Embolie pulmonaire aiguë:

Flash 2023

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Liens d'intérêt: O Sanchez

Affiliation / Financial interest	Commercial company
Grants/research support:	Bayer, BMS, Daiichi-Sankyo, Boehringer Ingelheim, MSD
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Participation in a company sponsored bureau:	No
Stock shareholder:	No
Spouse / partner:	No
Other support / potential conflict of interest:	No

Liens d'intérêt: M Mayenga

Affiliation / Financial interest	Commercial company
Grants/research support:	No
Honoraria or consultation fees:	No
Participation in a company sponsored bureau:	No
Stock shareholder:	No
Spouse / partner:	No
Other support / potential conflict of interest:	Leo Pharma (Prix Guy Meyer 2023)

Flash 2023

- **Traitement ambulatoire: pour qui et comment?**
- Embolie pulmonaire grave: thrombolyse ou thrombectomie per cutanée?
- Embolie pulmonaire et cancer: quelle prise en charge en 2023?

How to select the patients?

2 approaches

Parameter	Original version[226]	Simplified version[229]
Age	Age in years	1 point (if age >80 years)
Male sex	+10 points	–
Cancer	+30 points	1 point
Chronic heart failure	+10 points	1 point
Chronic pulmonary disease	+10 points	
Pulse rate ≥110 b.p.m.	+20 points	1 point
Systolic BP <100 mmHg	+30 points	1 point
Respiratory rate >30 breaths per min	+20 points	–
Temperature <36°C	+20 points	–
Altered mental status	+60 points	–
Arterial oxyhaemoglobin saturation <90%	+20 points	1 point

- Prognostic score:

=> short-term mortality

PESI score or Simplified PESI

- Empirical clinical criteria:

=> Does my patient need to be hospitalised?

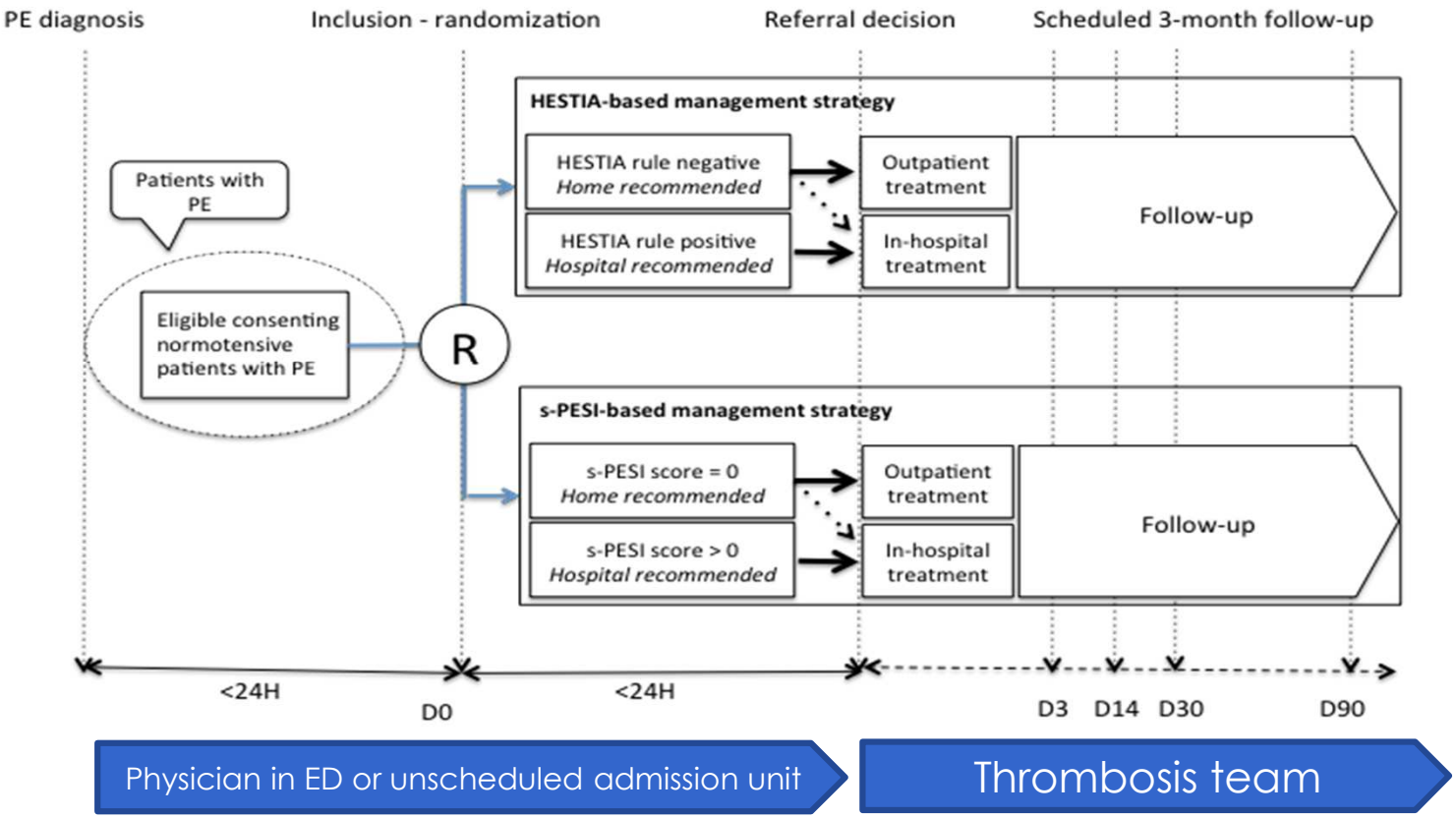
HESTIA criteria

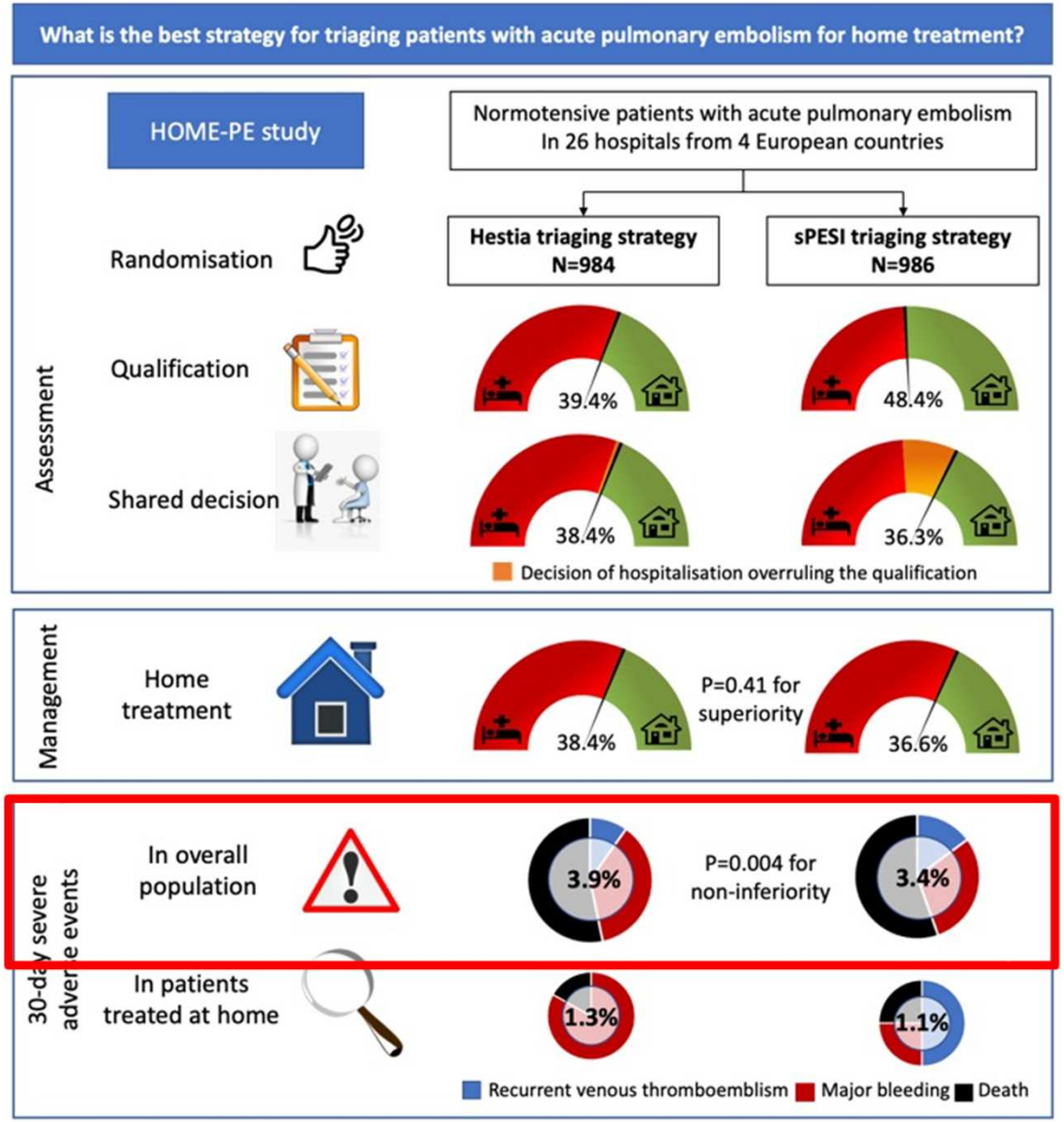
Is the patient hemodynamically unstable?*	Yes	No
Is thrombolysis or embolectomy necessary?	Yes	No
Active bleeding or high risk of bleeding?†	Yes	No
More than 24 h of oxygen supply to maintain oxygen saturation > 90%?	Yes	No
Is pulmonary embolism diagnosed during anticoagulant treatment?	Yes	No
Severe pain needing intravenous pain medication for more than 24 h?	Yes	No
Medical or social reason for treatment in the hospital for more than 24 h (infection, malignancy, no support system)?	Yes	No
Does the patient have a creatinine clearance of < 30 mL min^{-1}?‡	Yes	No
Does the patient have severe liver impairment?§	Yes	No
Is the patient pregnant?	Yes	No
Does the patient have a documented history of heparin-induced thrombocytopenia?	Yes	No

