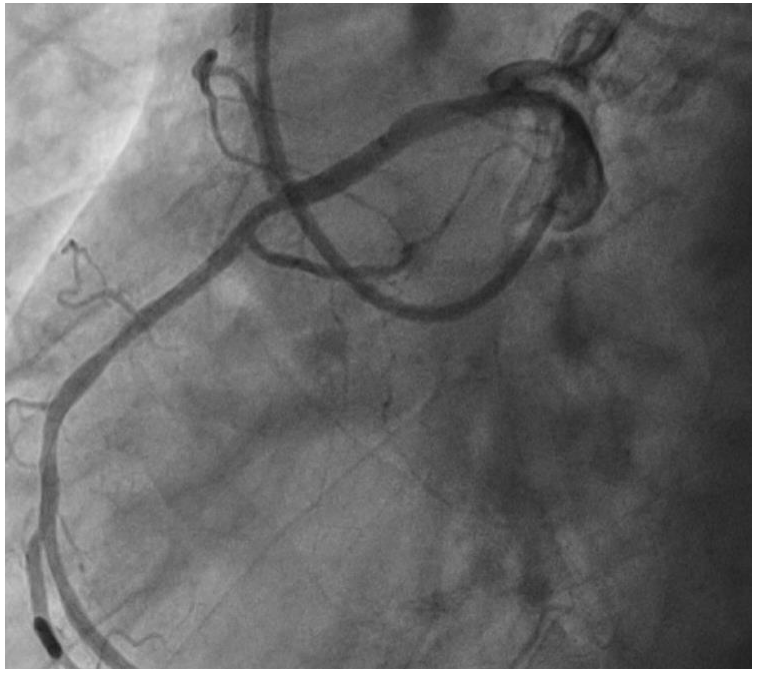




Droite ectopique

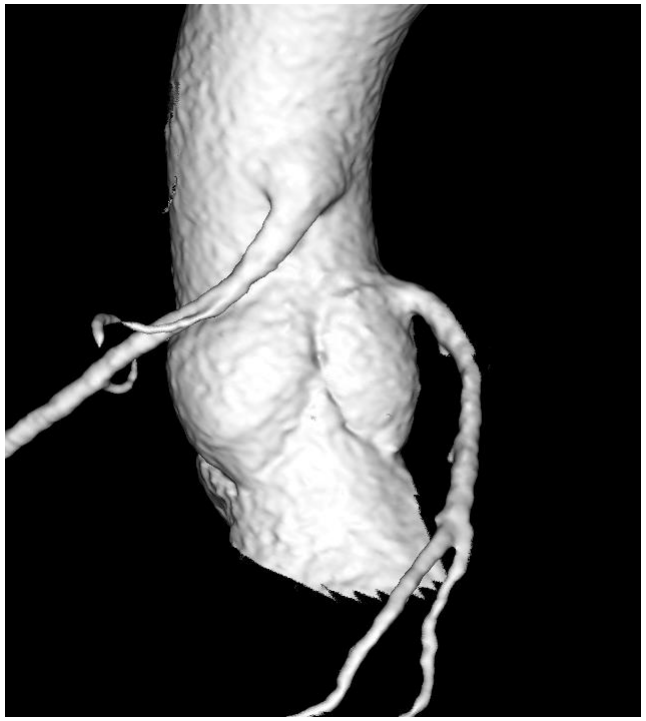






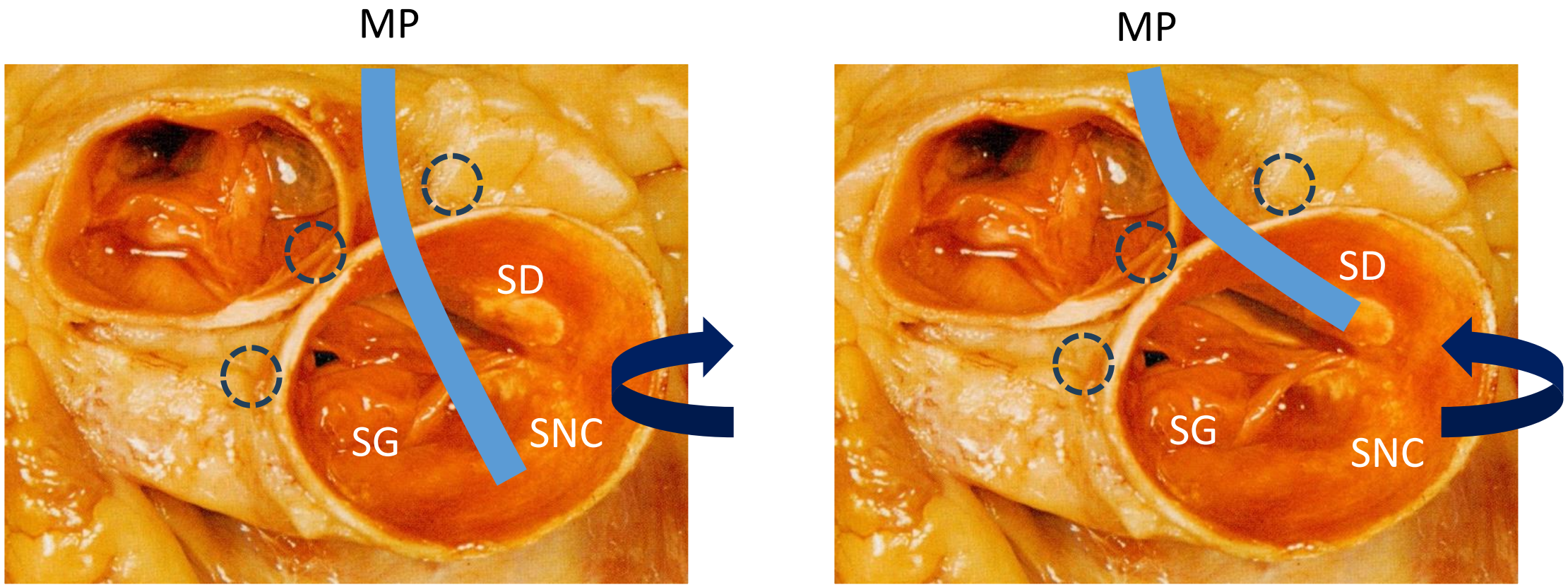
Extension de cathéter

Droite ectopique



Connexion aortique haute

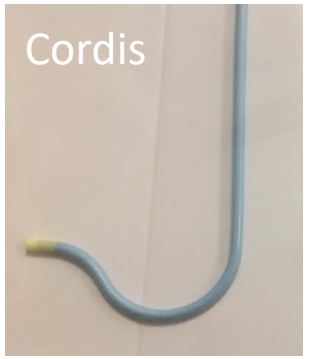
Droite ectopique



Connexion aortique haute

Droite ectopique

- Connexion sinus gauche :
  - cathéter-guide plutôt que sondes diagnostiques
  - EBU ou équivalent +++, AL ++
  - canulation ostium gauche puis rotation horaire lente
  - OAG 40° puis OAD 30-40°
  - échec de cathétérisme sélectif : guide 0.014, cathéter extension



