MED·TRAINING formations

CHU NANTES

ANOMALIES CONGÉNITALES DES ARTÈRES CORONAIRES

29 mai 2026

Les anomalies coronaires en vie réelle
Le registre ANOCOR

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Saint-Denis Gonesse
Plaine de France

Groupe ANOCOR

Groupe de travail multidisciplinaire sur les anomalies coronaires congénitales

Contact : pcaubry@yahoo.fr

2010 - …

Pierre Aubry (Paris)	Cardiologie interventionnel
Olivier Boudvillain (Paris)	Cardiologie interventionnel
Patrick Dupouy (Melun)	Cardiologie interventionnel et imageur
Reza Farnoud (Paris)	Ingénieur de recherche clinique
Xavier Halna du Fretay (Saran)	Cardiologie interventionnel
Athanasios Koutsoukis (Le Plessis-Robinson)	Cardiologie interventionnel
Jean-Pierre Laissy (Gonesse)	Radiologue
Phalla Ou (Paris)	Radiologue
Fouad Saadi (Paris)	Cardiologue imageur

Groupe ANOCOR

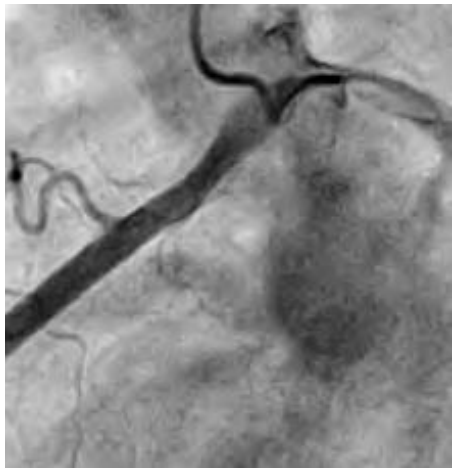
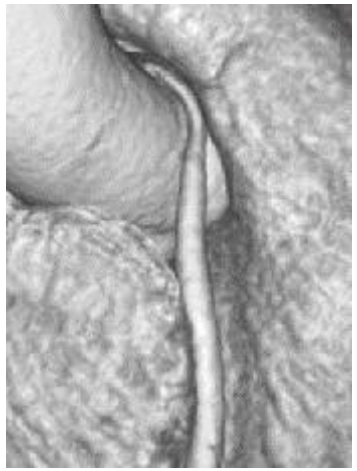
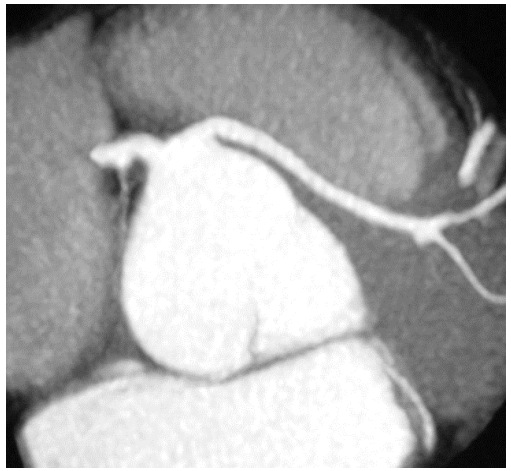
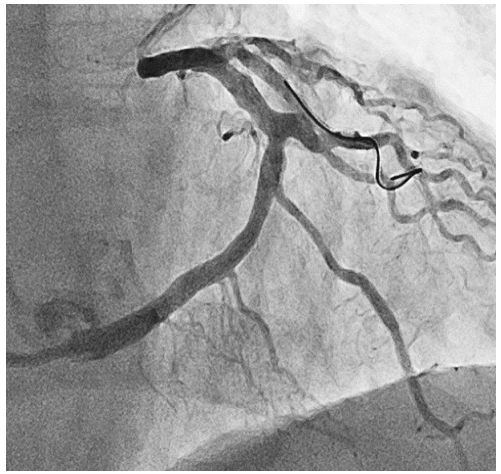
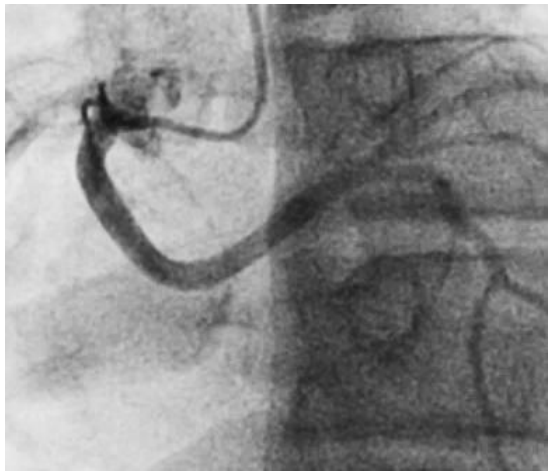
Groupe de travail multidisciplinaire sur les anomalies coronaires congénitales

1er registre ANOCOR *(on a sollicité…)*

- 2010 - 2013
- Investigateurs : 71 cardiologues interventionnels (GACI)
- ANOCOR diagnostiquées par coronarographie ou scanner coronaire
- Données démographiques, cliniques et angiographiques
- Comité d'analyse et de validation
- Classification selon l'anatomie, les risques et la présence d'athérome coronaire

472 patients inclus (**492** anomalies coronaires)
72% genre masculin
Âge moyen **63** ans

Premier registre ANOCOR

- Anomalies de connexion coronaire suspectées
- ≈ **600** dossiers analysés en quatre ans
- ≈ **80** réunions d'analyse et de validation angiographique
- Cardiologues/radiologues avec apprentissage collectif +++
- Classification des anomalies
- Pas d'avis donné sur la prise en charge

Groupe ANOCOR

Groupe de travail multidisciplinaire sur les anomalies coronaires congénitales

Cohorte ANOCOR *(on est sollicité…)*

2014 - …

Mode de fonctionnement

- Demande d'un cardiologue référent
- Récupération des éléments du dossier
- Analyse du dossier
- Avis adressé au cardiologue référent (classification, risques, management)
- Consultation avec le patient (exceptionnelle)

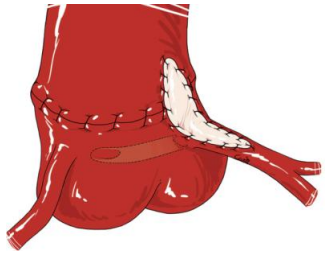
Activité ≈ **1.300** dossiers (2014-2025) / ≈ **110** par an
Activité 2015 : **50** dossiers
Activité 2025 : **220** dossiers

Cohorte ANOCOR

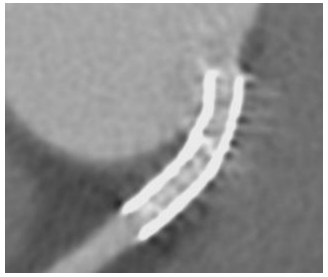
Activité 2025 : **220** dossiers

Proposition thérapeutique interventionnelle

- Chirurgie : **15** dossiers (**7%)**

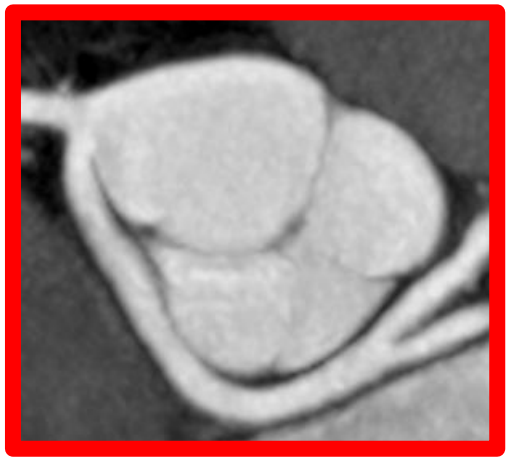


- Angioplastie : **7** dossiers (**3%)**



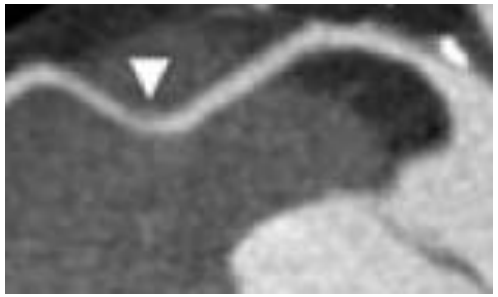
Anomalies congénitales des artères coronaires

Connexion



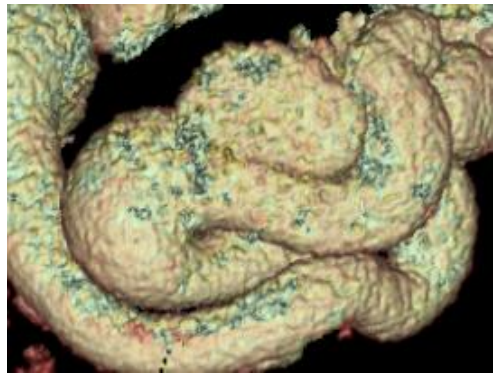
Connexion anormale

Trajet



Pont myocardique

Terminaison



Fistule coronaire

Prévalence des types anatomiques

Données du registre ANOCOR
496 anomalies coronaires

Annales de cardiologie et d'angéiologie 72 (2023) 101690

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Mise au point

Le registre ANOCOR

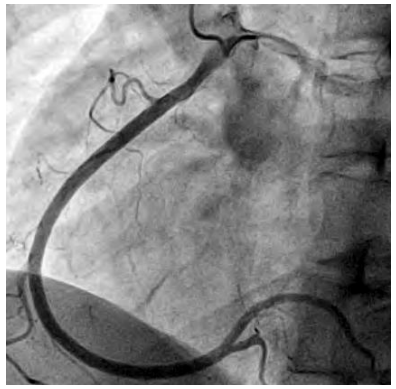
ANOCOR registry

P. Aubry[a,b,*], X. Halna du Fretay[c], S. Zendjebil[a], A. Koutsoukis[d], R. Farnoud[a], F. Hyafil[e], P. Ou[f], J-P. Laissy[g], J. Adjedj[h], W. Ferrag[i], P. Dupouy[d], au nom des investigateurs du registre ANOCOR **

Prévalence angiographique par artère (n = 487)

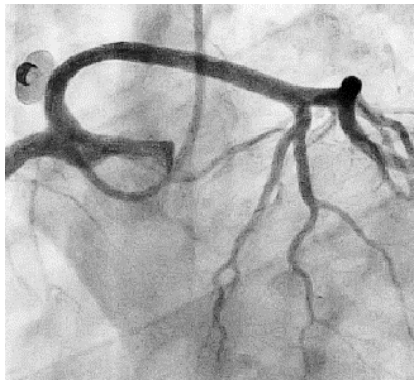
Circonflexe (n = 235)

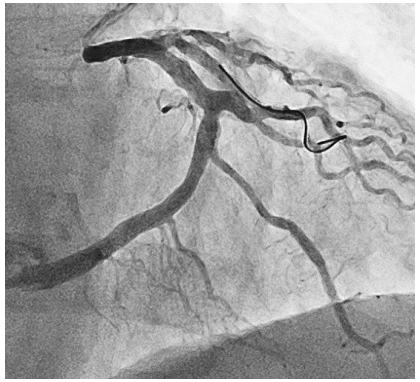
Prévalence angiographique
48%

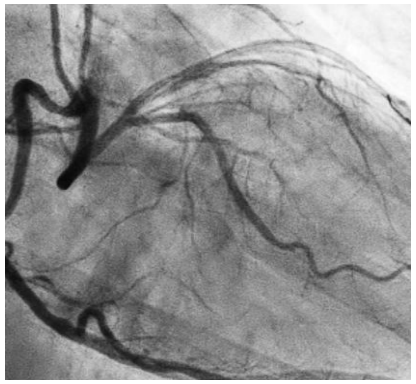


Coronaire droite (n = 165)

Prévalence angiographique
34%



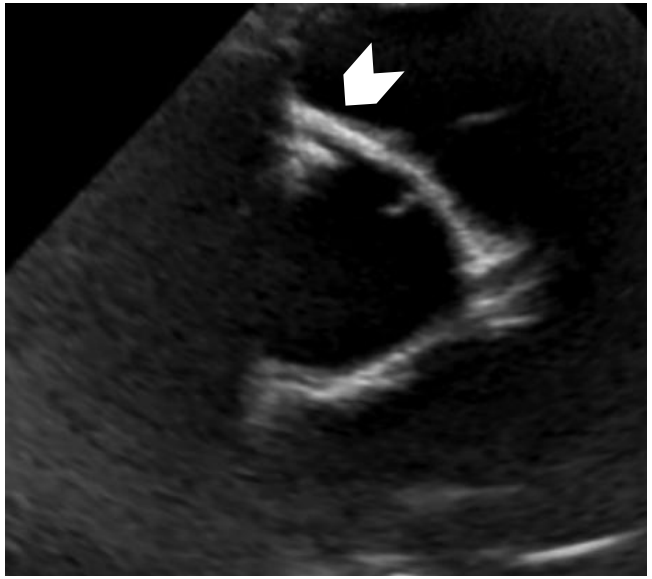




Tronc commun/IVA (n = 87)

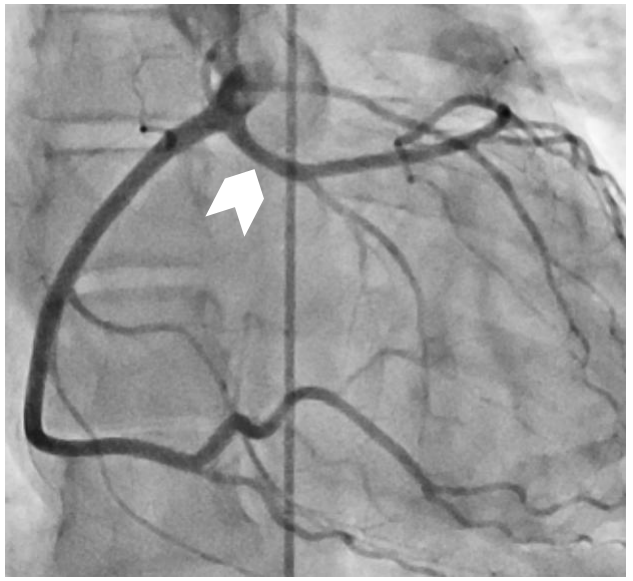
Prévalence angiographique
18%

Prévalence selon le mode d'imagerie



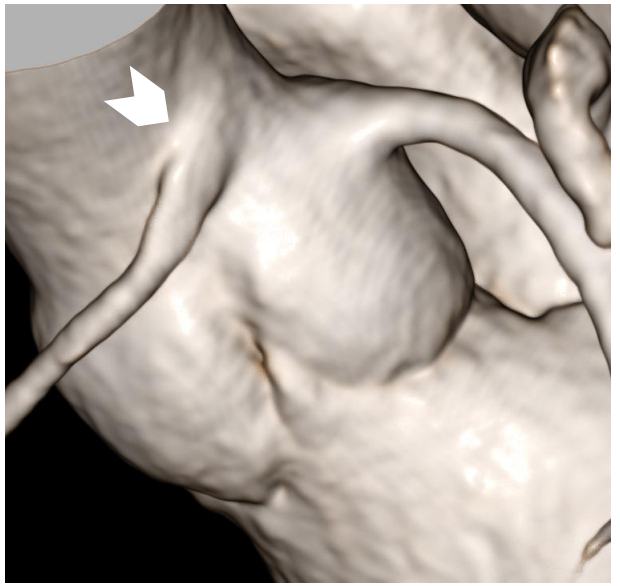
Echocardiographie

0.2%



Coronarographie

0.6%

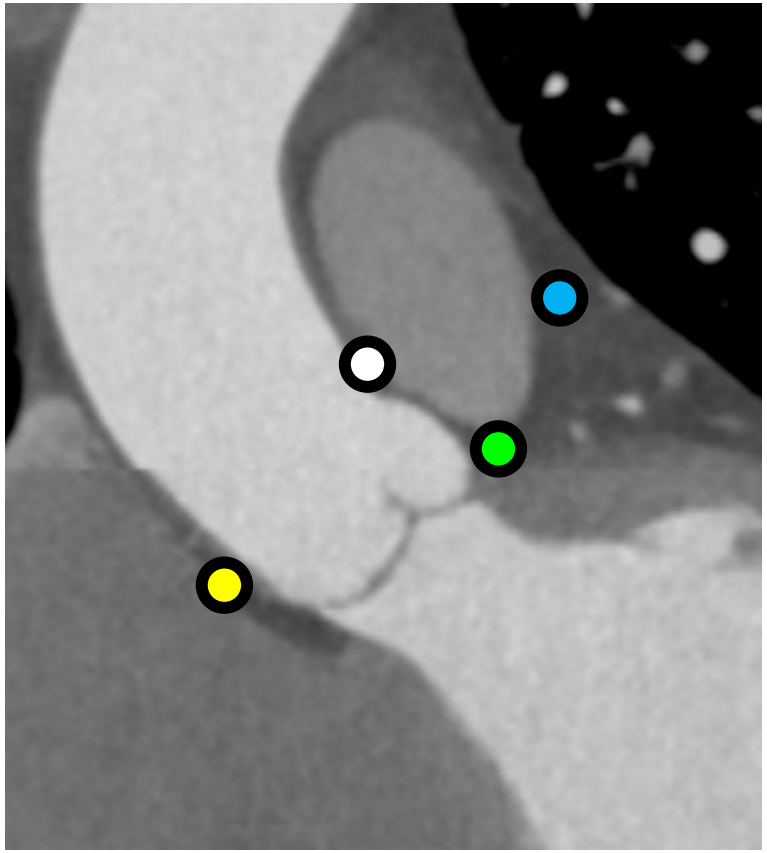


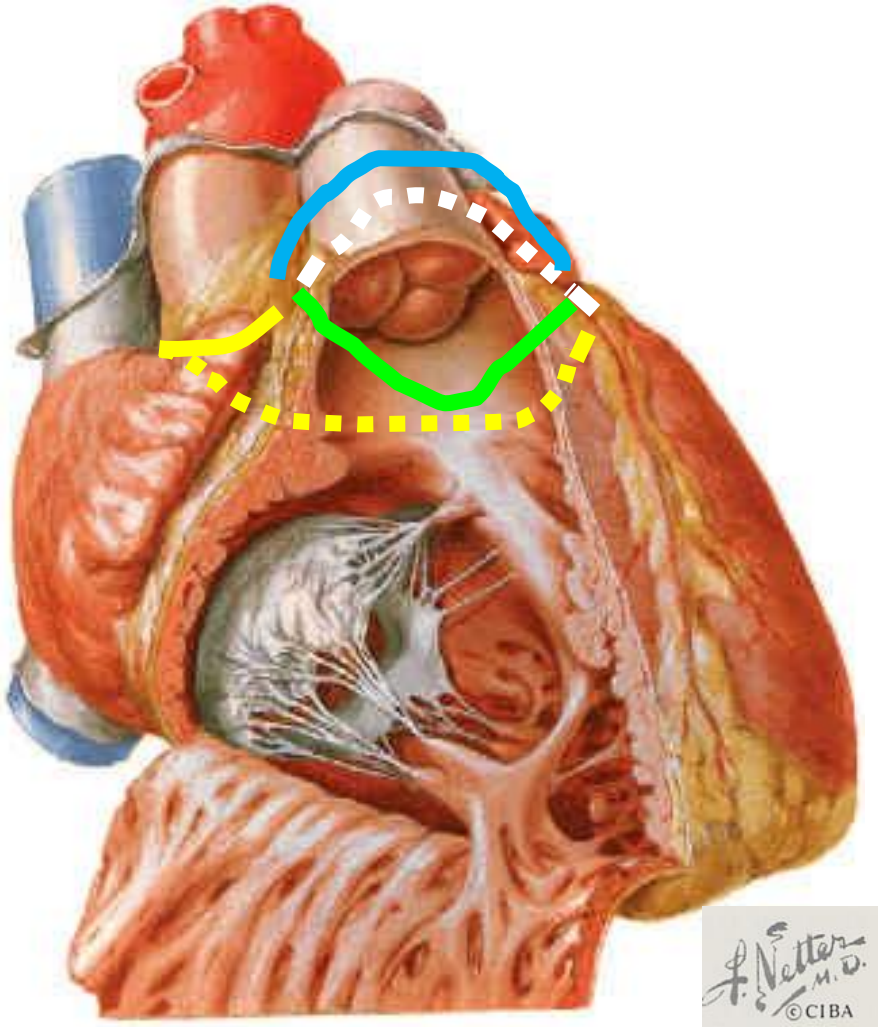
Scanner

0.8%

Classification anatomique par le trajet

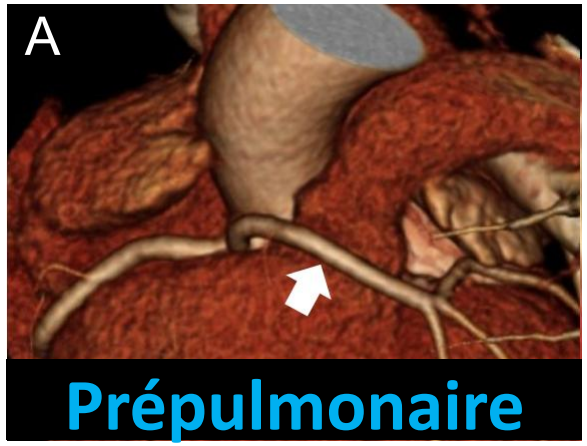
- Prépulmonaire
- Rétropulmonaire
- Interartériel
- Rétroaortique

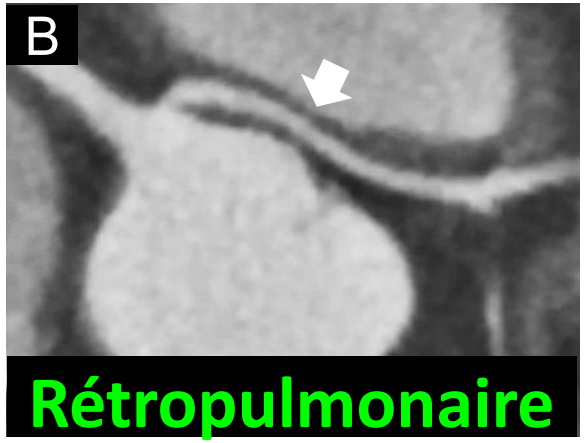


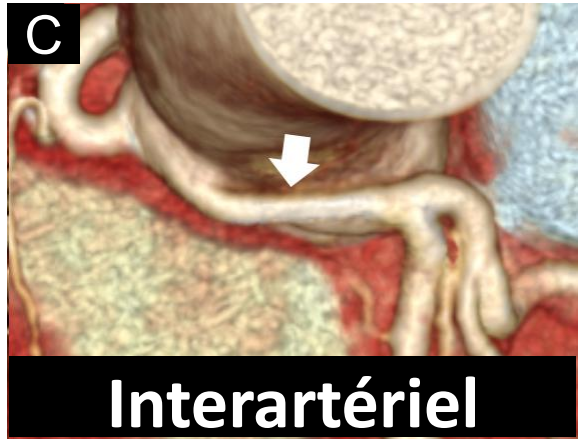


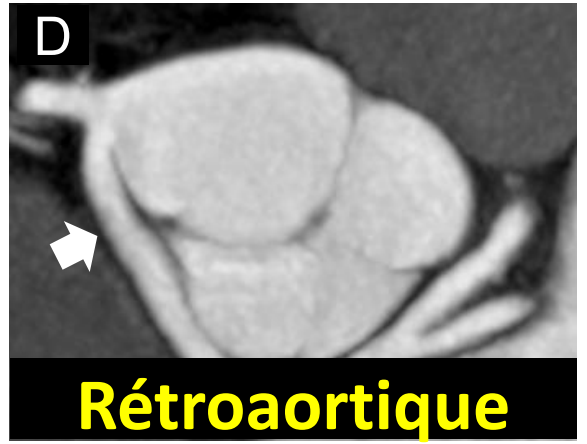
Classification anatomique par l'artère (tronc/IVA) et le trajet

