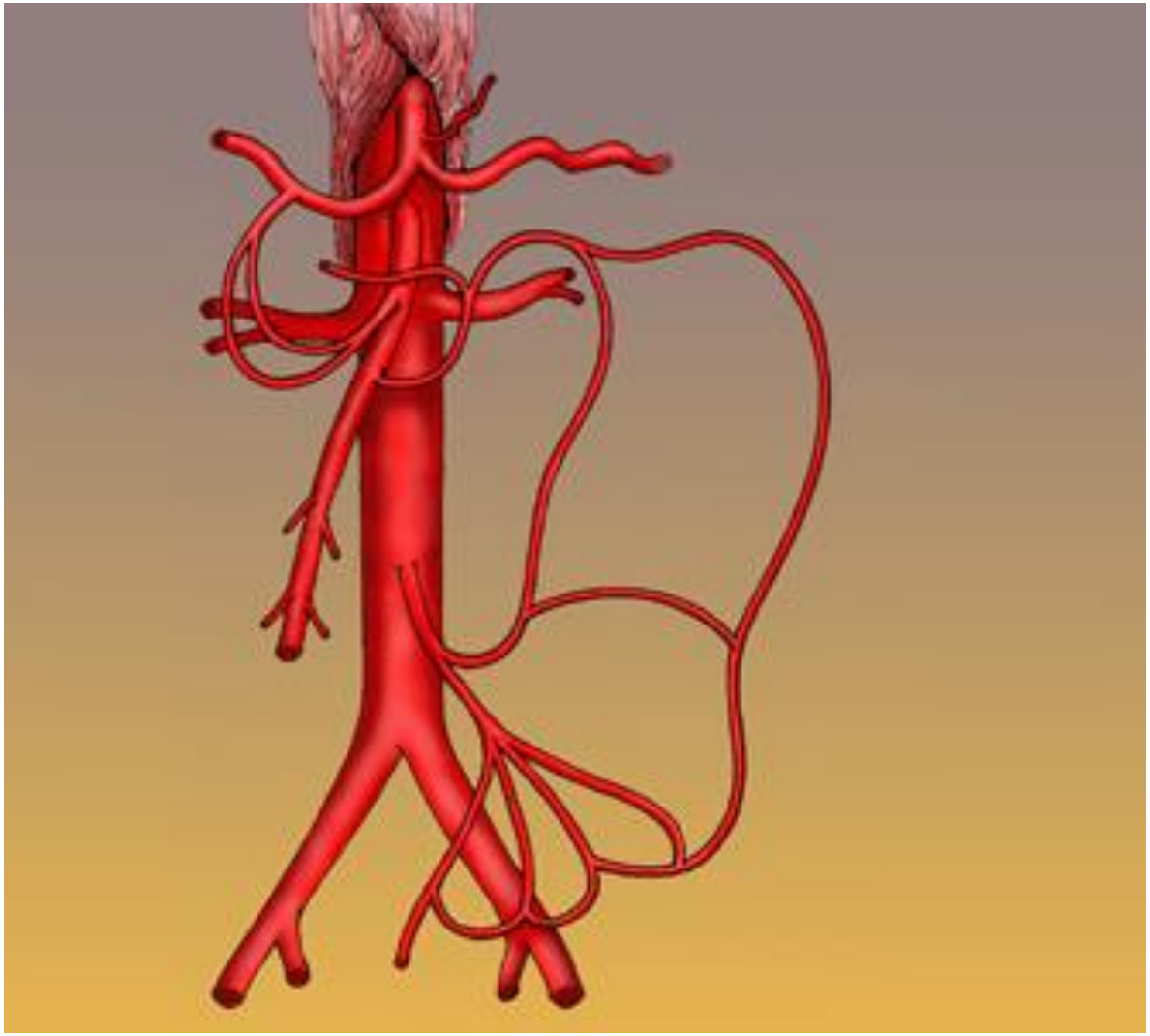
Echo-doppler des artères digestives

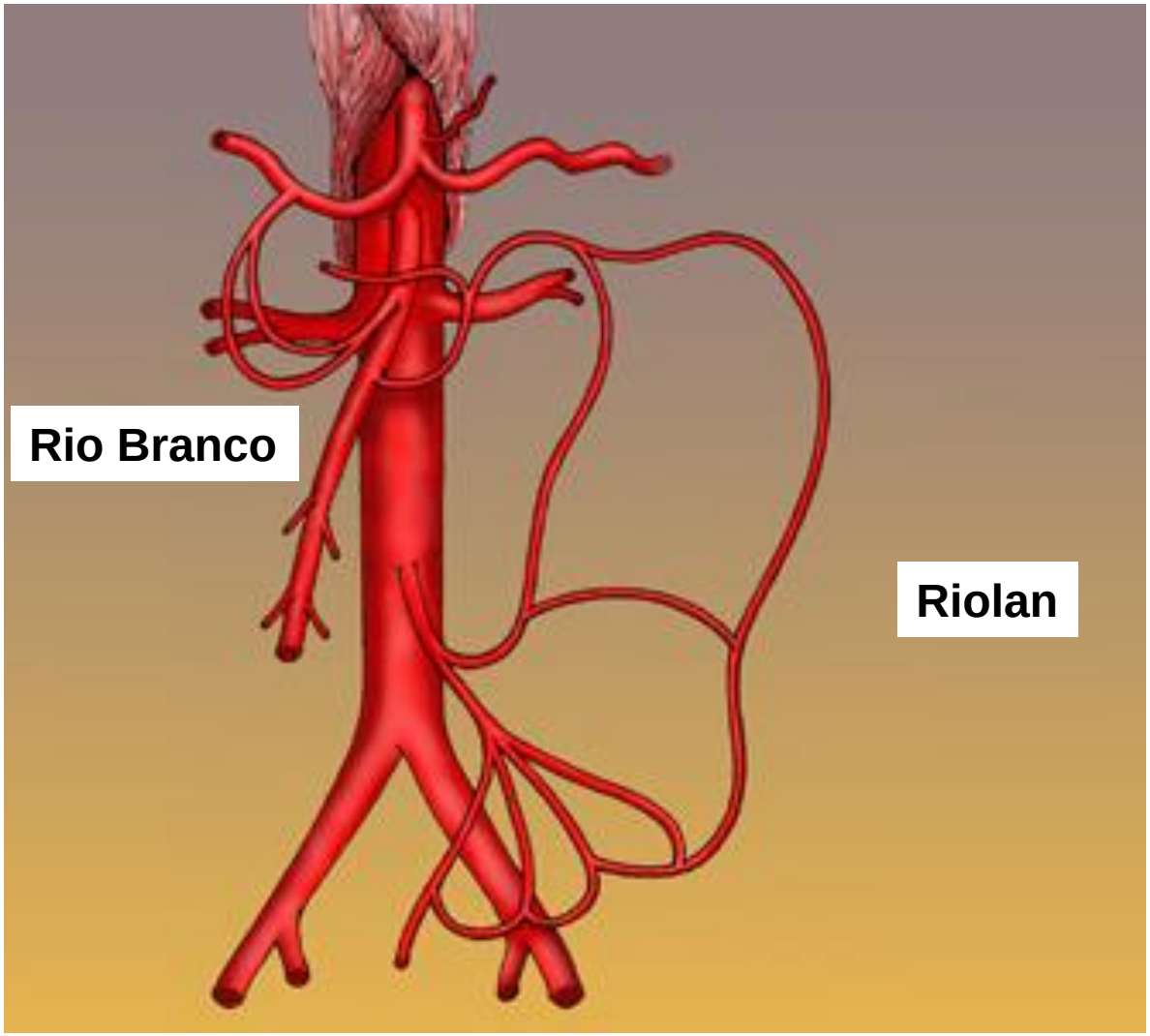
Gabrielle SARLON BARTOLI

Médecine vasculaire – CHU Timone

Artères digestives - Anatomie



Artères digestives - Anatomie



Ischémie mésentérique

AIGUE

- Douleur abdominale aigue
- Origine embolique
- AngioTDM

CHRONIQUE

- Angor mésentérique
- Douleur post prandiale
- Amaigrissement
- Diarrhée
- Origine athéromateuse

Règle de MIKKELSEN

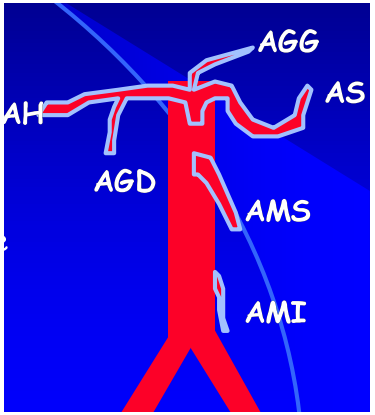
Ischémie mésentérique < 60 ans

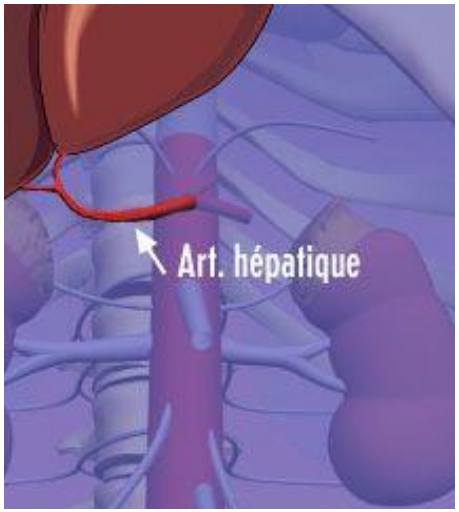
- 29 patients (1998-2013)
- 16 femmes - âge moyen 42,6 ans
- 60% chronique, 25% aigue, 15% asymptomatique
- Etiologies : Takayasu (17%), SMP (7%), SAPL (7%), Buerger (6%), idiopathique (34%)
- Pontage (40%), ATP (30%), thrombectomie (17%), thrombolyse (3%), médical (10%)
- 93% avec au moins un FDRCV
- Mortalité : 43% ischémie aigue vs 0% ischémie chronique