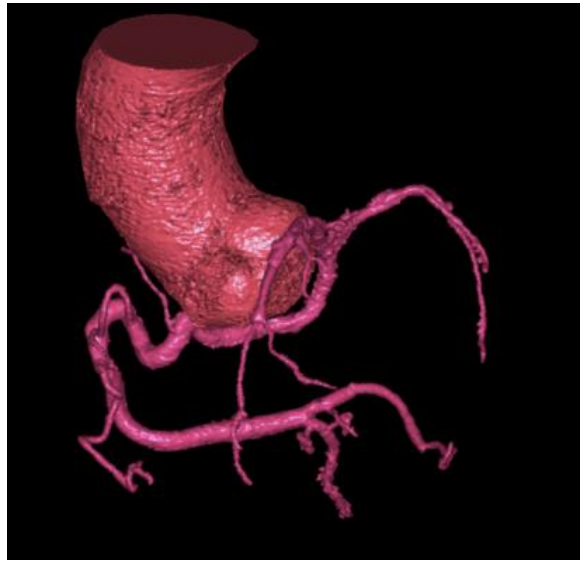
- Connexion haute :
  - AL 1, AL 2, MP au-dessus du sinus droit puis rotation anti-horaire
  - AL 1, AL 2, MP au-dessus du sinus gauche puis rotation horaire

DIU cardiologie interventionnelle

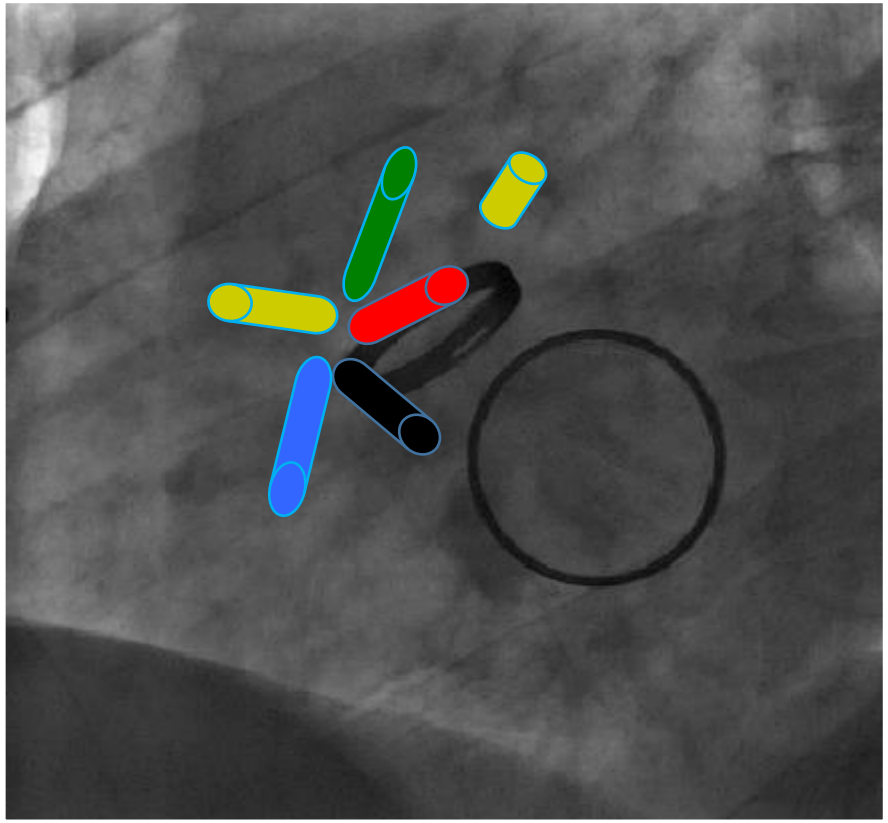
Tronc commun ou IVA ectopiques

- Connexion :
  - sinus controlatéral +++
  - artère controlatérale +++
  - autre

- Trajet :
  - rétroinfundibulaire +++
  - prépulmonaire ++
  - rétroaortique ++
  - interartériel +

