

Meilleurs vœux !



CENTRE CARDIO-THORACIQUE DE MONACO



L'ANNÉE  
PORTE-BONHEUR



## Quelle « évolution 2012 » paraît la plus significative?

- A. endoprothèse en phase aiguë des dissections thoraciques de type B non compliquée,
- B. utilisation des stents actifs en fémorale superficielle,
- C. utilisation des ballons actifs à l'étage jambier,
- D. abord percutané systématique pour endoprothèse aortique,
- E. prépondérance de l'angioplastie carotidienne sur l'endartériectomie.



# Stratégie d'Accès et Endoprothèses Aortiques

Claude MIALHE  
Stephane PESSORT

# Traitement Endovasculaire des A. AO sous rénale

CCM: 3 années – 140 procédures consécutives

Anévrismes sous rénaux: 140

**Endoprothèses: 134 ( 95.7%)**

Endoprothèses Bifurquées: 129 (92.1%)

**ACCES PERCUTANES/BIF: 99.2%**

*1 abord chirurgical bilatéral pour prévention de micro-embolies*

Open: 6 (4.3)

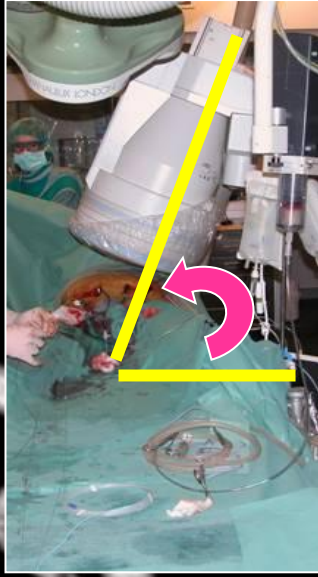
AUI: 5 (3.6)

- Déperdition minimale
- Pas de modification volémique
- Sécurité de l'abord percutané



# Gestion des Boucles Iliques

40-09-10  
4-13  
4



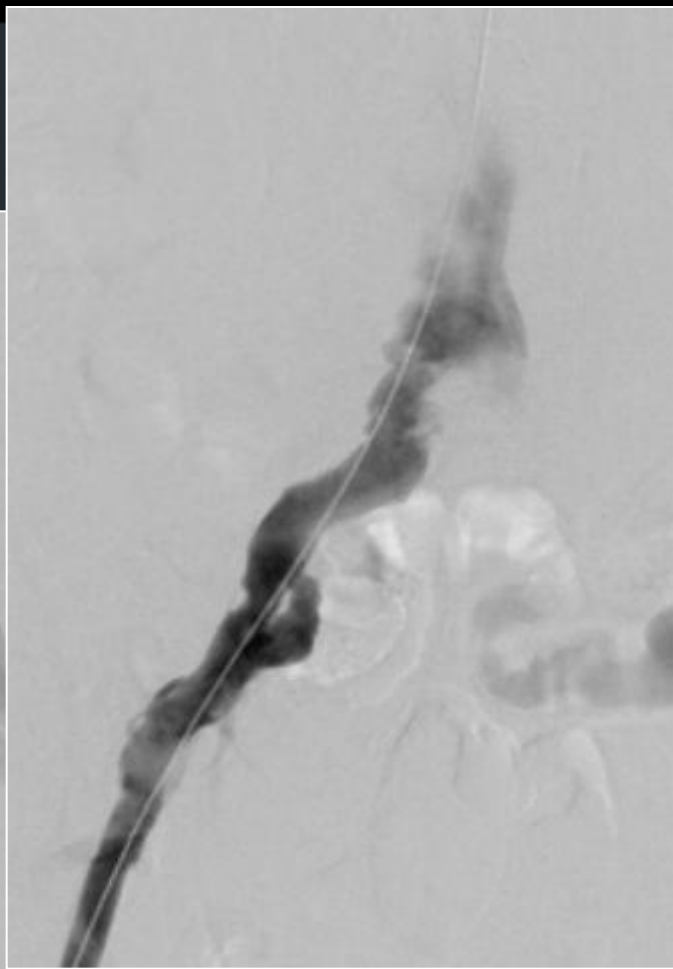
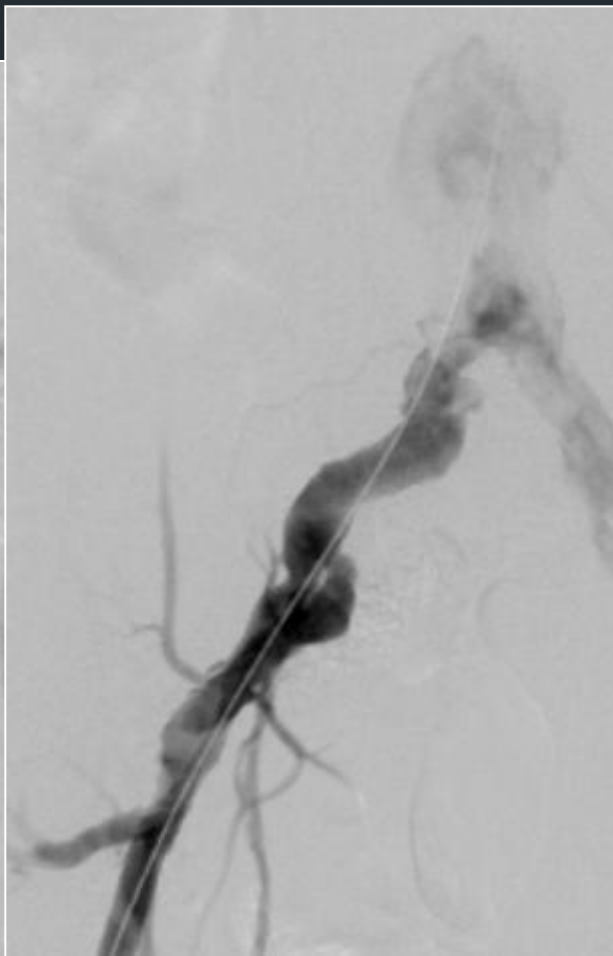
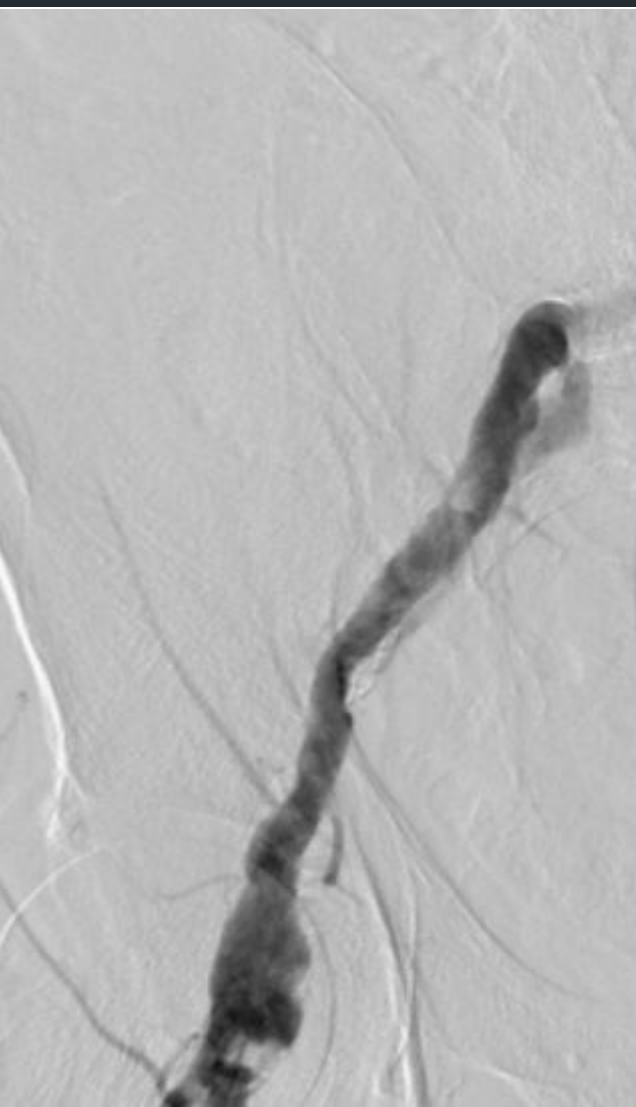


