Lignes directrices TEV ACCP 2016

16ème congrès annuel SSVQ

- Sélection appropriée du traitement selon la situation
- Durée de l'anticoagulation
- Thrombolyse et thérapies endovasculaires

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CHUM et ICM

Thrombosis Canada
Thrombose Canada

SSVQ
Société des sciences vasculaires du Québec

CANVECTOR

- Funded by CIHR-ICRH and various partners (including **SSVQ**) in 2015-2020
- $5.2 M in total
- Co-Directors: Susan Kahn (McGill) & Marc Rodger (U Ottawa)

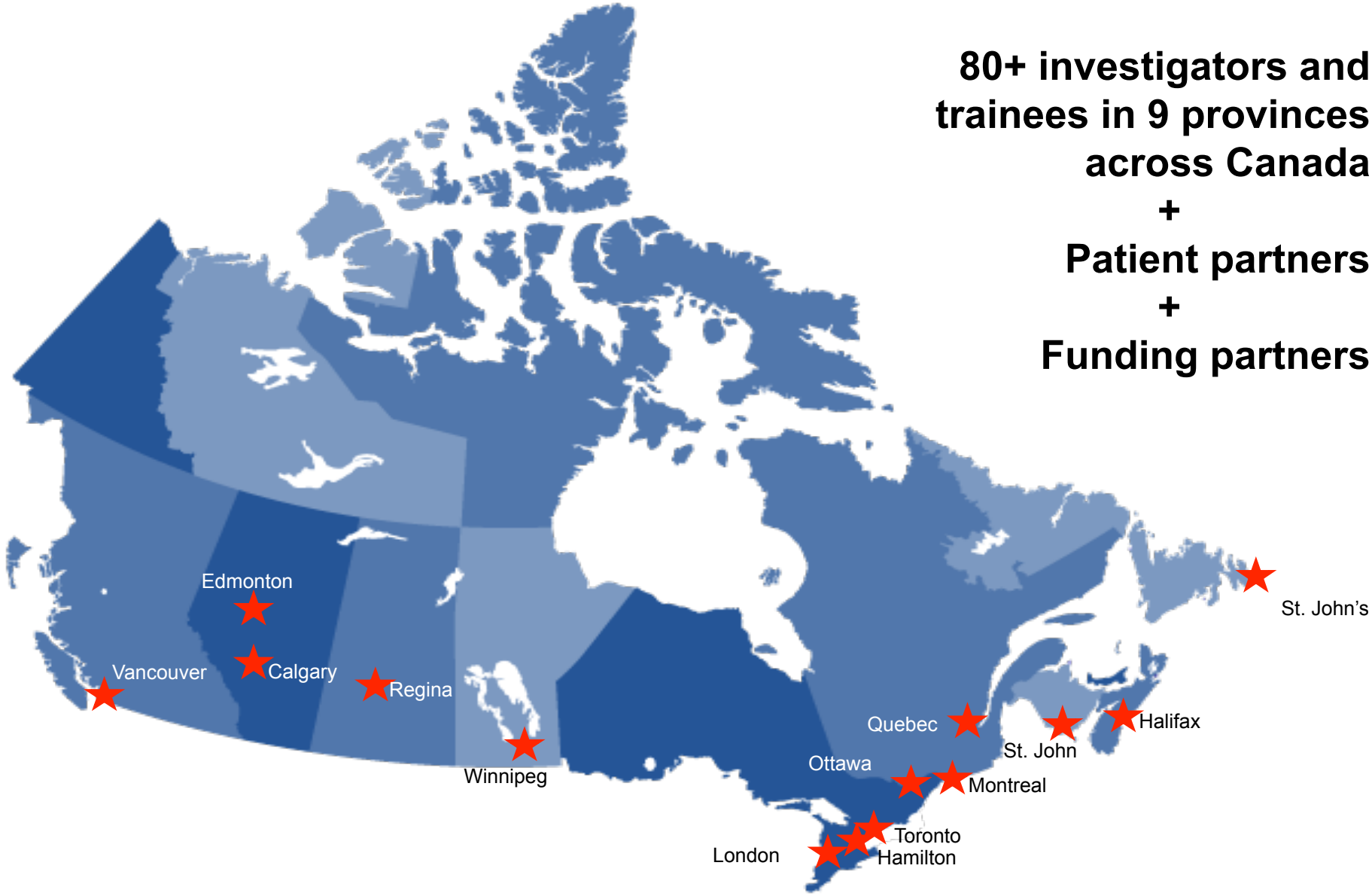
CIHR IRSC

Canadian Institutes of Health Research | Instituts de recherche en santé du Canada

CANVECTOR

Who are we?
VTE-focused research & training network

80+ investigators and trainees in 9 provinces across Canada
+
Patient partners
+
Funding partners



CANVECTOR

Our mission

To decrease the health, social and economic burden of VTE on affected individuals, their families, and on Canadians as a whole.

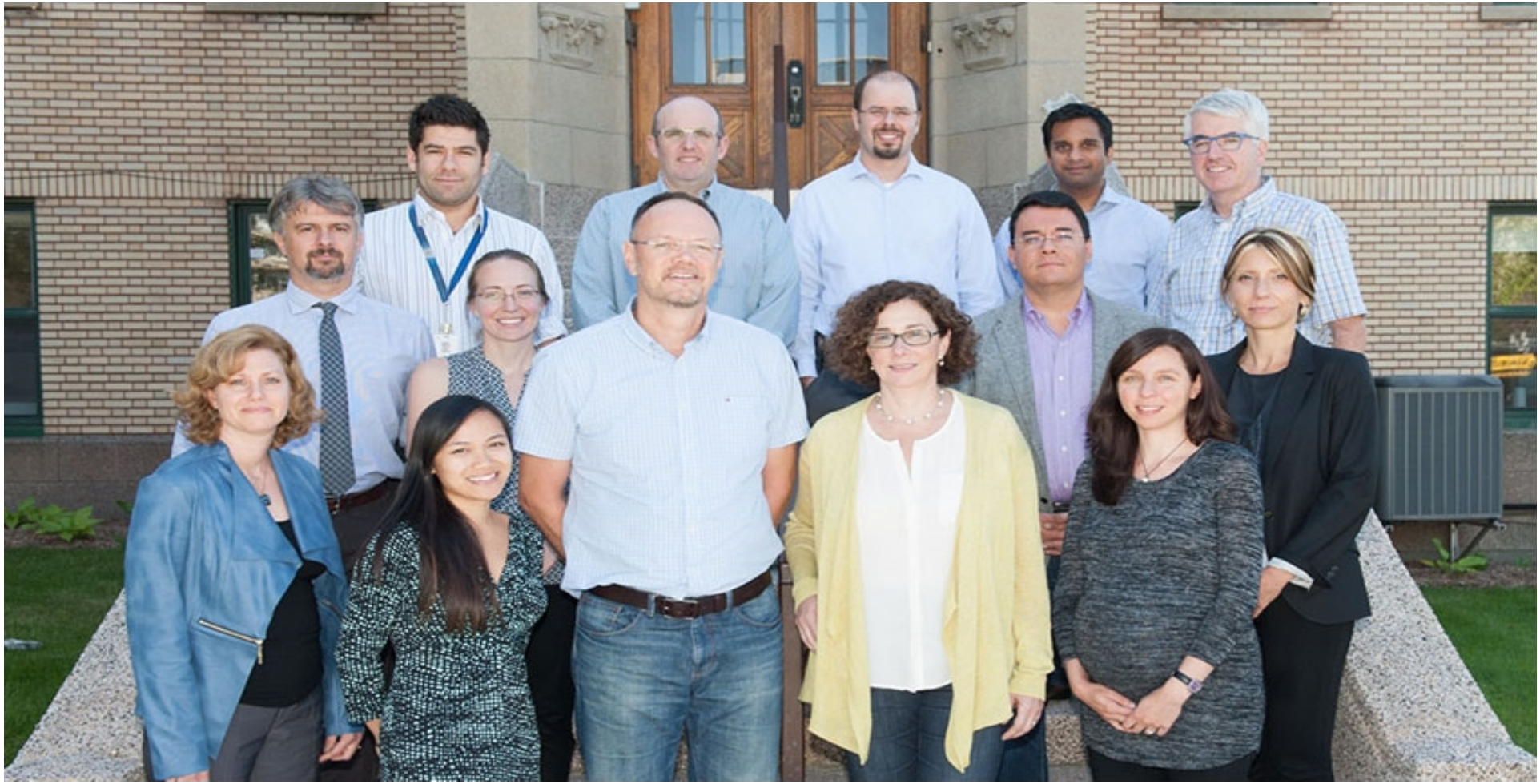
Our vision

To create an enduring, pan-Canadian network of stakeholders, researchers, methodology experts, knowledge transfer experts, research trainees, clinical research professionals, industry partners, public agency partners, healthcare providers, and patient groups whose combined efforts:

- reduce VTE occurrence
- improve VTE diagnosis and therapeutic management
- improve the safety of anticoagulant delivery
- enhance the quality of life of those impacted by VTE, both in Canada and globally

CANVECTOR

The CanVECTOR Scientific Steering Committee



Pictured left to right:
Front row – Nicole Langlois (Admin), Charlotte Guzman (Admin), Marc Rodger, Susan Kahn, Jessica Emed
Middle row – Alfonso Iorio, Lisa Duffett, Alejandro Lazo-Langner, Vicky Tagalakis
Last row – David Morrison (Admin - Finance), Gregoire Le Gal, Marc Carrier, Sudeep Shivakumar, Clive Kearon.
Not pictured – Jeffrey Weitz, Ed Conway, James Douketis, and patient partners (TBD)