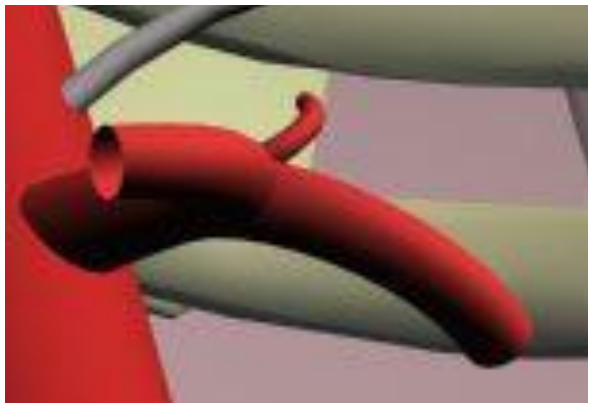
Belenotti et al, SFMV 2013

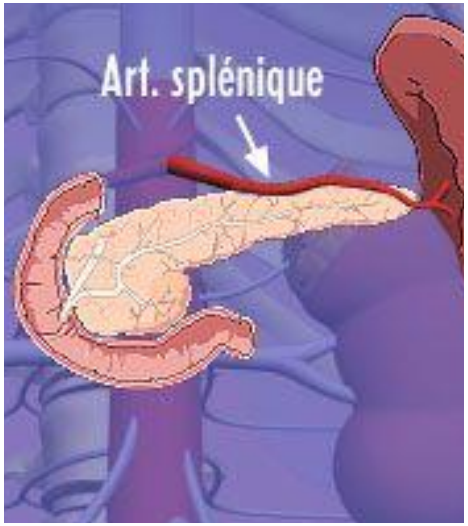
Tronc coeliaque

- 1ère artère digestive de l'aorte
- Trajet en J vers le haut
- 3 branches
- Flux systolo-diastolique de basse résistance
- Pas de modification post-prandiale
- VMS 100-150 cm/s

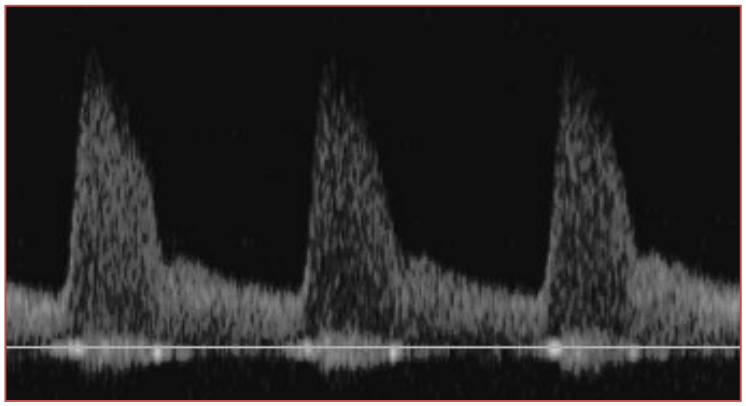


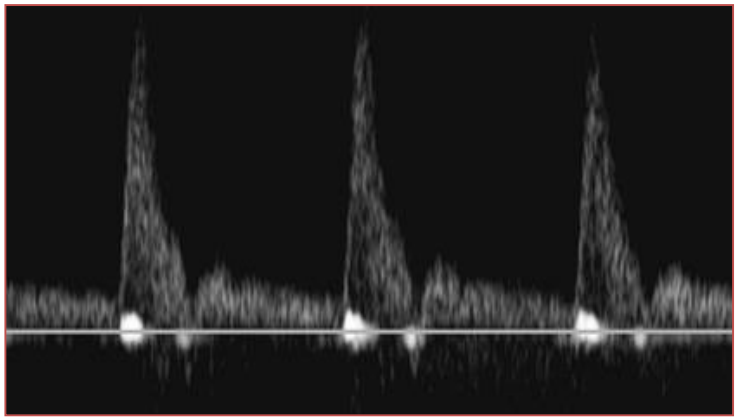


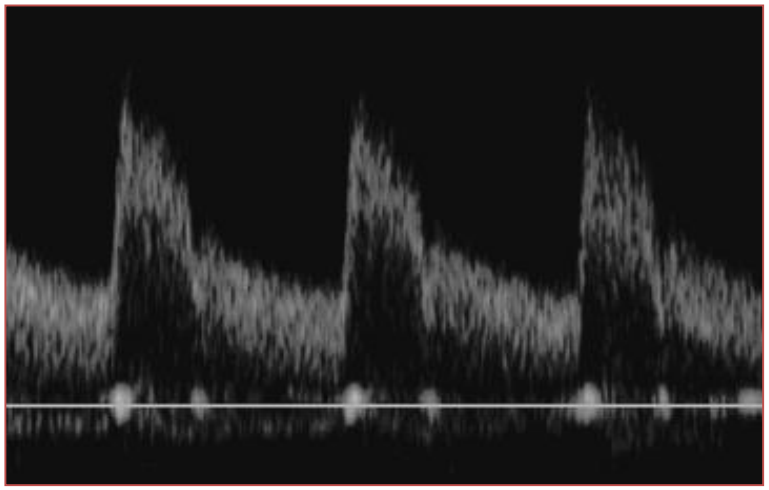





ANGIO SYNERGIE 84
26-04-'04
14:33:07
ALOKA
77/78
7Hz
9121 3.75
DVA: 71%
.97
FOB
ROB G63 C6 AZ
14:ARTERE MICRO.C





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9121 3.75
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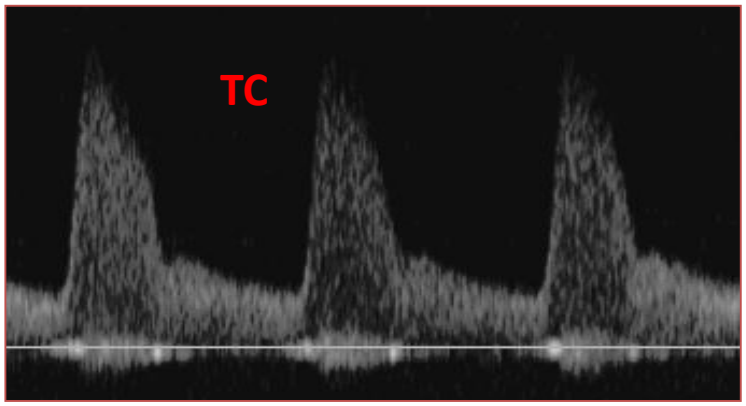
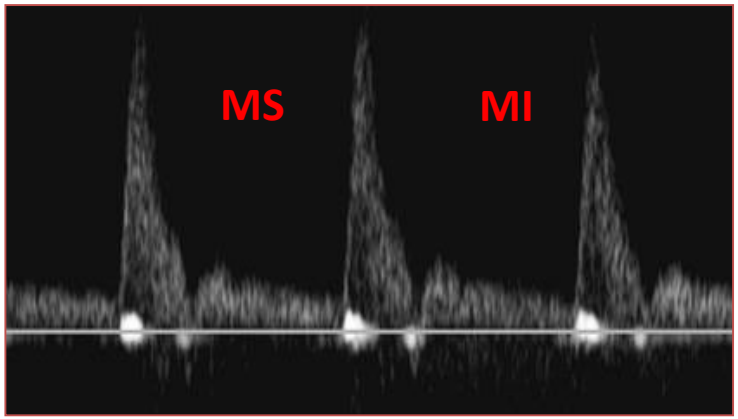
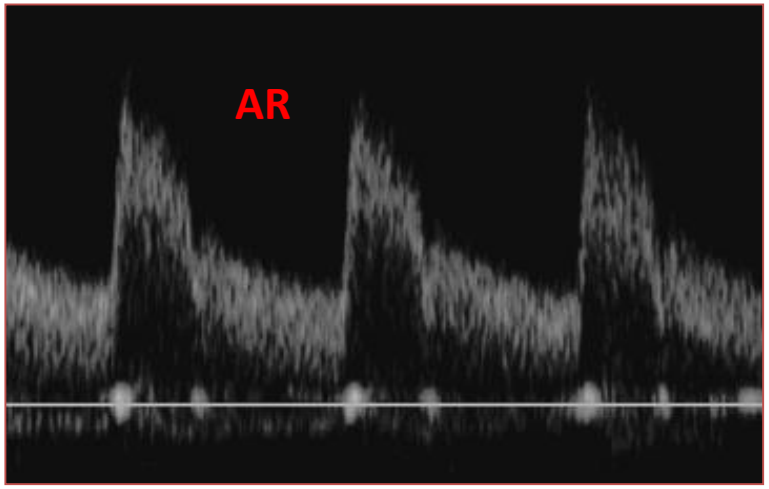
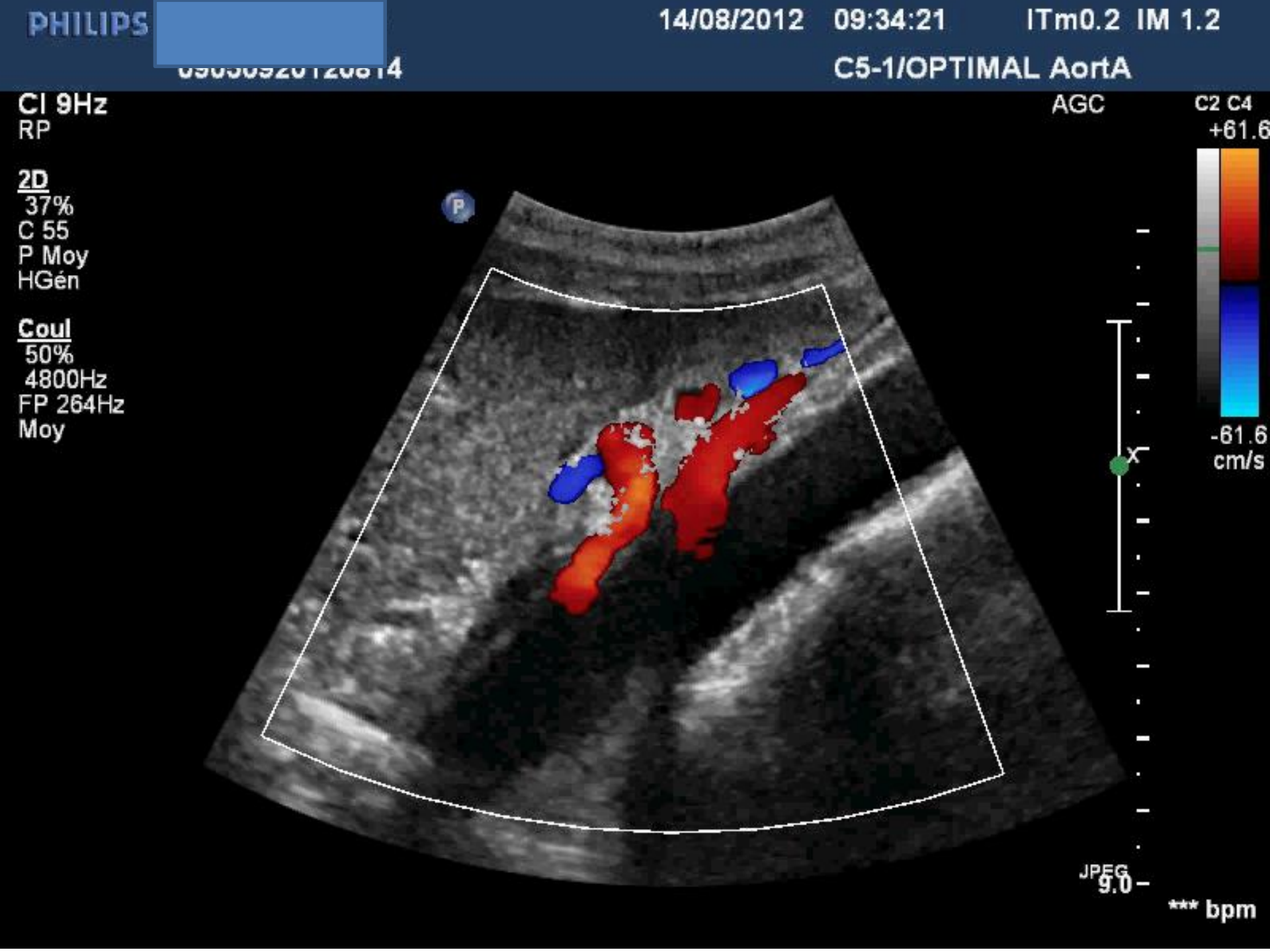