# Gestion des Collets Obliques

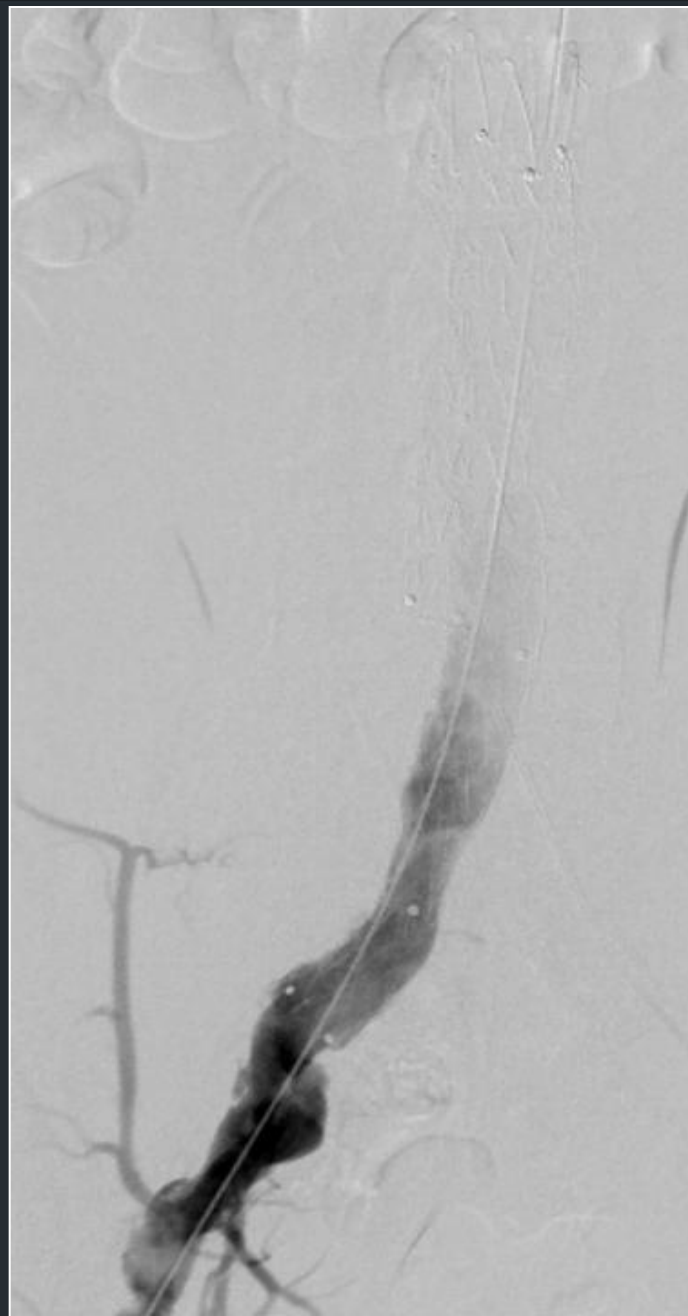
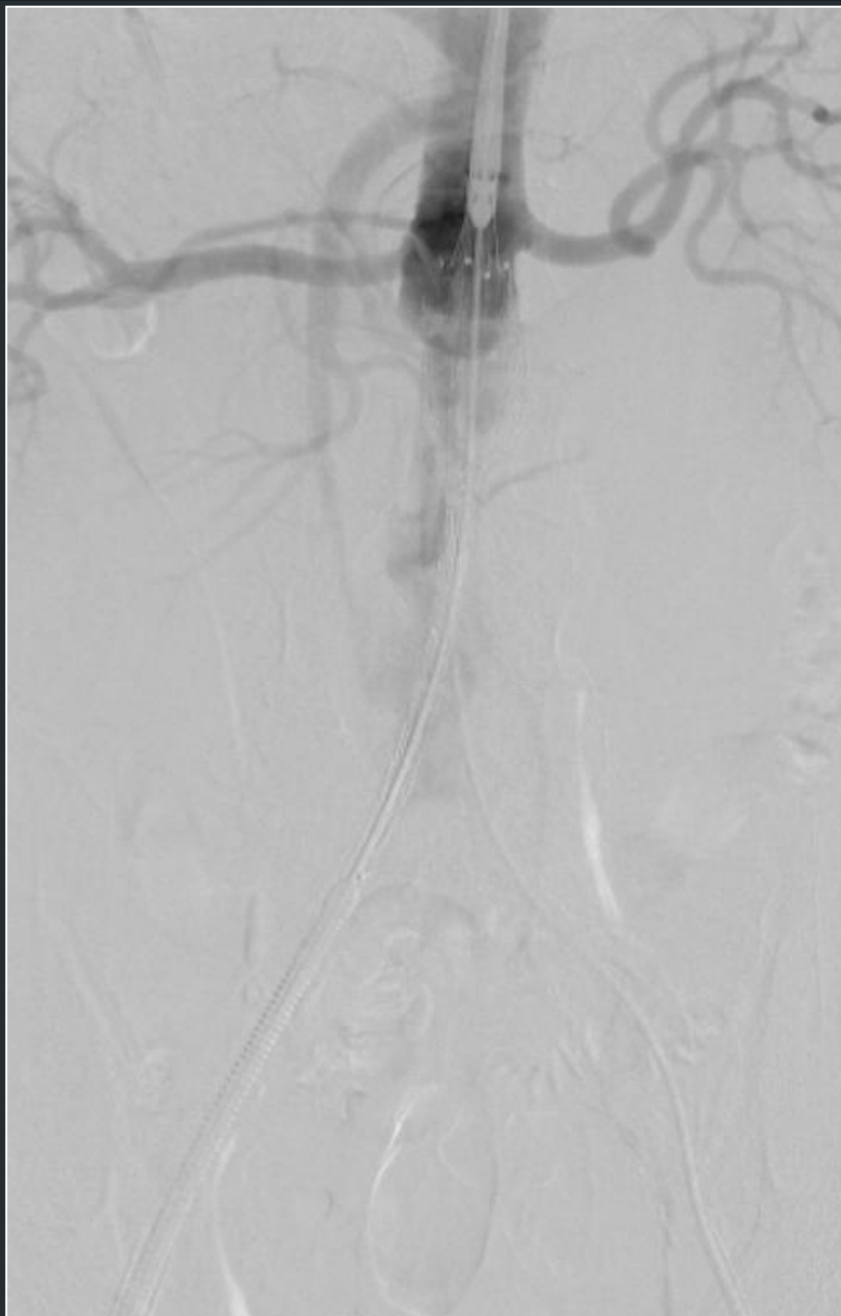


