5 6 7 JUIN 2019

APPAC Ensemble, imaginons la cardiologie de demain

Syndrome Coronarien du sujet jeune, un challenge béarnais

Thomas Baudinet, Pierre Poustis, Raphaël Lasserre, Nicolas Delarche
CH François Miterrand, Pau

terrain

Jeune rugbyman (compétition) 1m88 85 kg

Tabac cannabis
Rarement cocaïne

Ancien « bilan cardiaque » normal

Histoire

Février 2018 au décours d'un match de rugby

Céphalées, douleurs abdominales, vomissements
SAU local

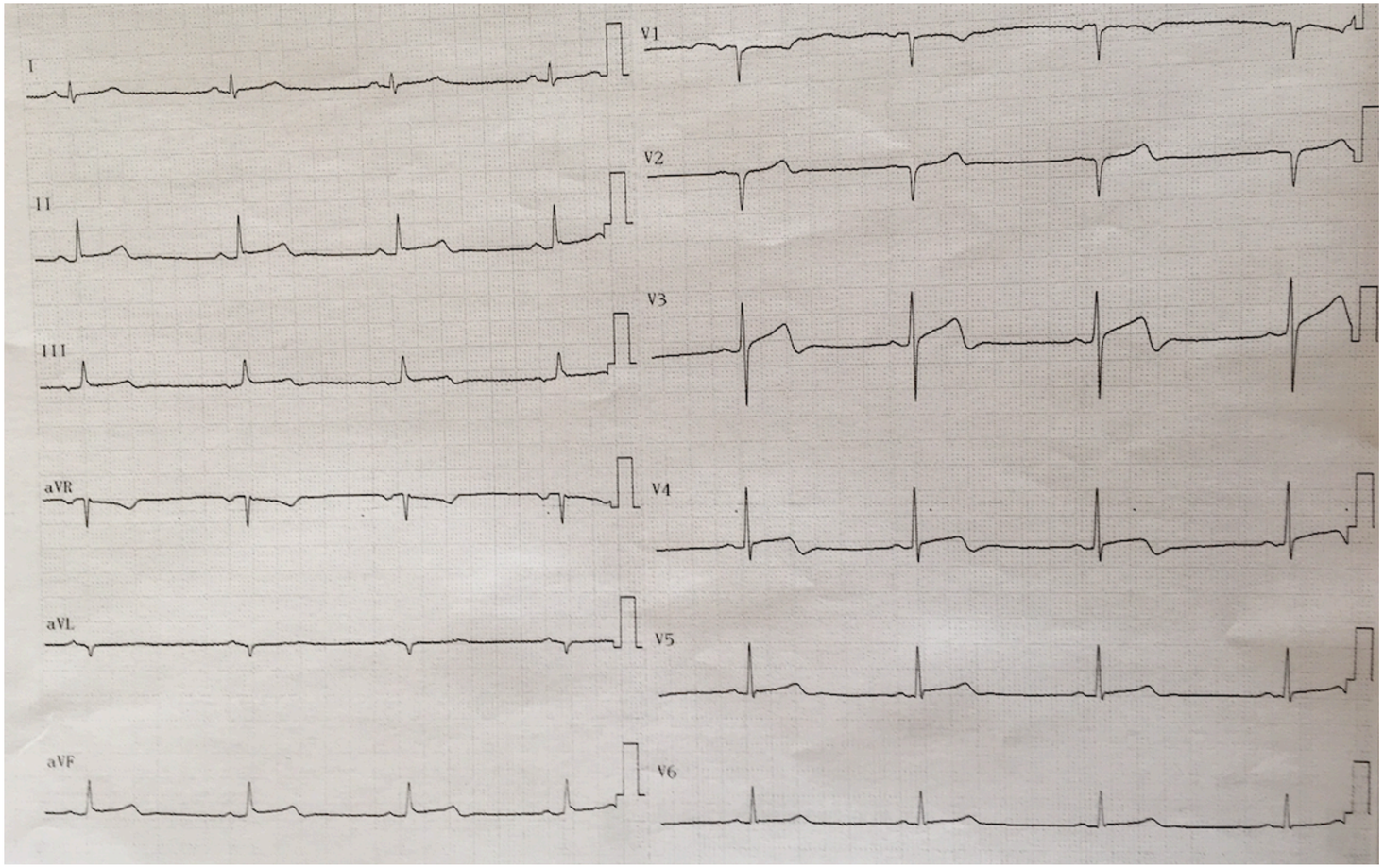
Bilan Initial

Ponctions lombaires

AngioTDM cérébrale

Irm Cérébrale

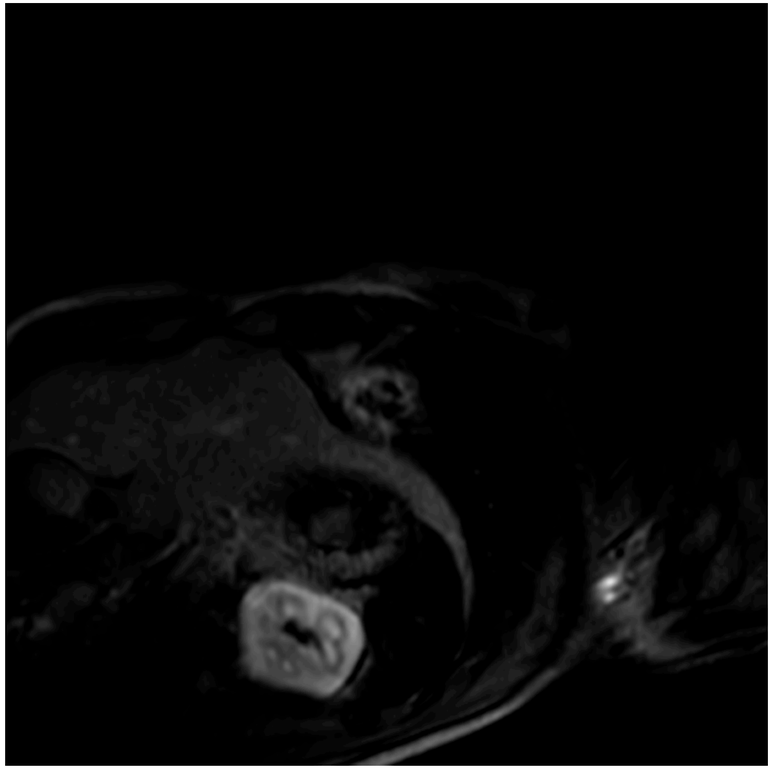
Blood patch !