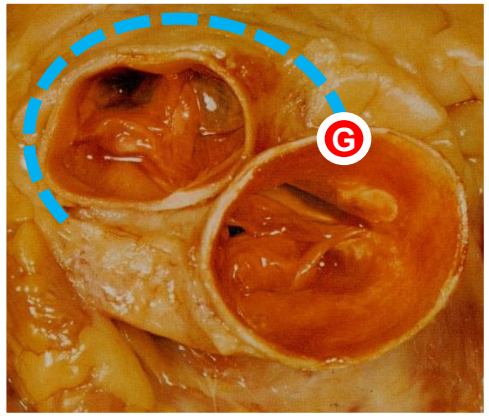
n = 80



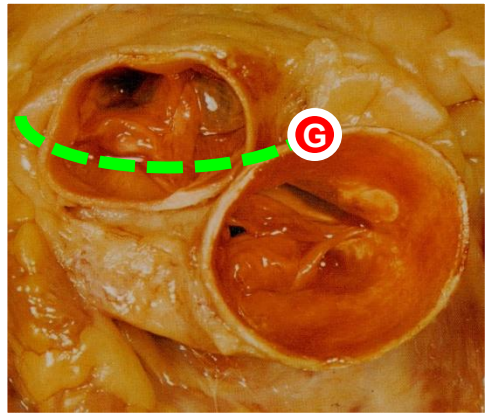




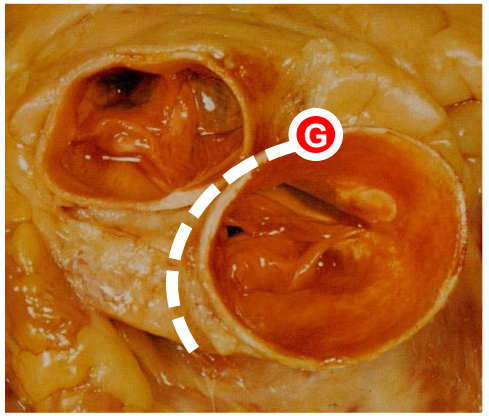




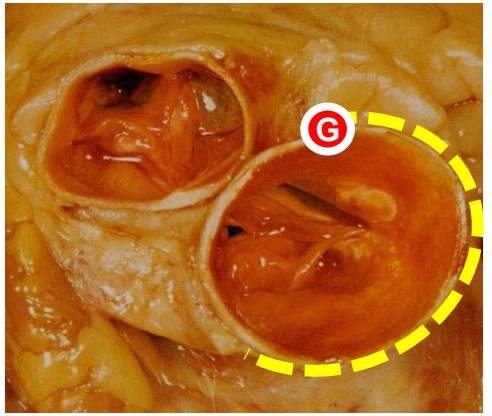
33%



46%



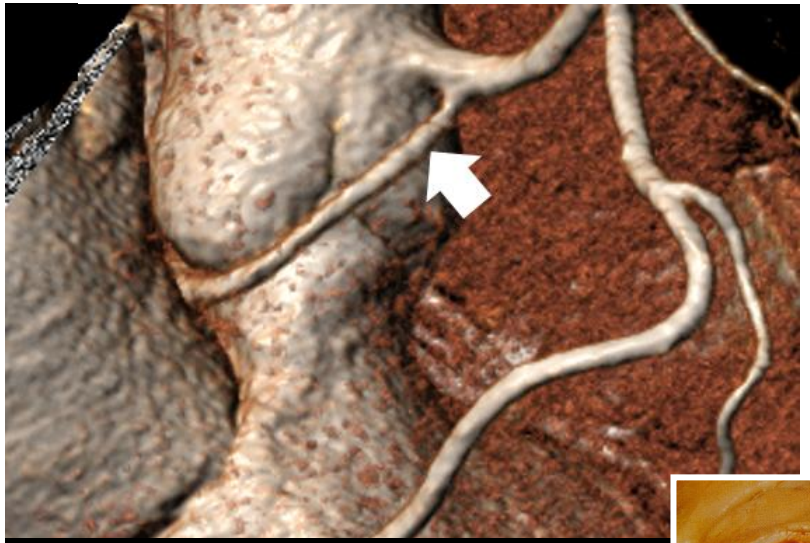
6%



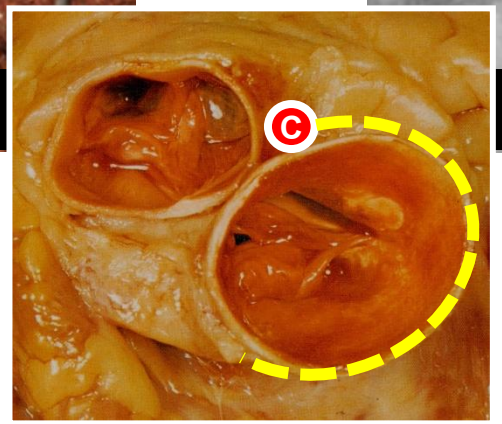
15%

Classification anatomique par l'artère (circonflexe) et le trajet

n = 235



Rétroaortique

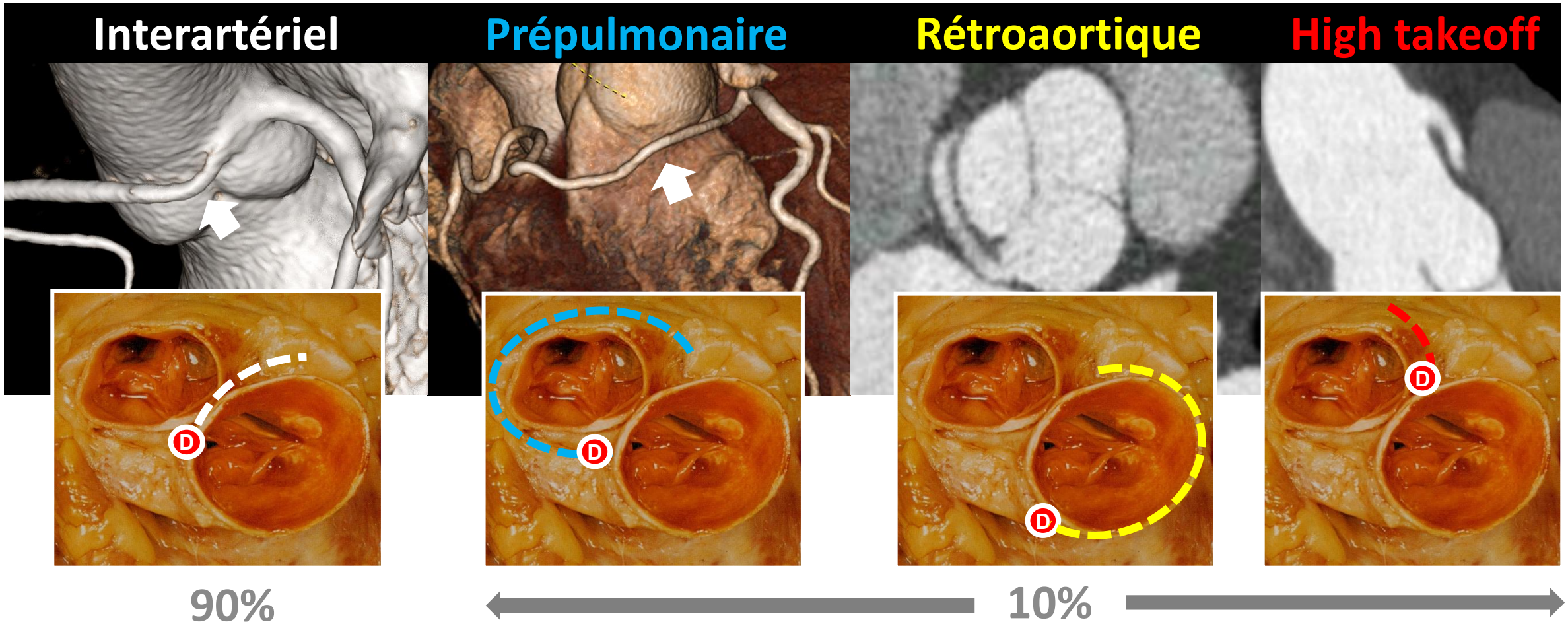


Rétroaortique

97%

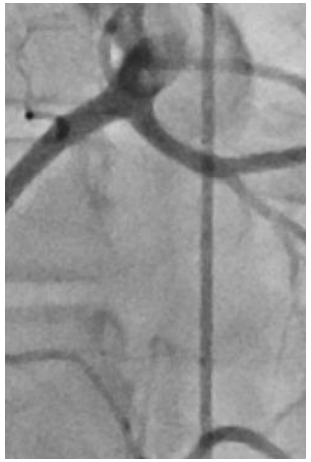
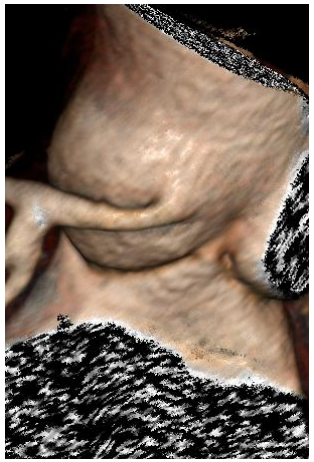
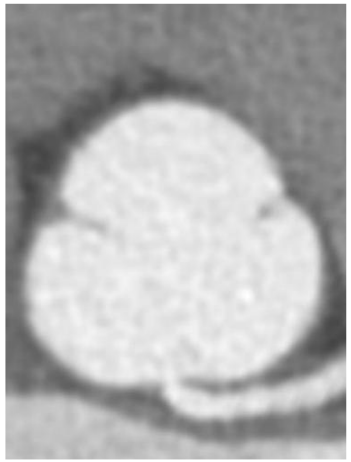
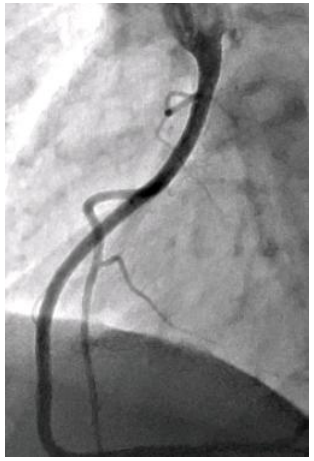
Classification anatomique par l'artère (droite) et le trajet

n = 165



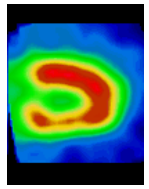
Classification anatomique selon le site de connexion

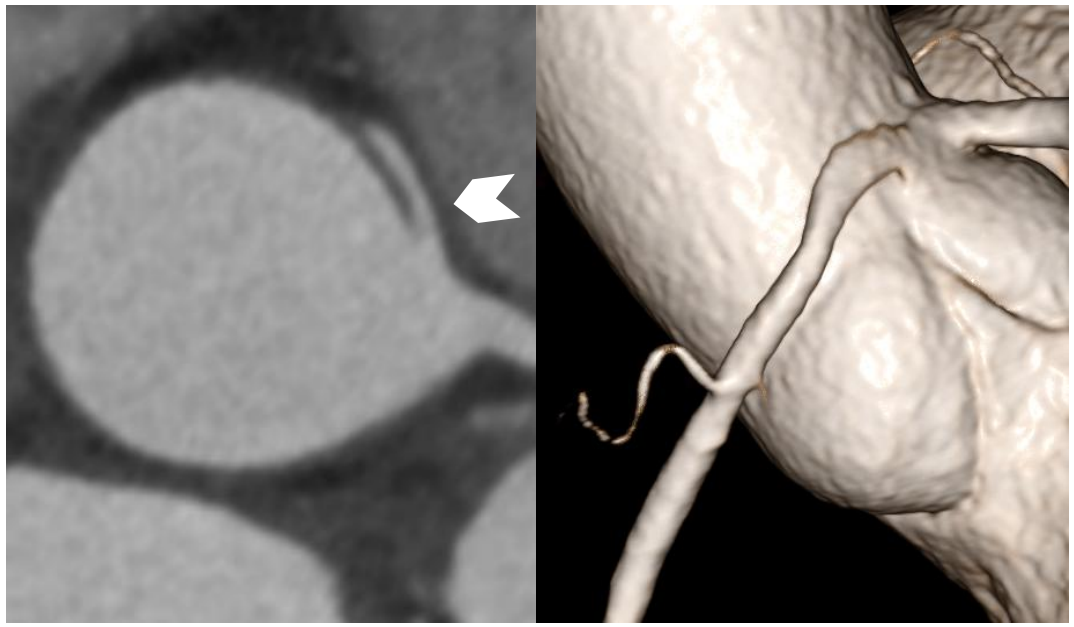
n = 496

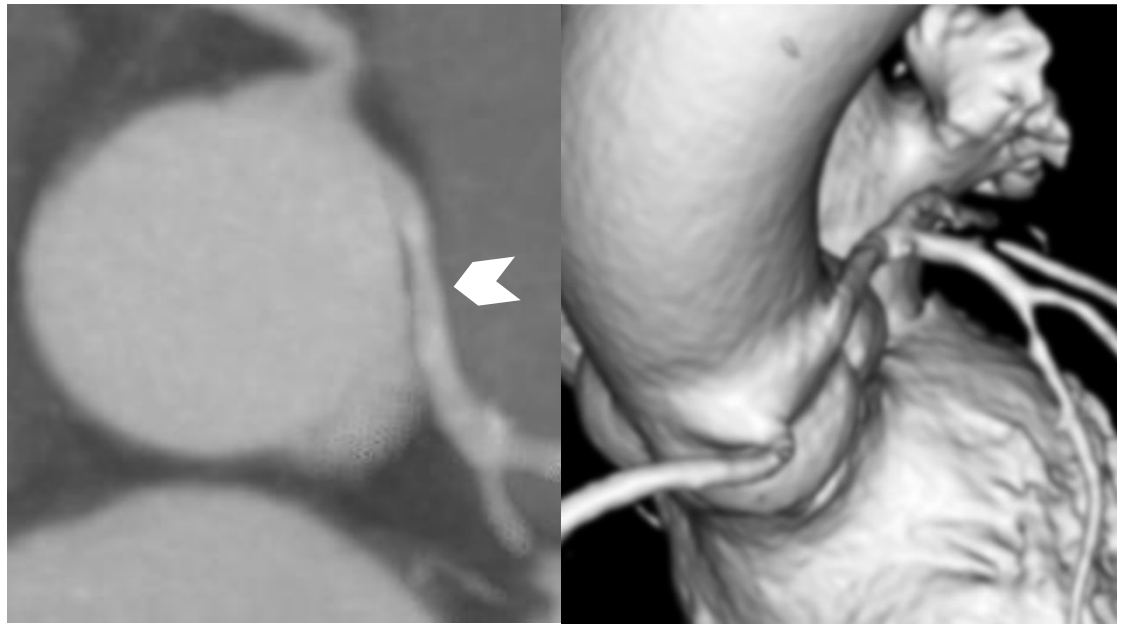
sinus CL ou artère CL	sinus N	sinus NC	HTO	C unique	AP
n = 451	n = 4	n = 2	n = 29	n = 6	n = 4
90.8%	**0.8%**	**0.4%**	**6.0%**	**1.2%**	**0.8%**

Anomalies de connexion aortique à risque



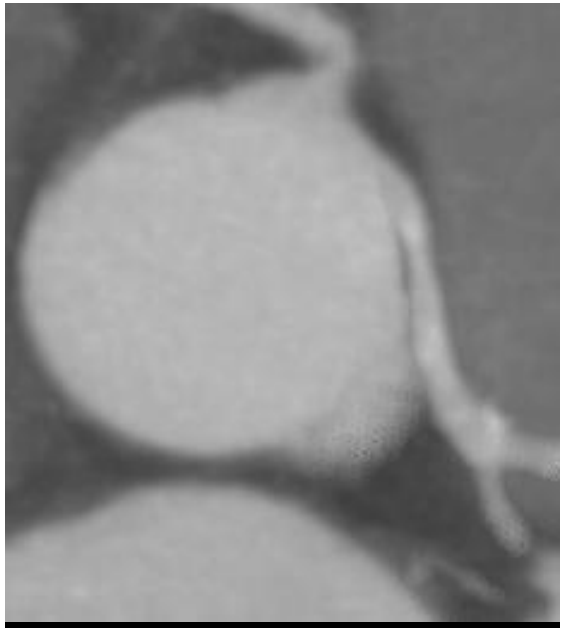


ANOCOR droite interartérielle



ANOCOR gauche interartérielle

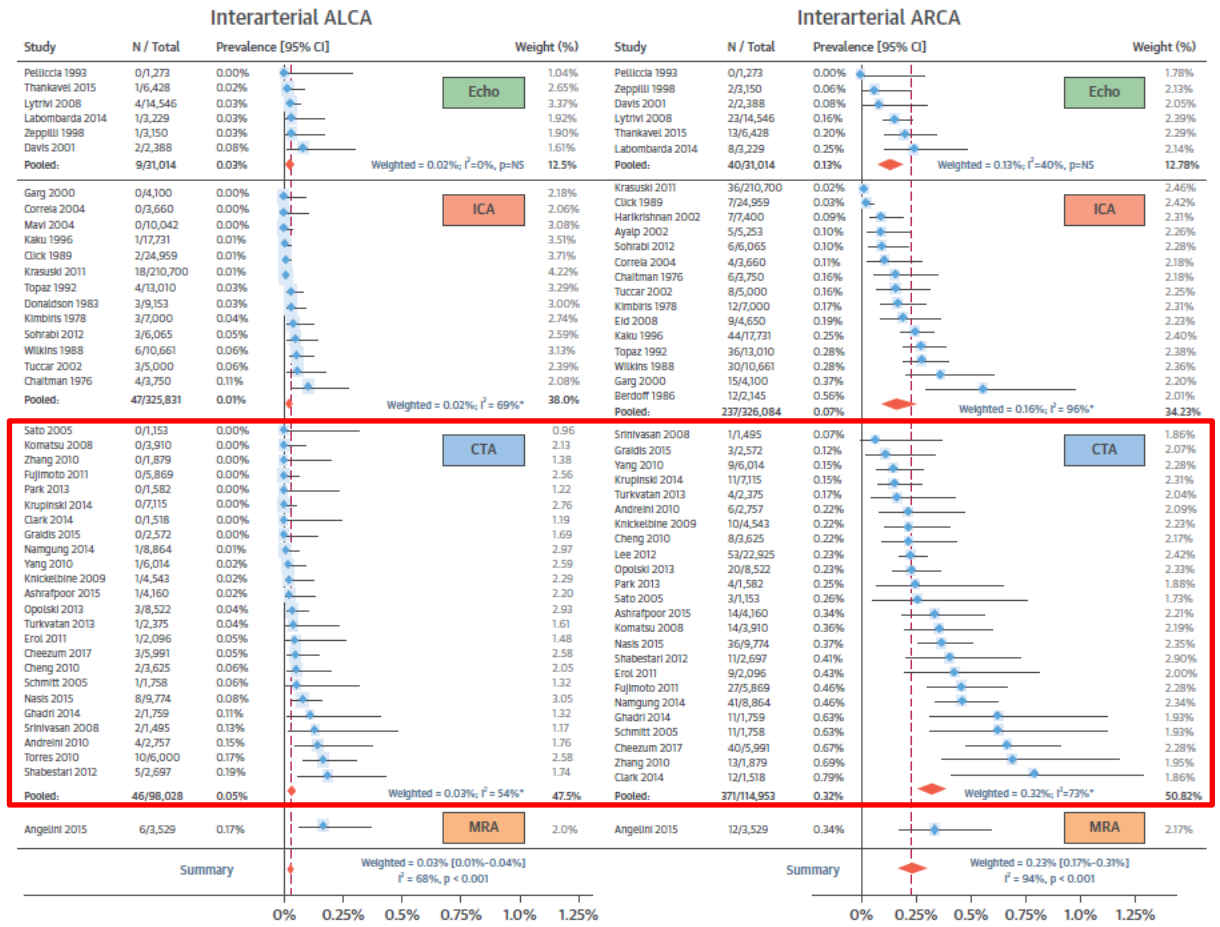
CT prevalence of AAOCA with interarterial course

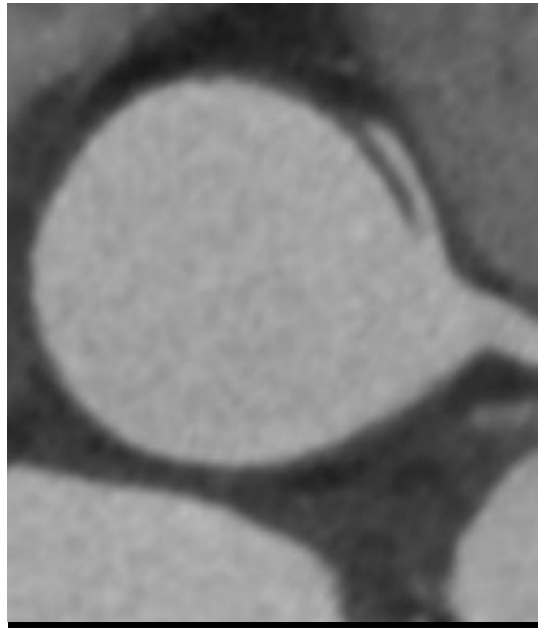


L-AAOCA-IA
0.5/1000*

* Chiffre sur-estimé ?

FIGURE 3 Observed Prevalence of Interarterial ALCA and ARCA on Cardiac Testing

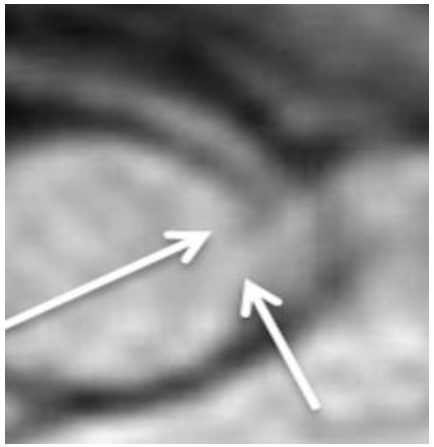




R-AAOCA-IA
3/1000

Cheezum MK et al. JACC. 2017.