TC


MS
MI


AR


PHILIPS
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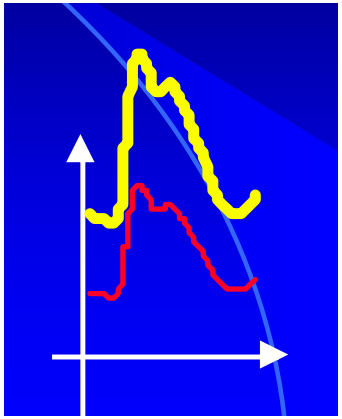
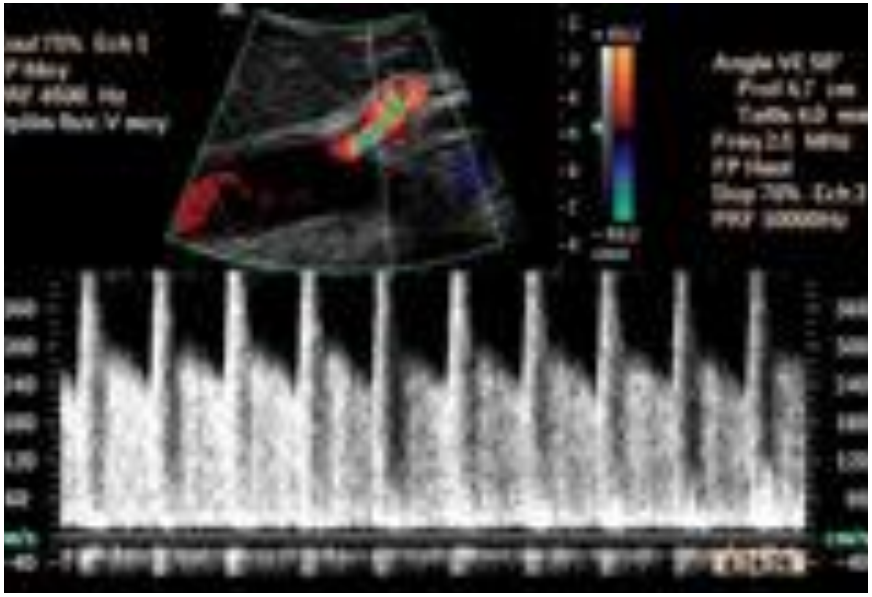
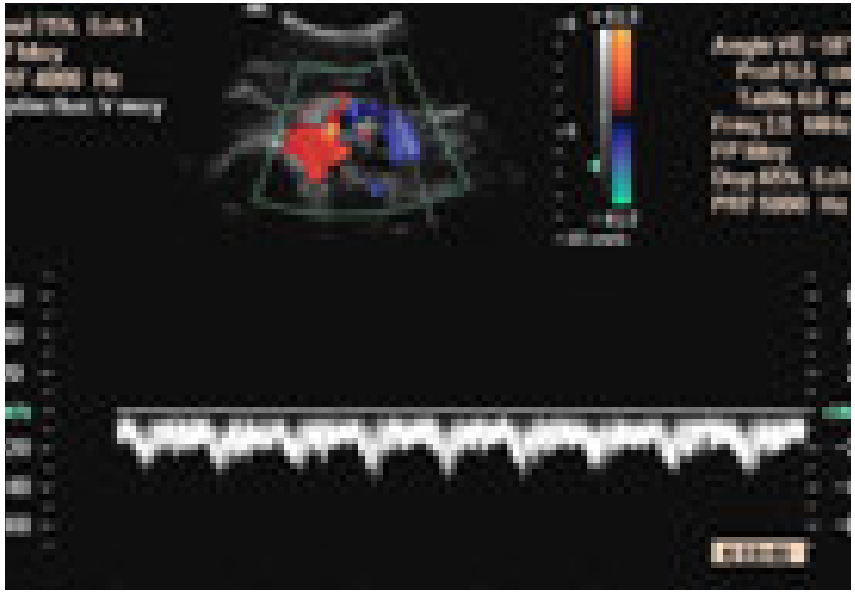
C5-1/OPTIMAL AortA
CI 9Hz
RP
AGC
C2 C4
+61.6
2D
37%
C 55
P Moy
HGén
Coul
50%
4800Hz
FP 264Hz
Moy
-61.6
cm/s
JPEG
9.0
*** bpm

Sténose athéromateuse > 70%







Mesenteric/celiac duplex ultrasound interpretation criteria revisited

Ali F. AbuRahma, MD,[a] Patrick A. Stone, MD,[a] Mohit Srivastava, MD,[a] L. Scott Dean, PhD, MBA,[b] Tammi Keiffer, RN,[b] Stephen M. Hass, MD,[a] and Albeir Y. Mousa, MD,[a] *Charleston, WV*

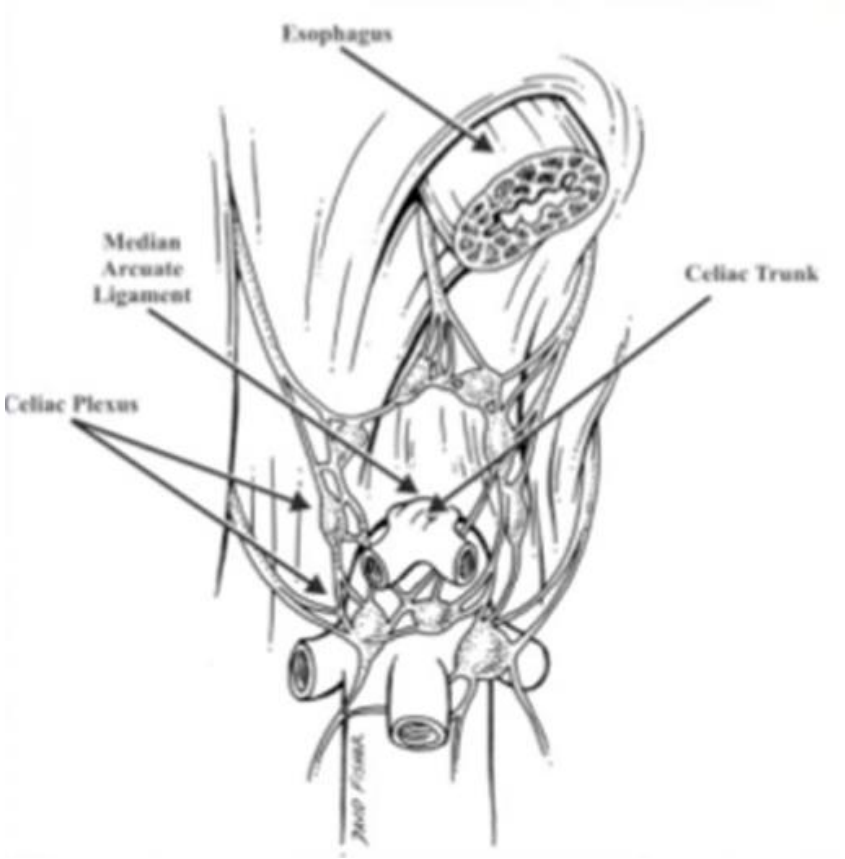
- 150 patients : ED + artério
- 105 patients avec sténose ≥ 50%
- 62 patients avec sténose ≥ 70%

Sténose	VMS (cm/sec)	VTD (cm/sec)	Ratio TC / aorte
≥ 50%	**240**	40	2,7
≥ 70%	**320**	100	4,5