CANVECTOR

Check us out:

www.canvector.ca

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Feel free to contact us:

info@canvector.ca

Lignes directrices TEV ACCP 2016
Conflits d'intérêts potentiels 2014 à 2016

Aviseur expert ou comités aviseurs:
Bayer, BI, BMS, Leo, Merck, Pfizer, Sanofi

Fonds de recherche:
Astra-Zeneca et Bayer

Conférencier:
Bayer, BI, BMS, Leo, Merck, Pfizer etSanofi

Options de traitement de la TEV: ACCP/AT 10

Warfarine, HNF, HBPM et AOD

Warfarine

- **HBPM s.-c. ou HNF i.v. ou s.-c. ou fondaparinux s.-c.** — Traitement de transition (5-10 jours) offrant un effet AC immédiat
- **Warfarine RIN 2–3, voie orale plutôt que HBPM 2C**

HBPM Plutôt que AVQ 2B ou AOD 2C

- **CANCER, (6 mois…) HBPM en monothérapie**

AOD Plutôt que AVK 2B

- **Rivaroxaban 15 mg BID durant 21 jours, puis à 20 mg DIE**
- **HBPM (HNF) durant 5-10 jours, puis dabigatran 150/110 mg BID**
- **Apixaban 10 mg BID durant 7 jours, puis 5 mg BID 6 mois puis 2.5 mg BID**

Cas spéciaux - HNF

- **HNF, voie s.-c. si CrCl < 30 mL/min, risque accru de saignement, si le patient a besoin d'un réversibilité rapide ou si un traitement thrombolytique est envisagé**

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Options de traitement de la TEV
AOD et INESSS 2016

Code CV 157 pour TVP
6 mois
Si warfarine problématique

Code CV 165 pour EP
long terme
Si warfarine problématique

AOD

Rivaroxaban 15 mg BID durant 21 jours, puis 20 mg DIE

HBPM (HNF) durant 5-10 jours, puis dabigatran 150/110 mg BID

Apixaban 10 mg BID durant 7 jours, puis 5 mg BID 6 mois puis 2.5 mg BID

Code CV 169 pour TEV (TVP et EP)
6 mois

Code CV 170 pour TEV
Après 6 mois pour 12 mois

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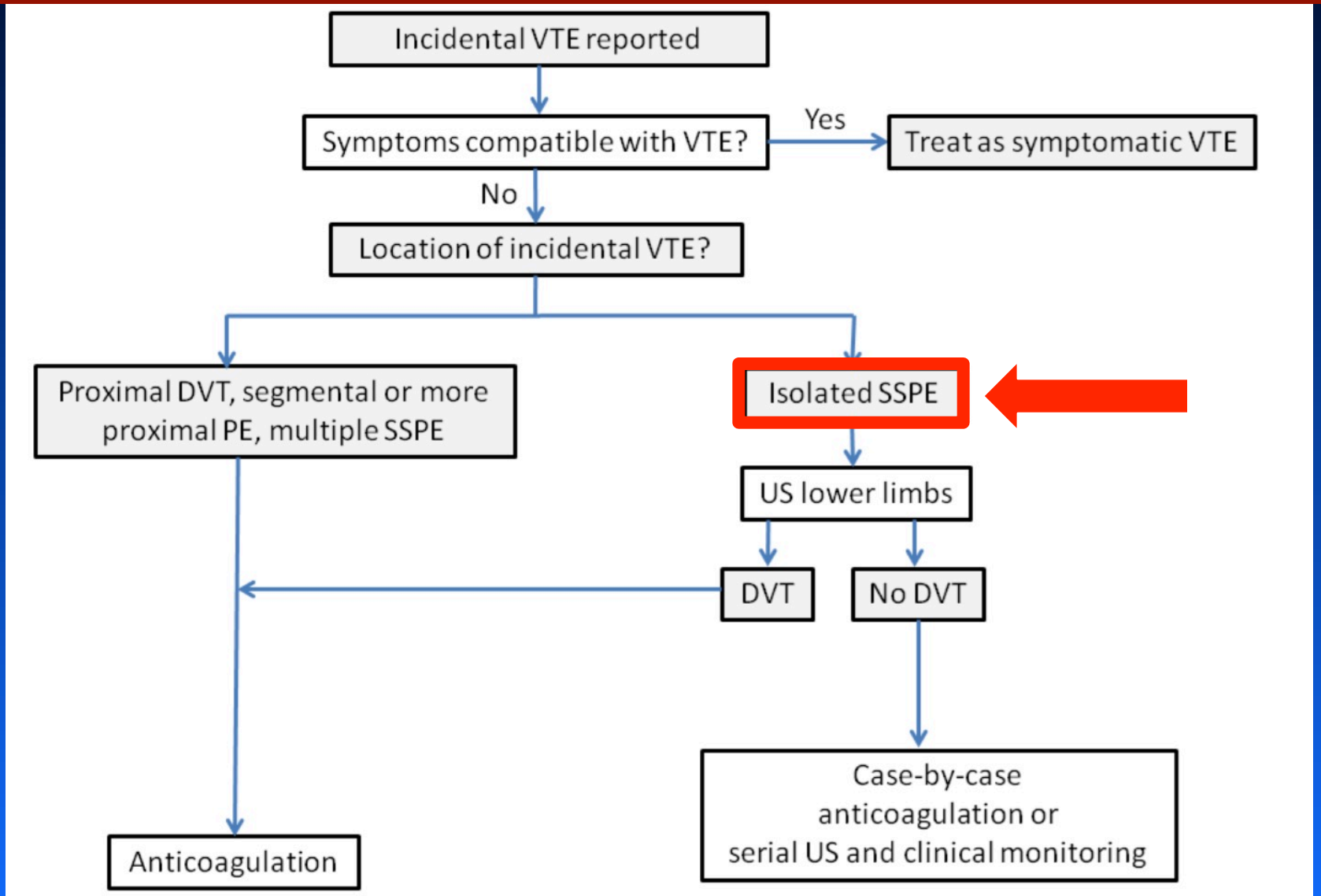
AT 10 ACCP/CHEST 2016
EP sous-segmentaire

*19. In patients with subsegmental PE (no involvement of more proximal pulmonary arteries) and no proximal DVT in the legs who have a (i) low risk for recurrent VTE (see text), we suggest clinical surveillance over anticoagulation (Grade 2C) or (ii) high risk for recurrent VTE (see text), we suggest anticoagulation over clinical surveillance (Grade 2C).

Echo prox…

Cancer…

Diagnostic et traitement de la TEV fortuite
Patients oncologiques: *Guide de SSC de ISTH 2015*



Risque de récidive de TEV, saignement majeur et mortalité pour l'EP fortuite traitée ou non

Annalyse regroupé de 926 patients avec cancer

- Saignements majeurs avec AVK 3 fois plus que HBPM
- Risque égal de récidive pour EP fortuite sous-segmentaire vs EP fortuite proximale
- HBPM mieux que AVK
- Thérapie équivalente pour EP sous-segmentaire vs proximale.

Van der Hulle et al. J Thromb Haemost 2016; 14: 105–13.

AT 10 ACCP/CHEST 2012-2016

TVP mollet

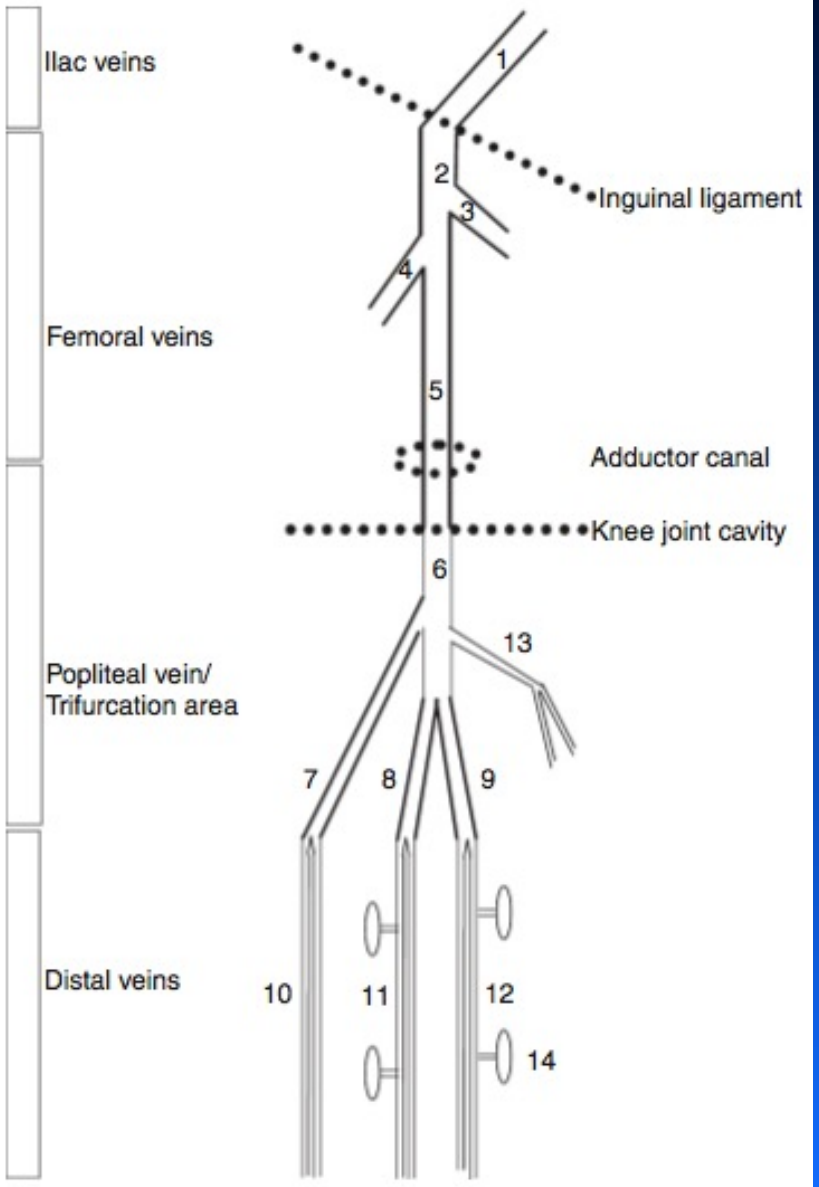
13. In patients with acute isolated distal DVT of the leg and (i) without severe symptoms or risk factors for extension (see text), we suggest serial imaging of the deep veins for 2 weeks over anticoagulation (Grade 2C) or (ii) with severe symptoms or risk factors for extension (see text), we suggest anticoagulation over serial imaging of the deep veins (Grade 2C)