Prevalence of AAOCA with interarterial course in general population



Clinical Investigation

High-Risk Cardiovascular Conditions in Sports-Related Sudden Death:

Prevalence in 5,169 Schoolchildren Screened via Cardiac Magnetic Resonance

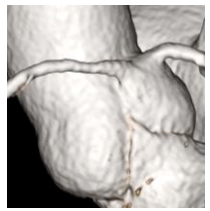
Angelini P Texas Heart Journal 2018

- L-ACAOS-IA = 2
- R-ACAOS-IA = 17
- **Total ACAOS-IA = 19**

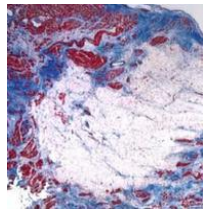
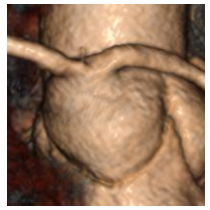
- Prevalence L-ACAOS-IA = 0.04%
- Prevalence R-ACAOS-IA = 0.32%
- **Total prevalence ACAOS-IA = 3.5/1000**

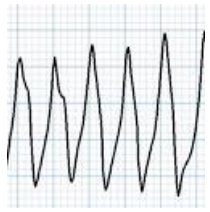
ACAOS: anomalous coronary artery from opposite sinus; IA: interarterial.

Cardiopathies congénitales à risque





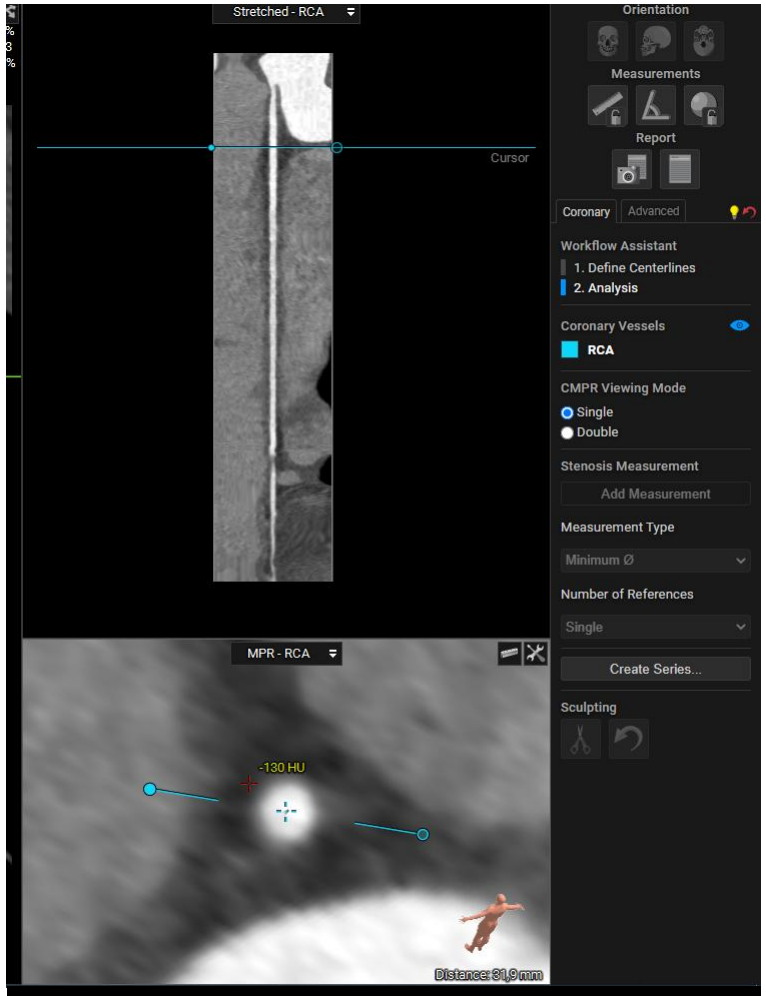






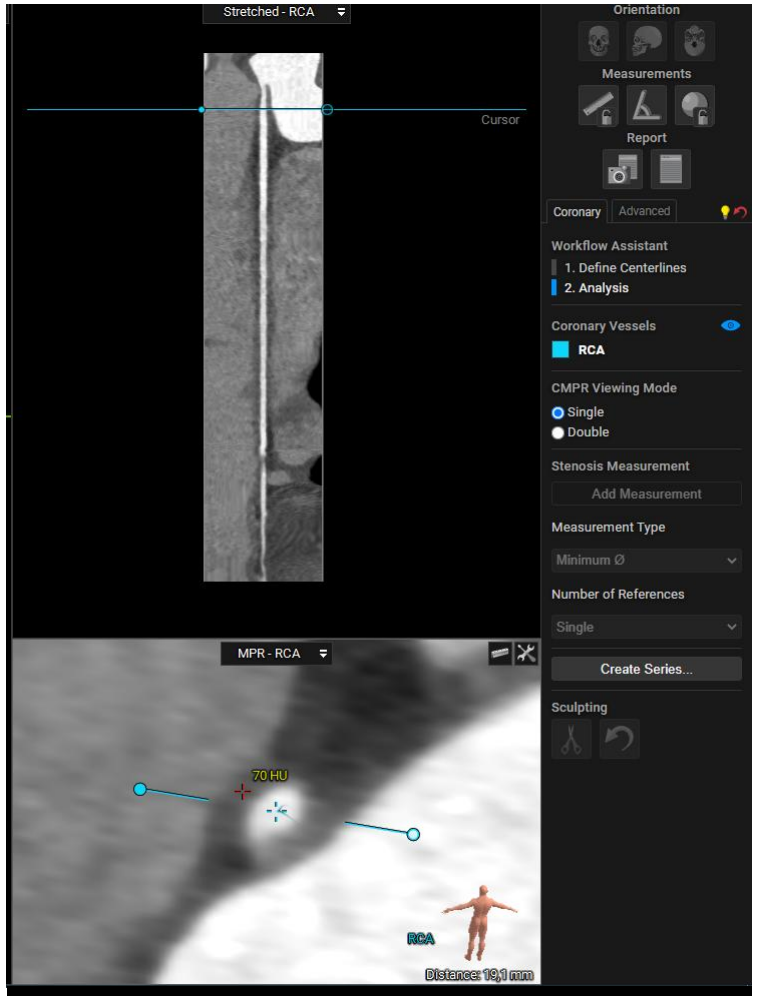
Cardiopathie	Prévalence*
ANOCOR droite avec trajet interartériel	**0.3%**
Cardiomyopathie hypertrophique	0.2%
Syndrome pré-excitation ventriculaire	0.15%
Syndrome du QT long	0.04%
Cardiomyopathie dilatée idiopathique	0.04%
Dysplasie ventriculaire droite arythmogène	0.04%
ANOCOR gauche avec trajet interartériel	**0.03%**
Syndrome de Brugada	0.02%
Tachycardie ventriculaire catécholergique	0.01%

*Prévalence en population générale (estimations)

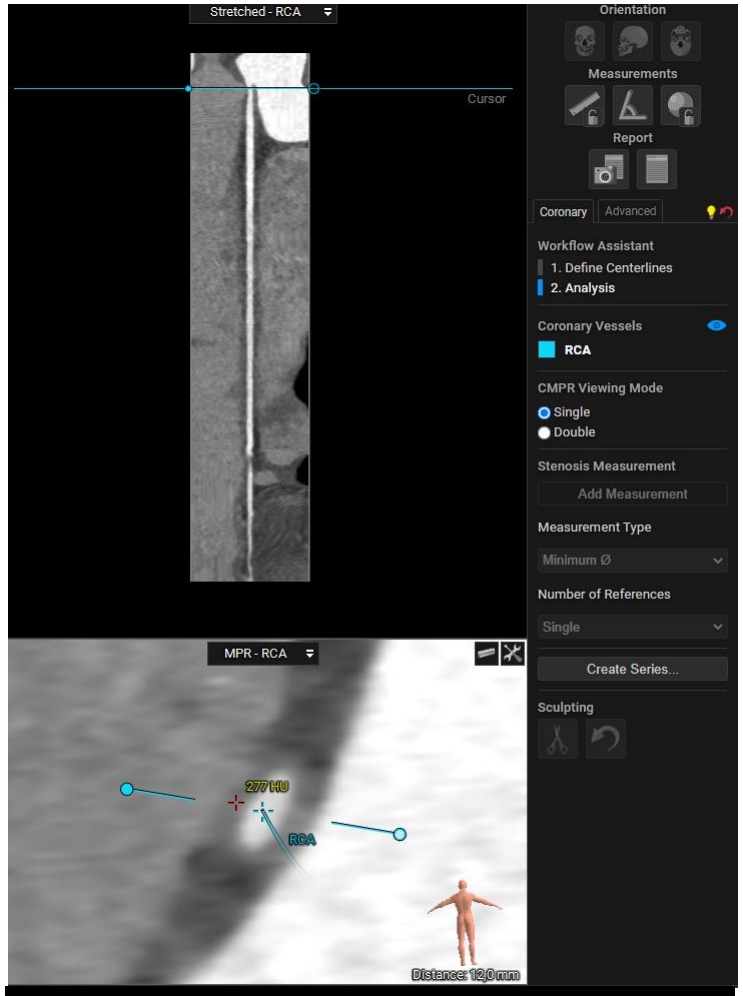
Trajet interartériel et adaptation vasculaire



Rond = GA/AX ≤ 1.3

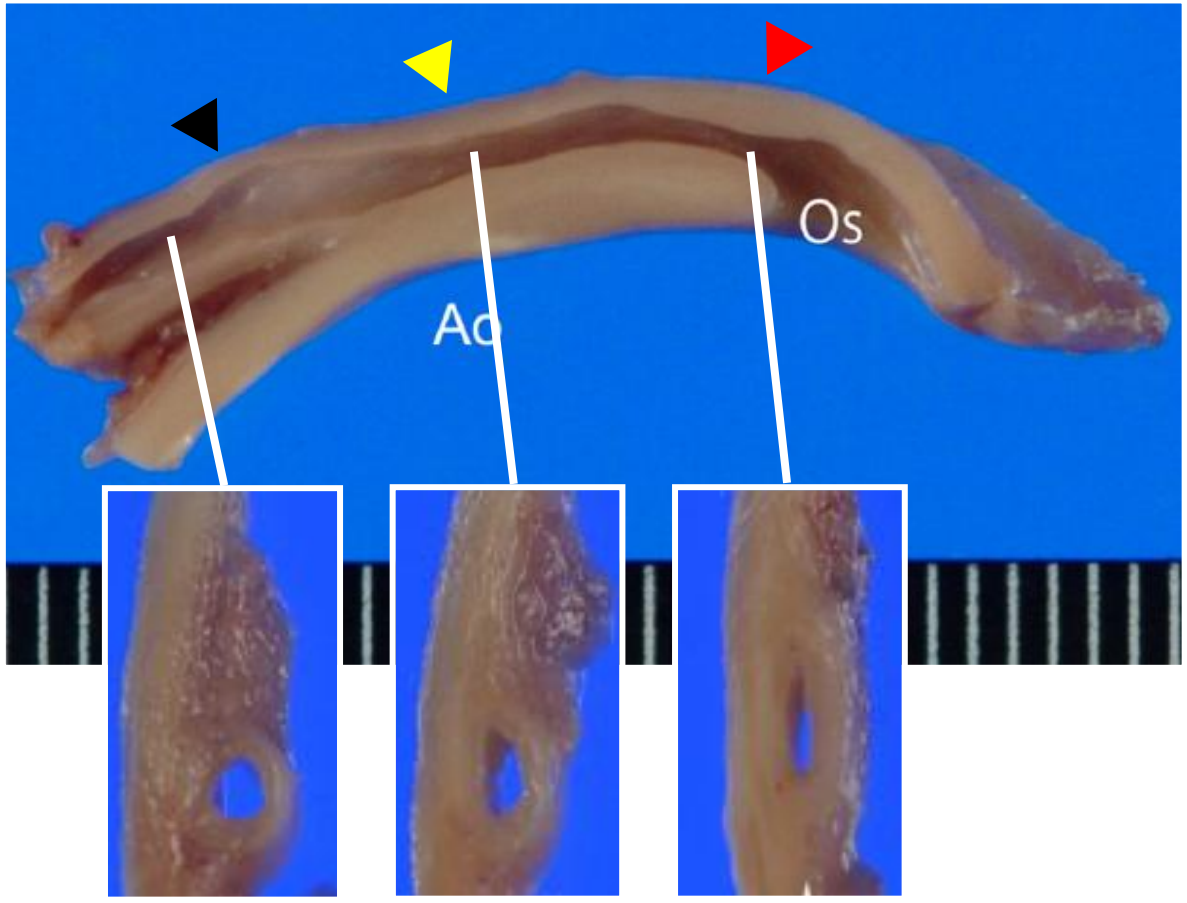


Ovale = GA/AX > 1.3 et < 2.0

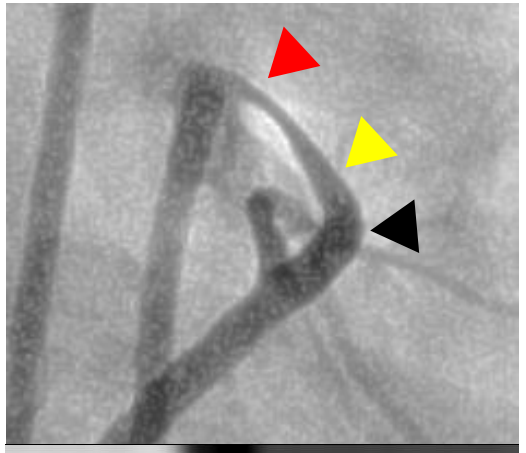


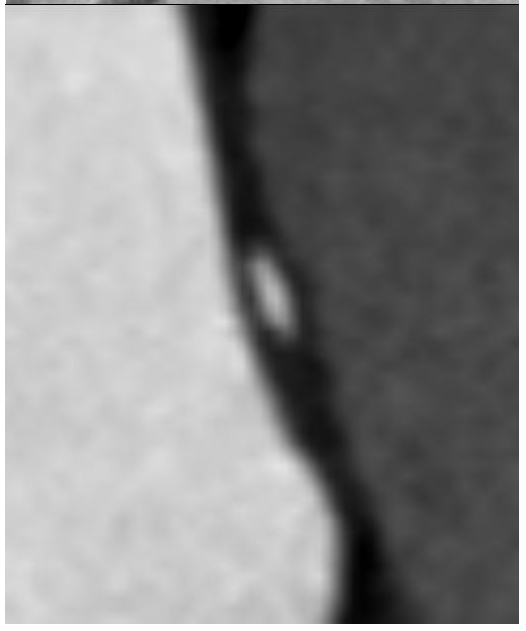
Fente = GA/AX ≥ 2.0

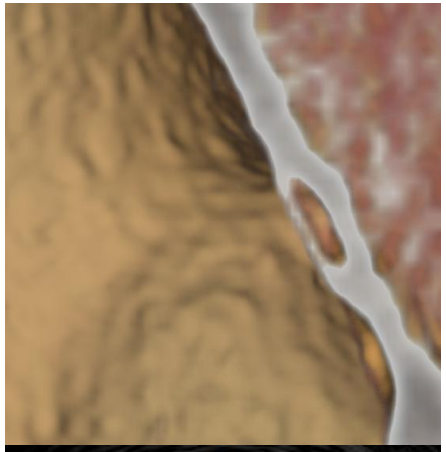
Trajet interartériel avec passage intramural aortique

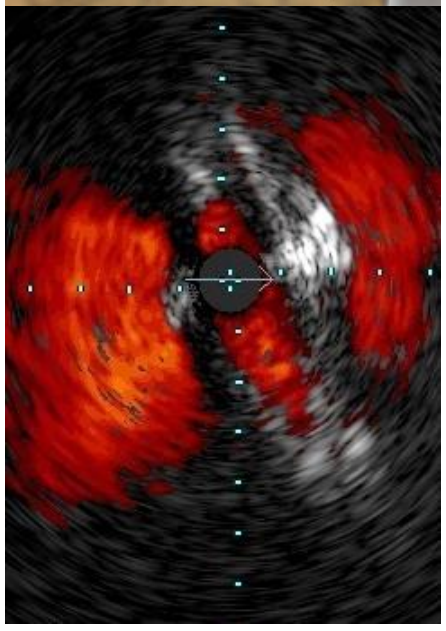


Hata Y et al. Cardiovasc Pathol. 2014.

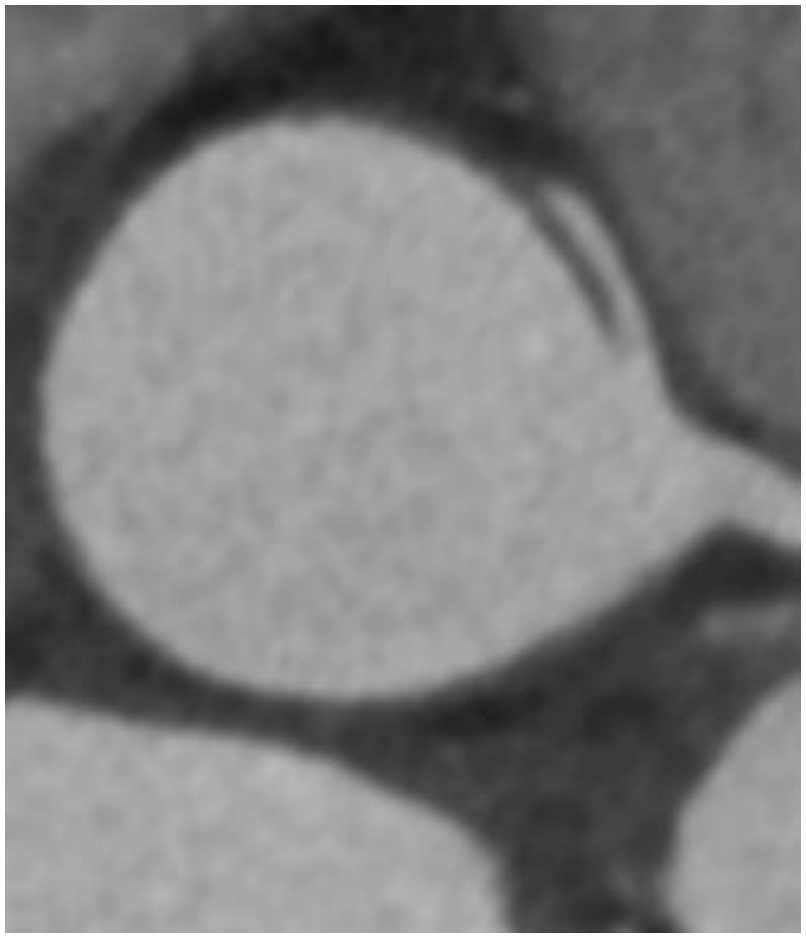








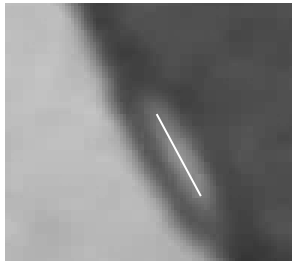
Trajet interartériel

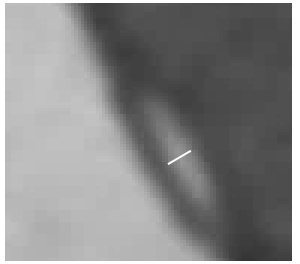


Passage intramural ?