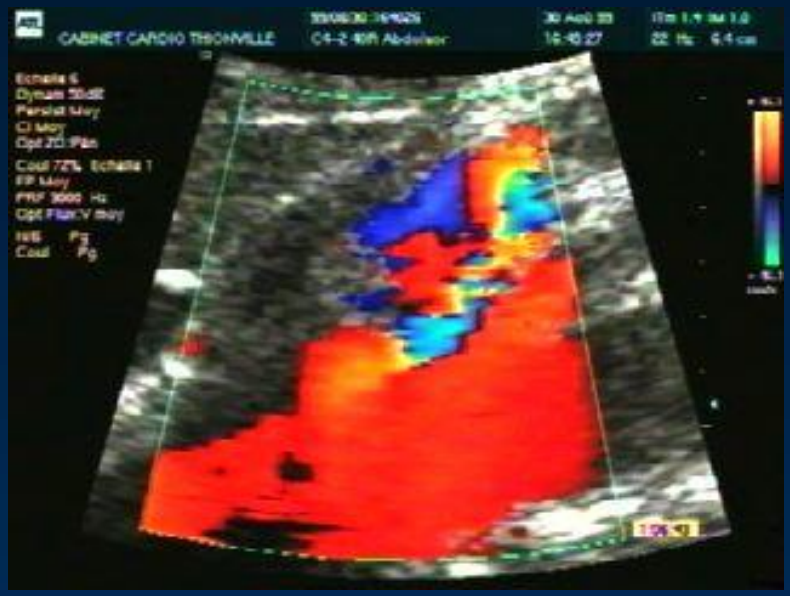
J Vasc Surg 2012;55:428-36

Ligament arqué médian

- Compression extrinsèque par les piliers du diaphragme



Ligament arqué



Expiration

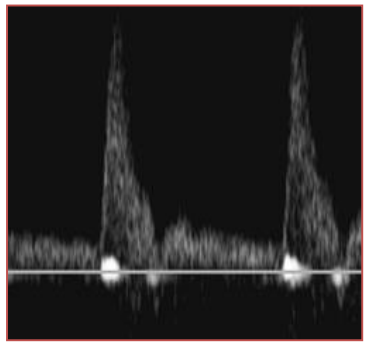
Inspiration

Ligament arqué

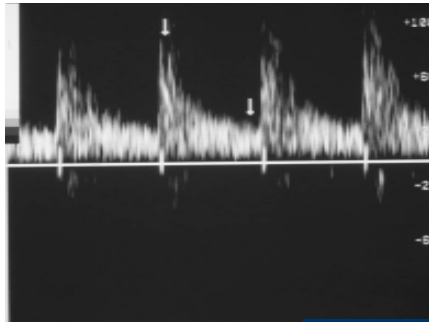
- Dissection AMS
- Anévrismes des arcades duodéno-pancréatiques
- Hyperdébit

Artère mésentérique supérieure

- 2ème artère digestive, 1 cm sous le TC
- En avant de la veine rénale gauche : pince aorto-mésentérique
- Parallèle à l'aorte
- A jeun : flux triphasique de haute résistance
- Hyperhémie post-prandiale

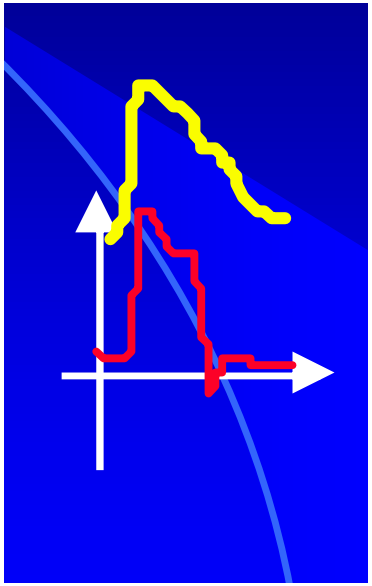


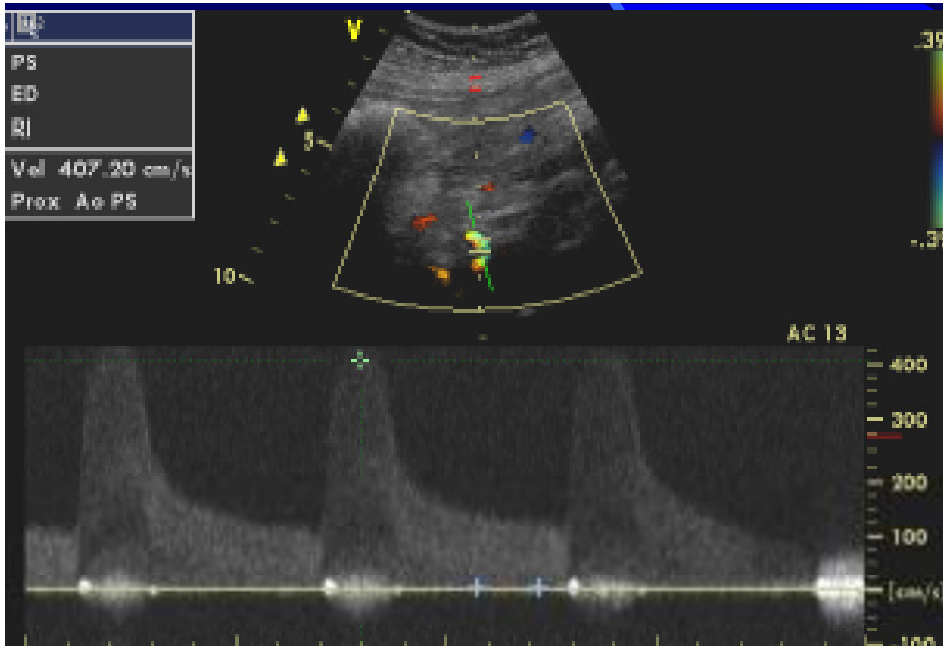
A jeun :
VMS 100-150 cm/sec
IR 0,9

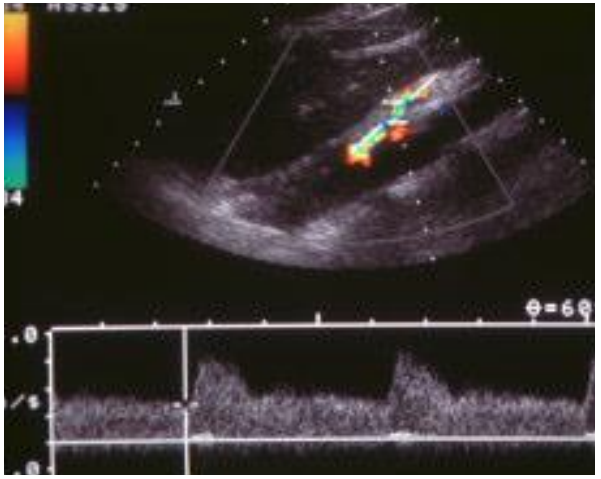


Post-prandial :
Baisse de l'IR
Augm VMS
Dispa onde reflux

Sténose athéromateuse > 70%







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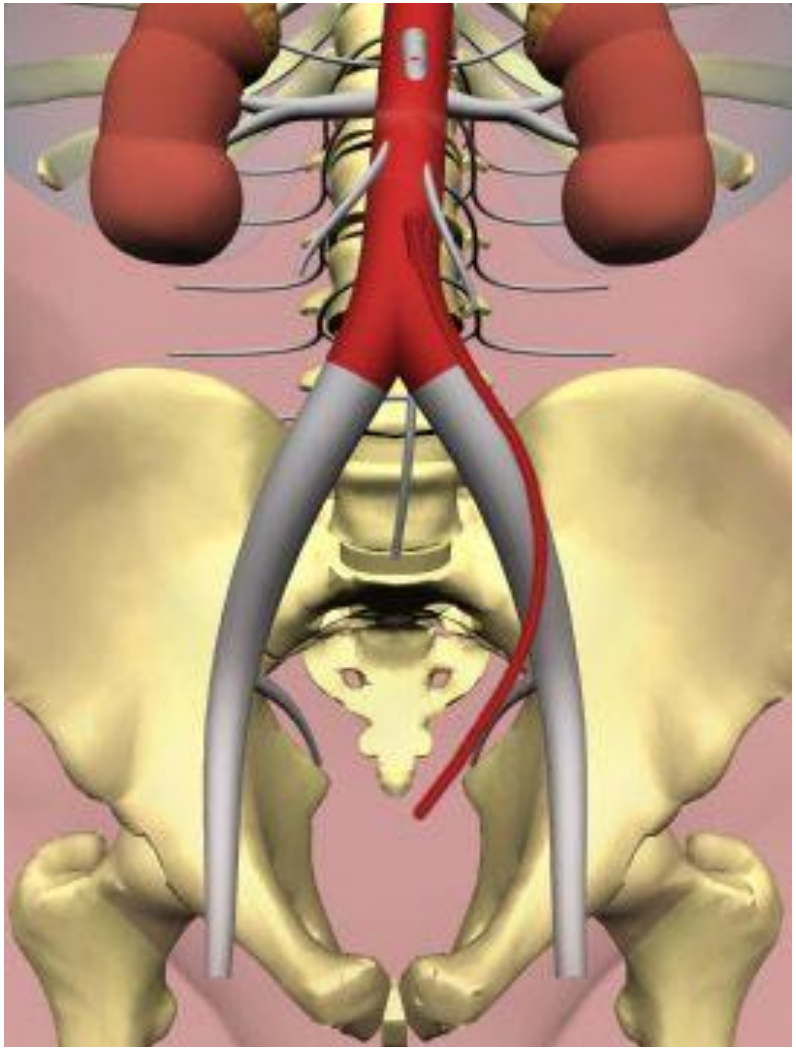
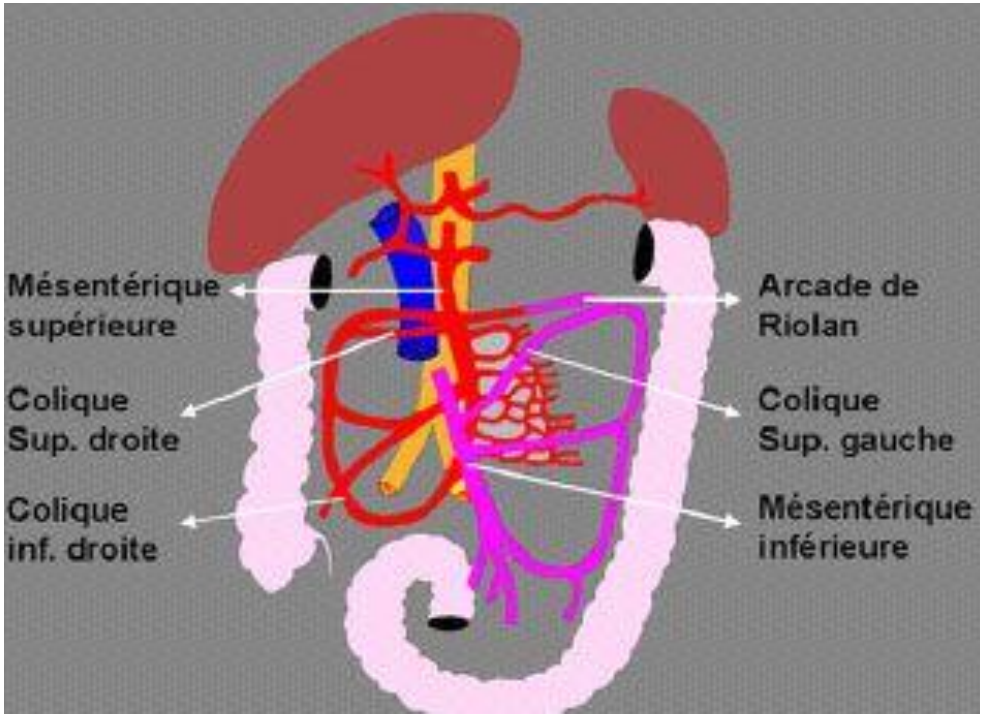
- 150 patients : ED + artério
- 84 patients avec sténose ≥ 50%
- 54 patients avec sténose ≥ 70%