Extension proximale ± 15%
Problème de faux + avec écho

AT 10 ACCP/CHEST 2016
TVP mollet: facteurs de risque pour extension

- D-dimère positif (surtout si très élevé sans autre cause évidente)
- Thrombose extensive (eg, >5 cm longueur, plusieurs veines touchées, >7 mm de diamètre)
- Thrombose près des veines proximales
- Pas de facteur de risque réversible de thrombose
- Cancer actif
- Historique de TEV
- Patient hospitalisé

TVP distale
Terminologie et anatomie



Veines du mollet

7 et 10: tibiales antérieures

8 et 11: tibiales postérieures

9 et 12: péronières

} Veines "profondes"

13: jumelles

14: soléaires

} Veines "musculaires"

Palereti G, Schellong S JTH 2011; 10: 11-19

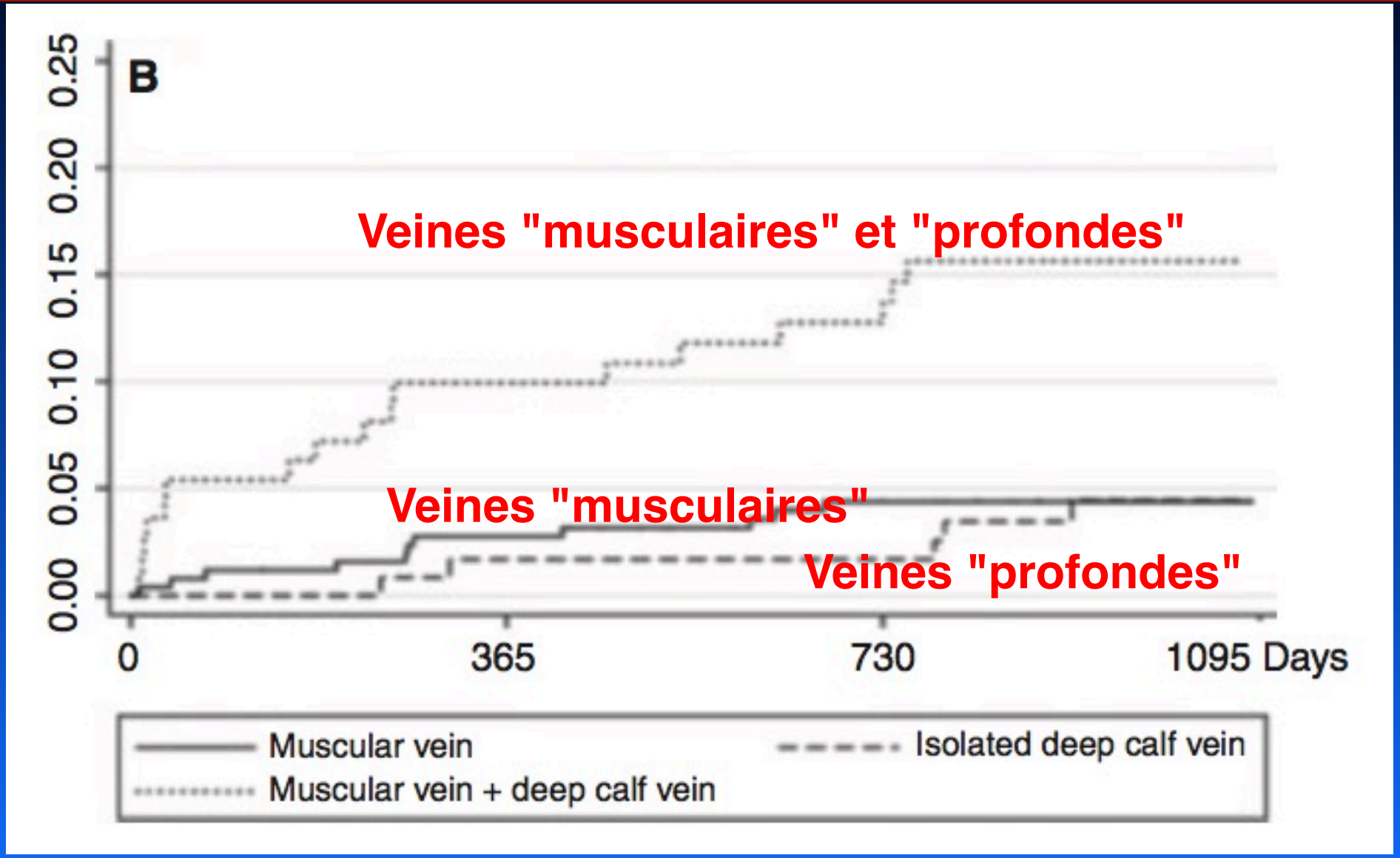
TVP mollet
Facteurs prédictifs échographiques de récidive

Table 3 Predictive factors and incidence of VTE recurrence after stopping anticoagulants in the case of isolated distal DVT (univariate and multivariate analyses, incidence of VTE recurrence)

	Univariate analysis, HR (95% CI)	Multivariate analysis, HR (95% CI)*	Incidence of VTE recurrence, % PY (95% CI)
Ultrasonographic characteristics of index DVT			
Number of venous segments thrombosed			
Single unilateral thrombosis (ref)	–	–	1.8 (1.1–2.9)
Multiple unilateral thromboses	2.4 (1.1–5.0)†	2.9 (1.4–6.1)	4.9 (3.1–7.8)
Bilateral DVT	4.8 (1.8–13.3)†	4.0 (1.4–11.1)	8.9 (3.7–21.4)

Galanaud JP et al. JTH 2014; 12: 436-443

TVP du mollet: veines profondes et musculaires
Incidence de récidive après l'arrêt des AC



Galanaud JP et al. JTH 2014; 12: 436-443

AT 10 ACCP/CHEST 2012-2016

TVP mollet: échos sériés (1 et 2 sem.)

15. In patients with acute, isolated, distal DVT of the leg who are managed with serial imaging, we (i) recommend no anticoagulation if the thrombus does not extend (Grade 1B), (ii) suggest anticoagulation if the thrombus extends but remains confined to the distal veins (Grade 2C), and (iii) recommend anticoagulation if the thrombus extends into the proximal veins (Grade 1B).

Fardeau des échos répétés

AT 10 ACCP/CHEST 2016

Thérapie initiale sans cancer

*2. In patients with DVT of the leg or PE and no cancer, as long-term (first 3 months) anticoagulant therapy, we suggest dabigatran, rivaroxaban, apixaban, or edoxaban over vitamin K antagonist (VKA) therapy (all Grade 2B).

Moins de saignements, plus pratique…

AT 10 ACCP/CHEST 2016

TEV récurrente sous AVK ou AOD

***29. In patients who have recurrent VTE on VKA therapy (in the therapeutic range) or on dabigatran, rivaroxaban, apixaban, or edoxaban (and are believed to be compliant), we suggest switching to treatment with LMWH at least temporarily (Grade 2C)**

Évaluer récidive, compliance, cancer etc.

Au moins 1 mois

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AT 10 ACCP/CHEST 2016
TEV récurrente sous HBPM

***30. In patients who have recurrent VTE on long term LMWH (and are believed to be compliant), we suggest increasing the dose of LMWH by about one-quarter to one-third (Grade 2C).**

Évaluer récidive, compliance, cancer etc.