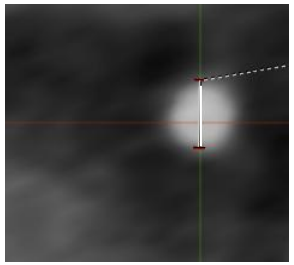
Analyse tomographique d'un trajet interartériel

- Degré d'excentricité (grand axe/petit axe) ≥ 2.0



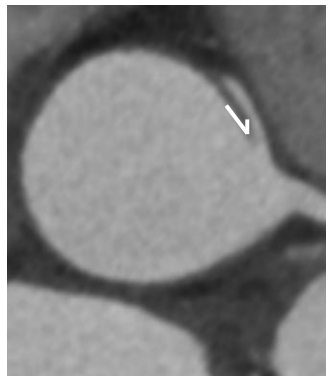


- Réduction de diamètre ≥ 50%



- Réduction de surface ≥ 50%

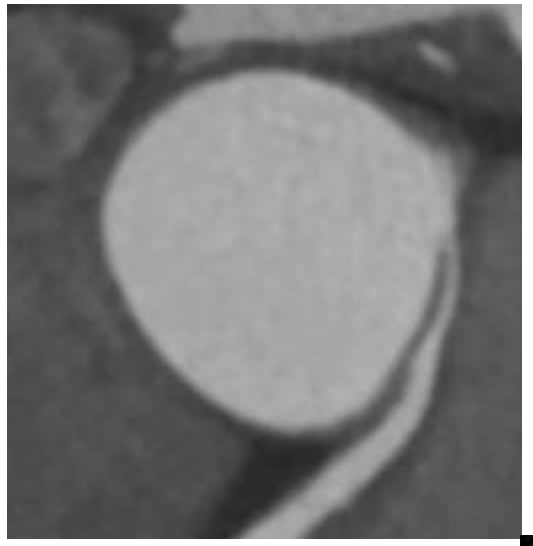
- Angle de connexion ≤ 35°

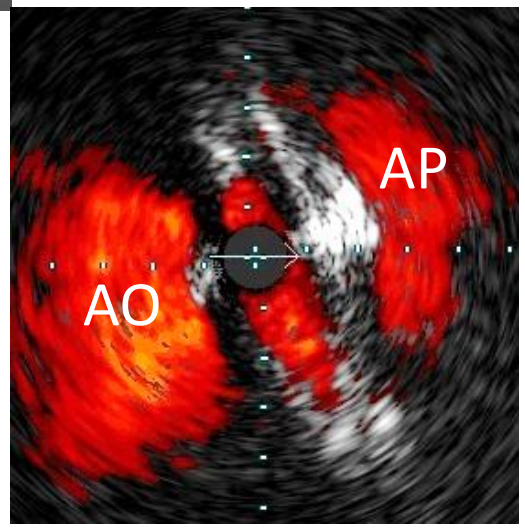


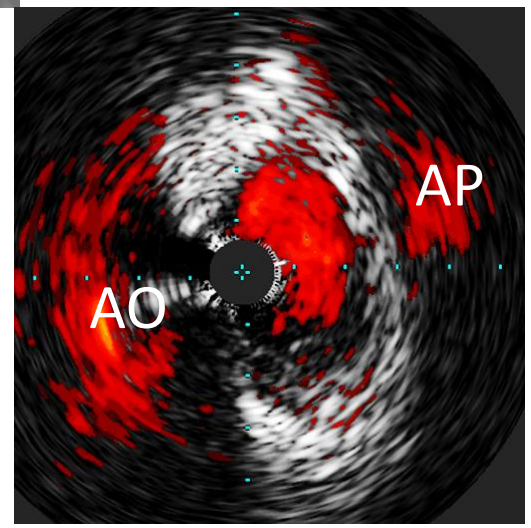
Diagnostic tomographique d'un passage intramural

• 3/4 critères présents :	présent
• 2 critères présents :	probable
• 0/1 critère présent :	absent

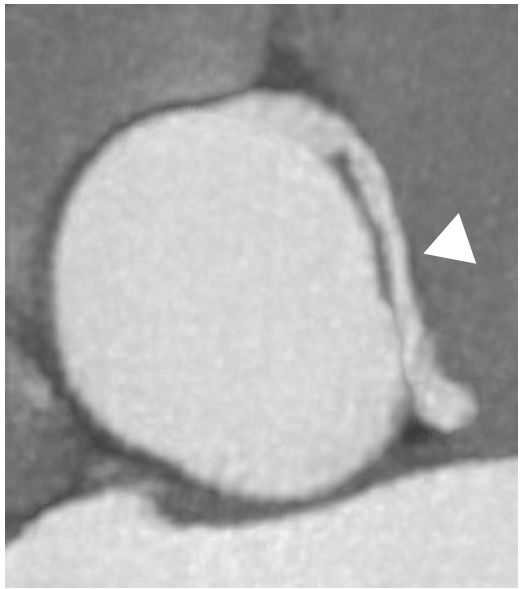
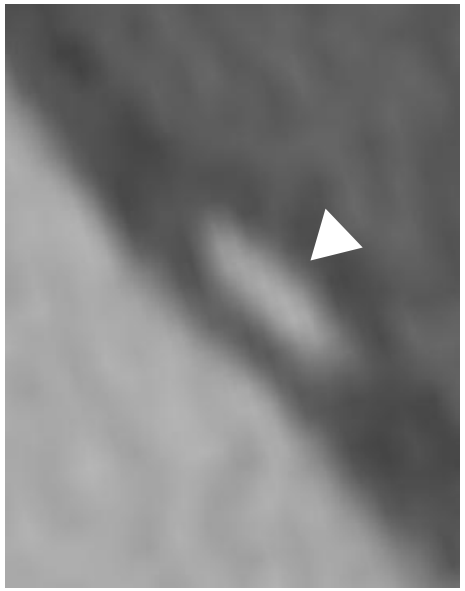
Trajet interartériel avec passage intramural aortique

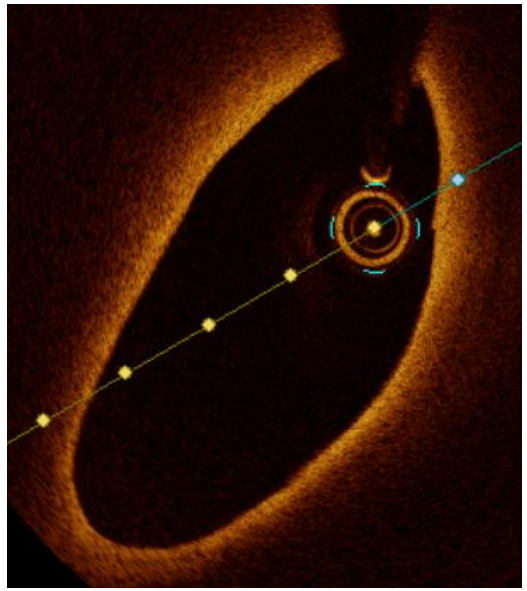






ANOCOR gauche avec passage intramural aortique



Erreurs de classification anatomique

Received: 11 October 2016 | Revised: 21 February 2017 | Accepted: 28 May 2017
DOI: 10.1111/chd.12504

ORIGINAL ARTICLE

WILEY Congenital Heart Disease

Interobserver variability in the classification of congenital coronary abnormalities: A substudy of the anomalous connections of the coronary arteries registry

Athanasios Koutsoukis, MD[1] | Xavier Halna du Fretay, MD[2] | Patrick Dupouy, MD[3] | Phalla Ou, MD, PhD[4] | Jean-Pierre Laissy, MD, PhD[4] | Jean-Michel Juliard, MD[5] | Fabien Hyafil, MD[6] | Pierre Aubry, MD[5] | on behalf of the ANOCOR Investigators*

Koutsoukis A. Congenit Heart Dis. 2017.

TABLE 5 Interobserver variability for the assessment of a preaortic course ($\kappa = 0.497$, 95% CI, 0.40–0.59; $P < .05$)

		Angiographic committee		
		Preaortic course	Other courses*	Total
Investigators	Preaortic course	78	27	105
	Other courses[a]	63	275	338
	Total	141	302	443

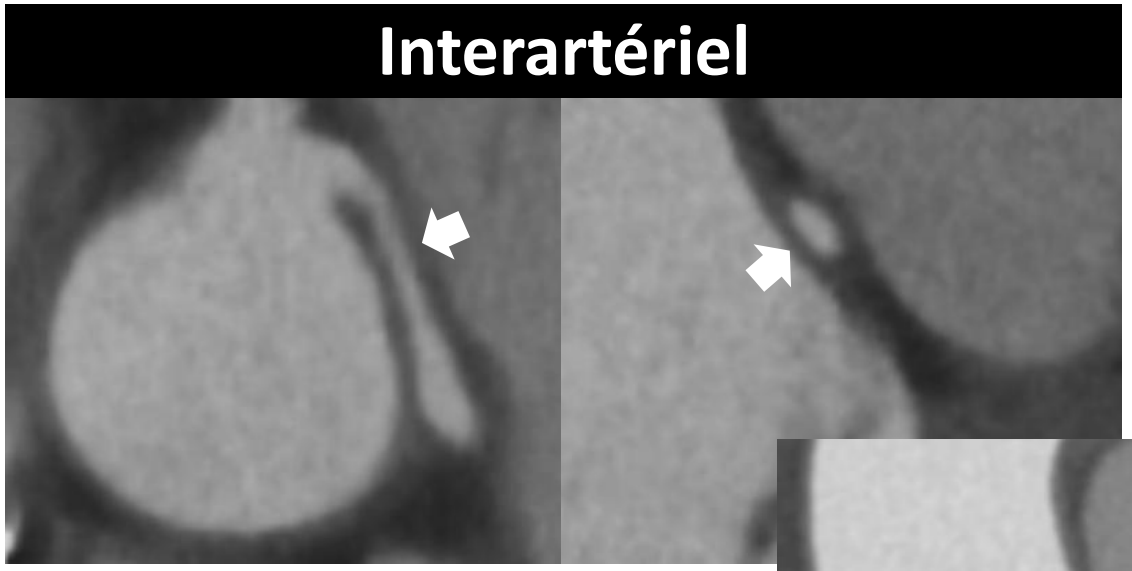
[a]Including undetermined course.

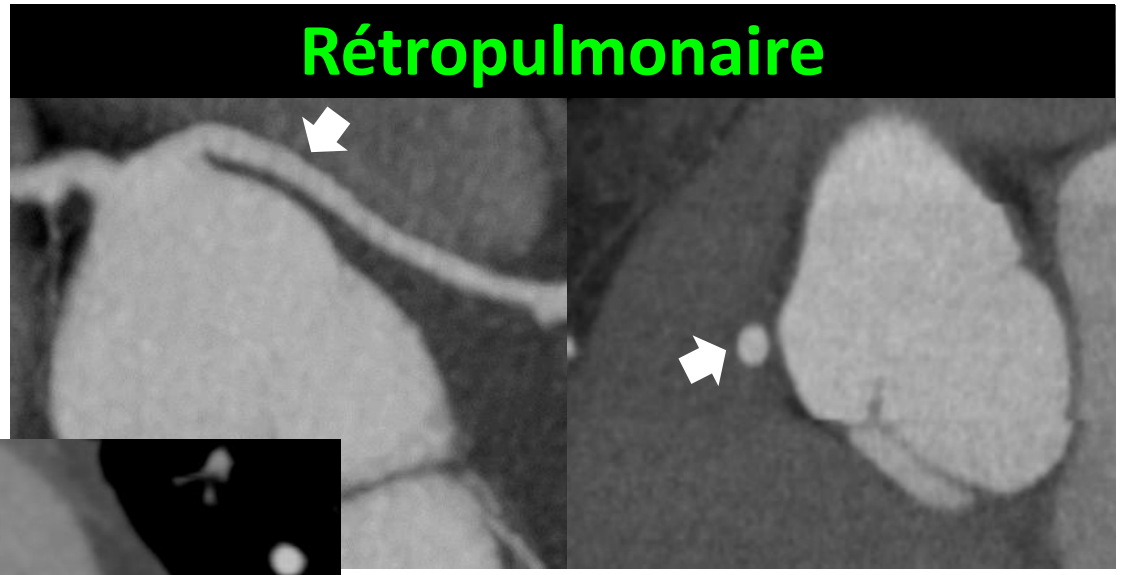
Premier registre ANOCOR

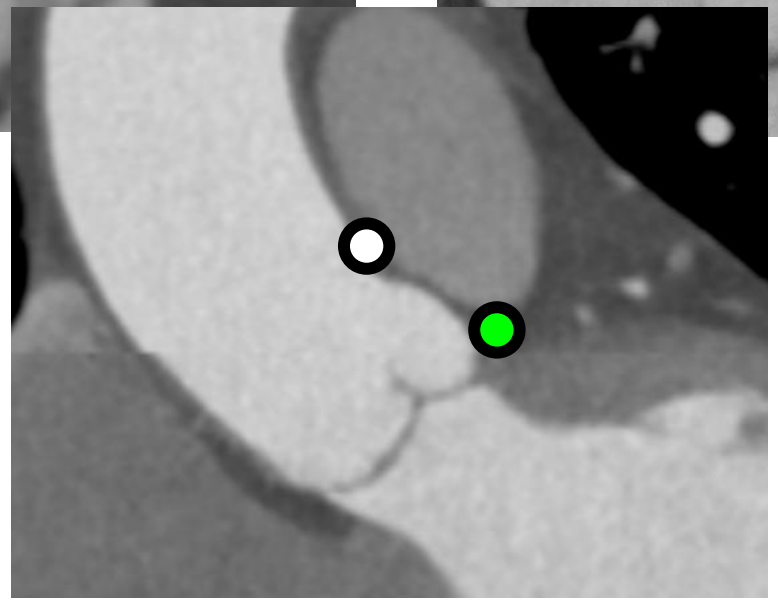
Investigator

Angiographic committee

Trajets à ne pas confondre (scanner coronaire)

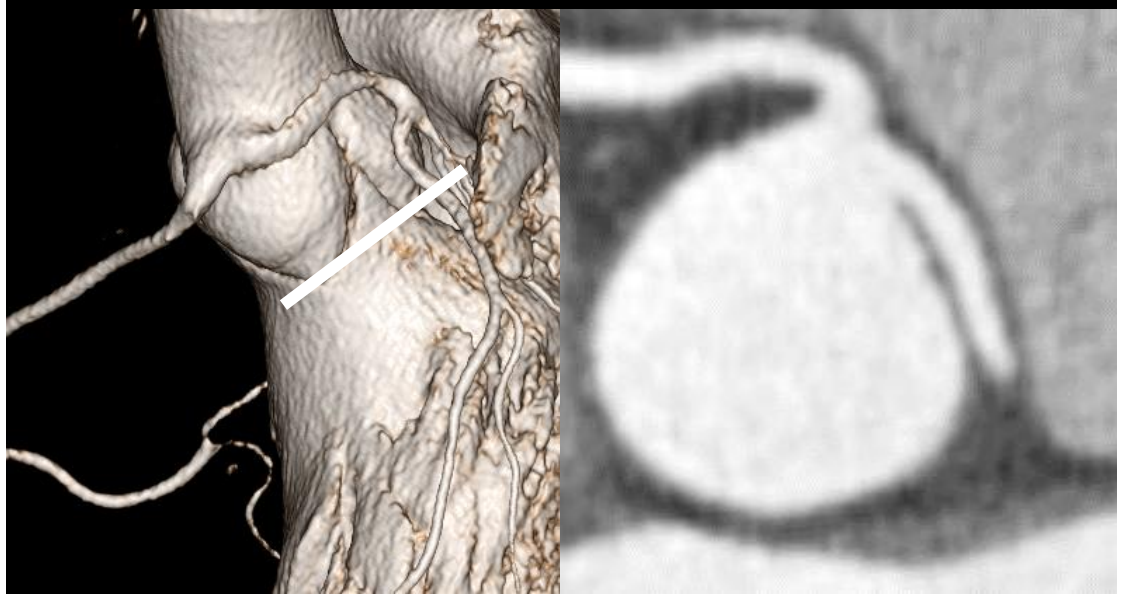




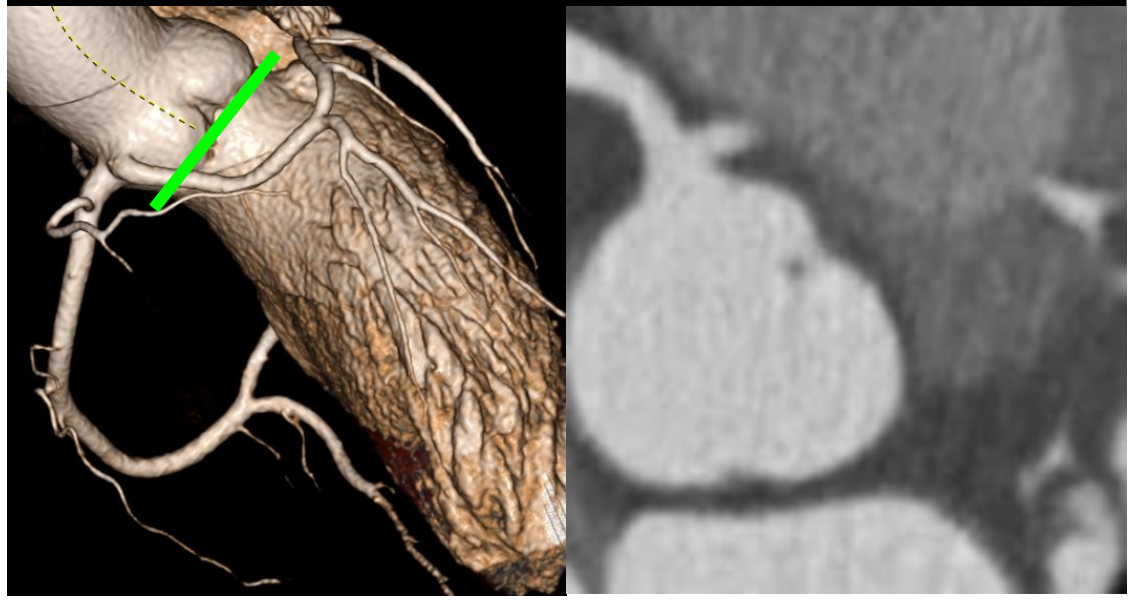


Trajets à ne pas confondre (scanner coronaire)

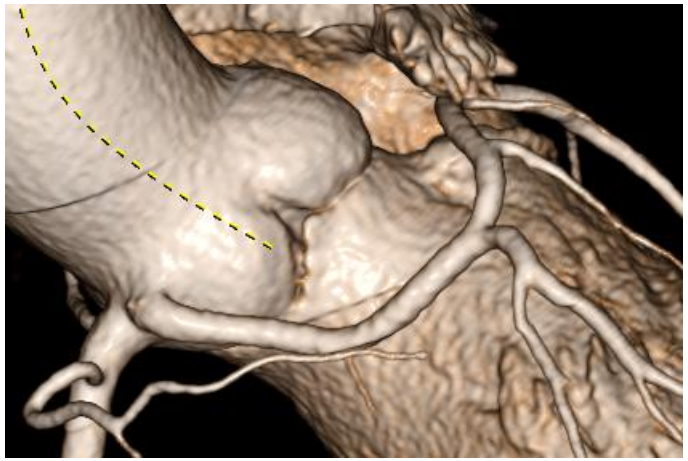
Interartériel



Rétropulmonaire



Trajet rétropulmonaire avec passage intramyocardique : rarement à risque

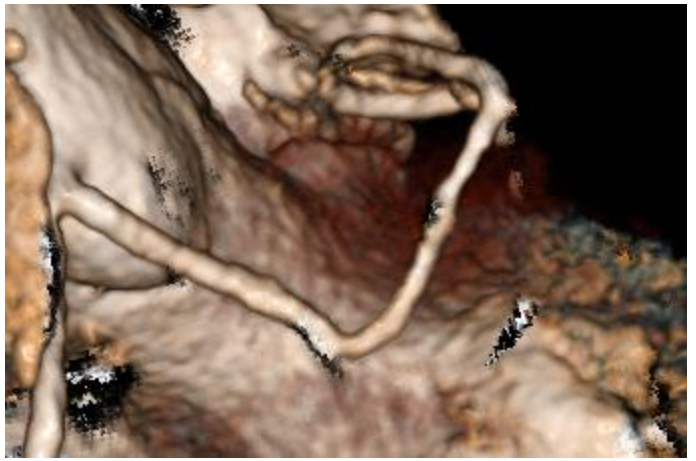


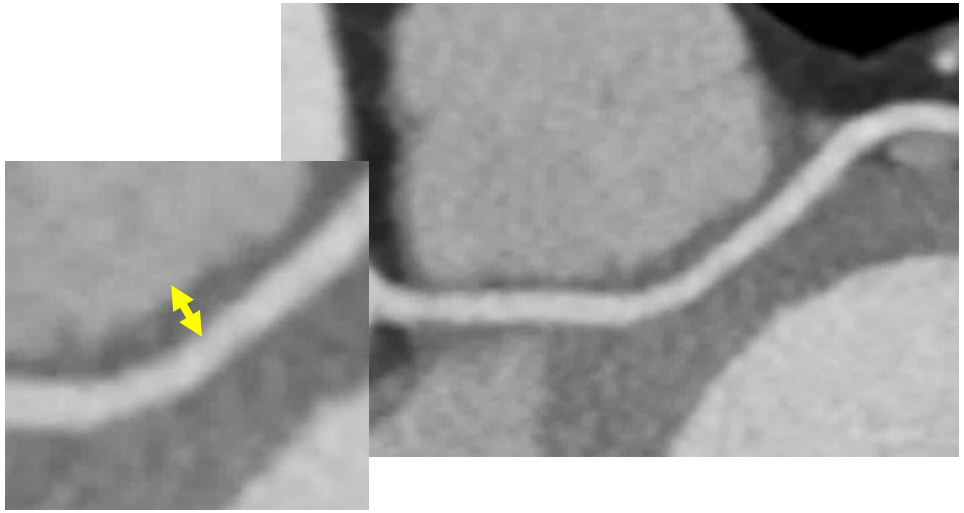
Profondeur :

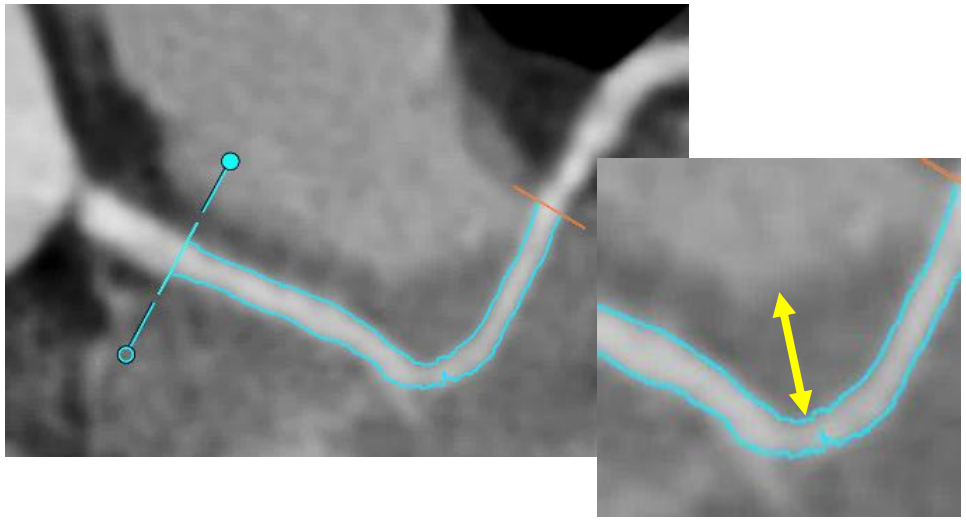
0

< 3.0 mm

≥ 3.0 mm







Classification clinique

- Mort subite
- Arrêt cardiaque
- Arythmies ventriculaires
- Ischémie myocardique
- Absents

Risques

Liens de causalité

- Entre anomalie coronaire et symptomatologie
- Entre anomalie coronaire et ischémie myocardique
- Entre anomalie coronaire et arythmie ventriculaire
- Entre anomalie coronaire et arrêt cardiaque

Absent | Possible/Probable | Certain

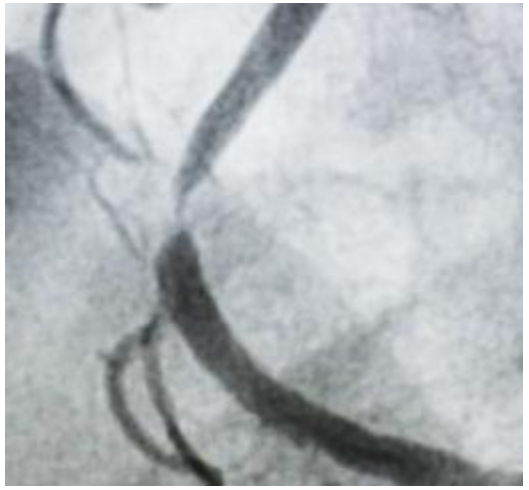
Anomalies de connexion aortique non à risque