Triaging acute pulmonary embolism for home treatment by Hestia or simplified PESI criteria: the HOME-PE randomized trial

European Heart Journal (2021) **42**, 3146–3157

- 1975 normotensive patients with acute PE randomized to a triaging strategy for Home treatment based on HESTIA criteria vs sPESI
- In both groups, the physician-in-charge could overrule the allocated rule in case of imperative medical or social reason but had to document his decision.
- Specific patient pathway "Thrombosis Team" in all centres to ensure 24h care by telephone service for patients discharges home
- 30-d composite of recurrent VTE, major bleeding or all-cause death (non inferiority analysis)
- Rate of patients actually treated at home (i.e. discharged ≤24h after inclusion)





- For triaging normotensive PE patients,
- A strategy based on HESTIA rule is at least as safe as a strategy based on sPESI score

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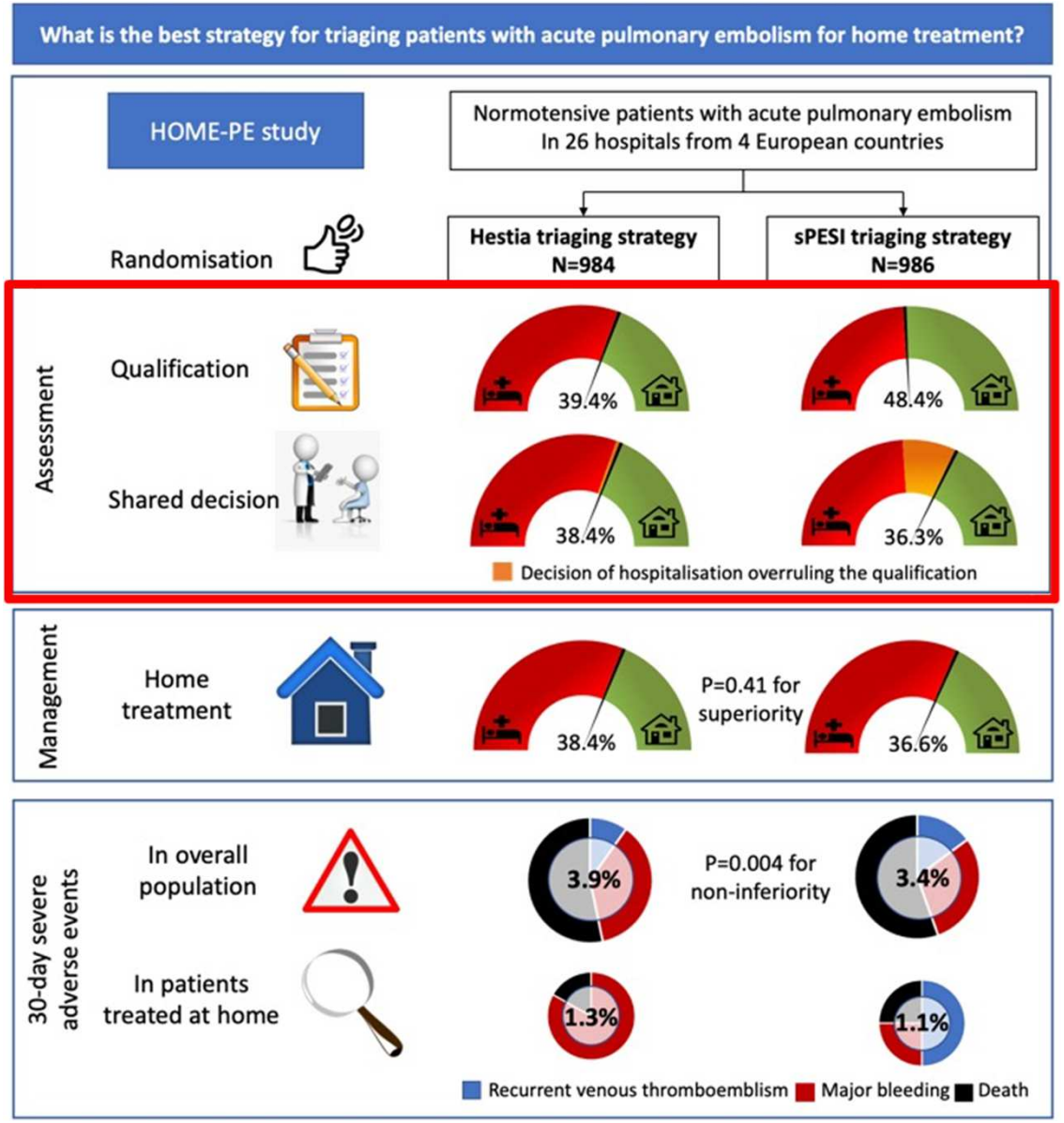

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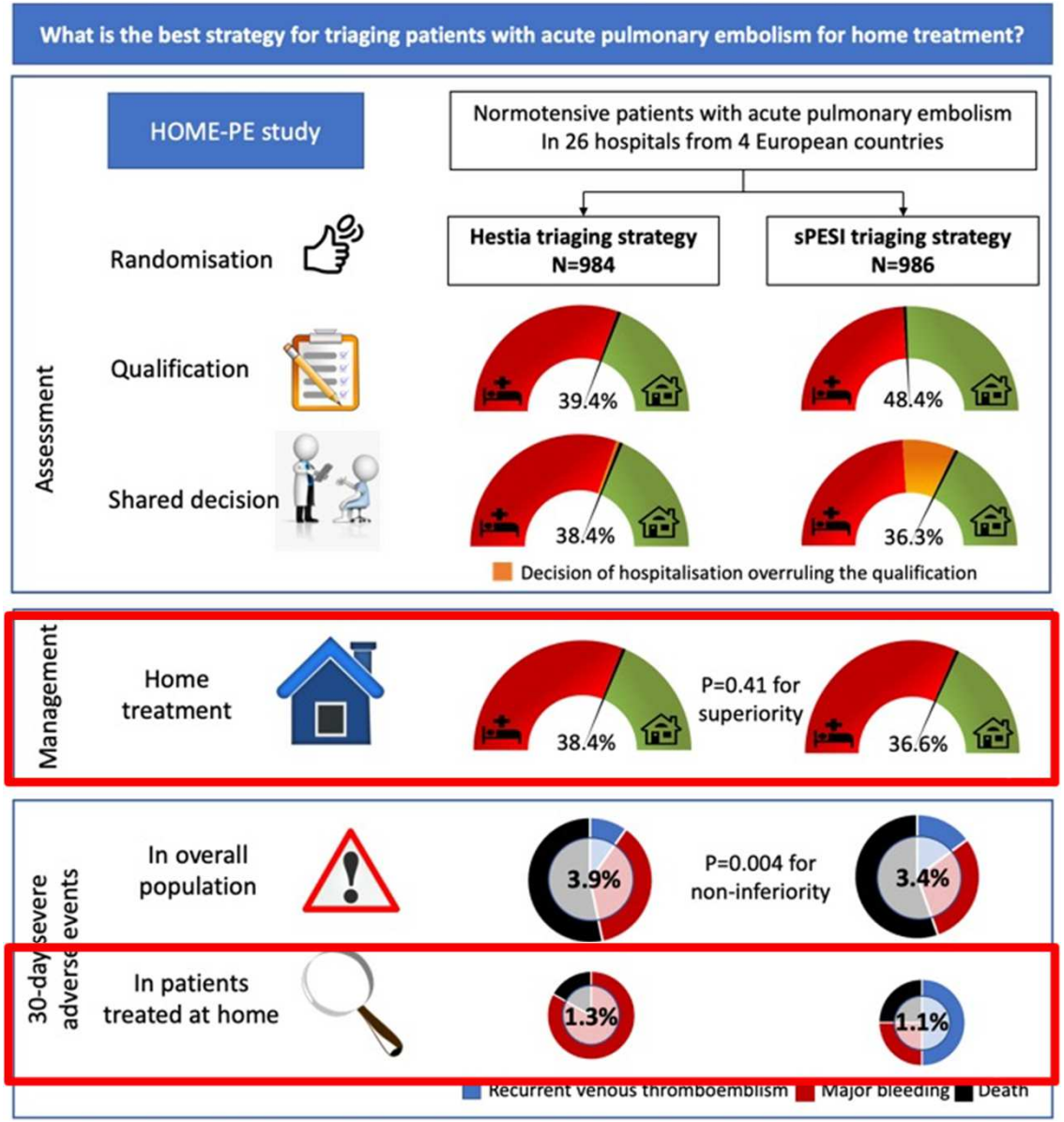

