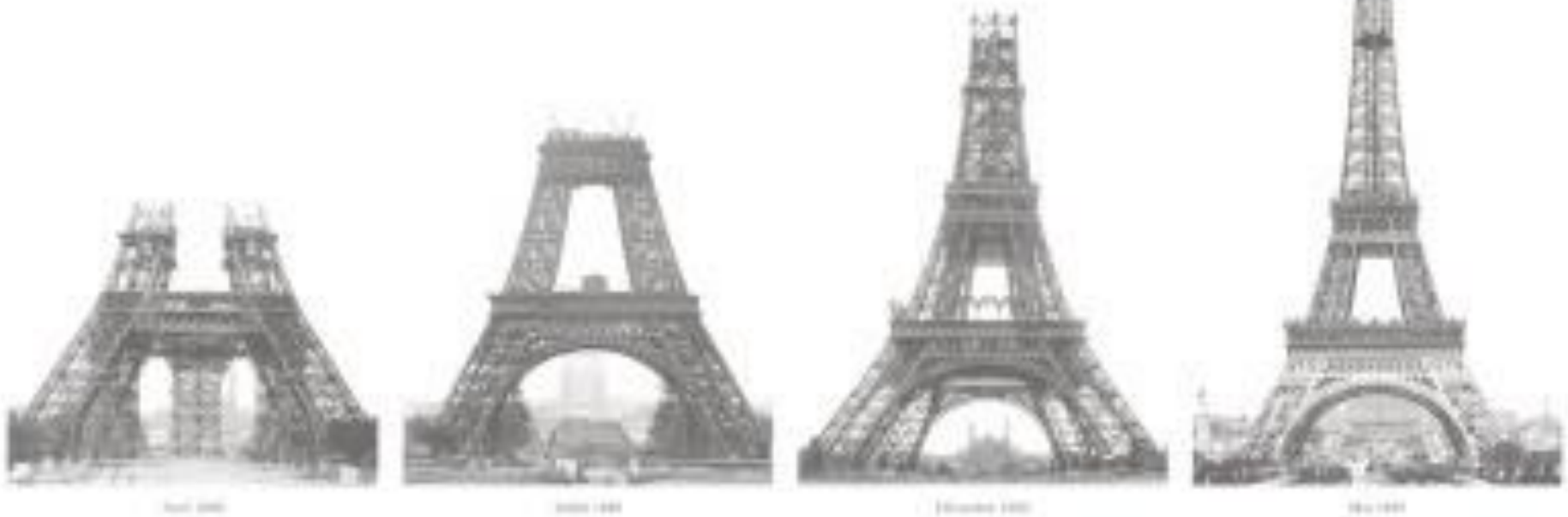
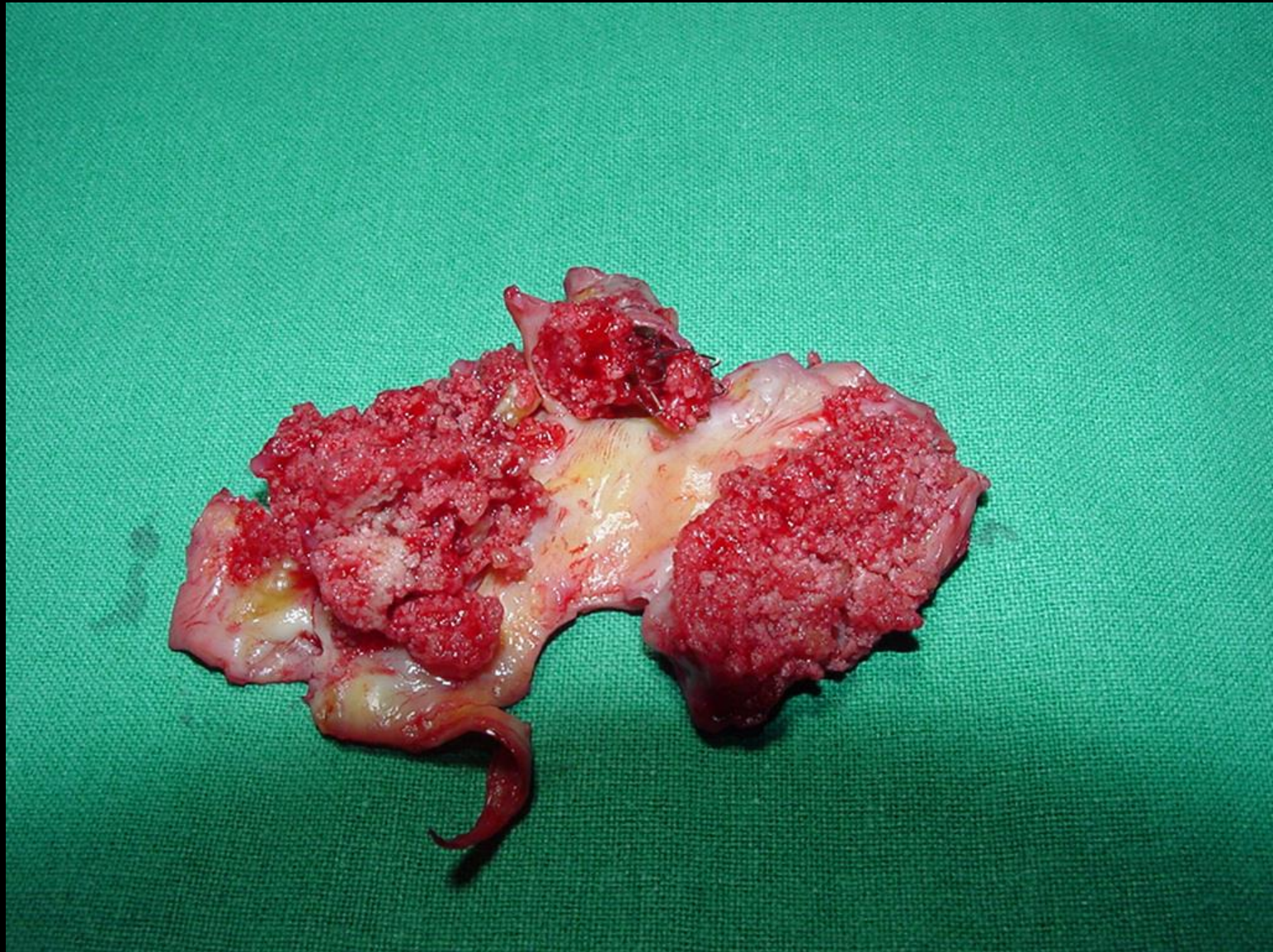


Aortic stenting

Self expanding is the best choice



T. Reix, L. Matray
CHU Amiens



The challenge

- Large volume to impact
- Heavy calcified or heterogenous lesions
- At risk of
 - rupture,
 - embolization,
 - retrograde dissection,
 - Collateral artery occlusion
- Precision landing / renal artery & aortic bifurcation
- The lowest shaft is easier to navigate & prevent femoral complications

