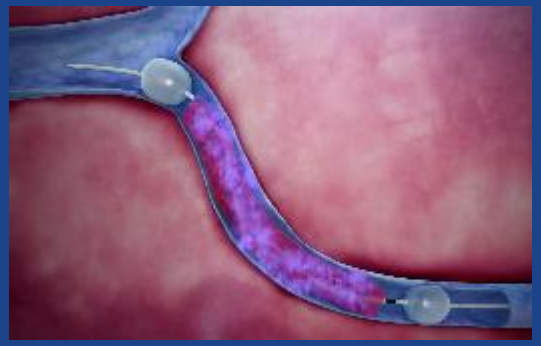
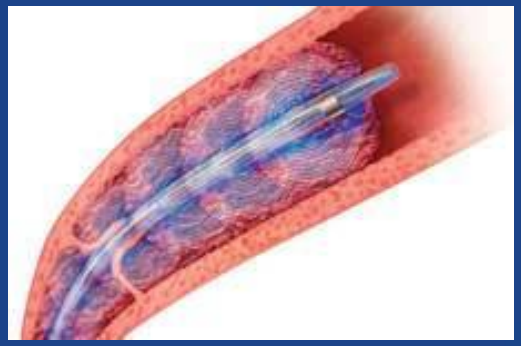
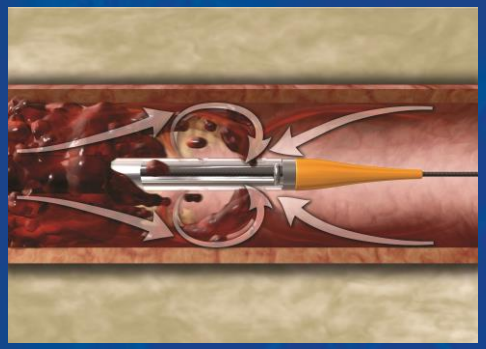
CONTROVERSIES & UPDATES IN VASCULAR SURGERY
JANUARY 22-24 2015
MARRIOTT RIVE GAUCHE & CONFERENCE CENTER PARIS, FRANCE

All patients are suitable for PMT for ilio-femoral DVT - Con

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Disclosure

Speaker name:

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☐ I have the following potential conflicts of interest to report:

