

**CORONARY
PERFORATION
SIMULATION ON
STAGE #1**

Image size: 512 x 512
View size: 695 x 695
WL: 128 WW: 254

352477 (69 y , 68 y)
Cardiokw(GABNOP) - unnamed
F20014529
2



Zoom: 136% Angle: 0

Im: 1/12 12/07/18, 09:35:18

JPEGLossless Non-hierarchical-1stOrderPrediction

Made In Osirix

Image size: 512 x 512
View size: 673 x 673
WL: 128 W/W: 254

352477 (69 y , 68 y)
Cardiolow(GADHOF) - unnamed
F20014524



Zoom: 131% Angle: 0

Im: 1/18

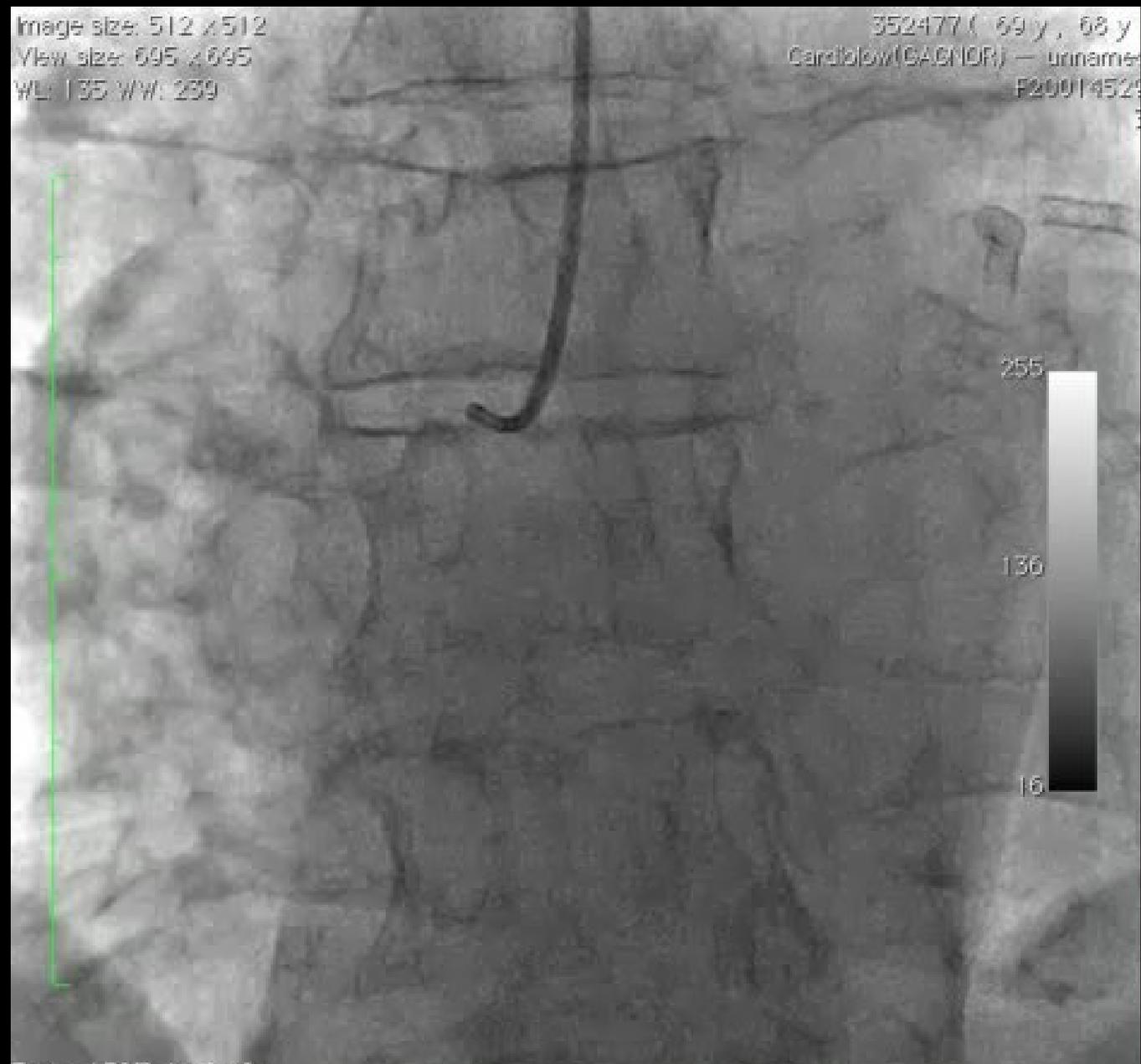
12/07/18, 09:35:02

JPEGLosslessNon-hierarchical-IstOrderPrediction

Made in OsiriX

Image size: 512 x 512
View size: 695 x 695
WL: 135 WW: 239

352477 (69 y , 68 y)
Cardiolow(CACNOR) - unname
F20014524



Zoom: 136% Angle: 0

Im: 1/11

12/07/18, 09:36:46

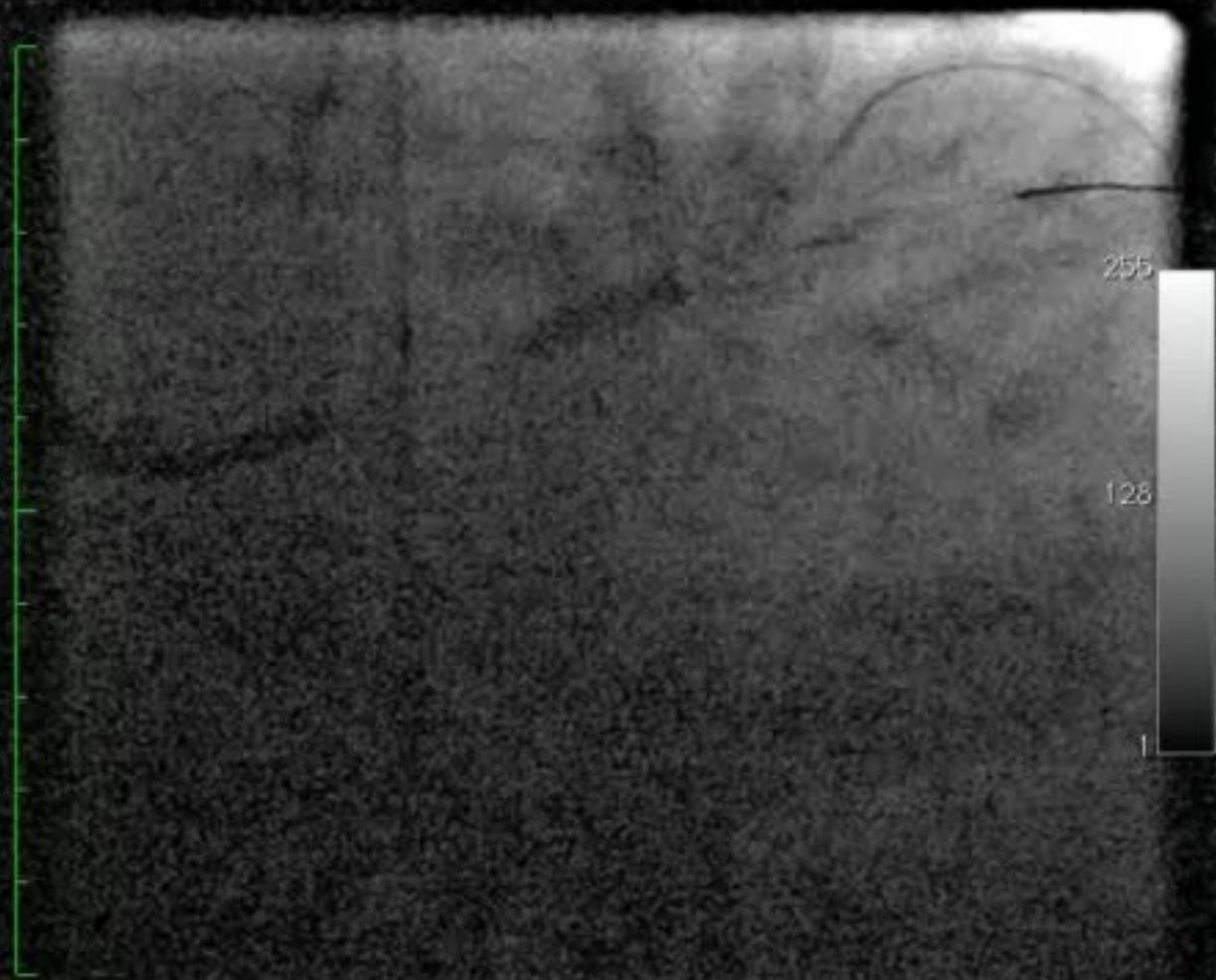
JPEG, lossless Non-hierarchical-1stOrderPrediction