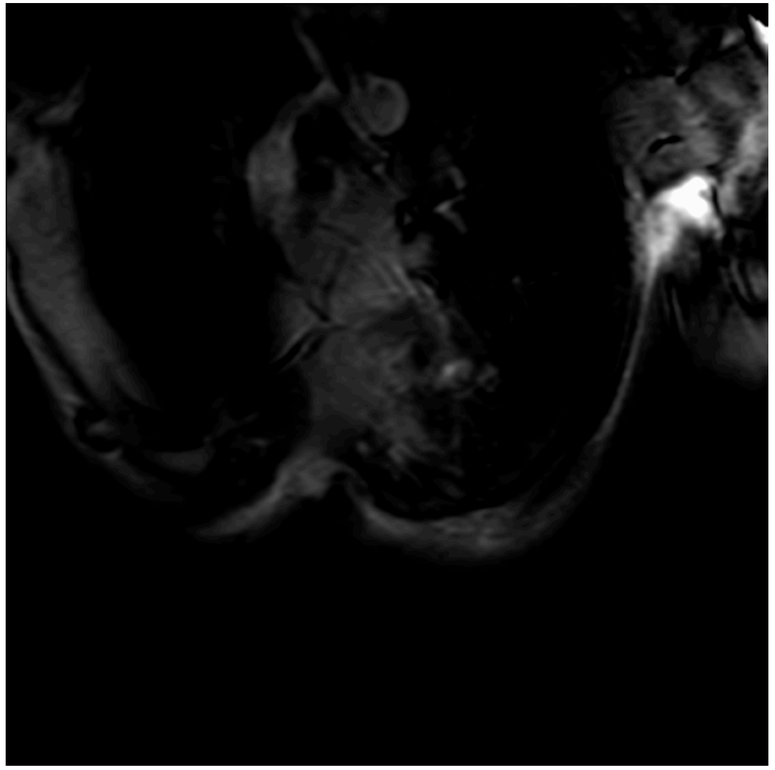


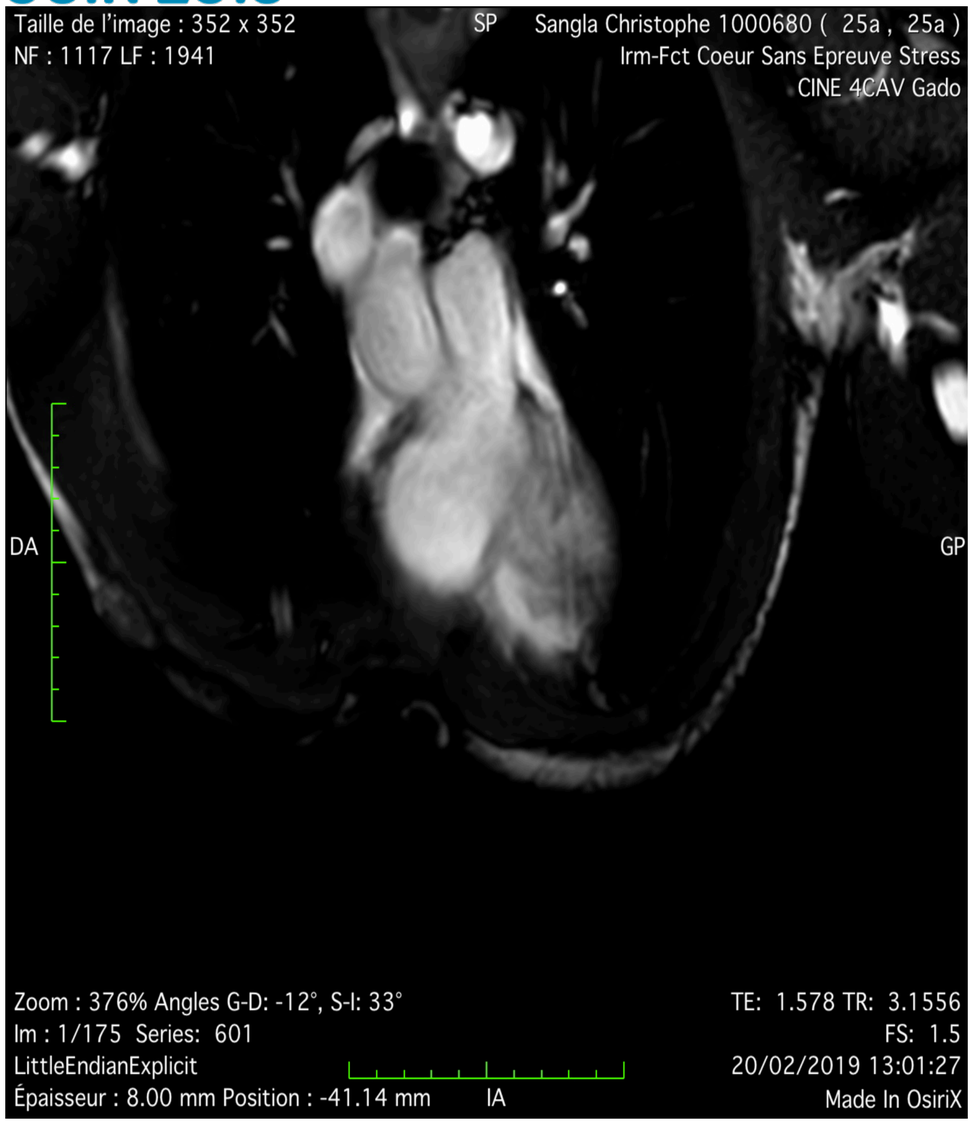
Investigations neurologiques progressives mais …

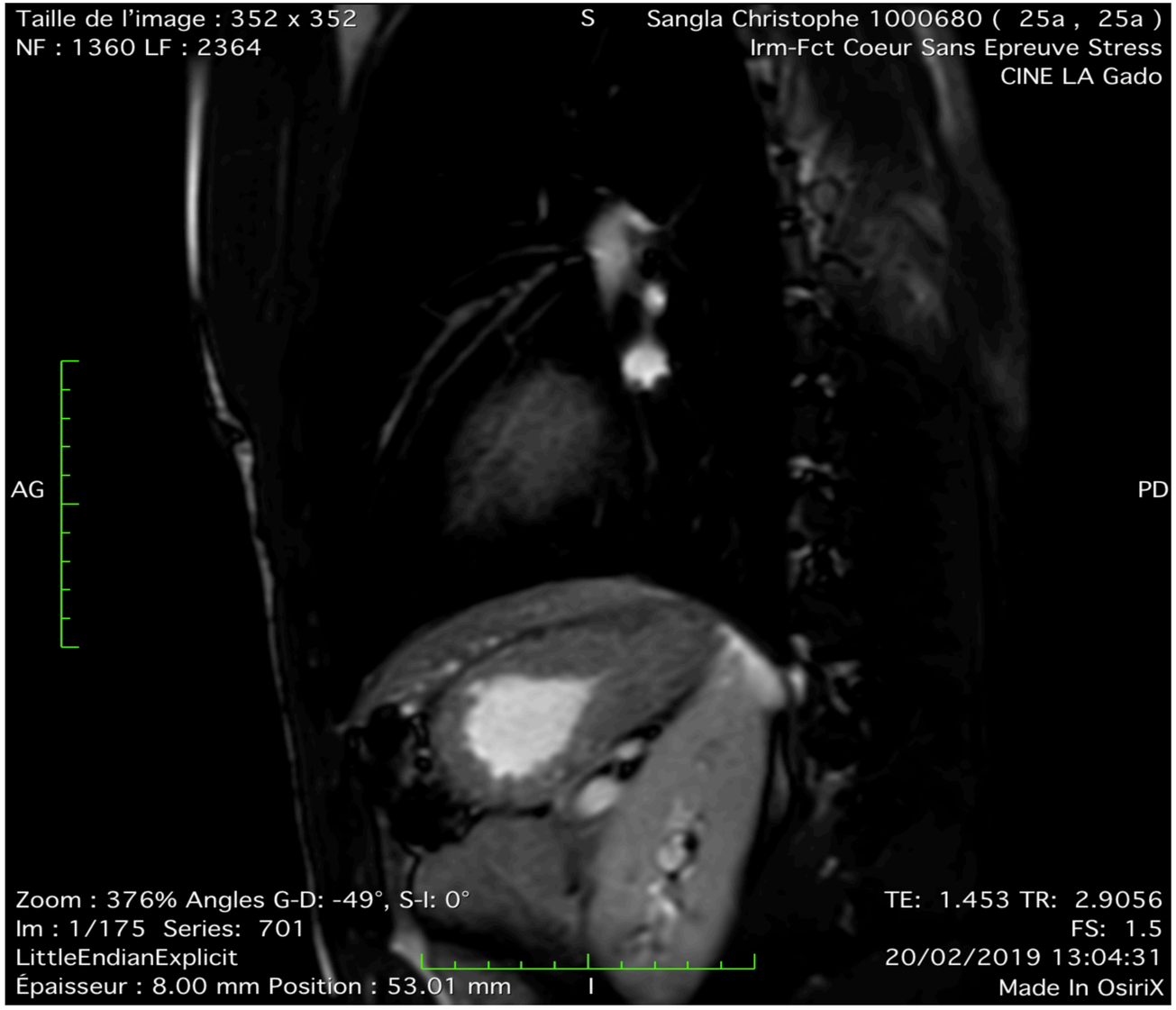
Tropo us (14,00) 57 puis 84 puis 200 puis à 48 h : 600?
Pas de douleur angineuse