Sténose	VMS (cm/sec)	VTD (cm/sec)	Ratio TC / aorte
≥ 50%	**295**	45	3,5
≥ 70%	**400**	70	4,5

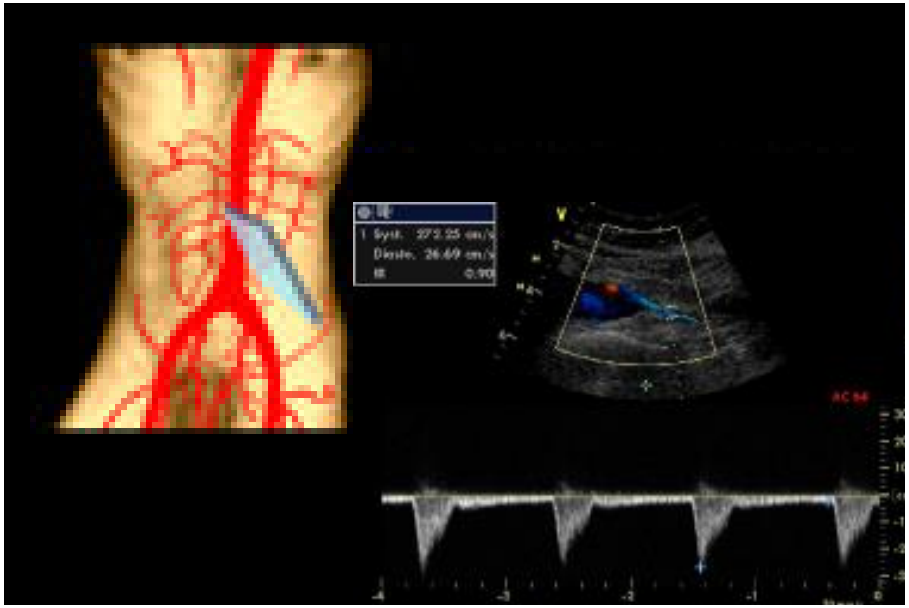
J Vasc Surg 2012;55:428-36

Artère mésentérique inférieure





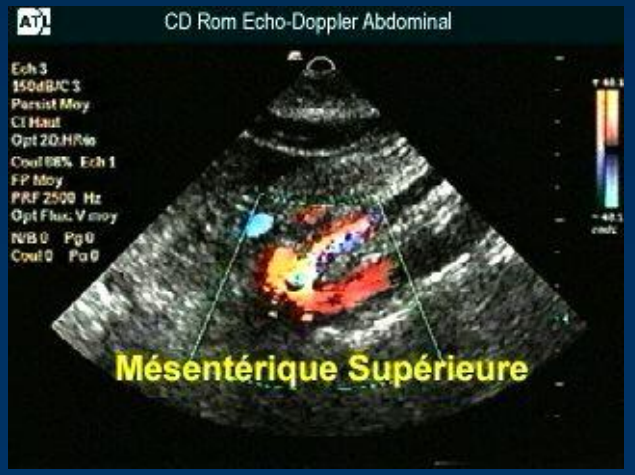
Artère mésentérique inférieure



Artère mésentérique inférieure

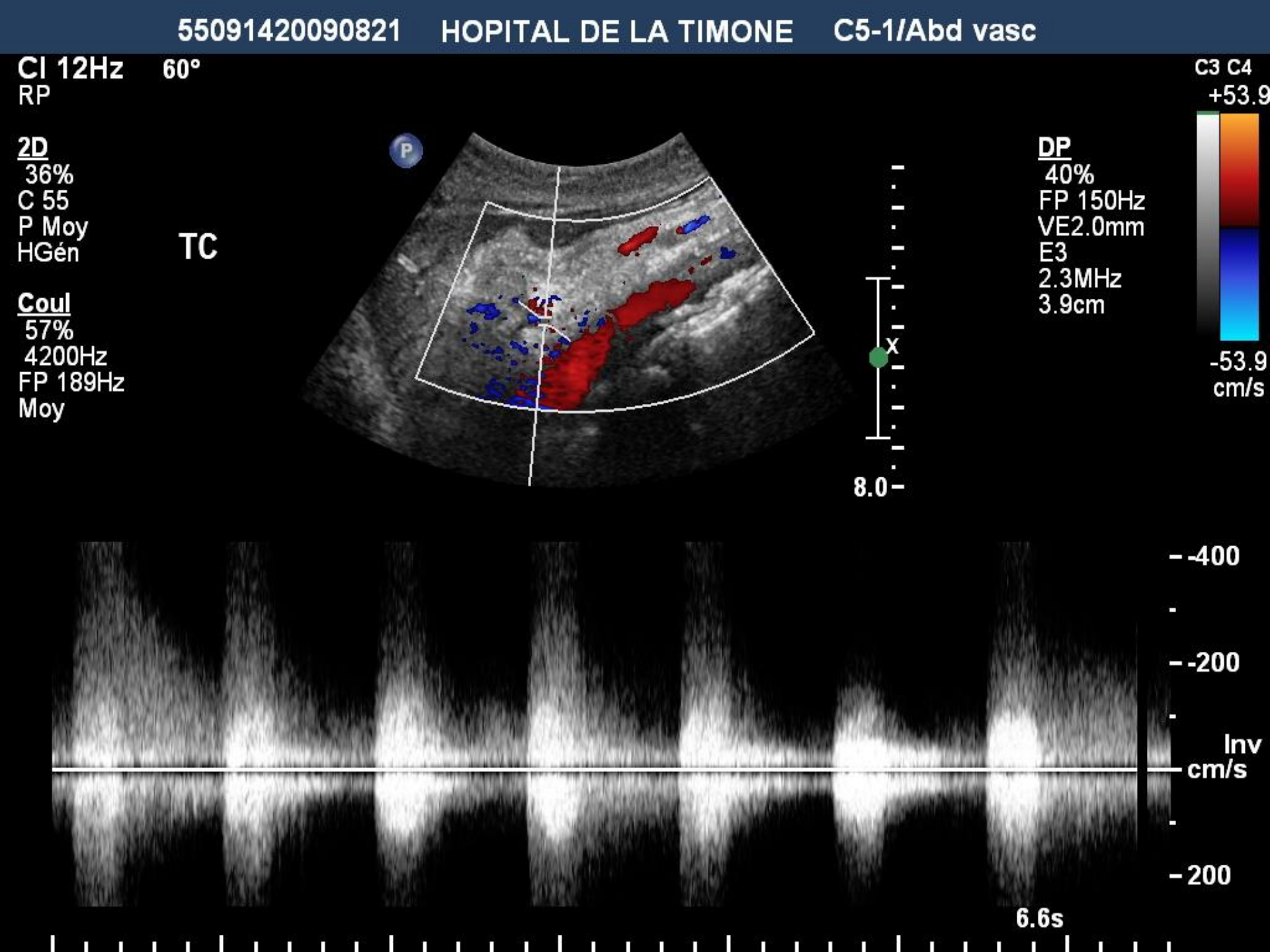
- Indications:
  - Pas grand chose en pratique