Made In Osir

Image size: 512 x 512
View size: 695 x 695
WL: 128 WW: 254

352477 (69 y , 68 y)
Cardiolow(GAGNOR) - unnamed
F20014529

7



Zoom: 136% Angle: 0

Im: 1/2

12/07/18, 09:46:48

Lossless Non-hierarchical-1stOrderPrediction

Made In Osirix

Image size: 512 x 512
View size: 695 x 695
ML: 128 WW: 254

352477 (69 y, 68 y)
Cardiolow(GAGNOR) - unnamed
F20014529



Zoom: 136% Angle: 0
m: 1/9

12/07/18, 09:50:10

PEGLossless Non-hierarchical-H stOrderPrediction

Made in Osh

Image size: 512 x 512

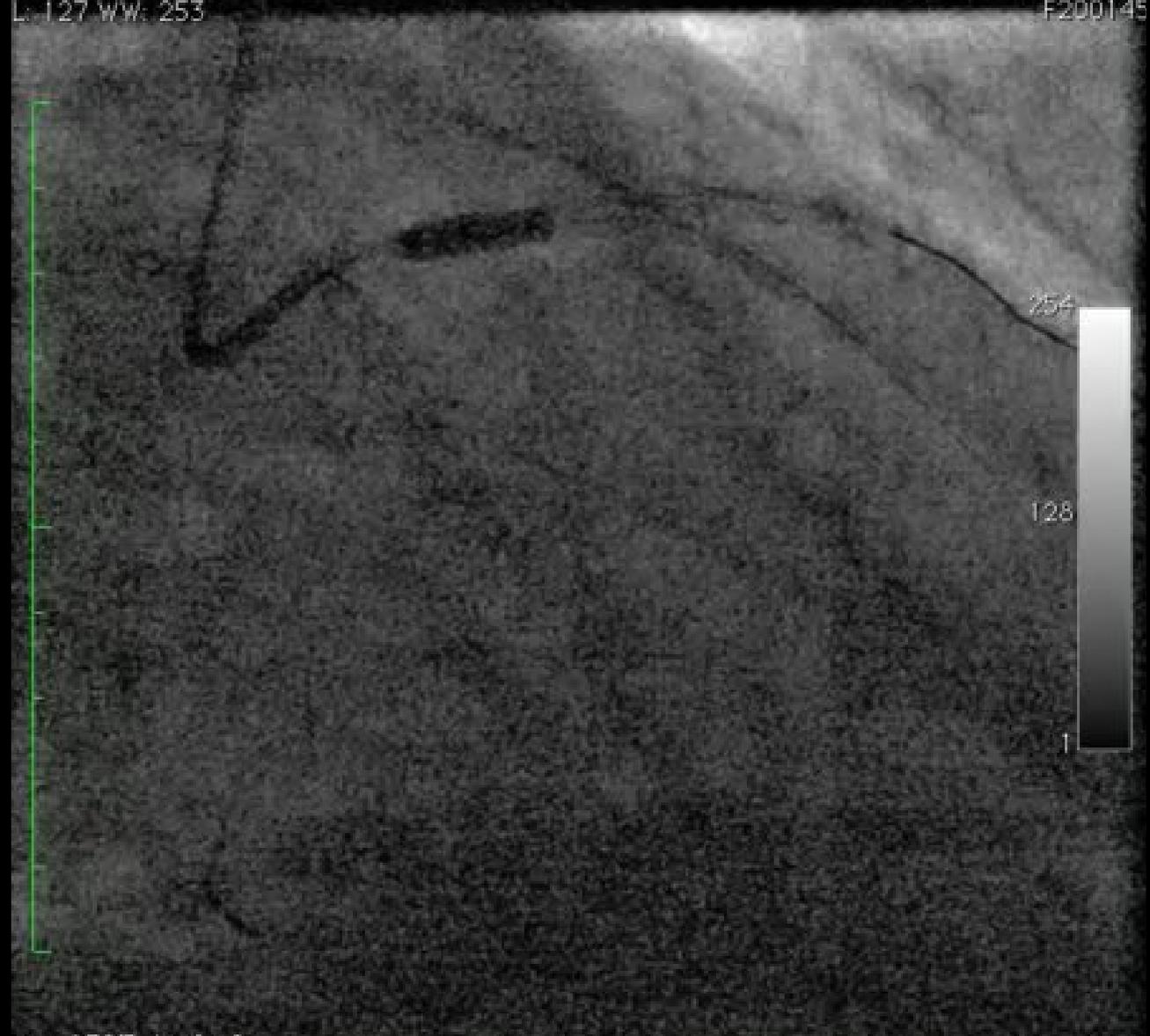
Low size: 695 x 695

L: 127 W/W: 253

352477 (69 y , 68

Cardiolow(GAGNOR) — unnan

F200145



Zoom: 136% Angle: 0

1/3

12/07/18, 09:55

Lossless Non-hierarchical 1stOrderPrediction

Made In Os

Image size: 512 x 512
View size: 695 x 695
WL: 107 WW: 212

352477 (69 y , 68 y)
Cardiolor(GAGNOR) — unnamed
F20014529
15



Zoom: 136% Angle: 0

Im: 1/5

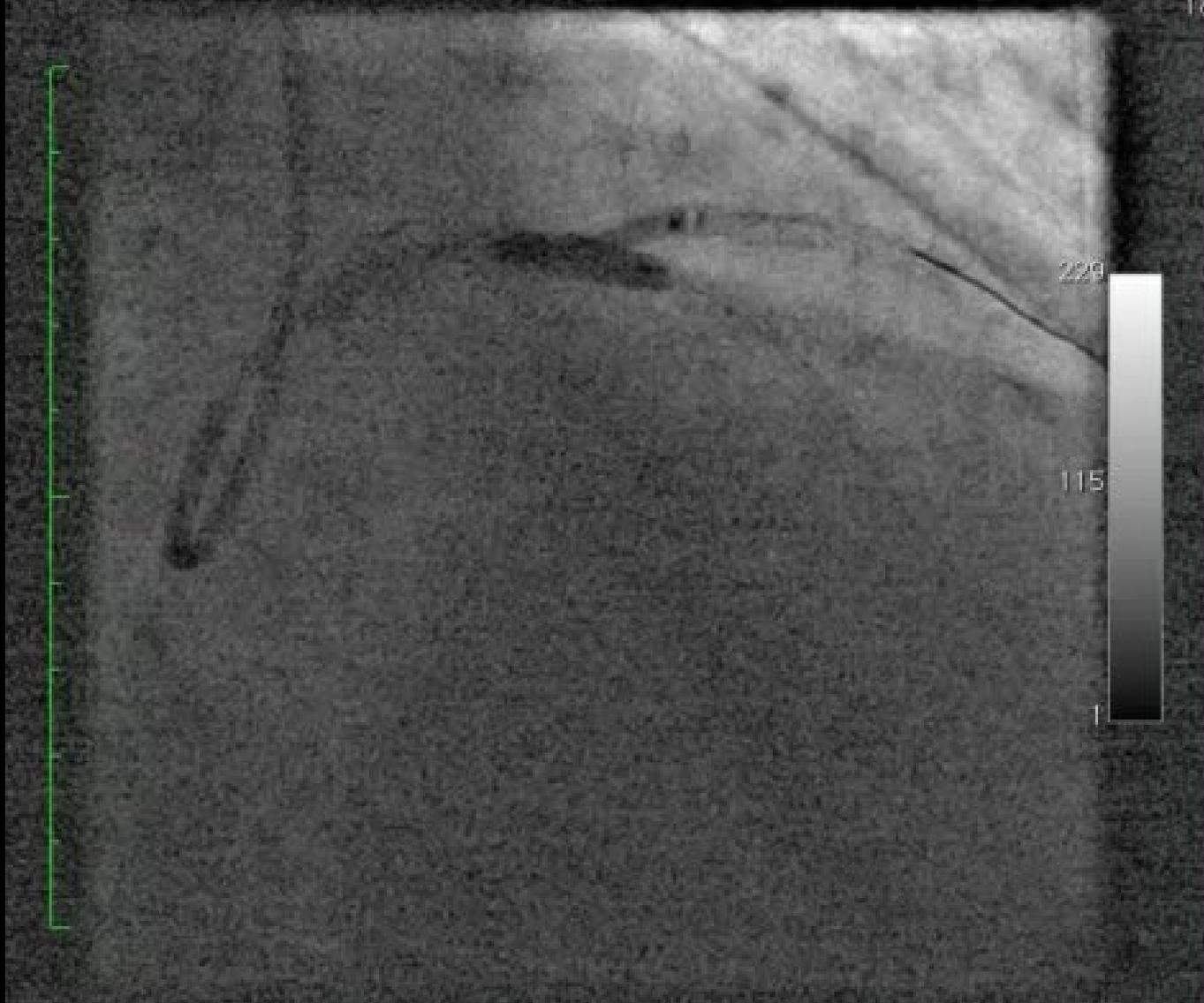
12/07/18, 09:56:18

JPEG Lossless Non-hierarchical Histogram Prediction

Made In Osirix

Image size: 512 x 512
View size: 695 x 695
WL: 115 WW: 228

352477 (69 y , 68 y)
Cardioblow(GAGNOR) - unnamed
F20014529
18



Zoom: 136% Angle: 0
Im: 1/3

12/07/18, 09:58:34

JPEGLossless Non-hierarchical-I stOrderPrediction

Made In OsirX

Image size: 512 x 512
View size: 695 x 695
WL: 131 WW: 247

352477 (69 y , 68 y)
CardioLow(SAG:IOF) - unname
F20014524
13



Zoom: 136% Angle: 0

In: 1/23 12/07/18, 09:59:19

JPEG Lossless Non-hierarchical 1st Order Prediction Made in OsirX

Image size: 512 x 512
View size: 695 x 695
WL: 129 WW: 251

352477 (69 y, 68 y)
Cardio/kwl (GABNOR) - unname
F2601452
2



Zoom: 136% Angle: 0
Im: 1/17

12/07/18, 09:59:3

Image size: 512 x 512
View size: 695 x 695
WL: 127 WW: 252

352477 (69 y , 68 y)
Cardioblow (GAGNOR) — unnamed
F20014529
21



Zoom: 136% Angle: 0

Im: 1/10

12/07/18, 10:00:32

JPEGLossless Non-hierarchical-1stOrderPrediction

Made In OsirX

Image size: 512 x 512
View size: 695 x 695
WL: 128 W/W: 254

352477 (59 y , 68 y)
Cardiolog(GAGNOR) - unname
F2001452
2



Zoom: 136% Angle: 0

Im: 1/15

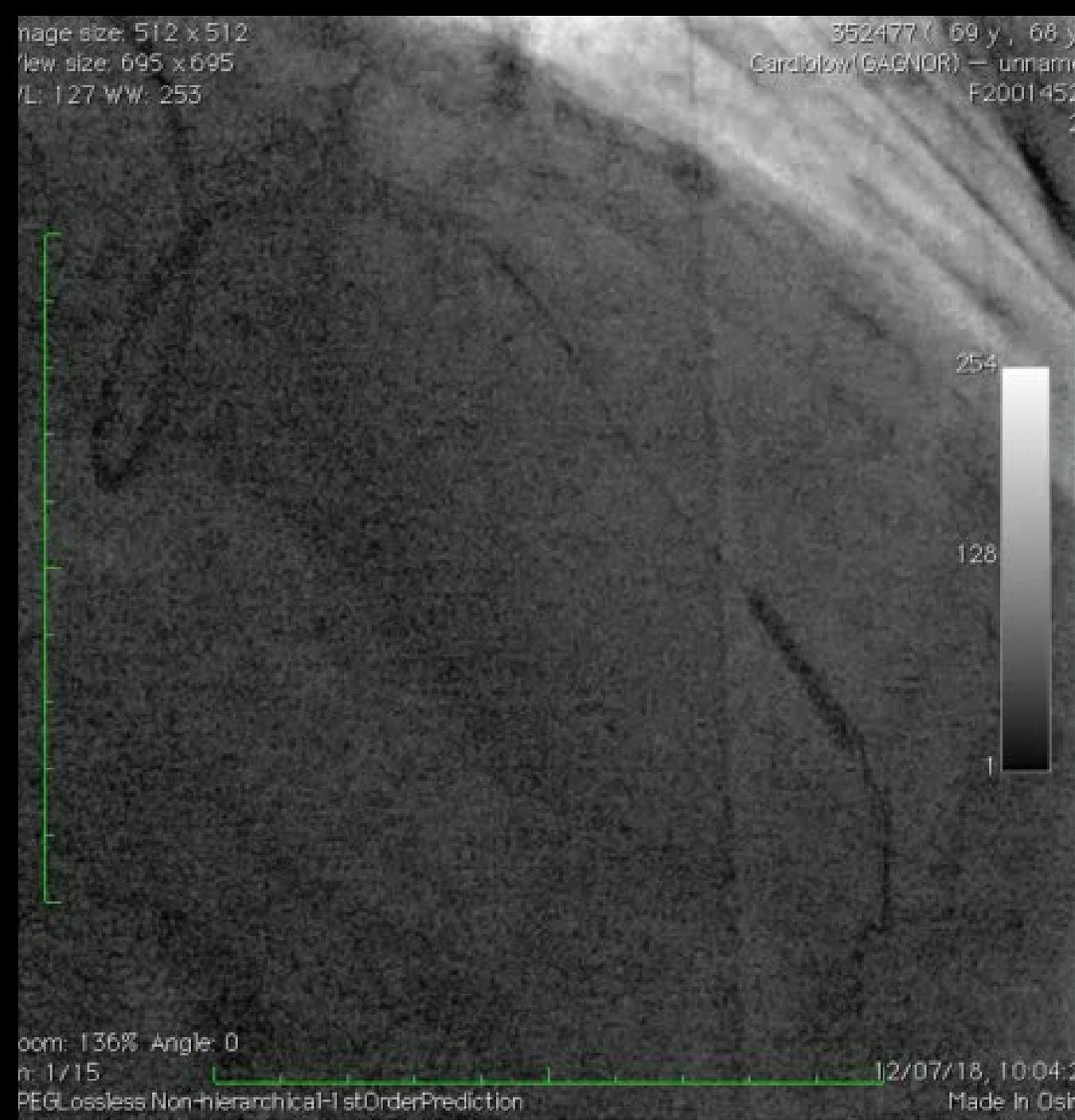
12/07/18, 10:00:4

JPEG_lossless Non-hierarchical Histogram Prediction

Made In Osir

Image size: 512 x 512
View size: 695 x 695
W: 127 W/W: 253

352477 (69 y , 68 y)
Cardiolog (GAGNOR) - unnam
E200145



Zoom: 136% Angle: 0

n: 1/15

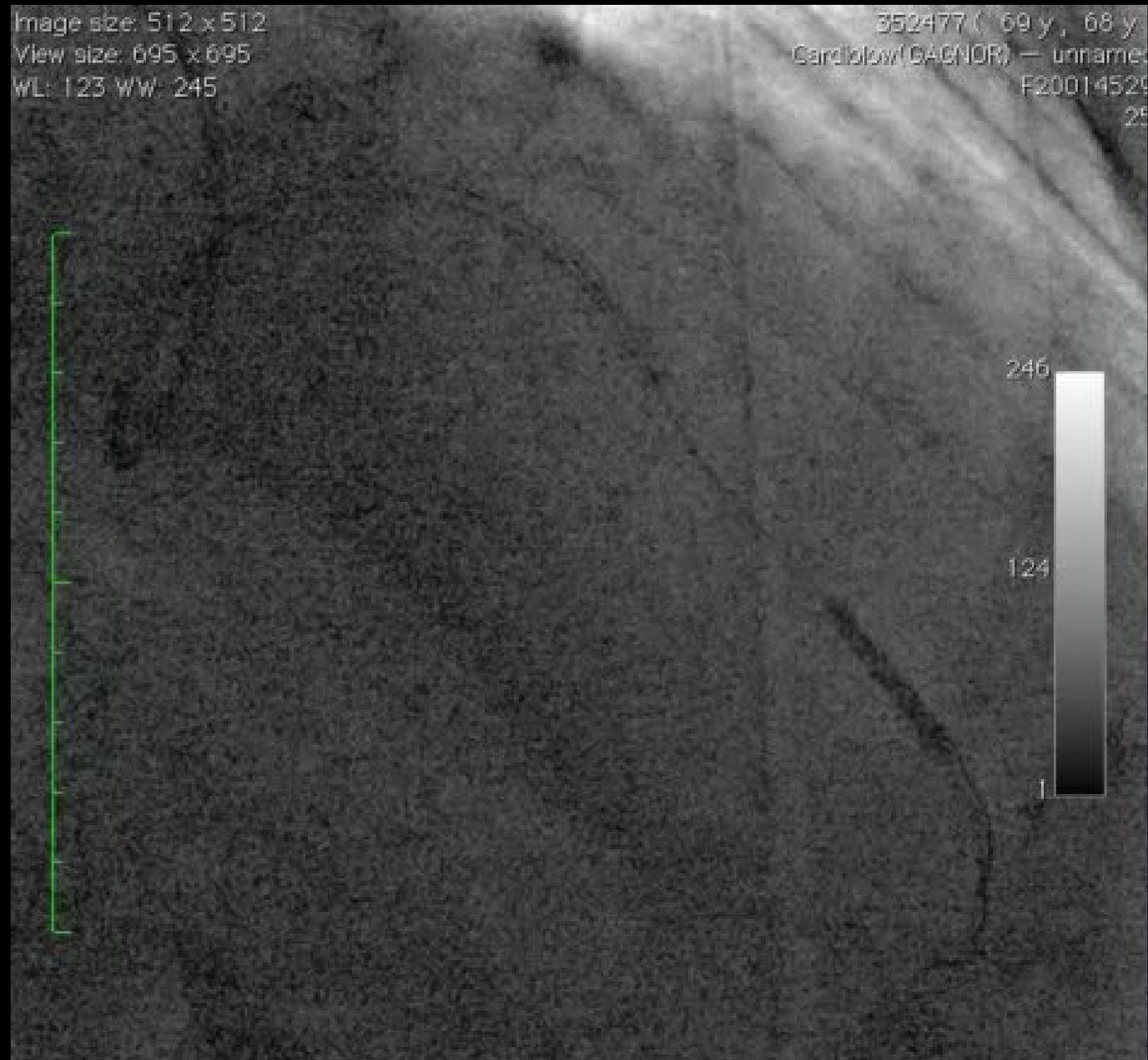
12/07/18, 10:04:3

PEGLossless Non-hierarchical-I stOrderPrediction

Made In Osh

Image size: 512 x 512
View size: 695 x 695
WL: 123 W/W: 245

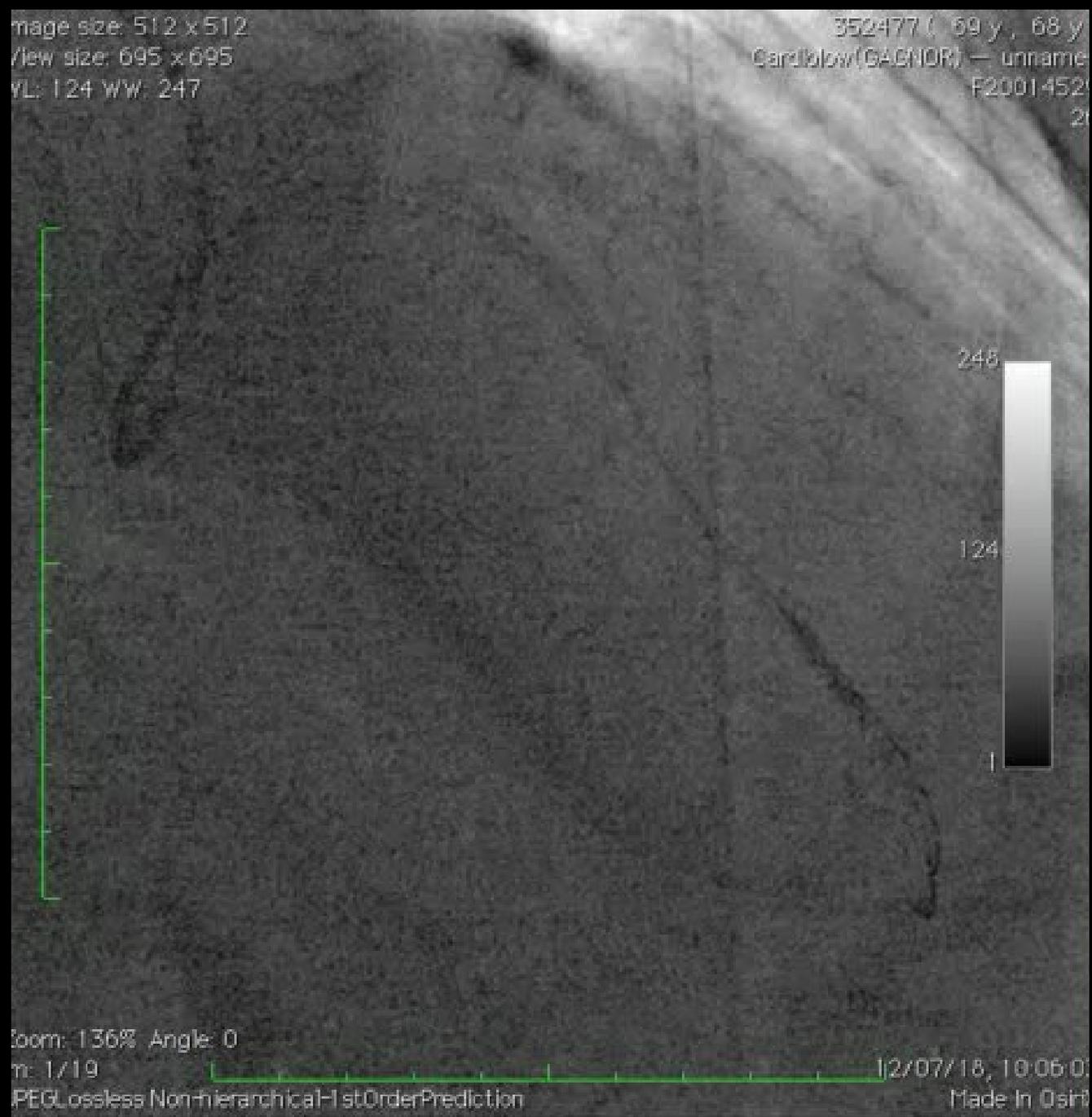
352477 (69 y, 68 y)
Cardblzw(GAGNOR) — unnamed
F20014529
25



Zoom: 136% Angle: 0
In: 1/14 12/07/18, 10:05:57
JPEG Lossless Non-hierarchical-IstOrderPrediction Made In Osirx

Image size: 512 x 512
View size: 695 x 695
YL: 124 WW: 247

352477 (59 y , 68 y)
Cardioloow(GACNOR) - unname
F2001452
2



Zoom: 136% Angle: 0

m: 1/19

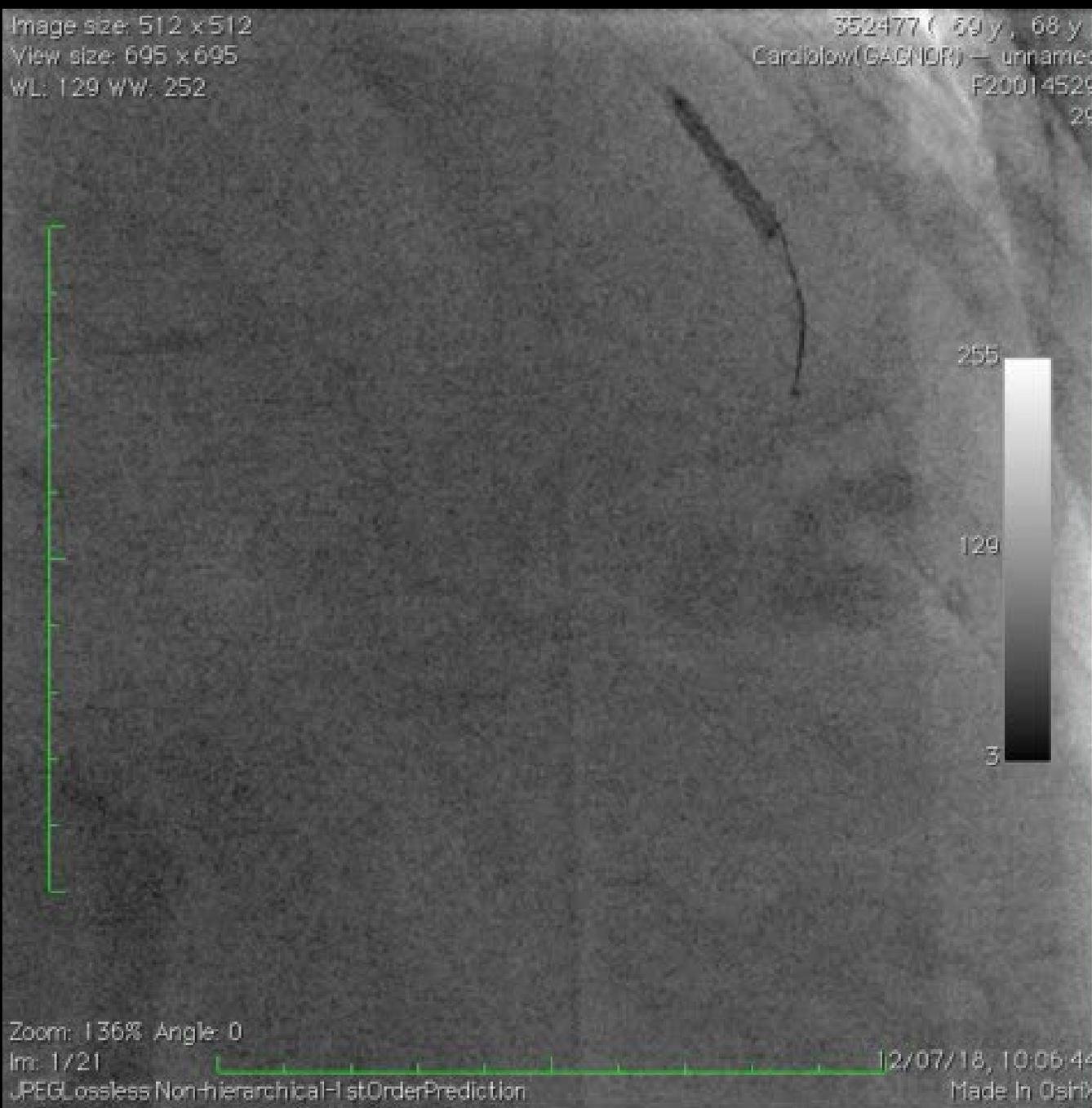
12/07/18, 10:06:01

PEGLossless Non-hierarchical-1stOrderPrediction

Made In OsiriX

Image size: 512 x 512
View size: 695 x 695
WL: 129 W/W: 252

352477 (69 y, 68 y)
Cardiolow(GAGNDR) - unname
F20014529
29



Zoom: 136% Angle: 0

Im: 1/21

12/07/18, 10:06:44

JPEGLosslessNon-hierarchical-1stOrderPrediction

Made In Oshkosh

Image size: 512 x 512
View size: 695 x 695
VL: 128 WW: 254

352477 (8
Cardiolog(GAGNOR)