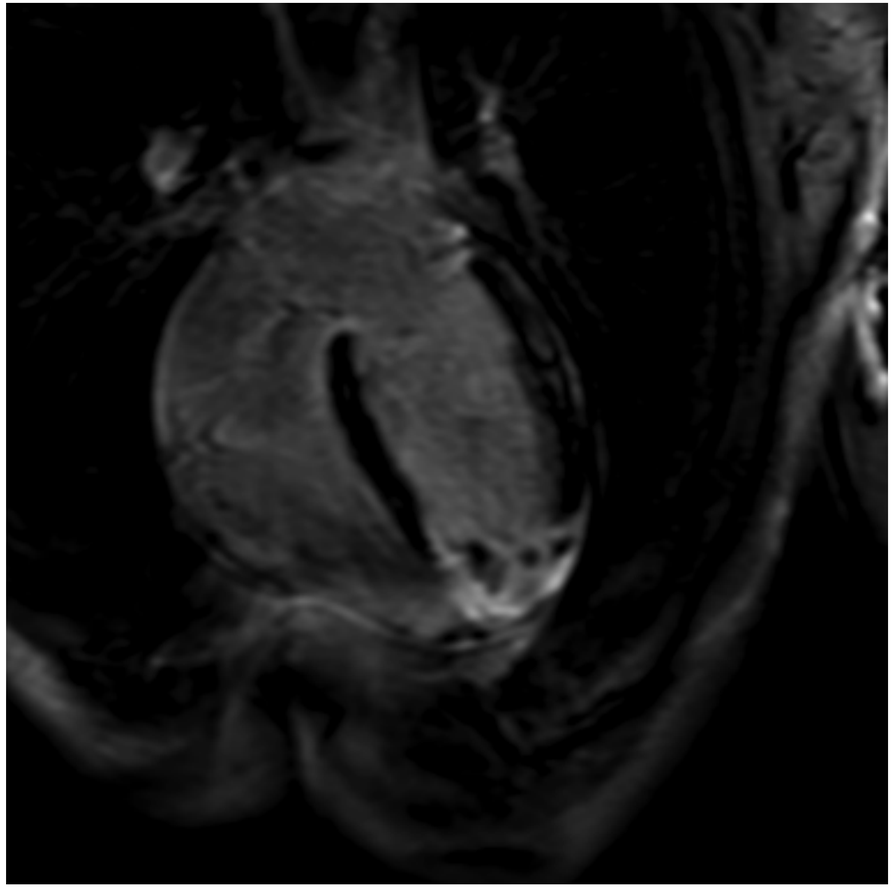
Myocardite ?

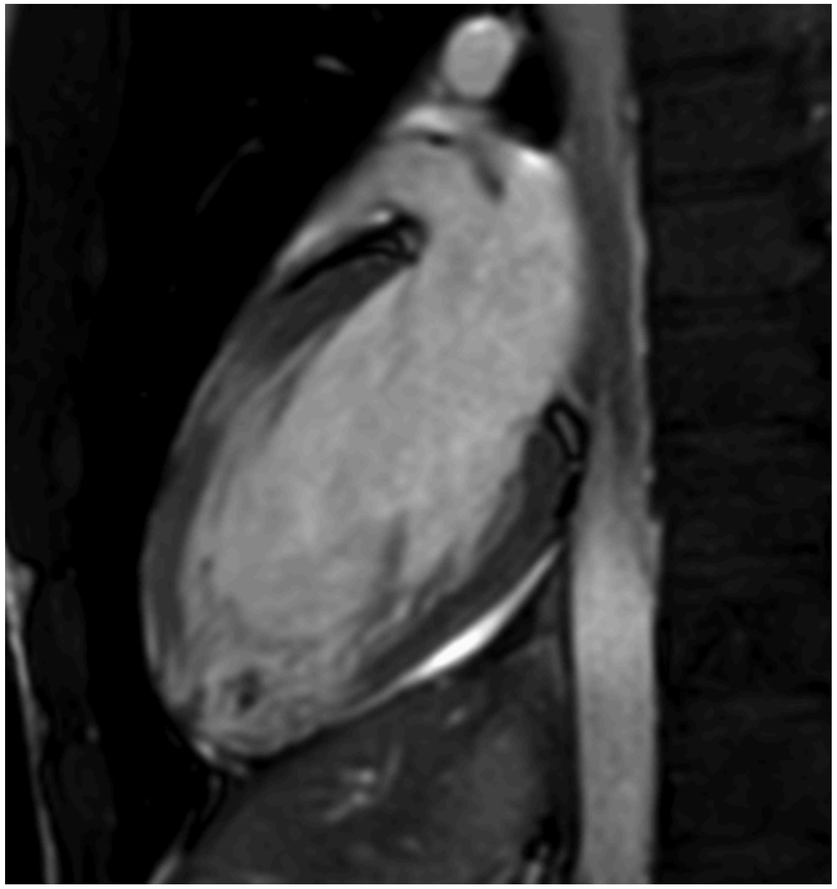





Taille de l'image : 352 x 352
NF : 1117 LF : 1941
SP
Sangla Christophe 1000680 (25a , 25a)
Irm-Fct Coeur Sans Epreuve Stress
CINE 4CAV Gado
DA
GP
Zoom : 376% Angles G-D: -12°, S-I: 33°
Im : 1/175 Series: 601
LittleEndianExplicit
Épaisseur : 8.00 mm Position : -41.14 mm
IA
TE: 1.578 TR: 3.1556
FS: 1.5
20/02/2019 13:01:27
Made In OsiriX