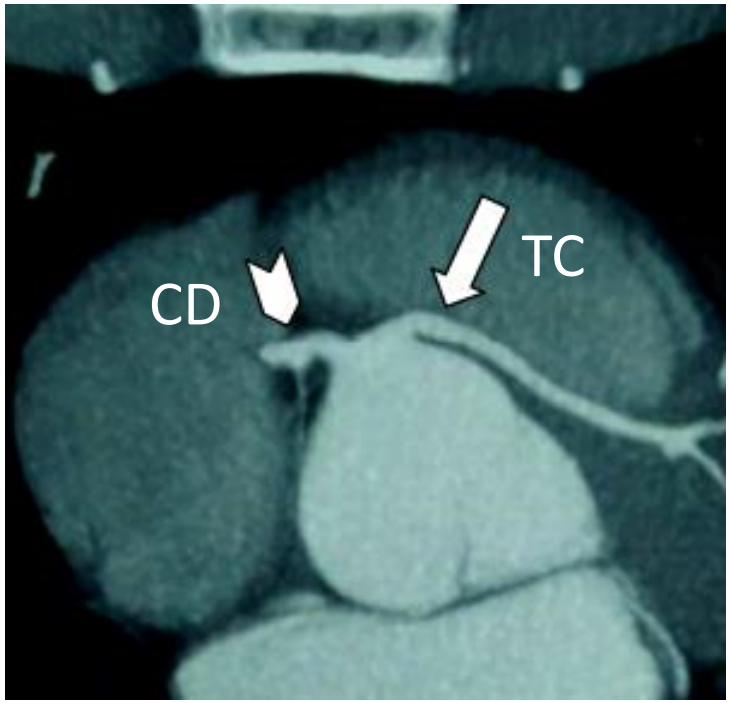


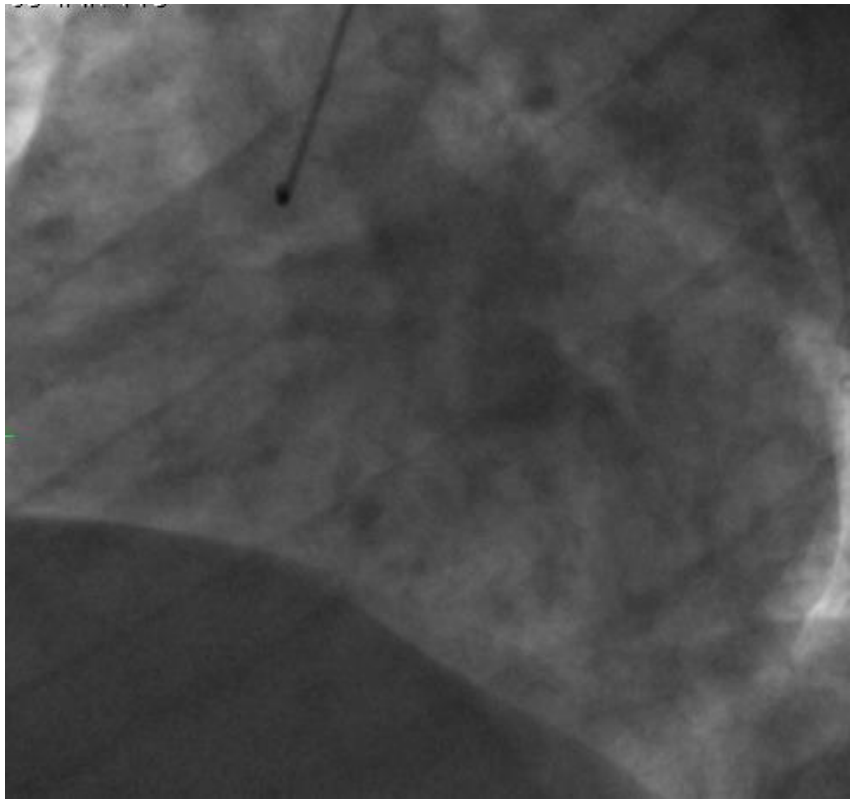
Tronc commun ou IVA ectopiques



- Prépulmonaire
- Interartériel
- Rétropulmonaire
- Rétroaortique

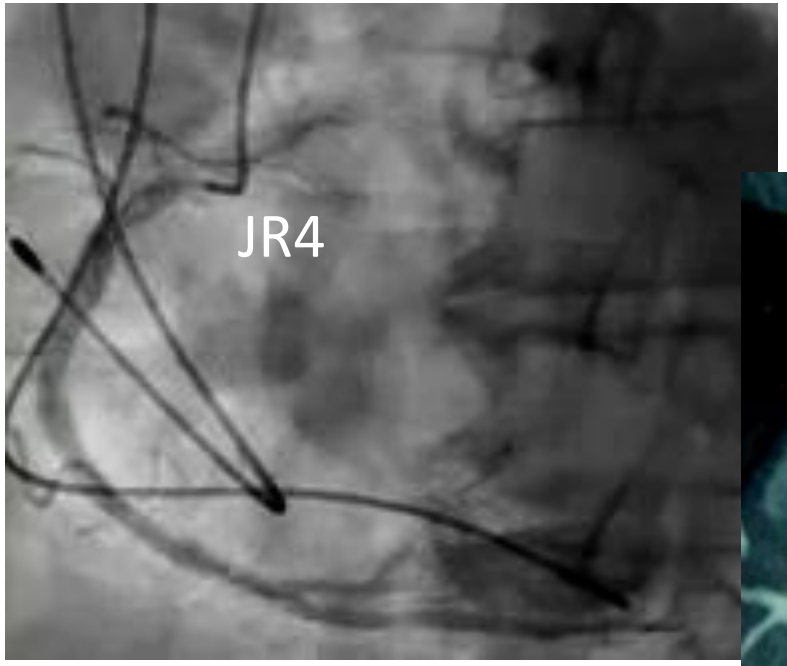
Tronc commun rétropulmonaire

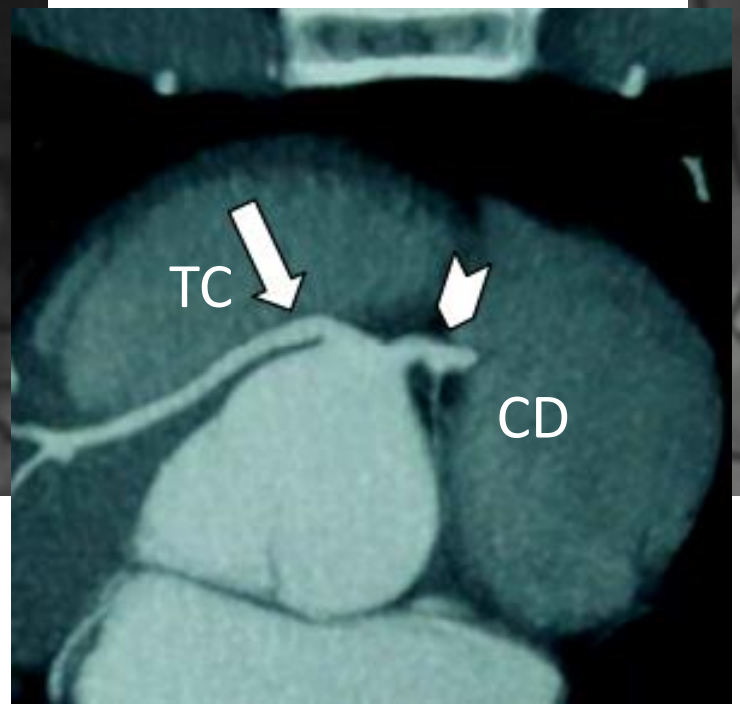


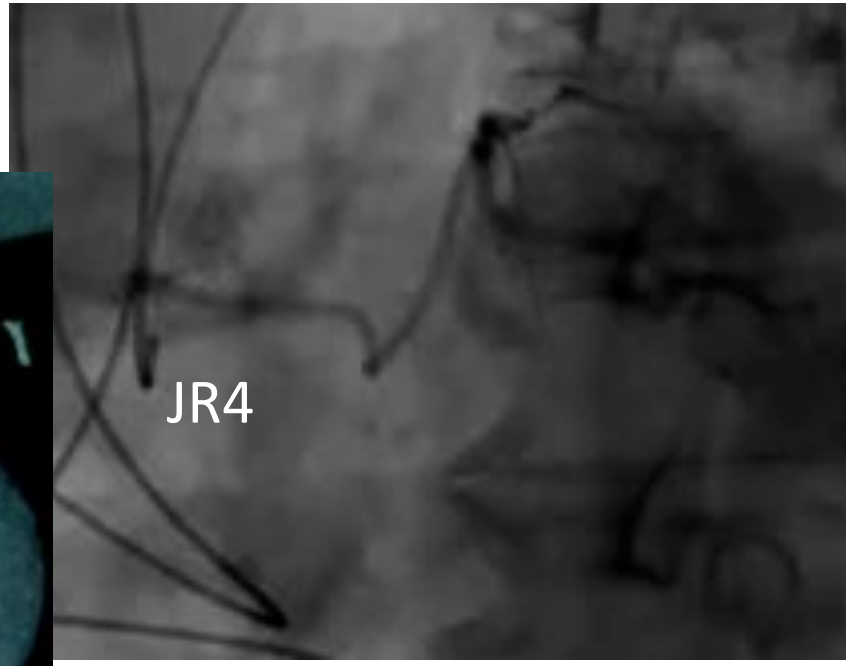


Tronc commun rétropulmonaire

Rotation antihoraire