Zoom: 136% Angle: 0
m: 1/21

12/97/1

JPEG Lossless Non-hierarchical 1st Order Prediction

11

Image size: 512 x 512
View size: 695 x 695
L: 128 W/W: 254

352477 (69 y , 68 y)
Cardiolog(GAGNOR) - urname
F2001452
3



Zoom: 136% Angle: 0
Page: 1/23

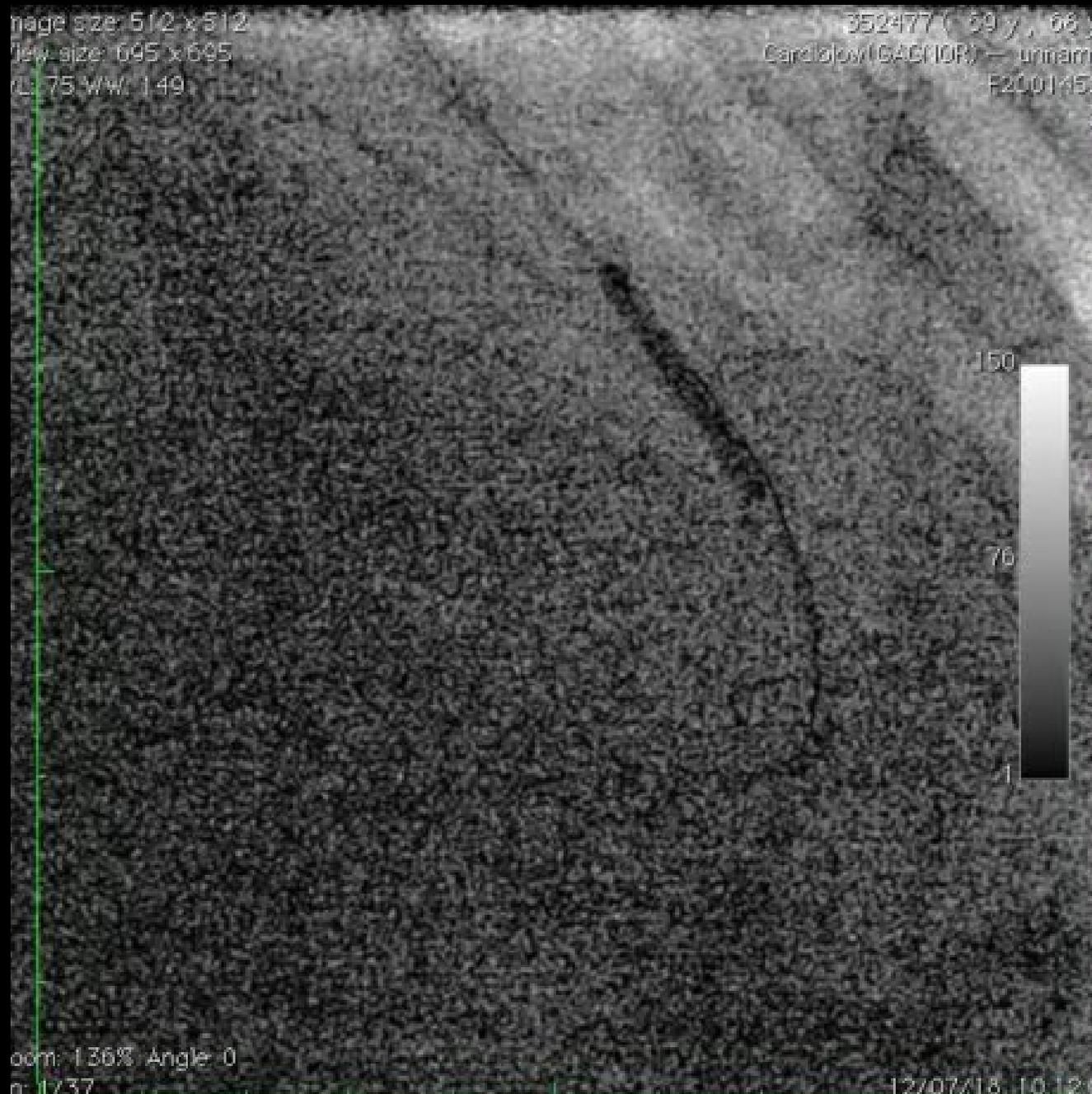
12/07/18, 10:09:2

Lossless Non-hierarchical-1stOrderPrediction

Made In Csh

page size: 512 x 512
raw size: 695 x 695
QL: 75 WW: 149

352477 (59 y , 68)
Cardiac/low (GAC10P) - unnam
F2101453



adm: 1.36% Angle: 0
n: 1737

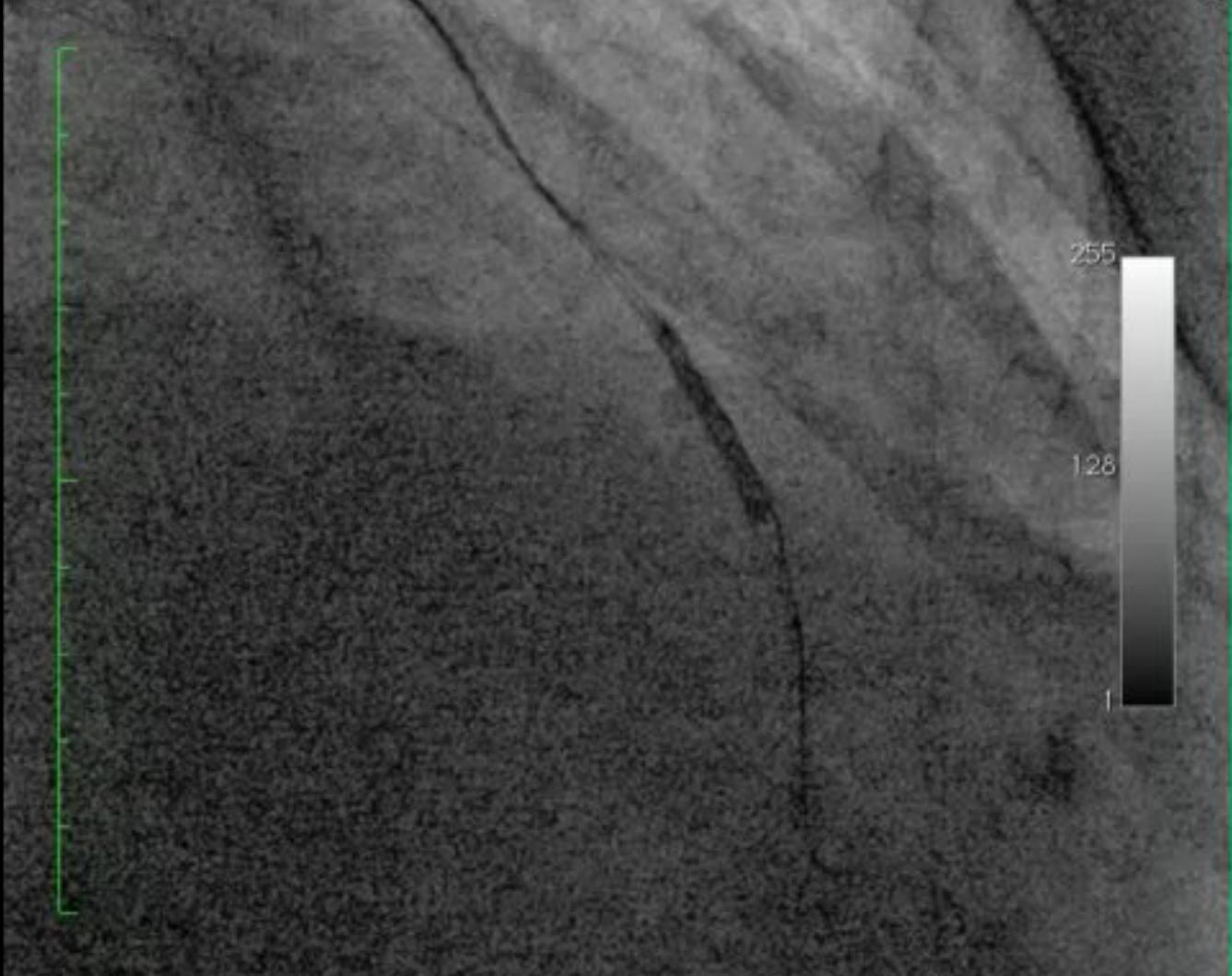
12/07/18, 10:12:0

PEGLossless Non-hierarchical-1stOrderPrediction

Made in Csr

Image size: 512 x 512
View size: 695 x 695
WL: 128 WW: 254

352477 (69 y , 68 y)
Cardioblow(GAGNOR) - unnamed
F20014529
39



Zoom: 136% Angle: 0

Im: 1/7

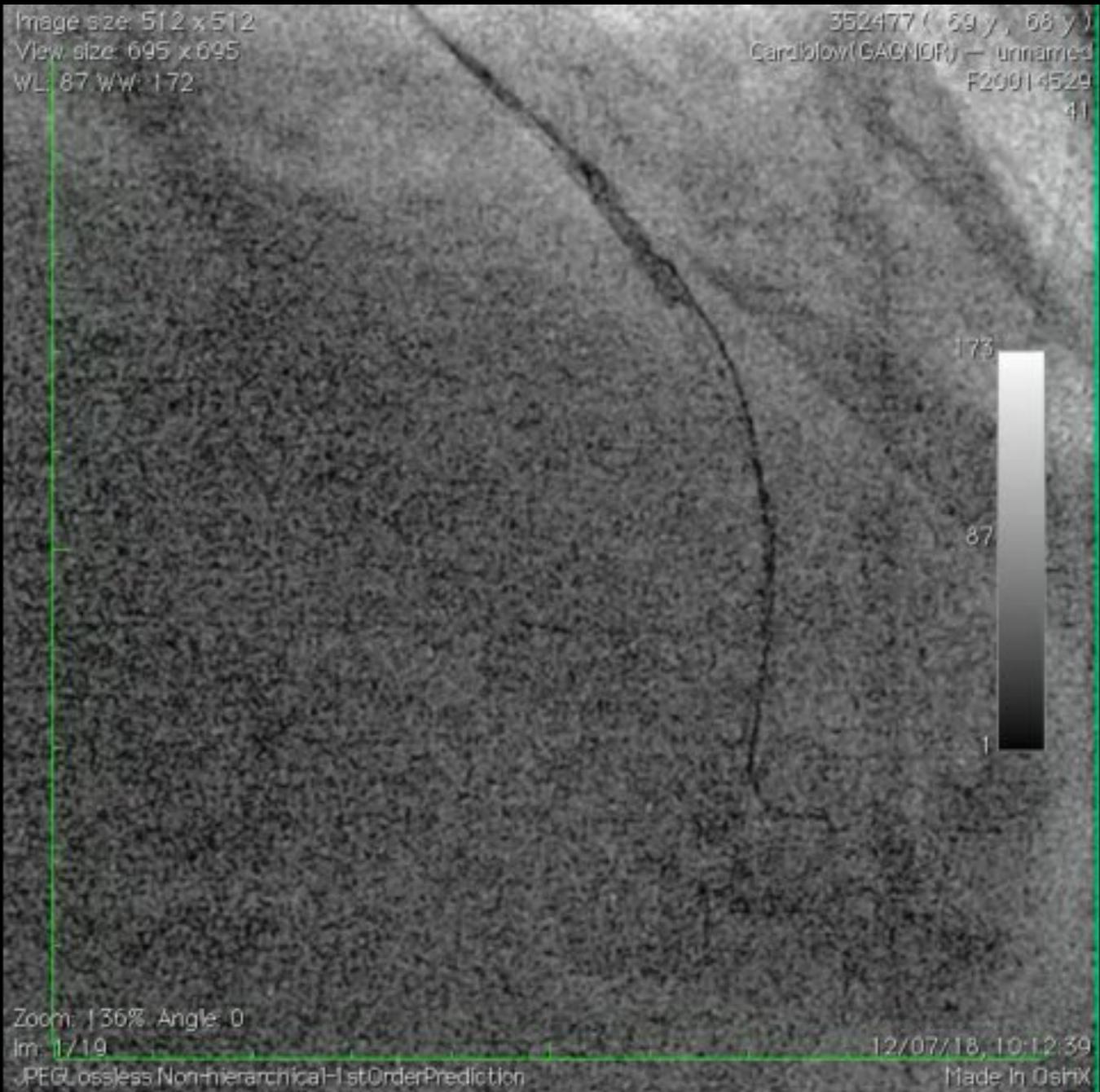
12/07/18, 10:12:29

JPEGLossless Non-hierarchical-1stOrderPrediction

Made in OSX

Image size: 512 x 512
View size: 695 x 695
WL: 87 WW: 172

352477 (59 y, 68 y)
Cardioblow(CACNOR) - unnamed4
F20014529
41



Zoom: 136% Angle: 0
Im: 1719

12/07/18, 10:12:39

JPEG Lossless Non-hierarchical 1st Order Prediction

Made In OshX

Image size: 512 x 512
View size: 695 x 695
WL: 128 W/W: 253

352477 (69 y , 68 y)
Cardioblow(GAS(OR) - unnamed
F20014529
44



Zoom: 136% Angle: 0

Im: 1/50

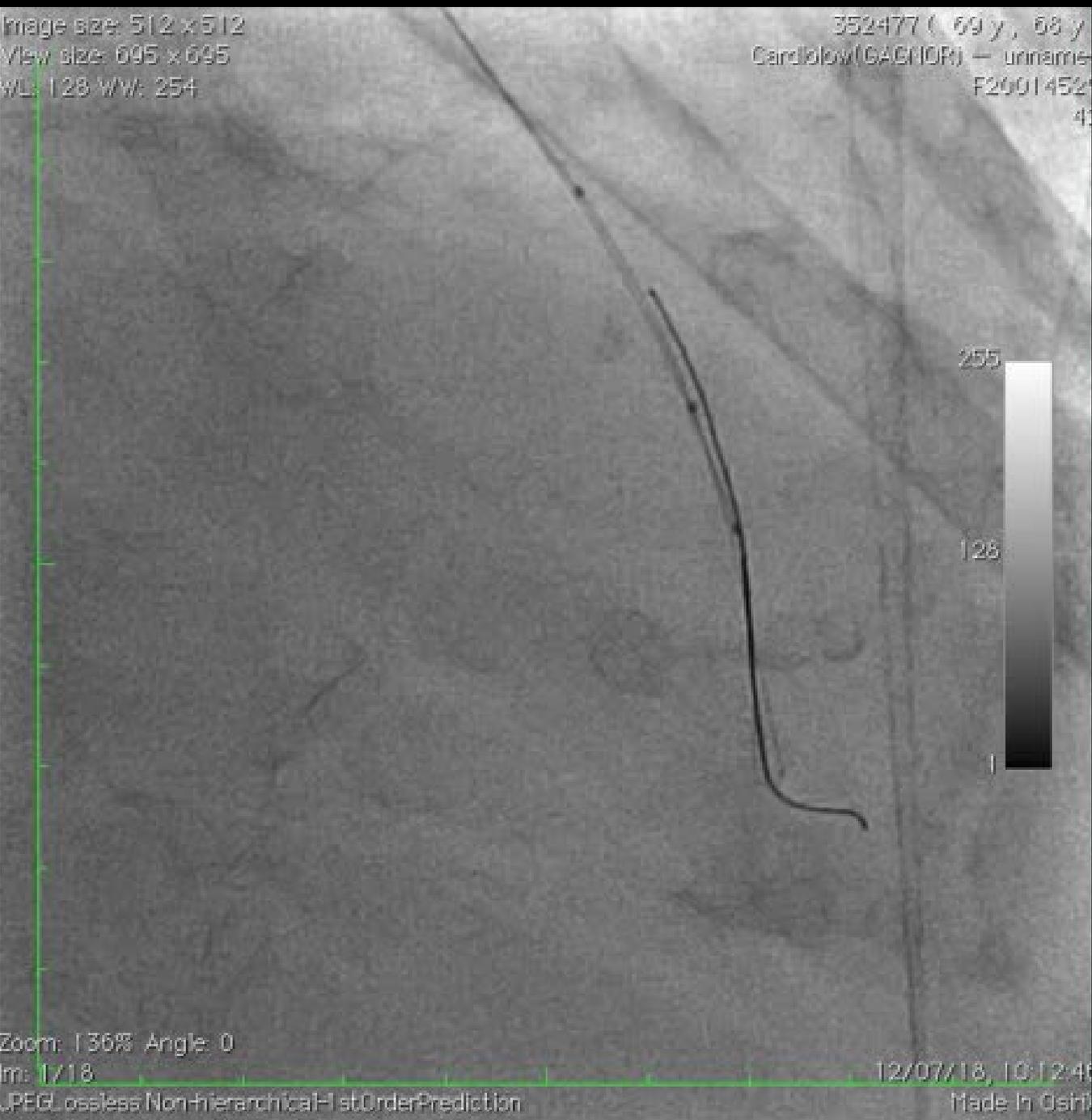
JPEG: ossless Non-hierarchical-HistOrderPrediction