# Gestion des Sténoses Calcifiées

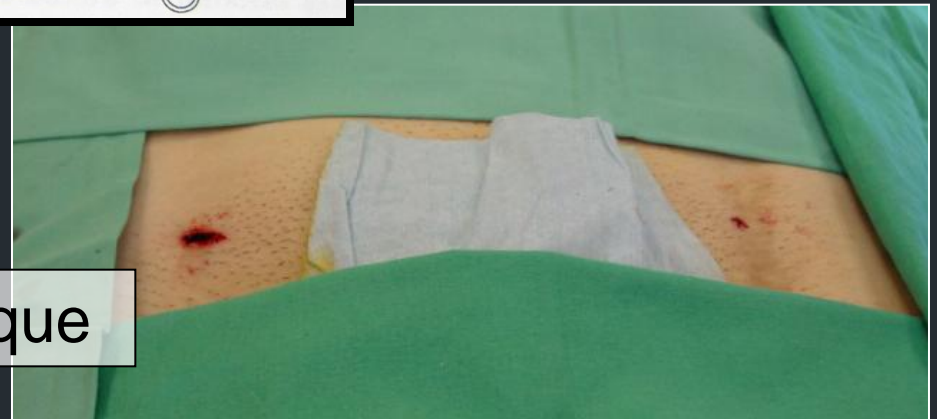
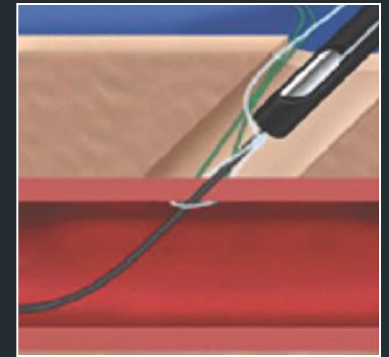
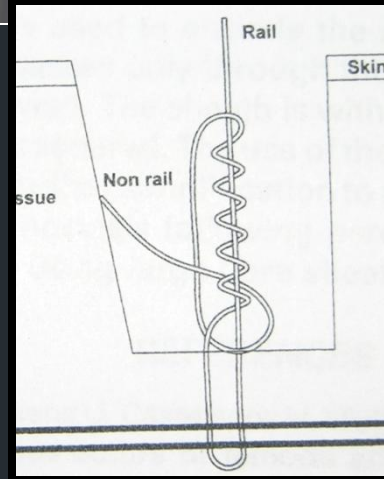
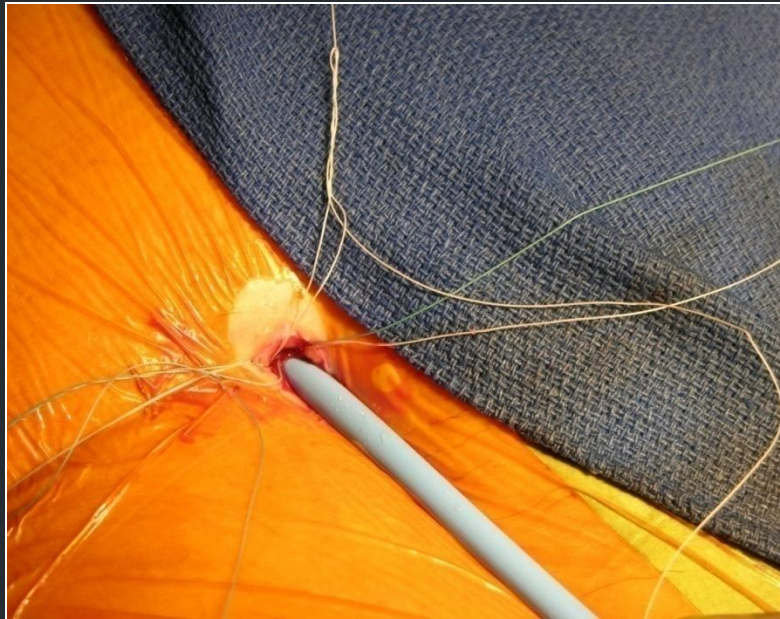
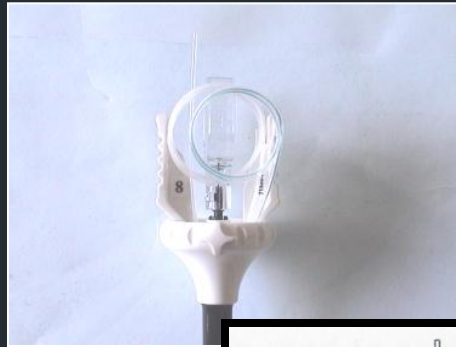
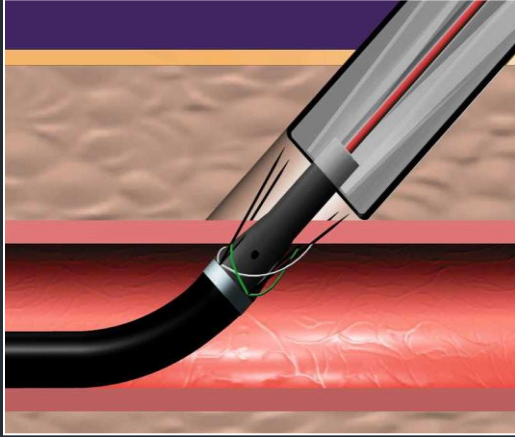








# SUTURE ARTERIELLE PERCUTANEE



Prostar XL: « pre-close » technique

*Prostar – Abbott Vascular*



Après échec de fermeture artérielle fémorale percutanée, les déperditions sanguines les plus importantes sont liées :

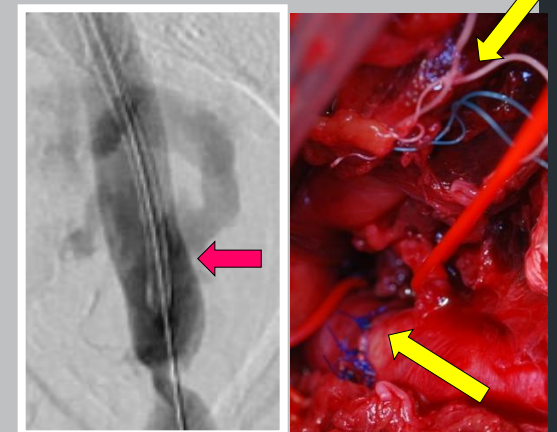
- A. échec de mise en place du Prostar,
- B. utilisation d'un seul Prostar pour des accès de gros calibre,
- C. défaut de placement de la suture,
- D. déchirure de la paroi artérielle fémorale,
- E. dissection et occlusion de l'artère fémorale.

# ACCES PERCUTANES

- résultats -

- Prostar XL (3 ans): 365
- Endoprothèses Aortiques(18F – 24F): 190
- **ACCES:** 347 P1: 329 - P2: 18

- Chirurgie d'hémostase: 10
  - ➔ Déchirure de paroi: 8
  - ➔ Malposition de suture / Obese: 2
- Chirurgie / dissection: 3



**CHIRURGIE COMPL. AFC: 3.7%**



# Déperdition Sanguine Per Procédure

## REVIEWS

J CARDIOVASC SURG 2009;50:153-8

### *Endurant stent-graft system: preliminary report on an innovative treatment for challenging abdominal aortic aneurysm*

H. J. M. VERHAGEN<sup>1</sup>, G. TORSELLO<sup>2</sup>, J.-P. P. M. DE VRIES<sup>3</sup>, P. H. CUYPERS<sup>4</sup>, J. A. VAN HERWAARDEN<sup>5</sup>,  
H.-J. FLOREK<sup>6</sup>, D. SCHEINERT<sup>7</sup>, H.-H. ECKSTEIN<sup>7</sup>, F. L. MOLL<sup>5</sup>

TABLE 1.—Pretreatment risk factors in patients receiving the endurant stent graft.