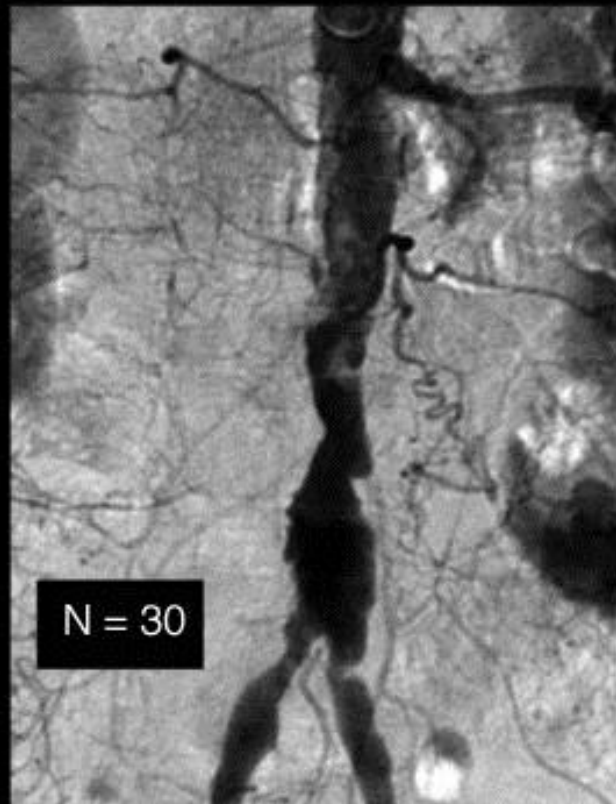
Team experience

Darabase 2002-2012

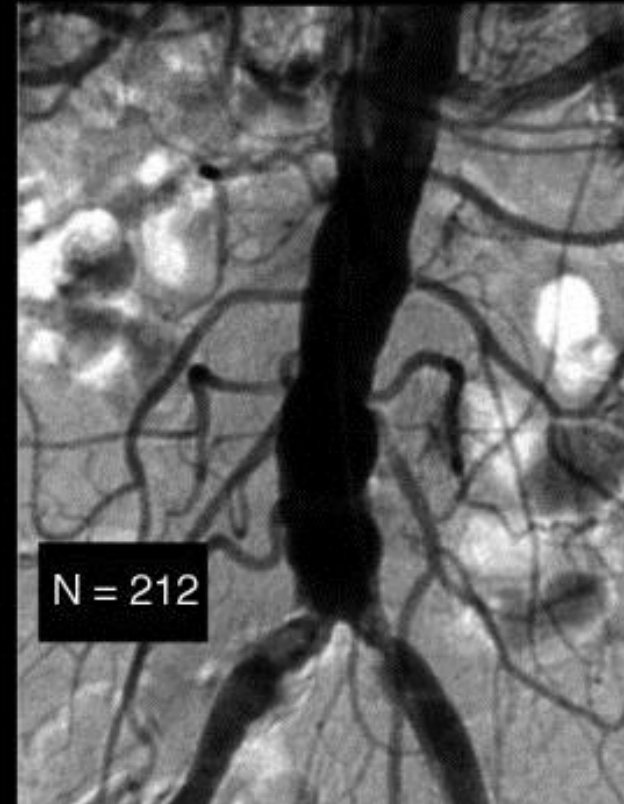
Type I



Type II



Type III



Self expanding
Stent

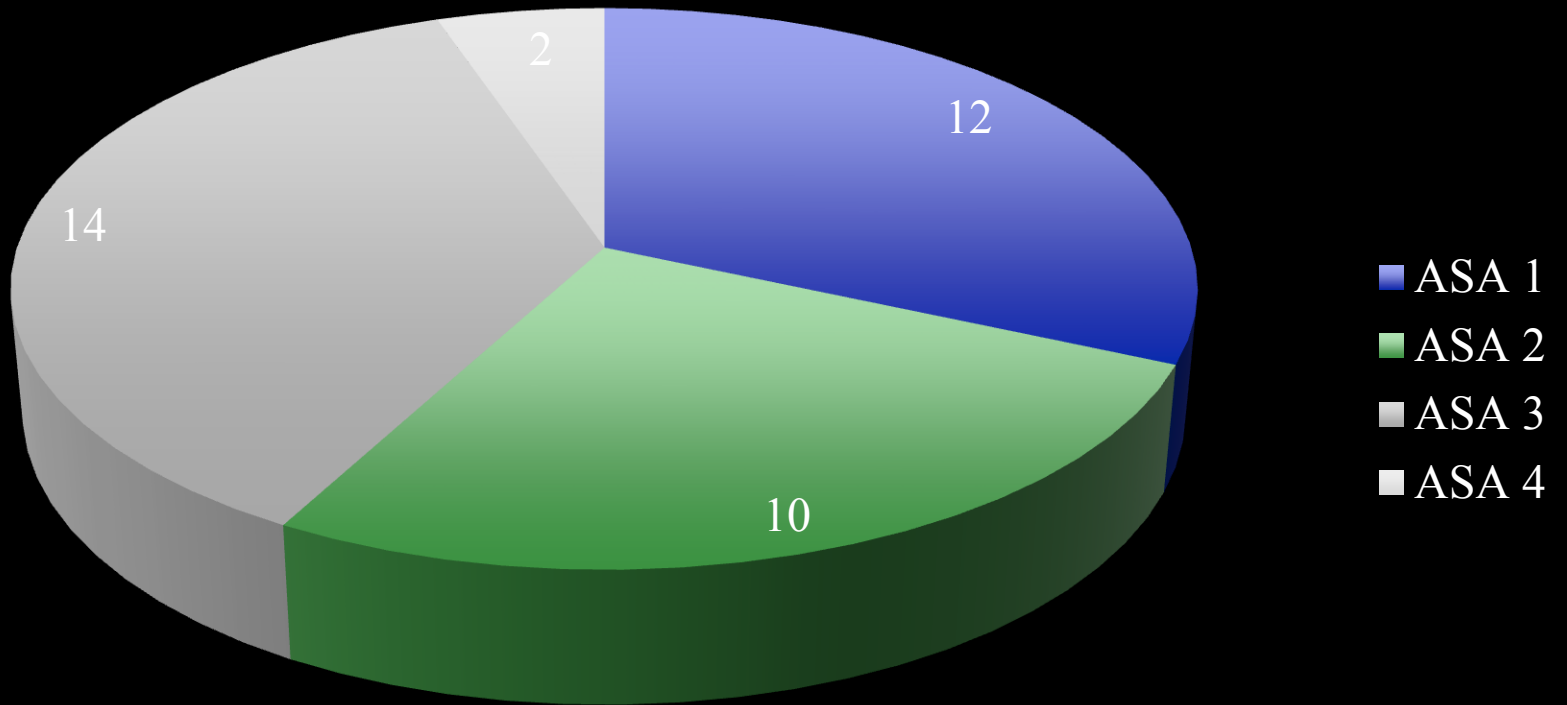
Eiffel Tower

Kissing balloon
expandable stent

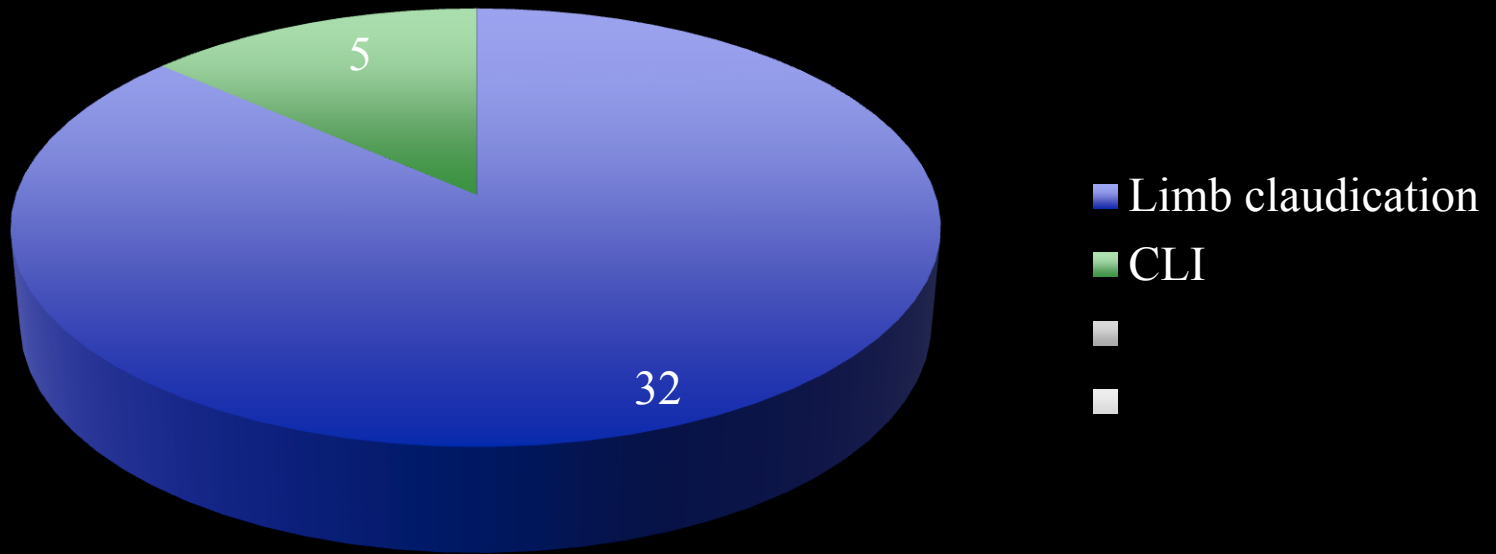
- 2002 – 2012
- N =37
- 23 men, 14 women

- 7 single aortic stent
- 30 Eiffel tower

ASA



Clinical Stage



- Bilateral aproach : all
- Axillary : 2
- 24 surgical femoral aproach
 - 10 endarterectomy

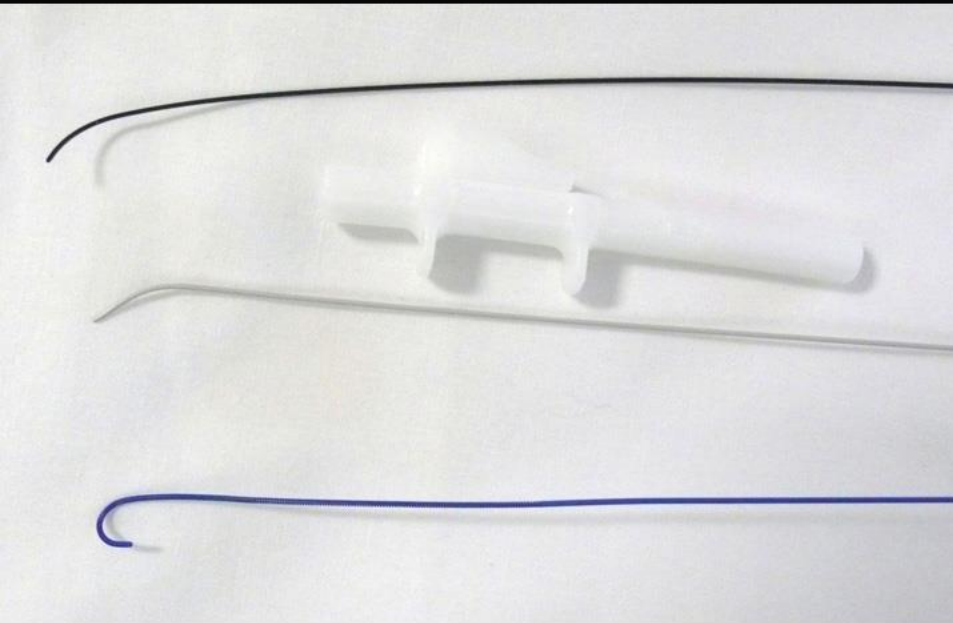
The ancillary devices

Catheters

- 6F bright tip sheath
- 4F Terumo Bolia cath
- 4F Terumo anguled
Glided cath
- 5F UF Cordis Tempo
- 4F UF Cordis Tempo



Guidewires



- Terumo 0,035'' anguled standard and stiff
- Cook 0,035'' anguled stiff roadrunner
- Amplatz extrastiff

Stents

- Aortic : large nitinol (Bard or Optimed Sinus XL), 10F shaft
- Common iliac : Balloon expandable
- External iliac : nitinol