- For triaging normotensive PE patients,
- A strategy based on HESTIA rule is at least as safe as a strategy based on sPESI score
- HESTIA qualified less patients as eligible for outpatient care than sPESI but was less frequently overruled by the physician-in-charge and led to better applicability
- With both strategies, in hospitals organized for outpatient management, more than a third of PE patients could be managed at home with a low rate of complications

European Heart Journal (2021) **42**, 3146–3157

Parcours de soins

Recommendation	Class[a]	Level[b]
Carefully selected patients with low-risk PE should be considered for early discharge and continuation of treatment at home, if proper outpatient care and anticoagulant treatment can be provided.[c] 178,206,317–319	IIa	A

T0 — **1 mois** — **3-6 mois**

DIAGNOSTIC

Urgences

- démarche diagnostique
- analyse de gravité
- traitement d'attaque
- orientation

TRAITEMENT INITIAL

CS ≤ 72 h

MT

- **confirmation démarche initiale et choix thérapeutique initial**
- **débriefing patient**
- **plan de soins**

TRAITEMENT D'ENTRETIEN

CS 1 mois

MT

- suivi clinique
- suivi thérapeutique
- orientation étiologique
- débriefing patient
- ETP

TRAITEMENT PREVENTION SECONDAIRE

CS 3-6 mois

MT

- diagnostic étiologique
- évaluation des séquelles
- durée optimale du traitement
- choix traitement et ETP

CS annuelle

MT

- suivi clinique
- suivi thérapeutique
- évaluation des séquelles
- analyse du rapport bénéfice risque du traitement

Sanchez et al Rev Mal Respir 2019

Flash 2023

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Risk stratification based on early mortality risk: 2019 ESC / ERS guidelines

Patient with objectively confirmed PE

Haemodynamic instability?

YES

(1) Cardiac arrest	(2) Obstructive shock[68–70]	(3) Persistent hypotension
Need for cardiopulmonary resuscitation	Systolic BP < 90 mmHg or vasopressors required to achieve a BP ≥90 mmHg despite adequate filling status	Systolic BP < 90 mmHg or systolic BP drop ≥40 mmHg, lasting longer than 15 min and not caused by new-onset arrhythmia, hypovolaemia, or sepsis
	And	
	End-organ hypoperfusion (altered mental status; cold, clammy skin; oliguria/anuria; increased serum lactate)	

- **These patients are rares:**
  - ICOPER (1995-1996)[1]: **4,2%** (103/2454)
  - RIETE (2001-2016)[2]: **3,5%** (1207/34380)
  - German healthcare database (2005-2015)[3]: **3,5%** (30939/885806)
- **High mortality rate: 30-40%; 60-70% if cardiac arrest**

HIGH

Konstantinides SV *et al*, *Eur Heart J* 2019: doi:10.1093/eurheartj/ehz405

Therapeutic goals of high-risk PE

- Rapid haemodynamic stabilisation
  - Improve RV function

  → Volume expansion

  → Positive inotropics agents
  - Increase systolic blood pressure and RV coronary perfusion

  → vasopressors
- Restoration of pulmonary blood flow : decrease RV afterload

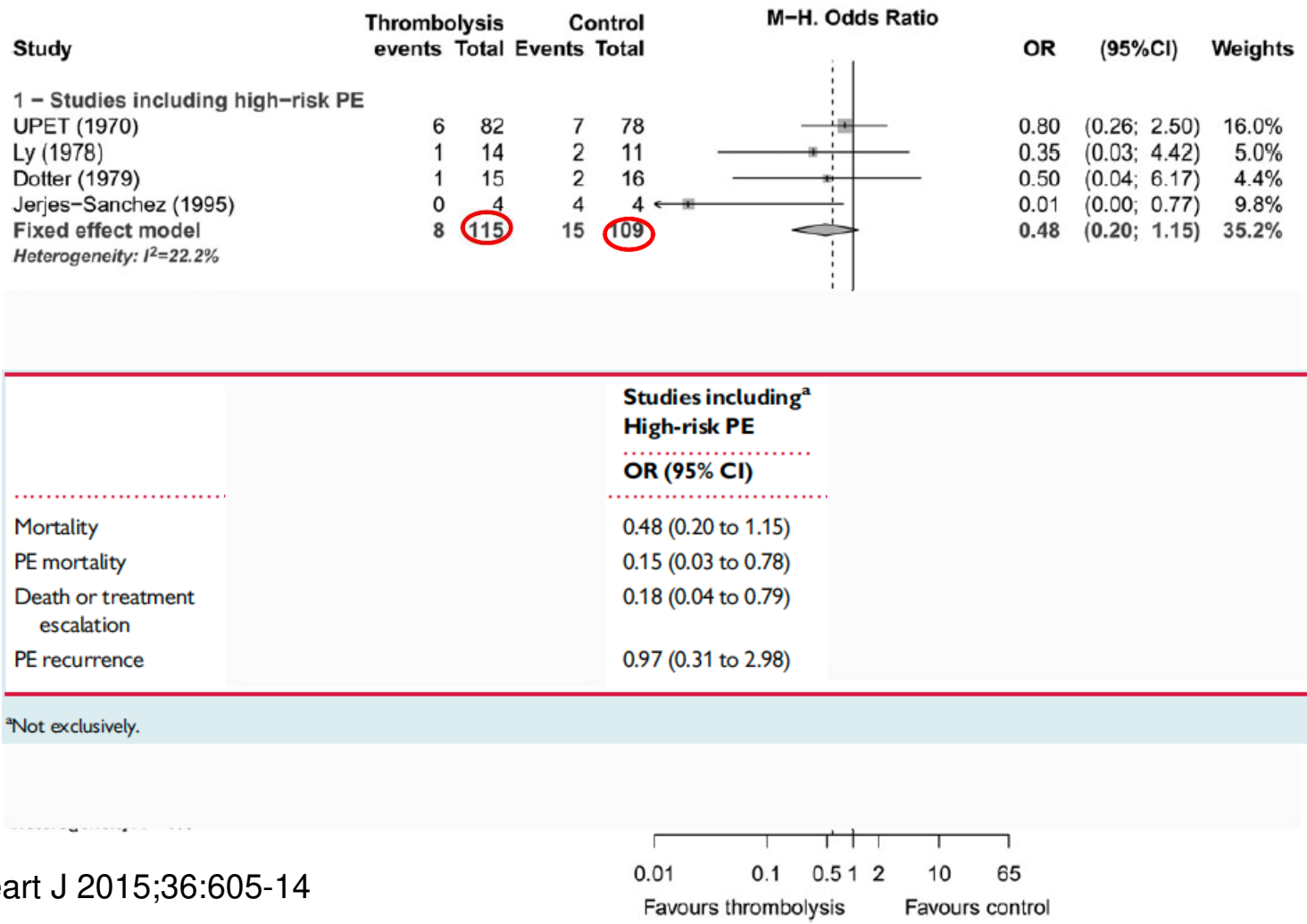
  → Primary reperfusion treatment

  Fibrinolysis or embolectomy (surgical/per-cutaneous)

  → Avoid recurrent PE

  Anticoagulant treatment: UFH / LMWH

Thrombolysis vs anticoagulant alone in High risk PE



	Studies including[a] High-risk PE OR (95% CI)
Mortality	0.48 (0.20 to 1.15)
PE mortality	0.15 (0.03 to 0.78)
Death or treatment escalation	0.18 (0.04 to 0.79)
PE recurrence	0.97 (0.31 to 2.98)

[a]Not exclusively.