Augmenter dose HBPM de 30%

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AT10 et TEV: durée de l'anticoagulation

Selon facteurs provoquants dont la présence de cancer

Situation	Recommandations	Grade
TVP proximale ou EP *provoquées* (asympto. ou non)	3 mois minimum	1B
• Facteur de risque chirurgical	3 mois	1B
• Facteur de risque non chirurgical transitoire	3 mois	2B
TVP proximale ou EP *non provoquées*		
• Risque de saignement bas ou modéré	• Thérapie long terme	2B
• Risque de saignement élevé	• 3 mois	1B
TEV avec cancer actif *(Tx < 6 mois ou persistant)*		
• Risque de saignement non élevé	• Thérapie long terme	1B
• Risque de saignement élevé	• Thérapie long terme	2B

Risque de récidive:
Risque relatif

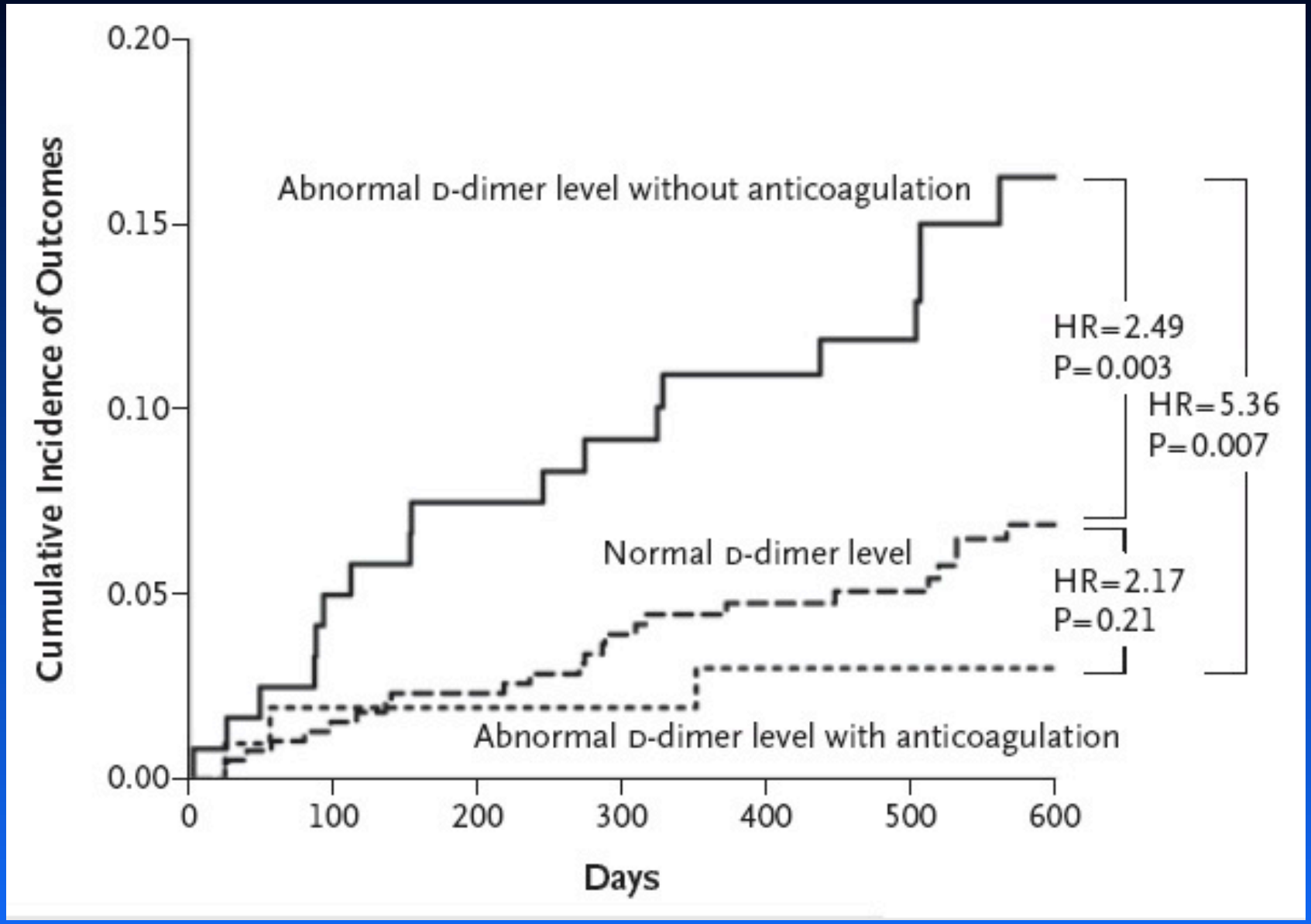
- D-Dimère neg. 1 mois après l'arrêt AVK: .5
  - ü surtout utile chez les femmes
- Homme (par rapport à une femme): 1.7

Risque de récidive de TEV et D-Dimère

608 pts

DD pos:
36.7% pts

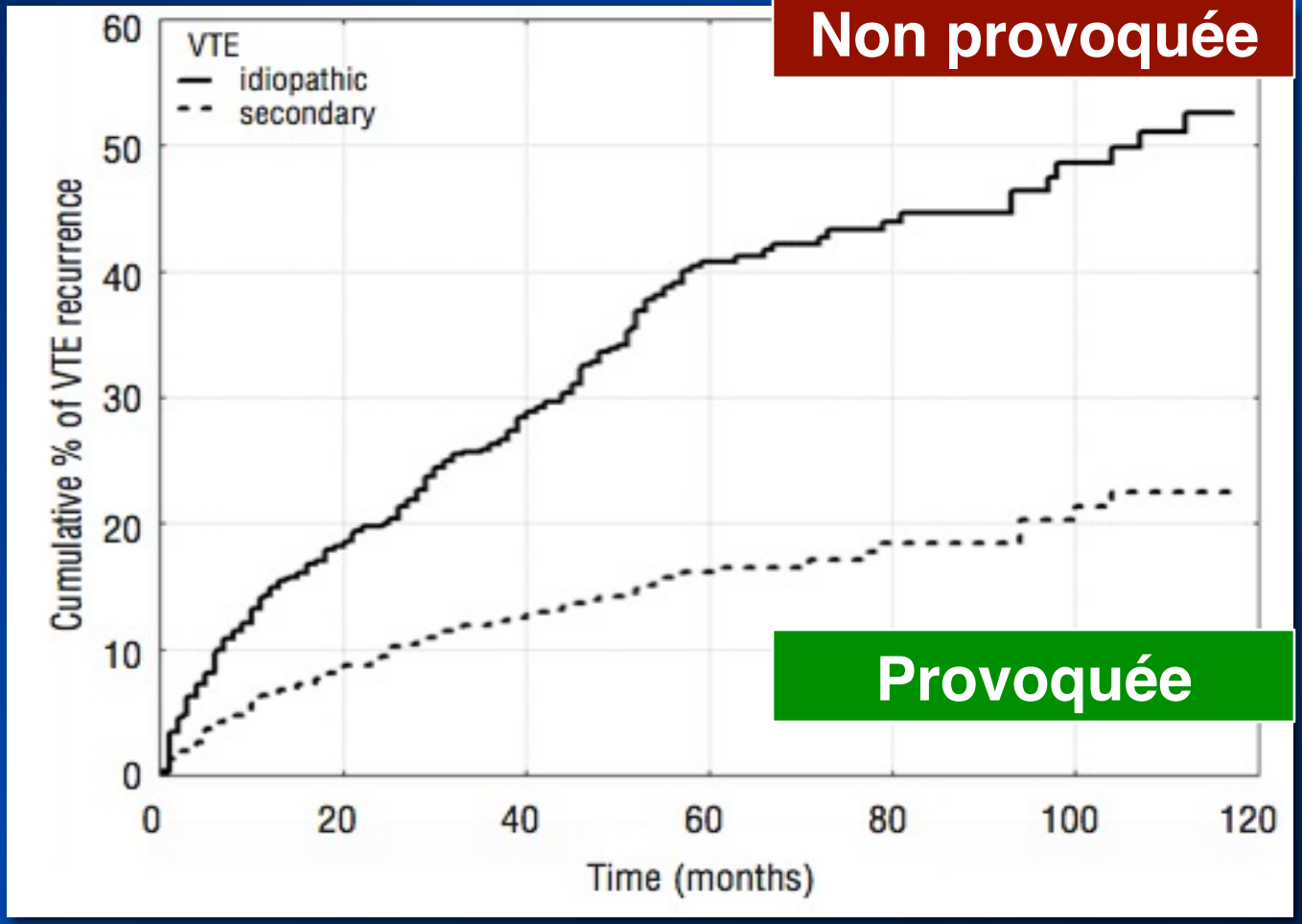
Suivi:
1.4 an



Palareti G et al. NEJM 2006; 355: 1780-9

TEV: incidence cumulative

Provoquée VS non provoquée à 10 ans



Non provoquée

50%

Provoquée

20%

Prandoni P et al. Haematologica 2007; 92: 199-205

Risque de récidive: rôle d'une thrombophilie isolé

Études rétro. et prospectives, la plupart non randomisées

Antithrombin, protéin C ou S	10-17% / 1ere année Puis 2.7% / an
Facteur V Leiden homozygote Antiphospholipide (APS)	48% / 4 ans 29 à 53% / 4-5 ans
Facteur VIII Hyperhomocystéinémie Facteur V Leiden hétérozygote Mutation II G20210A	RR 6.7 ! RR 2.7 RR 1.0 à 4.7 RR 1.0 à 4.9
Facteur IX, XI	?

Synergie des facteurs de risque
V Leiden et Contraceptif oral

Facteur de risque	RR	Incidence annuelle
Nil	1	0.8 / 10 000
CO	4	3.0 / 10 000
V Leiden	7	5.7 / 10 000
CO + V Leiden	35	28.5 / 10 000

Vandenbroucke JP et al. NEJM 2001; 344: 1527-1535

Combined oral contraceptives, thrombophilia and the risk of venous thromboembolism: a systematic review and meta-analysis

- We performed a meta-analysis on thrombosis risk in thrombophilic oral contraceptive (COC)-users.
- The results support discouraging COC-use in women with a natural anticoagulant deficiency.
- Contrary, additive risk of factor V Leiden (FVL) or prothrombin-G20210A (PT) mutation is modest.
- Women with a FVL/PT-mutation as single risk factor can use COCs if alternatives are not tolerated.

Van Vlijmen EFW et al. JTH 2016; 14: 1393 - 1403

AT 10 ACCP/CHEST 2016

TEV thérapie prolongée, selon le risque de saignement

*9. In patients with a first VTE that is an unprovoked proximal DVT of the leg or PE and who have a (i) **low or moderate bleeding risk** (see text), we suggest extended anticoagulant therapy (no scheduled stop date) over 3 months of therapy (Grade 2B), and a (ii) **high bleeding risk** (see text), we recommend 3 months of anticoagulant therapy over extended therapy (no scheduled stop date) (Grade 1B).