NEW
NOUVEAU
NEU



optimed

sinus-XL 6F

self-expanding nitinol stent system



ARTERIAL



VENOUS



6F

Ø device



.035i

guide wire



NiTi

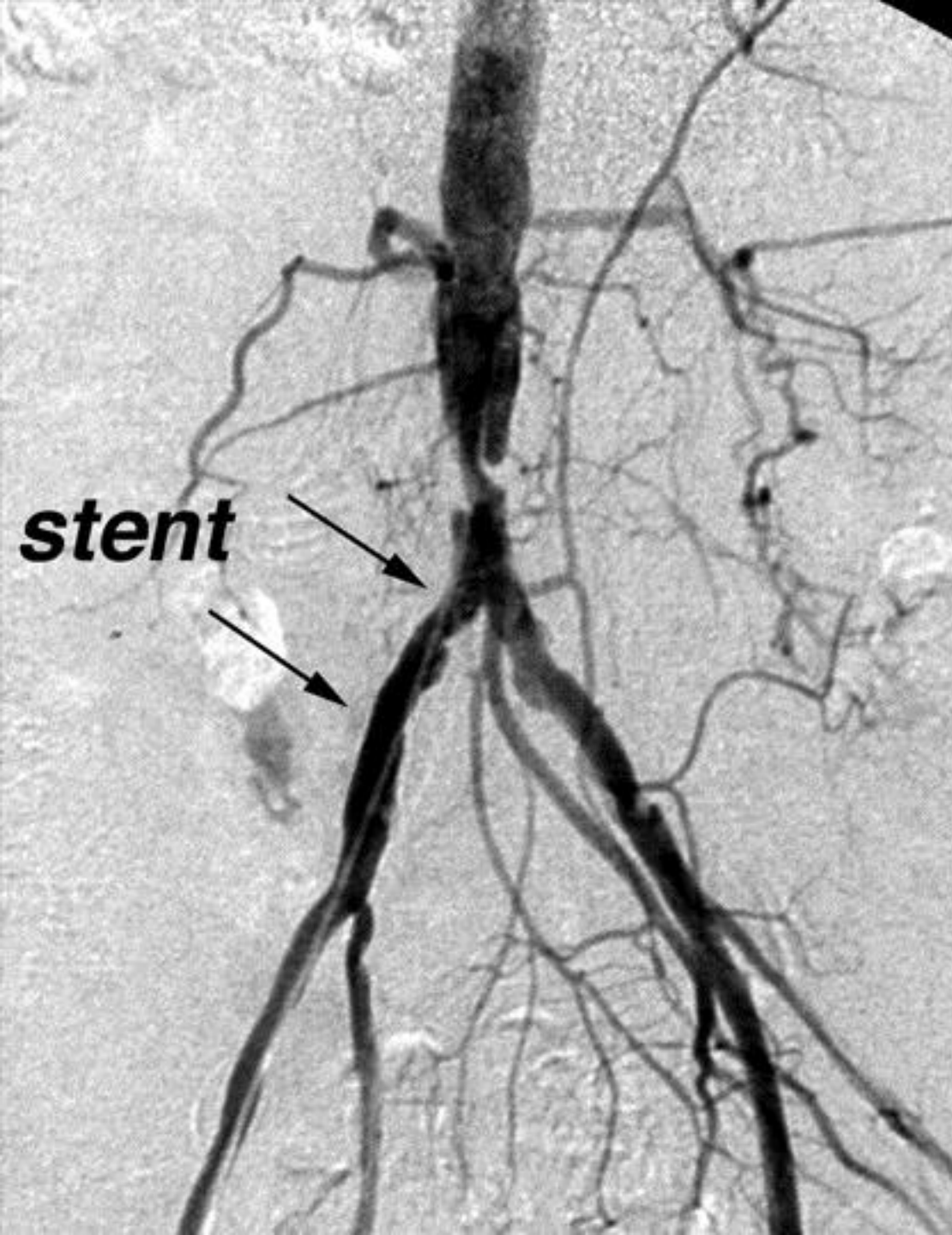
nitinol stent

the 6F power-stent for
straight vessel segments
of the aorta and
vena cava

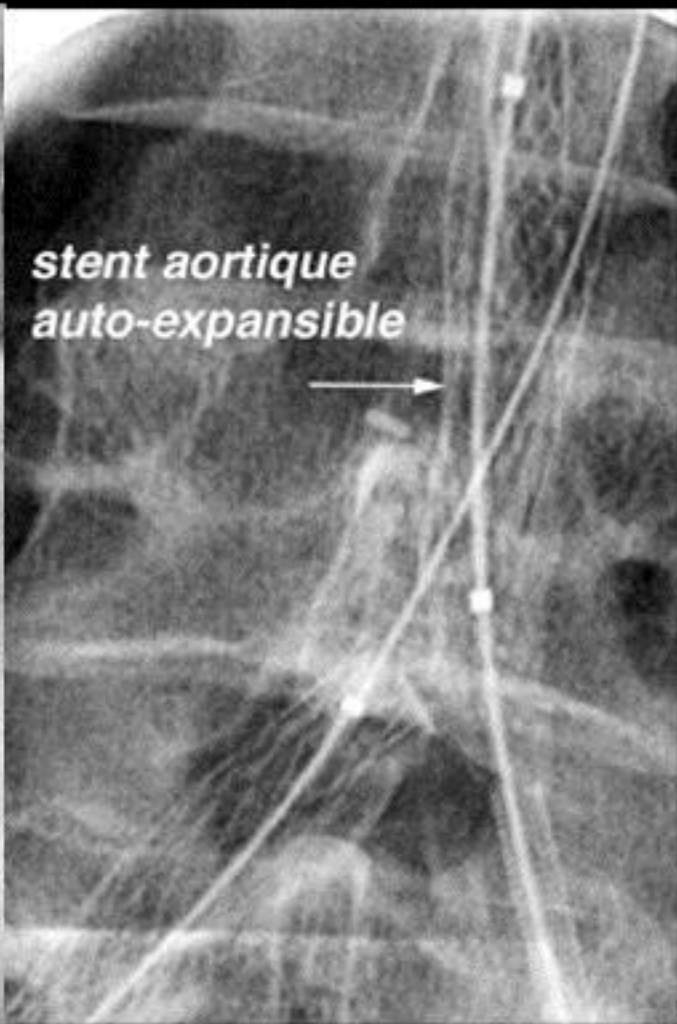


sinus-XL 6F

Stent diameter mm	Stent length mm
14	30
	40
	50
	60
	80
16	100
	30
	40
	50
	60
18	80
	100
	120



ATL en kissing + stent aortique



Tour Eiffel procedure

- Planning & sizing like EVAR according to CT
- Aortic stent must cover 1 cm above the lesion
- Aortic balloon angioplasty & stenting first
- Aortic stent is landed the lower as possible
- Progressive intra-stent balloon remodeling
- Iliac kissing-stent



Scanner non injecté

Im:9
 DFOV 35.0cm
 SOFT/P

Im:10
 MF: 1.3

Im:10
 DFOV 35.0cm
 SOFT/P

Im:11
 MF: 1.3

HISpeed Adv SYS#HSD0
 49262
 2
 1216.5
 15
 V 35.0cm
 T/P

A113

HOPITAL SUD AMIENS
LEMAIRE JEAN CLAUDE
 M 26/03/54
 FEB 14, 2002
 512
 MF: 1.3



R 1 5 1
 L 1 1 8

R L

kV 120
 mA 220

Large
 10.0mm
 Tilt: 0.0
 1.0 s 02:41:41 PM
 *20 L * 15



R 1 5 1
 L 1 1 8

R L

kV 120
 mA 220

Large
 10.0mm
 Tilt: 0.0
 1.0 s 02:41:43 PM
 *20 L * 15



R 1 5 1
 L 1 1 8

R L

kV 120
 mA 220

Large
 10.0mm
 Tilt: 0.0
 1.0 s 02:42:07 PM

CT HISpeed Adv SYS#HSD0
 Ex:49262
 Se:2
 XY 1196.5
 Im:13
 DFOV 35.0cm
 SOFT/P

A113

HOPITAL SUD AMIENS
LEMAIRE JEAN CLAUDE
 M 26/03/54
 FEB 14, 2002
 512
 MF: 1.3

CT HISpeed Adv SYS#HSD0
 Ex:49262
 Se:2
 XY 1206.5
 Im:14
 DFOV 35.0cm
 SOFT/P

A113

HOPITAL SUD AMI
LEMAIRE JEAN CLA
 M 26/03/54
 FEB 14, 2002

CT HISpeed Adv SYS#HSD0
 Ex:49262
 Se:2
 XY 1226.5
 Im:16
 DFOV 35.0cm
 SOFT/P

A109

HOPITAL SUD AMIENS
LEMAIRE JEAN CLAUDE
 M 26/03/54
 FEB 14, 2002
 512
 MF: 1.3



R 1 5 1
 L 1 1 8

R L

kV 120
 mA 220

Large
 10.0mm



R 1 5 1
 L 1 1 8

R L

kV 120
 mA 220

Large
 10.0mm



R 1 3 8
 L 1 2 8

R L

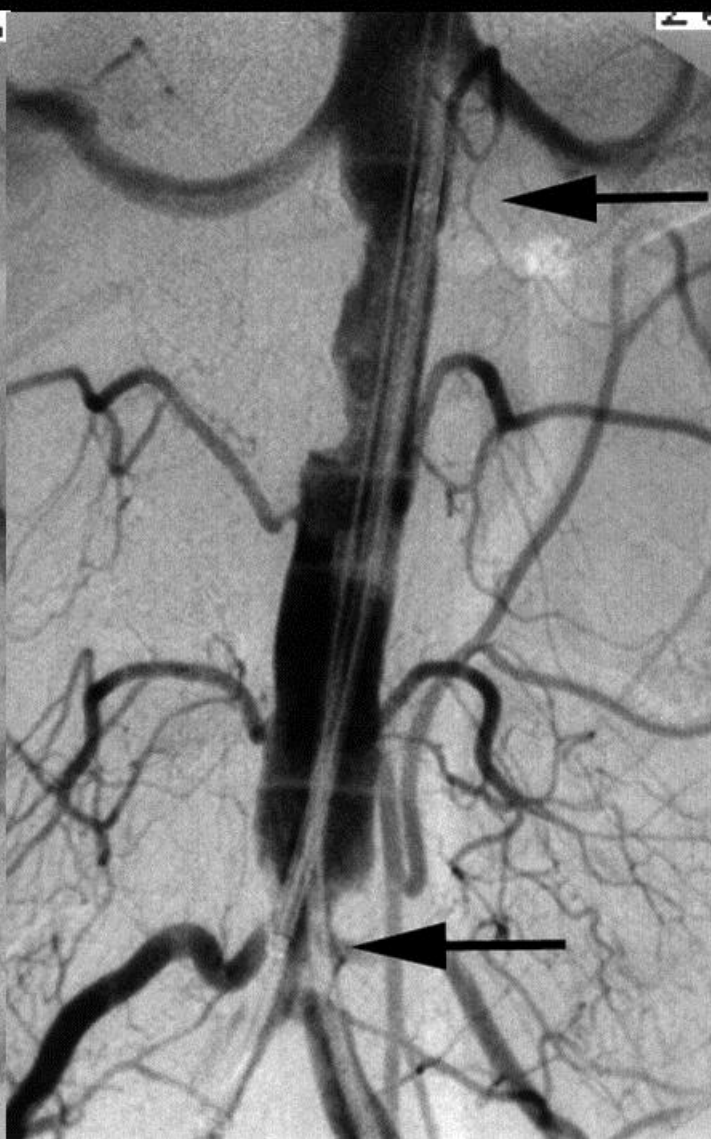
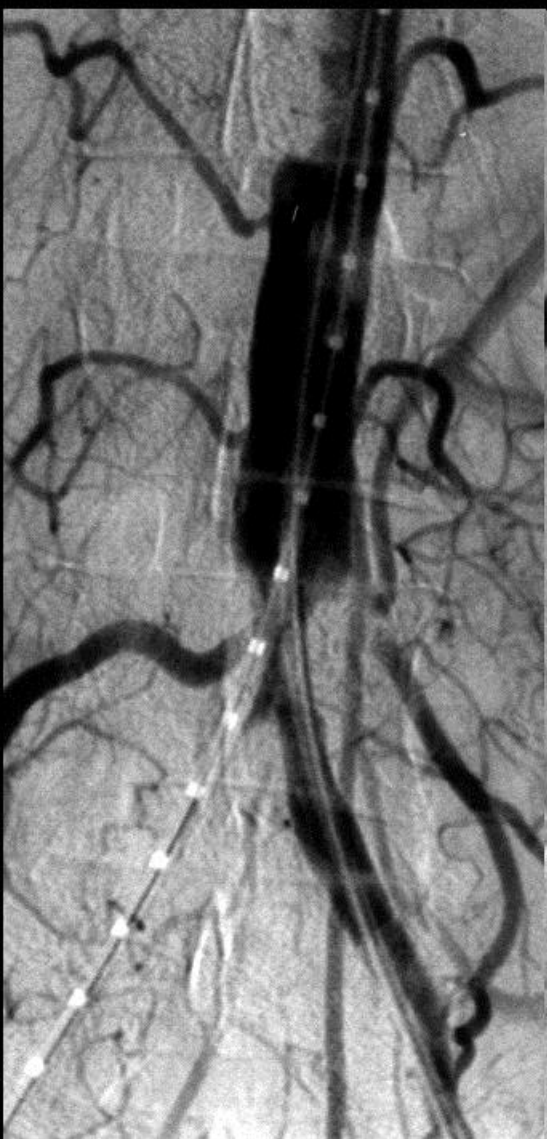
kV 120
 mA 220