Risk factors	Number (N=40)	%
Angina	5	12.5
Arrhythmia		
Coronary artery disease		
Congestive heart failure		
Chronic obstructive pulmonary disease	7	17.5
Cerebral vascular accident	5	12.5
Diabetes	6	15.0
Hypertension	28	70.0
Myocardial infarction	14	35.0
Peripheral vascular disease	1	2.5
Renal insufficiency	0	0.0
Tobacco use	24	60.0

#### The Endurant delivery system

The stent-graft delivery system is made of an outer polymer-graft cover sheath with a hydrophilic coating (Figure 2). The crossing profile of the delivery system has been reduced to enable accessing and tracking small iliac vessels. The main body components of the delivery system are available in 20 F and 18 F outside diameters, while the limb components are available in 16 F and 14 F sizes. The disposable single-use catheter has an integrated handle to provide

patient will be followed for one year, with follow-up visits at 30 days and six months. For analysis, the patients will be divided into two subgroups based on infrarenal angulation (angle between proximal neck and aneurysm) <60° or infrarenal angulation 60° to

in the treatment of infrarenal aortic or aorto-iliac AAA. Here we provide preliminary baseline and periprocedural data related to all 40 subjects.

The study subjects were predominantly male (95%) and elderly (mean age 74.1 years). Cardiovascular risk factors were prevalent, with hypertension (70%), tobacco use (60%) and previous myocardial infarction (35%), coronary artery disease (32.5%), and diabetes mellitus (15%) the most common (Table 1). Only 10% of subjects were American Stroke Association class I, while 65% were class II and 25% were class III.

Aneurysm-related characteristics were closely assessed. The mean maximum aneurysm diameter was 57.2 mm (range 46 to 74 mm), the mean proximal neck diameter was 24.2±2.97 mm (range 18 to 30 mm), the mean aneurysm length was 119.8±23.53 mm (range 18 to 161 mm), and the mean proximal neck length was 28.9±13.85 mm (range 12 to 73 mm). Six study patients had infrarenal angulation 60° to

jects, with no reported type I/III endoleaks; no loss of device integrity; no graft infections; thromboses or occlusions; no conversions to open repair; and no ruptured aneurysms. Three secondary endovascular procedures were recorded, all related to access site bleeding complications. No device-related death or device-related serious adverse events were seen during the first 30 days of follow-up. Careful review of the adverse events during the clinical investigation revealed an acceptable safety profile for endovascular abdominal aortic stent-grafting.

Preliminary clinical investigation with the Endurant stent-graft system

## Final Results of the Prospective European Trial of the Endurant Stent Graft for Endovascular Abdominal Aortic Aneurysm Repair

E.V. Rouwet<sup>a</sup>, G. Torsello<sup>b</sup>, J.-P.P.M. de Vries<sup>c</sup>, P. Cuyppers<sup>d</sup>, J.A. van Herwaarden<sup>e</sup>, H.-H. Eckstein<sup>f</sup>, R.J. Beuk<sup>g</sup>, H.-J. Florek<sup>h</sup>, R. Jentjens<sup>i</sup>, H.J.M. Verhagen<sup>a,\*</sup>

Table 4 Procedural details.

Parameter	Infrarenal angulation ≤60° (n = 71)	Infrarenal angulation 60°–75° (n = 9)
Delivery success <sup>a</sup>	100% (71/71)	100% (9/9)
Deployment success <sup>b</sup>	100% (71/71)	100% (9/9)
Contrast used (n)	62	8
Contrast volume (mL)	115.0 ± 63.78 (30–410)	103.1 ± 29.99 (50–140)
Contrast usage unknown (n)	9	1
Anaesthesia		

**Blood transfusion required**

**1.4% (1/71)**

**33.3% (3/9)**

Blood transfusion required	1.4% (1/71)	33.3% (3/9)
Time in intensive care unit (hours)	6.0 ± 10.00 (0–37)	12.0 ± 21.46 (0–63)
Overall hospital stay (days)	6.5 ± 2.78 (3–20)	11.2 ± 6.30 (5–23)

Data are presented as mean ± SD (range) or percentage.





<sup>a</sup> Successful vascular access and delivery of the device to the intended anatomical treatment site.

<sup>b</sup> Successful deployment of the device in the intended site and the successful removal of the delivery system.

« **Only 10% of subjects needed blood transfusion** »



# Transfusion Sanguine en France

- PMSI – 2011
  - Mise à plat – Greffe sous Rénale:  19%
  - Endoprothèses Aortiques:  10%
- CCM Monaco (2010-2011): 104
  - Accès Percutanés:  100%
  - Aorte Sous Rénale + Thoracique: 1/104  1%

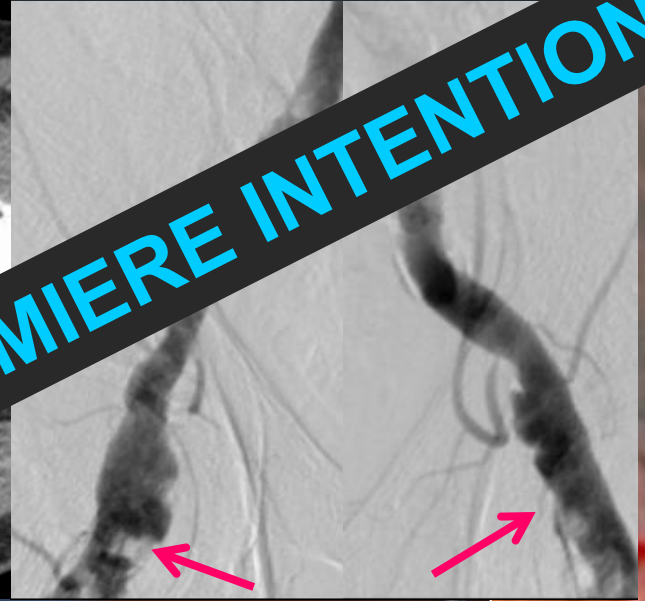
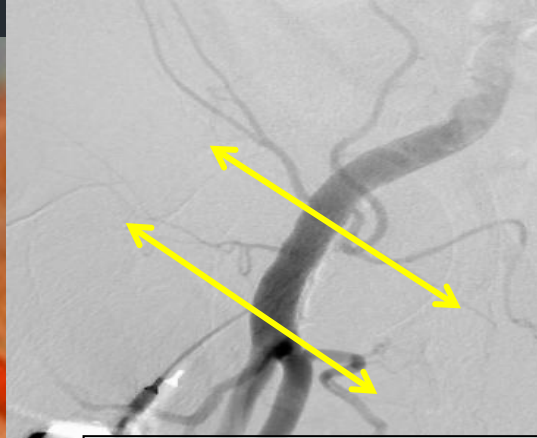
# Etude Rétrospective CCM (2010-2011)