Sexe et D-dimère…

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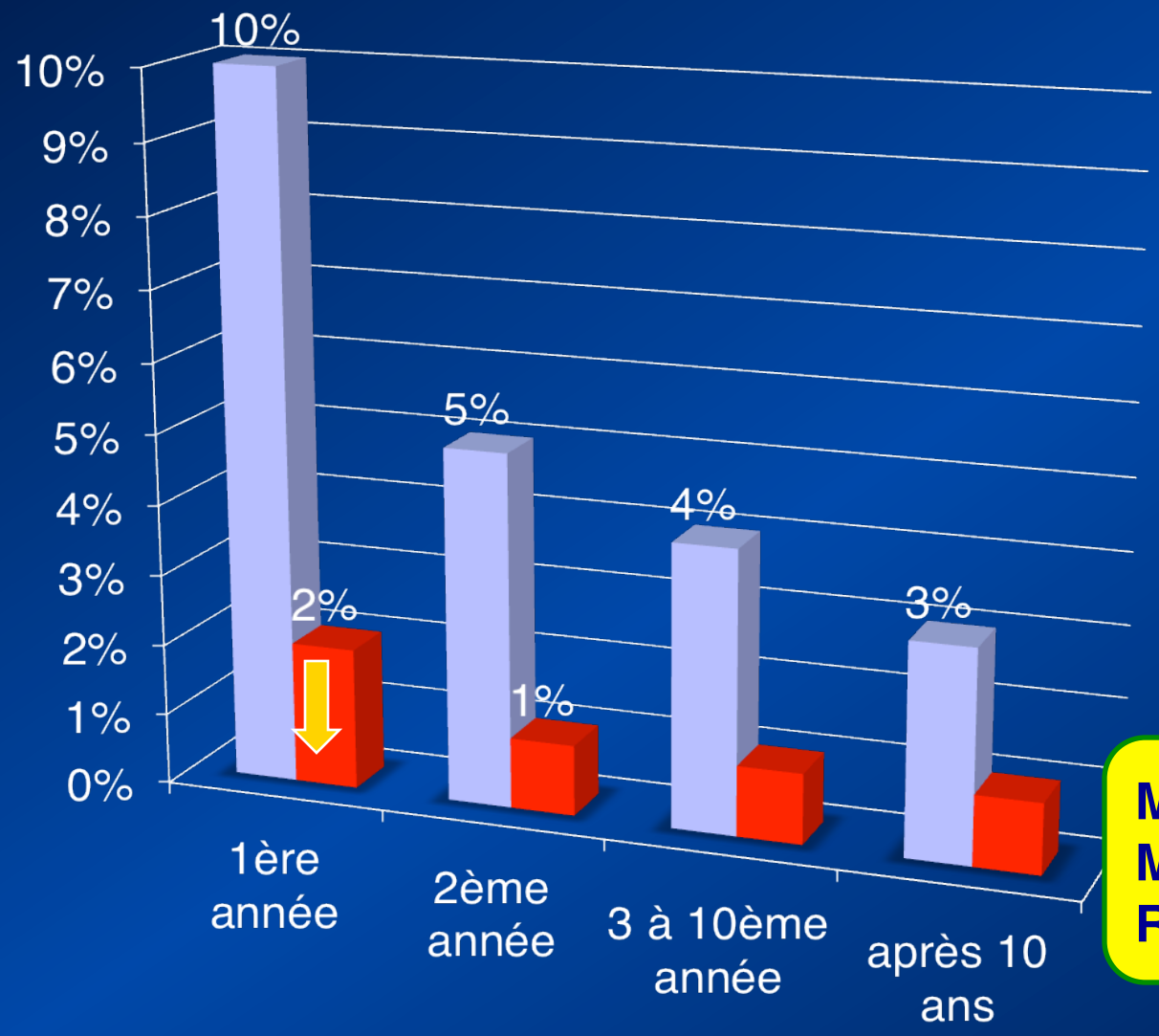
TEV non provoquée risque annuel de récidive
En fonction du risque de saignement majeur



Récidive TEV

Saignement majeur

Mort. TEV sans AC = 1:20
Mort. saign. maj. avec AC = 1:10
Rapport = 4:1 puis 2:1

Étude REVERSE (Suivi à 8 mois)

Étude prospective de marqueurs potentiels de récidive

- 9.3% récidive annuelle de TEV:
  - 13.7% hommes
  - 5.5% femmes
- Analyse multivariée: 5 règles hommes, 2 femmes
  - Aucune règle utile pour hommes
  - HERDOO2 validé pour femmes

Rodger et al. CMAJ 2008; 179 (5): 417-26

Étude REVERSE (Suivi à 8 mois)

Étude prospective de marqueurs potentiels de récidive

"Men continue and HERDOO2"

1. **Men Continue**
2. Women: 1 or less discontinue
3. **Women: with 2 or more continue**

HERDOO2 Predictors:

- **H**yperpigmentation, **E**dema or **R**edness (**HER**)
- Vidas **D** -Dimer >250 on AC
- **O**besity- BMI >30 or
- **O**lder than age65

# of risk factors	Annual risk of VTE
0-1	1.6%
2 or more	14.1%

Rodger et al. CMAJ 2008; 179 (5): 417-26

A Roussin

Étude REVERSE

Suivi 5.1 annés APRÈS arrêt AC

Risque annuel de récidive	Hommes	Femmes
647 patients (âge moyen 53; ♀ 49%)	4.9%	
Hommes	7.4%	
Femmes haut risque HERDOO2 ≥ 2 points		5.9%
Femmes bas risque HERDOO2 ≤ 1 points		1.1%
Hommes HER + ("Hyperpigmentation, OMI, Redness")	10.6%	
Femmes HER +		6%

Rodger MA et al. ISTH, 13 (Suppl. 2) (2015) 1–997

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Étude REVERSE II

HERDOO2 évalué après 5 à 12 mois d'AC

Récidive de TEV à 1 an 2,779 patients (âge moyen 54.4)	Hommes	Femmes
Hommes et femmes haut risque* qui cessent AC (*HERDOO2 ≥ 2 points)	8.1%	
Hommes et femmes haut risque* qui continuent AC (*HERDOO2 ≥ 2 points) 1,534 hommes et 591 femmes	1.6%	
Femmes bas risque* qui cessent AC (*HERDOO2 ≤ 1 points) 622 femmes		3%
Femmes post-ménopausées âgées > 50 Même si HERDOO2 ≤ 1 points		5.7%

AT 10 ACCP/CHEST 2016
AAS

*12. In patients with an unprovoked proximal DVT or PE **who are stopping anticoagulant therapy** and do not have a contraindication to aspirin, we suggest aspirin over no aspirin to prevent recurrent VTE (Grade 2C).

Mieux que rien…

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AT 10 ACCP/CHEST 2016
EP et thérapie ambulatoire

*20. In patients with low-risk PE and whose home circumstances are adequate, we suggest treatment at home or early discharge over standard discharge (eg, after first 5 days of treatment) Q9 (Grade 2B).

Sélection: Score PESI

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AT 10 ACCP/CHEST 2016
EP grave sans hypotension

*22. In most patients with acute PE not associated with hypotension, we recommend against systemically administered thrombolytic therapy (Grade 1B)

Suivi serré des SV…

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AT 10 ACCP/CHEST 2016

EP importante qui se déteriore

*23. In selected patients with acute PE who deteriorate after starting anticoagulant therapy but have yet to develop hypotension and who have a low bleeding risk, we suggest systemically administered thrombolytic therapy over no such therapy (Grade 2C).

D'où l'importance de la surveillance

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AT 10 ACCP/CHEST 2016
EP importante et thrombolyse

*24. In patients with acute PE who are treated with a thrombolytic agent, we suggest systemic thrombolytic therapy using a peripheral vein over catheter directed thrombolysis (CDT) (Grade 2C).

Selon expertise locale

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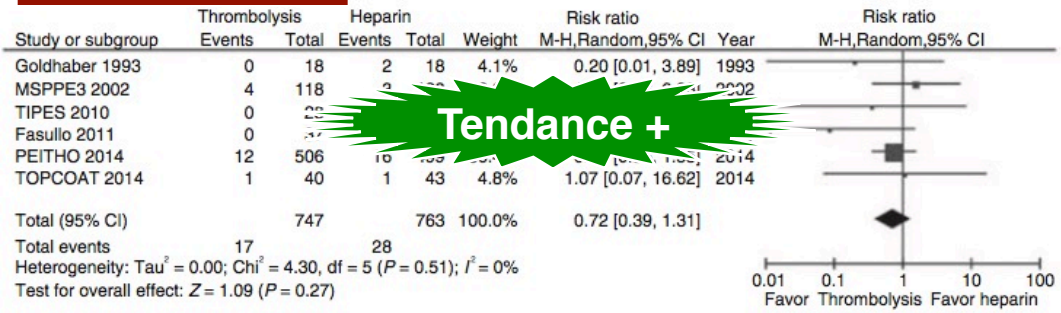
Thrombolyse systémique pour l'EP sub-massive