✔ Consulting: Covidien

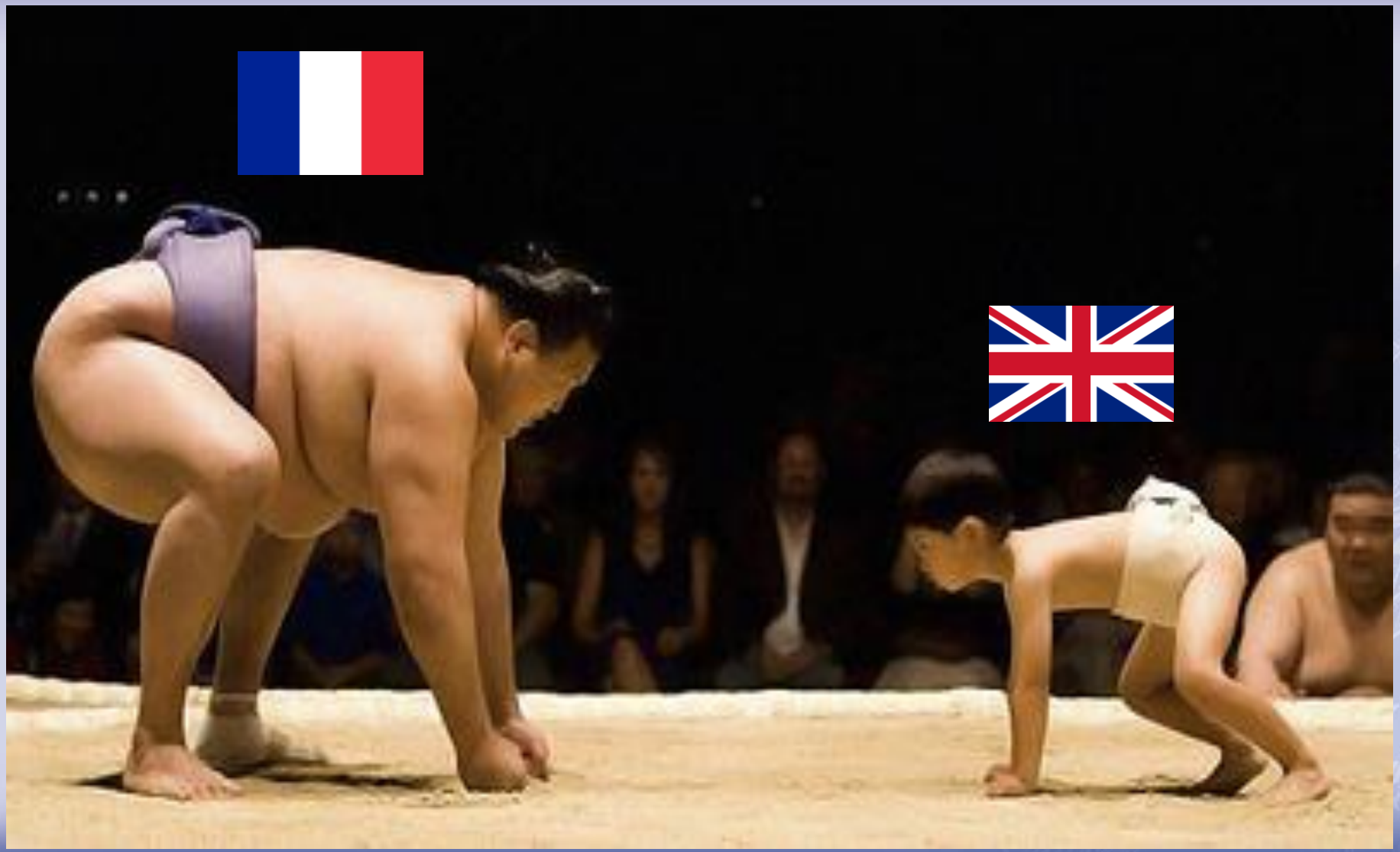
☐ Employment in industry

☐ Shareholder in a healthcare company

☐ Owner of a healthcare company

✔ Other(s): Research award: Laboratoires Urgo

☐ I do not have any potential conflict of interest



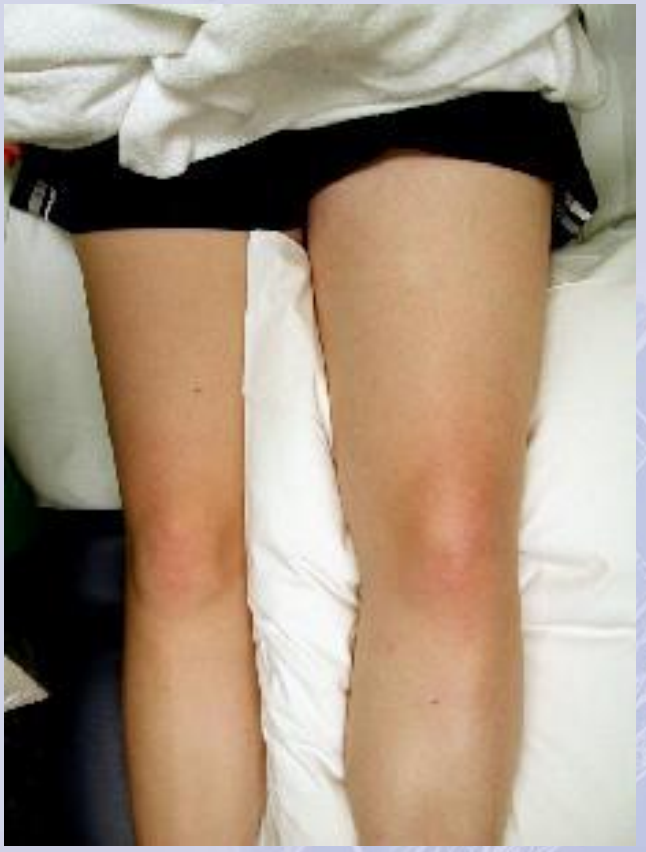
Introduction

50,000 DVTs / annum in UK

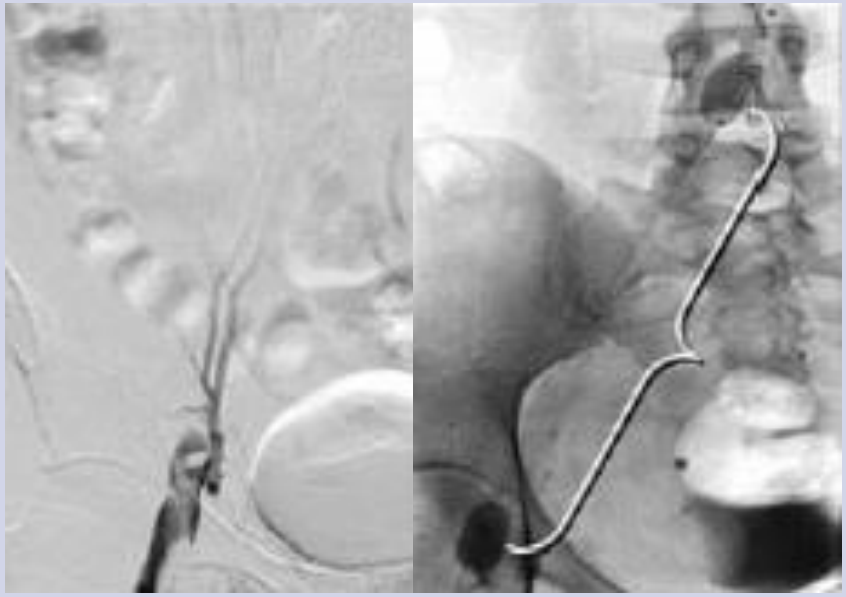
Around 10-15% iliofemoral

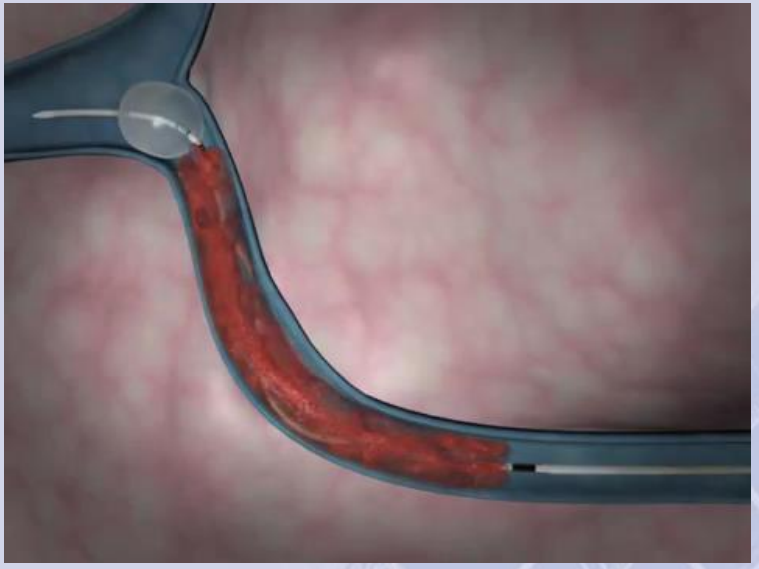