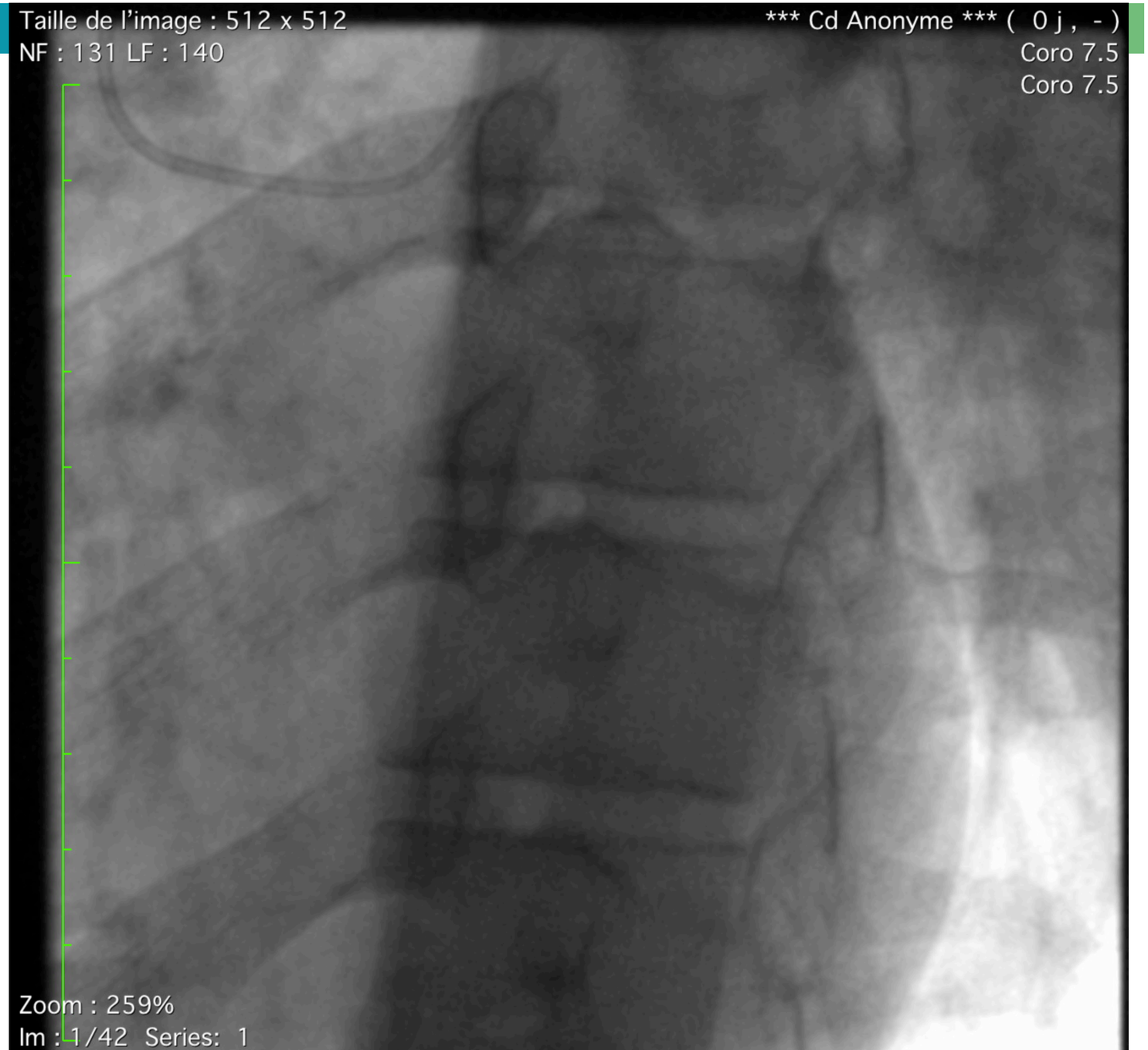

Taille de l'image : 352 x 352
NF : 1360 LF : 2364
S
Sangla Christophe 1000680 (25a , 25a)
Irm-Fct Coeur Sans Epreuve Stress
CINE LA Gado
AG
PD
Zoom : 376% Angles G-D: -49°, S-I: 0°
Im : 1/175 Series: 701
LittleEndianExplicit
Épaisseur : 8.00 mm Position : 53.01 mm
I
TE: 1.453 TR: 2.9056
FS: 1.5
20/02/2019 13:04:31
Made In OsiriX