Méta-analyse: efficacité, saignements et déterioration

Mortalité

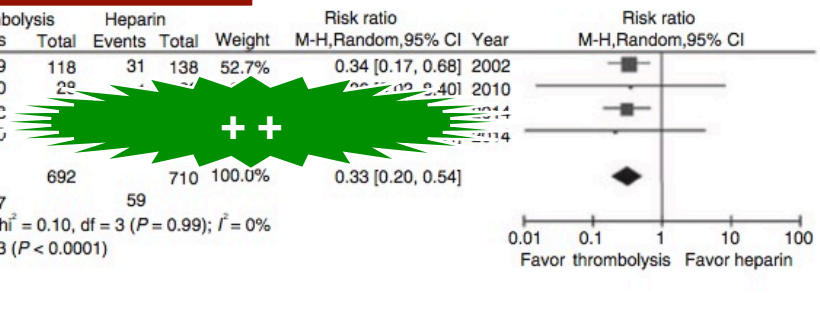


Study or subgroup	Thrombolysis Events	Total	Heparin Events	Total	Weight	Risk ratio M-H,Random,95% CI	Year
Goldhaber 1993	0	18	2	18	4.1%	0.20 [0.01, 3.89]	1993
MSPPE3 2002	4	118					
TIPES 2010	0						
Fasullo 2011	0						
PEITHO 2014	12	506					
TOPCOAT 2014	1	40	1	43	4.8%	1.07 [0.07, 16.62]	2014
Total (95% CI)		747		763	100.0%	0.72 [0.39, 1.31]	
Total events	17		28				

Heterogeneity: Tau² = 0.00; Chi² = 4.30, df = 5 (P = 0.51); I² = 0%
Test for overall effect: Z = 1.09 (P = 0.27)

Risk ratio M-H,Random,95% CI
0.01 0.1 1 10 100
Favor Thrombolysis Favor heparin

Déterioration clinique

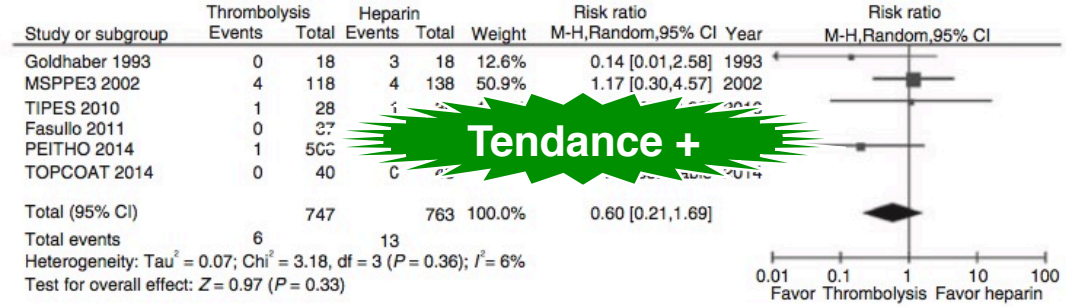


Study or subgroup	Thrombolysis Events	Total	Heparin Events	Total	Weight	Risk ratio M-H,Random,95% CI	Year
MSPPE3 2002	9	118	31	138	52.7%	0.34 [0.17, 0.68]	2002
TIPES 2010	0						
PEITHO 2014							
TOPCOAT 2014							
Total (95% CI)		692		710	100.0%	0.33 [0.20, 0.54]	
Total events	17		59				

Heterogeneity: Tau² = 0.00; Chi² = 0.10, df = 3 (P = 0.99); I² = 0%
Test for overall effect: Z = 4.33 (P < 0.0001)

Risk ratio M-H,Random,95% CI
0.01 0.1 1 10 100
Favor thrombolysis Favor heparin

Récidive EP

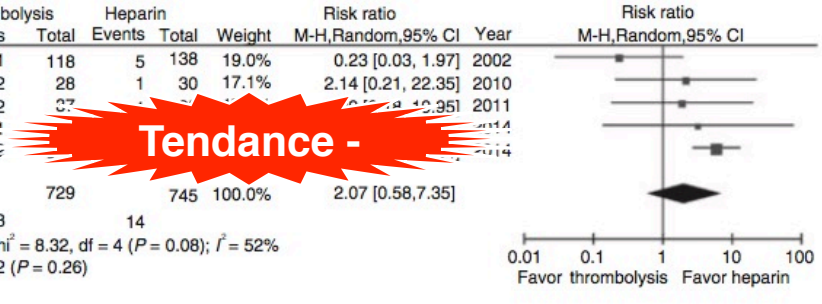


Study or subgroup	Thrombolysis Events	Total	Heparin Events	Total	Weight	Risk ratio M-H,Random,95% CI	Year
Goldhaber 1993	0	18	3	18	12.6%	0.14 [0.01,2.58]	1993
MSPPE3 2002	4	118	4	138	50.9%	1.17 [0.30,4.57]	2002
TIPES 2010	1	28					
Fasullo 2011	0						
PEITHO 2014	1						
TOPCOAT 2014	0	40					
Total (95% CI)		747		763	100.0%	0.60 [0.21,1.69]	
Total events	6		13				

Heterogeneity: Tau² = 0.07; Chi² = 3.18, df = 3 (P = 0.36); I² = 6%
Test for overall effect: Z = 0.97 (P = 0.33)

Risk ratio M-H,Random,95% CI
0.01 0.1 1 10 100
Favor Thrombolysis Favor heparin

Saignements majeurs

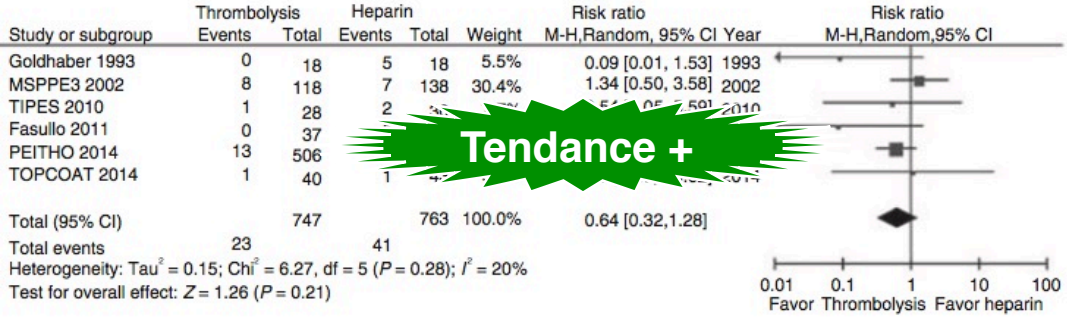


Study or subgroup	Thrombolysis Events	Total	Heparin Events	Total	Weight	Risk ratio M-H,Random,95% CI	Year
MSPPE3 2002	1	118	5	138	19.0%	0.23 [0.03, 1.97]	2002
TIPES 2010	2	28	1	30	17.1%	2.14 [0.21, 22.35]	2010
Fasullo 2011	2						
TOPCOAT 2014							
PEITHO 2014							
Total (95% CI)		729		745	100.0%	2.07 [0.58,7.35]	
Total events	48		14				

Heterogeneity: Tau² = 1.02; Chi² = 8.32, df = 4 (P = 0.08); I² = 52%
Test for overall effect: Z = 1.12 (P = 0.26)

Risk ratio M-H,Random,95% CI
0.01 0.1 1 10 100
Favor thrombolysis Favor heparin

Récidive EP et Mortalité

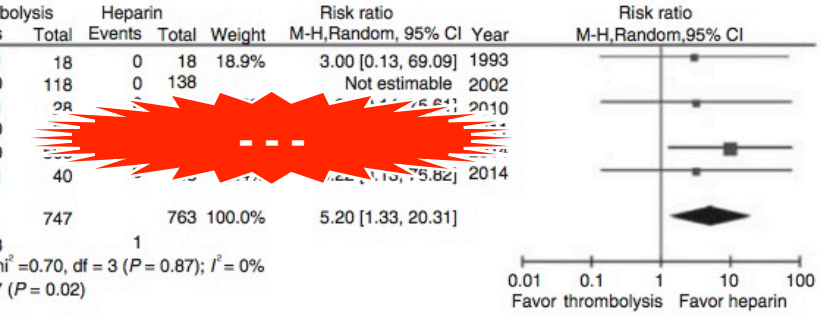


Study or subgroup	Thrombolysis Events	Total	Heparin Events	Total	Weight	Risk ratio M-H,Random, 95% CI	Year
Goldhaber 1993	0	18	5	18	5.5%	0.09 [0.01, 1.53]	1993
MSPPE3 2002	8	118	7	138	30.4%	1.34 [0.50, 3.58]	2002
TIPES 2010	1	28	2				
Fasullo 2011	0	37					
PEITHO 2014	13	506					
TOPCOAT 2014	1	40					
Total (95% CI)		747		763	100.0%	0.64 [0.32,1.28]	
Total events	23		41				

Heterogeneity: Tau² = 0.15; Chi² = 6.27, df = 5 (P = 0.28); I² = 20%
Test for overall effect: Z = 1.26 (P = 0.21)

Risk ratio M-H,Random,95% CI
0.01 0.1 1 10 100
Favor Thrombolysis Favor heparin

Saignements intra-crâniens



Study or subgroup	Thrombolysis Events	Total	Heparin Events	Total	Weight	Risk ratio M-H,Random, 95% CI	Year
Goldhaber 1993	1	18	0	18	18.9%	3.00 [0.13, 69.09]	1993
MSPPE3 2002	0	118	0	138		Not estimable	2002
TIPES 2010	1	28					
Fasullo 2011	0						
PEITHO 2014	10						
TOPCOAT 2014	1	40					2014
Total (95% CI)		747		763	100.0%	5.20 [1.33, 20.31]	
Total events	13		1				

Heterogeneity: Tau² = 0.00; Chi² =0.70, df = 3 (P = 0.87); I² = 0%
Test for overall effect: Z = 2.37 (P = 0.02)