Risk of PTS >75%

(iliofemoral DVT)



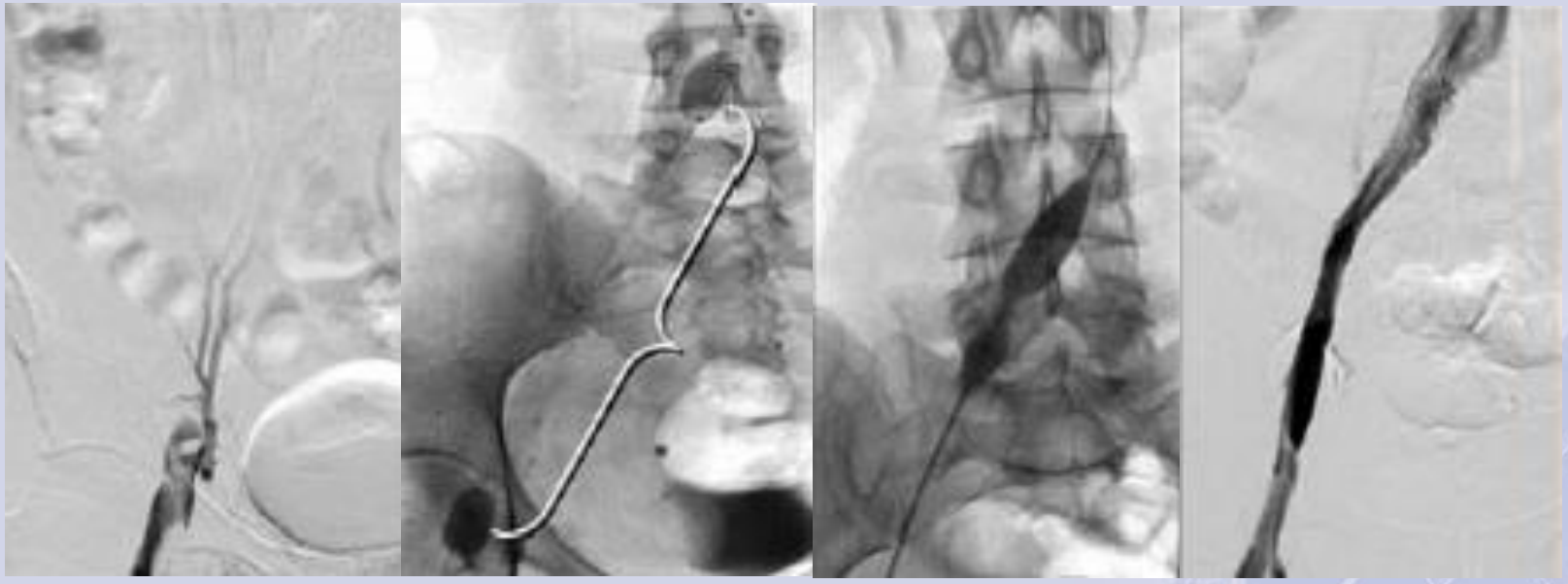
Introduction





Pharmacomechanical thrombolysis and venoplasty in 23 year old female

Introduction



Pharmacomechanical thrombolysis and venoplasty in 23 year old female

09.46 | CONTROVERSY: All patients are suitable for PMT for ilio-femoral DVT

09.46 | CONTROVERSE: Tous les patients peuvent relever de TPM dans les TVP ilio-fémorales