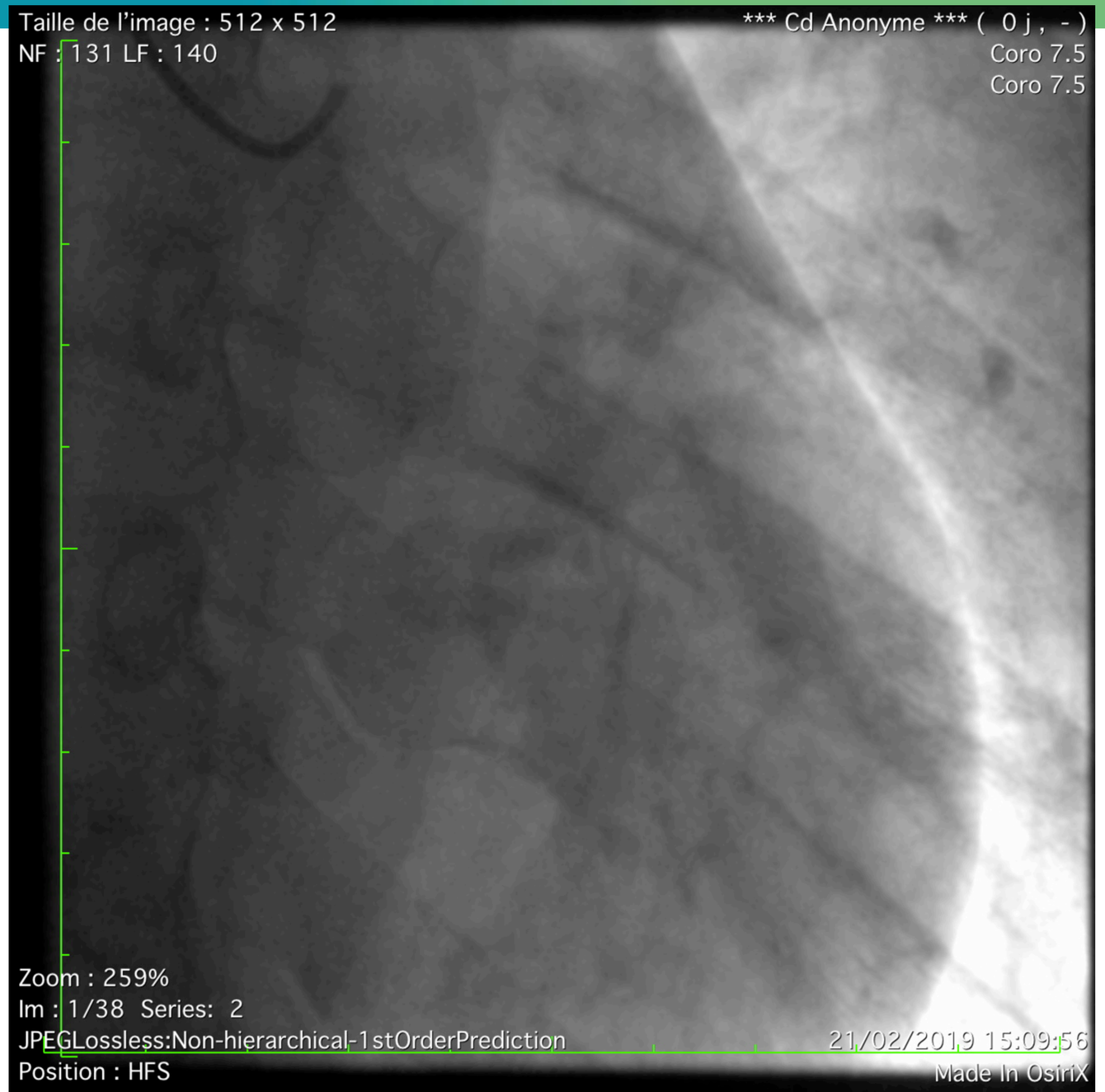


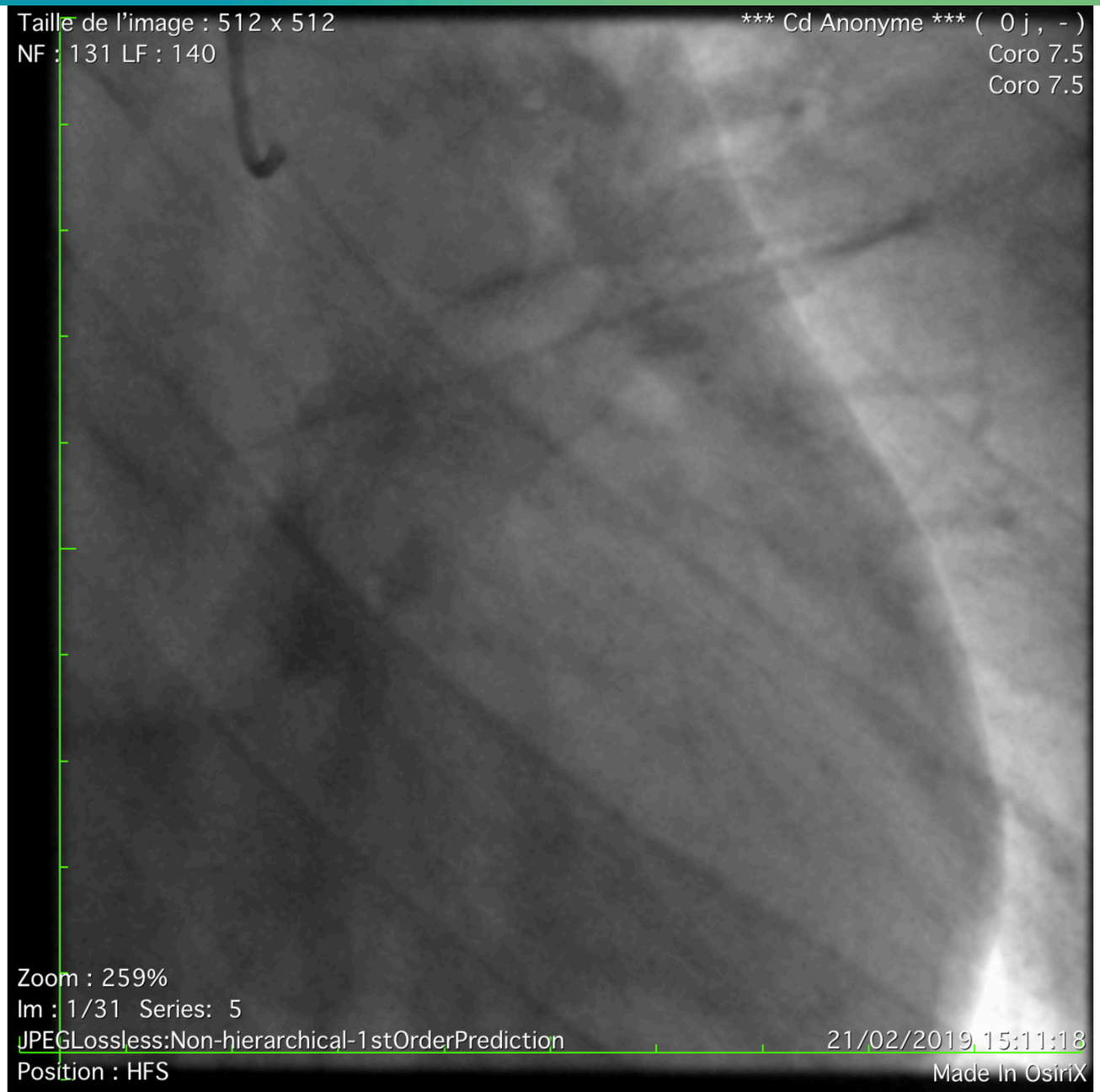


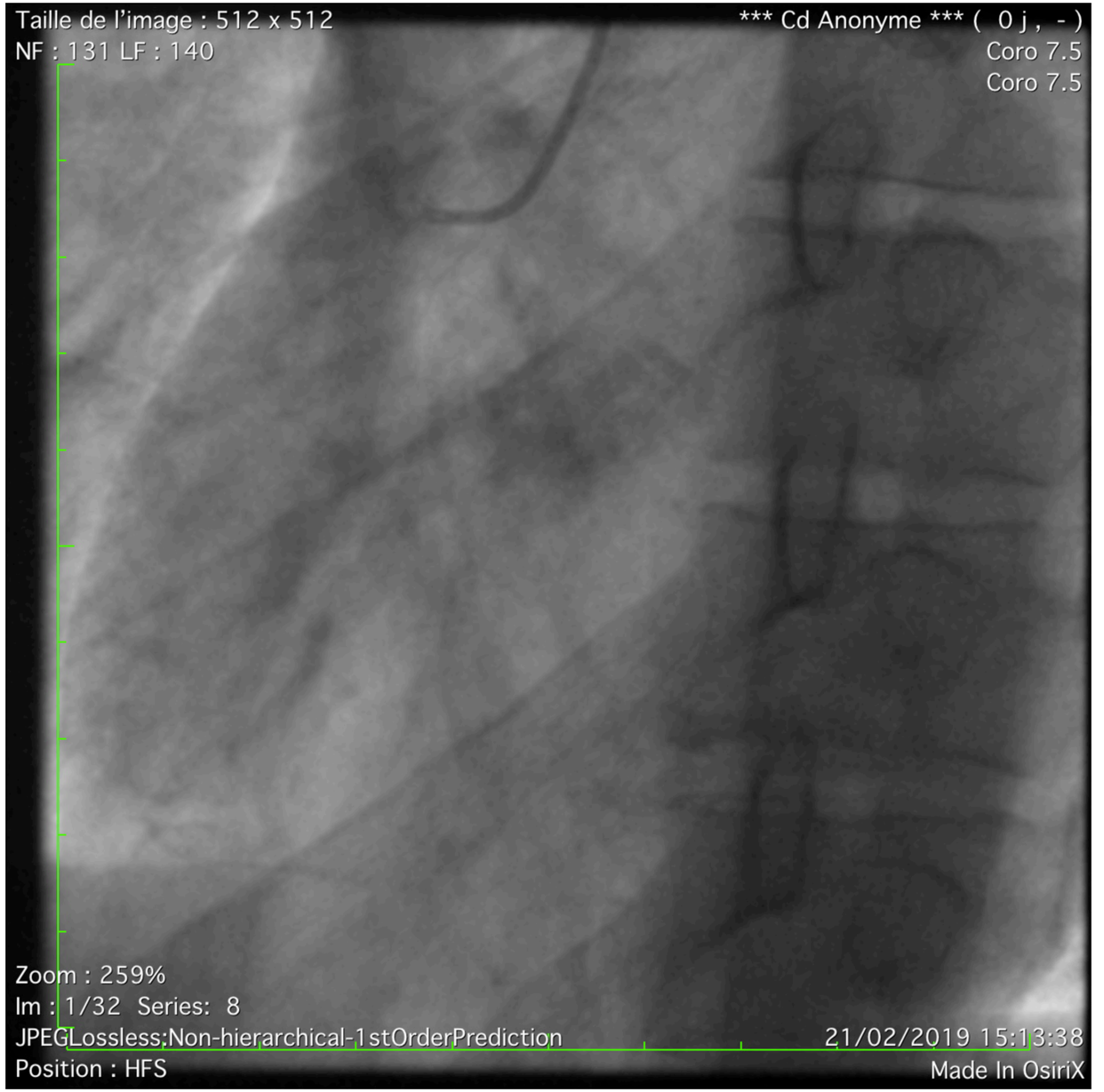
À 25 ans ?