12/07/18, 16:13:18

Made In Osirix

Image size: 512 x 512
View size: 695 x 695
WL: 128 WW: 254

352477 (69 y, 68 y)
Cardiolo (GAGNOR) - unname
F2001452
4



Zoom: 136% Angle: 0
In: 1718

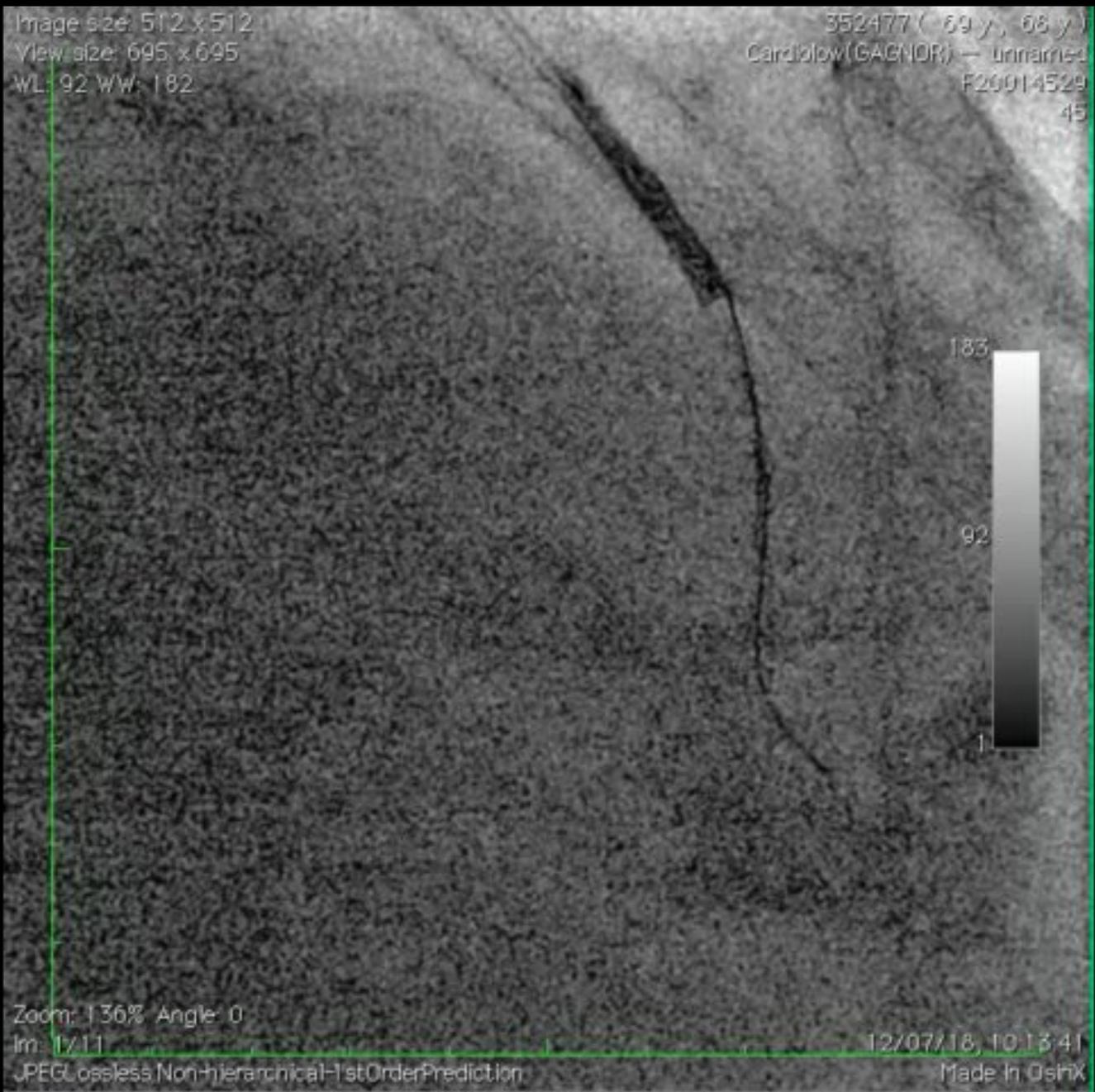
12/07/18, 10:12:46

JPEG Lossless Non-hierarchical-1stOrderPrediction

Made In Gosh

Image size: 512 x 512
View size: 695 x 695
WL: 92 W/W: 182

352477 (69 y, 68 y)
CardiFlow (GAGNOR) — unnamed
F20014529
45



Zoom: 136% Angle: 0

In: 1/11

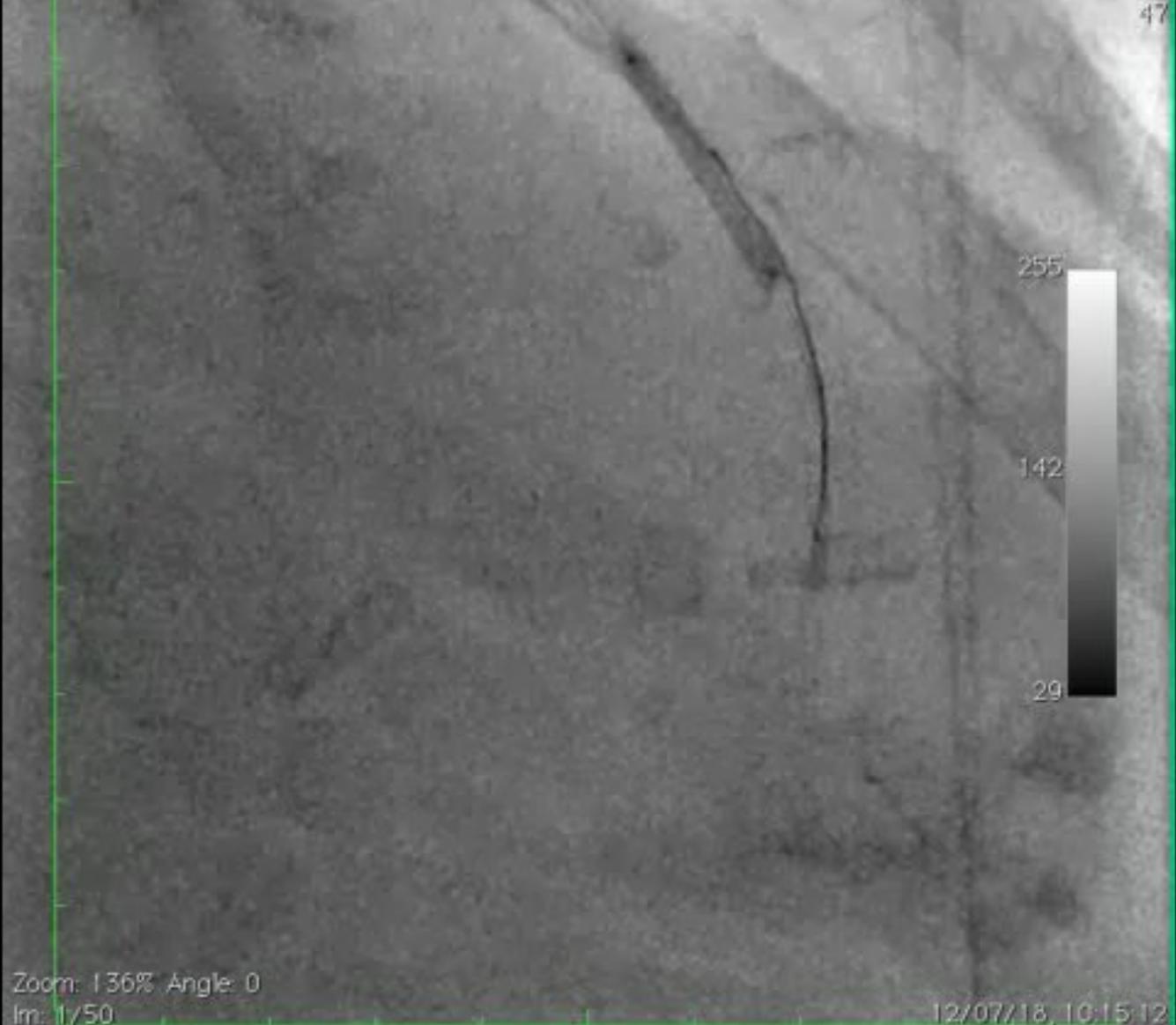
12/07/18, 10:13:41

JPEG Lossless Non-hierarchical 1st Order Prediction

Made In OsiriX

Image size: 512 x 512
View size: 695 x 695
WL: 142 WW: 226

352477 (69 y , 68 y)
Cardiobov(GAGNOR) - unnamed
F20014529
47



Zoom: 136% Angle: 0
Im: 1/50

12/07/18, 10:15:12

JPEG_Lossless Non-hierarchical-1stOrderPrediction

Made In Osirix

Image size: 512 x 512
View size: 695 x 695
WL: 143 WW: 224

352477 (69 y, 68 y)
CardiFlow(GAENOR) - unnamed
F20014529
49

Zoom: 136% Angle: 0
Im: 1/50

12/07/18, 10:16:04

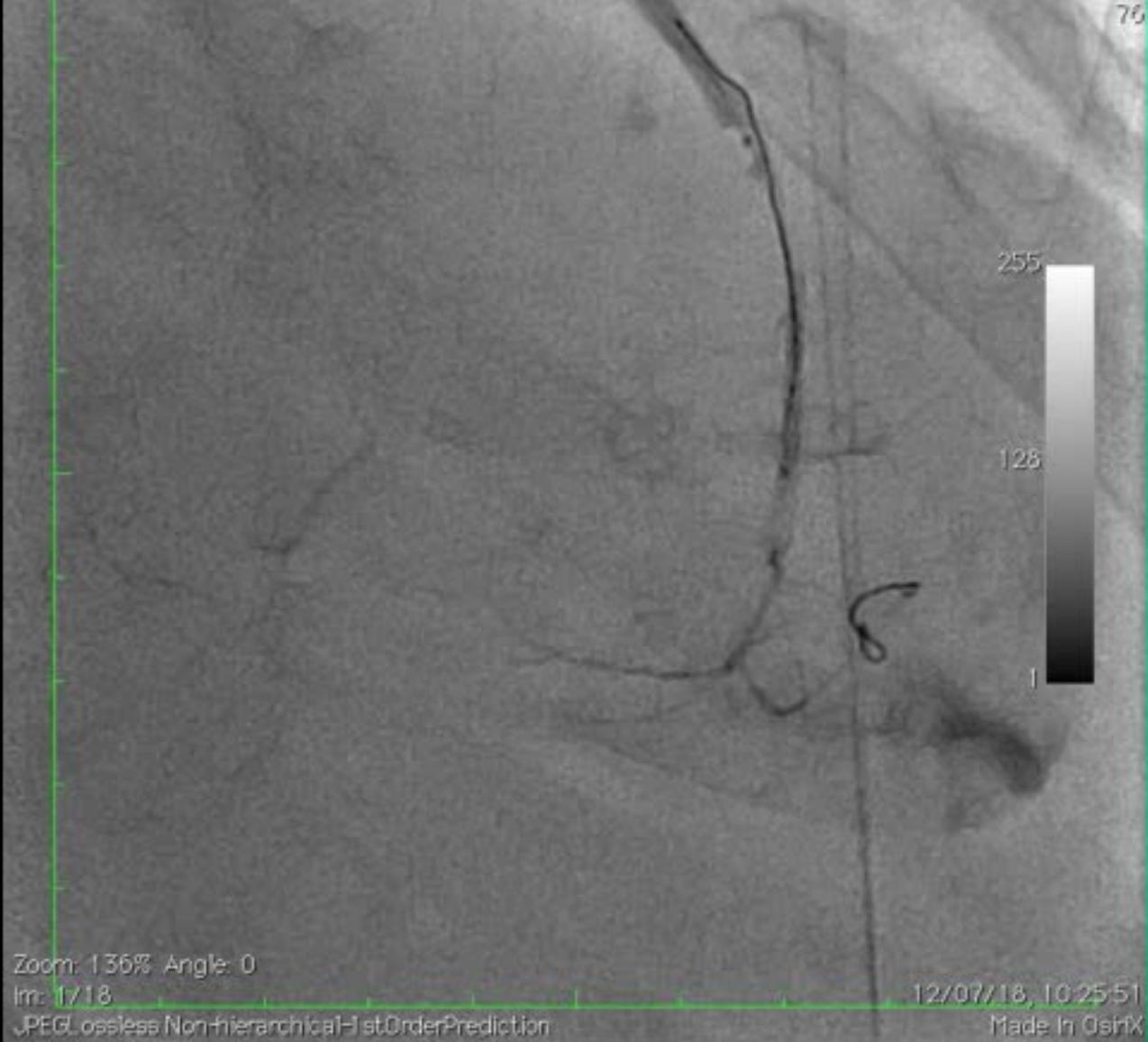
PEGLossless Non-hierarchical-1stOrderPrediction