Eur Heart J 2015;36:605-14

Systemic thrombolytic therapy for acute pulmonary embolism: a systematic review and meta-analysis

Eur Heart J 2015;36:605-14

Christophe Marti[1]*, Gregor John[1], Stavros Konstantinides[2], Christophe Combescure[3], Olivier Sanchez[4], Mareike Lankeit[2], Guy Meyer[4], and Arnaud Perrier[1]

Efficacy

Intermediate risk PE N=1135	Odds Ratio (95% CI)
Mortality	0.42 (0.17 – 1.03)
PE mortality	0.17 (0.05 – 0.67)
Death or treatment escalation	0.37 (0.20 – 0.69)
PE recurrence	0.25 (0.06 – 1.03)

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Safety

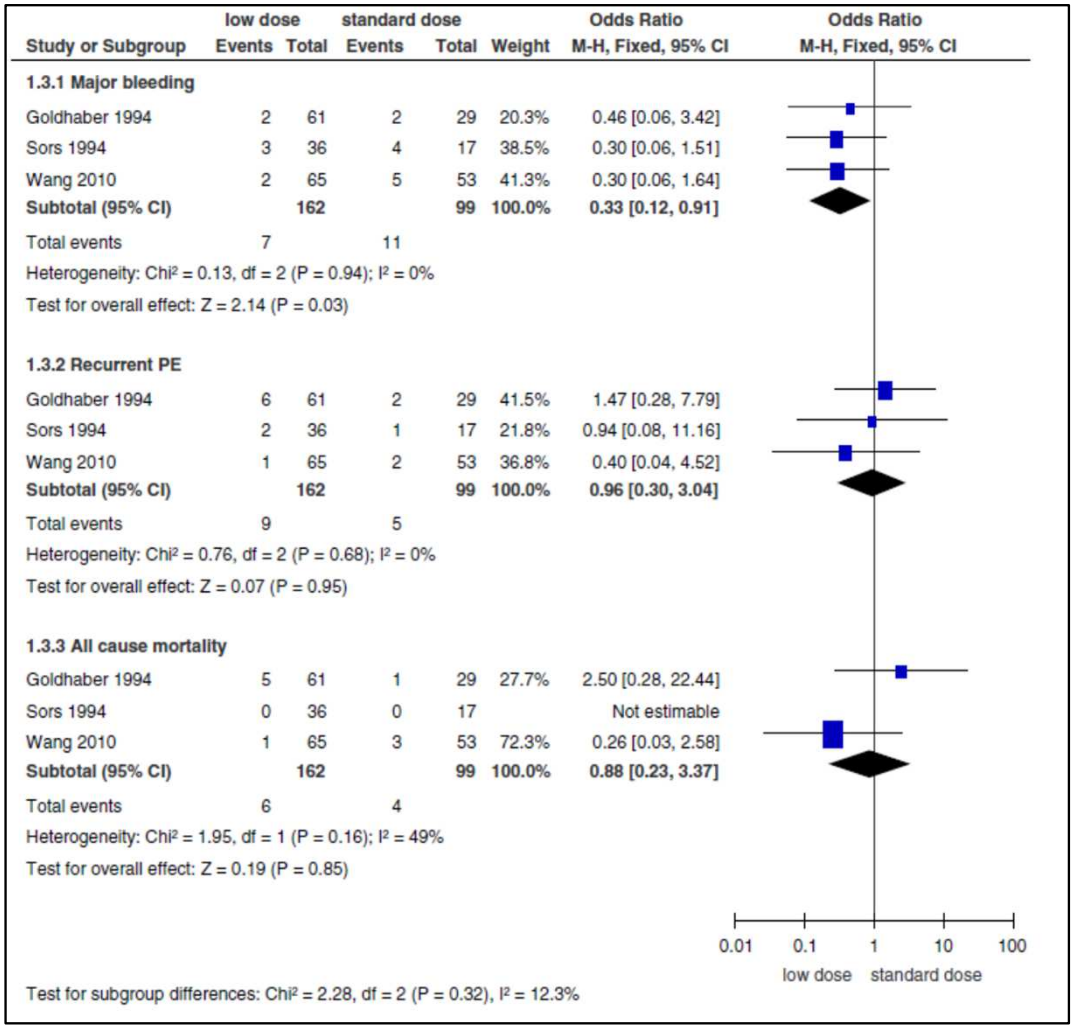
Thrombolysis
Major bleeding: 9.9%
Fatal or intracranial haemorrhage: 1.7%

	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

Improving safety with systemic reduced-dose lysis?