Infarctus puis thrombus intraVG vs thrombus intraVG puis infarctus embolique

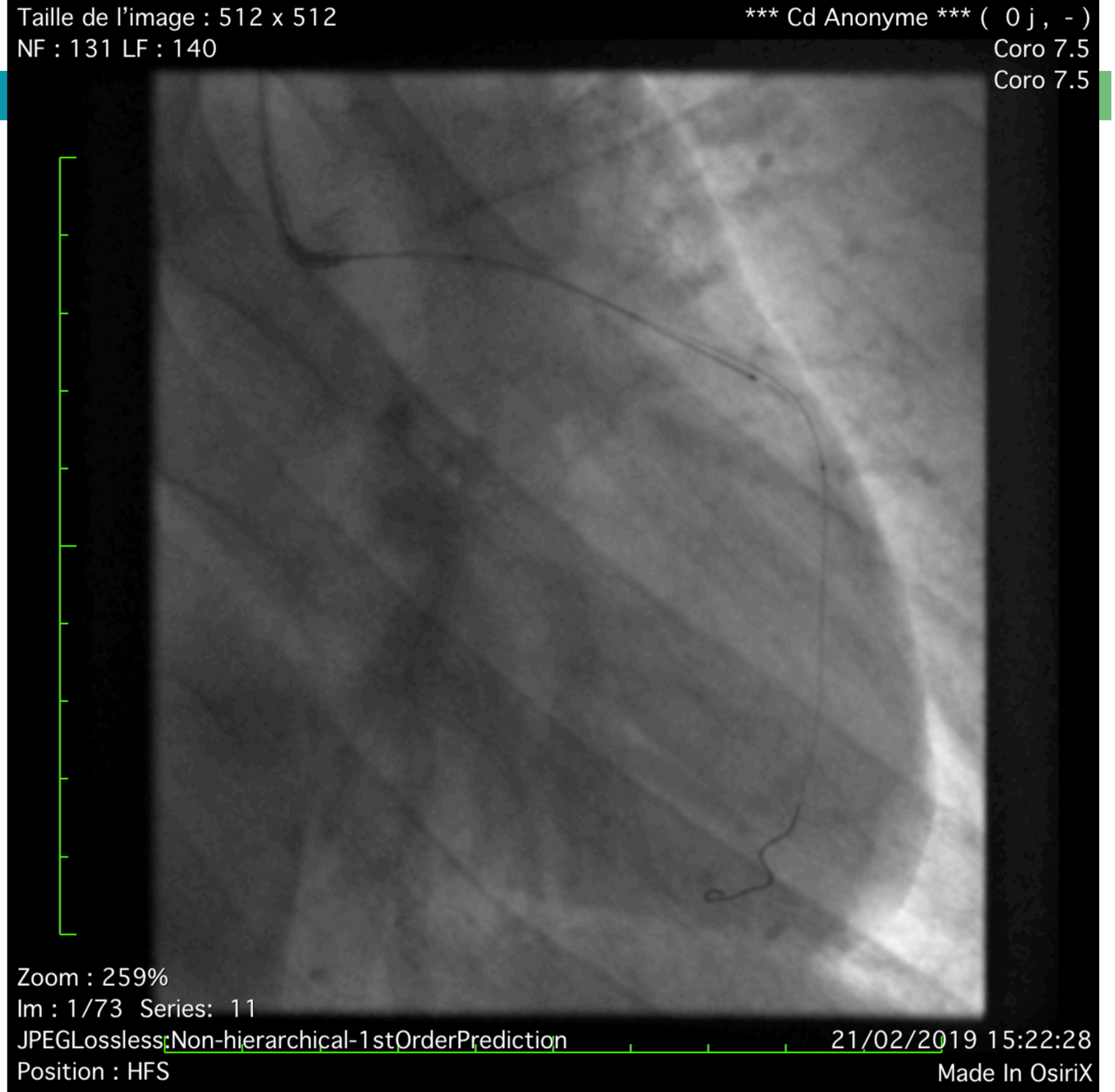

Taille de l'image : 512 x 512
NF : 131 LF : 140
*** Cd Anonyme *** (0 j , -)
Coro 7.5
Coro 7.5
Zoom : 259%
Im : 1/42 Series: 1