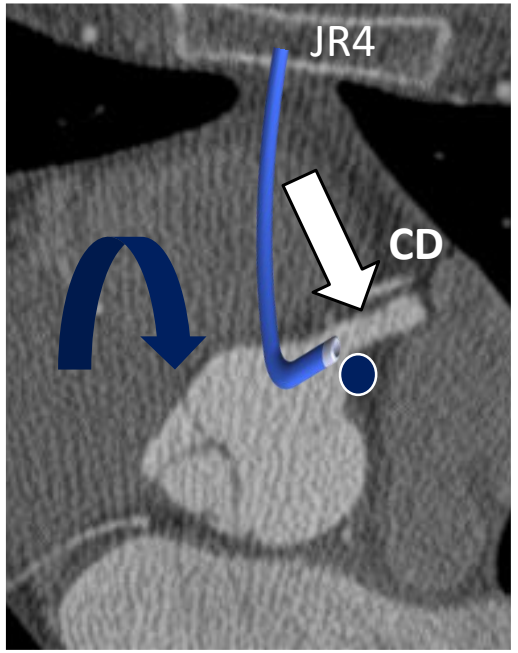


Rotation horizontale image

Tronc commun rétroaortique

Image scanner axiale

Rotation horizontale image



Rotation horaire

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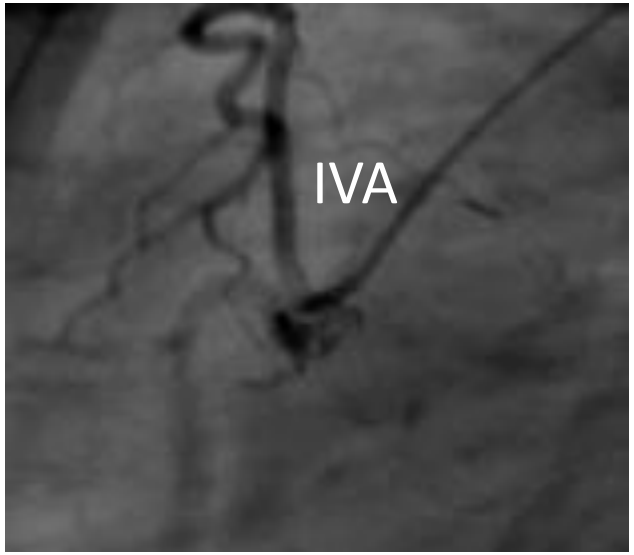
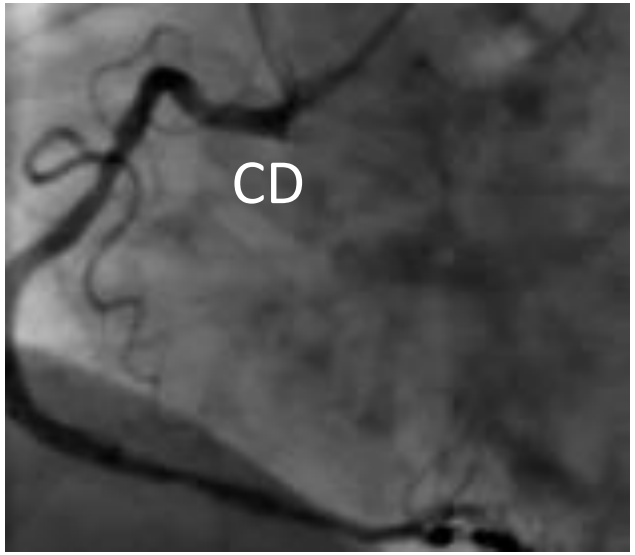
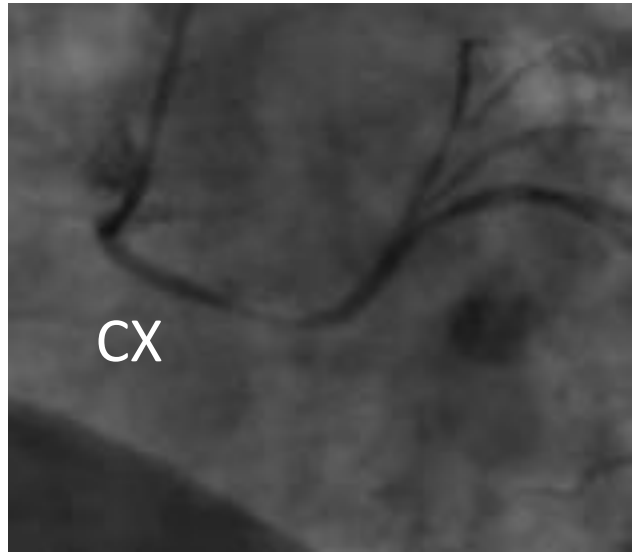
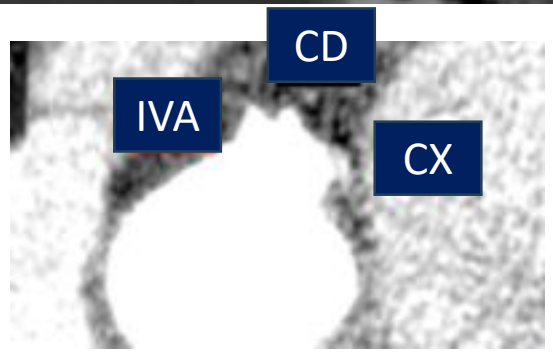
Double anomalie coronaire IVA-CX