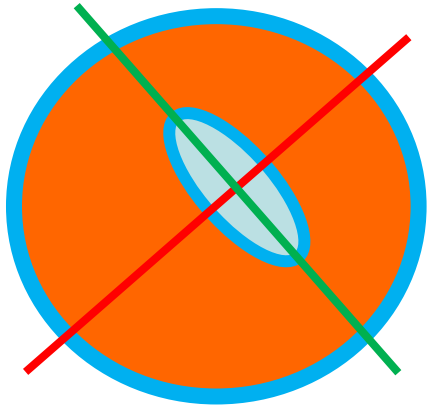
ANOCOR prépulmonaire

ANOCOR rétroaortique

ANOCOR et ischémie myocardique

ATHEROME

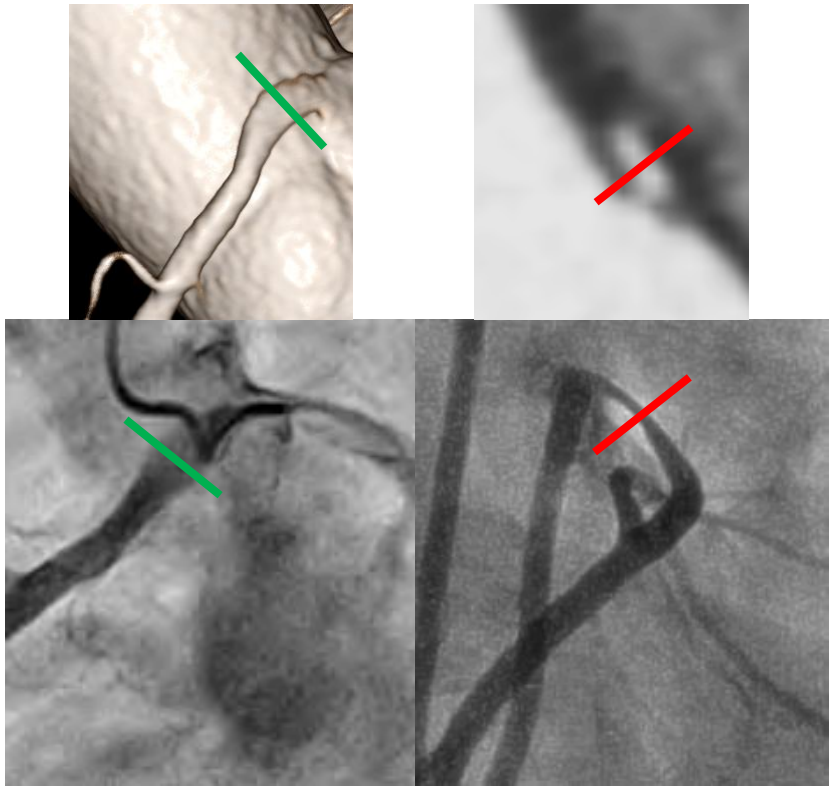


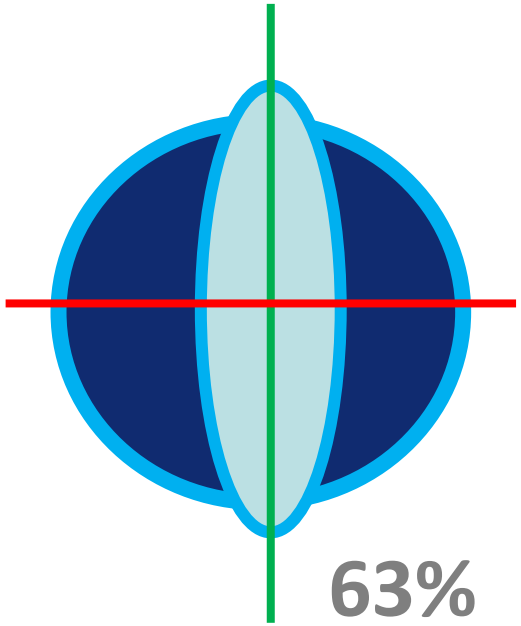


92%

Réduction de surface : > 70%

ANOCOR

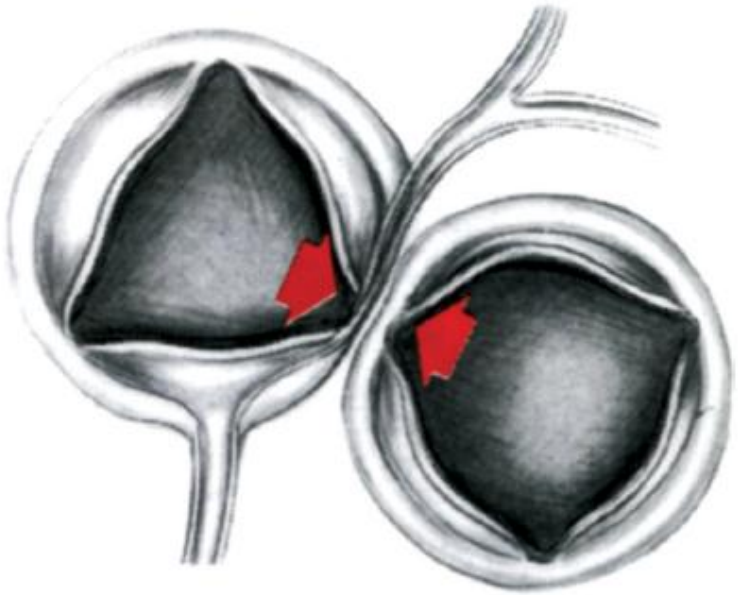




63%

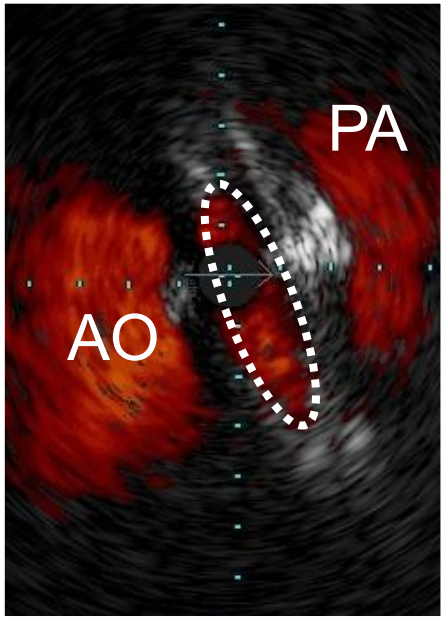
Réduction de surface : 35-70%

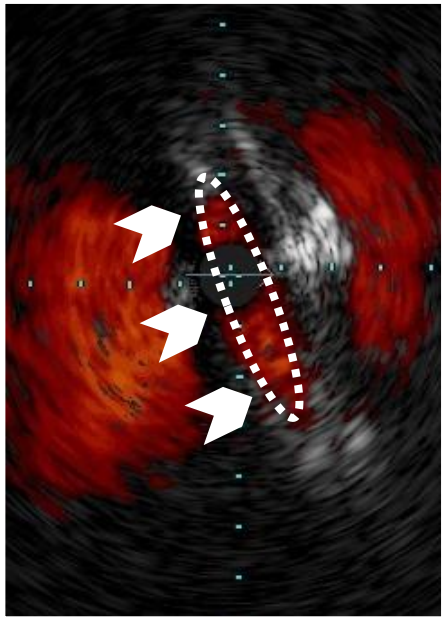
Mechanisms of myocardial ischemia



Raisky O, Vouhé P. EMC. 2007.

Fixed Component **Dynamic Component**





Exercise
Wall stress

35-70% Reduction in lumen area > 70%

Bigler MR et al. Front Cardiovasc Med. 2021.

ANOCOR et ischémie myocardique

TABLE 3 | Overview of possible stress protocols in assessing patients with ACAOS.

	Physical exercise		Adenosine	Regadenoson	Norepinephrine	Dobutamine	Dobutamine + volume challenge
Protocol/dose	85% of max. HR	100% of max. HR	140 µg/kg/min	Bolus: 400 µg	0.01 µg/kg/min	40 µg/kg/min	40 µg/kg/min + saline: 1.5–3 l+ atropine: 1 mg
Applied in	Non-invasive testing	Non-invasive testing	Non-invasive / invasive testing	Non-invasive testing	Invasive testing	Non-invasive / invasive testing	Invasive testing
Increase in coronary blood flow to detect relevant fixed stenosis	+++	+++++	+++	+++	++	++++	++++
Increased heart minute volume to provoke dynamic lateral compression	++	+++++	-	-	+++	++	++++
Reproducibility of symptoms	+++	+++++	-	-	++	++	+++
Tolerability	++++	++++	++	+++	++	++	++

HR, heart rate.

Bigler MR et al. Front Cardiovasc Med. 2021.

Sudden cardiac death in athletes

The NEW ENGLAND JOURNAL of MEDICINE

REVIEW ARTICLE

Sudden Cardiac Arrest in Athletes

Rachel Lampert, M.D.,[1] and Kimberly G. Harmon, M.D.[2]

Study	Country	Type of Cardiac Arrest or Death	Population	Age Range yr	No. of Cases	HCM %	Idiopathic LVH, Fibrosis, or Cardiomyopathy NOS %	Coronary-Artery Anomalies %	Arrhythmogenic Cardiomyopathy %	DCM %	AN-SUD %	CAD %	Myocarditis-Related %	Aortic Dissection %	Commotio Cordis %	Other %
Corrado et al.	Italy	SDC	Competitive athletes	12–35	46	2	0	13	26	2	2	22	11	2		20
Harmon et al.	U.S.	SDC	High-school athletes	14–18	50	14	26	8	2	0	18	6	14	0	0	12
Thiene et al.	Italy	SDC	Athletes	<40	75	5	0	16	27	0	11	23	4	0	0	15
Egger et al.	Many	SCA/D	Recreational, competitive, and elite soccer players	≤35	104	11	9	13	4	1		14	13	0	7	36
Peterson et al.	U.S.	SCA/D	Athletes	11–29	209	21	13	12	6	3	19	2	4	3	0	16
Finocchiaro et al.	U.K.	SDC	Athletes	18–35	128	3	12	9	8	3	52	1	0	0	5	7
Bohm et al.	Germany, France	EA-SCA/D	Recreational and competitive athletes	18–35	25	8	4	0	0	4	24	20	16	0	0	24
Petek et al.	U.S.	SDC	Competitive athletes	18–26	118	13	17	8	5	2	19	6	7	4	2	17
Total					**755**	**12**	**11**	**10**	**8**	**2**	**20**	**8**	**6**	**1**	**2**	**20**

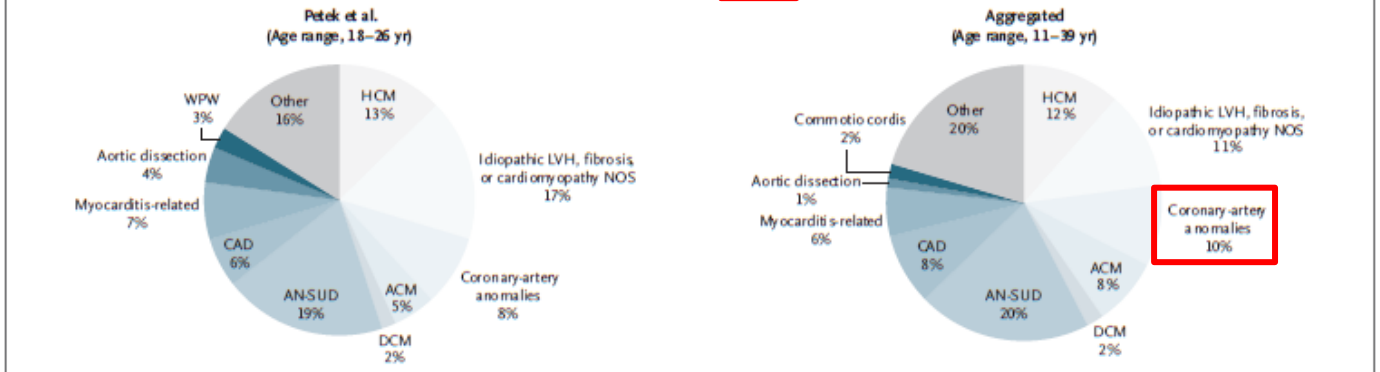


Figure 2. Cardiac Causes of Sudden Death in Athletes.

Only data from studies that included autopsy-negative, sudden, unexplained death (AN-SUD) among possible causes are shown. Data are from Bohm et al.,[36] Corrado et al.,[28] Egger et al.,[37] Finocchiaro et al.,[35] Harmon et al.,[22] Petek et al.,[27] Peterson et al.,[24] and Thiene et al.[38] ACM denotes arrhythmogenic cardiomyopathy, CAD coronary artery disease, DCM dilated cardiomyopathy, EA-SCA/D exercise-associated sudden cardiac arrest or death, HCM hypertrophic cardiomyopathy, LVH left ventricular hypertrophy, NOS not otherwise specified, SCA/D sudden cardiac arrest or death, SDC sudden death from cardiac causes, and WPW the Wolff–Parkinson–White syndrome.

Sudden cardiac death in athletes

1979

2022

The NEW ENGLAND JOURNAL of MEDICINE

REVIEW ARTICLE

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Finocchiaro et al.	U.K.	SDC	Athletes	18–35	128	3	12	9	8	3	52	1	0	0	5	7
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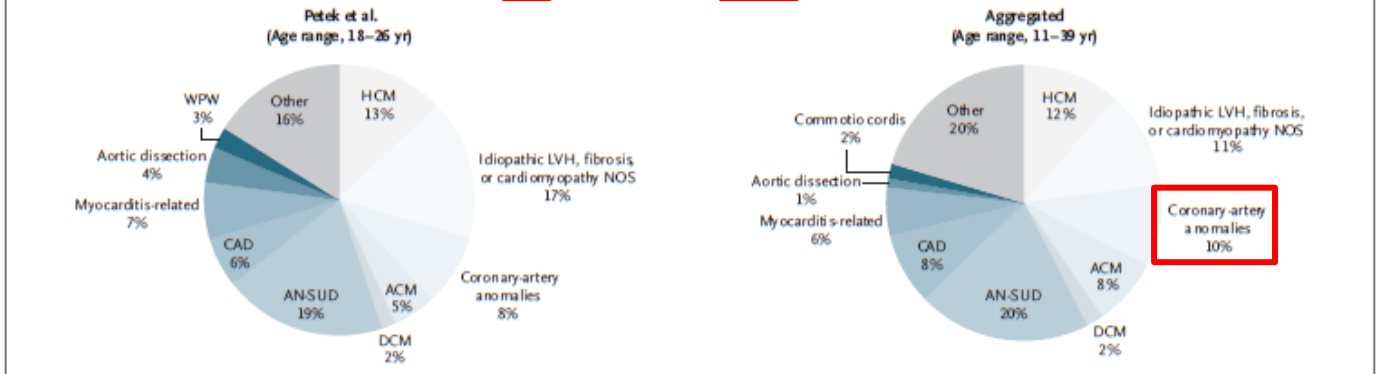
Total					755	12	11	10	8	2	20	8	6	1	2	20



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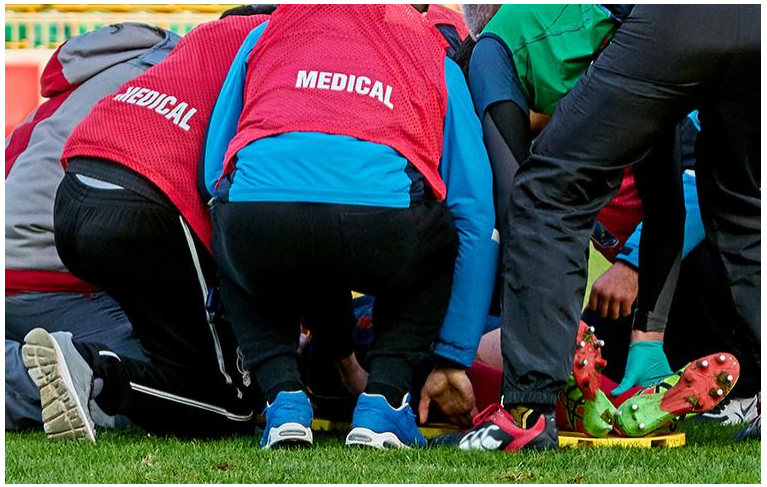
Incidence de la mort subite



?

Q. Please give me the incidence of sudden cardiac death for each AAOCA.

OpenAI GPT-3

1. Anomalous Origin of the Right Coronary Artery (ARCA):
   1. Studies suggest that ARCA is one of the more common types of AAOCA.
   2. The incidence of SCD associated with ARCA has been reported to be relatively low, but exact figures may vary.

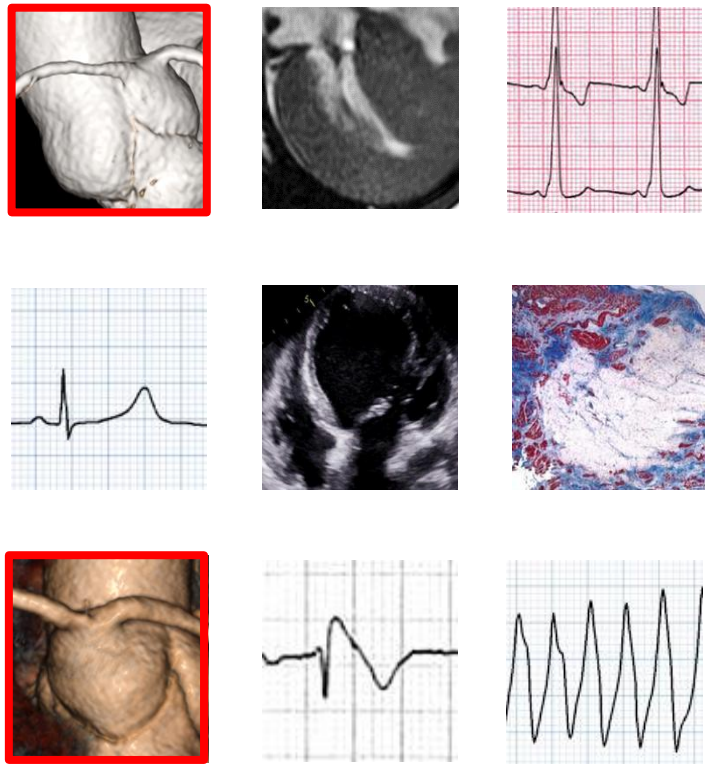
2. Anomalous Origin of the Left Coronary Artery from the Pulmonary Artery (ALCAPA):
   1. ALCAPA, also known as Bland-White-Garland syndrome, is a rare but serious congenital anomaly.
   2. SCD is a recognized complication of untreated ALCAPA, particularly in infants, where it can occur early in life due to myocardial ischemia.

3. Anomalous Origin of the Left Coronary Artery from the Right Sinus (ALCA):
   1. The incidence of SCD associated with ALCA can vary.
   2. Some studies have suggested that ALCA may carry a higher risk of SCD compared to other types of AAOCA, especially when the anomalous artery takes an interarterial course between the aorta and pulmonary artery.

4. Other Anomalous Origins (e.g., Anomalous Origin of Circumflex Artery):
   1. Incidence rates of SCD for less common variants of AAOCA may be less well-documented.
   2. The risk of SCD in these cases may depend on factors such as the specific anatomical course of the anomalous artery and the presence of associated cardiovascular abnormalities.

Cardiopathies congénitales à risque

Mort subite



Cardiopathie	Incidence annuelle*
Tachycardie ventriculaire catécholergique	1.5%
Cardiomyopathie hypertrophique	1-2%
Syndrome de Brugada	1%
Syndrome de QT long	0.5-1%
Cardiomyopathie dilatée idiopathique	0.5-1%
Dysplasie ventriculaire droite arythmogène	0.5-1%
ANOCOR gauche avec trajet interartériel*	**0.2%**
Syndrome pré-excitation ventriculaire	0.1%
ANOCOR droite avec trajet interartériel*	**0.02%**

*Incidence dans une population < 35 ans (estimations)

Aborted SCD and AAOCA in registry-based data collection

Le registre ANOCOR

ANOCOR registry

- 472 AAOCA patients – mean age 63 years
- 12 aborted SCD **(2.5%)**
- 3 AAOCA-related SCD **(0.6%)**

Aubry P et al. Arch Cardiovasc Dis. 2016.

Outcomes of 230 Patients Undergoing Surgical Repair of Anomalous Aortic Origin of a Coronary Artery

- 198 AAOCA patients – median age 17 years
- Surgical series
- 6 aborted SCD **(3.0%)**

First report from the European registry for anomalous aortic origin of coronary artery (EURO-AAOCA)

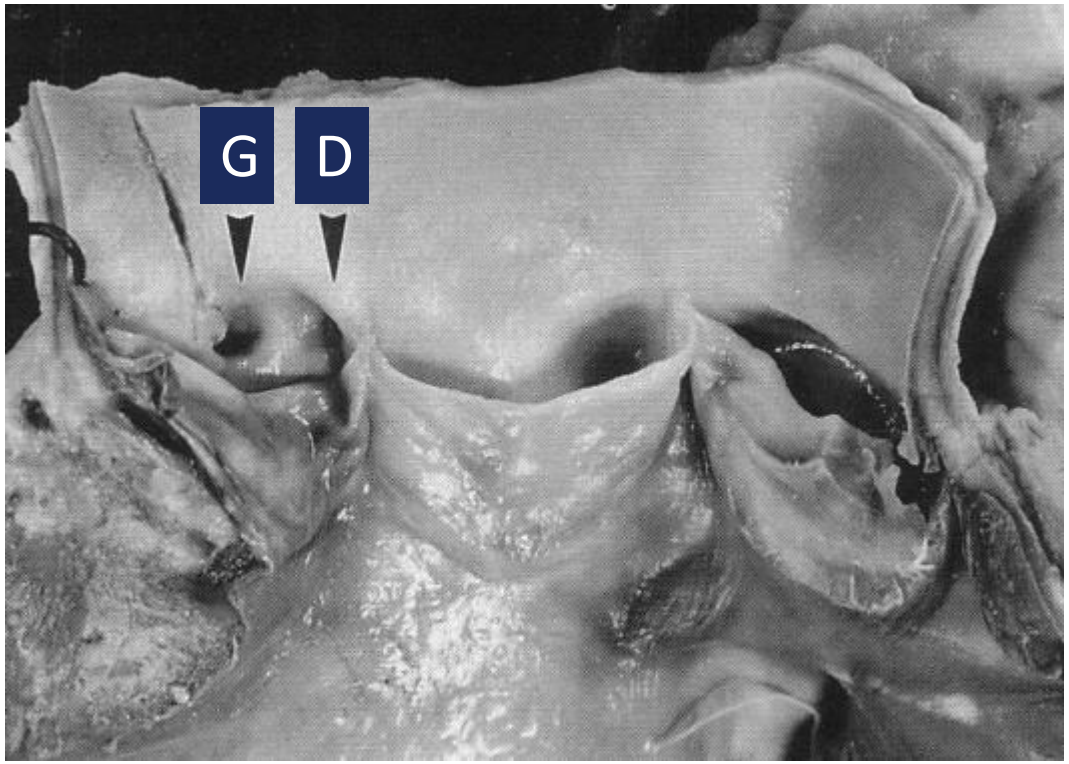
- 263 AAOCA patients – median age 36 years
- Surgery in 28% of cases
- 2 aborted SCD **(1.4%)**

Gräni C et al. Interdiscip Cardiovasc Thorac Surg. 2024.