Large
 10.0mm
 Tilt: 0.0
 1.0 s 02:42:09 PM

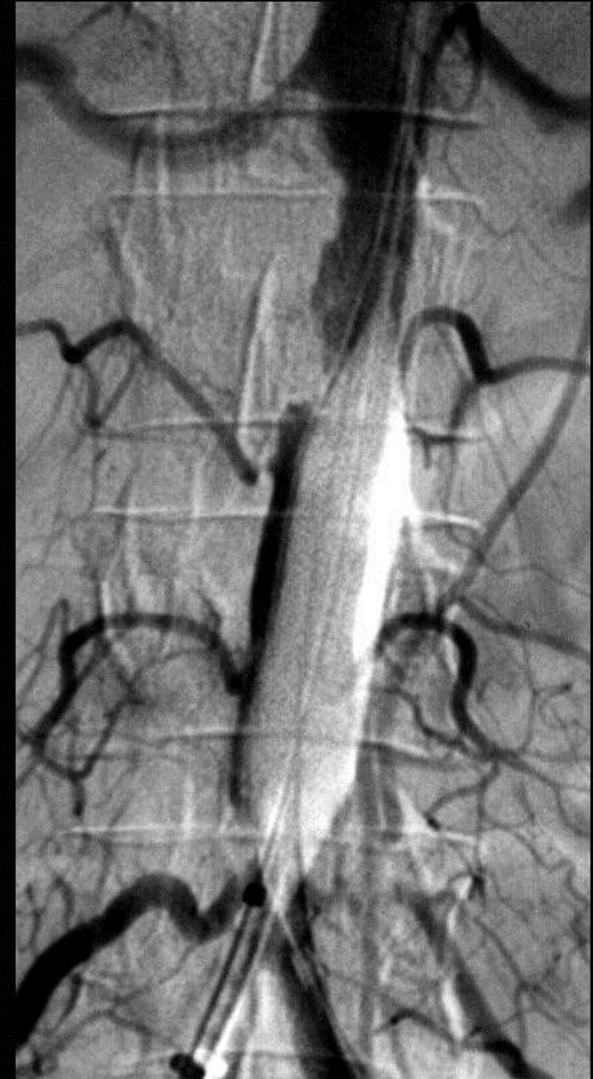
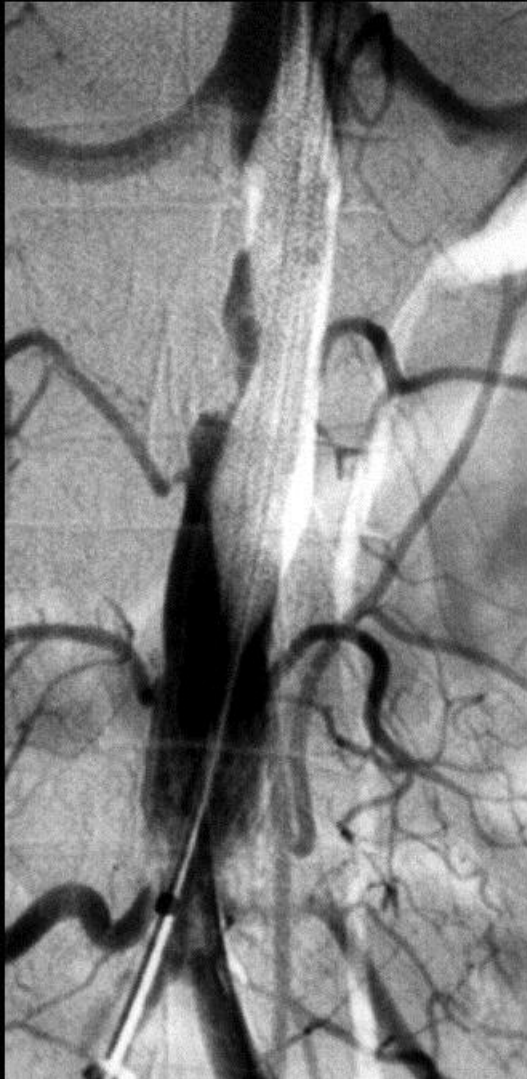
Mesure

Pré-dilatation

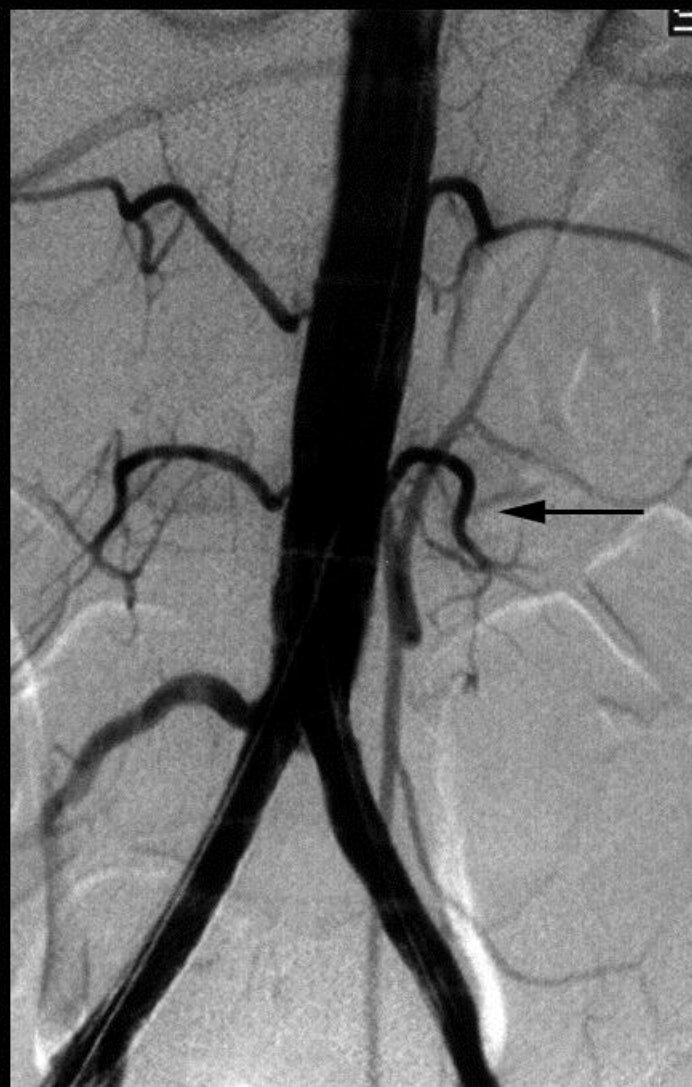
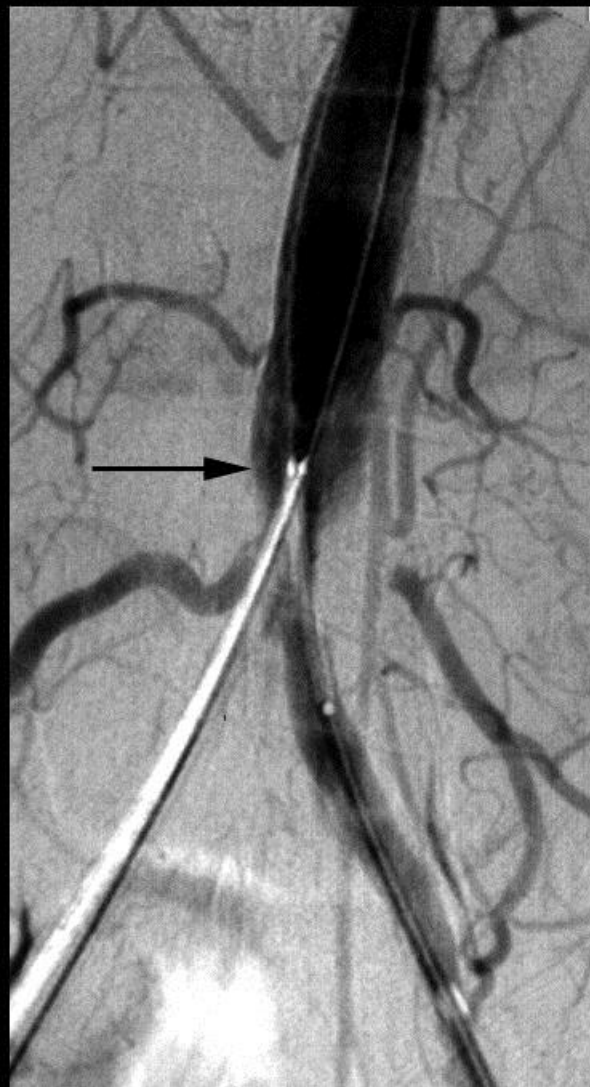
Stent 18mm x 10 cm