Reduced versus standard dose

A meta-analysis of 3 studies



Zhang Z, et al. *Thromb Res* 2014;133:357-363

Catheter-directed treatment options in PE

FIGURE 4 Penumbra Indigo Aspiration System

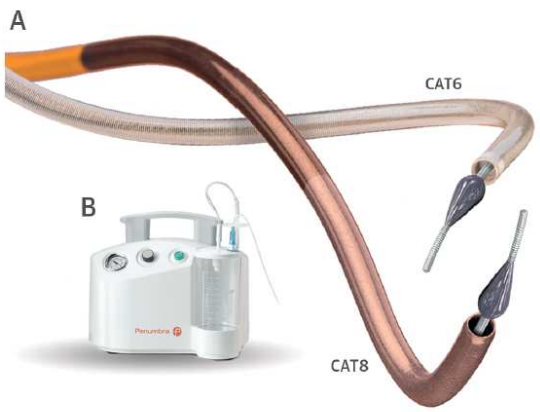


FIGURE 6 EkoSonic Endovascular Device

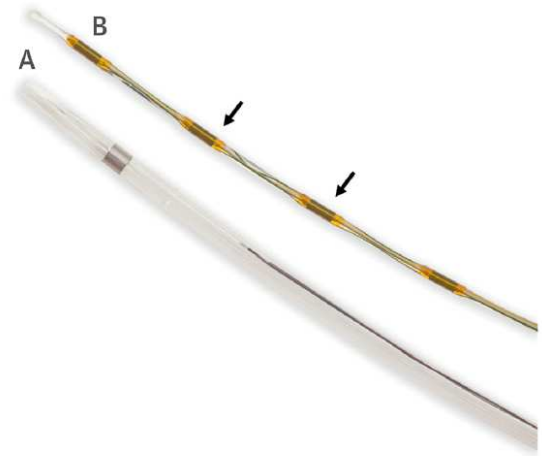


FIGURE 2 AngioVac Device

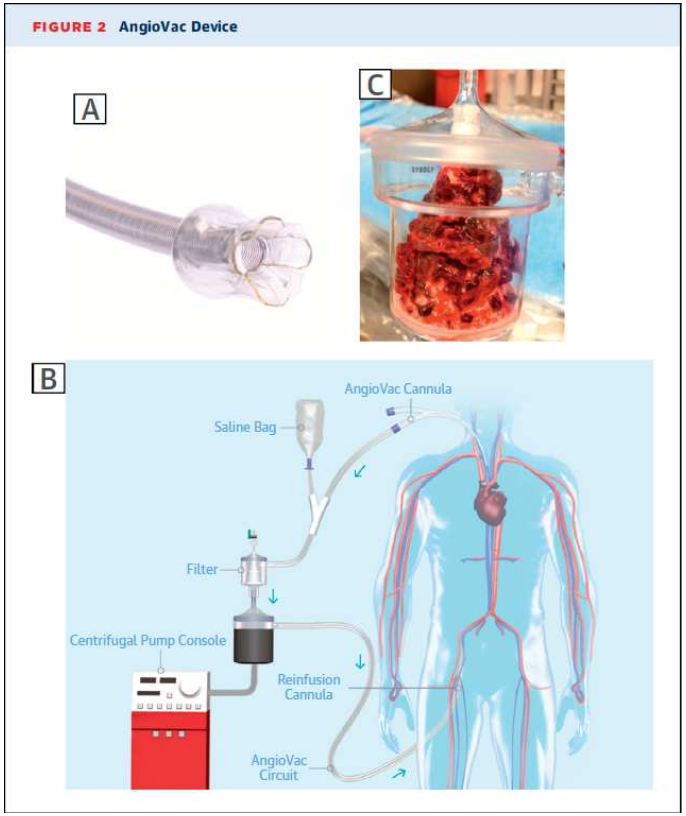
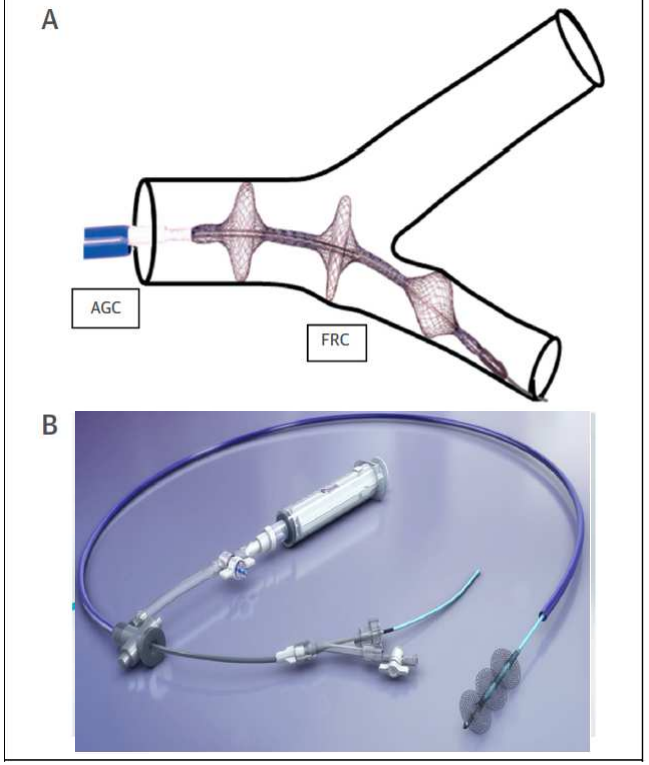
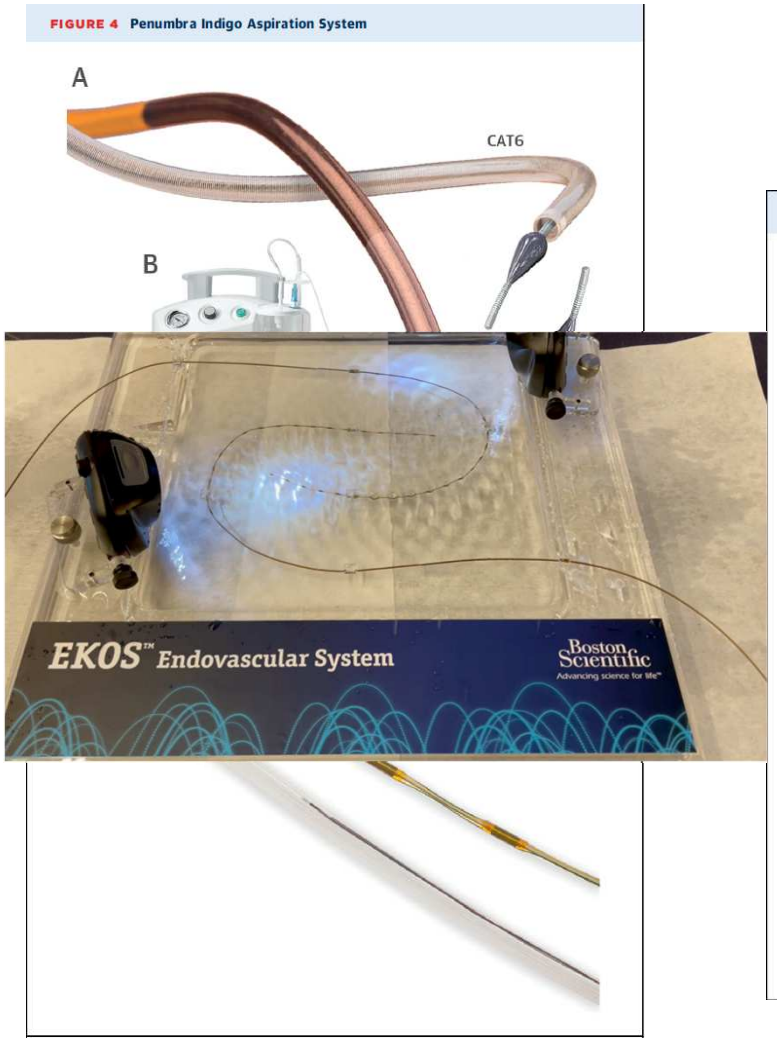
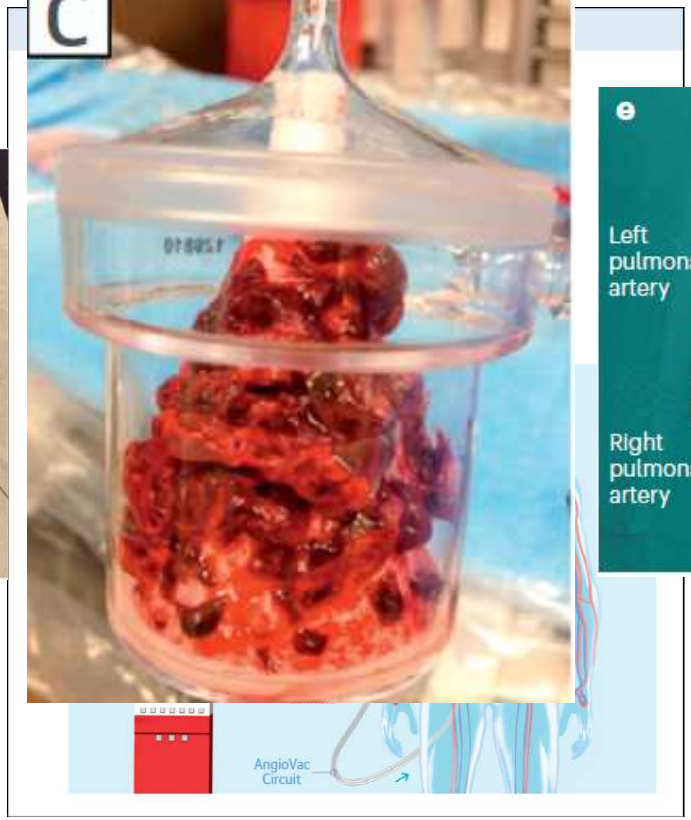


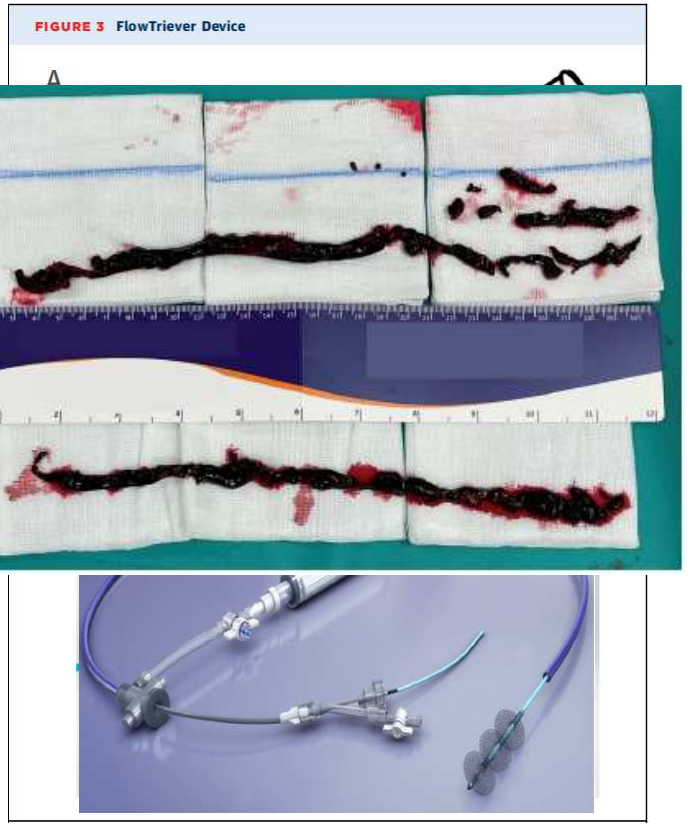
FIGURE 3 FlowTriever Device



Catheter-directed treatment in PE: impressive images of clot removal…







Catheter-directed treatment in PE: registries and RCT

Study, year	Device	Comparator	Patients n	Inclusion criteria	Intermediate high-risk PE	High-risk PE	Primary outcome
SEATTLE 2, 2015	USAT (EKOS)	No	150	RV/LV > 0.9	79%	21%	RV/LV at H48
FLARE, 2019	FlowTriever	No	106	RV/LV > 0.9	56%	0%	RV/LV at H48
FLASH, 2023	FlowTriever	No	800	RV/LV > 0.9	77%	8%	Device related death, MB, intra-procedural adverse event
EXTRACT-PE, 2021	Indigo aspiration	No	119	RV/LV > 0.9	71%	0%	RV/LV at H48
ULTIMA, 2014	USAT (EKOS)	Anticoagulant	59	RV/LV > 1	80%	0%	RV/LV at H24
SUNSET sPE, 2021	USAT (EKOS)	Other CD Tlysis	82	RV/LV > 1 +/- ↑cTn/BNP	95%	0%	Miller score (CTPA) at H48
Kroupa et al, 2022	CD Tlysis	anticoagulant	23	RV/LV > 0,9	100%	0%	↑RV, ↓sPAP, ↓Qanadli: H48
CANARY, 2022	CD Tlysis	Anticoagulant	94	RV/LV > 0,9	100%	0%	RV/LV at M3

Catheter-directed treatment in PE: all-cause mortality and major bleeding

Study, year	Device	Comparator	Patients, n	30-d all-cause mortality	30-d major bleeding	Intracranial bleeding
SEATTLE 2, 2015	USAT (EKOS)	-	150	2.7%	10%	0
FLARE, 2019	FlowTriever	-	106	0.9%	0.9% at H48	0
FLASH, 2023	FlowTriever	-	800	0.8%	1.4% at H48	0
EXTRACT-PE, 2021	Indigo aspiration	-	119	2.5%	1.7% at H48	0
ULTIMA, 2014	USAT (EKOS)	Anticoagulant	59	0 vs 3.4%	0 vs 0	0 vs 0
SUNSET sPE, 2021	USAT (EKOS)	Other CD Tlysis	82	5% vs 0	2.5% vs 0	2.5% vs 0
Kroupa et al, 2022	CD Tlysis	anticoagulant	23	0 vs 0	0 vs 0	0 vs 0
CANARY, 2022	CD Tlysis	Anticoagulant	94	0 vs 6.5% at M3	2.1% vs 0	0 vs 0
OPTALYSE, 2018	USAT (EKOS)	Various dosing & timing	100	1%	4% at D3	2%

What do the guidelines say?