Definition:

All patients (Tous les patients)

every one; 100%

DVT risk factors

Old age

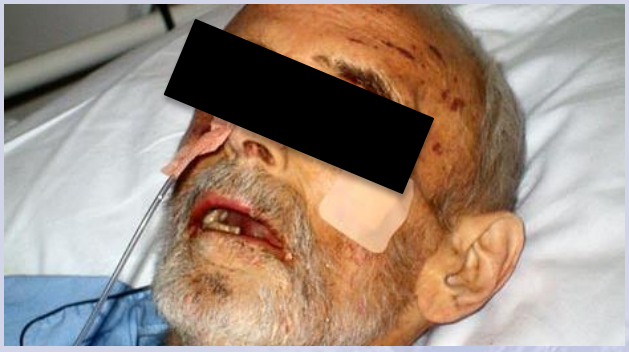
Obesity

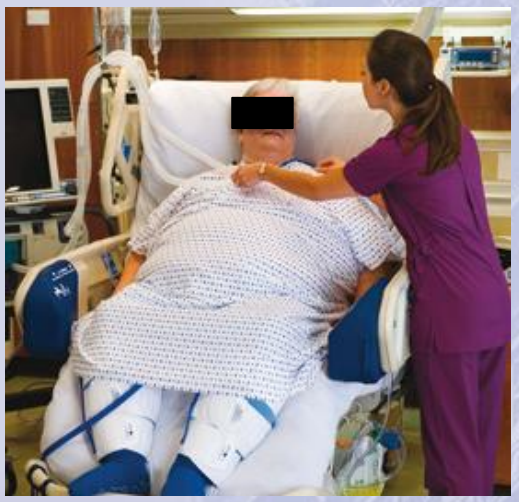
Malignancy

Major surgery

Immobility

Previous DVT





DVT risk factors

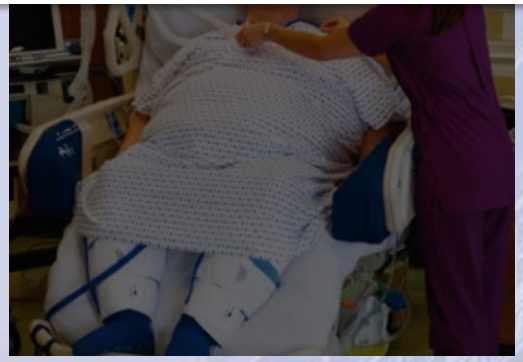
Old age

Obesity

There are some patients that you would NOT treat with PMT

Immobility

Previous DVT



Iliofemoral DVT

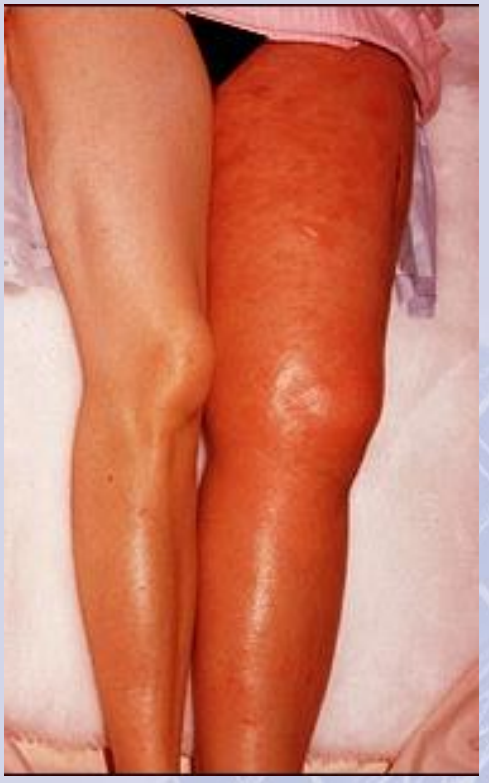
Thrombus removal strategy

(CDT or PMT)