Cohorte ANOCOR (2025)

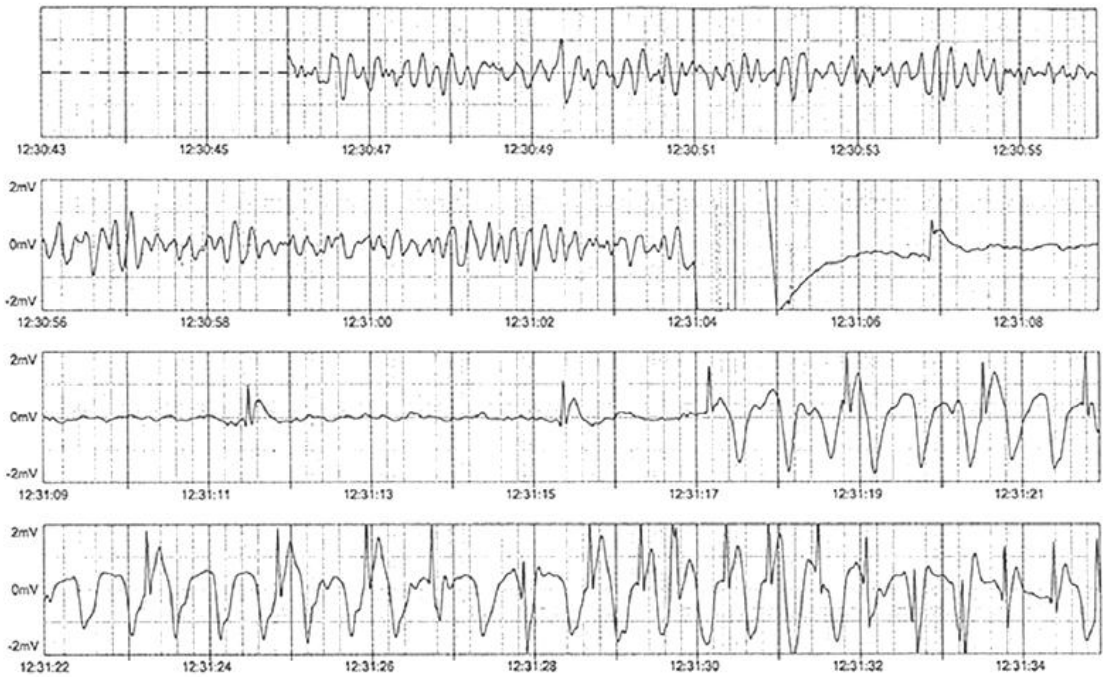
- 220 dossiers
- 5 ACR **(2.3%)**
- 4 ACR liés ANOCOR **(1.8%)**

1990 Mort subite



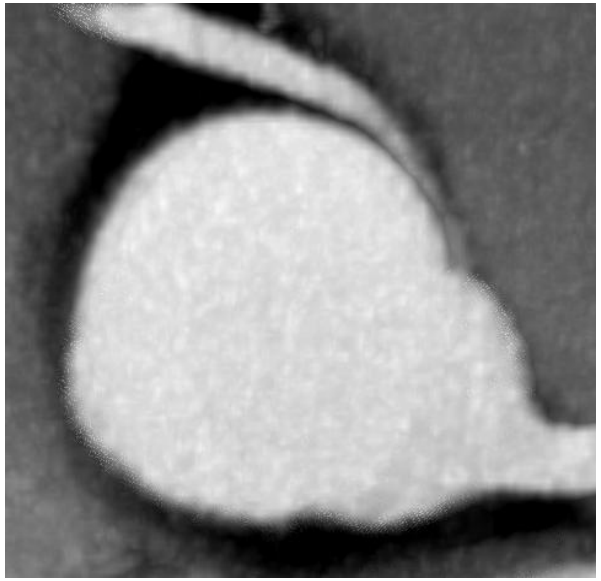
Corrado et al. Br Heart J. 1992.

2010 Arrêt cardiaque récupéré



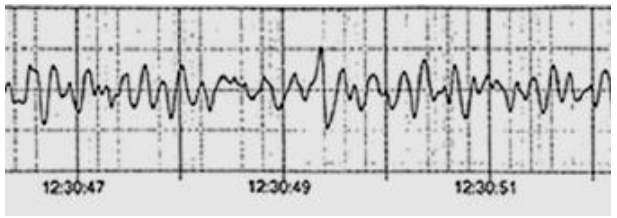
Cause de la mort subite = fibrillation ventriculaire

Mr G.
32 ans

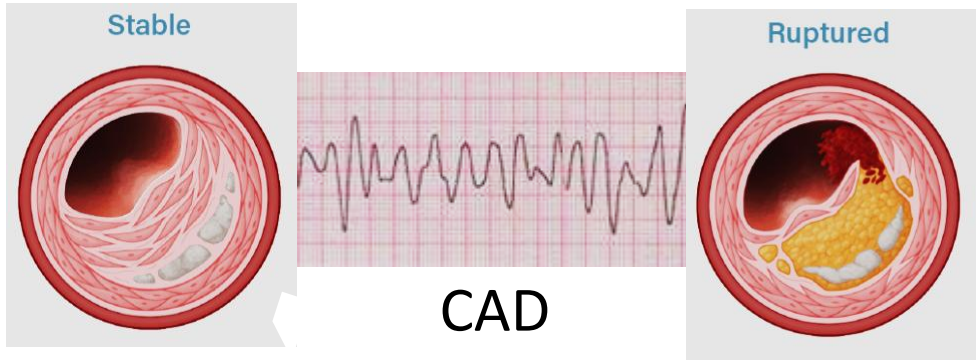


?

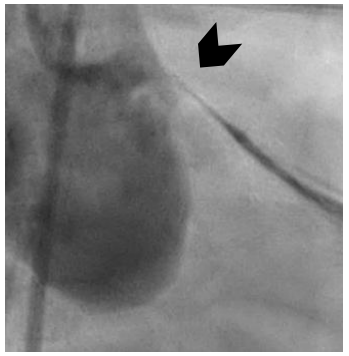
24/07/2024
12.56

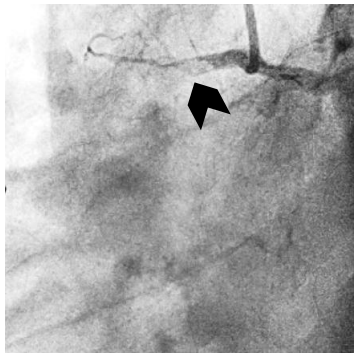


Mécanisme(s) de la fibrillation ventriculaire

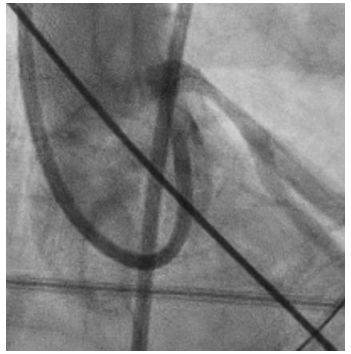


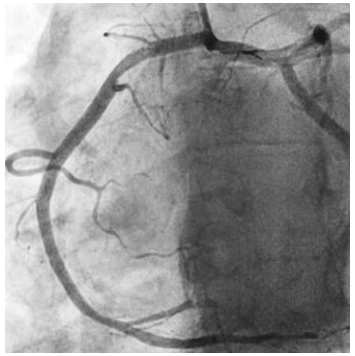
CAD



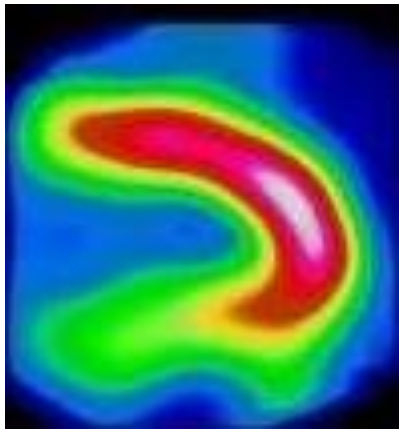


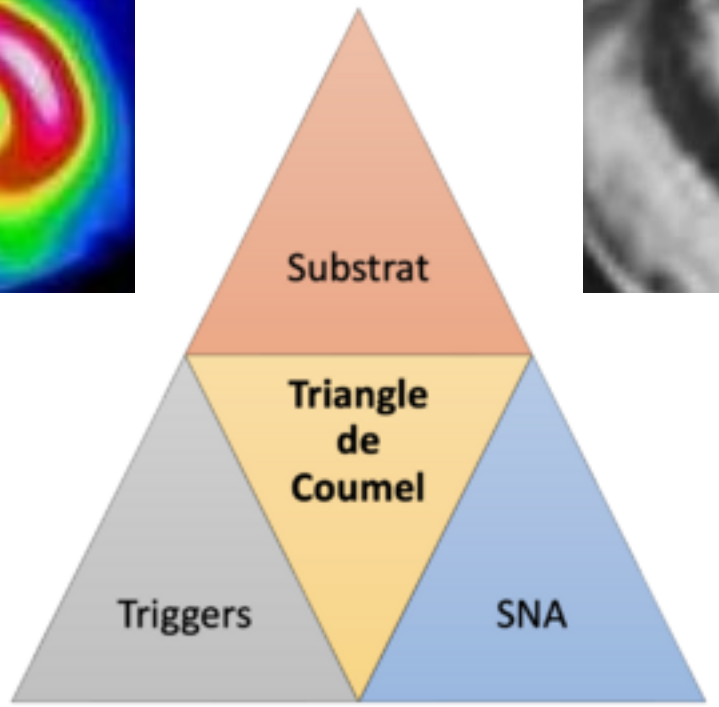
AAOCA



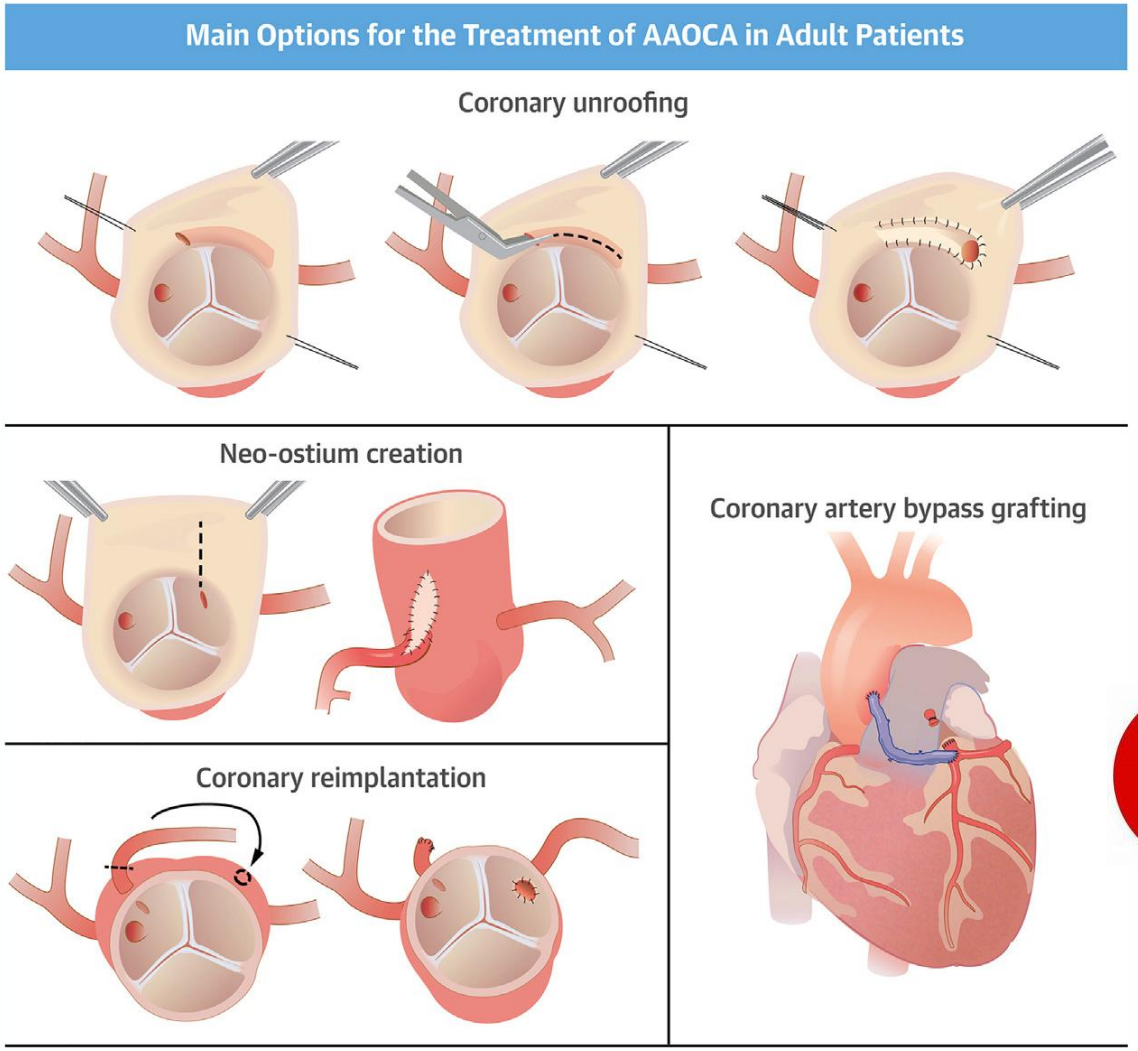


Mécanisme(s) de la fibrillation ventriculaire



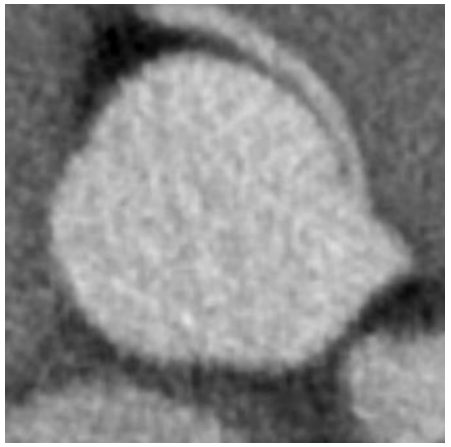


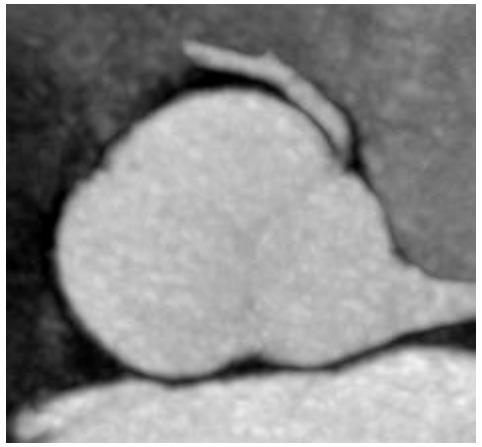
Techniques chirurgicales

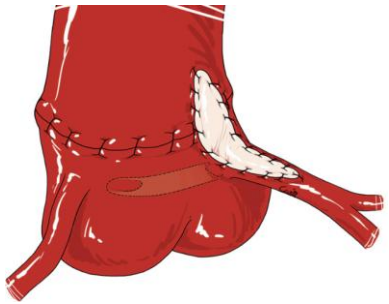


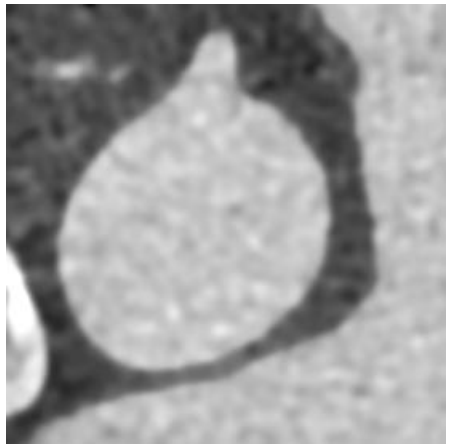
Gaudino M. et al.
Ann Thorac Surg. 2023.

Techniques chirurgicales









Sudden cardiac death and exertional status

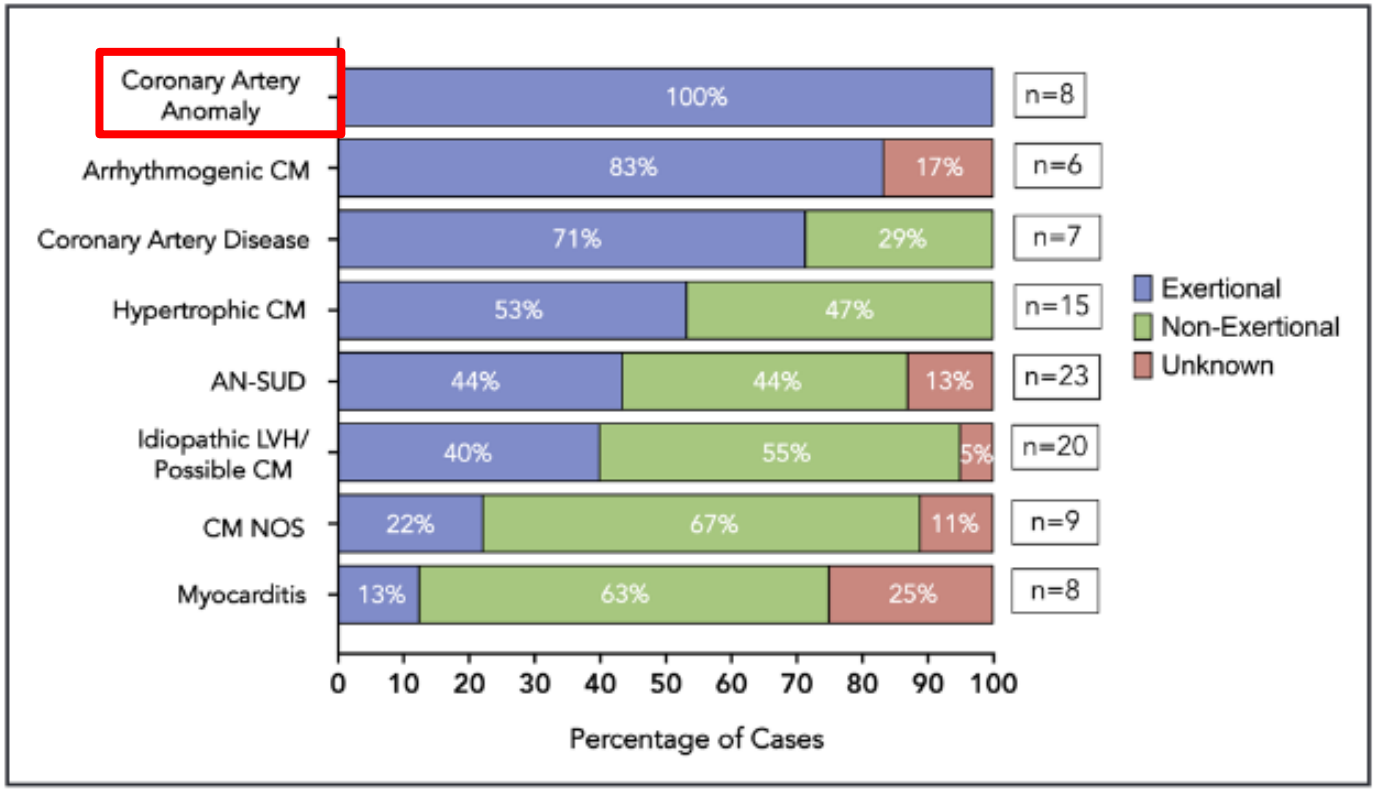


Figure 4. Exertional status at time of death by common causes of sudden cardiac death.
AN-SUD indicates autopsy-negative sudden unexplained death; CM, cardiomyopathy; LVH, left ventricular hypertrophy; NOS, not otherwise specified; and SCD, sudden cardiac death.

Petek BJ et al. Circulation. 2024

Restriction sportive

- Aucune
- Sur activité sportive d'intensité basse
- Sur activité sportive d'intensité moyenne
- Sur activité sportive d'intensité élevée
- Sur la pratique en compétition
- En attendant une correction de l'anomalie coronaire
- Après la correction de l'anomalie coronaire

Information éclairée du patient

Participation du patient à la décision

Pratique dans un environnement adapté

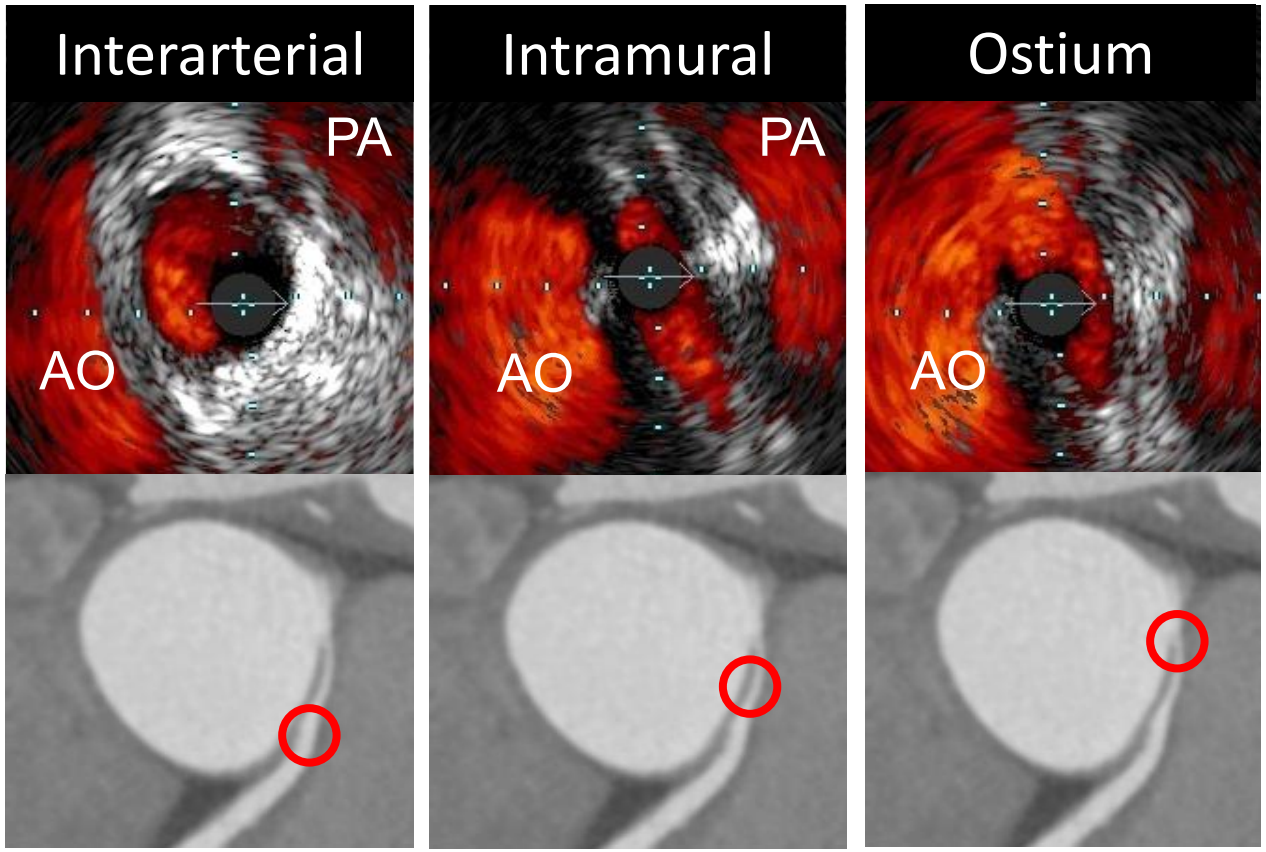
Cas complexe à gérer

- Jeune sportif (football) de 15 ans
- Centre de formation (pôle espoirs)
- Echocardiogramme systématique
- Découverte ANOCOR droite avec trajet interartériel
- Pas de symptomatologie d'allure ischémique
- Pas d'ischémie myocardique documentée

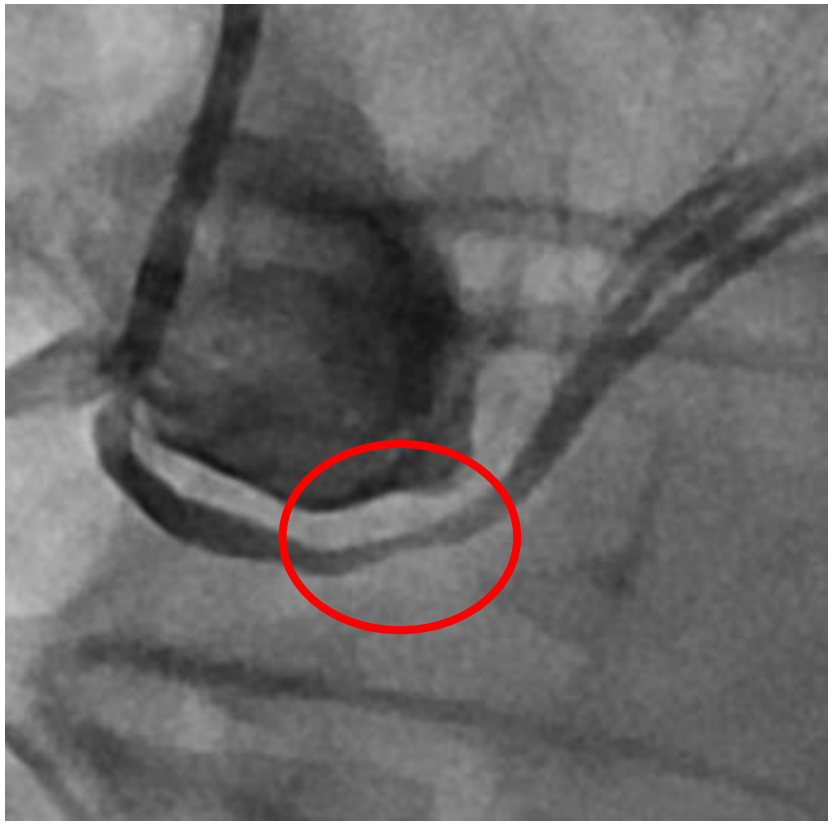
Que lui proposer ?