- Hb D(0,1,5) - Hte D(0,1,5)
- Transfusion:

	$\Delta$ Hte (%) ( $\Delta$ 1% = 100 ml)	Perte Estimée (ml)
Endoprothèse	Perte Moyenne: 2.5%	250 ml
Dissection AFC	2.5 %	250 ml
Déchirure AFC	7.5%	750 ml
Hématome Rétropéritonéal	11.2%	1120 ml

A red line graph is overlaid on the table. The line starts at the top right, goes down to the 'Hématome Rétropéritonéal' row, then goes up to a peak above the 'Dissection AFC' row, and then goes down to the 'Hématome Rétropéritonéal' row again. The number '1' is written above the peak. The '1120 ml' value in the table is highlighted in red.

# ACCES FEMORAL



- Contrôle Angio
- Guidage Echo

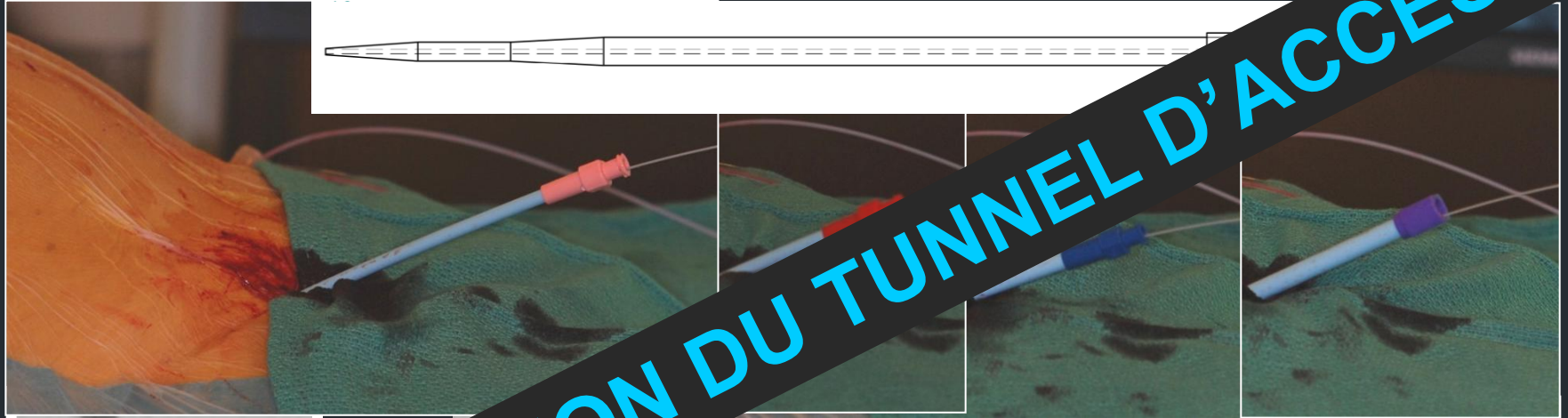
**ABORD PERCUTANE DE PREMIERE INTENTION**

<i>CHIRURGIE CPL AFC:</i>	<i>3.7%</i>
<i>DISSECTION:</i>	<i>0.9%</i>
<i>DEFAUT HEMOSTASE:</i>	<i>2.3%</i>
<i>MALPOSITION DE SUTURE:</i>	<i>0.5%</i>

*Prostar XL « preclose technique » – Abbott Vascular*



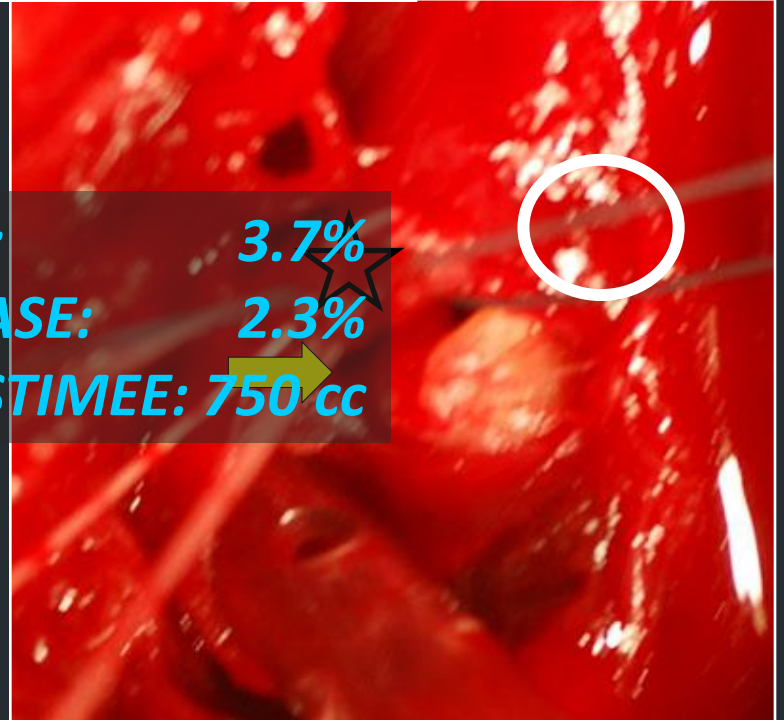
# TUNNELISATION D'ACCES



## PREDILATATION DU TUNNEL D'ACCES



*CHIRURGIE CPL AFC: 3.7%  
DEFAUT D'HEMOSTASE: 2.3%  
PERTE SANGUINE ESTIMEE: 750 cc*



# INTRODUCTEUR / VALVE ACTIVE



**VALVE ACTIVE SYSTEMATIQUE > 16 F**

HQS(26-18F/140-200)