Grosse artère mésentérique inf = sténose serrée ou oblitération mésentérique sup



Madame Corsica, 78 ans

- Tabagique, dyslipidémique
- En Médecine interne pour exploration d'une altération de l'état général avec perte de poids de 10 kg en 1 an
- 55 kg à 45 kg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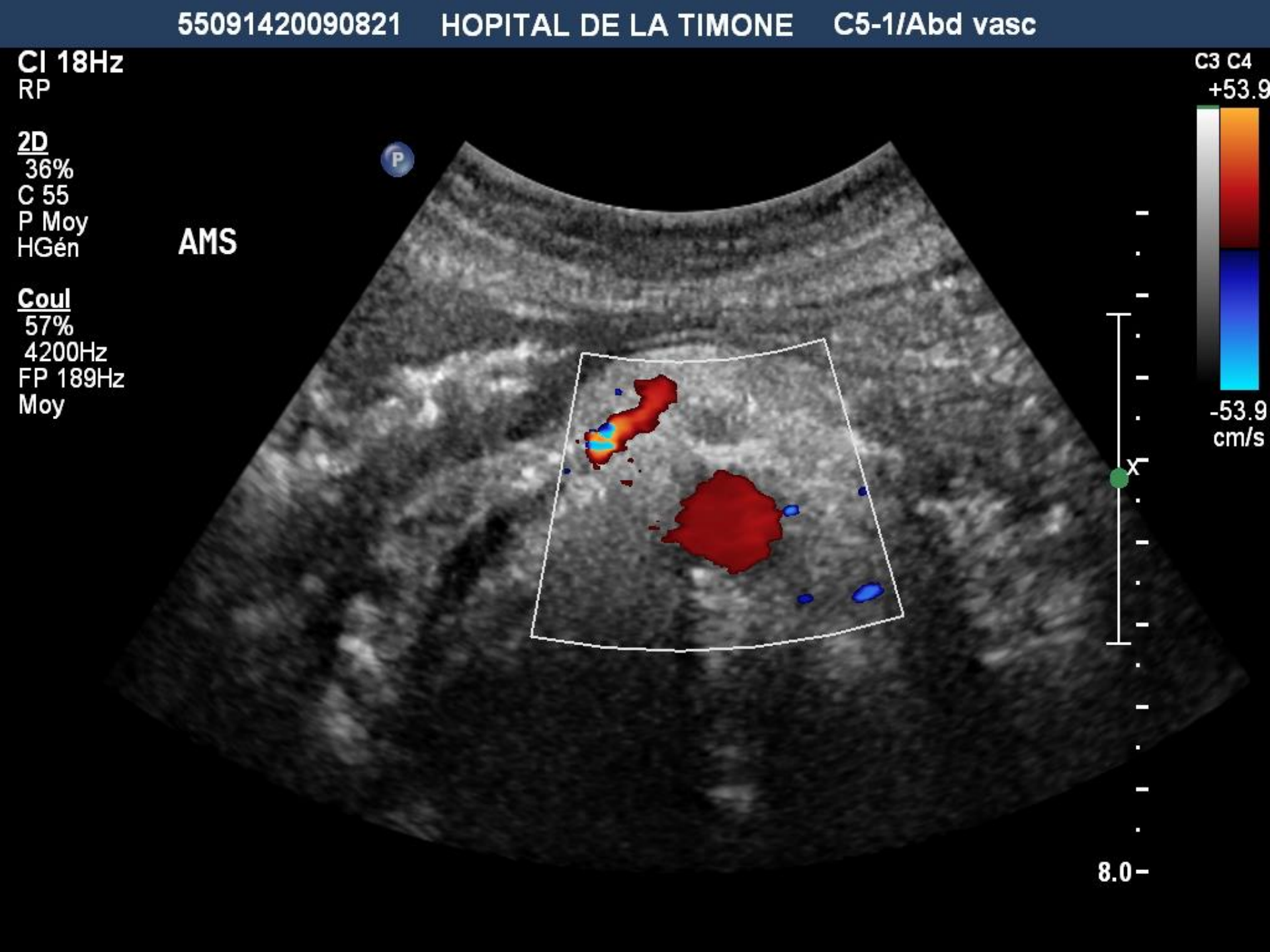
CI 12Hz 60°
RP
2D
36%
C 55
P Moy
HGén
Coul
57%
4200Hz
FP 189Hz
Moy
TC
8.0
DP
40%
FP 150Hz
VE2.0mm
E3
2.3MHz
3.9cm
C3 C4
+53.9
-53.9
cm/s
-400
-200
Inv
cm/s
-200
6.6s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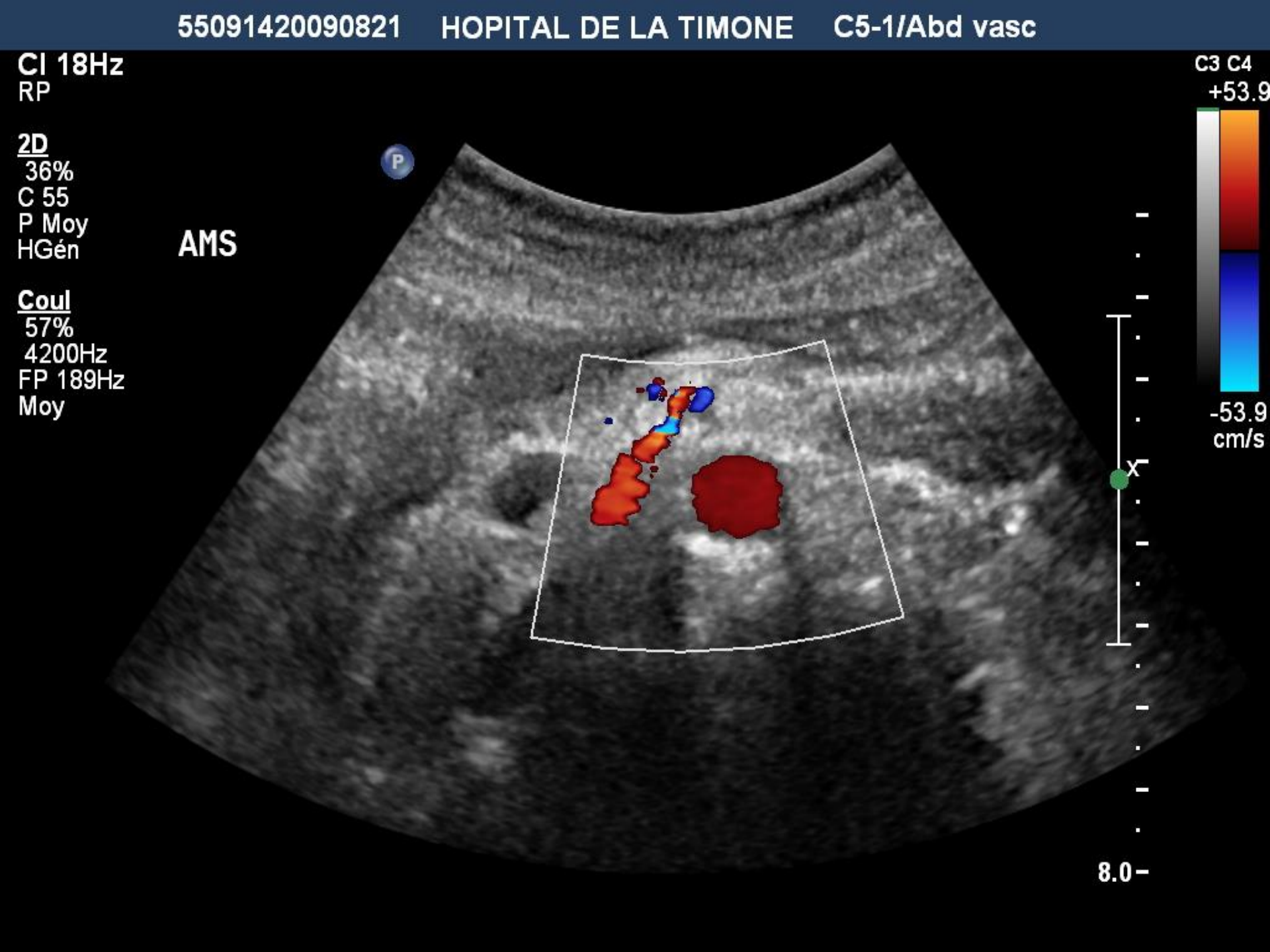
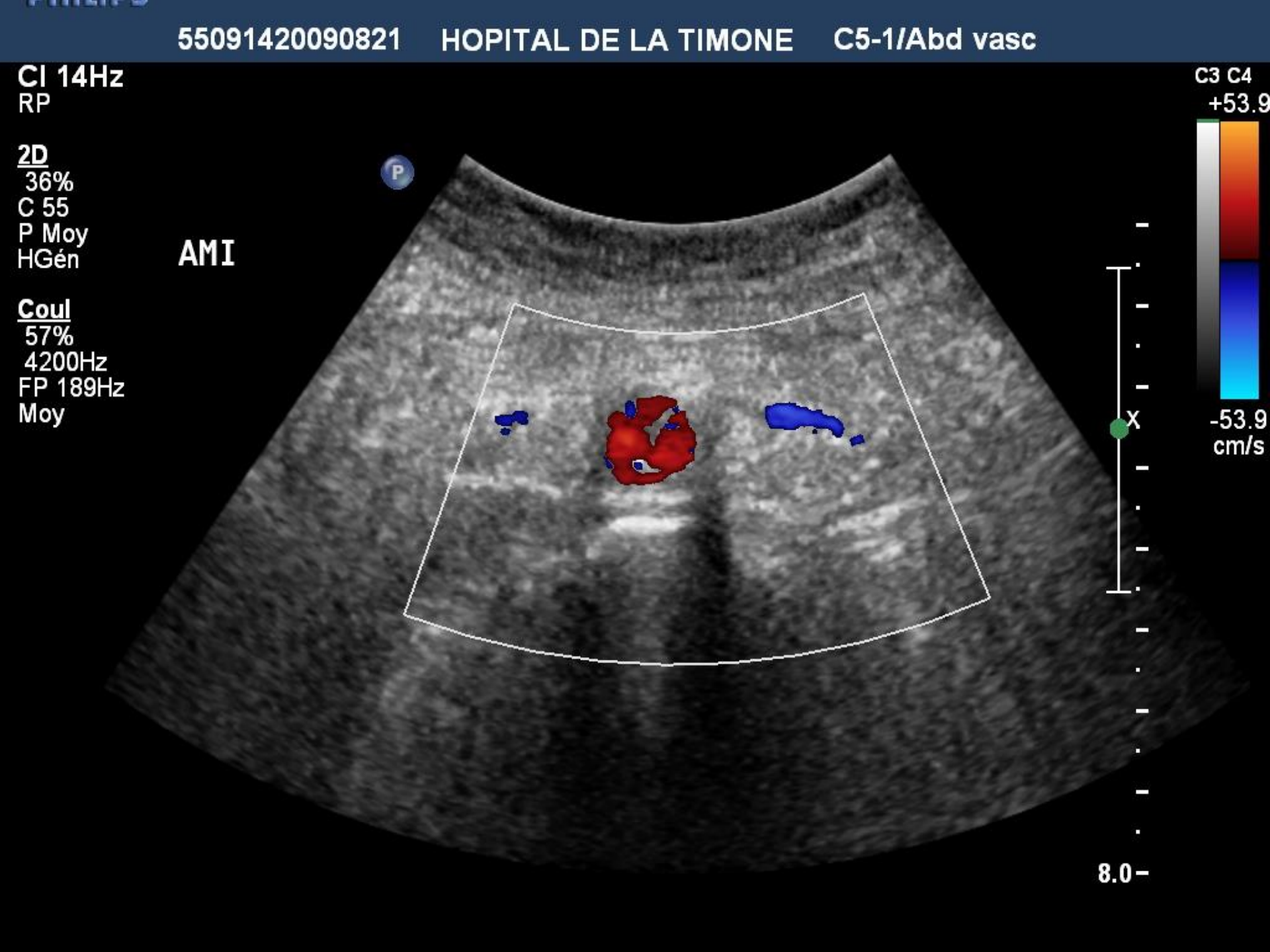
RP
2D
36%
C 55
P Moy
HGén
Coul
57%
4200Hz
FP 189Hz
Moy
AMS
C3 C4
+53.9
-53.9
cm/s
8.0