Restore venous patency

Prevent PTS

Improve quality of life



27 year old female

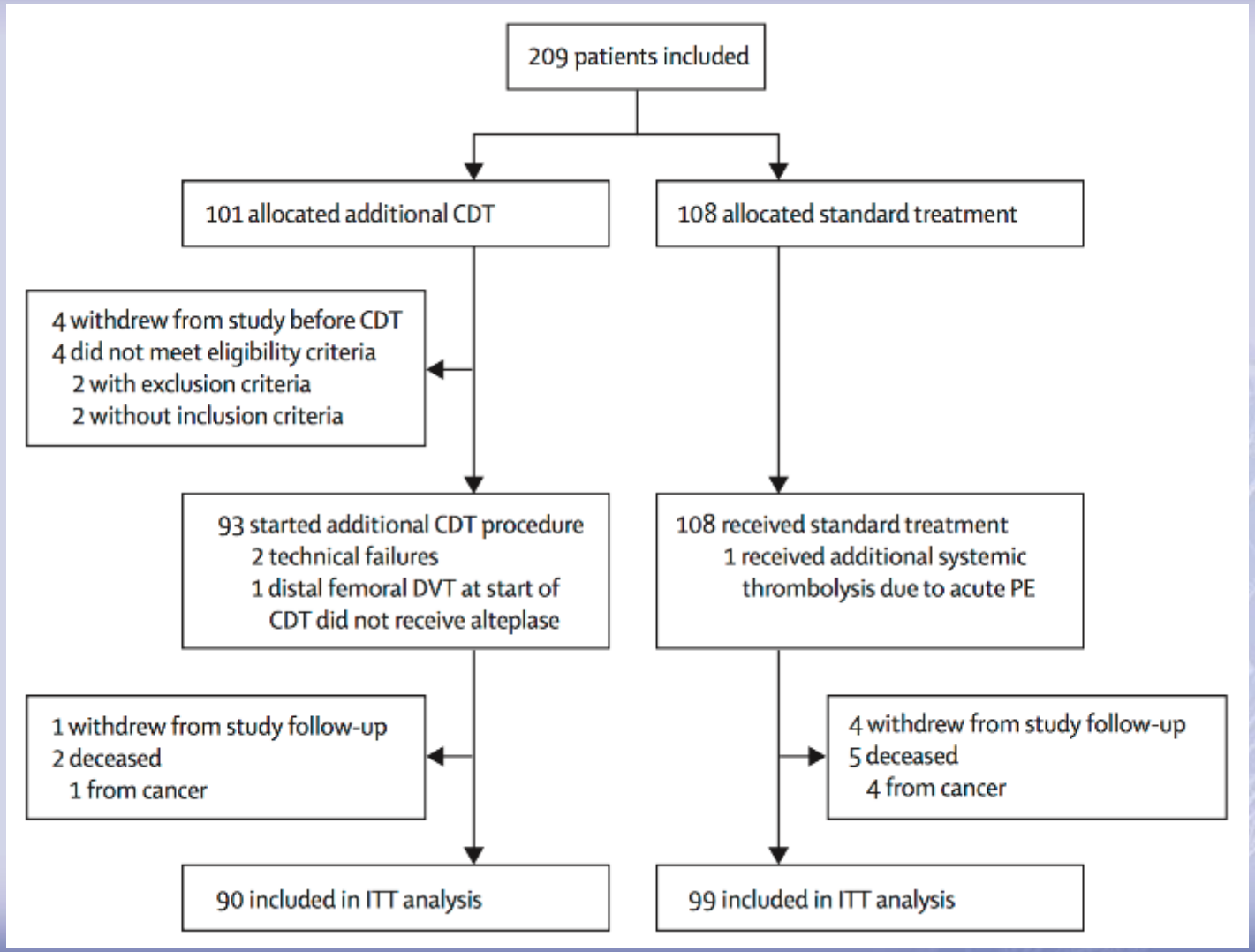
CAVENT trial

Long-term outcome after additional catheter-directed thrombolysis versus standard treatment for acute iliofemoral deep vein thrombosis (the CaVenT study): a randomised controlled trial

Tone Enden, Ylva Haig, Nils-Einar Kløw, Carl-Erik Slagsvold, Leiv Sandvik, Waleed Ghanima, Geir Hafsahl, Pål Andre Holme, Lars Olaf Holmen, Anne Mette Njaastad, Gunnar Sandbæk, Per Morten Sandset, on behalf of the CaVenT Study Group

- Multicentre randomised trial (20 centres in Norway)
- 18-75 years, first iliofemoral DVT, <21 days duration
- Anticoagulation vs anticoagulation with CDT
- Outcomes: incidence of PTS (24 months) and iliofemoral patency (6 months)

CAVENT trial



CAVENT trial

	Additional catheter-directed thrombolysis (n=90)		Standard treatment only (n=99)		p value*
	n	% (95% CI)	n	% (95% CI)	
Post-thrombotic syndrome at 24 months†	37	41·1% (31·5–51·4)	55	55·6% (45·7–65·0)	0·047
Iliofemoral patency at 6 months†‡	58	65·9% (55·5–75·0)	45	47·4% (37·6–57·3)	0·012
Post-thrombotic syndrome at 6 months§	27	30·3% (21·8–40·5)	32	32·2% (23·9–42·1)	0·77

Post-thrombotic syndrome defined as Villalta score of 5 points or higher. *χ^2 test. †Co-primary outcomes. ‡Five patients had inconclusive patency assessments and one was lost to follow-up at 6 months. §Secondary outcome.