Risk ratio M-H,Random,95% CI
0.01 0.1 1 10 100
Favor thrombolysis Favor heparin

Thrombolyse systémique pour l'EP aigue

Méta-analyse: efficacité et saignements majeurs

Table 2 Efficacy outcomes, subgroup analyses

	All studies			Studies including[a] High-risk PE	Intermediate-risk PE	Low and intermediate-risk PE	Group difference
	OR (95% CI)	*P*-value	I^2 (%)	OR (95% CI)	OR (95% CI)	OR (95% CI)	*P*-value
Mortality	0.59 (0.36 to 0.96)	0.034	0	0.48 (0.20 to 1.15)	0.42 (0.17 to 1.03)	0.96 (0.41 to 2.24)	0.36
PE mortality	0.29 (0.14 to 0.60)	<0.001	0	0.15 (0.03 to 0.78)	0.17 (0.05 to 0.67)	0.63 (0.20 to 1.97)	0.23
Death or treatment escalation	0.34 (0.22 to 0.52)	<0.001	0	0.18 (0.04 to 0.79)	0.37 (0.20 to 0.69)	0.35 (0.18 to 0.66)	0.67
PE recurrence	0.50 (0.27 to 0.94)	0.031	0	0.97 (0.31 to 2.98)	0.25 (0.06 to 1.03)	0.46 (0.17 to 1.21)	0.33

Table 3 Safety outcomes, subgroup analyses

	All studies			Alteplase	Tenecteplase	Other thrombolytics	Group difference
	OR (95% CI)	*P*-value	I^2 (%)	OR (95% CI)	OR (95% CI)	OR (95% CI)	*P*-value
Major bleeding	2.91 (1.95 to 4.36)	<0.001	25	1.07 (0.43 to 2.62)	5.02 (2.72 to 9.26)	2.16 (1.03 to 4.54)	0.02
Fatal/intracranial haemorrhage	3.18 (1.25 to 8.11)	0.008	0	1.09 (0.27 to 4.40)	7.32 (1.64 to 32.63)	NA	0.07

AT 10 ACCP/CHEST 2012-2016

Thrombolyse par catheter pour TVP M. Inf. aigue proximale

16. In patients with acute proximal DVT of the leg, we suggest anticoagulant therapy alone over CDT (Grade 2C)

En 2016: "The CAVENT Study has since reported that CDT reduced PTS, did not alter quality of life, and appears to be cost-effective"

"our results together with the ATTRACT trial and the CAVA trial could provide definitive evidence for the use of catheter-directed thrombolysis in the treatment of severe proximal DVT"

A Roussin

AT 10 ACCP/CHEST 2016

Thrombolyse par catheter pour TVP M. inf. aigue proximale

- A retrospective analysis found that CDT (3649 patients) was associated with an increase in transfusion (twofold), intracranial bleeding (threefold), PE (1.5-fold), and vena caval filter insertion (twofold); long-term outcomes and PTS were not reported.

- A single-center prospective registry found that US-assisted CDT in acute iliofemoral (87 patients) achieved high rates of venous patency, was rarely associated with bleeding, and that only 6% of patients had PTS at 1 year.

A Roussin

AT 10 ACCP/CHEST 2016

Contre-indications à la thrombolyse locale ou systémique

Major Contraindications[a]
Structural intracranial disease
Previous intracranial hemorrhage
Ischemic stroke within 3 mo
Active bleeding
Recent brain or spinal surgery
Recent head trauma with fracture or brain injury
Bleeding diathesis

Relative contraindications[b]
Systolic BP >180
Diastolic BP >110
Recent bleeding (nonintracranial)
Recent surgery
Recent invasive procedure
Ischemic stroke more than 3 mo previously
Anticoagulated (eg, VKA therapy)
Traumatic cardiopulmonary resuscitation
Pericarditis or pericardial fluid
Diabetic retinopathy
Pregnancy
Age >75 y
Low body weight (eg, <60 kg)
Female
Black race

Thrombose veineuse profonde

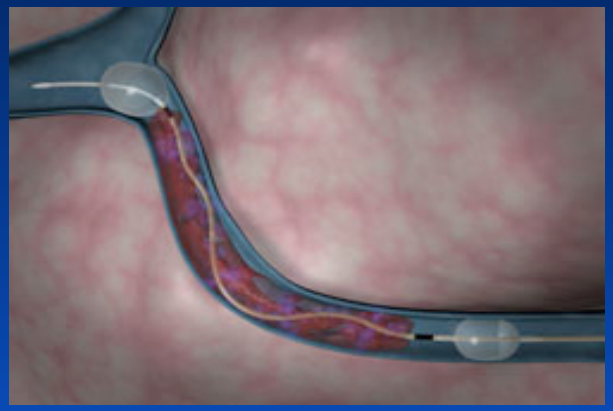
Thrombolyse par *cathéter*

Exemples de types de perfusions

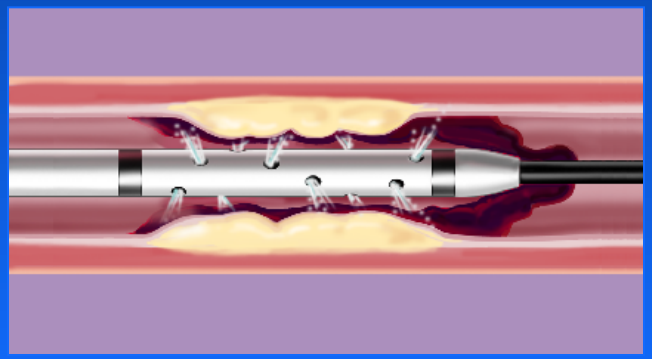
Perfusion

Pharmaco-mécanique

Trellis™



Angiojet™



EKOS™

AT 10 ACCP/CHEST 2016

Thromboendartérectomie pour le traitement de l'hypertension pulmonaire chronique

*26. In selected patients with chronic thromboembolic pulmonary hypertension (CTEPH) who are identified by an experienced thromboendarterectomy team, we suggest pulmonary thromboendarterectomy over no pulmonary thromboendarterectomy (Grade 2C).

Dans les centres d'expertise

A Roussin

AT 10 ACCP/CHEST 2012-2016
Thrombolyse pour la TVP du membre supérieur

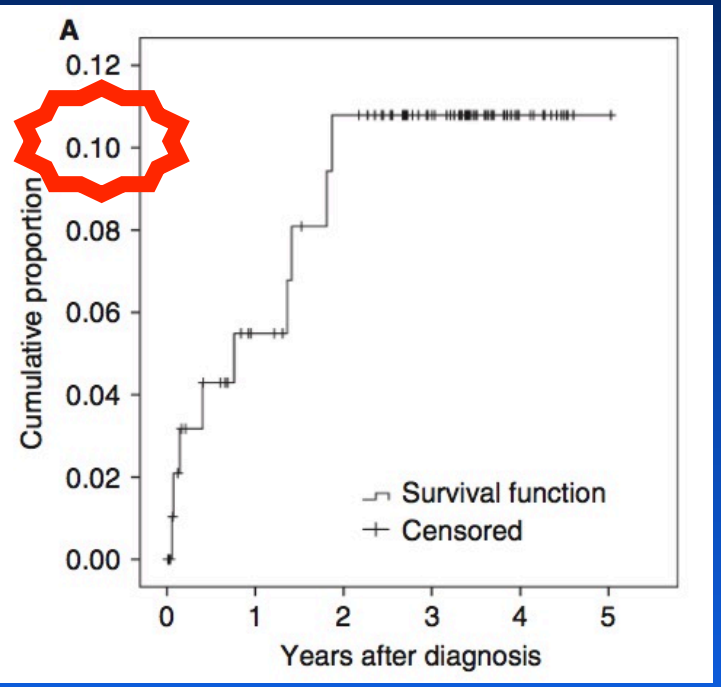
27. In patients with acute upper extremity DVT (UEDVT) that involves the axillary or more proximal veins, we suggest anticoagulant therapy alone over thrombolysis (Grade 2C).

28. In patients with UEDVT who undergo thrombolysis, we recommend the same intensity and duration of anticoagulant therapy as in patients with UEDVT who do not undergo thrombolysis (Grade 1B).