2019 ESC guidelines

2021 ACCP guidelines

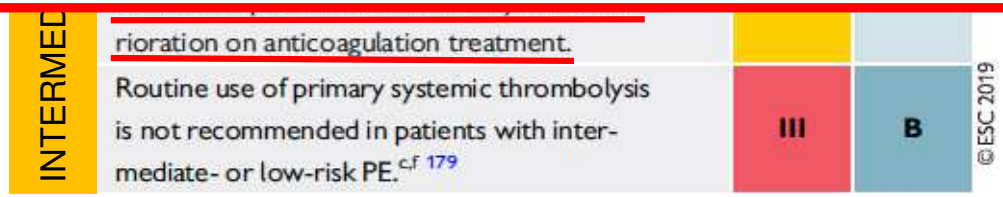
Guidance statements:

7. In patients with acute PE associated with hypotension (eg, systolic BP < 90 mm Hg) who do not have a high

Systemic thrombolytic therapy is recommended

- In high risk PE
- In patients with intermediate high-risk PE who deteriorate

Catheter-directed treatment should be considered as an alternative if systemic thrombolysis is contraindicated or has failed



Konstantinides SV *et al*, *Eur Heart J* 2019: doi:10.1093/eurheartj/ehz405

likely to cause death before systemic thrombolysis can take effect (eg, within hours), if appropriate expertise and resources are available, we suggest catheter-assisted thrombus removal over no such intervention (weak recommendation, low-certainty evidence).

CHEST 2021; 160(6):e545-e608

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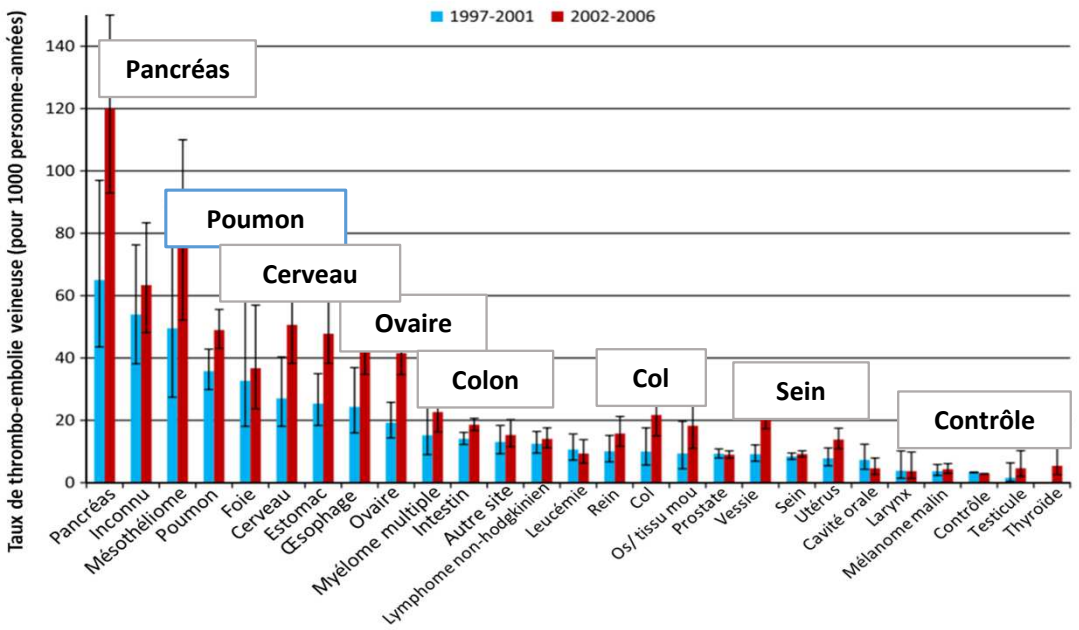
MTEV et cancer

Risque de MTEV x 4-7 en cas de cancer

Variable selon type de cancer - stade de la maladie - délai après le diagnostic - traitement – comorbidités

Incidence en augmentation

50% forme symptomatique 50% diagnostic fortuit

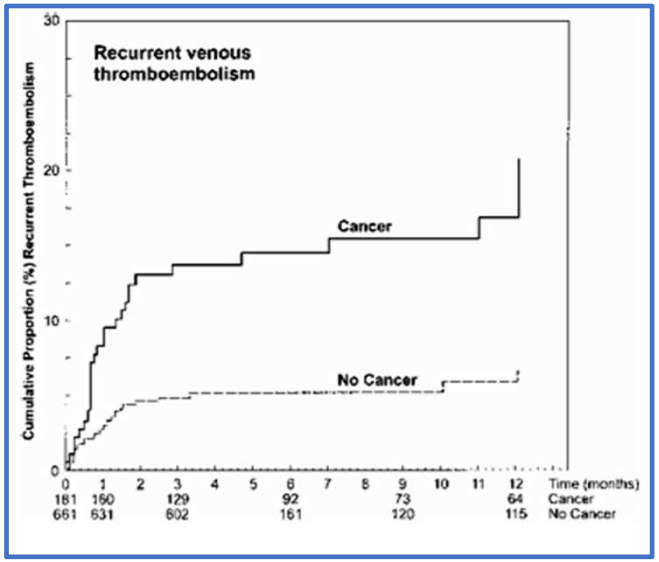


Oger et al, Thromb Haemost 2007 ; d'après Walker et al. Eur J Cancer 2013, Farge et al Medicine 2015, Angelini et al Am J Hematol 2019

TAC : 2ème cause de mortalité après le cancer lui même

de récidive (x 2-3)

d'hémorragie (x 2)



De quoi meurt-on ?

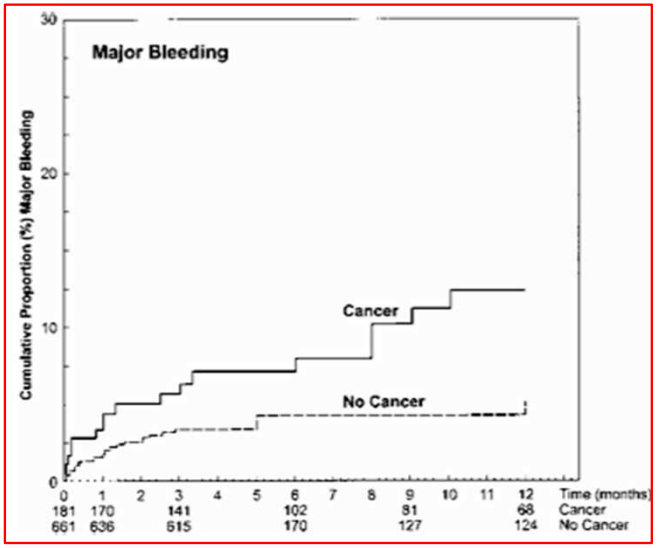
Méta-analyse (29 études prospectives, n= 8000 patients)

Taux exprimés pour 100 personne-années de suivi	
Récidive	23,7 (IC95 20,1–27,8)
Récidive fatale	**1,9** (IC95% CI: 0,8–4,0)
Saignement majeur	13,1 (IC95% 10,3–16,7)
Saignement majeur fatal	**0,8** (IC95% 0,3–2,1)

Taux de létalité

Des récidives 14,8%

Des hémorragies majeures 8,9%



(Mais données sous AVK)

Prandoni et al., Blood 2002, Farge et al Medicine 2015, Angelini et al Am J Hematol 2019, Abdulla Thromb Haemost 2020

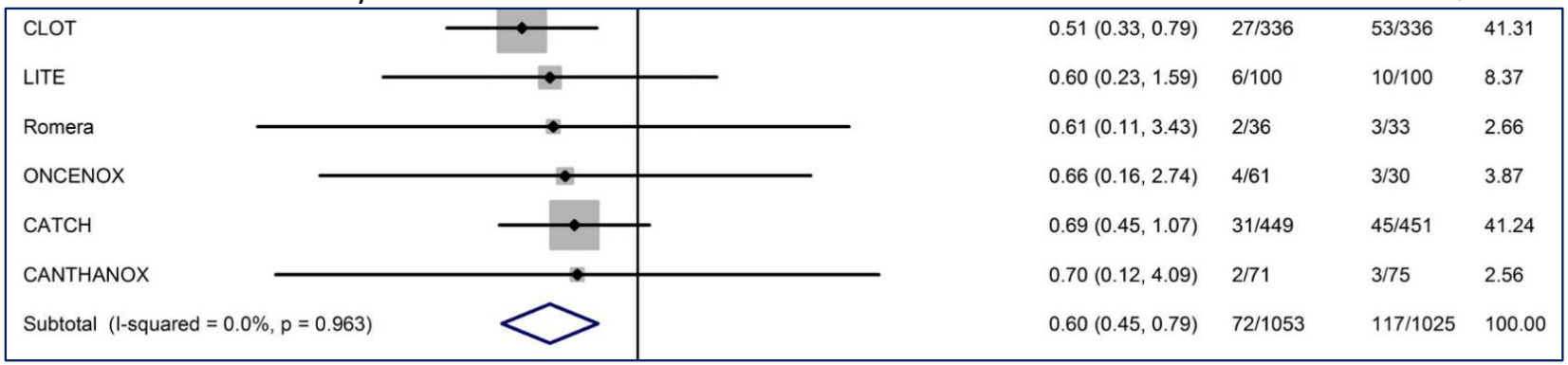
Quel traitement anticoagulant en 2023 ?