Table 2: **Short-term and long-term outcomes**

CAVENT trial

Open Access Research

BMJ open

Health-related quality of life after catheter-directed thrombolysis for deep vein thrombosis: secondary outcomes of the randomised, non-blinded, parallel-group CaVenT study

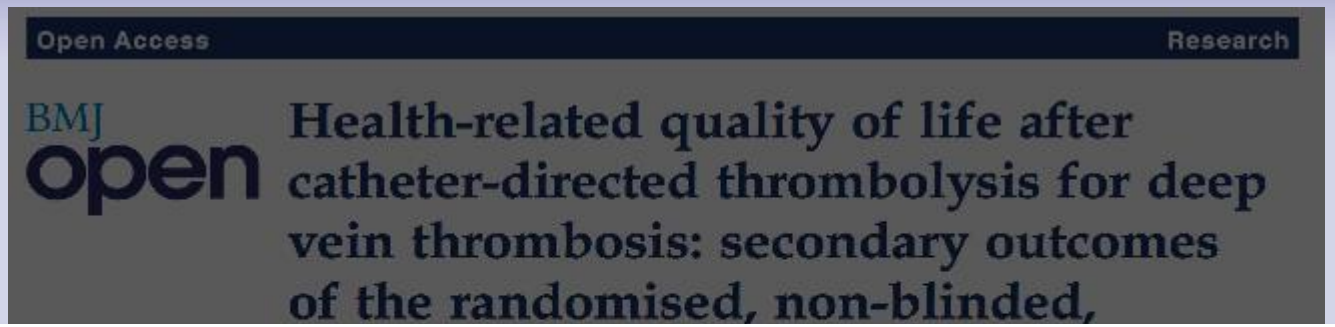
Tone Enden,[1,2] Hilde Skuterud Wik,[1,3] Ann Kristin Kvam,[1] Ylva Haig,[2,3] Nils Einar Kløw,[2,3] Per Morten Sandset[1,3]

Table 2 Generic and disease-specific quality of life and symptom severity according to treatment allocation

		Additional catheter-directed thrombolysis (n=90)	Standard treatment only (n=99)	Mean difference	p Value*
24 months					
Generic QOL	EQ-5D	0.80 (0.746 to 0.849)	0.84 (0.807 to 0.875)	0.04 (−0.01 to 0.17	0.705
Disease-specific QOL	VEINES-QOL	50.1 (47.9 to 52.3)	49.9 (48.0 to 51.8)	0.2 (−2.8 to 3.0)	0.595
	VEINES-Sym	50.3 (48.0 to 52.5)	49.8 (47.9 to 51.6)	0.5 (−2.4 to 3.4)	0.368

NO DIFFERENCE BETWEEN THE GROUPS

CAVENT trial


Open Access Research

BMJ open

Health-related quality of life after catheter-directed thrombolysis for deep vein thrombosis: secondary outcomes of the randomised, non-blinded,

Iliofemoral DVT: are thrombus removal strategies as good as we think?

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NO DIFFERENCE BETWEEN THE GROUPS

Table 1. A Summary Previous Trials Investigating the Role of Catheter Delivered Therapy for DVT