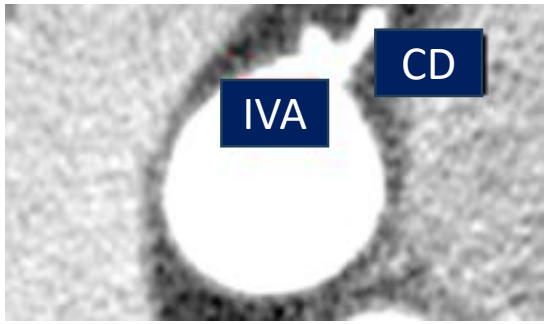


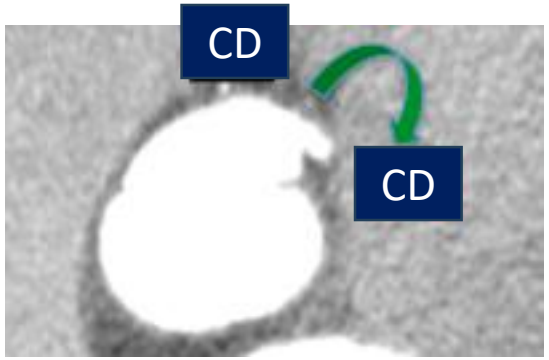
Rotation horizontale image

Double anomalie coronaire IVA-CX

Cathétérisme coronaire droite

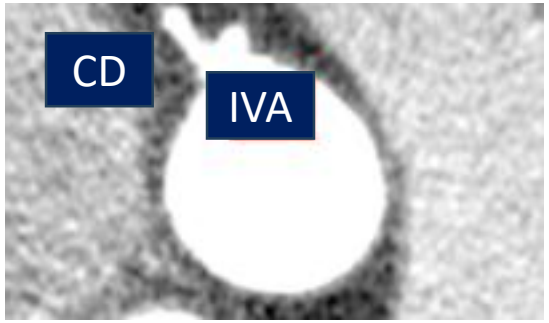
Rotation antihoraire

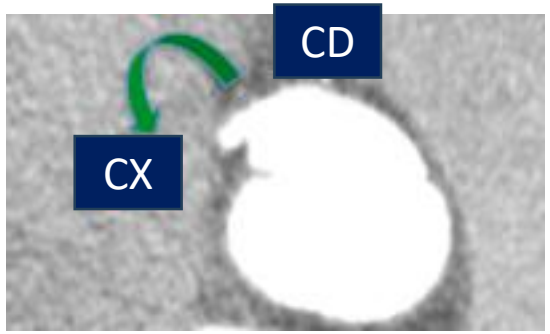




Rotation horaire

Rotation horizontale images

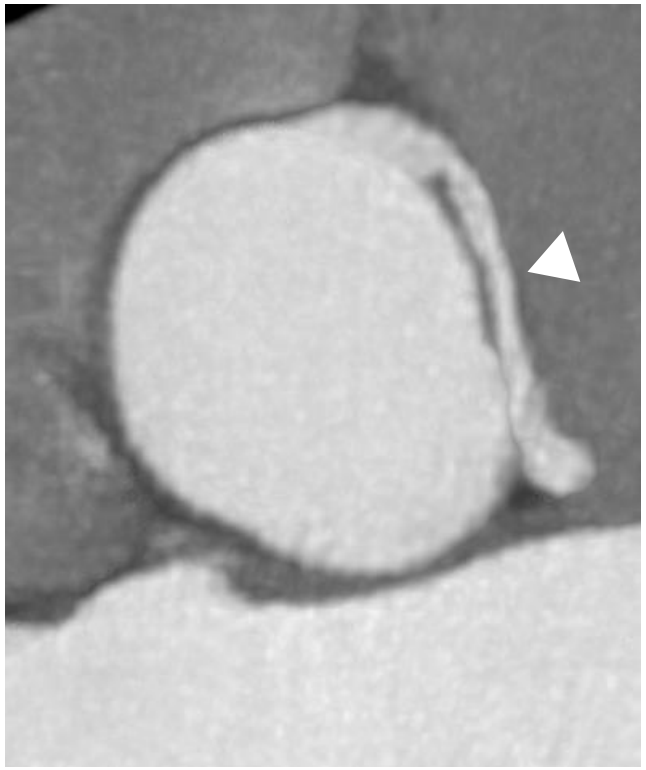




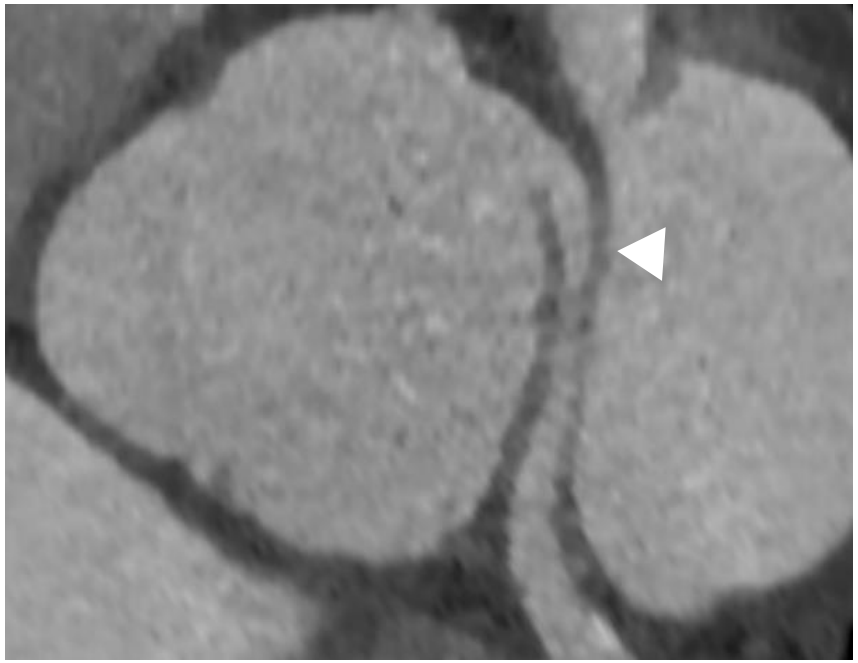
Images scanner axiales

Tronc commun interartériel

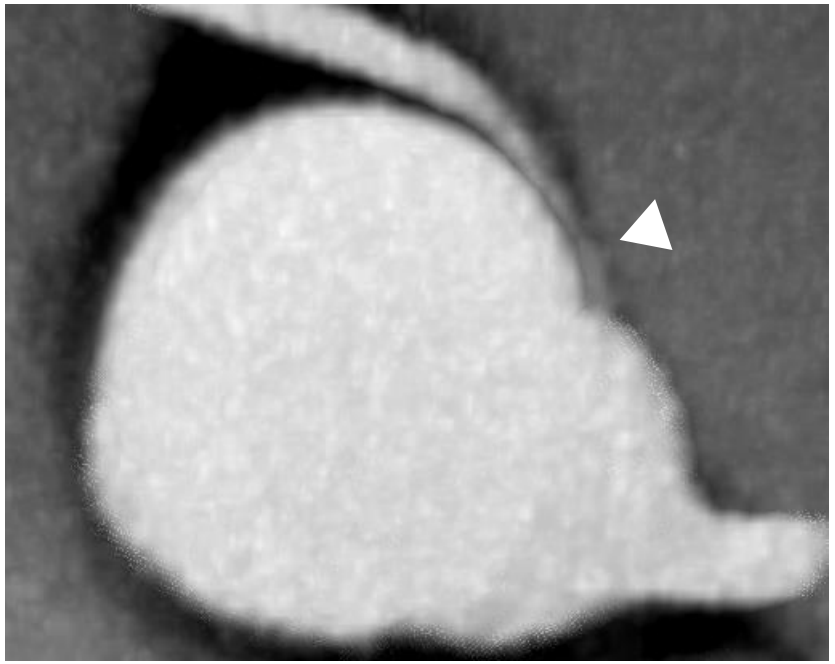
Cathéters habituels



ANOCOR gauche



ANOCOR droite



Tronc commun ou IVA ectopiques

- Trajets prépulmonaire-rétropulmonaire-rétroaortique

  - sondes JR, AR, AL, MP

  Canulation de la coronaire droite

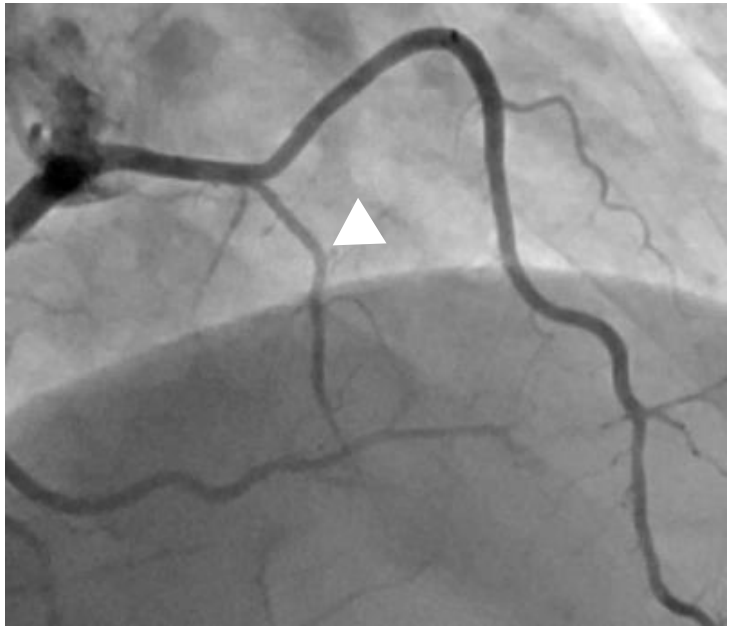
  - rotation horaire (rétro aortique)
  - rotation antihoraire (prépulmonaire, rétropulmonaire)

- Trajet interartériel

  - sondes/cathéters gauches habituels
  - JR

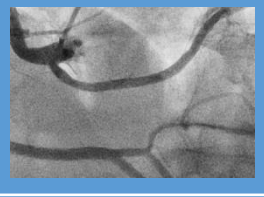
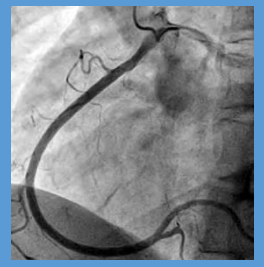
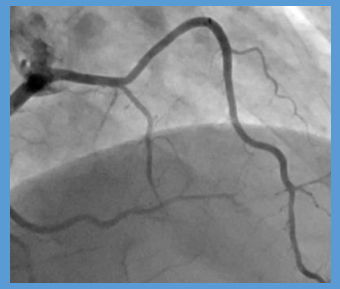
Tronc commun ou IVA ectopiques