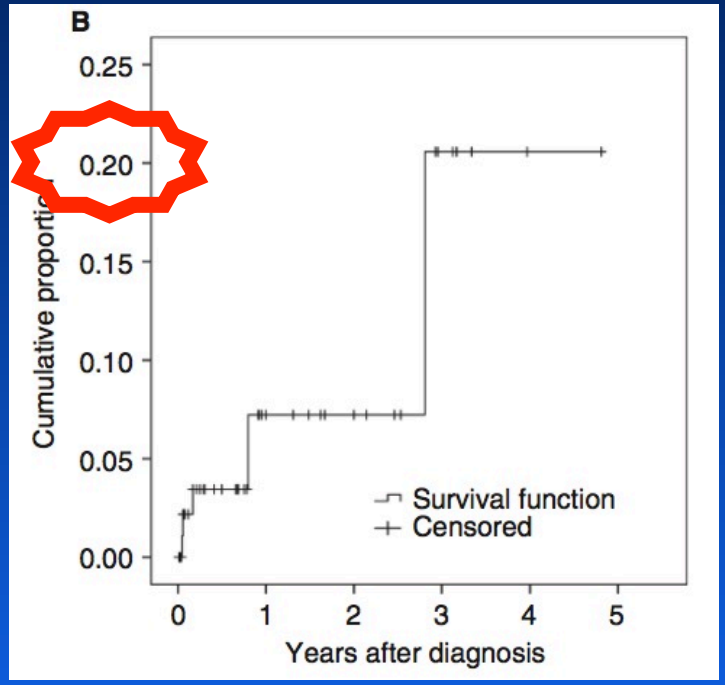
TVP du membre supérieur

Récidive de TEV vs saignements majeurs

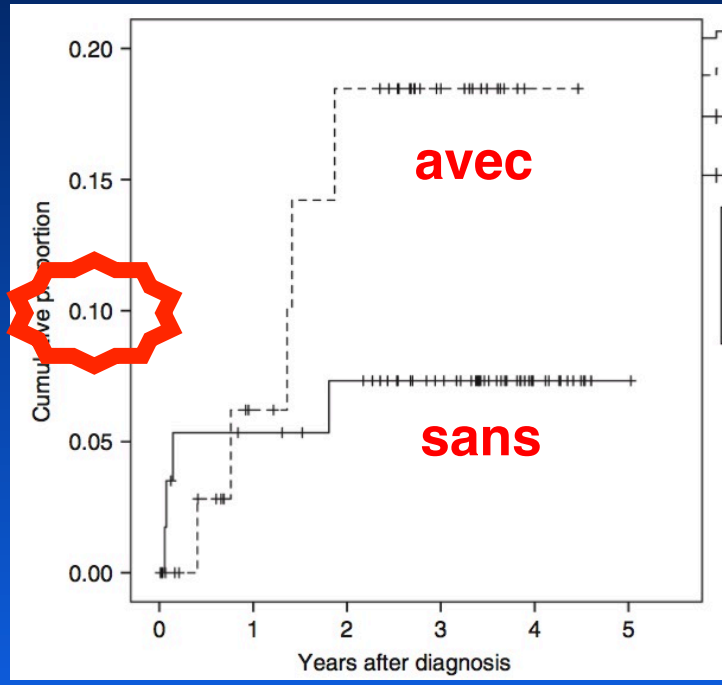
Risque de récidive de TEV



Risque de saignement majeur



Risque de récidive de TEV Avec ou sans cancer



Bleker S M et al. Journal of Thrombosis and Haemostasis 2016, 14: 973–981

A Roussin

Références TEV

Thrombosis Canada
Thrombose Canada

2016

Apixaban (Eliquis®)
Anticoagulant & Antiplatelet Drugs, Atrial Fibrillation, Novel Oral Anticoagulants, Venous Thromboembolism

To provide an overview of the mechanism of action, licensed indications, dosing regimens and side-effects of apixaban.

Cancer and Thrombosis
Venous Thromboembolism

To assist health care professionals in the management of cancer-associated thrombosis (CAT).

Central Venous Catheter-Related Deep Vein Thrombosis
Venous Thromboembolism

To provide guidance on the diagnosis, treatment and prevention of central venous catheter-related deep vein thrombosis (DVT).

Dabigatran (Pradaxa®)
Anticoagulant & Antiplatelet Drugs, Atrial Fibrillation, Novel Oral Anticoagulants, Venous Thromboembolism

To provide an overview of the mechanism of action, licensed indications, dosing regimens, and side-effects of dabigatran.

Deep Vein Thrombosis (DVT): Diagnosis
Venous Thromboembolism

To provide an evidenced-based approach to the evaluation of patients with a clinical suspicion of deep vein thrombosis (DVT).

Deep Vein Thrombosis (DVT): Treatment
Venous Thromboembolism

To provide an evidence-based approach to treatment of patients presenting with deep vein thrombosis (DVT).

Heparin-Induced Thrombocytopenia (HIT)
Anticoagulant & Antiplatelet Drugs, Ischemic Vascular Diseases, Venous Thromboembolism

To assist clinicians with the diagnosis and initial management of heparin-induced thrombocytopenia (HIT) and suspected HIT.

Pregnancy: Venous Thromboembolism Treatment
Pregnancy & Thrombosis, Venous Thromboembolism

To provide an evidence-based approach to treatment of deep vein thrombosis and/or pulmonary embolism during pregnancy and the postpartum period.

Apixaban (Eliquis®)
Anticoagulant & Antiplatelet Drugs, Atrial Fibrillation, Novel Oral Anticoagulants, Venous Thromboembolism

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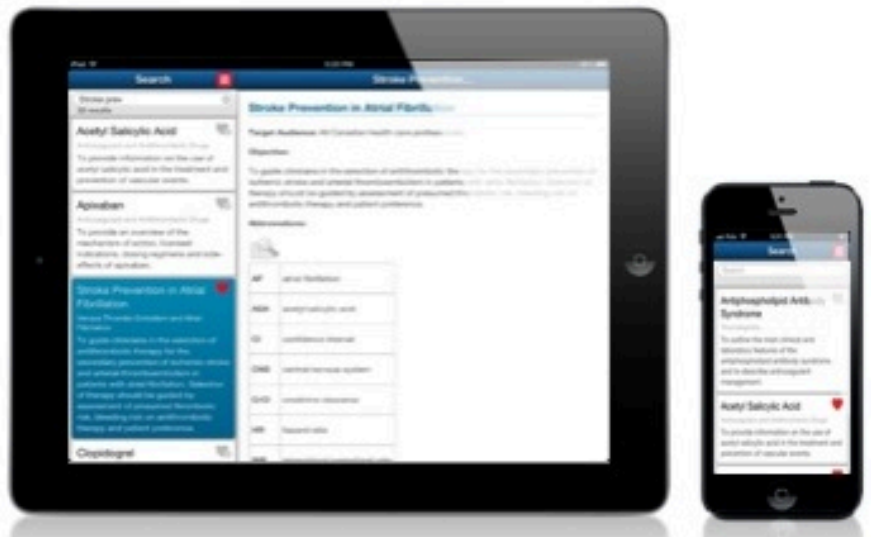

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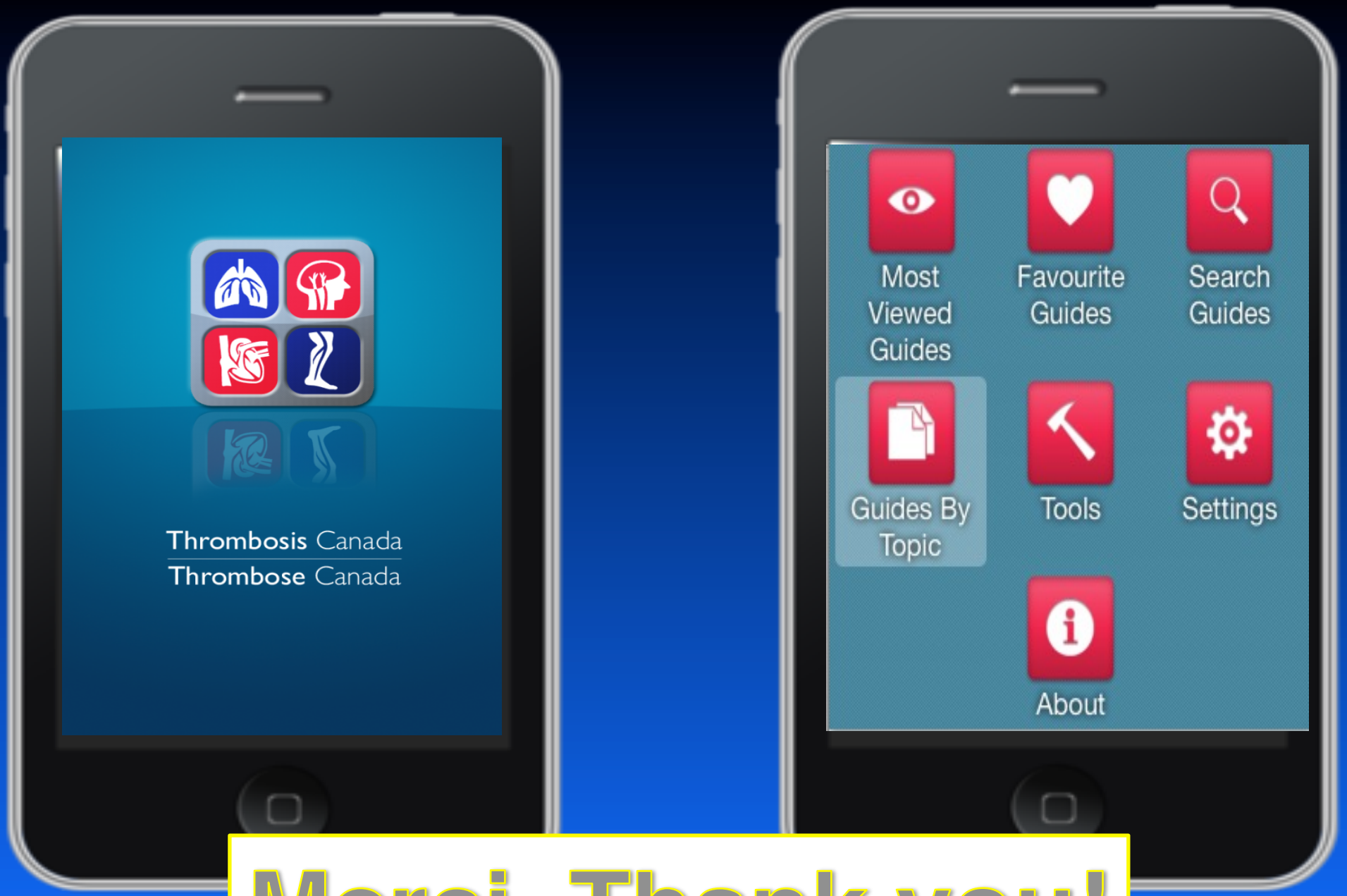

Merci, Thank you!

A Roussin