



# i-MEET

## NEXT GENERATION

Multidisciplinary European Endovascular Therapy

# Outpatients management is profitable

**Yann Gouëffic, MD, PhD**

Department of vascular surgery, institut du thorax, Nantes, France

## Disclosure

Speaker name:

**Yann Goueffic**

☒ **I have the following potential conflicts of interest to report:**

Consultant: BOSTON SCIENTIFIC, COOK, HEXACATH, MEDTRONIC,  
PEROUSE.



## **Outpatients is profitable because:**

- 1) It helps to respond to the increased demand of hospital care**
- 2) It makes the structure more efficient**
- 3) It saves money**
- 4) It makes patients, physicians and nurses happy**

## **Outpatients is profitable because:**

- 1) It helps to respond to the increased demand of hospital care**
- 2) It makes the procedure and the structure organization more efficient
- 3) It saves money
- 4) It makes patients, physician and nurses happy

# Increased demand of hospital care for PAD

Population is ageing – Diabetes - Renal insufficiency

*During the preceding decade the number of individuals with PAD, increased by 28.7% in LMIC and 13.1% in HIC.*

	People living with peripheral artery disease in year 2000 (thousands)			People living with peripheral artery disease in 2010 (thousands)			Rate of change (2000–10)		
	High-income countries	Low-income and middle-income countries	Worldwide	High-income countries	Low-income and middle-income countries	Worldwide	High-income countries	Low-income and middle-income countries	Worldwide
25–29 years	2311	10756	13068	2381	12037	14419	3.02%	11.91%	10.34%
30–34 years	2803	11469	14272	2760	12343	15103	–1.52%	7.62%	5.82%
35–39 years	3486	11247	14733	3343	13776	17119	–4.12%	22.49%	16.19%
40–44 years	4071	11138	15209	3938	14707	18645	–3.28%	32.05%	22.59%
45–49 years	4528	11408	15936	4851	14354	19205	7.14%	25.83%	20.51%
50–54 years	4907	9902	14808	5503	14100	19603	12.15%	42.40%	32.37%
55–59 years	4530	9111	13641	5948	14170	20118	31.31%	55.53%	47.49%
60–64 years	5342	9074	14416	6242	11787	18029	16.85%	29.90%	25.06%
65–69 years	5287	8416	13704	5547	10124	15670	4.90%	20.29%	14.35%
70–74 years	5594	6953	12547	6043	9020	15063	8.02%	29.73%	20.05%
75–79 years	4808	4960	9768	5370	7012	12382	11.68%	41.36%	26.75%
80–84 years	3107	3015	6123	4723	4396	9118	51.98%	45.77%	48.92%
85–89 years	2246	1411	3658	3028	2087	5115	34.80%	47.86%	39.84%
≥90 years	1174	544	1717	1611	864	2474	37.22%	58.82%	44.09%
Total	54195	109405	163600	61287	140775	202062	13.08%	28.67%	23.51%

Additions in the table might deviate from the world total in the last digit due to rounding.

Table 2: Estimated number of people living with peripheral artery disease in high-income countries, low-income and middle-income countries, and worldwide in the years 2000 and 2010, and the rate of change from 2000 to 2010



# CHU île de Nantes

*-30% of conventionnal beds*



# Endovascular repair is the first line of treatment for PAD



Lancet 2005; 366: 1925-34

Bypass versus angioplasty in severe ischaemia of the leg  
(BASIL): multi-centre randomised controlled trial

BASIL trial participants\*

## ORIGINAL ARTICLES

### Shifting Paradigms in the Treatment of Lower Extremity Vascular Disease

*A Report of 1000 Percutaneous Interventions*

Brian G. DeRubertis, MD, Peter L. Faries, MD, James F. McKinsey, MD, Rabih A. Chaer, MD, Matthew Pierce, BS, John Karasowski, MD, Alan Weinberg, PhD, Roman Nowygrod, MD, Nicholas J. Morrissey, MD, Harry L. Bush, MD, and K. Craig Kent, MD

(Ann Surg 2007;246: 415-424)

Is revascularization and limb salvage always the best treatment for critical limb ischemia?

Mark R. Nehler, MD,<sup>a</sup> William R. Hiatt, MD,<sup>b</sup> and Lloyd M. Taylor, Jr, MD,<sup>c</sup> Denver, Colo; and Portland, Ore

J Vasc Surg 2003;37:704-8.