Made In Osirix



Image size: 512 x 512
View size: 695 x 695
WL: 128 W/W: 254

352477 (59 y , 68 y)
Cardiolog(GAGNOR) - unnamed
F20014529
76



Zoom: 136% Angle: 0
Im: 1/18

12/07/18, 10:25:51

JPEG, lossless Non-hierarchical-J stOrderPrediction

Made In Osirix

Image size: 512 x 512
View size: 695 x 695
WL: 128 WW: 254

352477 (69 y , 68 y)
CardioLow(GACHOR) - unnamed4
F24014529
79



Zoom: 136% Angle: 0
Im: 1719

12/07/18, 10:29:22

Image size: 512 x 512
View size: 695 x 695
WL: 128 WW: 254

352A77 (69 y , 68 y)
Cardioblow(GA6F10R) - unnamed
F20014529
83



Zoom: 136% Angle: 0

Im: 1/28

JPEG Lossless Non-hierarchical-1stOrderPrediction

12/07/18, 10:30:35

Made in OsirX

Image size: 512 x 512
View size: 695 x 695
WL: 122 WW: 243

352477 (69 y, 68 y)
Cardioblow (GAGNOR) — unnamed
F2001452



Zoom: 136% Angle: 0

Im: 1/29

12/07/18, 10:33:2

JPEG Lossless Non-hierarchical H st Order Prediction

Made In Osh

Image size: 512 x 512
View size: 695 x 695
wL: 128 wW: 254

352477 (69 y, 68)
Cardioloan(GAGNOR) - unnam
F2001452



Zoom: 136% Angle: 0

m: 1/33

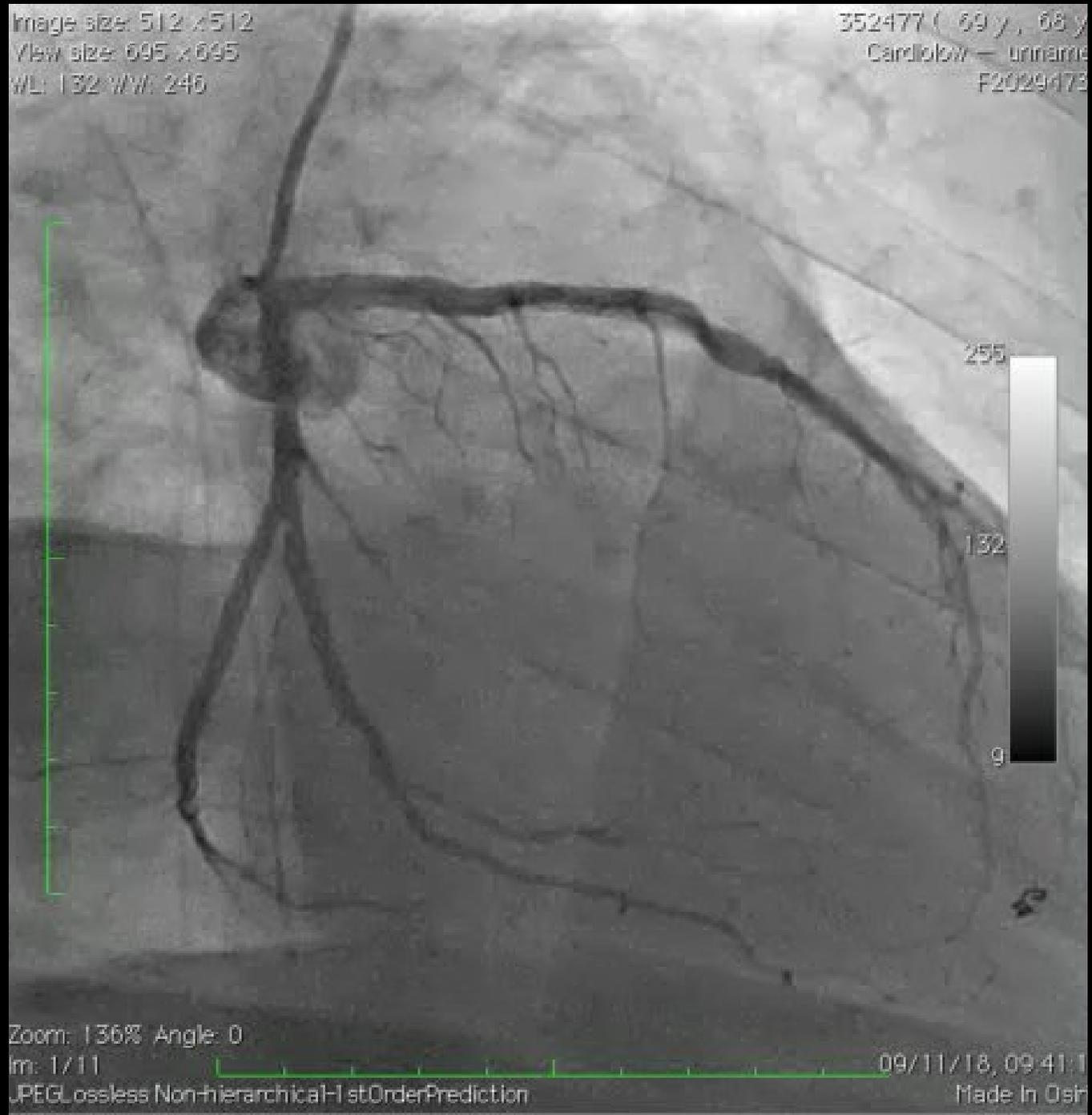
12/07/18, 10:33:5

.JPEG Lossless Non-hierarchical Histogram Order Prediction

Made In Osir

Image size: 512 x 512
View size: 695 x 695
WL: 132 WW: 245

352477 (69 y, 68 y)
Cardio/77 - unname
F2029473



Zoom: 136% Angle: 0

Im: 1/11

09/11/18, 09:41:1

JPEGLossless Non-hierarchical-IstOrderPrediction

Made in Osh

Image size: 512 x 512
View size: 695 x 695
WL: 128 WW: 254

352477 (69 y , 68 y)
CardioLow - unnamed
F20294732

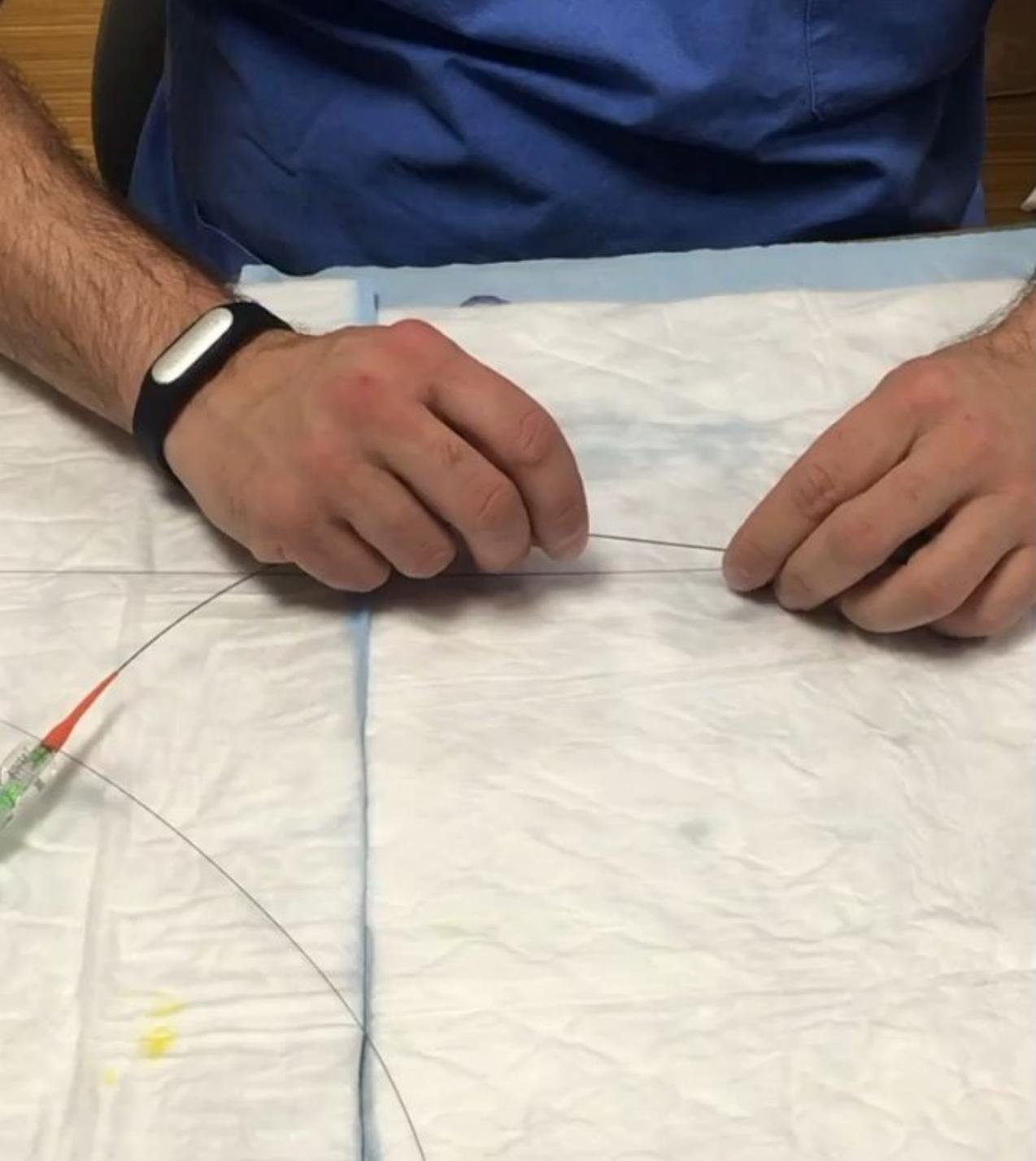


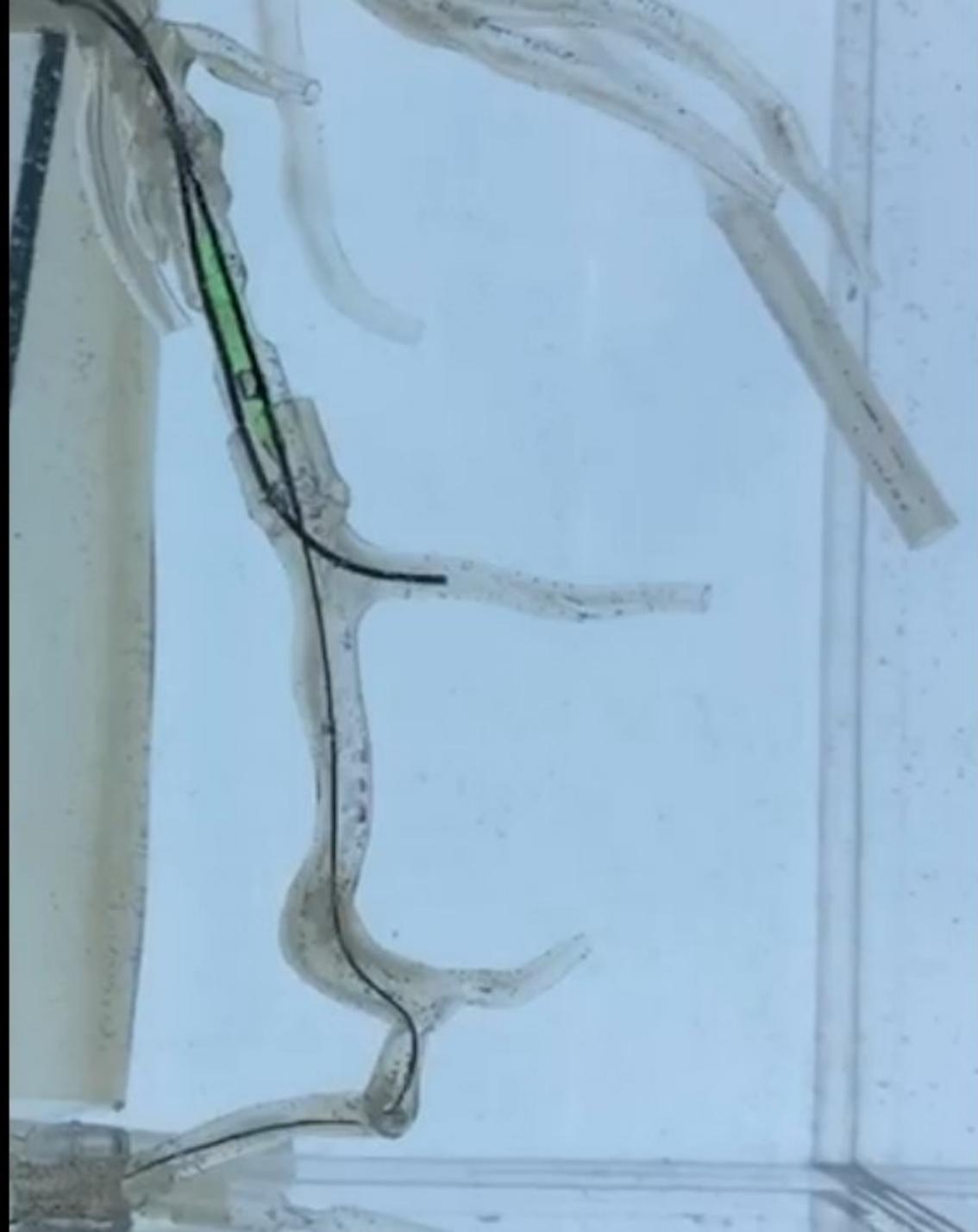
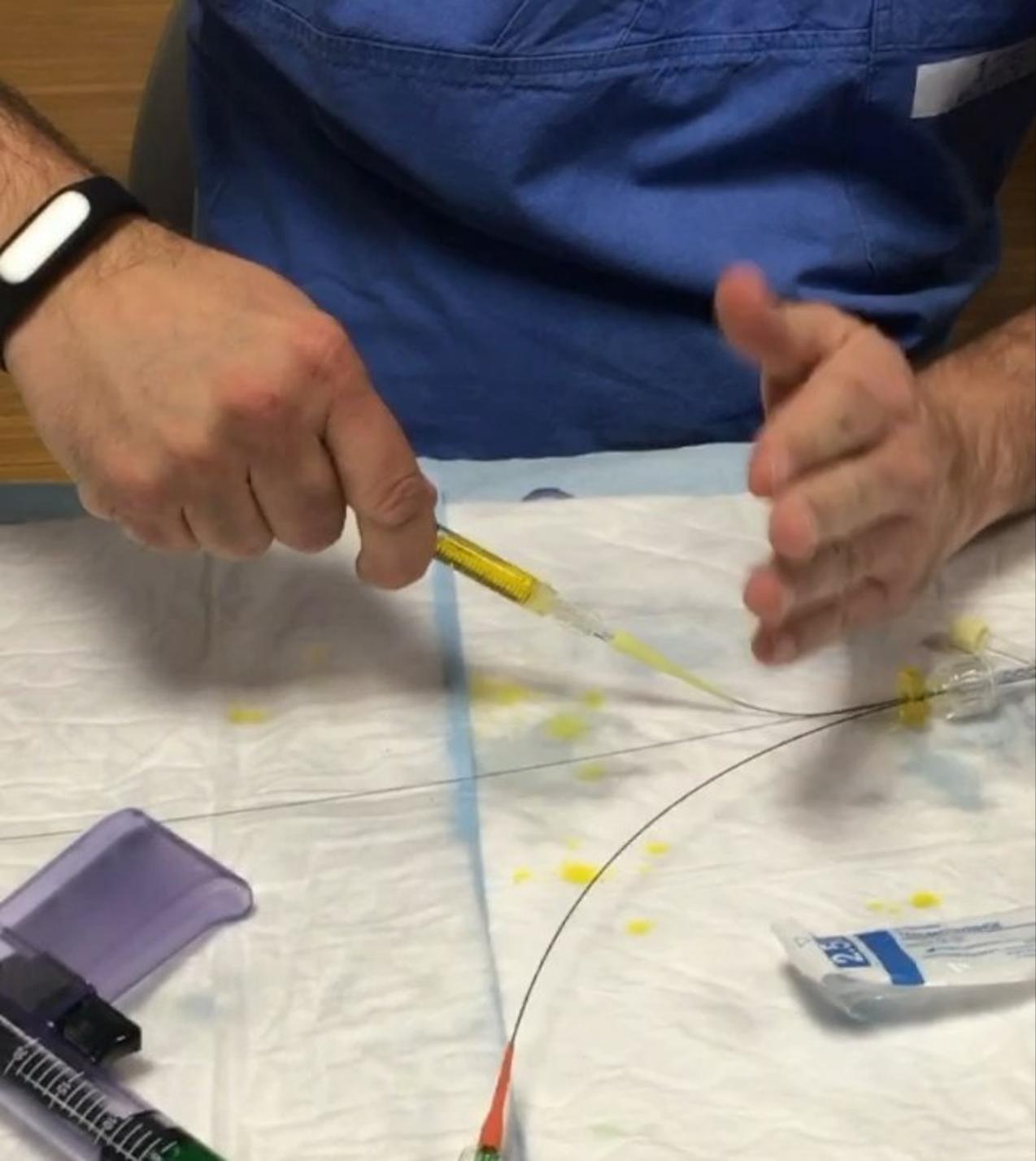
Zoom: 136% Angle: 0
m: 1/11

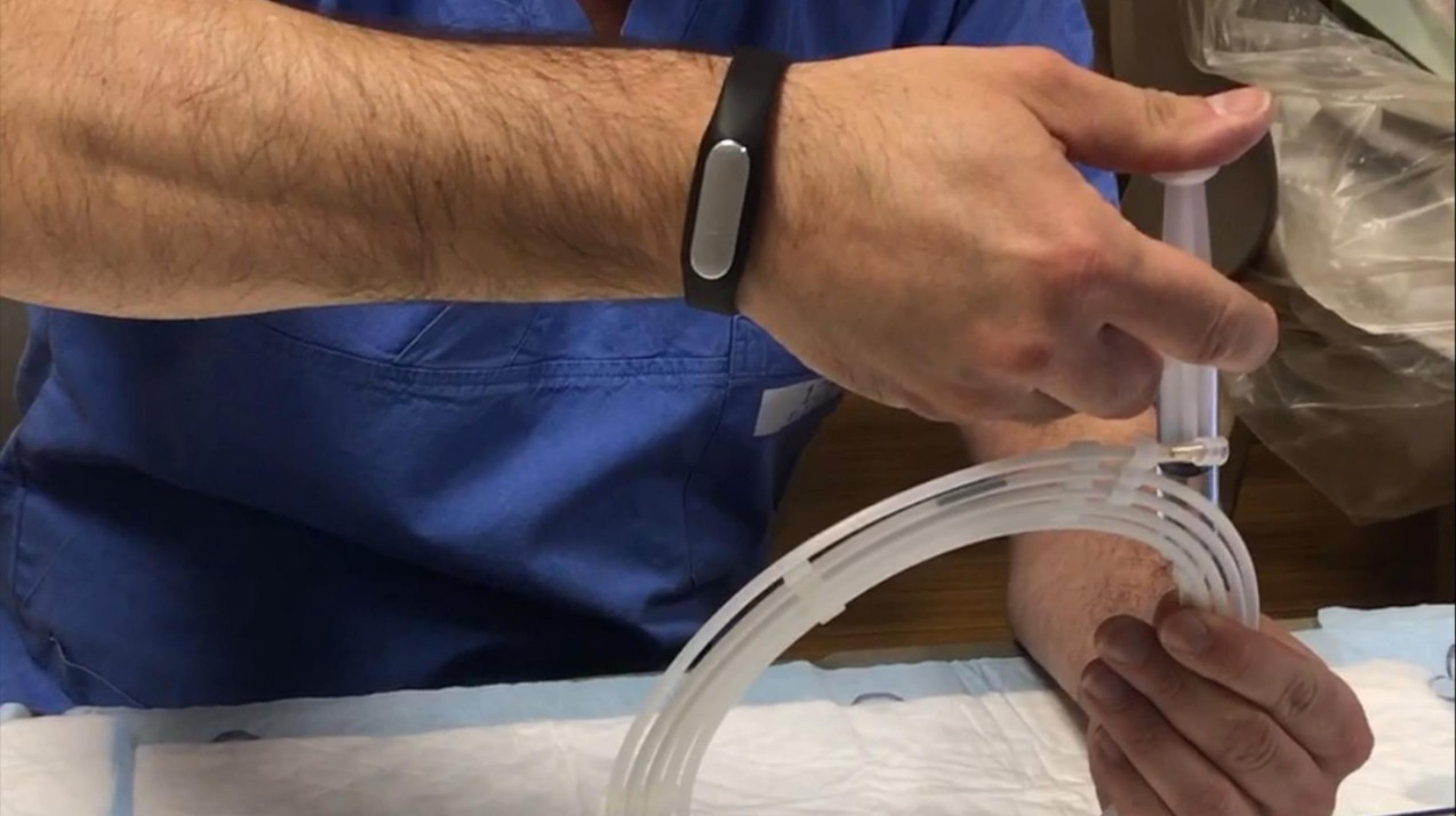
09/11/18, 09:42:04

JPEG Lossless Non-hierarchical-1stOrderPrediction

Made In Osirix





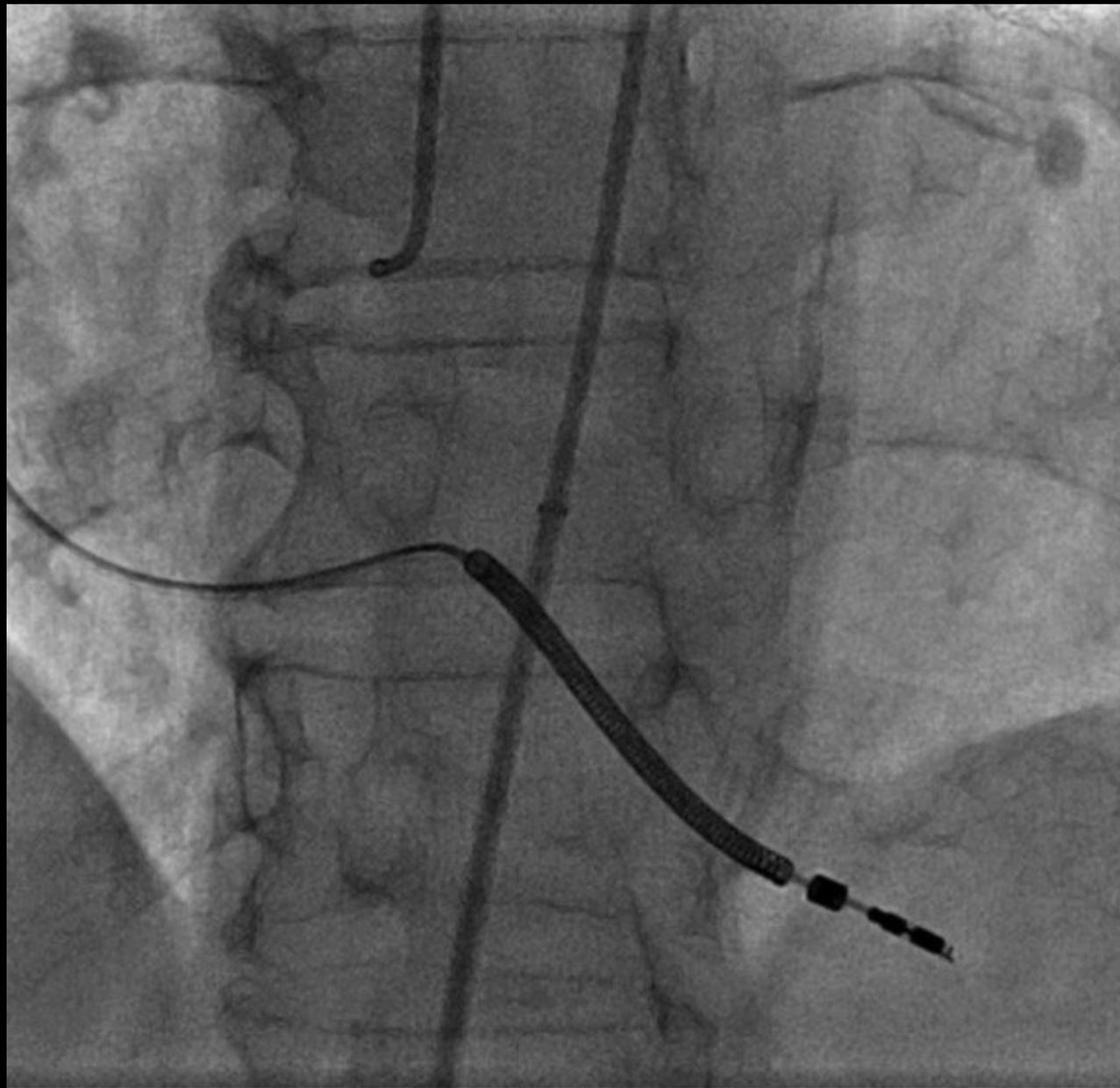


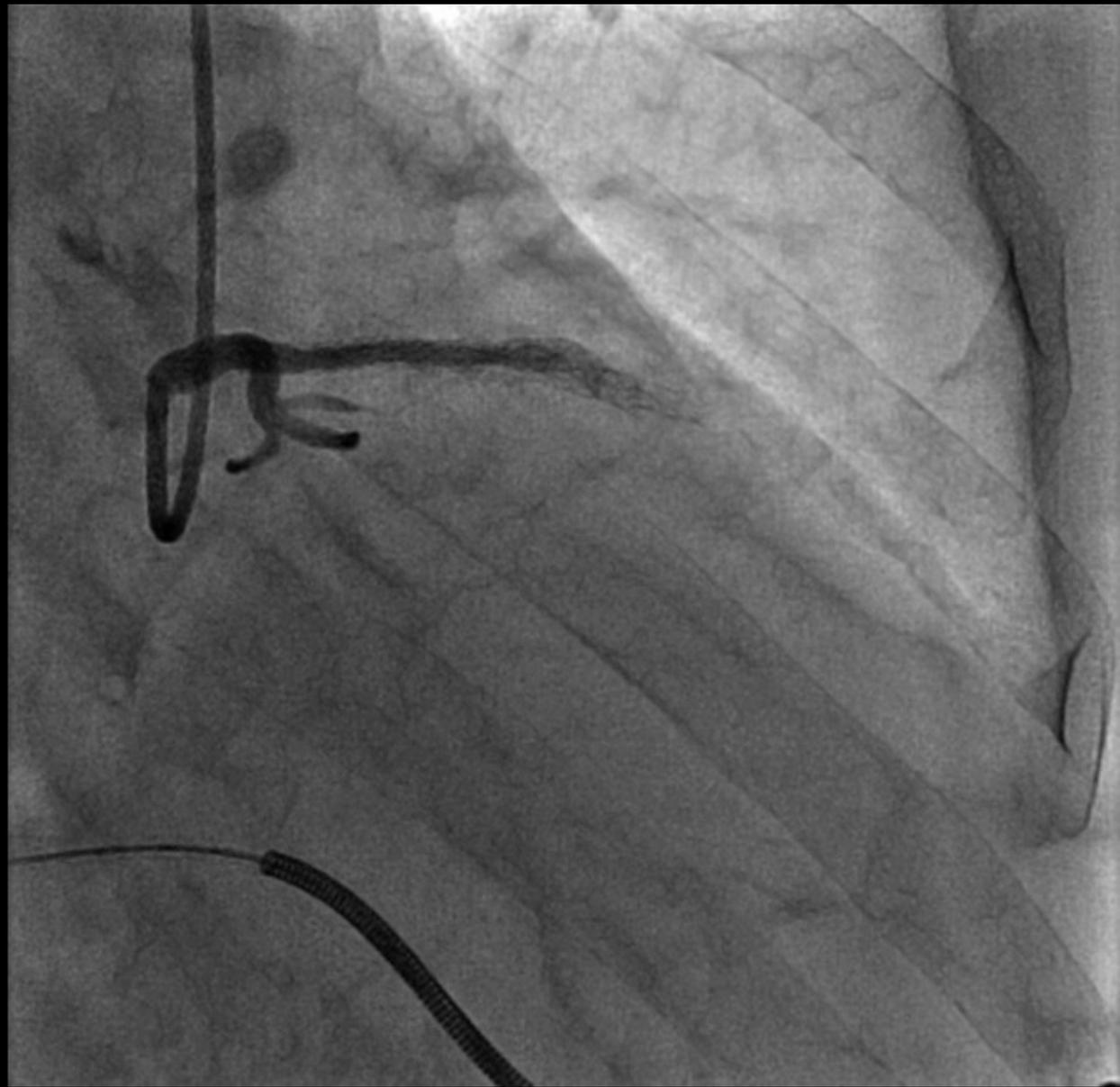
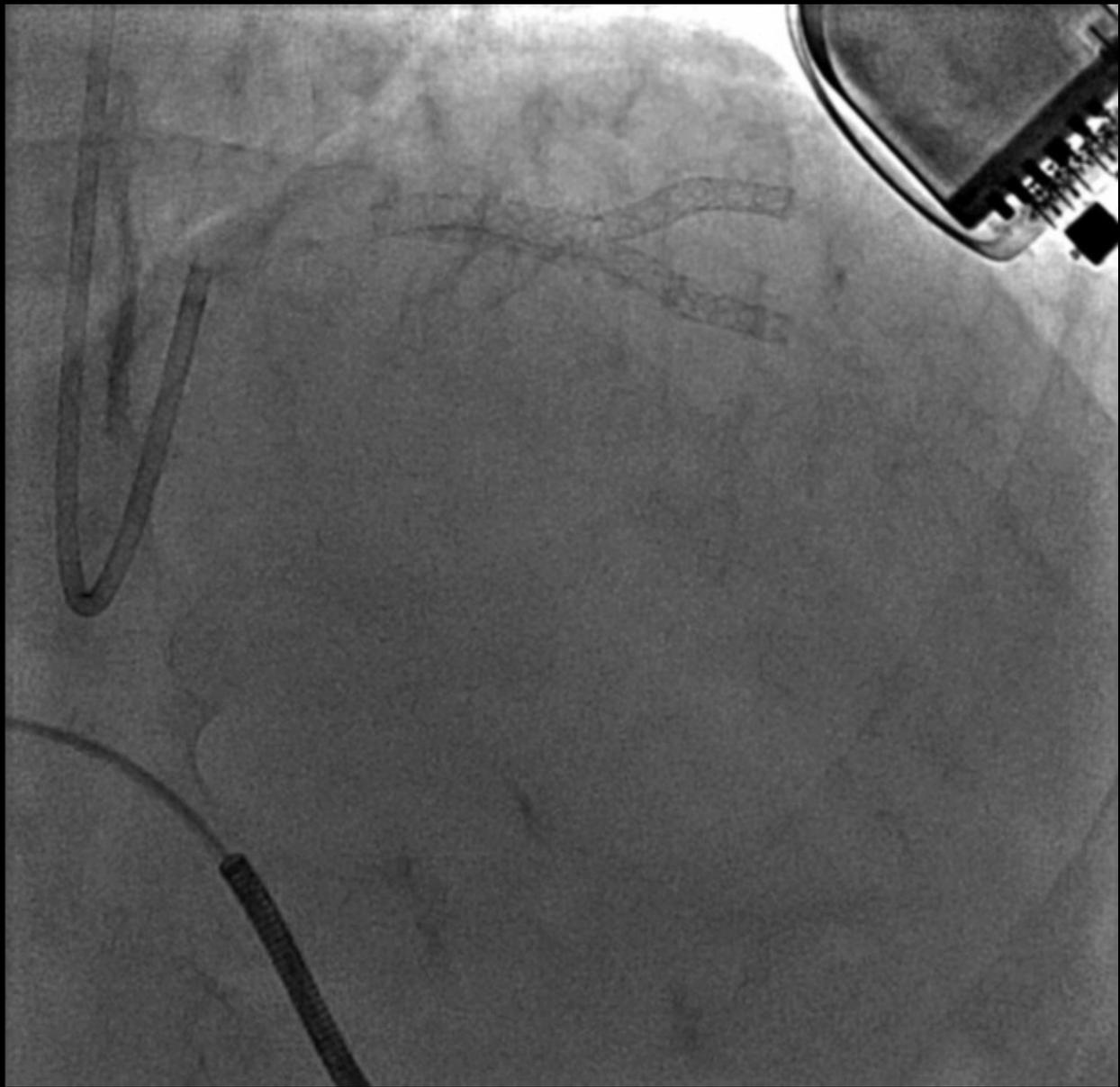