Remodelage intra stent (16mm x 4 cm)



Kissing stent et controle



peed CT/1 SYS#CT01
1948
2
S30.0
5

AS SCANOGRAPHIE CHU AMIENS NORD

LEMAIRE J CLAUDE
47 M CCV
DOB: 26 mar 1954
26 fév 02
512
MF:1.1

V 12.0cm
D/P



P1

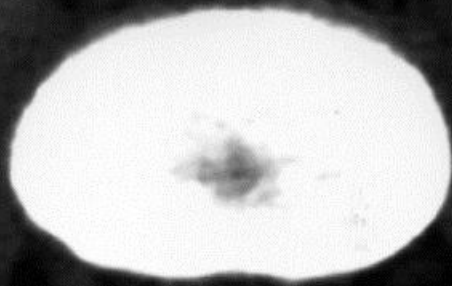
120
230
ge
mm
t : 2.0
s 16:46:27
37 L:89

peed CT/1 SYS#CT01
1948
2
S24.0
7

AS SCANOGRAPHIE CHU AMIENS NORD

LEMAIRE J CLAUDE
47 M CCV
DOB: 26 mar 1954
26 fév 02
512
MF:1.1

V 12.0cm
D/P



P1

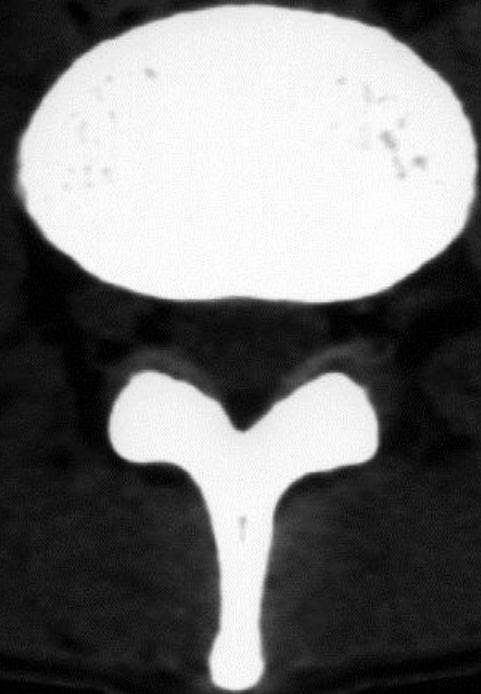
120
230
ge
mm
t : 2.0
s 16:46:27
37 L:89

HiSpeed CT/1 SYS#CT01
Ex: 1948
Se: 2
CI S27.0
In: 6

AS SCANOGRAPHIE CHU AMIENS

LEMAIRE J
47
DOB: 26 mar
26 f

DFOV 12.0cm
STND/P



P1

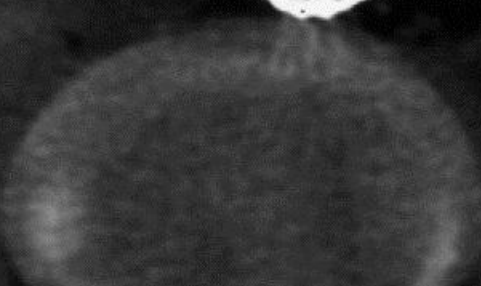
kV 120
mA 230
Large
3.0 mm
Tilt : 2.0
2.0 s 16:46:34
V:237 L:89

HiSpeed CT/1 SYS#CT01
Ex: 1948
Se: 2
CI S21.0
In: 8

AS SCANOGRAPHIE CHU AMIENS

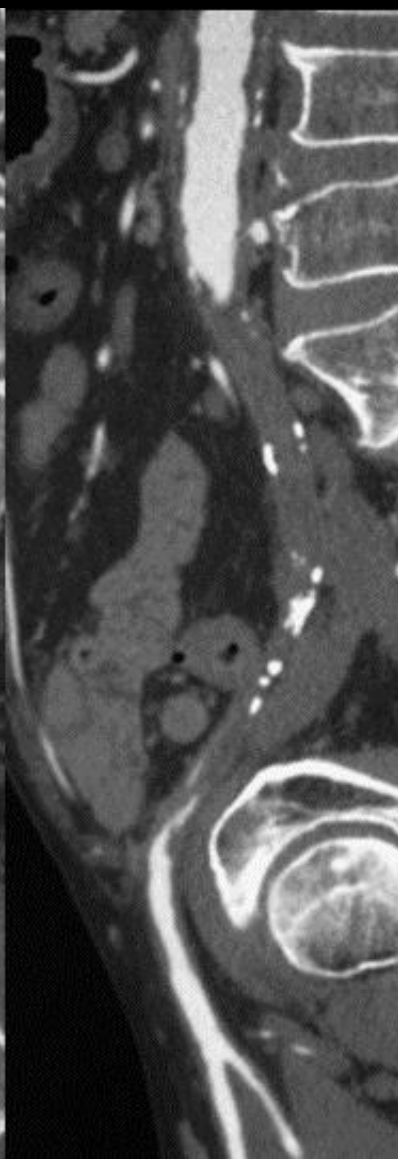
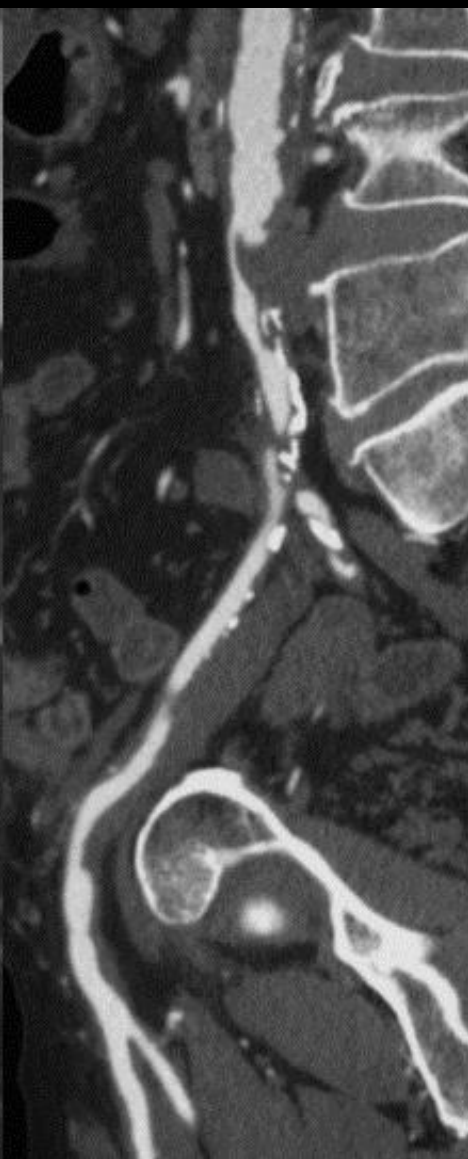
LEMAIRE J
47
DOB: 26 mar
26 f

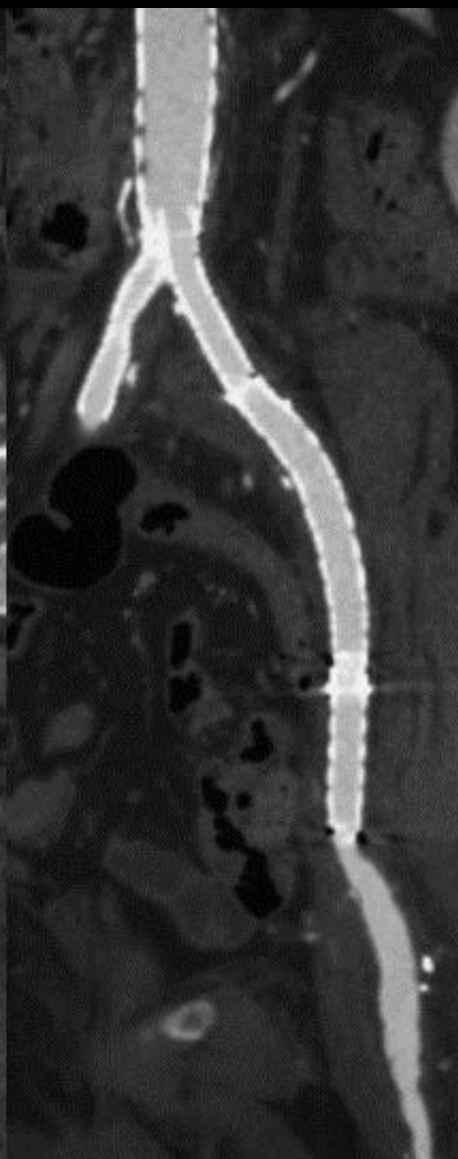
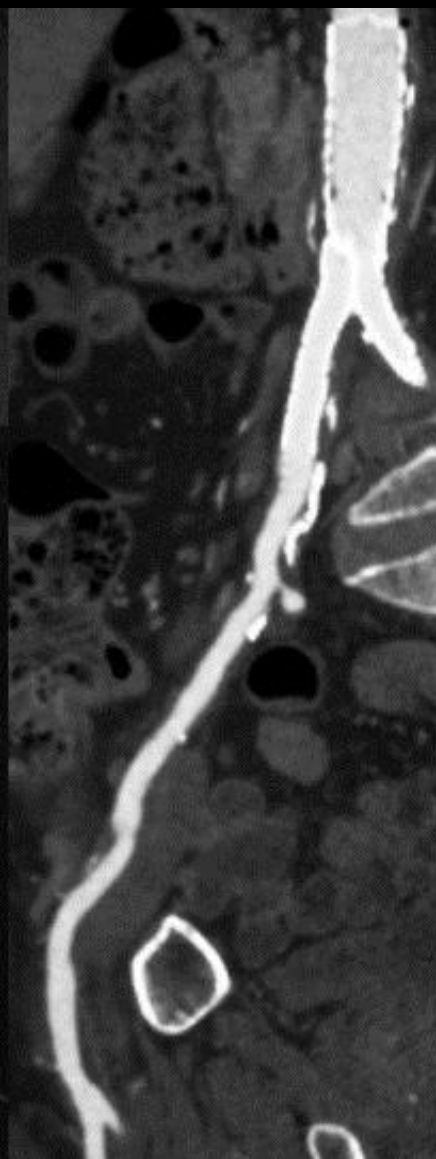
DFOV 12.0cm
STND/P