Trajets ectopiques



	ectopic course	initial loop	eye sign	dot sign	LAD length	septal branches
type A	preinfundibular	anterior and upward	yes	no	short	no
type B	retroinfundibular	anterior and downward	yes	no	short	yes
types C and D	preaortic	posterior and upward	no	yes	normal	no
type E	retroaortic	posterior and downward	no	yes	normal	no

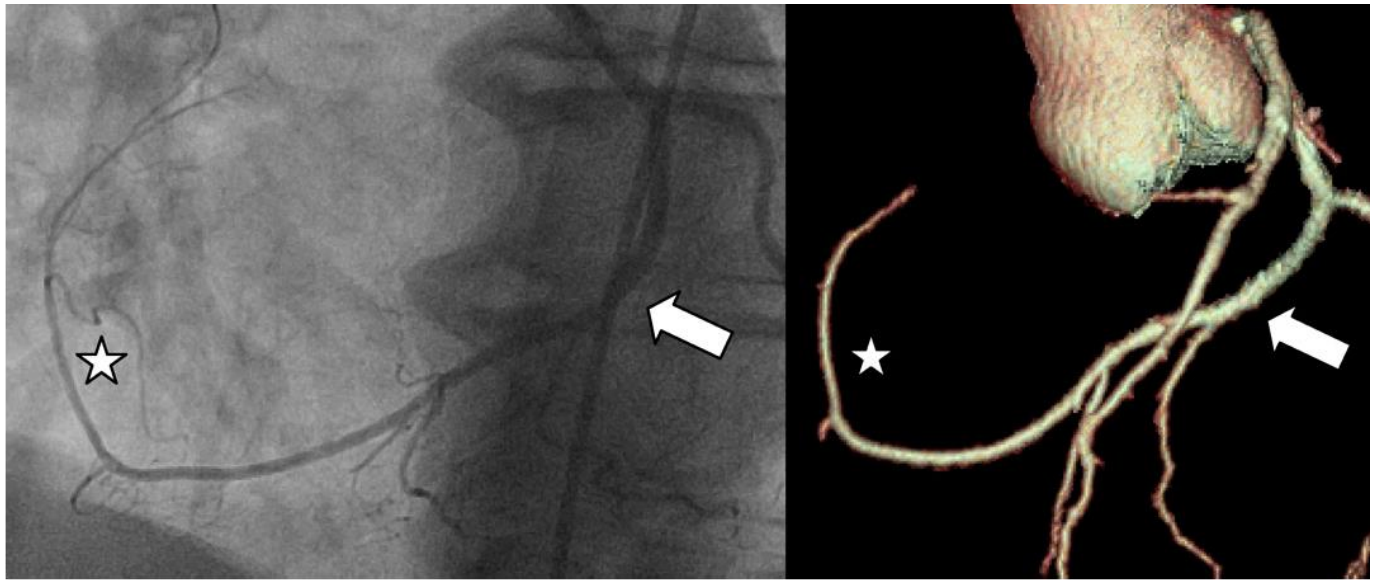
Anomalies coronaires congénitales de l'adulte

Artery	Site of origin	Frequency	Ectopic course	Catheters
Circumflex 	Right sinus	++++	Retroaortic	JR 4, AR 1-2, AL 1, MP
	RCA	++++	Retroaortic	JR 4, AR 1-2
	Single coronary artery	Very rare	Not applicable	Standard right
	Pulmonary trunk	Very rare	Not applicable	Standard left/right
Right coronary artery 	Left sinus	++++	Interarterial	EBU, AL 1-2, XB, CLS
	Left main	+	Interarterial	Standard left
	LAD	+	Prepulmonic	Standard left
	Aorta	+	Absent or interarterial	AL 1-2, MP
	Right sinus	Very rare	Absent or interarterial	Standard right
	Non-coronary sinus	Very rare	Retroaortic	Standard right-left
	Single coronary artery	Very rare	Not applicable	Standard left
	Pulmonary trunk	Very rare	Not applicable	Standard left
Left main or LAD 	Right sinus	++++	Prepulmonic or subpulmonic or retroaortic	JR 4, AR 1-2, AL 1, MP
			Interarterial	Standard left, JR 4
	RCA	++	Prepulmonic or subpulmonic or retroaortic	Standard right
	Aorta	+	Absent or interarterial	AL 1-2, MP
	Left sinus	Very rare	Absent or interarterial	Standard left
	Non-coronary sinus	Very rare	Retroaortic	Standard left-right
	Single coronary artery	Very rare	Not applicable	Standard right
	Pulmonary trunk	Very rare	Not applicable	Standard right