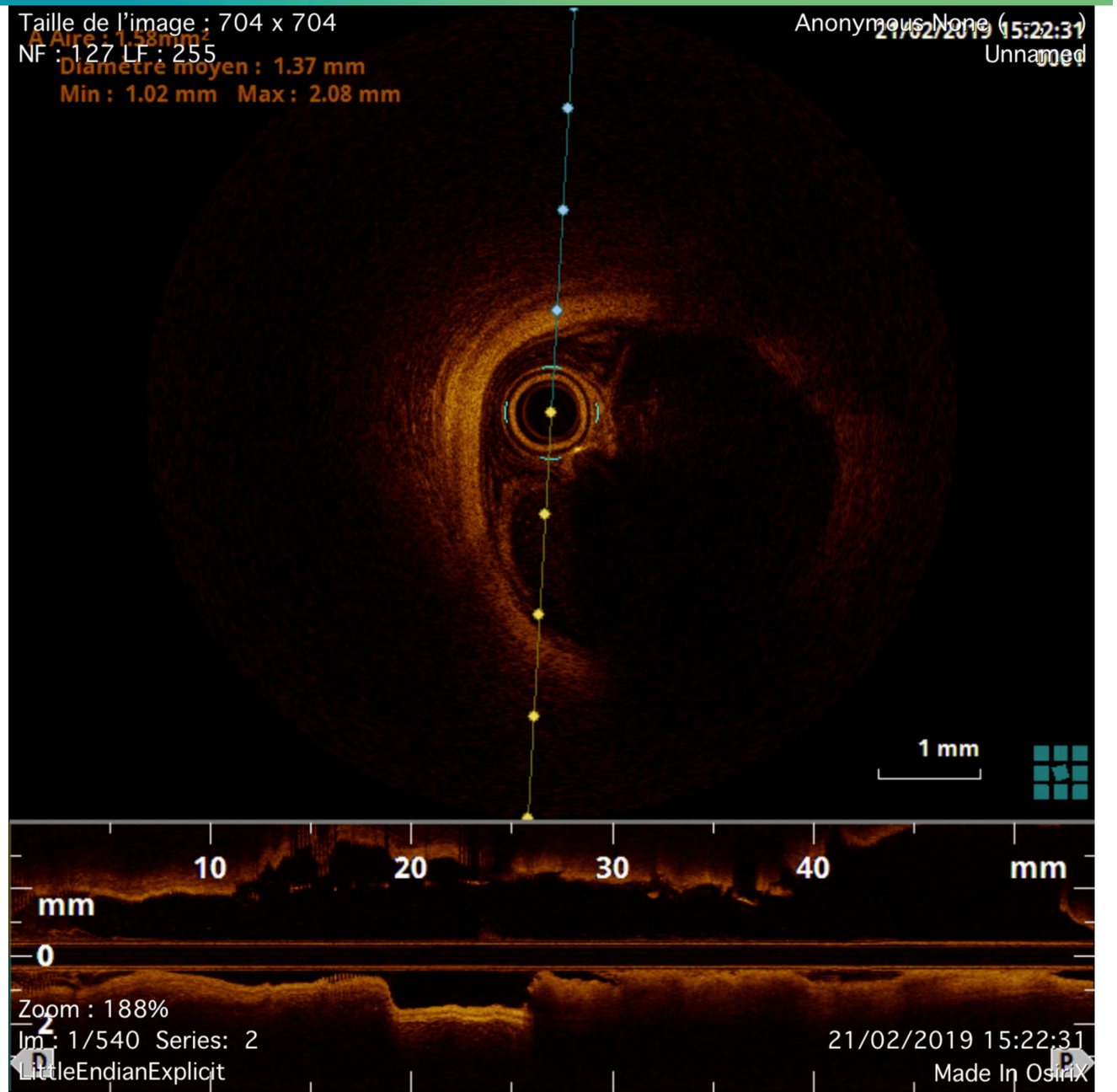

Taille de l'image : 512 x 512
NF : 131 LF : 140
*** Cd Anonyme *** (0 j , -)
Coro 7.5
Coro 7.5
Zoom : 259%
Im : 1/38 Series: 2
JPEGLossless:Non-hierarchical-1stOrderPrediction
Position : HFS
21/02/2019 15:09:56
Made In OsiriX


Taille de l'image : 512 x 512
NF : 131 LF : 140
*** Cd Anonyme *** (0 j , -)
Coro 7.5
Coro 7.5
Zoom : 259%
Im : 1/31 Series: 5
JPEGLossless:Non-hierarchical-1stOrderPrediction
21/02/2019 15:11:18
Position : HFS
Made In OsiriX


Taille de l'image : 512 x 512
NF : 131 LF : 140
*** Cd Anonyme *** (0 j , -)
Coro 7.5
Coro 7.5
Zoom : 259%
Im : 1/32 Series: 8
JPEGLossless:Non-hierarchical-1stOrderPrediction
21/02/2019 15:13:38
Position : HFS
Made In OsiriX

Poursuite des Explorations morphologiques ???


Taille de l'image : 512 x 512
NF : 131 LF : 140
*** Cd Anonyme *** (0 j , -)
Coro 7.5
Coro 7.5
Zoom : 259%
Im : 1/73 Series: 11
JPEGLossless:Non-hierarchical-1stOrderPrediction
21/02/2019 15:22:28
Position : HFS
Made In OsiriX


Taille de l'image : 704 x 704
NF : 127 LF : 255
Diamètre moyen : 1.37 mm
Min : 1.02 mm Max : 2.08 mm
Anonymous None (...)
Unnamed
1 mm
10
20
30
40
mm
mm
0
Zoom : 188%
Im : 1/540 Series: 2
21/02/2019 15:22:31
LittleEndianExplicit
Made In OsiriX

Nos conclusions

Athérosclérose authentique
Thombus intracoronaire sans obstruction

Traitement médical

Investigations supplémentaires

Facteurs de risques cardiovasculaires

Pressions artérielles normales
Glycémie 1.0
LDL 0,52 HDL 0,5
Tabagisme actif
…

Et mutation FII 20210 chez le père !

Investigations supplémentaires

Bilan de thrombophilie

SAPL, déficit PC, PS, ATIII, mutation FV FII négatifs
Polymorphisme MTHFR banal

Suivi

Pas de récidive clinique
Bonne tolérance du traitement
Disparition du thrombus intraVG

Discussion hyperhomocystéinémie

2016 European Guidelines on cardiovascular disease prevention in clinical practice

The Sixth Joint Task Force of the European Society of Cardiology and Other Societies on Cardiovascular Disease Prevention in Clinical Practice (constituted by representatives of 10 societies and by invited experts)

Recommendation for assessment of circulating and urinary biomarkers

Recommendation	Class[a]	Level[b]	Ref[c]
Routine assessment of circulating or urinary biomarkers is not recommended for refinement of CVD risk stratification.	III	B	114, 115

[a]Class of recommendation.
[b]Level of evidence.
[c]Reference(s) supporting recommendations.

Cochrane Library
Cochrane Database of Systematic Reviews

Homocysteine-lowering interventions for preventing cardiovascular events (Review)

Martí-Carvajal AJ, Solà I, Lathyris D, Dayer M

SUMMARY OF FINDINGS FOR THE MAIN COMPARISON *[Explanation]*

Homocysteine-lowering interventions (vitamins B6 (pyridoxine; pyridoxal); B9 (folic acid) or B12 (cyanocobalamin) compared with placebo or standard care for preventing cardiovascular events

Patient or population: adults at risk of or with established cardiovascular disease
Settings: outpatients
Intervention: homocysteine-lowering interventions (vitamins B6 (pyridoxine; pyridoxal), B9 (folic acid) or B12 (cyanocobalamin).
Comparison: placebo or standard care

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)	Comments
	Assumed risk	Corresponding risk				
	Placebo or standard care	Homocysteine-lowering interventions (vitamins B6 (pyridoxine; pyridoxal); B9 (folic acid) or B12 (cyanocobalamin)				
Myocardial infarction Follow-up: 1 to 7.3 years	60 per 1000	61 per 1000 (57 to 66)	RR 1.02 (0.95 to 1.10)	46,699 (12 trials)	⊕⊕⊕⊕ high	
Stroke Follow-up: 1 to 7.3 years	51 per 1000	46 per 1000 (42 to 50)	RR 0.90 (0.82 to 0.99)	44,224 (10 trials)	⊕⊕⊕⊕ high	
Death by any cause Follow-up: 1 to 7.3 years	123 per 1000	124 per 1000 (118 to 130)	RR 1.01 (0.96 to 1.06)	44,817 (11 trials)	⊕⊕⊕⊕ high	
Adverse events Follow-up: 3.4 to 7.3 years	85 per 1000	91 per 1000 (85 to 97)	RR 1.07 (1.00 to 1.14)	35,788 (8 trials)	⊕⊕⊕⊕ high	Cancer is the only reported adverse event.