P1

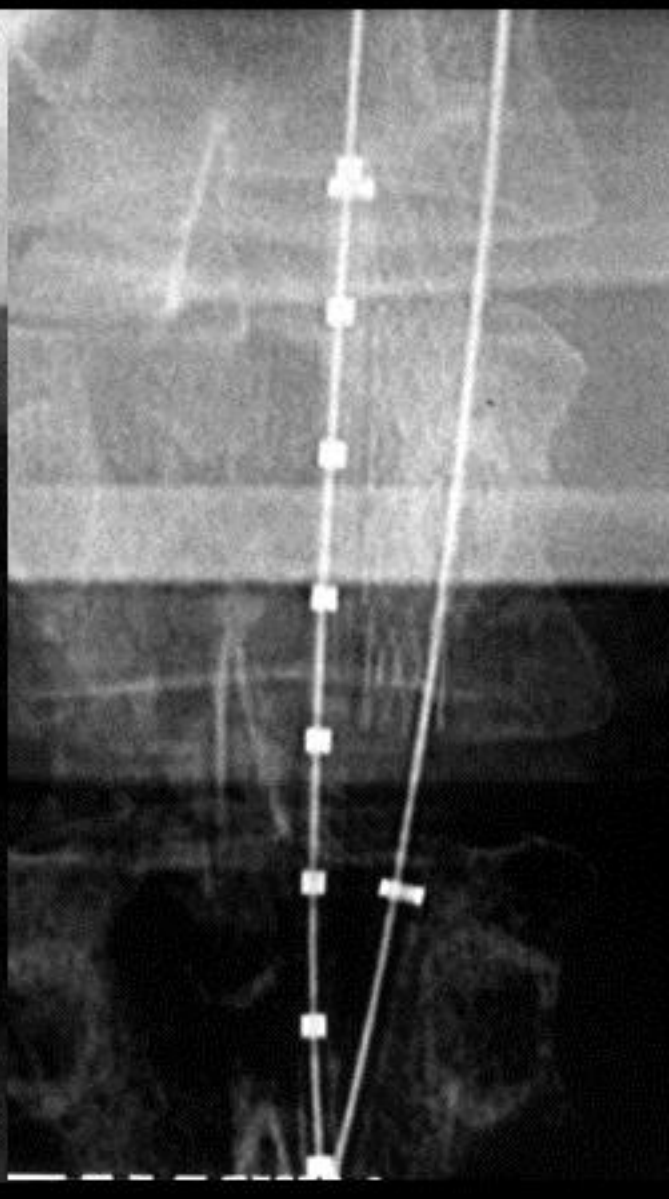
120
230
ge
mm
t : 2.0
s 16:46:27
37 L:89

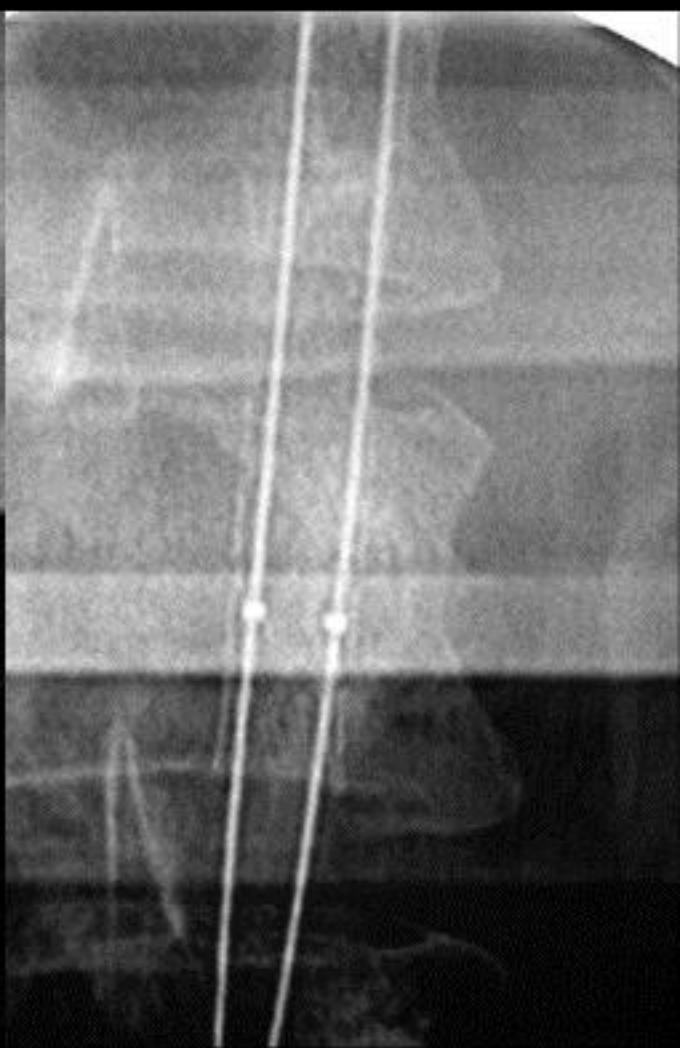
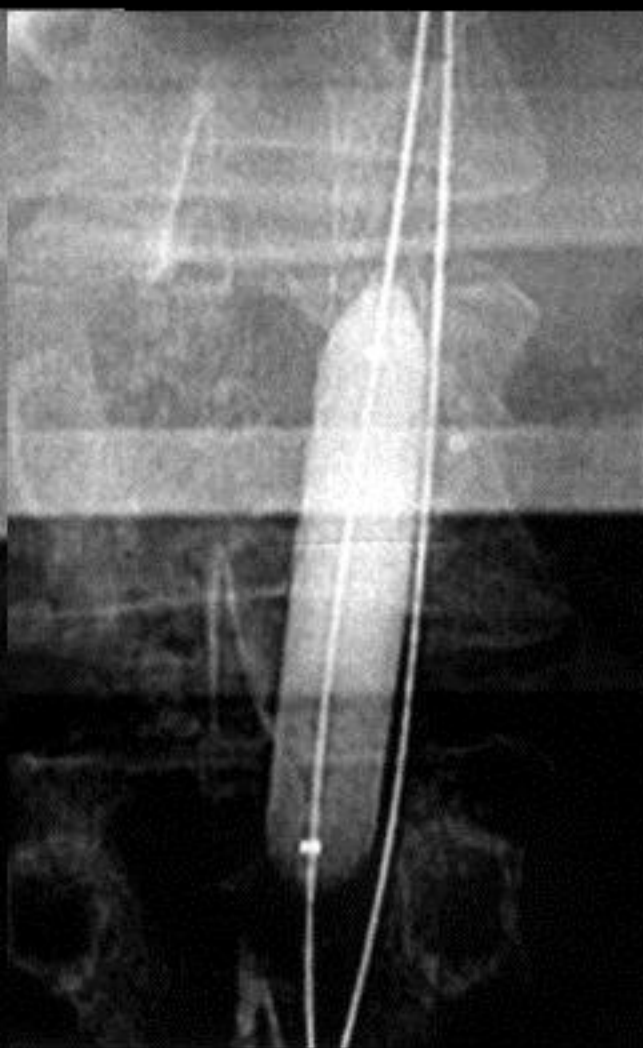
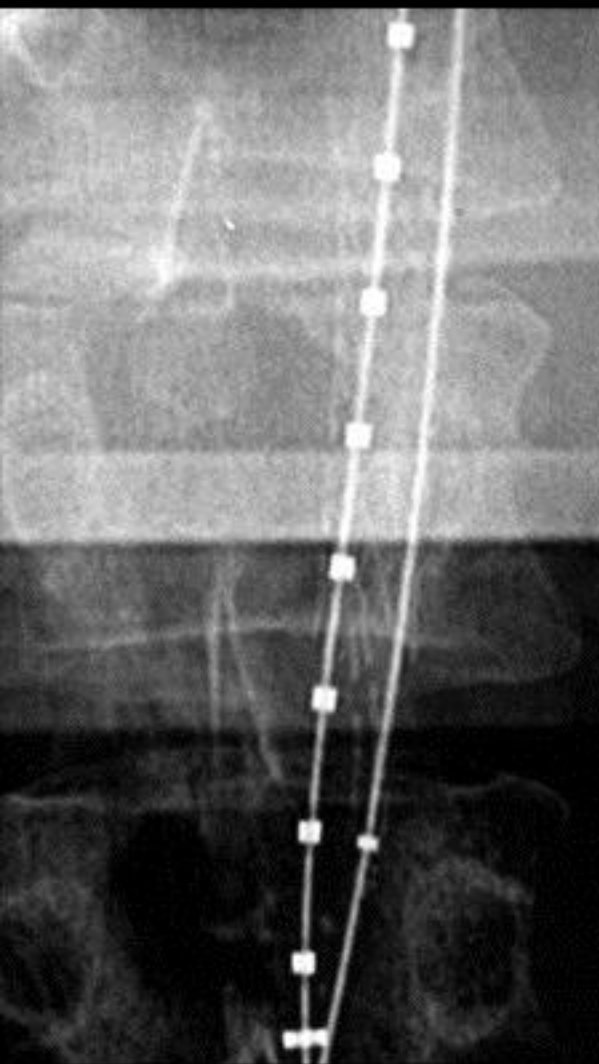