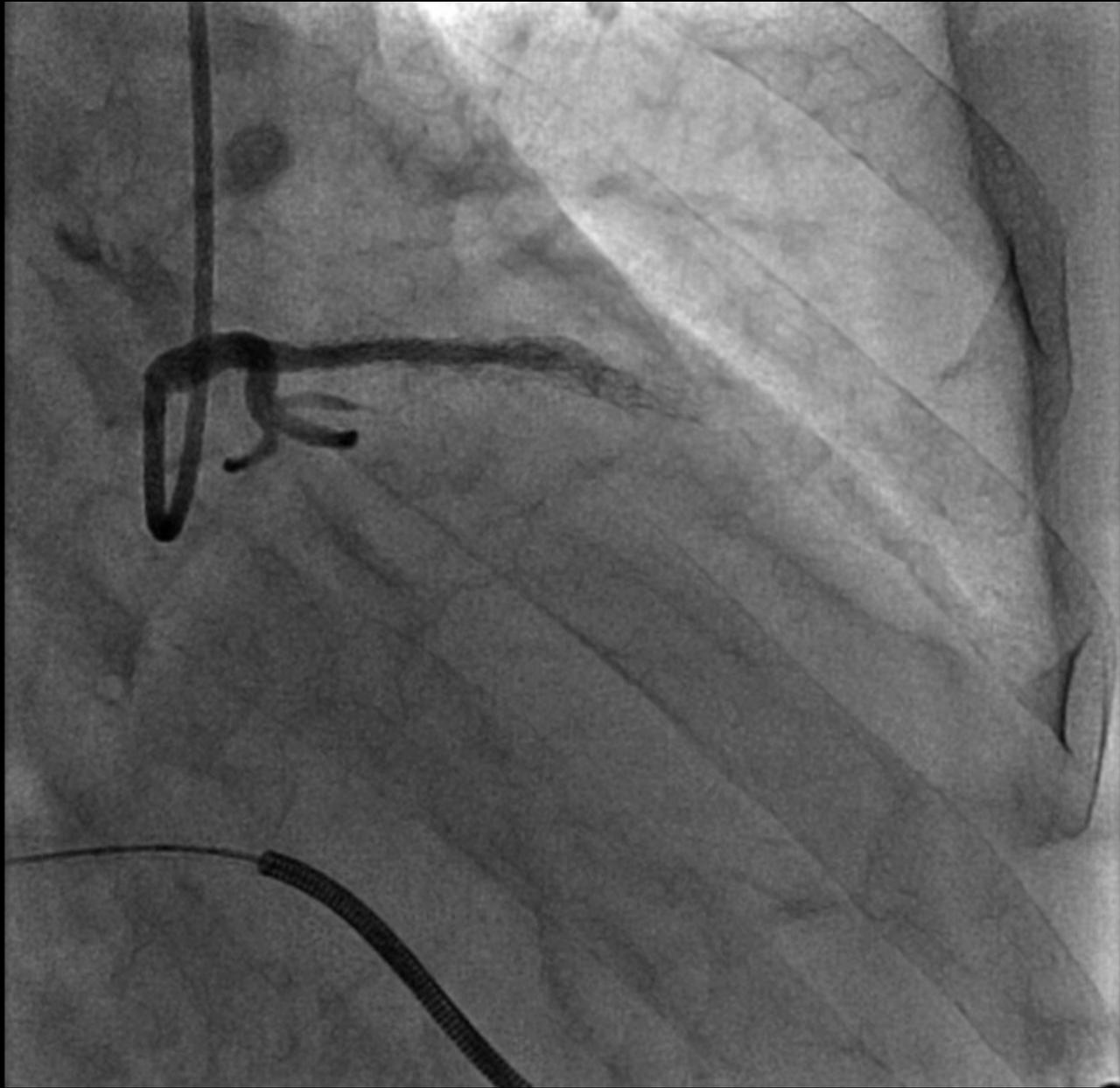
**CORONARY
PERFORATIO
N
SIMULATION
ON
STAGE #2**

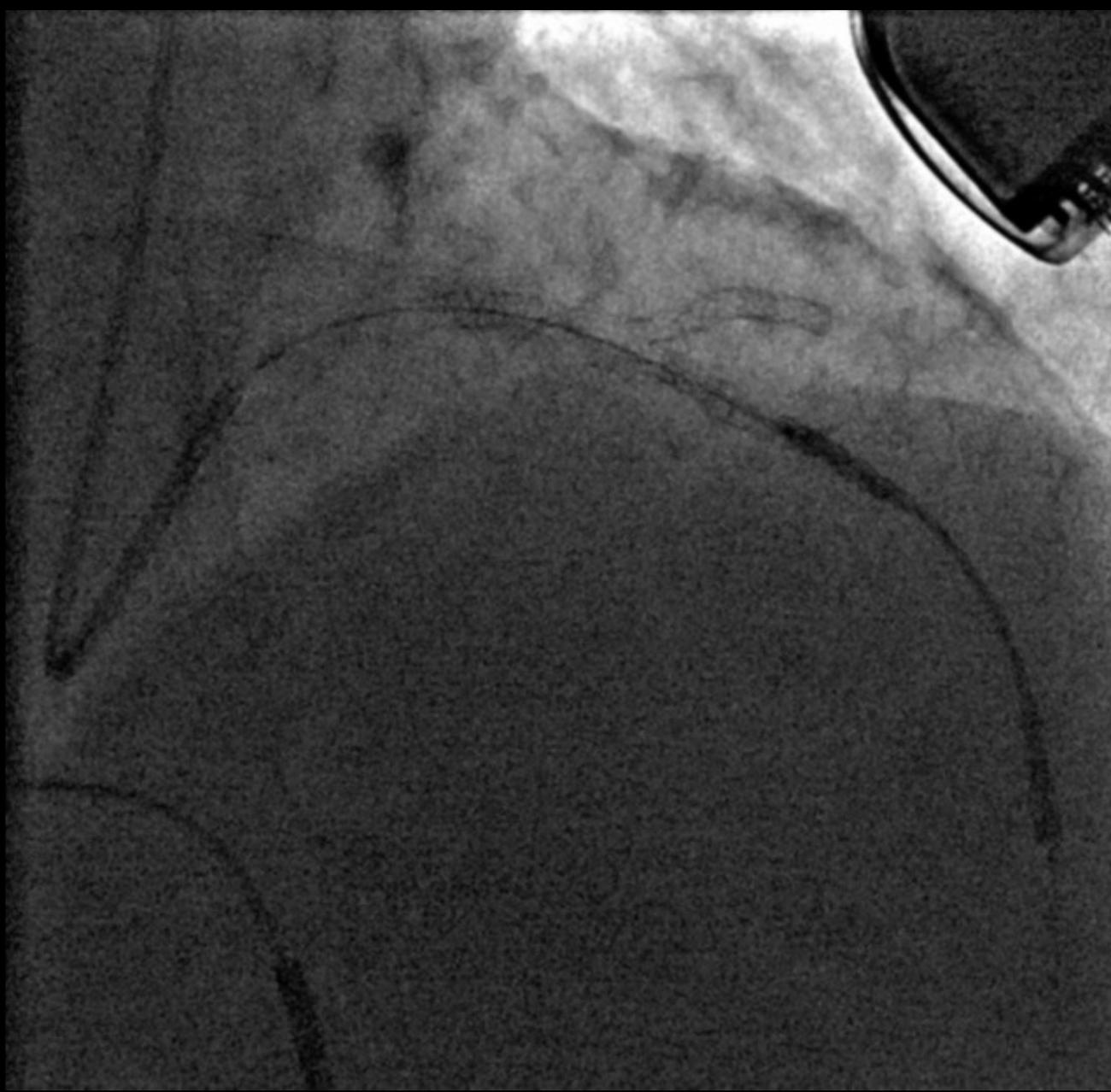
Storia clinica:

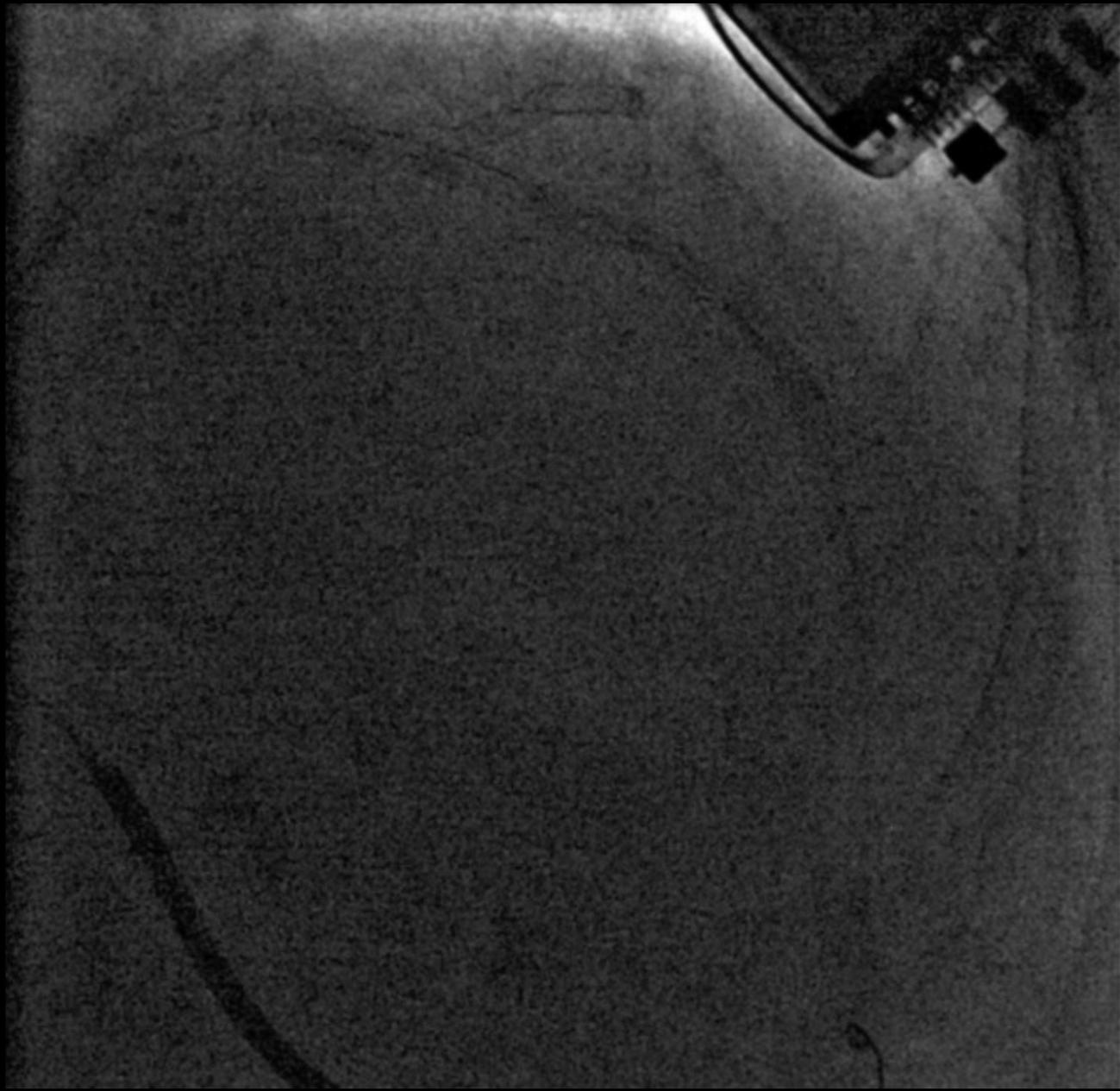
Lesione anteriore con QS V1-V5. D

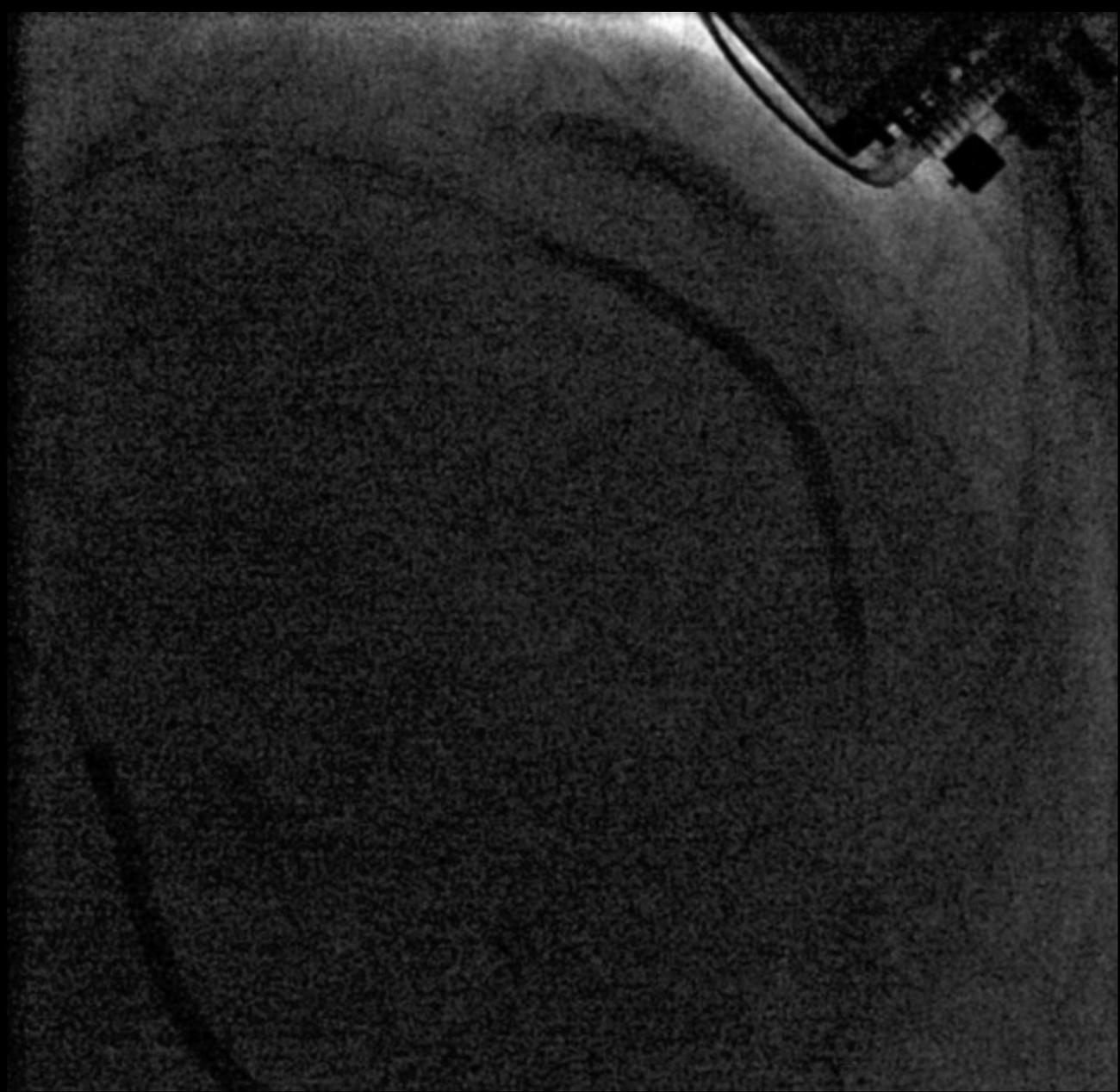


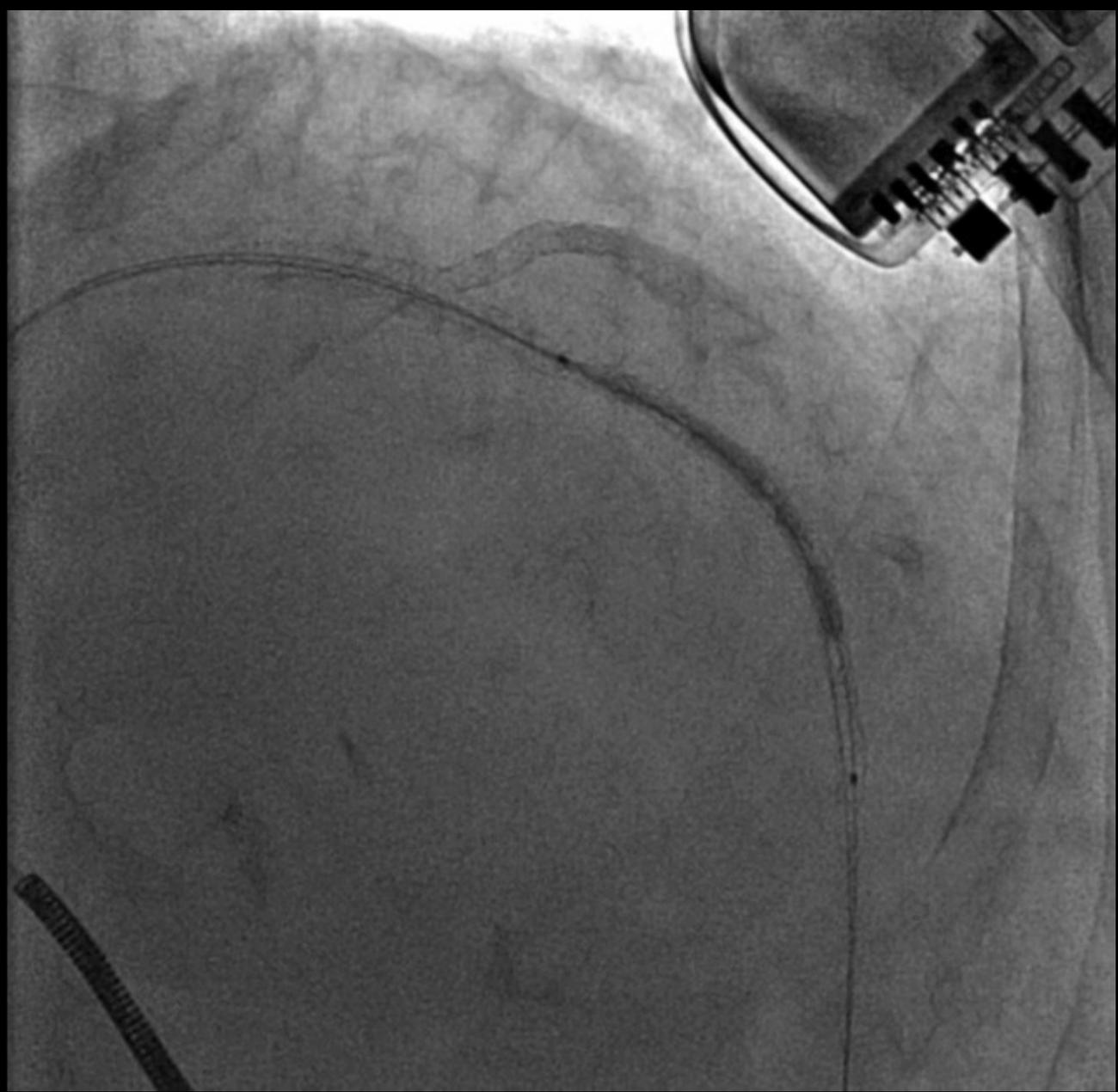


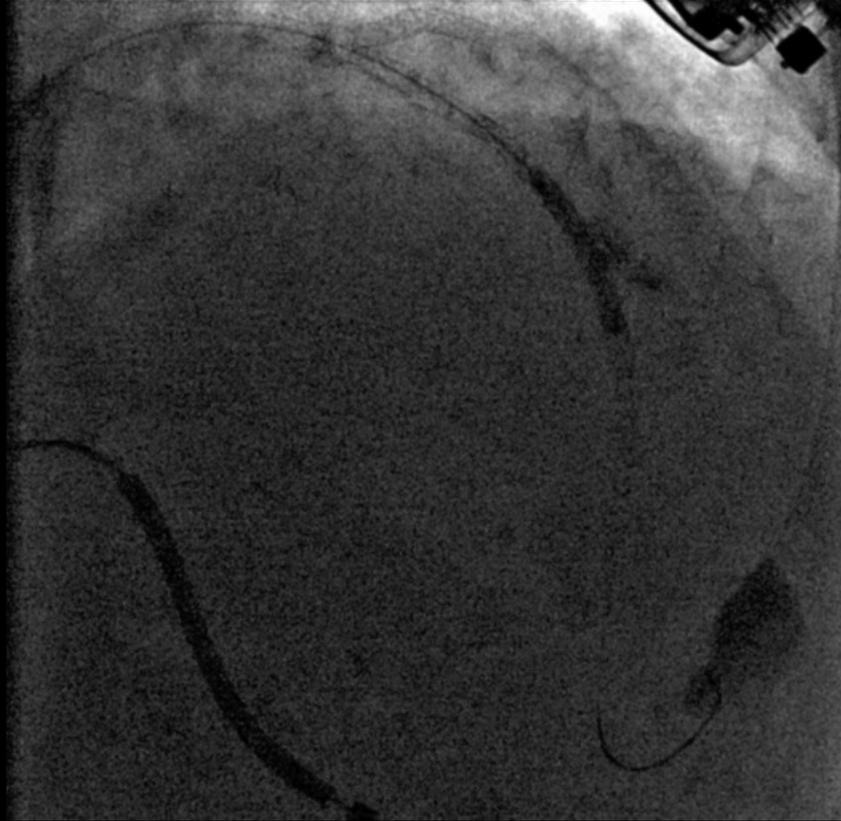


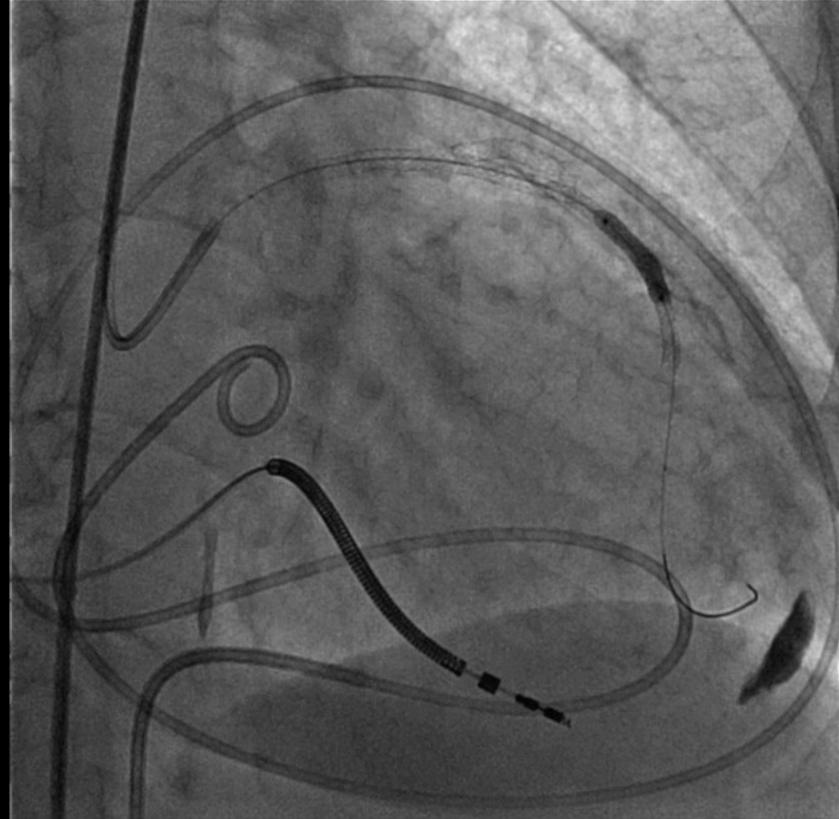






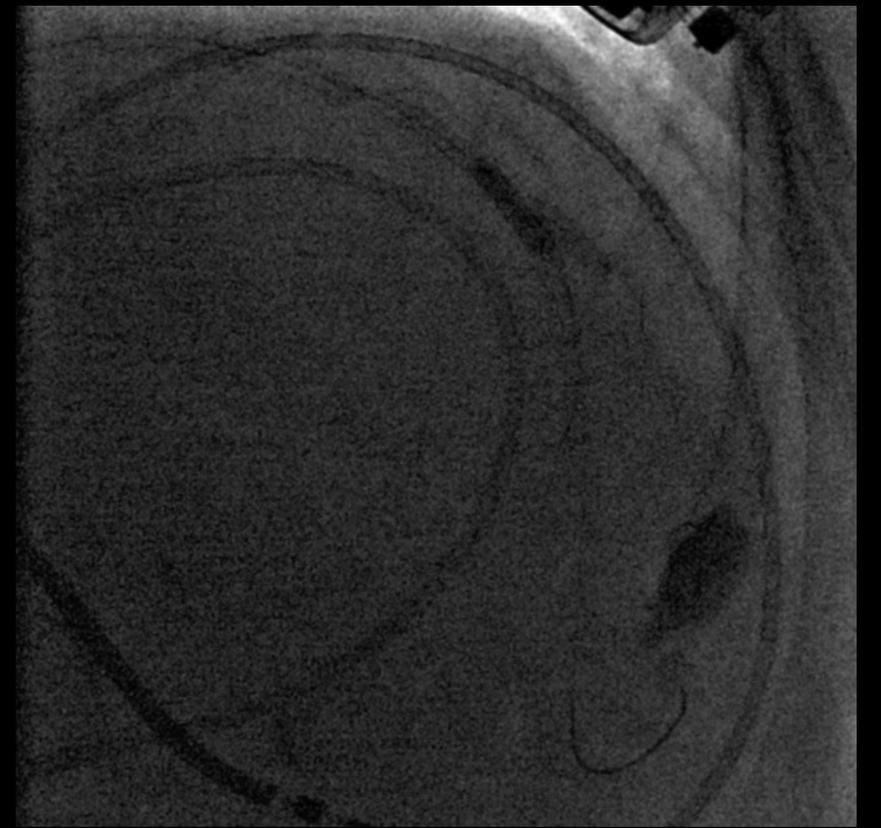




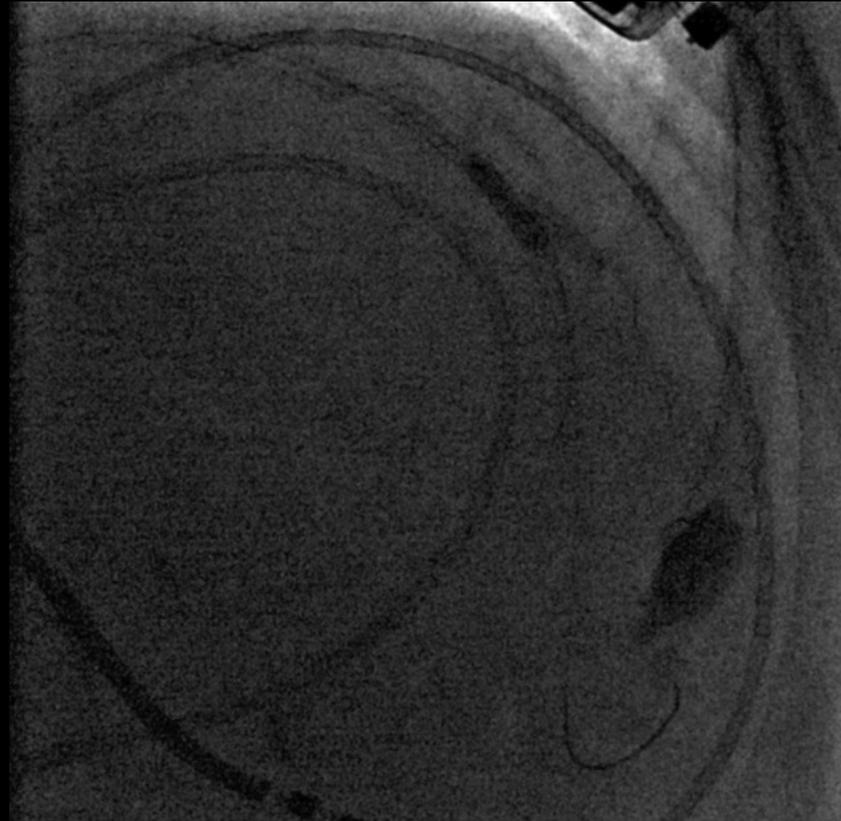


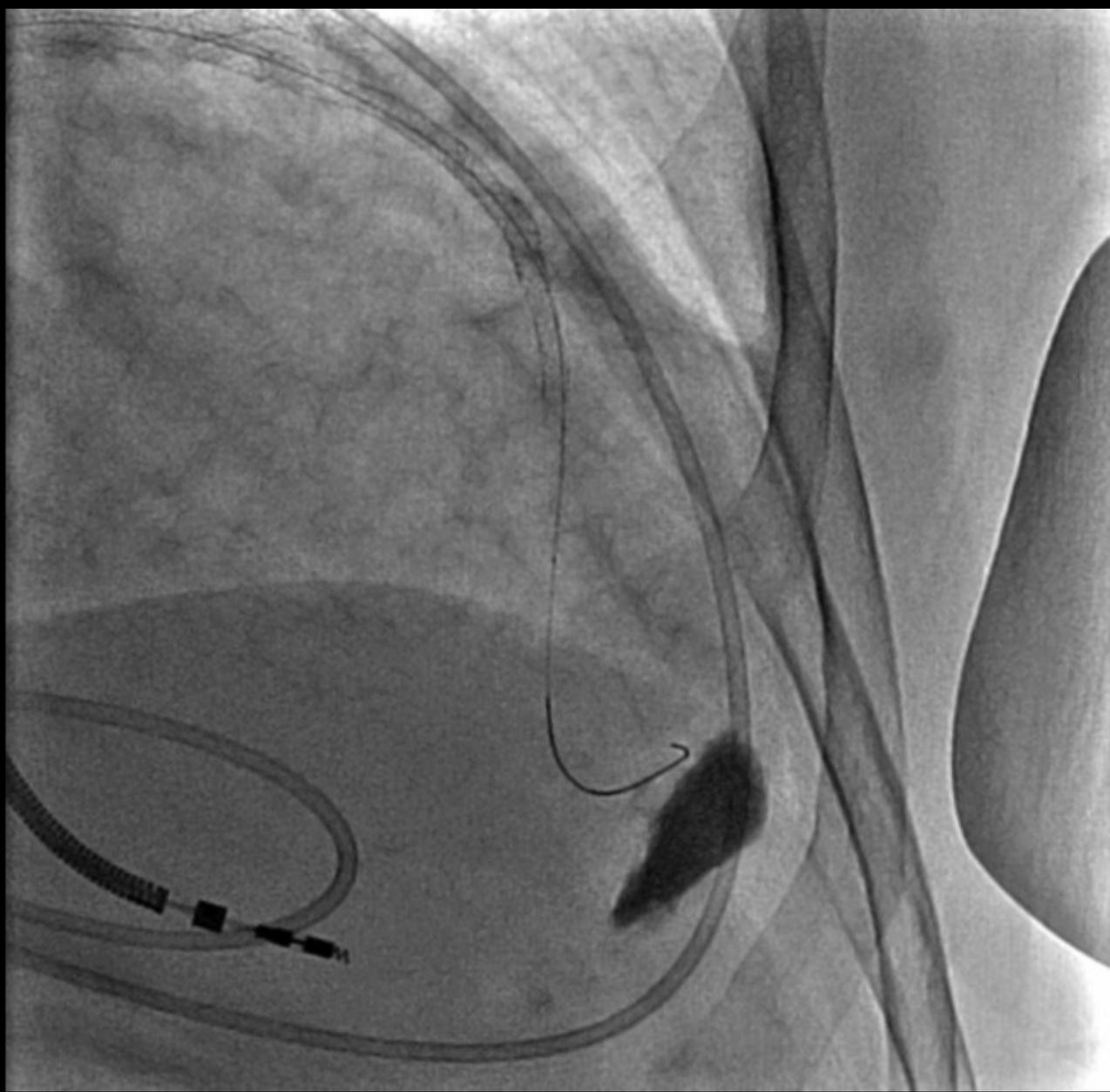


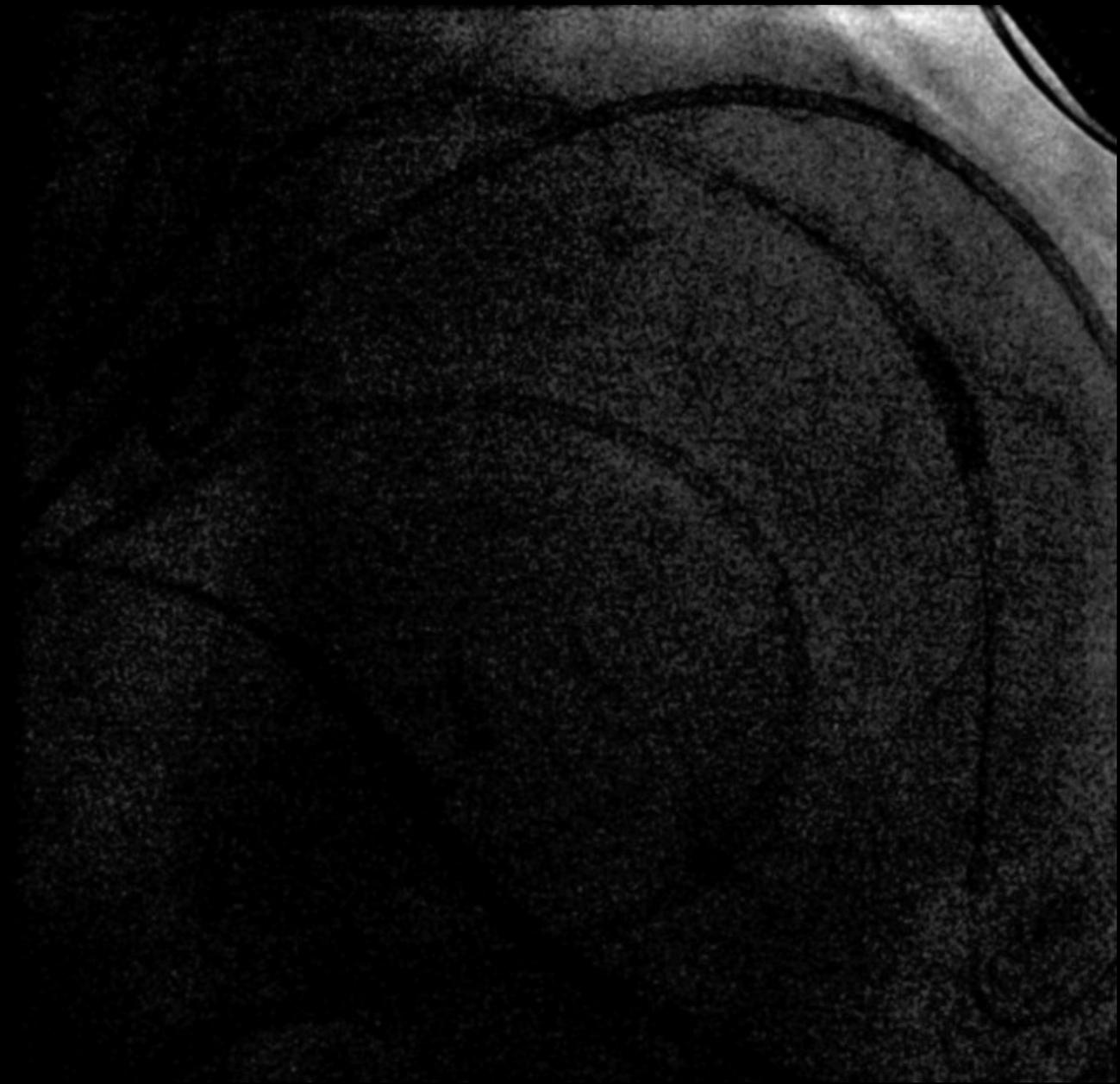
51

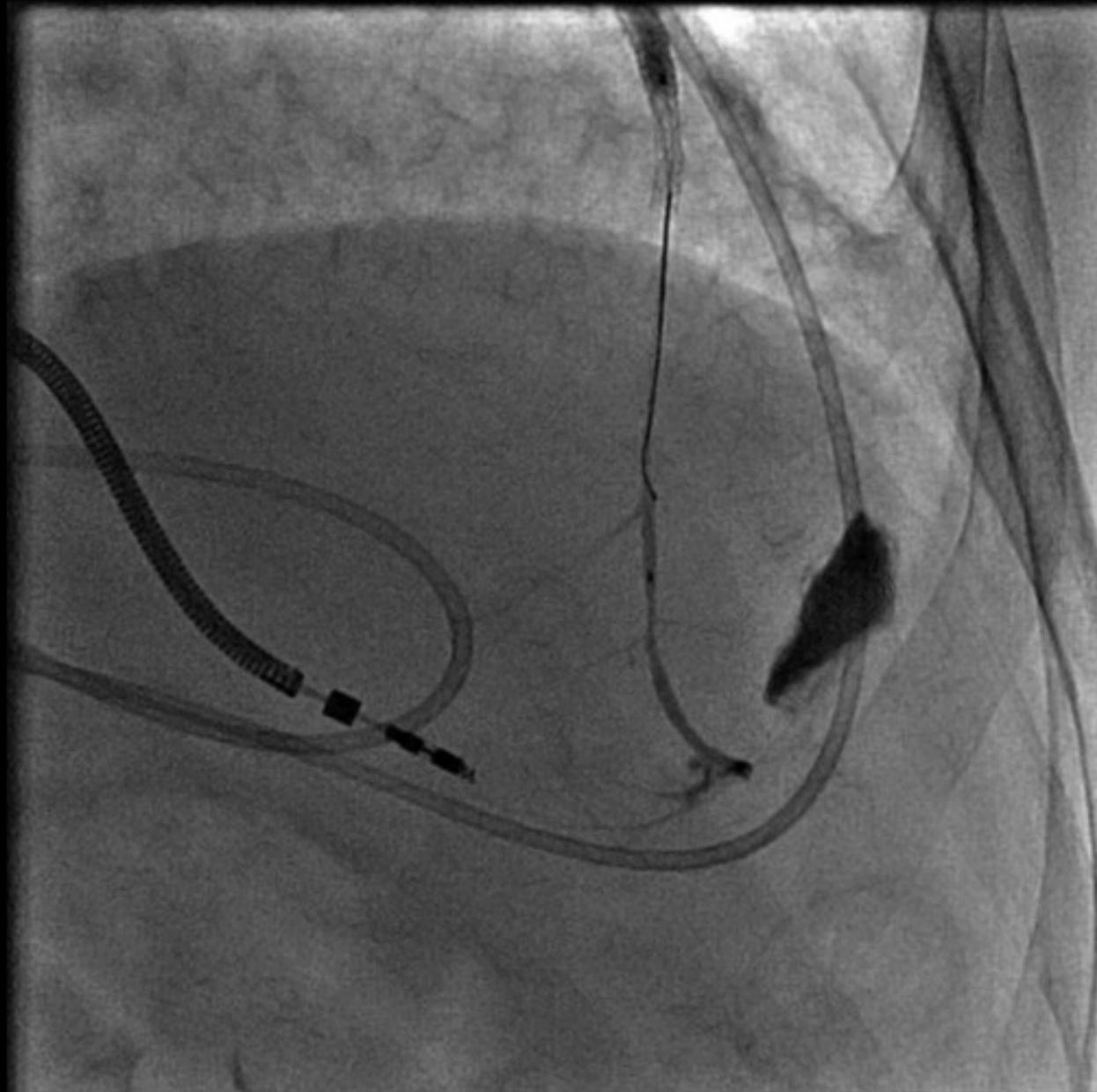


51

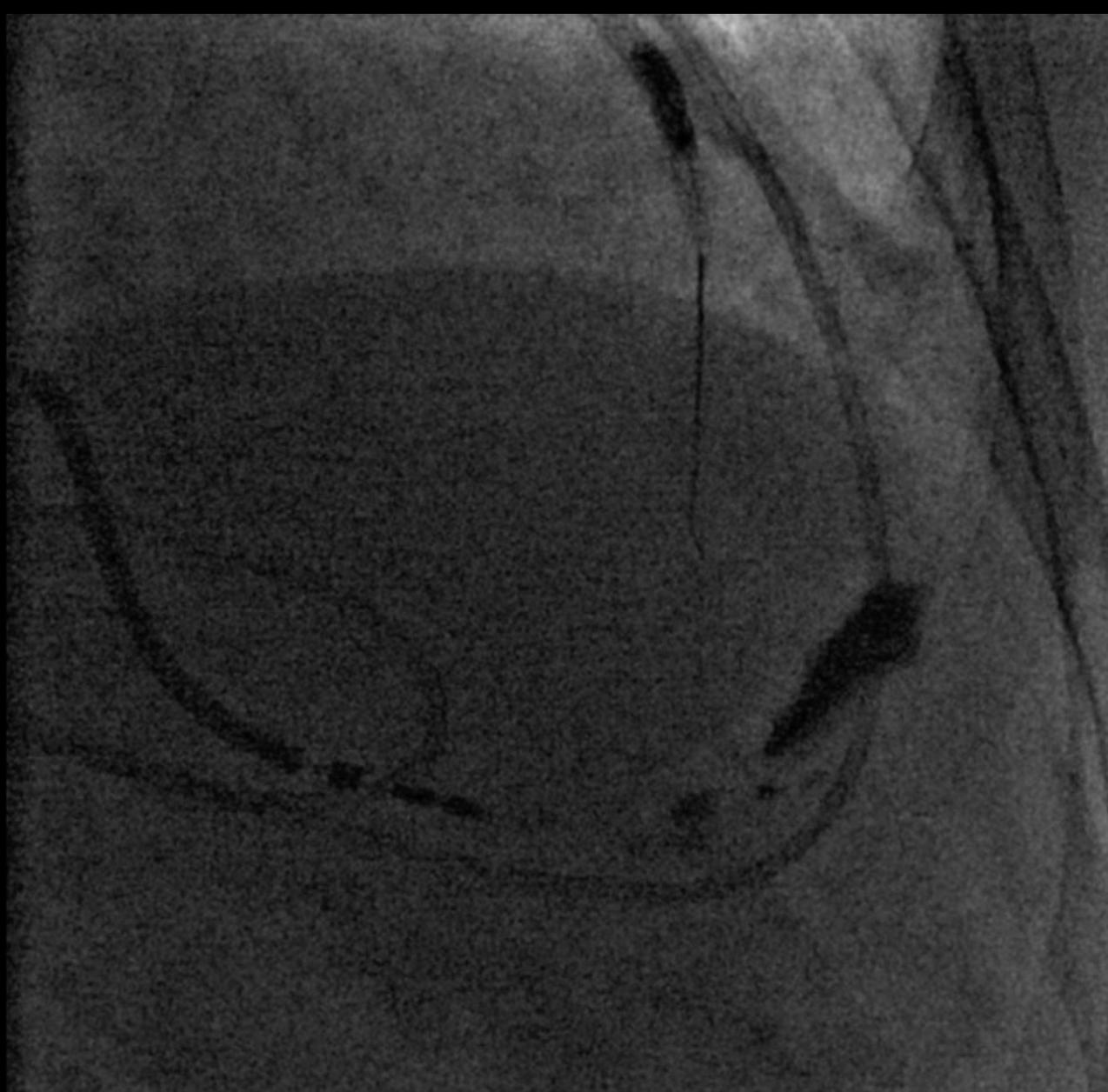




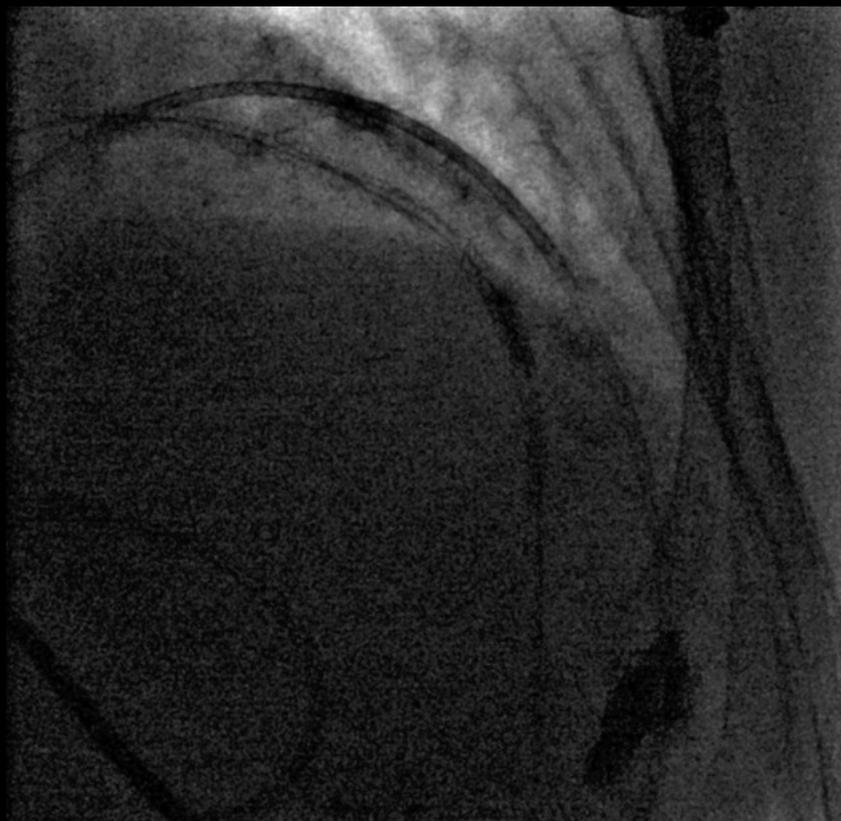


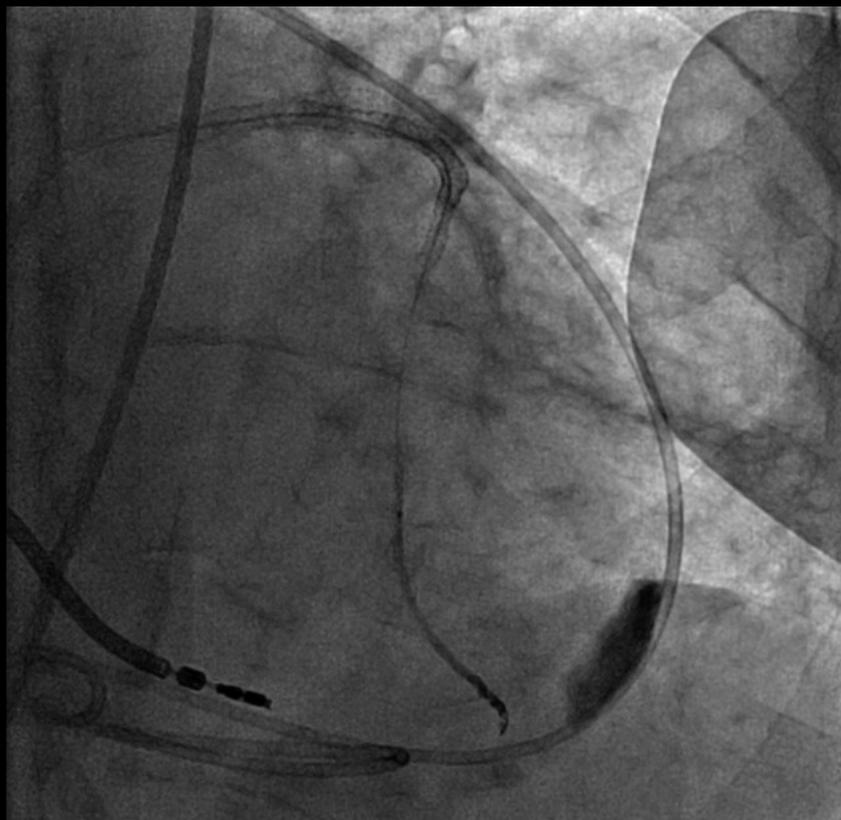


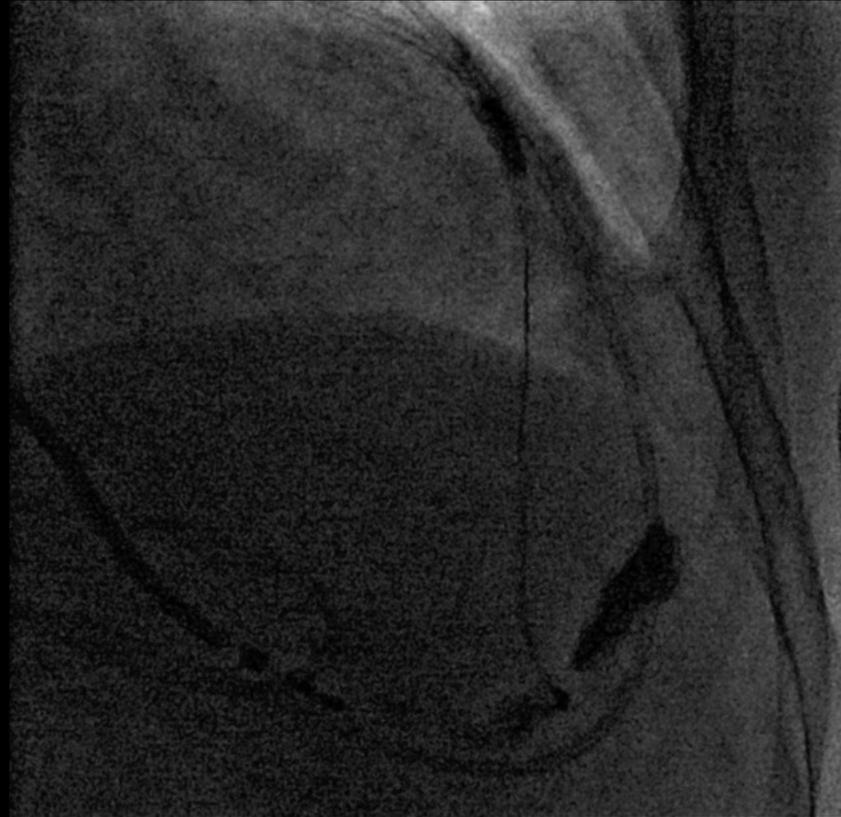