Discussion
Infarctus d'effort

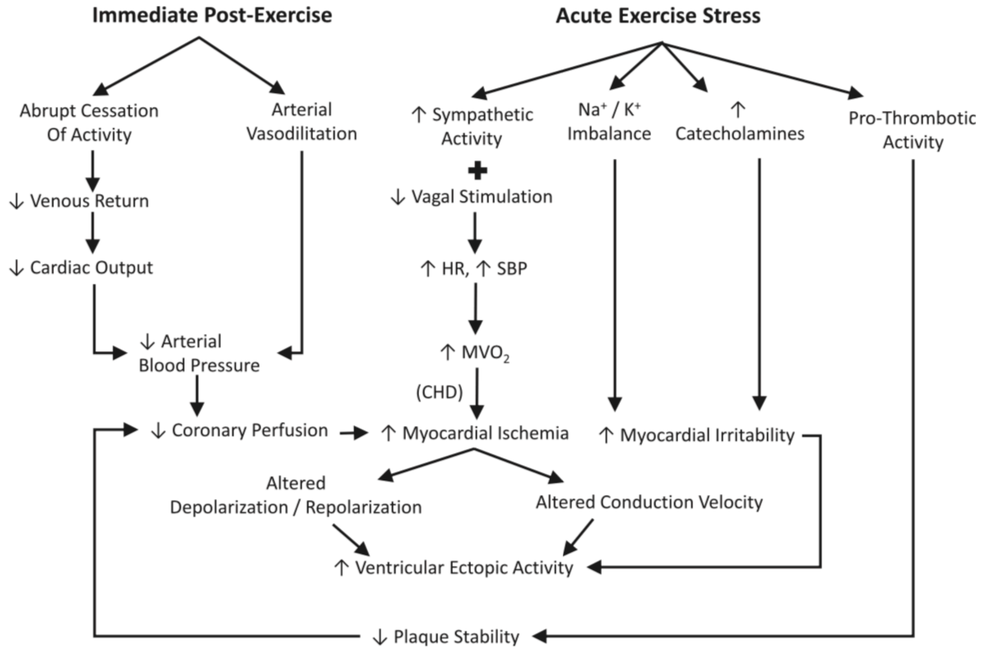


Figure 1. Factors contributing to exercise-induced CV risk during and following vigorous physical activity in those with occult cardiovascular disease. CHD, coronary heart disease; HR, heart rate; MVO_2, myocardial oxygen consumption; SBP, systolic blood pressure. Modified from Franklin[21] with permission from NRC Research Press.

Goodman 2016

The small number of prospective studies that tracked CV adverse events reported higher event rates[95] ranging from 0.3 to 2.7 events per 10,000 person-hours of exercise (across all age groups) for men and 0.6-6.0 events per 10,000 person-hours for women. Higher values for women were due to the smaller sample size, but when normalized to similar exercise frequencies and duration for a 1-year period, the incidence of exercise-induced SCD in women is similar to other reports, typically 5%-10% of that seen in men.[31,32] A large study[52] examined

Discussion
Infarctus en contexte sportif

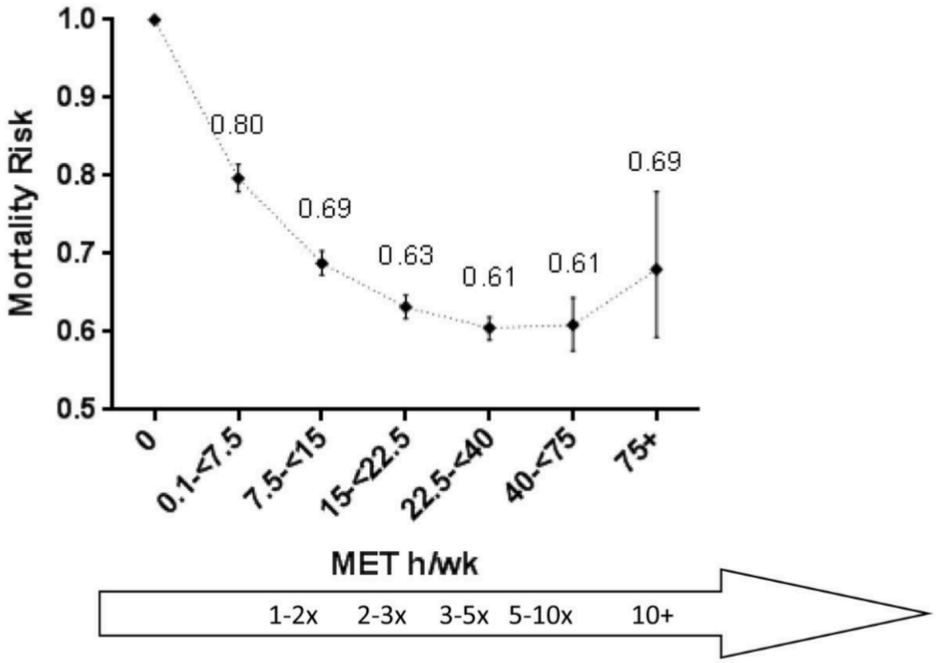


Figure 1. Hazard ratios (HRs) and 95% confidence intervals (CIs) for leisure time moderate- to vigorous-intensity physical activity and mortality[a-c]

Arem, JAMA 2015

Discussion
Infarctus du sujet jeune

Cohorte framingham IDM <55 ans
Incidence à 10 ans 51,1/1000, différences avec les infarctus plus classiques

Importance du tabac par rapport aux autres FDR
Causes « rares » finalement peu fréquentes

Symptomes souvent peu clairs

50% de revascularisation à 5 ans

Shah N et al, heart, lung and circulation 2016

Disussion

Différence de diagnostic ?
De prise en charge initiale ?
De suvi?

Conclusion

Infarctus transmural apical au décours d'effort intense chez un jeune sportif tabagique, confirmé par IRM et OCT, sans lésion sérrée, et de bonne évolution après traitement médical.

L'accident coronarien est possible chez le jeune à bas risque cardiovasculaire, et de diagnostic plus délicat

références

1. Piepoli MF, Hoes AW, Agewall S, Albus C, Brotons C, Catapano AL, et al. [2016 European guidelines on cardiovascular disease prevention in clinical practice. The Sixth Joint Task Force of the European Society of Cardiology and Other Societies on Cardiovascular Disease Prevention in Clinical Practice (constituted by representatives of 10 societies and by invited experts. Developed with the special contribution of the European Association for Cardiovascular Prevention & Rehabilitation]. G Ital Cardiol 2006. 2017 Aug;18(7):547–612.

2. Martí-Carvajal AJ, Solà I, Lathyris D, Dayer M. Homocysteine-lowering interventions for preventing cardiovascular events. Cochrane Database Syst Rev. 2017 17;8:CD006612.

3. Goodman JM, Burr JF, Banks L, Thomas SG. The Acute Risks of Exercise in Apparently Healthy Adults and Relevance for Prevention of Cardiovascular Events. Can J Cardiol. 2016 Apr;32(4):523–32.

4. Arem H, Moore SC, Patel A, Hartge P, Berrington de Gonzalez A, Visvanathan K, et al. Leisure time physical activity and mortality: a detailed pooled analysis of the dose-response relationship. JAMA Intern Med. 2015 Jun; 175(6):959–67.

5. Shah N, Kelly A-M, Cox N, Wong C, Soon K. Myocardial Infarction in the “Young”: Risk Factors, Presentation, Management and Prognosis. Heart Lung Circ. 2016