- HBPM longtemps traitement de référence pour la thrombose associée au

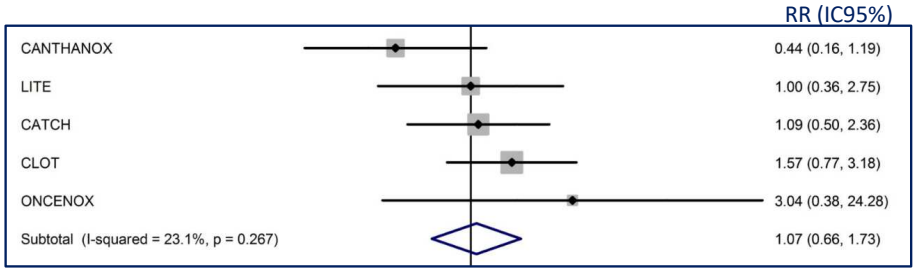
HBPM > AVK

↘ du risque relatif de récidive thromboembolique de 40 %

- Essai CLOT (Daltéparine vs warfarine 6 mois) : ↘ risque récidive à 6 mois (9% vs 17%)[1]
- Méta-analyse :



Pas d'augmentation du risque d'hémorragie majeure



HBPM vs AOD

Avantages
Prise orale
Action rapide
Dose fixe

➔ Données des essais ?

[1] *Lee et al 2003* [2] *Posch et al Thromb Res 2015*

Essais AOD vs HBPM : caractéristiques

Essais randomisés
En ouvert
vs Daltéparine (comme CLOT)

Etude	Traitement	Age	Maladie métastatique	Cancer GI	EP ± TVP	ATCD TEV	MTEV Incidental
HOKUSAI Cancer [1]	**Edoxaban** (N=522)	65 a	~60%	~30%	~60%	9%	32%
	Daltéparine (N=524)	±12	53%	27%	63%	12%	33%
Select-D [2]	**Rivaroxaban** (N=203)	67	58%	43%*	73%	NR	53%
	Daltéparine (N=203)	67	58%	40%*	71%	NR	52%
ADAM-VTE [3]	**Apixaban** (N=150)	64±11	65%	33%	55%	5%	NR
	Daltéparine (N=150)	64±11	66%	38%	51%	8%	NR
Caravaggio [4]	**Apixaban** (N=576)	67±11	67%	33%	53%	8%	20%
	Daltéparine (N=579)	67±11	68%	32%	58%	10%	20%
CASTADIVA [5]	**Rivaxaban** (N=74)	69	77%	20%	90%	24%	
	Daltéparine (N=84)	71	76%	24%	82%	29%	

MTEV : maladie thromboembolique veineuse. HNMCS : hémorragie non majeure cliniquement significative

1. Raskob GE, van Es N, Verhamme P, et al. Edoxaban for the Treatment of Cancer-Associated Venous Thromboembolism. N Engl J Med 2018;378(7):615-624. 2. Young AM, Marshall A, Thirlwall J, et al. Comparison of an Oral Factor Xa Inhibitor With Low Molecular Weight Heparin in Patients With Cancer With Venous Thromboembolism: Results of a Randomized Trial (SELECT-D). J Clin Oncol 2018;36(20):2017-2023. 3. McBane 2nd RD, Wysokinski WE, Le-Rademacher JG, et al. Apixaban and dalteparin in active malignancy-associated venous thromboembolism: The ADAM VTE trial. J Thromb Haemost 2020;18(2):411-421. 4. Agnelli G, Becattini C, Meyer G, et al. Apixaban for the Treatment of Venous Thromboembolism Associated with Cancer. N Engl J Med 2020;382(17):1599-1607. 5. Planquette Chest 2021 in press

Essais AOD vs HBPM :

Etude	Traitement	Design Critère(s) de jugement	Récidive TEV	Hémorragie majeure	HNMCS	Mortalité toute cause
Hokusai Cancer [1]	Edox (N=522)	Non infériorité Réc TEV + HM 12 Mo	7.9%	6.9%	14.6%	39.5%
	Dalte (N=524)		11.3% HR 0.71 (0.48 -1.06)	4.0% HR 1,77 (1,03 – 3,04)	11.1%	36.6%
Select-D [2]	Riva (N=203)	Pilote Réc TEV 6 Mo	4%	6%	13%	25%
	Dalte (N=203)		11% HR 0,43 (0,19- 0,99)	4% HR 1,83 (0,68 – 4,96)	4%	30%
ADAM-VTE [3]	Apix (N=150)	Supériorité HM 6 Mo	0,7%	0%	6.2%	15.9%
	Dalte (N=150)		6,3% HR 0.09 (0,01-0,78)	1.4% HR non calculable	4.2%	10.6%
Caravaggio [4]	Apix (N=576)	Non infériorité Réc TEV 6 Mo	5.6%	3.8%	9.0%	23.4%
	Dalte (N=579)		7.9% HR 0.63 (0.37 – 1.07)	4.0% HR 0.82 (0.40 – 1.69)	6.0%	26.4%
CASTADIVA [5]	Riva (N=74)	Non infériorité Réc TEV (Σ ou incidental) + ↑ obstruct° 3 Mo	6.4%	1.4%	-	25.7%
	Dalte (N=84)		10.1% HR 0.75 (0.21-2.66)	3.7% HR 0.36 (0.04-3.43)	-	23.8%

TEV : thromboembolique veineuse. HNMCS : hémorragie non majeure cliniquement significative

1. Raskob GE, van Es N, Verhamme P, et al. Edoxaban for the Treatment of Cancer-Associated Venous Thromboembolism. N Engl J Med 2018;378(7):615-624. 2. Young AM, Marshall A, Thirlwall J, et al. Comparison of an Oral Factor Xa Inhibitor With Low Molecular Weight Heparin in Patients With Cancer With Venous Thromboembolism: Results of a Randomized Trial (SELECT-D). J Clin Oncol 2018;36(20):2017-2023. 3. McBane 2nd RD, Wysokinski WE, Le-Rademacher JG, et al. Apixaban and dalteparin in active malignancy-associated venous thromboembolism: The ADAM VTE trial. J Thromb Haemost 2020;18(2):411-421. 4. Agnelli G, Becattini C, Meyer G, et al. Apixaban for the Treatment of Venous Thromboembolism Associated with Cancer. N Engl J Med 2020;382(17):1599-1607. 5. Planquette Chest 2021 in press

Essais AOD vs HBPM : prévention des récidives

Etude	Traitement	Design Critère(s) de jugemen	Récidive TEV	Hémorragie majeure	HNMCS	Mortalité toute cause
Hokusai Cancer [1]	Edox (N=522)	Non infériorité Réc TEV + HM 12 Mo	**7.9%**	6.9%	14.6%	39.5%
	Dalte (N=524)		**11.3%** HR 0.71 (0.48 -1.06)	4.0% HR 1,77 (1,03 – 3,04)	11.1%	36.6%
Select-D [2]	Riva (N=203)	Pilote Réc TEV 6 Mo	**4%**	6%	13%	25%
	Dalte (N=203)		**11%** HR 0,43 (0,19- 0,99)	4% HR 1,83 (0,68 – 4,96)	4%	30%
ADAM-VTE [3]	Apix (N=150)	Supériorité MB 6 Mo	**0,7%**	0%	6.2%	15.9%
	Dalte (N=150)		**6,3%** HR 0.09 (0,01-0,78)	1.4% HR non calculable	4.2%	10.6%
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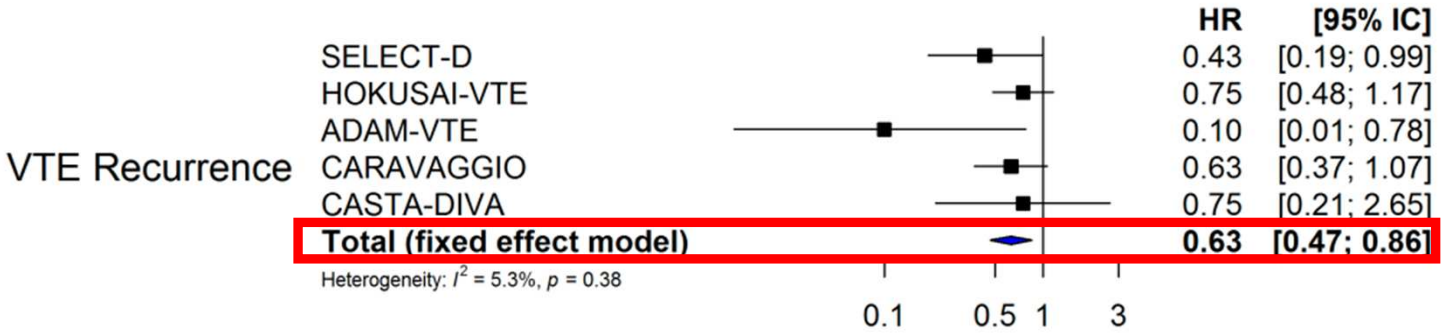
Essais AOD vs HBPM : prévention des récidives