# Ambulatory for PAD is safe

## Clinical and Economic Evaluation of Ambulatory Endovascular Treatment of Peripheral Arterial Occlusive Lesions

Bénédicte Albert,<sup>1</sup> Jean-Michel Davaine,<sup>1,2</sup> Marie-Pierre Chaillet,<sup>3</sup> Gaël Grimandi,<sup>4</sup> Béatrice Guyomarch,<sup>5</sup> Laure Azéma,<sup>1,6</sup> Alain Costargent,<sup>1</sup> Philippe Chaillon,<sup>1</sup> Philippe Patra,<sup>1,6</sup> and Yann Gouëffec,<sup>1,6</sup> Nantes, France

*Ann Vasc Surg* 2014; 28: 137–143

Journal of Vascular Surgery

## Peripheral angioplasty in patients with intermittent claudication

Gabriel Akopian, MD, and Steven G. Katz, MD, Pasadena, Calif

*J Vasc Surg*, 2006

## Day-case peripheral angioplasty using nurse-led admission, discharge, and follow-up procedures: arterial closure devices are not necessary

R. Kasthuri, D. Karunaratne, H. Andrew, J. Sumner

Department of Radiology, Manchester Royal Infirmary

Received 16 February 2007; received in revised form 16 February 2007; accepted 16 February 2007

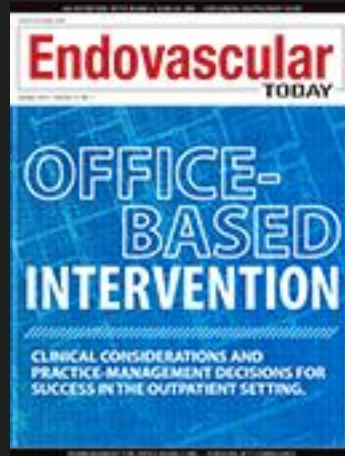
*J Vasc Surg*, 2015

From the Society for Clinical Vascular Surgery

## Office-based endovascular suite is safe for most procedures

Krishna Jain, MD, John Munn, MD, Mark C. Rummel, MD, Dan Johnston, MD, and Chris Longton, RN, Kalamazoo, Mich

# Outpatients for PAD: a routine management



## COVER STORY

# The Outpatient Endovascular and Interventional Society

This new society, fo

**A**lthough outpatient suites have been operational for many years, there has been a marked proliferation of these sites in multiple states in the past 3 years. It is estimated that nearly 350 to 400 office-based labs exist in the United States to date, and that number is growing rapidly. Office-based labs, also referred to as *outpatient interventional suites*, offer many distinct advantages and

The Outpatient Endovascular Society (OES) was conceived to promote the growth of these interventional suites.

### STARTING A NEW MEETING

With the growth of outpatient endovascular and interventional suites in the past few years, many physicians have felt alone and some have had difficulty in the process of establishing and building their practices. Until now, there has been no representation or collective experience to draw upon. The existing national societies, although supportive of the cause, have other interests that are often a singular-specialty focus. Additionally, there has been no formal representation to payers and

**A**lthough outpatient or office-based interventional suites have been operational for many years, there has been a marked proliferation of these sites in multiple states in the past 3 years. It is estimated that nearly 350 to 400 office-based labs exist in the United States to date, and that number is growing rapidly. Office-based labs, also referred to as *outpatient interventional suites*, *access centers*, or *office-based endovascular suites*, offer many distinct advantages and

A sentinel meeting took place in Dallas, Texas, on August 24, 2013. Fifteen founding physicians, five from each of the three specialties and representing different geographic areas of the country, came together to develop the society's goals, bylaws, and objectives. In that meeting, the unity of purpose and approach to forging

## **Outpatients is profitable because:**

- 1) It helps to respond to the increased demand of hospital care
- 2) It makes the procedure and the structure organization more efficient
- 3) It saves money
- 4) It makes patients, physician and nurses happy

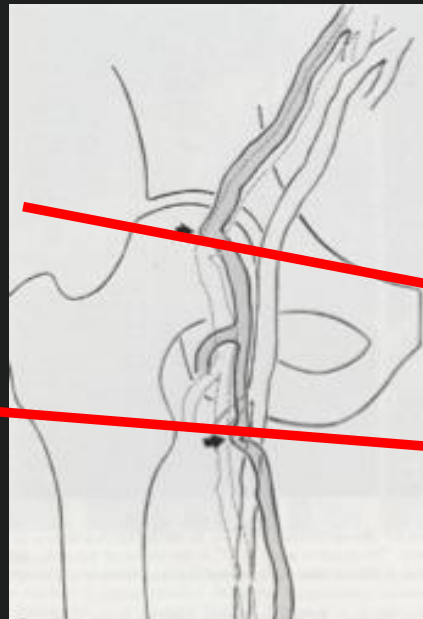
## **Patient care should be safe and efficient with a same day discharge**