55091420090821 HOPITAL DE LA TIMONE C5-1/Abd vasc
CI 18Hz
RP
2D
36%
C 55
P Moy
HGén
Coul
57%
4200Hz
FP 189Hz
Moy
AMS
C3 C4
+53.9
-53.9
cm/s
8.0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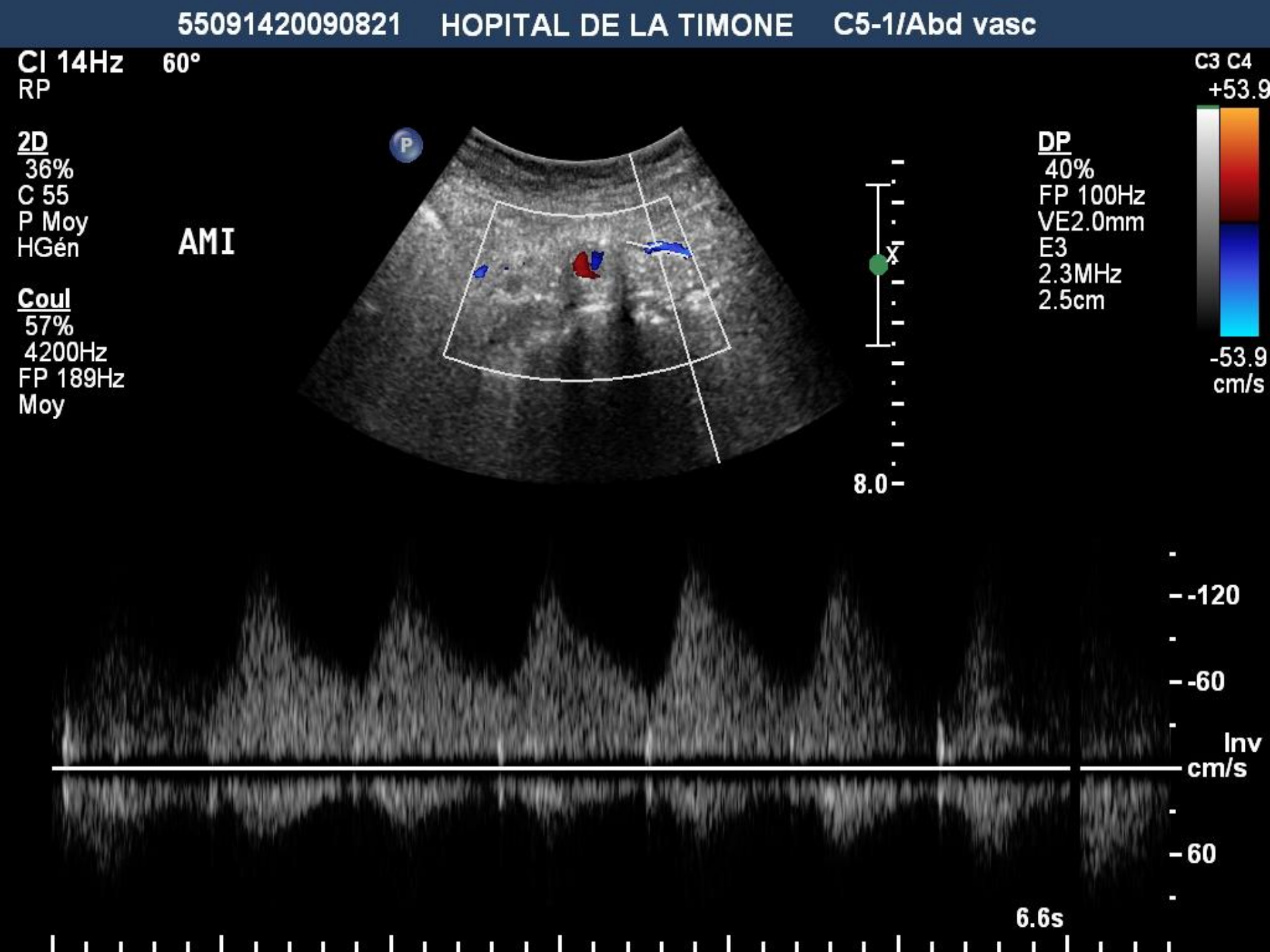
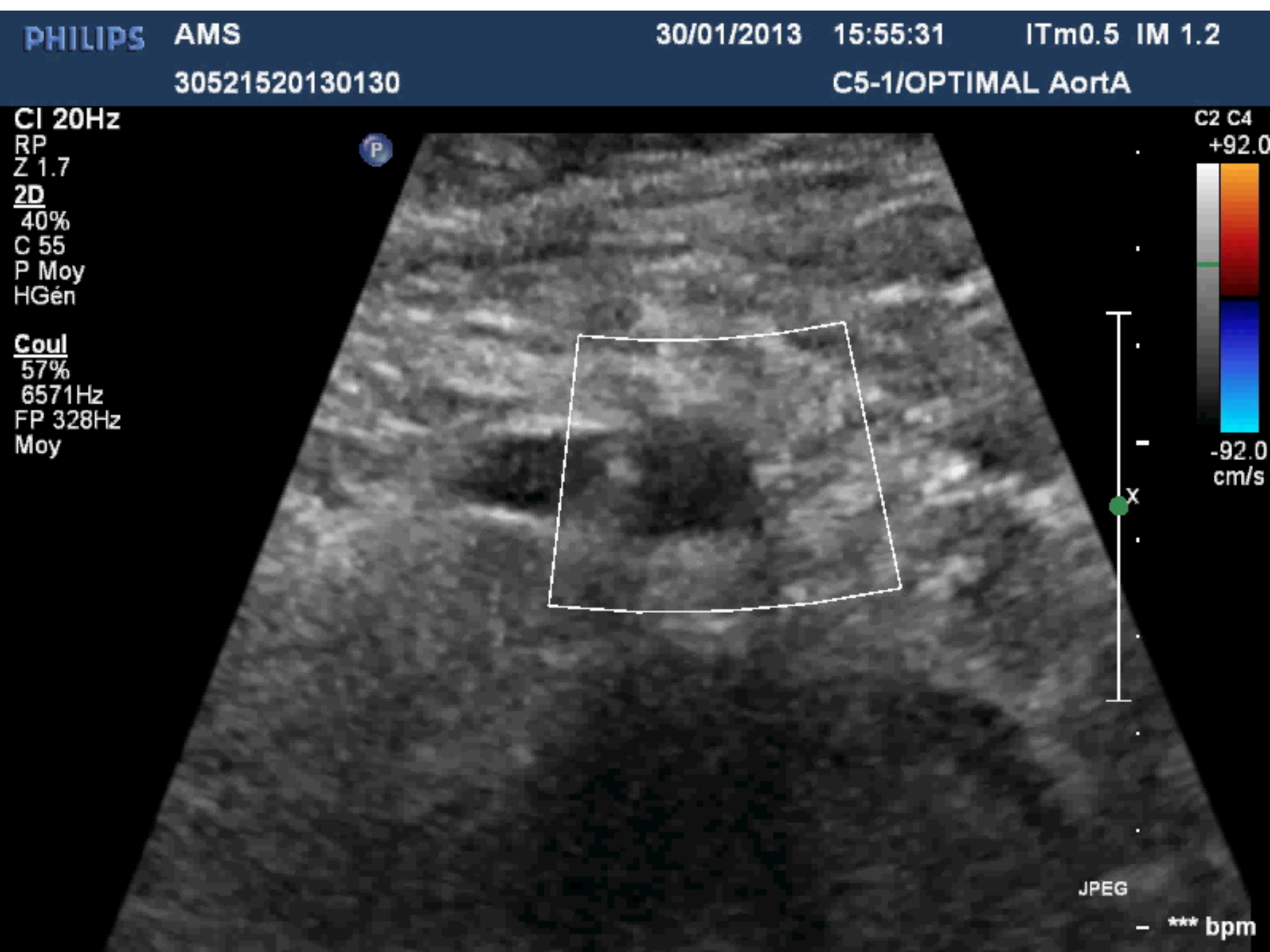
CI 14Hz
RP
2D
36%
C 55
P Moy
HGén
Coul
57%
4200Hz
FP 189Hz
Moy
AMI
C3 C4
+53.9
-53.9
cm/s
8.0


55091420090821 HOPITAL DE LA TIMONE C5-1/Abd vasc
CI 14Hz 60°
RP
2D
36%
C 55
P Moy
HGén
Coul
57%
4200Hz
FP 189Hz
Moy
AMI
DP
40%
FP 100Hz
VE2.0mm
E3
2.3MHz
2.5cm
C3 C4
+53.9
-53.9
cm/s
8.0
-120
-60
Inv
cm/s
60
6.6s


View size: 904 x 726
WL: 127 WW: 255
82 y , 75 y
44155
5287
255
128
0
Zoom: 49% Angle: 0
Im: 1/1
07/09/2009 11:13:25
Made In OsiriX