- Pas de restriction sportive ?
- Restriction sur activité sportive d'intensité élevée ?
- Correction chirurgicale ?

Relationship between AAOCA and coronary artery disease (CAD)



Right AAOCA



LCx AAOCA

Relationship between AAOCA and coronary artery disease (CAD)

Coronary Artery Disease

Prevalence and location of coronary artery disease in anomalous aortic origin of coronary arteries

Sandra Zendjebil[a], Athanasios Koutsoukis[b], Thomas Rodier[c], Fabien Hyafil[d], Xavier Halna du Fretay[a,e], Patrick Dupouy[b], Jean-Michel Juliard[a], Reza Farnoud[a], Phalla Ou[f], Jean-Pierre Laissy[g], Camille Couffignal[c,h] and Pierre Aubry[a,i]; on behalf of the ANOCOR investigators

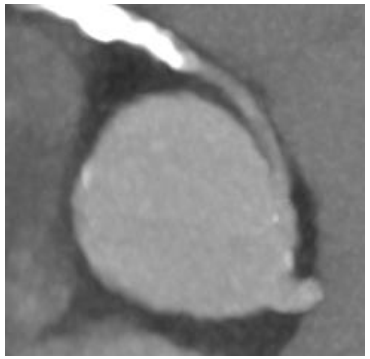
Zendjebil S et al. Cor Art Dis 2024

1er registre ANOCOR

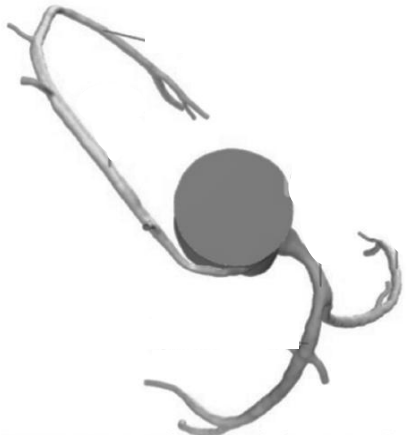
390 patients
Median age 64 years
73.1% male
75.9% non obstructive and obstructive CAD (1-100%)

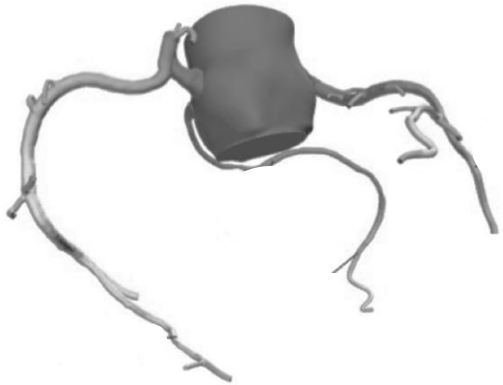
Prevalence and location of CAD in AAOCA

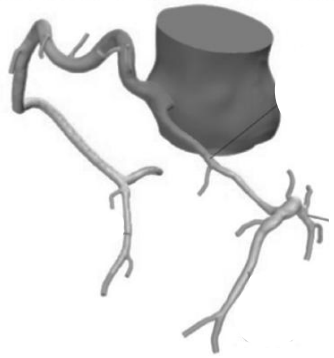
Ectopic courses (n=390)

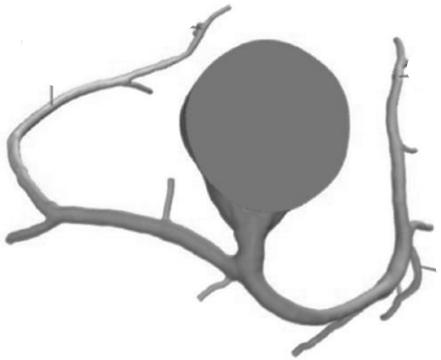


AAOCA
interarterial course
N = 122 (31.3%)









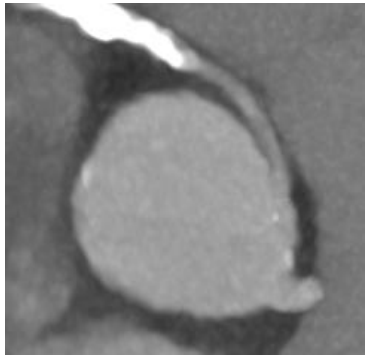
AAOCA
retroaortic course
N = 219 (56.2%)

AAOCA
subpulmonic course
N = 24 (6.2%)

AAOCA
prepulmonic course
N = 25 (6.3%)

Zendjebil S et al. Cor Art Dis 2024

Prevalence and location of coronary artery disease CAD in AAOCA



AAOCA
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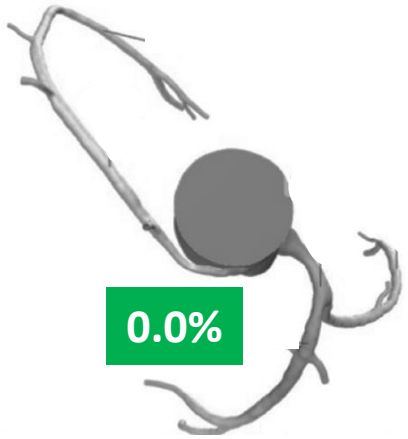
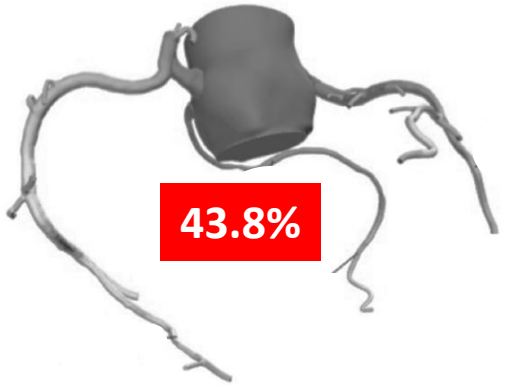
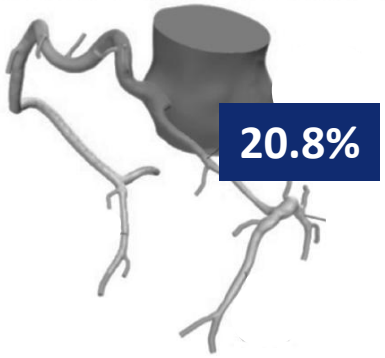
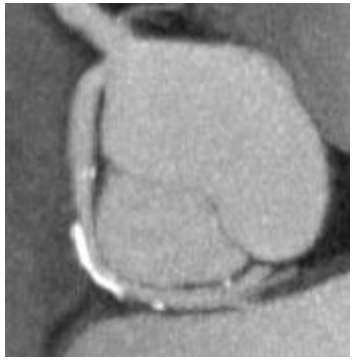
Ectopic courses (n=390)









AAOCA
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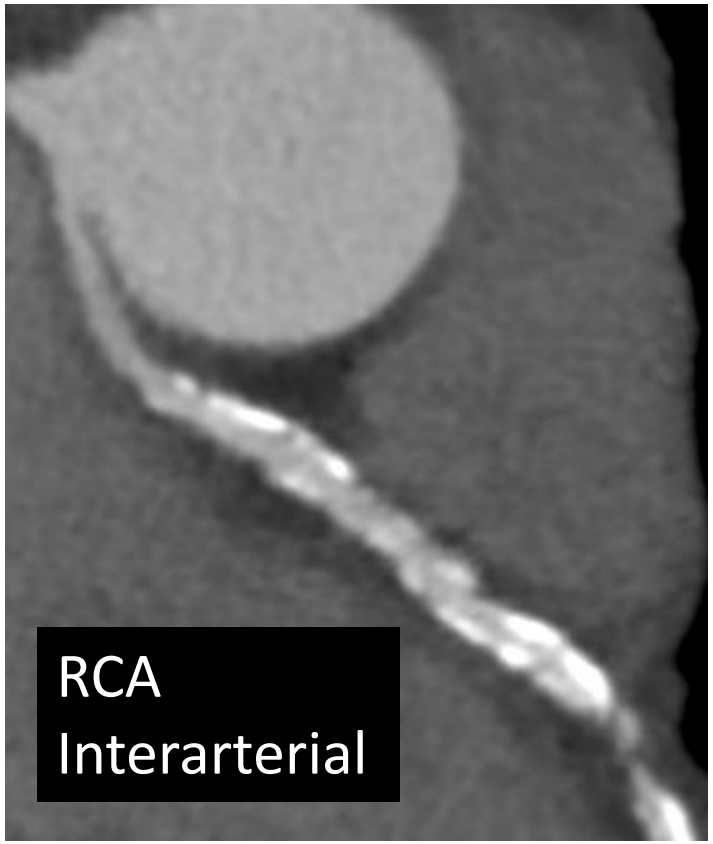
AAOCA
prepulmonic course
N = 25 (6.3%)

Zendjebil S et al. Cor Art Dis 2024

Prevalence and location of CAD in AAOCA



How can these differences be explained?

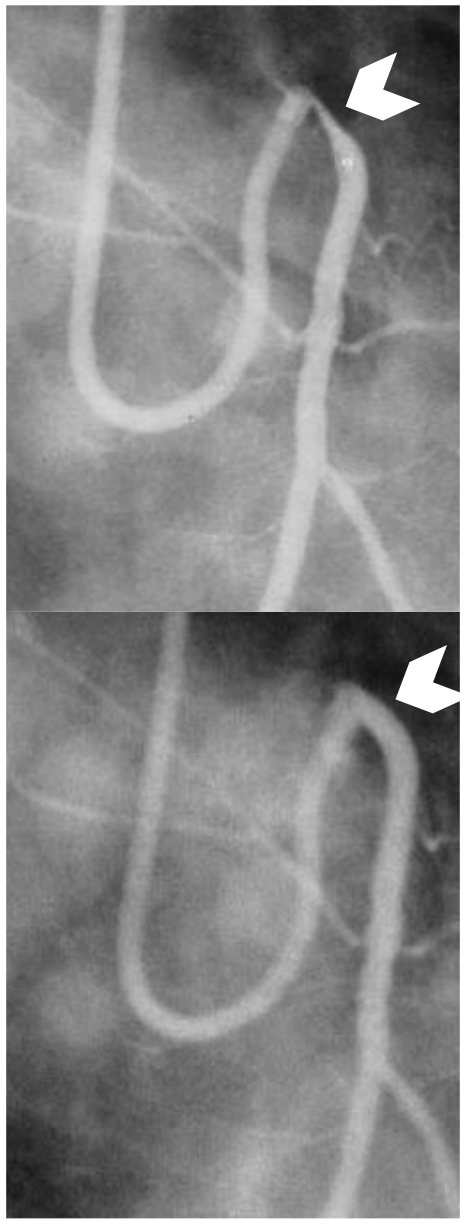
Angioplasty for AAOCA

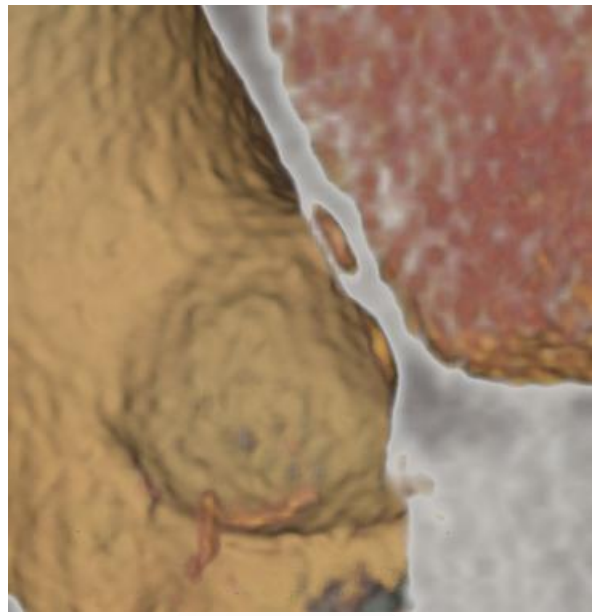
Six-Month Success of Intracoronary Stenting for Anomalous Coronary Arteries Associated With Myocardial Ischemia

Andrew J. Doorey, MD, Michael J. Pasquale, MD, James F. Lally, MD, Gary S. Mintz, MD, Erik Marshall, MD, and David A. Ramos, MD

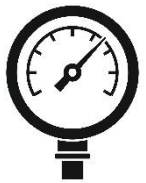
THE AMERICAN JOURNAL OF CARDIOLOGY® VOL. 86 SEPTEMBER 1, 2000

25 years ago





Φ 3.0/4.0 mm



16/24 bars

Angioplasty for AAOCA

Six-Month Success of Intracoronary Stenting for Anomalous Coronary Arteries Associated With Myocardial Ischemia

Doorey AJ et al. Am J Cardiol. 2000.

N=14

Origin of the Right Coronary Artery from the Opposite Sinus of Valsalva in Adults: Characterization by Intravascular Ultrasonography at Baseline and After Stent Angioplasty

Angelini P et al. Cathet Cardio Interv. 2015.

N=42

Technical success and long-term outcomes after anomalous right coronary artery stenting with cardiac computed tomography angiography correlation

Darki A et al. Cathet Cardio Interv. 2020.

N=4

Place of Angioplasty for Coronary Artery Anomalies With Interarterial Course

Aubry P et al. Front Cardiovasc Med. 2021.

N=17

frontiers in Cardiovascular Medicine

MINI REVIEW
published: 18 January 2021
doi: 10.3389/fcvm.2020.596018

Cohorte ANOCOR

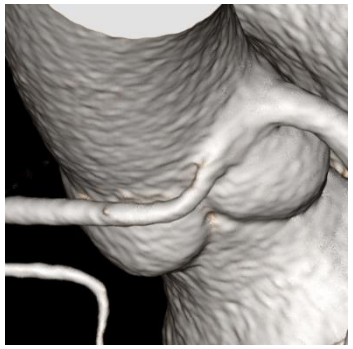
Registre ANOCOR STENTING
2014 - …

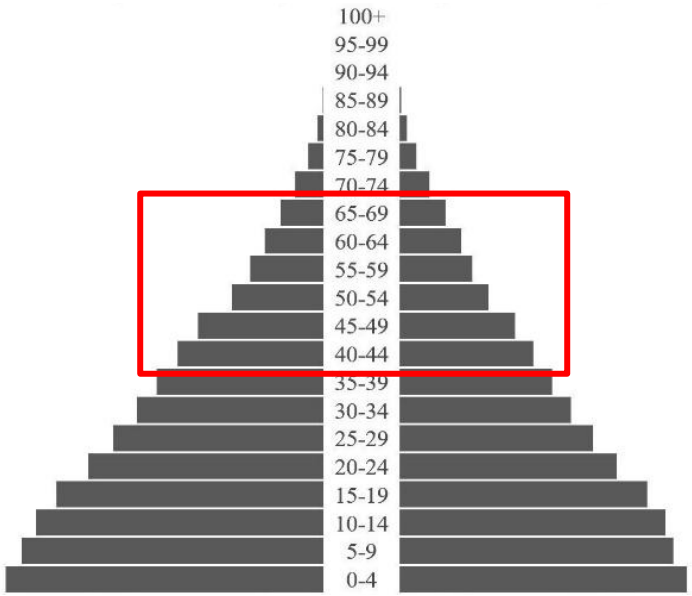
Place of Angioplasty for Coronary Artery Anomalies With Interarterial Course

Pierre Aubry[1,2*], *Xavier Halna du Fretay*[3], *Olivier Boudvillain*[1], *Philippe Degrell*[4] *and the ANOCOR Working Group*

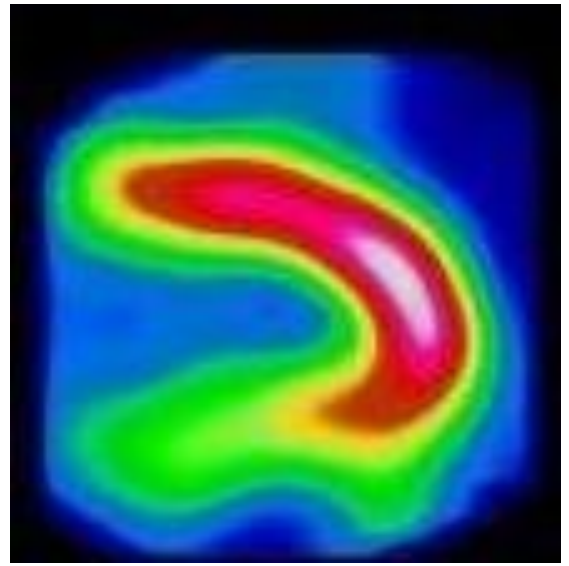
Rationnel pour un stenting

Symptômes

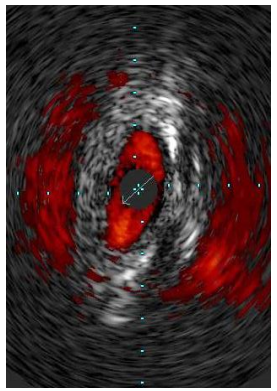


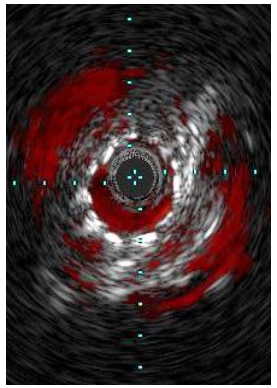


Ischémie

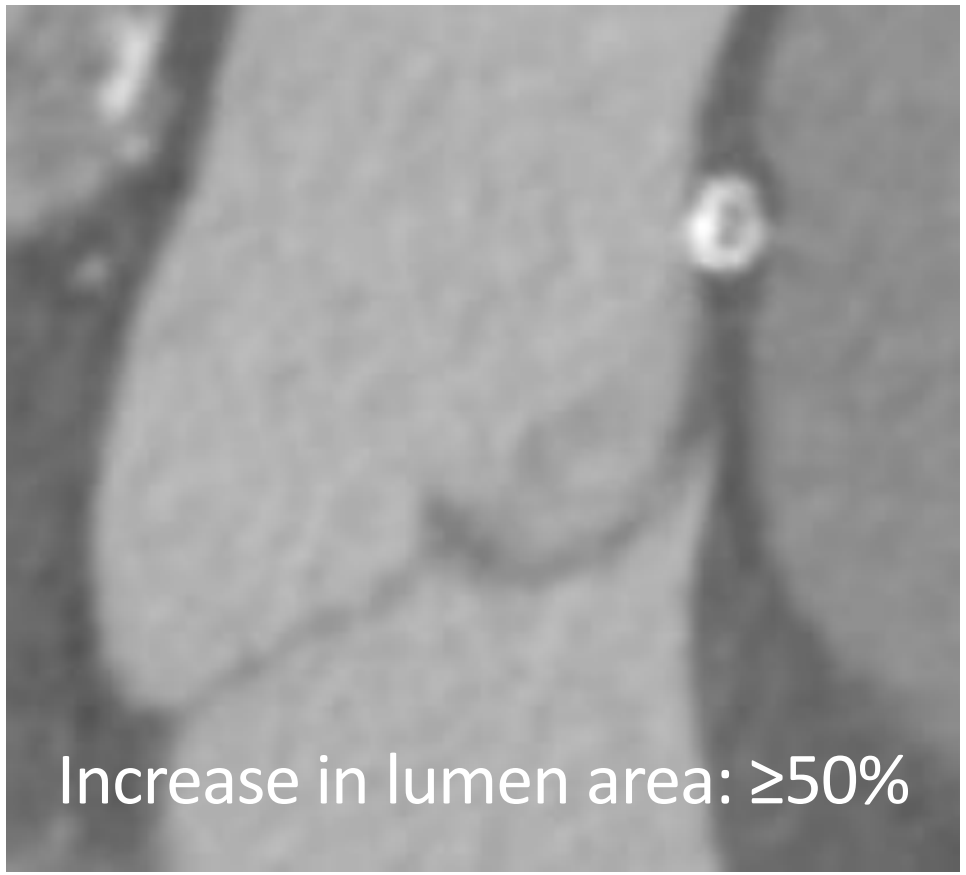


How can stenting work?