227

Durée moyenne:

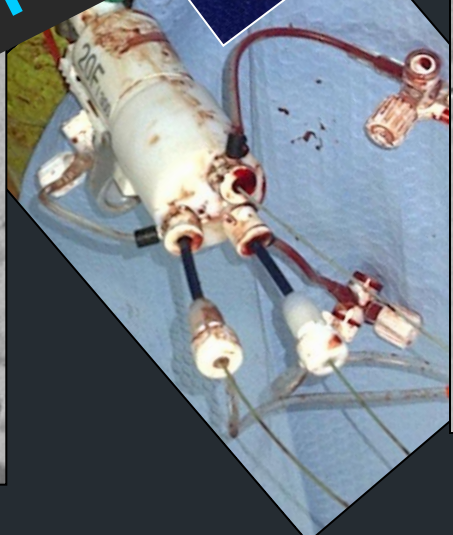
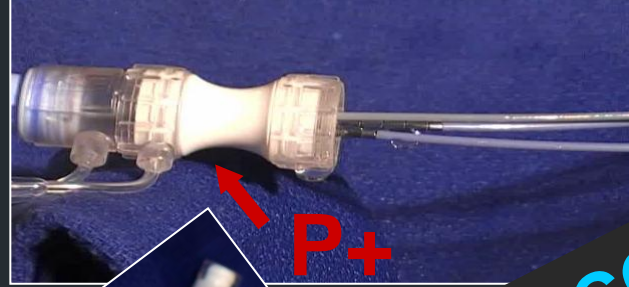
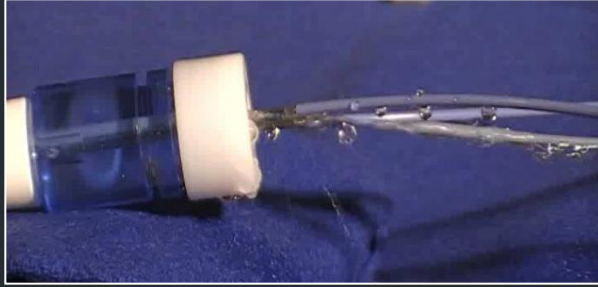
1h39' (1h-4hrs)

Sanguine Moyenne:

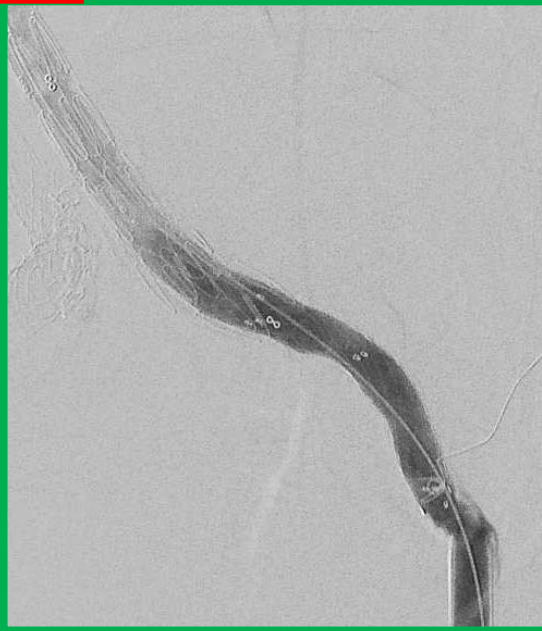
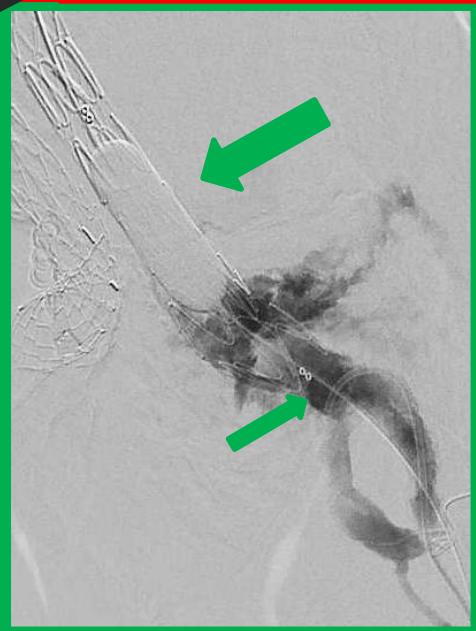
**16.9 ml (5-50ml)**