- The hospitalisation should be well organized
- It mobilizes fewer resources than conventional surgery
- The procedure should be successful
- Follow-up should be safe

# Duplex scan guided femoral puncture to increase the safety and the efficacy of ACD

*Prostar®*, *Proglide®* (Abbott, France)

*Angioseal®*, *Femoseal* (St Jude)



Inguinal ligament

CFA bifurcation





# Arterial closure device Vs Manual compression

+

-

**The use of smaller diameter instruments would  
tend to render manual compression sufficient**

**puncture point which presents  
a greater risk after the ACD**

**Cost**

# FREDDOM trial

(ClinicalTrials.gov Identifier: NCT01587482)

## Everflex peripheral self-expanding stent with Entrust delivery system

"FREDDOM"

RC13\_

### **FREDDOM protocol**

Record no.: no. ?

Ref: RC/ ?

Ethics Committee Ref.: ?

"Pilot study of the feasibility and safety of resuming early walking after manual compression in patients treated for peripheral artery disease by endovascular technique involving retrograde femoral puncture with 5F sheath"

#### **Coordinating Investigator:**

**Prof. Yann GUYOMARCH**

Service de chirurgie vasculaire - Institut du Thorax

Nantes University Hospital Center (CHU)

yann.guyomarch@univ-nantes.fr

Tel: 33 (0)2 40 16 58 59

#### **Methodology expert:**

**Ms. Béatrice GUYOMARCH**

Département: Institut du Thorax

Nantes University Hospital Center (CHU)

E-mail: beatrice.guyomarch@univ-nantes.fr

Telephone: 33 (0)2 40 16 58 59

#### **Sponsor:**



**Nantes University Hospital Center (CHU)**

Research Division

Département promotion

5, allée de l'île Gloriette

44 093 Nantes cedex 01 (FRANCE)

Contact:

Tel: +33 (0)2 53 48 28 35

Fax: 33 (0)2 53 48 28 36

## Objective

To demonstrate the feasibility of early resumption of walking after manual puncture point compression following a diagnostic or therapeutic procedure by endovascular technique involving retrograde femoral puncture point with 5F sheath.

## Primary endpoint

Walking at H5

## **Outpatients is profitable because:**

- 1) It helps to respond to the increased demand of hospital care
- 2) It makes the procedure and the structure organization more efficient
- 3) **It saves money**
- 4) It makes patients, physician and nurses happy

# Government urges to save money

## Cinq milliards d'euros d'économies sur la chirurgie

coup améliorée : les hôpitaux publics affichent même un excédent de 100 millions d'euros, selon les prévisions du ministère de la santé.

### Lits inoccupés

Si elle note l'inversion de tendance, la Cour décrit « *un équilibre fragile et largement circonstanciel* », obtenu grâce à des cessions d'actifs (notamment 60 millions à l'AP-HP ou 43 millions aux hospices de Lyon) et un changement comptable. Son regard se fait particulièrement sévère sur la chirurgie ambulatoire, qui permet d'éviter les coûteux séjours à l'hôpital notamment pour la cataracte ou les hernies. Son retard est « *considérable et préjudiciable* ». En

moyenne, quatre opérations sur dix sont réalisées en ambulatoire en France, contre huit dans des pays comparables. Les magistrats relèvent que malgré la montée en puissance de l'ambulatoire, la diminution du nombre de lits en chirurgie conventionnelle a marqué le pas. Résultat, bon nombre sont inoccupés. Une bonne gestion permettrait une économie de 5 milliards par an.

Pour la Cour, la solution réside non plus dans l'incitation financière à pratiquer des opérations sans hébergement à l'hôpital, mais dans l'alignement des tarifs de chirurgie classique sur l'ambulatoire. Une baisse de tarifs qui inverserait enfin la logique. ■

L. CL.

## LES AUTRES PISTES D'ÉCONOMIES

► **Le développement de la chirurgie ambulatoire** (actes pratiqués à l'hôpital permettant la sortie le jour même du patient), qui permettrait 5 milliards d'euros d'économies.