Study (Year)	Design	Limbs Treated	Pathology	Arms	Agent	Short-Term Patency	Long-Term Patency
Bjarnason et al (1997)[25]	Institution series	87	Acute iliofemoral DVT	CDT (87)± angioplasty±stent±PMT	Urokinase	Immediate: 69 (79%), iliac, 86%; femoral, 63%	1 year: iliac, 63% primary, 78% secondary; femoral, 40% primary, 51% secondary
Mewissen et al (1999)[24]	National registry data	303	Acute and chronic suprapopliteal	CDT	Urokinase	Immediate: grade III in 96 (31%), II in 162 (52%), I in 54 (17%)	1 year: 181 (60%)
Gandini et al (1999)[33]	Institution series	8	Iliocaval thrombosis	PMT	None	Immediate: 6 (75%)	2 years: 6 (75%)
Elsharawy et al (2002)[34]	Single blind RCT	35	Iliofemoral DVT <10 days	CDT+ (18), Anticoagulation alone (17)	Streptokinase	1 week: CDT 11 (61%), control 0 (0%)	6 months: CDT, 2 (13%); control, 2 (12%)
Jackson et al (2005)[35]	Institution series	28	Acute supra popliteal DVT (4 had symptoms >14 days)	CDT±stenting±PMT		Immediate: 5 (18%) complete lysis, 20 (72%) partial	1 year: 22 (80%)
Lin et al (2006)[36]	Retrospective comparison of CDT and PMT	98	Acute symptomatic lower limb DVT	CDT (46), PMT (52)		CDT: 32 (75%) complete, 14 (25%) partial; PMT: 39 (75%) complete, 13 (25%) (Primary assisted)	1 year: CDT, 29 (64%); PMT, 35 (68%)
Protack et al (2007)[12]	Institution series	69	Lower extremity DVT	CDT (27), PMT (12), both (30)		Immediate: grade III in 46 (67%), II in 19 (26%), I in 4 (6%)	2 years: 57 (83%) freedom from rethrombosis
Rao et al (2009)[32]	Institution series	43	Symptomatic iliofemoral DVT (19, >14 days)	CDT ± PMT	r-TPA	Immediate: grade III, III lysis in 41 (95%)	Not reported
Shi et al (2009)[37]	Institution series	16	Massive lower limb DVT	CDT+PMT+IVC filter	Urokinase	Immediate: grade III and III lysis in 14 (89%), I in 2 (11%)	Follow-up:* 12 (75%)
Baekgaard et al (2009)[14]	Institution series	103	DVT <14 days, open distal popliteal vein	CDT+stockings (103)+stent (57)	r-TPA	1 week: 95/103 (92%)	6 years: 84 (82%) mean follow-up 50 months
Enden et al (2009)[13]	Open multicenter RCT: short-term report	103	Iliofemoral DVT <21 days and symptoms	CDT+anticoagulation (50), anticoagulation alone (53)	r-TPA	Immediate: grade III in 24, II in 20 for CDT group	6 months: 32 (64%) of CDT group vs 19 (36%) of control

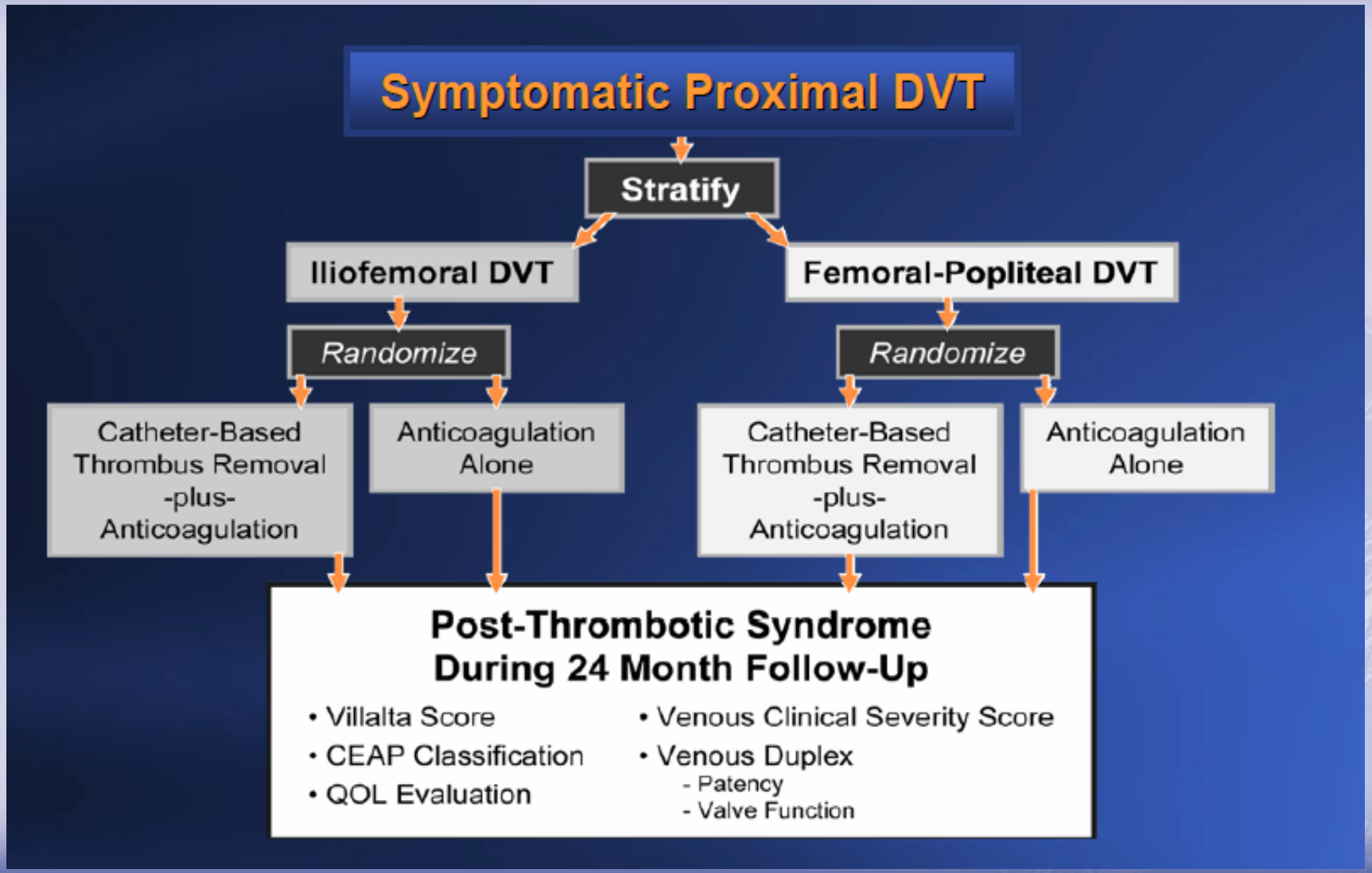
Patterson et al, Arterioscler Thromb Vasc Biol. 2010;30:669-674