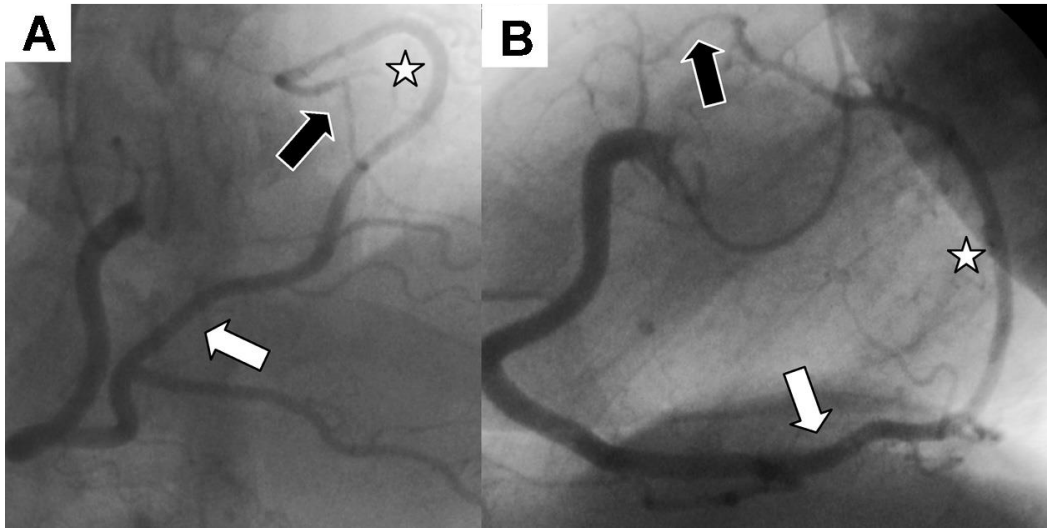
DIU cardiologie interventionnelle

Artère coronaire unique

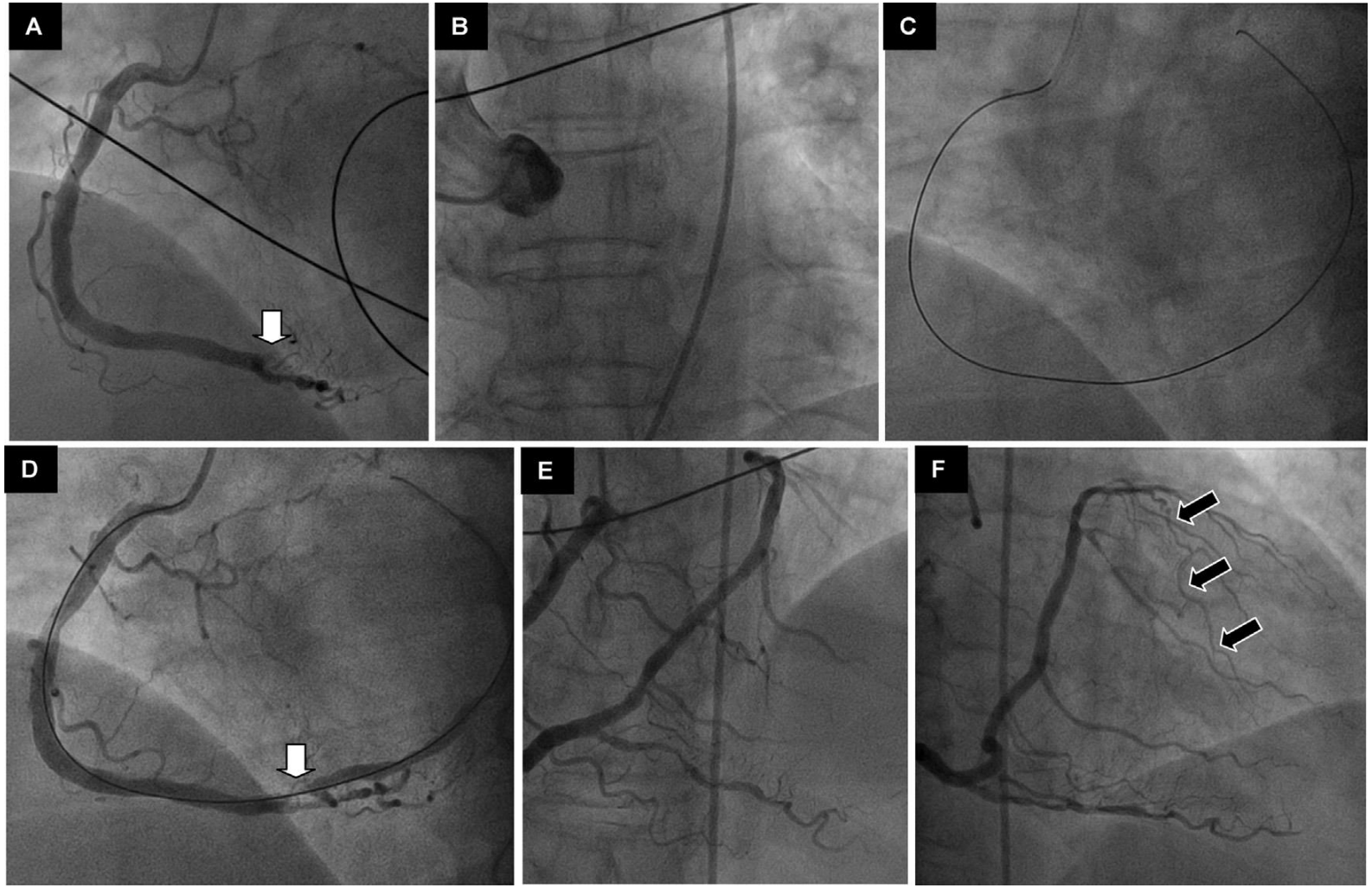
Forme droite



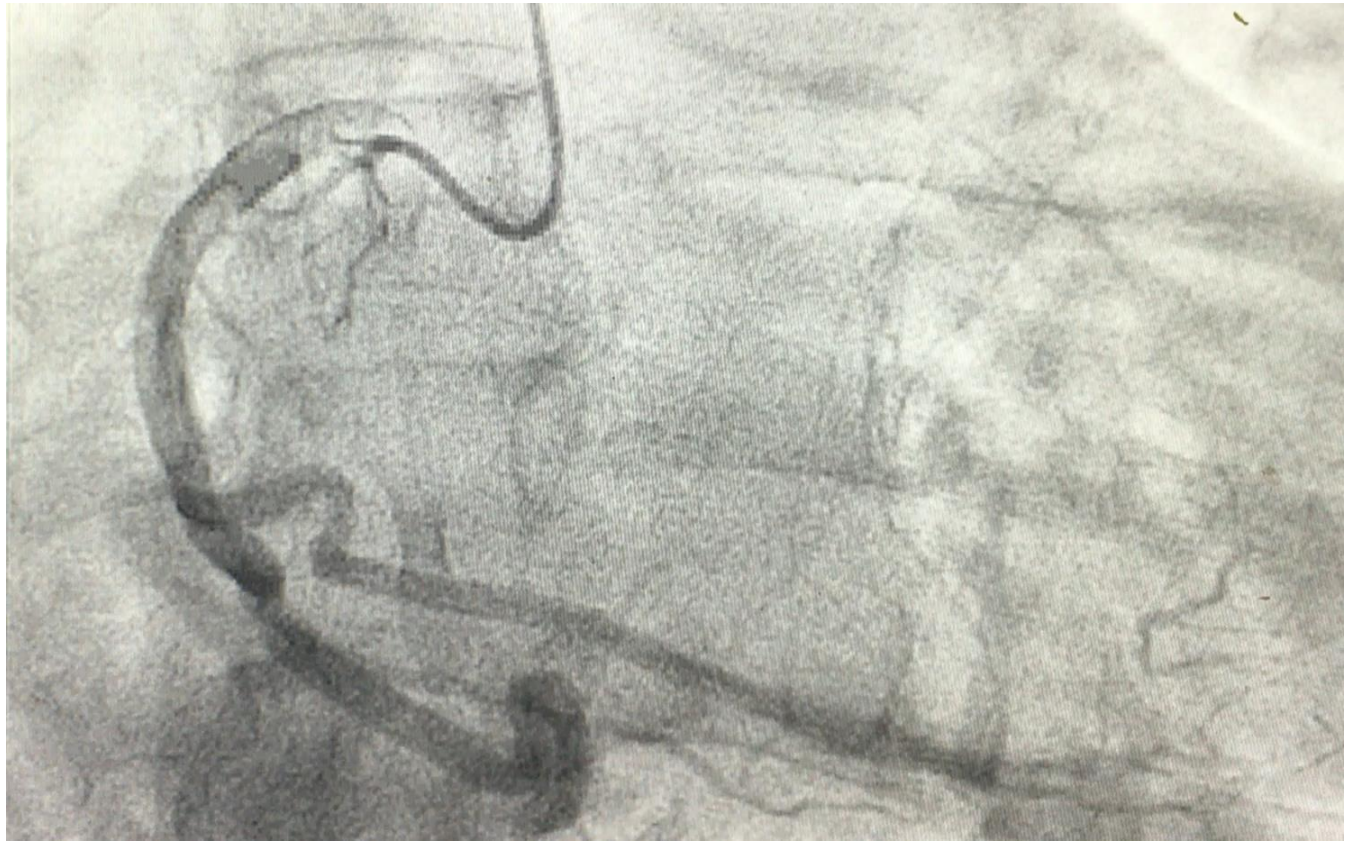
Forme gauche

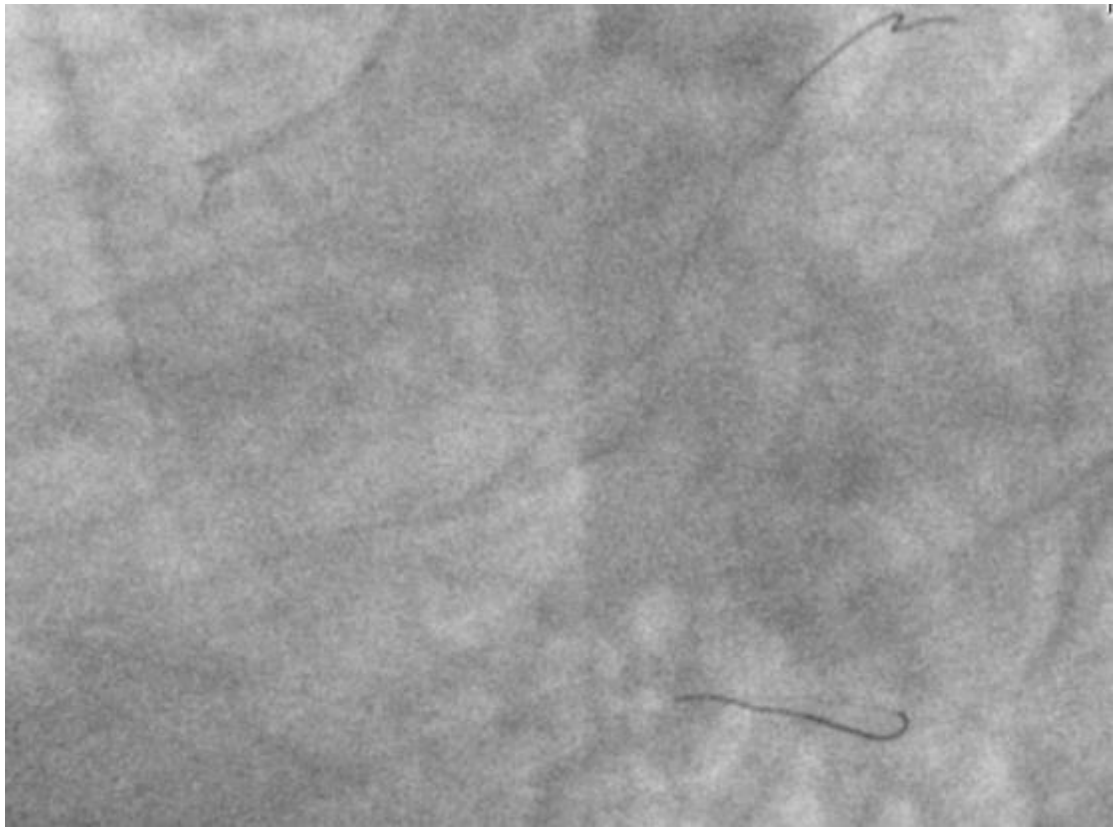


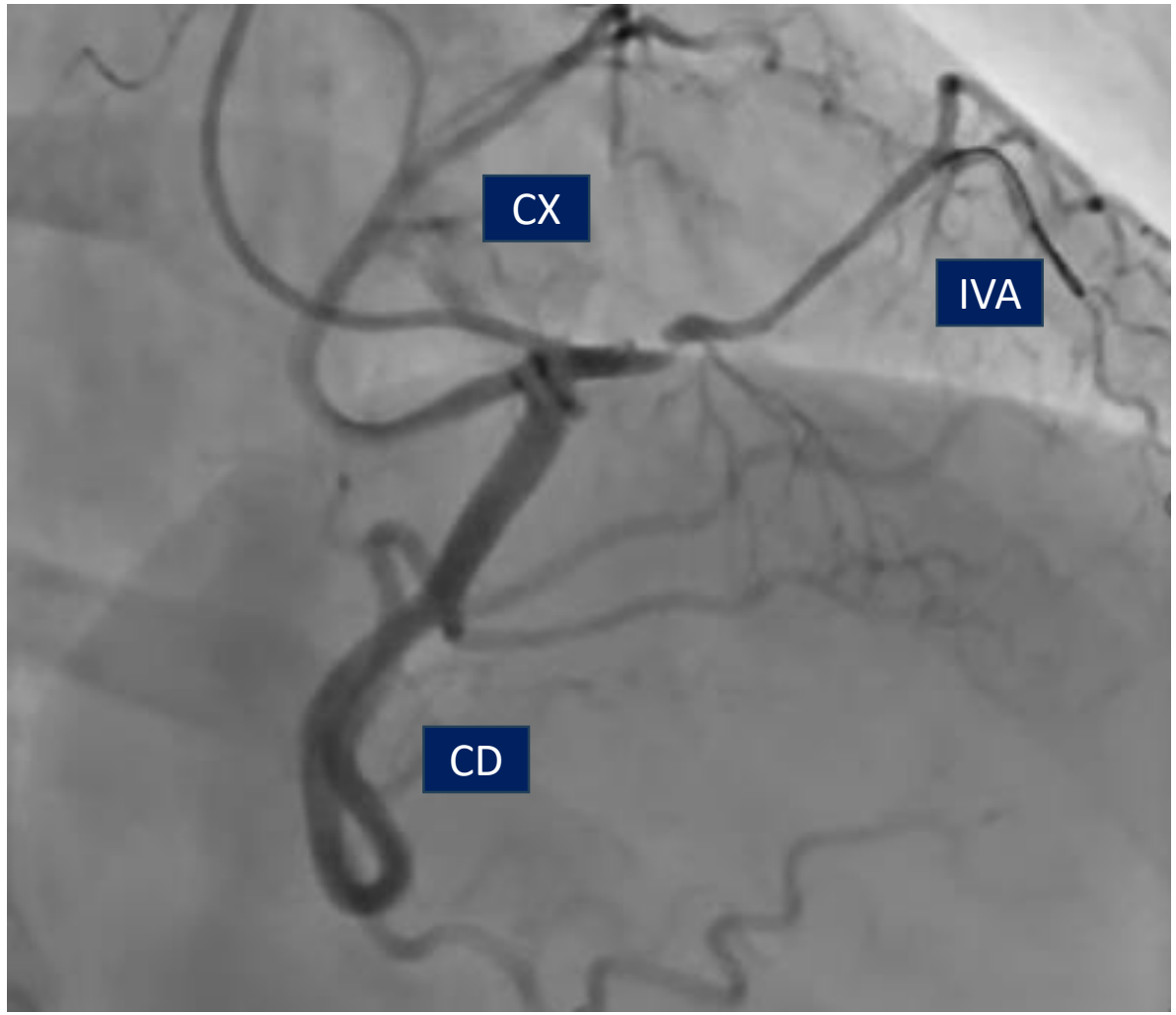
Artère coronaire unique



Connexion pulmonaire






CX
IVA
CD

Groupe de travail multidisciplinaire sur les ANOmalies congénitales des artères CORonaires

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http://anocor.fr

Ouverture début 2024

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Anomalies Coronaires Congénitales

Ce site est destiné aux professionnels de santé et aux patients, ainsi qu'à leur entourage, souhaitant obtenir des informations sur les Anomalies Coronaires Congénitales (ANOCOR). Les formes anatomiques sont très nombreuses, allant de la banale anomalie sans conséquence clinique aux anomalies pouvant être responsables de symptômes cardiaques graves dont l'arrêt cardiaque. Même si les techniques d'imagerie, surtout radiologiques, permettent le diagnostic de ces anomalies rares, leur compréhension reste incomplète et leur prise en charge n'est pas encore parfaitement codifiée. Le site ANOCOR a pour objectifs d'aider les professionnels de santé dans leur démarche de recherche et de transmettre aux patients nos connaissances actuelles. Bonne navigation.