Fixed Component



Dynamic Component

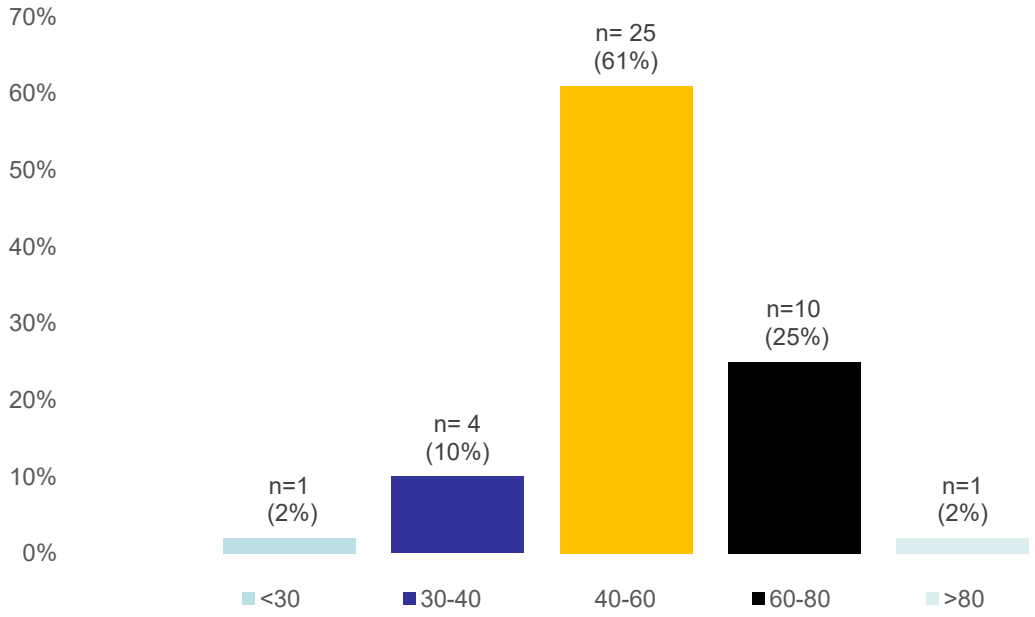
ANOCOR STENTING Registry

- ANOCOR working group (Bichat Hospital - Paris - France)
- Multicenter prospective observational study
- 2014 - ongoing (47 patients included by December 31, 2025)
- Stenting in proximal course of a congenital anomalous coronary artery (ACA)
- De novo procedure or post-surgical failure
- Exclusion criteria: PCI for atherosclerosis stenosis in ectopic course

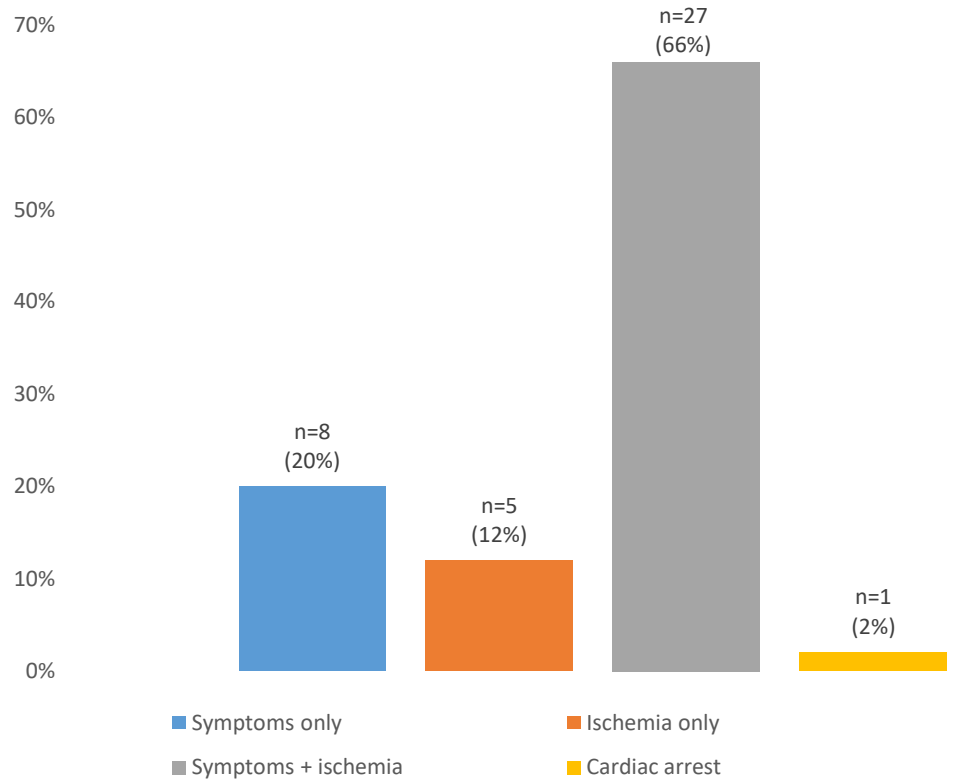
ANOCOR STENTING Registry

N=41

Male: 68% - Mean age: 54±10 years [29-82]



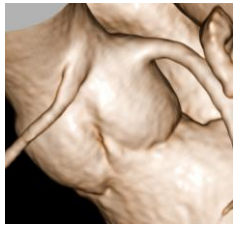
Age distribution (years)

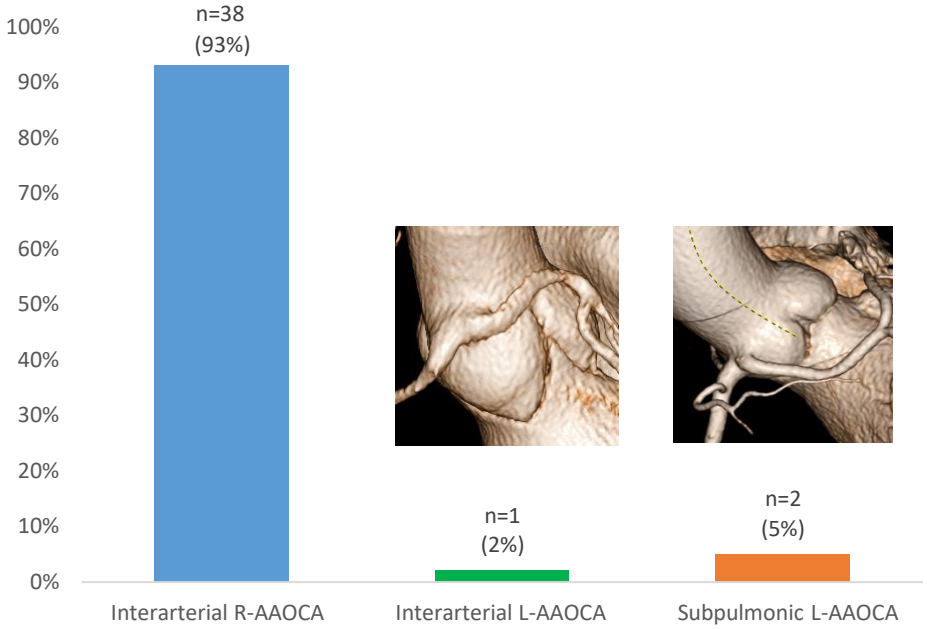


Initial presentation

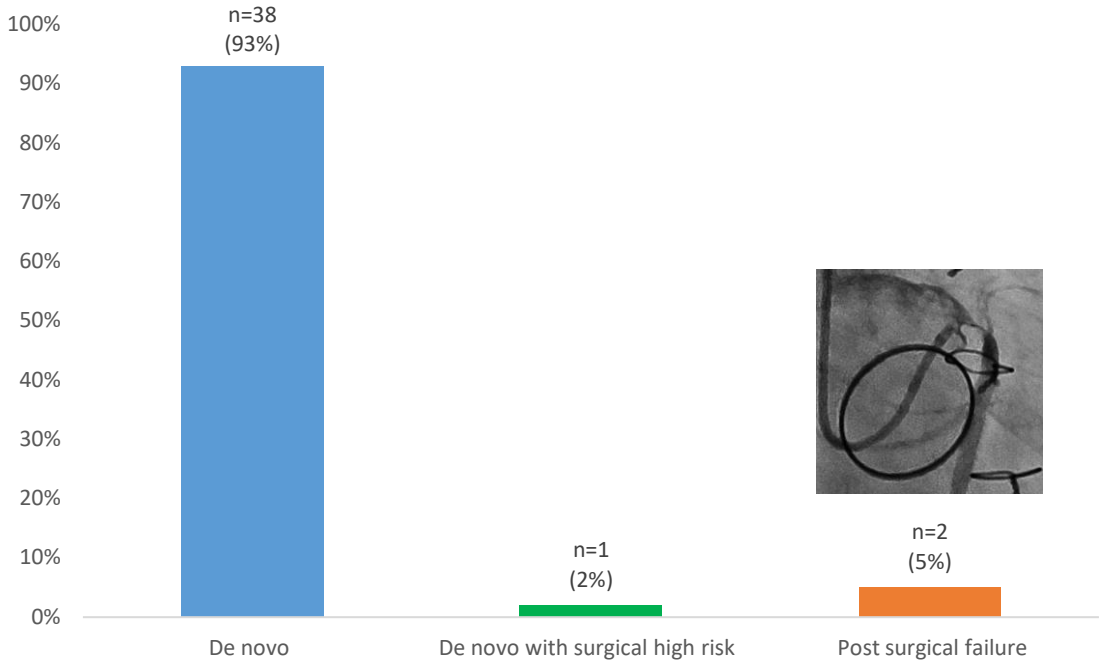
ANOCOR STENTING Registry

N=41





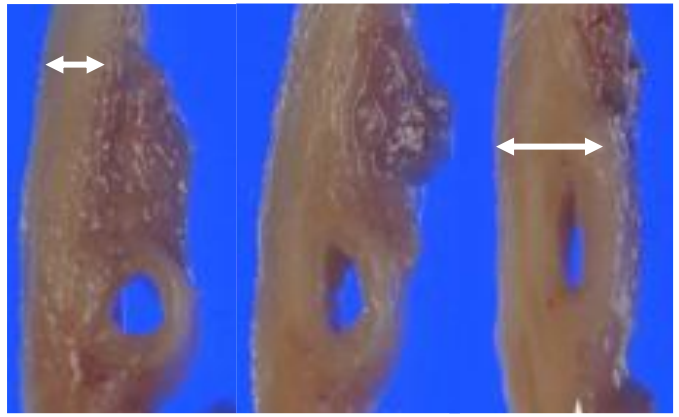
Anatomical distribution



Stenting indication

ANOCOR STENTING Registry N=41

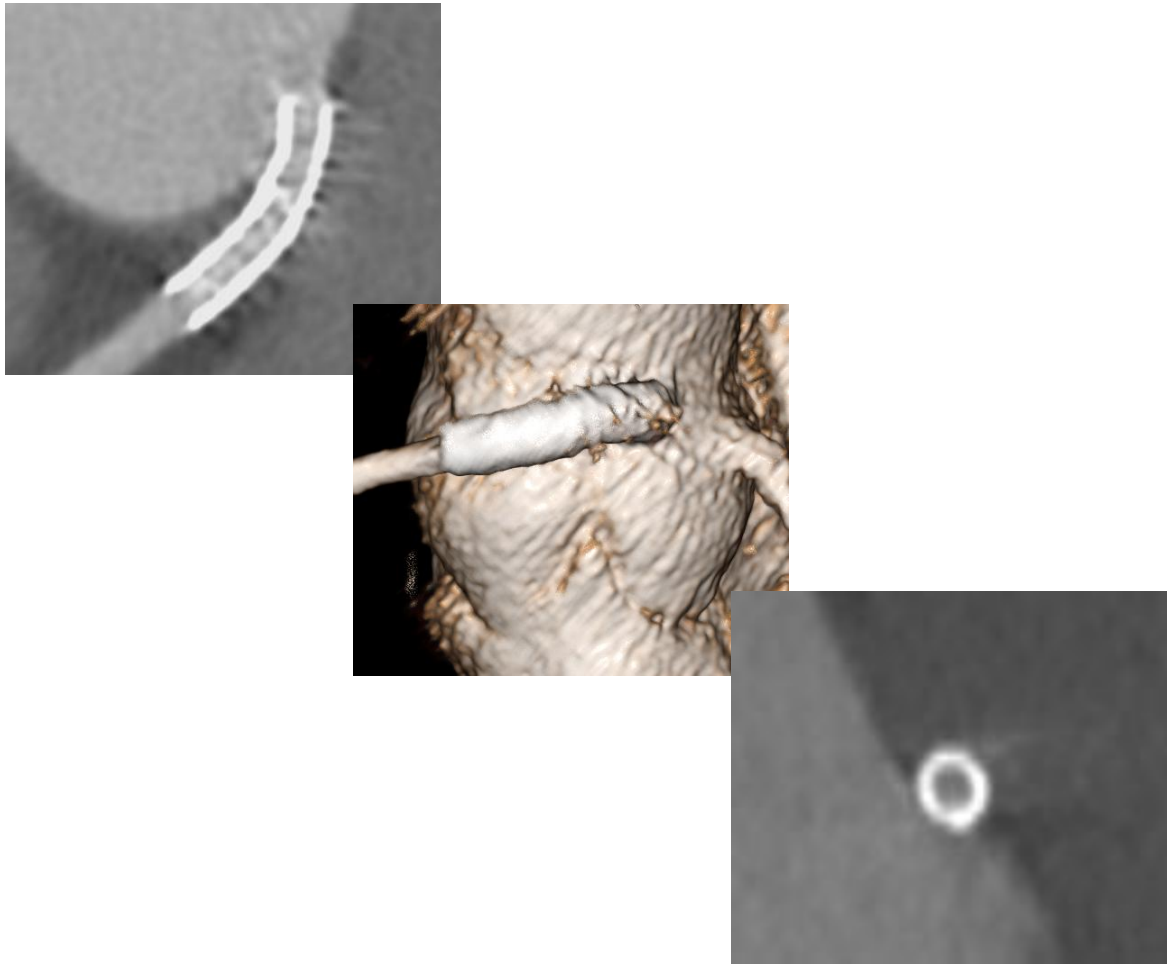
Angiographic characteristics	N	%
No residual stenosis	34	83
Residual stenosis < 30%	7	17
TIMI 3 flow post stenting	41	100
Angiographic success	**41**	**100**



Hata Y et al. Cardiovasc Pathol. 2014.

In-hospital outcomes	N	%
Death	0	
Myocardial infarction	0	
Recurrent angioplasty	0	
Emergent coronary surgery	0	
Coronary dissection	0	
Aortic dissection	0	
Major vascular adverse event	0	
Stroke	1	2
Clinical success	**40**	**98**

Next Guidelines for Adult CHD?



- Larger cohorts
- Longer follow-up periods
- Procedure safety
- In-stent restenosis rate
- Late stent deformation

Standardized algorithm 2021

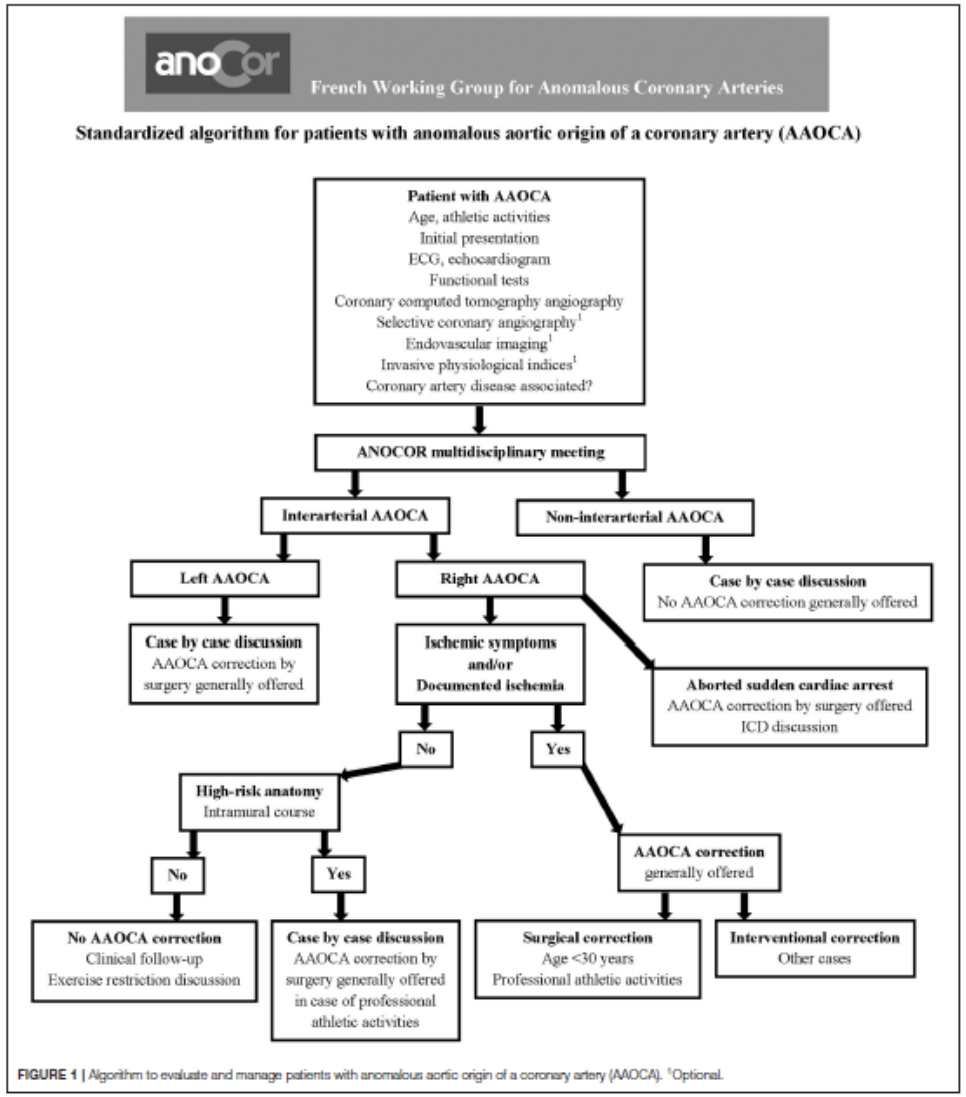
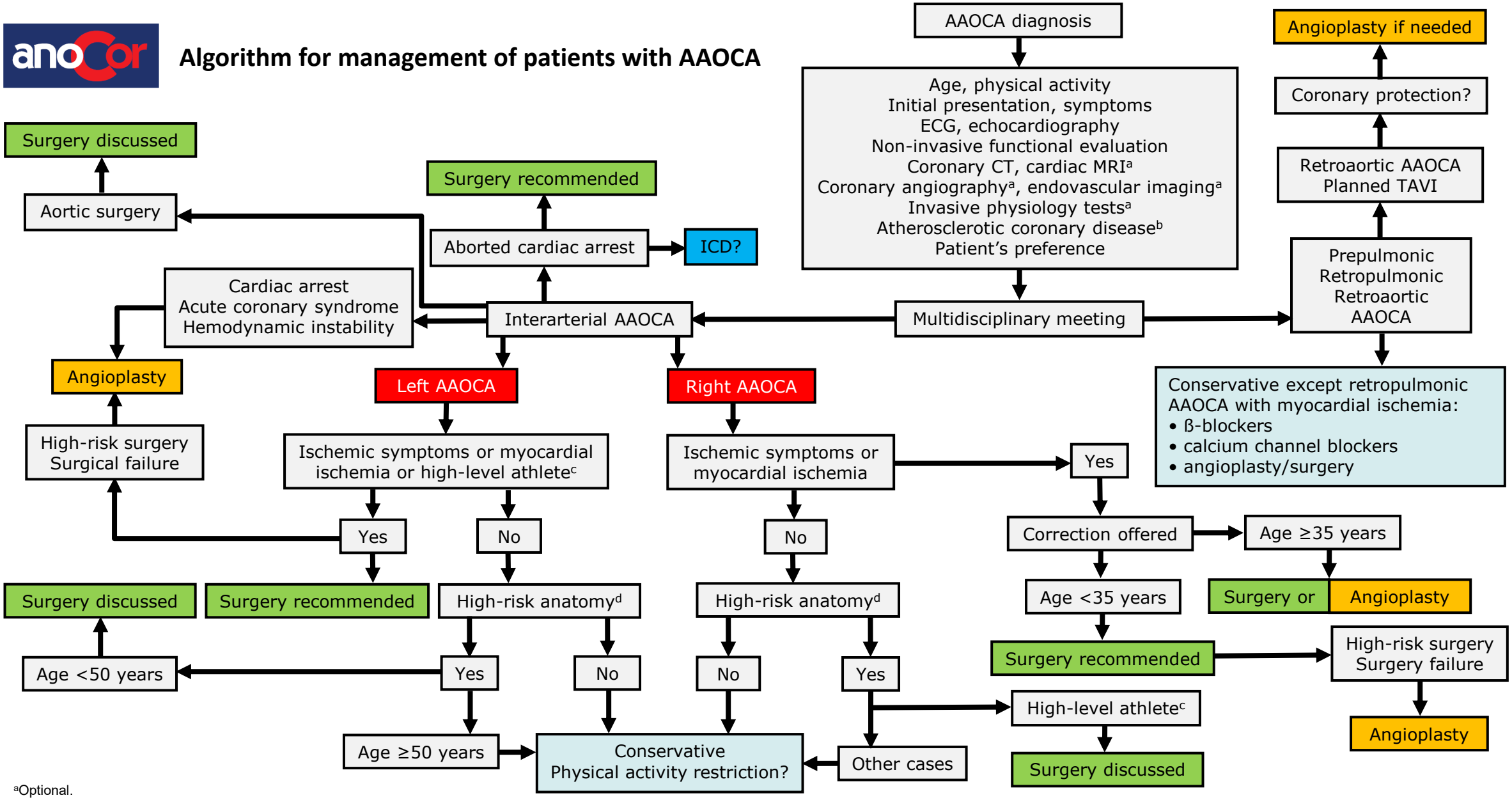


FIGURE 1 | Algorithm to evaluate and manage patients with anomalous aortic origin of a coronary artery (AAOCA). [1]Optional.

Algorithm for management of patients with AAOCA



[a]Optional.
[b]Surgical technique adapted.
[c]Physical activity according to ESC guidelines.
[d]Intramural aortic passage.
AAOCA: Anomalous aortic origin of a coronary artery. ANOCOR: Anomalies coronaires congénitales. CT: Computed tomography. ECG: Electrocardiogram. ICD: Implantable cardioverter-defibrillator. MRI: Magnetic resonance imaging. TAVI: transcatheter aortic valve implantation.

What is next?

- Poursuite activité d'expertise
- Ouverture d'autres centres
- Intégration cardiopédiatres/chirurgiens spécialisés
- Utilisation de la base de données
- Participation à des registres internationaux (EURO-AAOCA)

https://www.anocor.fr