LIBÉRATION **MERCREDI** 18 SEPTEMBRE 2013

# Currently, outpatient for PAD represents less than 2% of the hospitalization in France

	Toutes durées confondues (dont séjours supérieurs à 2 nuits)	2 nuits	1 nuit	Ambulatoire	Total durées inférieures ou égales à 2 jours
05K061	21 288	15 676			15 676
05K131	3 794	3 550	787		4 337
05K06T	5 840		3 347	447	3 794
05K13J	158			158	158
Total	31 080	19 226	4 134	605	23 965
%	100%	61,9%	13,3%	1,9%	77,1%

DRG for outpatients:

05K06T: Vascular stent without myocardial infarction, very short length

05K13J: Therapeutic procedure through vascular access except stent (>17 years old)



## PAD French Context

- 23,965\* stays  $\leq 2$  nights including 605  $< 1$  night
- Ambulatory surgery DRG\*: **1,784.66 €**
- Conventional surgery DRG ( $> 24$ h; severity 1)\*:
  - if patient stays between 2 and 7 nights: **2,791.28 €**
  - if patient stays 1 night: **2,287.98 €**
- Expected economy of ambulatory surgery development from a health care insurance perspective :

**11M€** (based on 2014 tariffs and 2013 activity)

\*Public Hospital

# AMBUVASC (PRME 2014)

ClinicalTrials.gov Identifier: NCT02581150



## Objective

To compare the utility-cost of the conventional hospitalization versus ambulatory hospitalization (with ACD)

## Primary endpoint

Incremental cost-effectiveness ratio (ICER)

$$ICER = \frac{C_{ambulatory} - C_{hospitalisation}}{QALYs_{ambulatory} - QALYs_{hospitalisation}}$$

Programme de Recherche Médico-économique PRME 2014 Hors Champs Cancer  
Axe parcours de soins

### Protocole AMBUVASC UC-14-0444

«Analyse coût-utilité de la prise en charge en chirurgie ambulatoire versus l'hospitalisation conventionnelle dans le traitement de l'artériopathie oblitérante des membres inférieurs par technique endovasculaire»

Personne qui dirige et surveille la réalisation de la recherche :  
Pr YANN GOUFFIC  
Etablissement hospitalier : CHU de NANTES  
Chirurgie vasculaire  
Adresse : Hôpital Guillaume et René Lallemand  
Boulevard Jacques Monod 44093 Nantes cedex 1  
Téléphone : 02 40 18 50 93 Adresse électronique : yann.gouffic@chu-nantes.fr  
Télécopie : 02 40 18 50 81

Méthodologie :  
Adresse :  
Téléphone :  
Télécopie :

Economistes de la recherche :  
Adresse :  
Téléphone :  
Télécopie :  
Adresse :  
Téléphone :  
Télécopie :

Etablissement responsable de la recherche CHU de Nantes :  
Direction de la recherche  
Département promotion et  
Département Partenariats et Innovation  
5, allée de l'île Gloriette 44 093 Nantes cedex 01 (FRANCE)  
Contact : A. OMNES, A. ROYER  
Tel : 02 53 48 28 35 Fax : 02 53 48 28 36

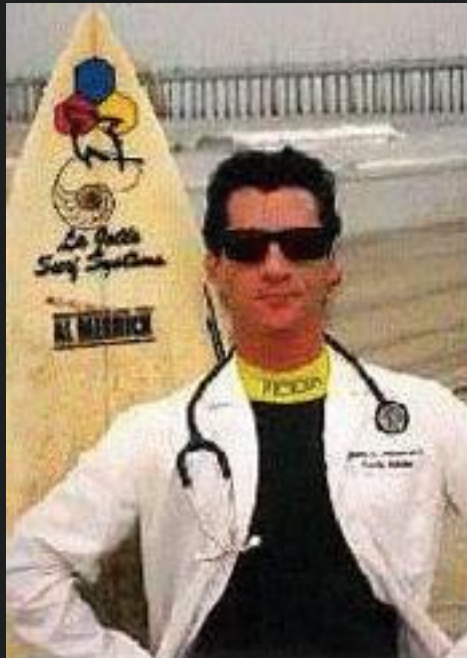
Undergoing study  
Start in March 2016  
30 inclusions / 160

## **Outpatients is profitable because:**

- 1) It helps to respond to the increased demand of hospital care
- 2) It makes the procedure and the structure organization more efficient
- 3) It saves money
- 4) It makes patients, physicians and nurses happy

# Physician, nurses and patients are discharged earlier also !

HOURS	
Monday	9 ~ 5
Tuesday	9 ~ 5
Wednesday	9 ~ 5
Thursday	9 ~ 5
Friday	9 ~ 5
Saturday	
Sunday	



"... and in here we have our ambulatory cases."

CN  
COLLECTION