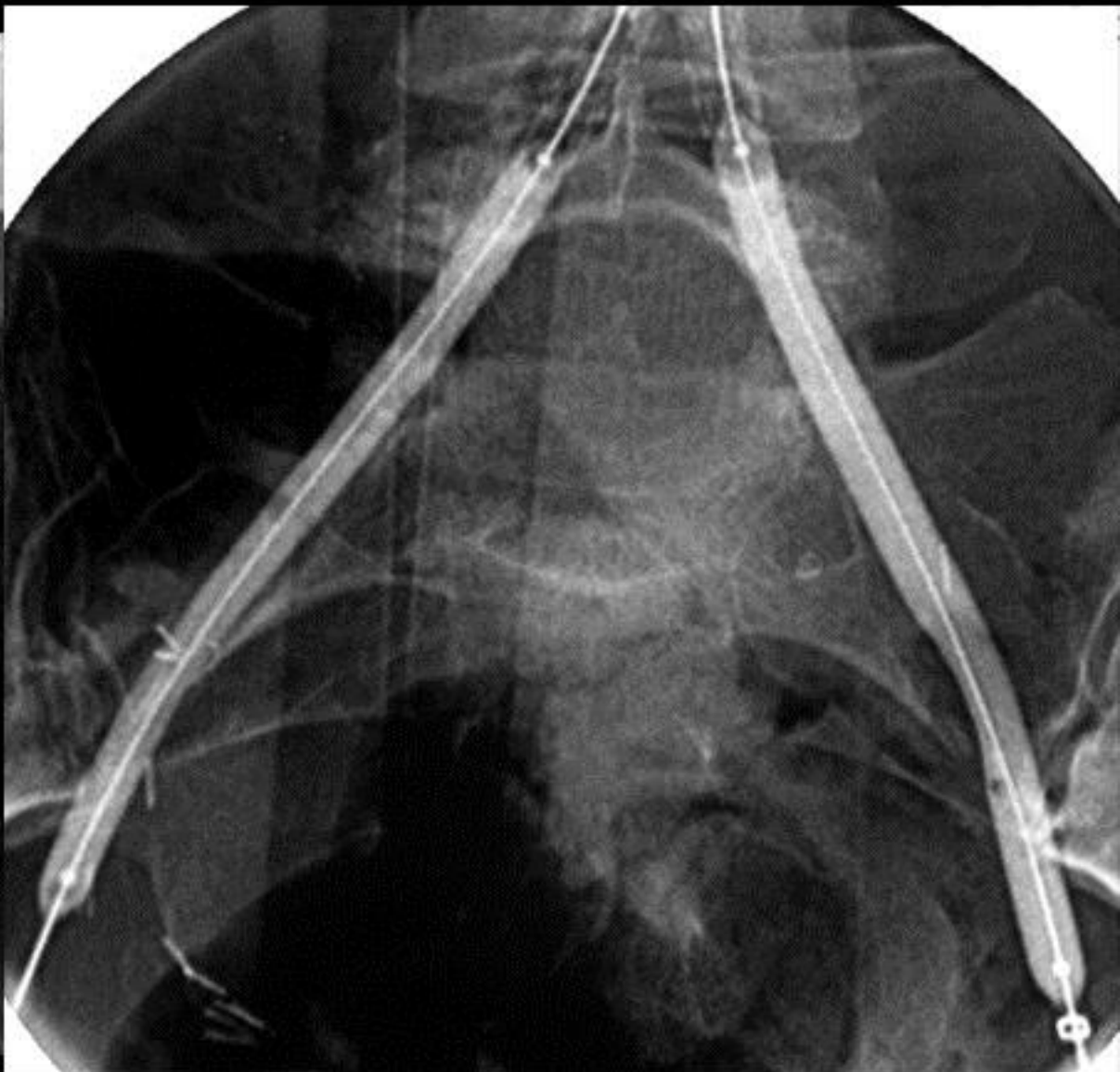


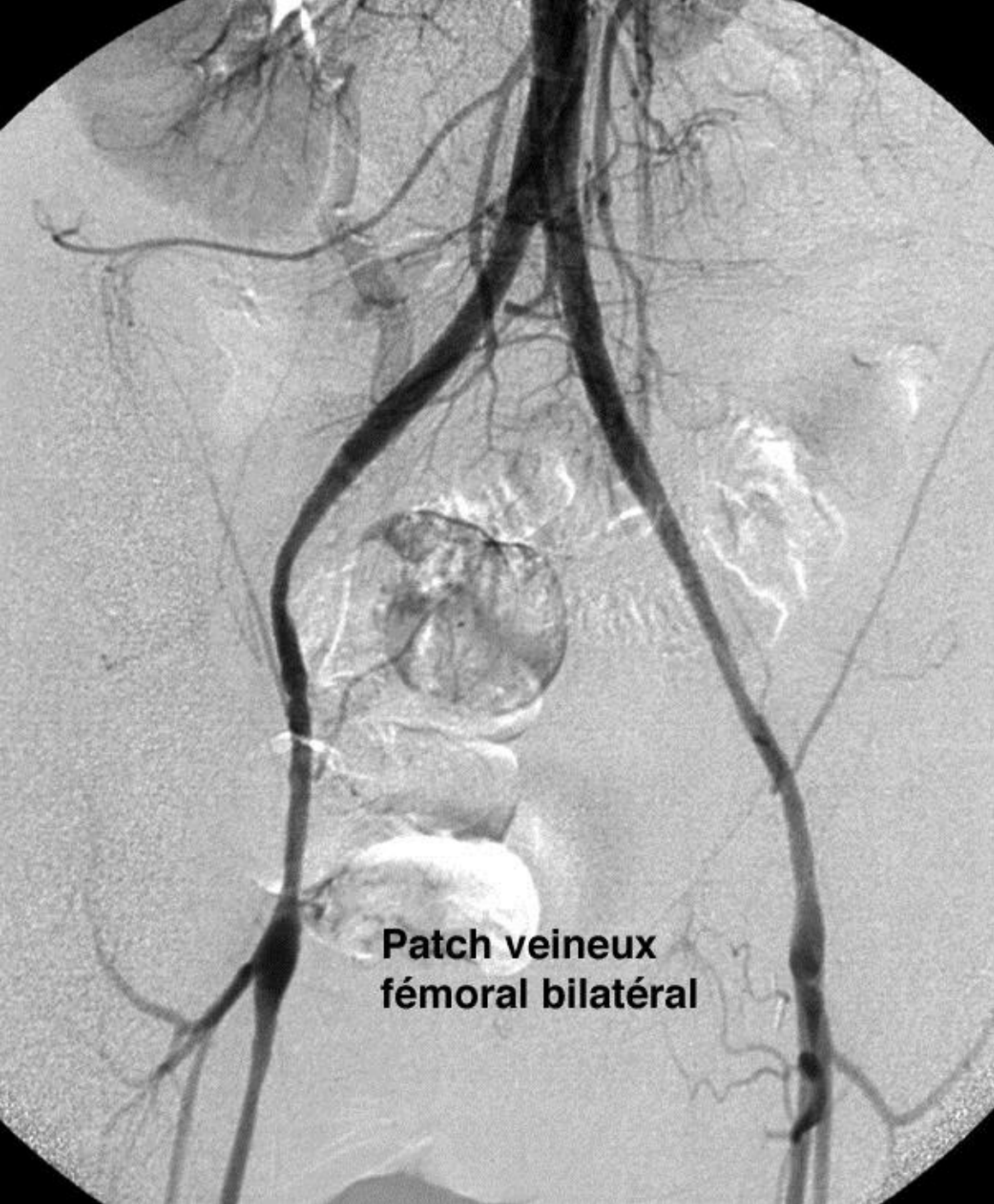
Aorto iliac Thrombosis











Results

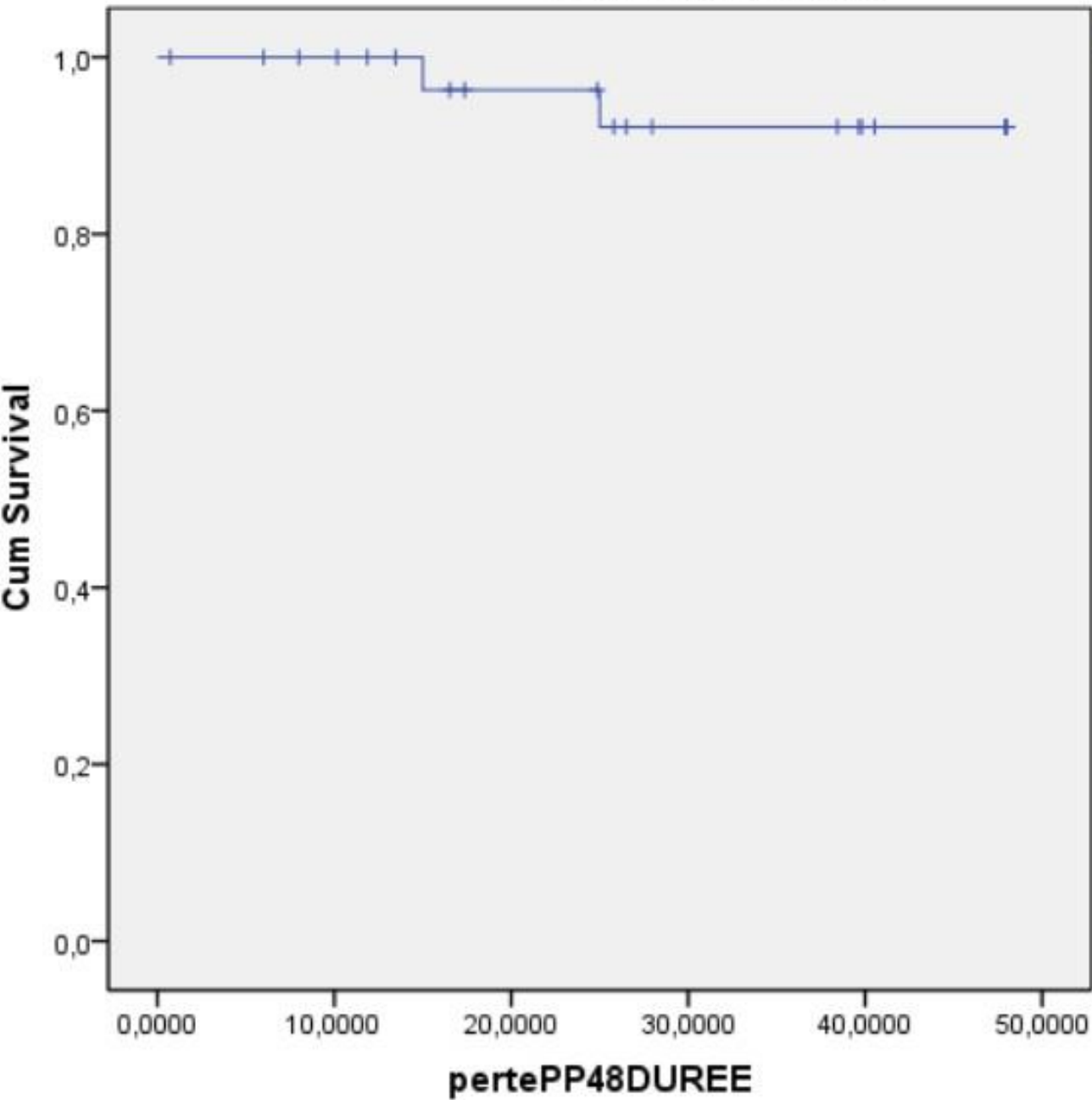
- No technical failure
- No rupture, dissection, emboly
- 3 femoral access complications