# PORT MULTI-ACCES



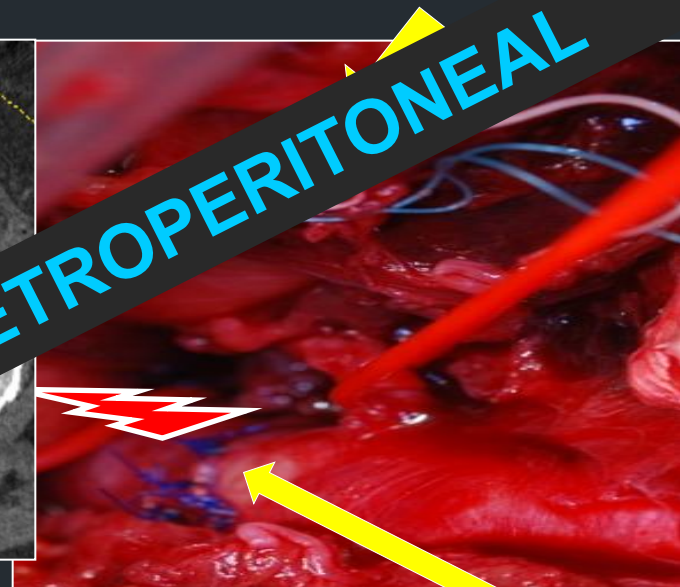
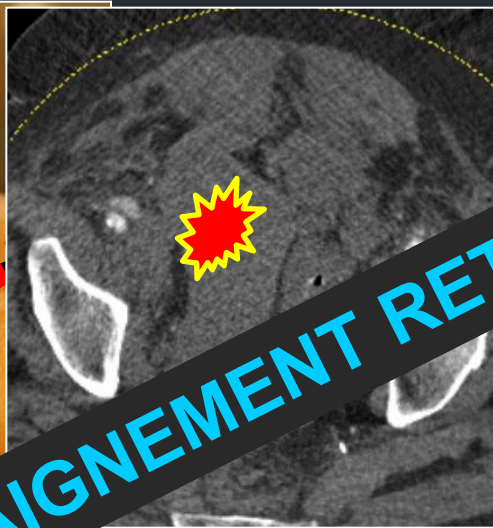
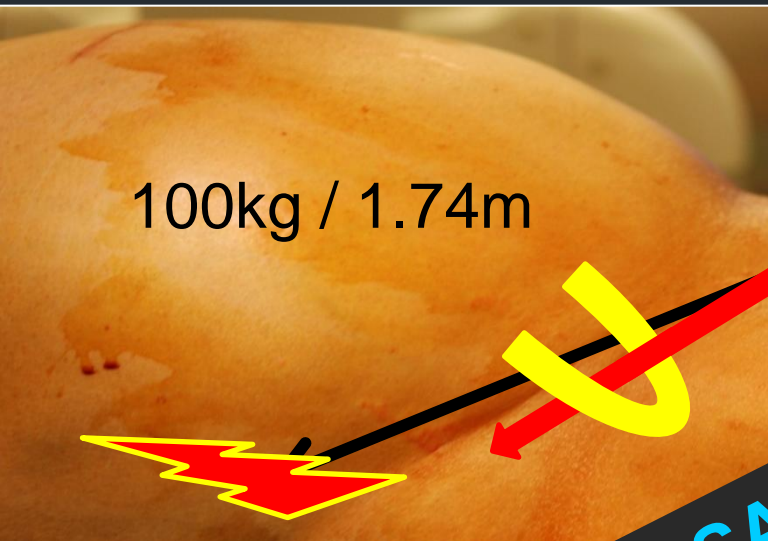
**SYSTÈME MULTI-ACCES / GESTES COMPLÉMENTAIRES**



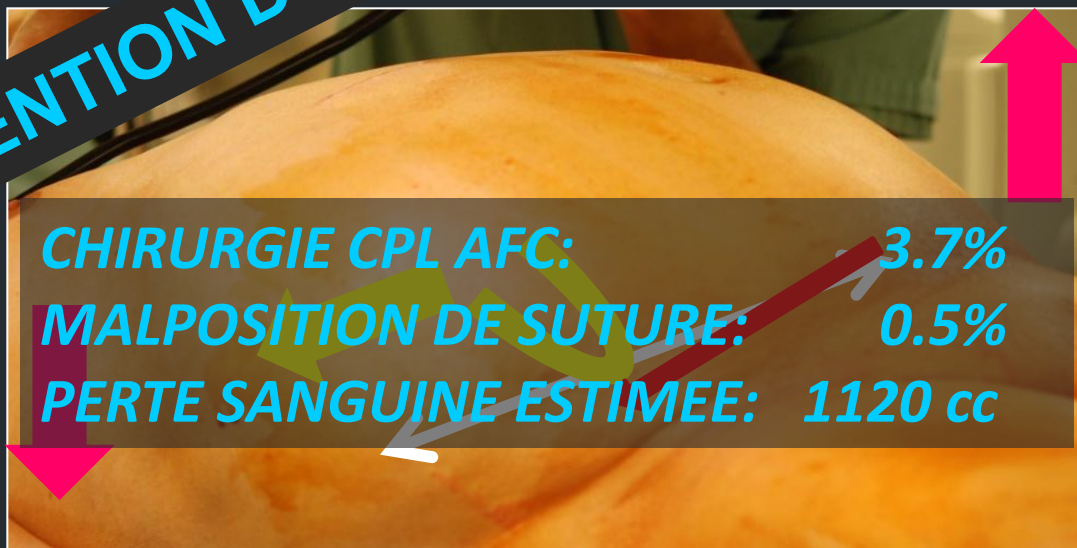
**PORT MULTI-ACCES / RUPTURE ILIAQUE**



# MALPOSITION DE LA SUTURE



**PREVENTION DU SAIGNEMENT RETROPERITONEAL**



CHIRURGIE CPL AFC:	3.7%
MALPOSITION DE SUTURE:	0.5%
PERTE SANGUINE ESTIMEE:	1120 cc

# CONCLUSION

- Gestion de l'abord percutané pour limiter la transfusion sanguine.
- Problématique de la transfusion:
  - Manque de donneurs
  - Coût
  - Risque transfusionnel
- Projet d'étude prospective sur la déperdition sanguine:
  - Chirurgie d'abord direct
  - Endoprothèse aortique avec abord chirurgical
  - Endoprothèse aortique avec abord percutané