Autres lésions

- Dissection
- Anévrisme
- Penser à la dysplasie fibromusculaire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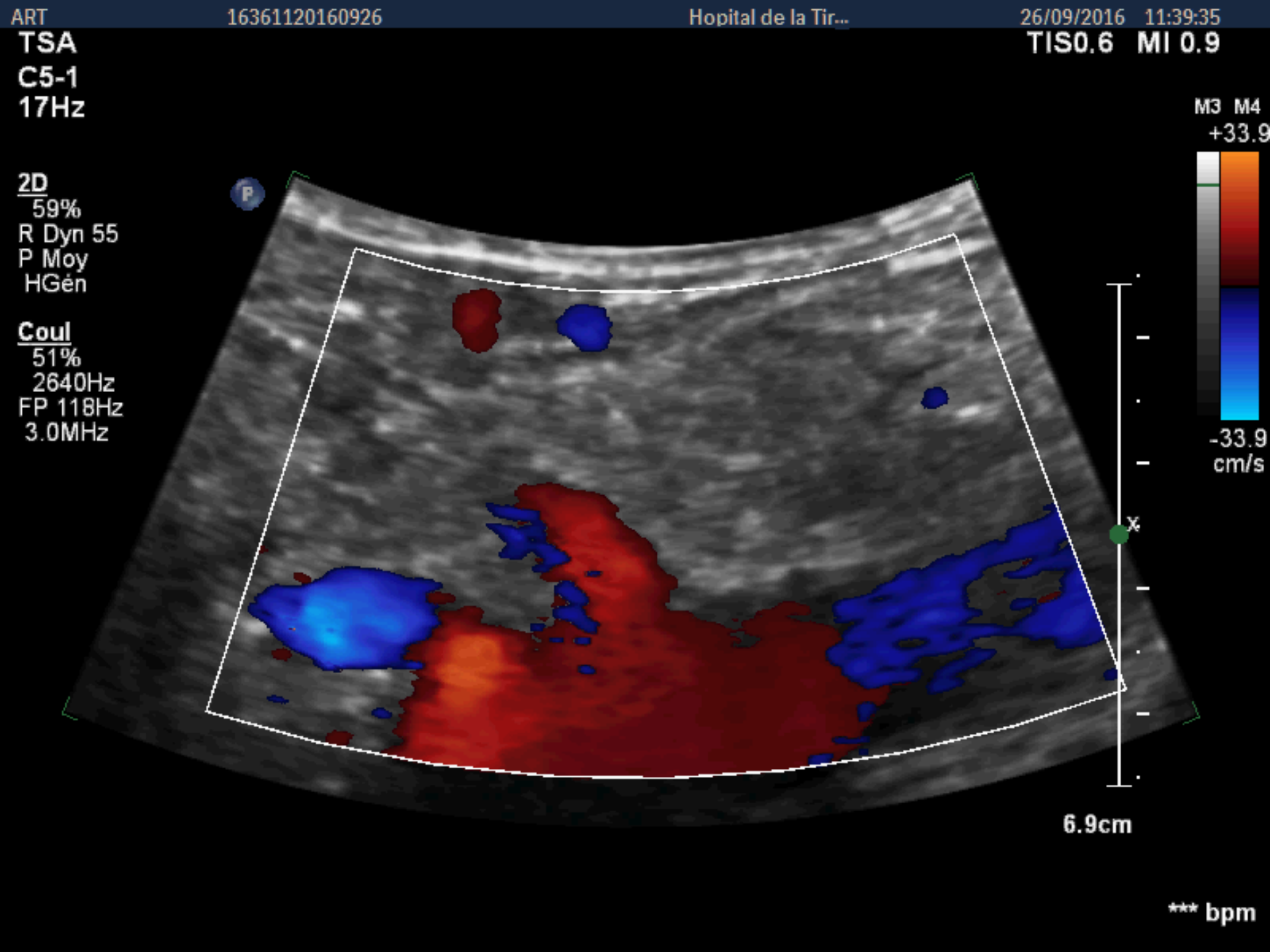
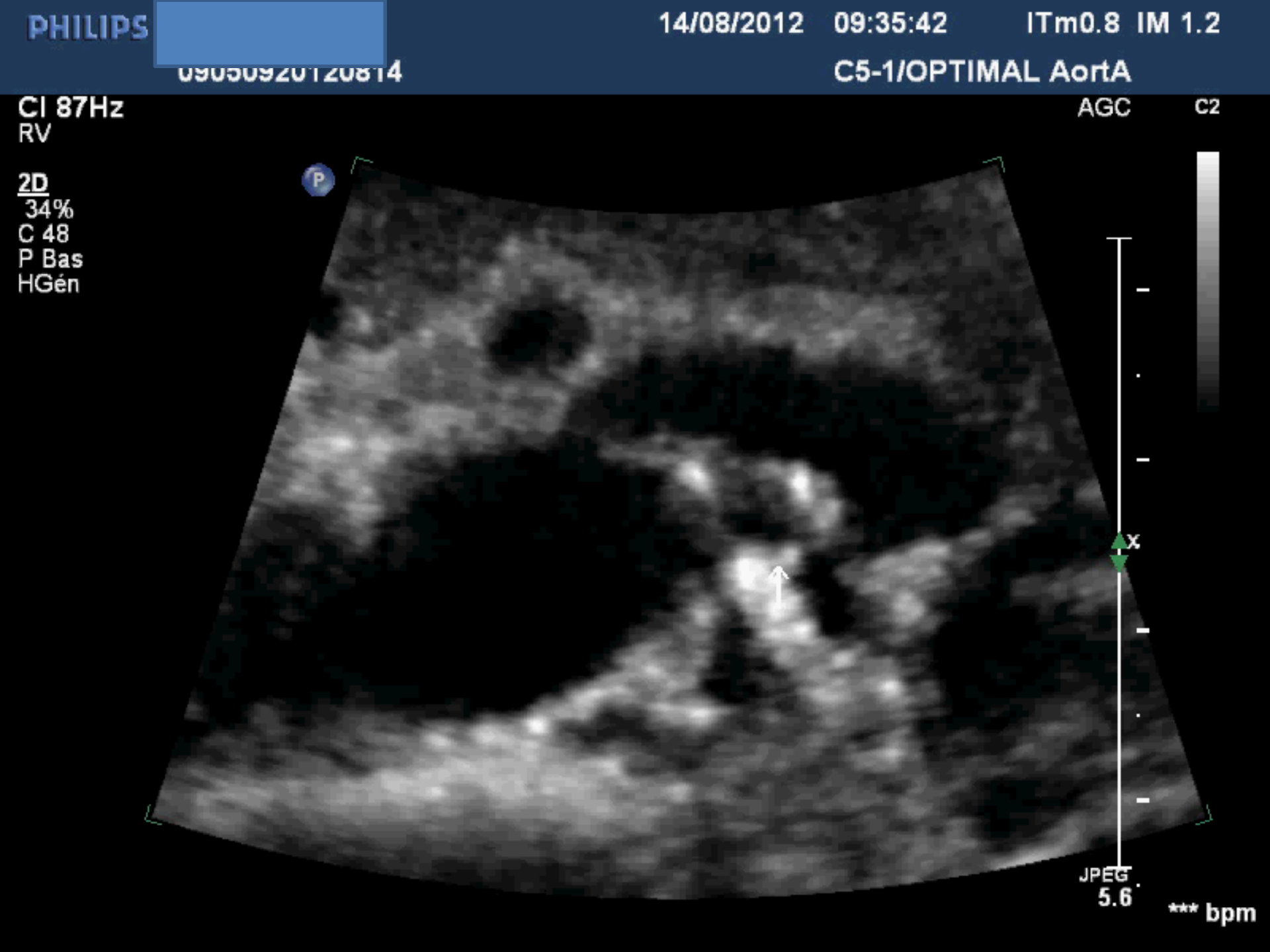
C5-1/OPTIMAL AortA
CI 20Hz
RP
Z 1.7
2D
40%
C 55
P Moy
HGén
Coul
57%
6571Hz
FP 328Hz
Moy
C2 C4
+92.0
-92.0
cm/s
JPEG
*** bpm


ART
16361120160926
Hopital de la Tir...
26/09/2016 11:39:35
TSA
C5-1
17Hz
TIS0.6 MI 0.9
M3 M4
+33.9
-33.9
cm/s
2D
59%
R Dyn 55
P Moy
HGén
Coul
51%
2640Hz
FP 118Hz
3.0MHz
6.9cm
*** bpm


PHILIPS
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C5-1/OPTIMAL AortA
CI 87Hz
RV
AGC
C2
2D
34%
C 48
P Bas
HGén
JPEG
5.6
*** bpm


PHILIPS
14/08/2012 09:32:21 ITm0.4 IM 1.2
Hôpital de la Timone
C5-1/OPTIMAL AortA
CI 43Hz
RV
AGC
C2
2D
36%
C 48
P Bas
HGén
TC
COLLIER
9.0

Duplex velocity criteria for native celiac/superior mesenteric artery stenosis vs in-stent stenosis

Ali F. AbuRahma, MD,[a] Albeir Y. Mousa, MD,[a] Patrick A. Stone, MD,[a] Stephen M. Hass, MD,[a] L. Scott Dean, PhD,[b] and Tammi Keiffer, RN,[b] *Charleston, WVa*

Sténose TC	VMS (cm/sec)	VTD (cm/sec)	Ratio TC / aorte
≥ 50%	240	40	2,7
≥ 70%	320	100	4,5
Resténose TC	**VMS (cm/sec)**	**VTD (cm/sec)**	**Ratio TC / aorte**
≥ 50%	260	60	3,5
≥ 70%	360	110	5,7

J Vasc Surg 2012;55:730-8.

Duplex velocity criteria for native celiac/superior mesenteric artery stenosis vs in-stent stenosis

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Sténose AMS	VMS (cm/sec)	VTD (cm/sec)	Ratio TC / aorte
≥ 50%	295	45	3,5
≥ 70%	400	70	4,5
Resténose AMS	**VMS (cm/sec)**	**VTD (cm/sec)**	**Ratio TC / aorte**
≥ 50%	330	30	3,5
≥ 70%	410	110	8,5

J Vasc Surg 2012;55:730-8.

CR type – Artères digestives

- **A jeun**
- Aorte : diamètre AP, VMS
- Tronc cœliaque :
  - VMS, VTD, spectre, aval
- AMS :
  - VMS, VTD, spectre, aval
- AMI :
  - VMS