Early thrombus removal strategies for acute deep venous thrombosis: Clinical Practice Guidelines of the Society for Vascular Surgery and the American Venous Forum

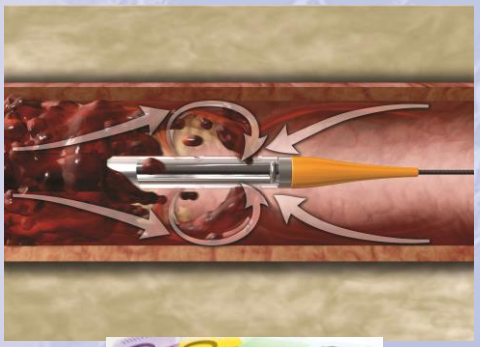
Mark H. Meissner, MD,[a] Peter Gloviczki, MD,[b] Anthony J. Comerota, MD,[c] Michael C. Dalsing, MD,[d] Bo G. Eklof, MD,[e] David L. Gillespie, MD,[f] Joann M. Lohr, MD,[g] Robert B. McLafferty, MD,[h] M. Hassan Murad, MD,[i] Frank Padberg, MD,[j] Peter Pappas, MD,[k] Joseph D. Raffetto, MD,[l] and Thomas W. Wakefield, MD,[m] *Seattle, Wash; Rochester, Minn; Toledo, Ohio; Indianapolis, Ind; Helsingborg, Sweden; Rochester and New York, NY; Cincinnati, Ohio; Springfield, Ill; Newark, NJ; West Roxbury, Mass; Ann Arbor, Mich*

		Grade of recommendation: 1: Strong 2: Weak	*Quality of evidence A. High B. Moderate C. Low or very low*
2.1.	We suggest a strategy of early thrombus removal in selected patients meeting the following criteria (*a*) a first episode of acute iliofemoral deep venous thrombosis, (*b*) symptoms <14 days in duration, (*c*) a low risk of bleeding, and (*d*) ambulatory with good functional capacity and an acceptable life expectancy.	2	C

ATTRACT study



What about cost?



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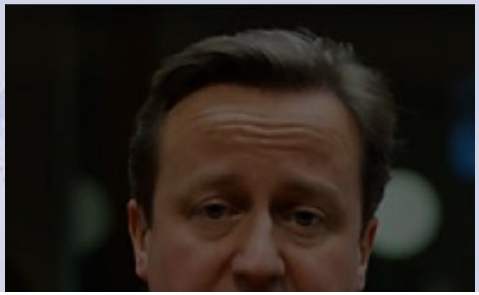
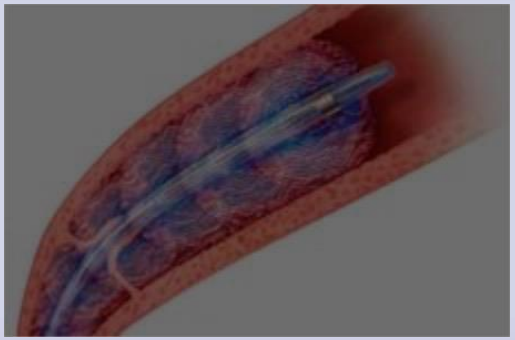


We have no evidence that these interventions are cost-effective



Conclusions

All patients are suitable for PMT for ilio-femoral DVT

There are patients who are NOT SUITABLE for PMT

Evidence is lacking for the clinical effectiveness of PMT

There is little / no evidence of cost effectiveness

Conclusions

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