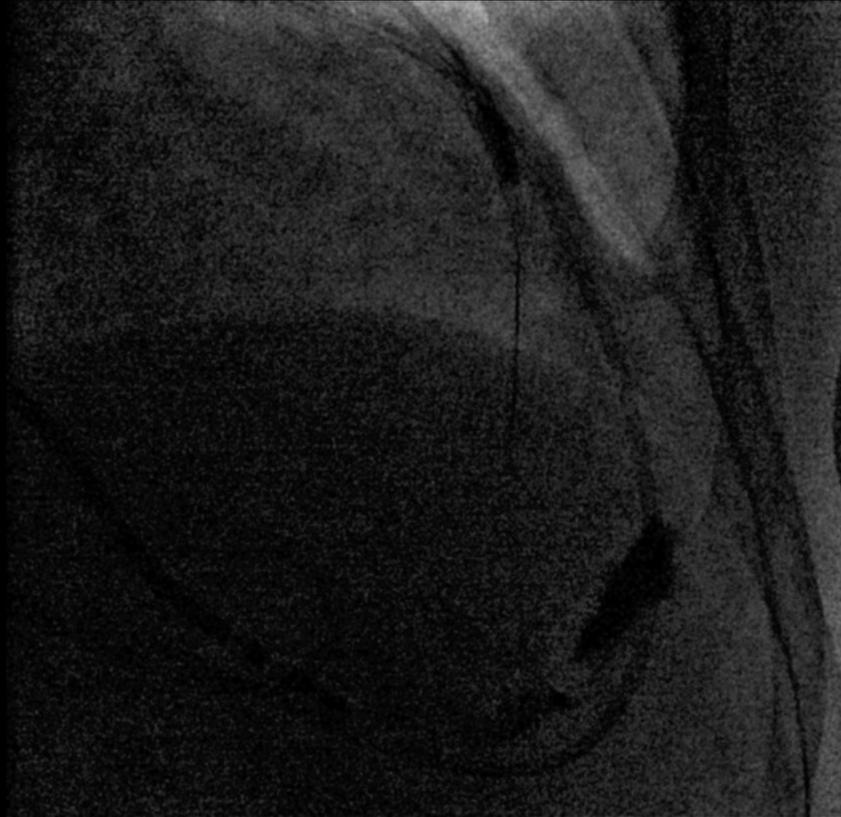












Perforation management

1. Inflate balloon to occlude vessel
2. Intravenous fluids / pressors
3. Pericardiocentesis if hypotension
– ? autotransfusion
4. Notify surgeons

**“Universal” Algorithm for
Coronary Perforations**

Persistent extravasation?

no

Monitor pt

yes

Treat the cause

Large vessel perforation
1. Covered stent
2. Prolonged balloon
inflations

Distal vessel perforation
1. embolization (fat, coil,
thrombin, etc)
2. Covered stent over
perforated branch origin

**Type-specific
Treatment**

continued extravasation?

Reverse anticoagulation