Long-term results

- Mean follow-up : 58,4 M (→ 10 Y)
- 4 late iliac failures :
 - 2 restenosis (15,25 M)
 - 2 complete thrombosis (6, 8 M)
- 4 Y secondary patency : 96,7 %

Survival Function

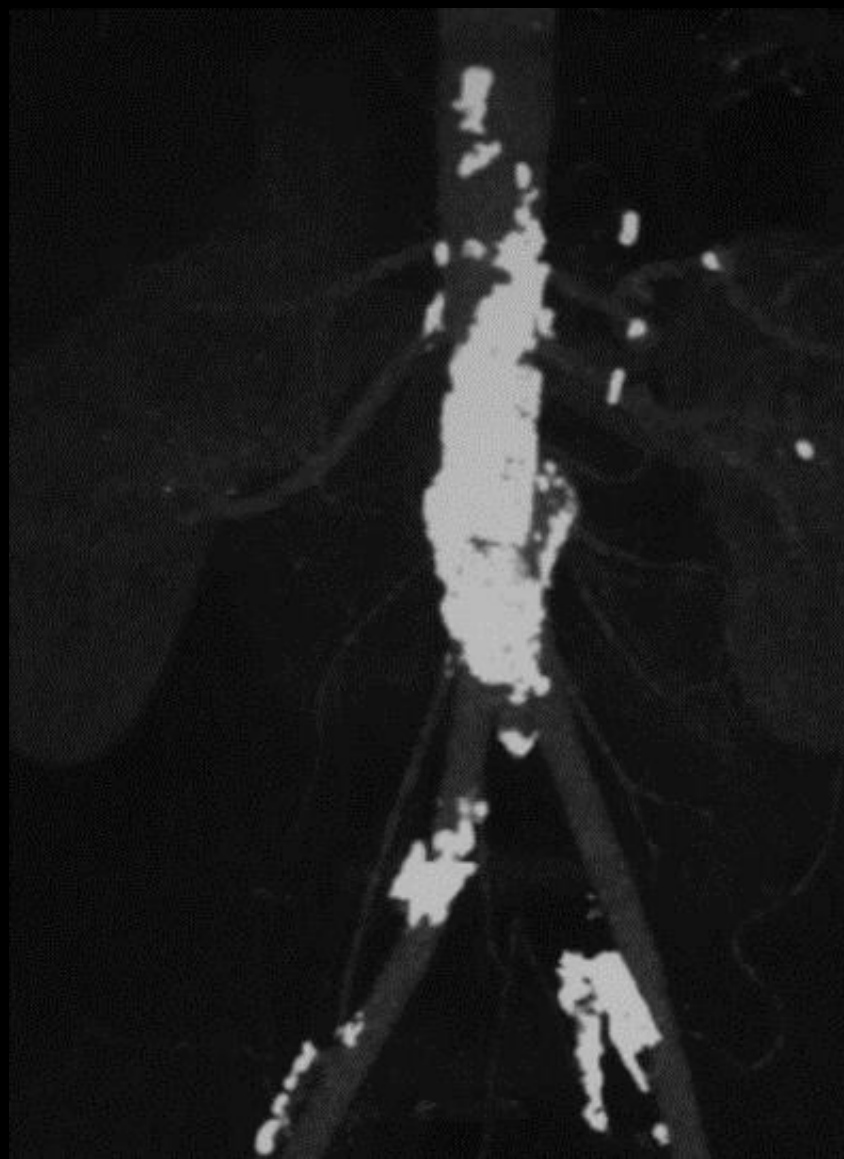
Survival Function
Censored

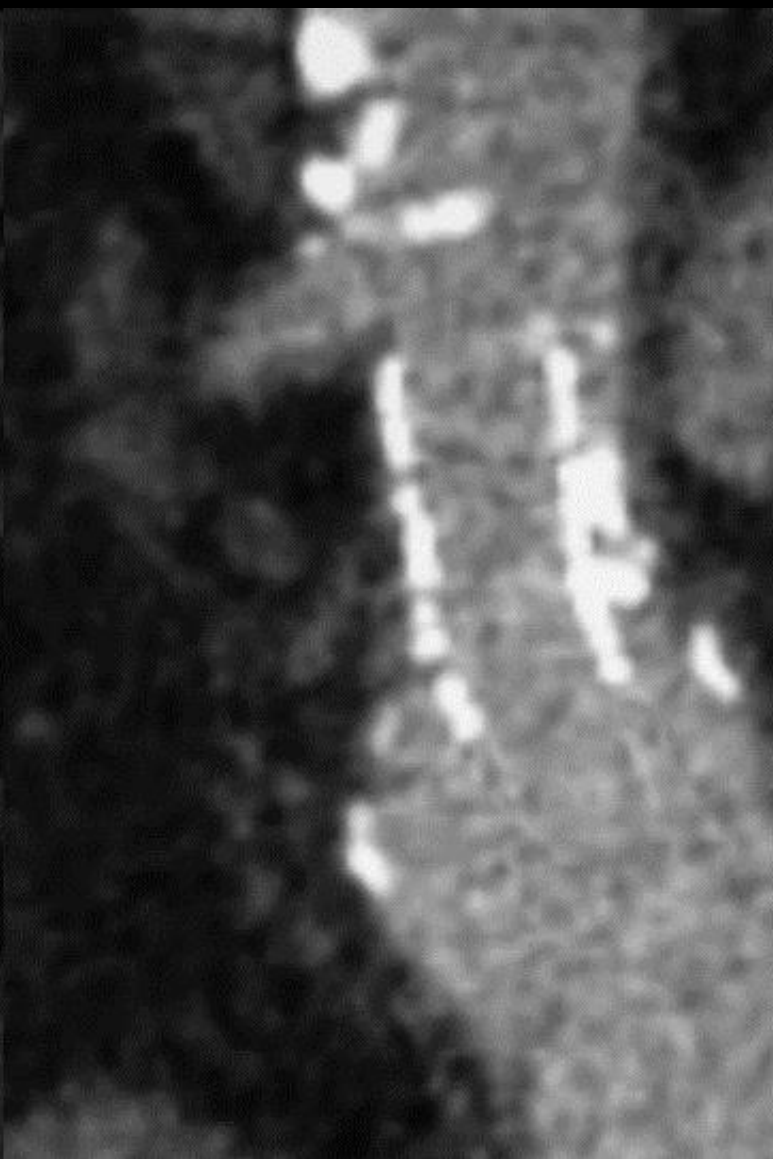
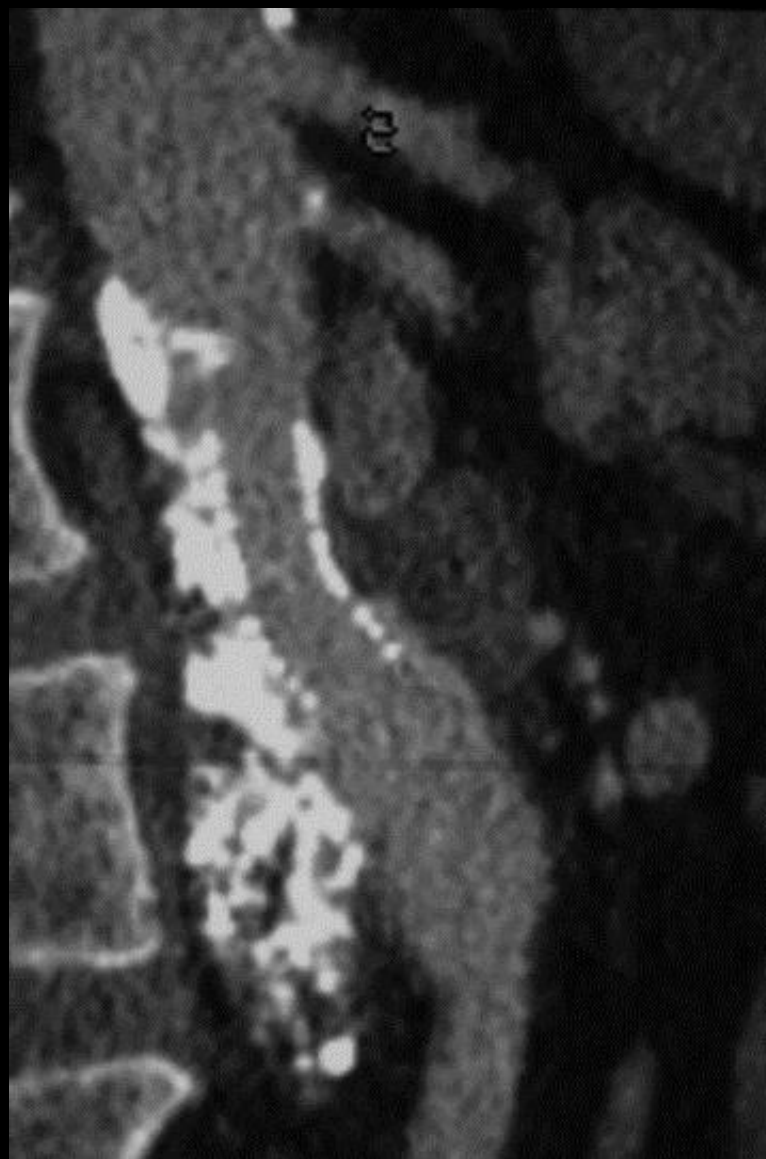


Balloon expandable disagreements

- Short length
- Rigidity
- Shaft size
- Diameter
- Difficulty in the below aorta

When a balloon expandable stent
is usefull ?





Conclusion

- New large self expanding stent is the best choice to have a secure, durable, anatomic result
- Balloon expandable stent is useful when high precision regarding to renal arteries is needed