Méta analyse



➔ **Diminution du risque de récidive thrombo-embolique (HR 0,63)**

B. Planquette et al. Chest 2022

Essais AOD vs HBPM : saignements

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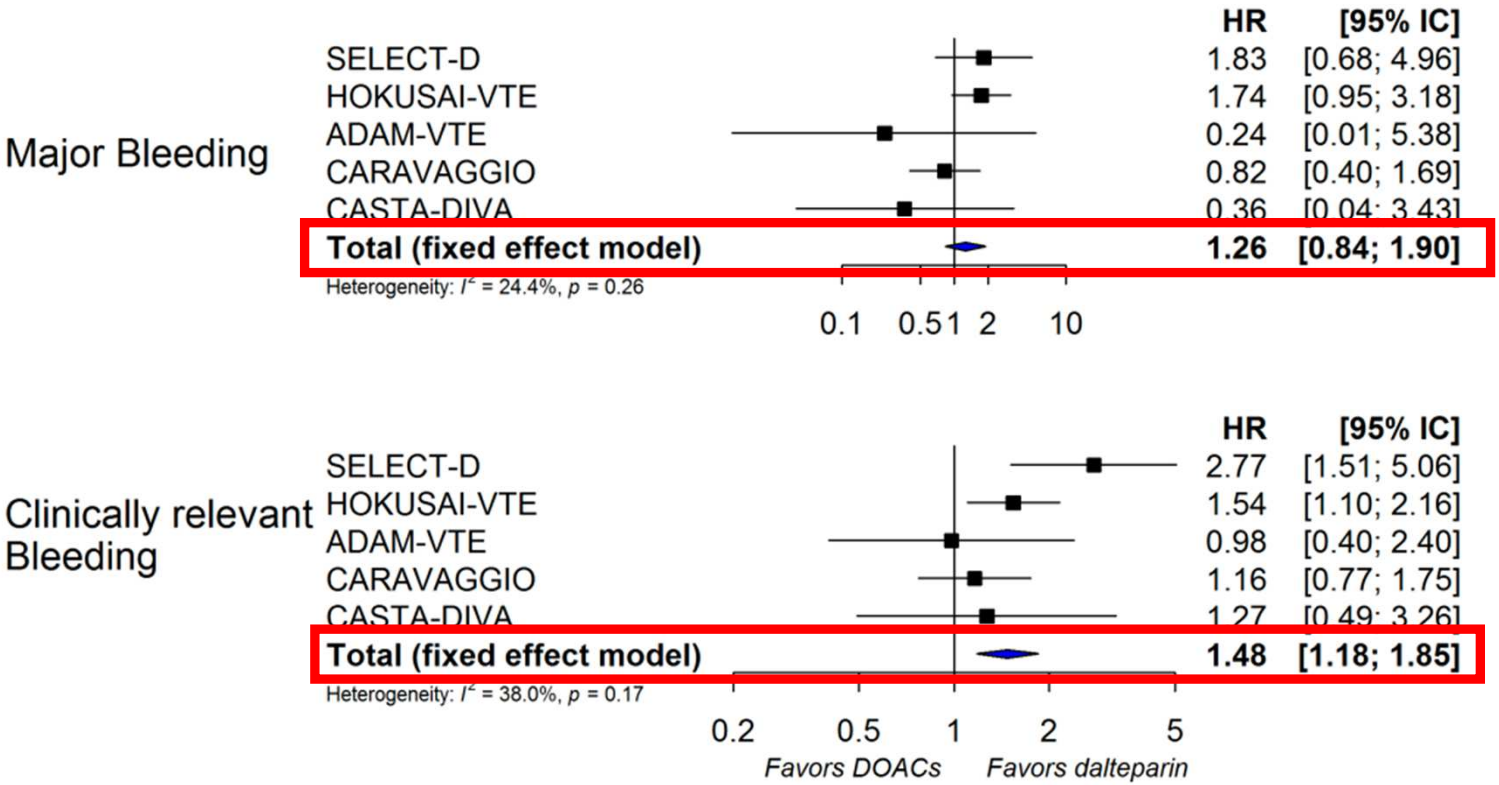
Essais AOD vs HBPM : saignements

Méta analyse



B. Planquette et al. Chest 2022

Signal hémorragique sous AOD

HOKUSAI VTE (Edoxaban)

➔ **Excès d'hémorragie majeure sous Edoxaban**

⇔ **saignements gastro-interstinaux (tractus digestif haut++)**

Type de cancer	Edoxaban (n=522)		Daltéparine (n=524)	
	Nb à risque	Hémorragie majeure, n (%)	Nb à risque	Hémorragie majeure, n (%)
Cérébral	30	2 (7%)	42	3 (7%)
Gastro -intest	**165**	**21 (12.7%)**	**140**	**2 (3.6%)**
Génito-urinaire	65	3 (4.6%)	71	1 (1.4%)
Gynéco	47	2 (4.3%)	63	2 (1.6%)
Poumon	77	2 (2.6%)	75	0
Sein	64	0	60	2 (3.3)
Hémato	56	1 (1.8%)	55	2 (3.6%)

CARAVAGGIO (Apixaban)

➔ Majorité des hémorragies majeure = gastro-intestinales

MAIS

➔ **Pas de différence entre Apixaban et Daltéparine**

Kraajpoel et al, Thromb Haemost 2018, Ageno et al Thromb Haemost 2020

Quel traitement pour les 6 premiers mois ?

Recommandations

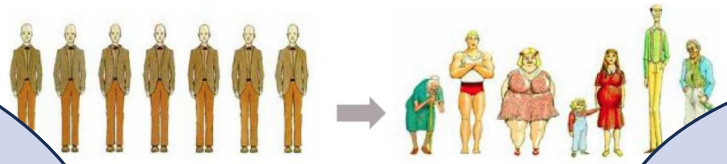
R16.2 Pour traiter les patients atteints de cancer actif et d'une TVP et/ou d'une EP:

- il est recommandé une **HBPM** sans relais par AVK (Grade 1 +)
- il est recommandé un traitement par **apixaban** (Grade 1 +) → **Eliquis 10 mg matin et soir pendant 7 jours puis 5 mg matin et soir**

- en alternative, sauf cancer digestif ou urogénital, il est suggéré d'utiliser un traitement par **rivaroxaban** (Grade 2 +) → Xarelto 15 mg matin et soir pendant 21 jours puis 20 mg par jour en 1 prise
- *en alternative, sauf cancer digestif ou urogénital, il est suggéré d'utiliser un traitement par edoxaban (Grade 2 +)*

R16.3 - En cas d'insuffisance rénale sévère (DFG 15 à 30 ml/mn), il est suggéré d'avoir recours à une HBPM, en raison d'une moindre efficacité des AVK, (Grade 2 +).

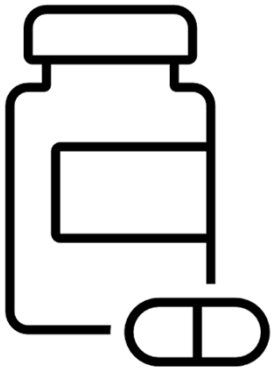
Réflexions AOD chez patients atteints de cancer



AOD ➔ Absorption digestive

Vomissements ?
Diarrhées / Colite ?
Résections digestives étendues ?

Hypoalbuminémie



Interactions médicamenteuses

Liste des comédications
Recherche d'interactions
Avis pharmacie

Maniabilité
Gestes invasifs prévus

Capacité à prendre le ttt ?

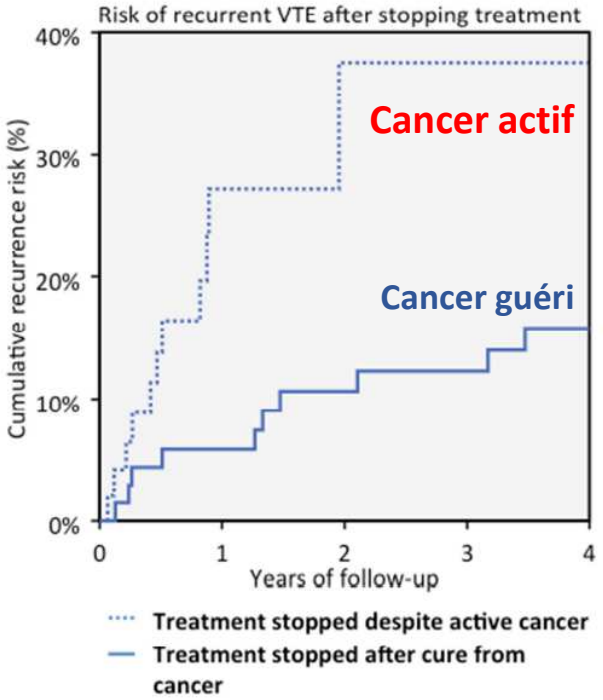
Acceptabilité
Par le patient

Quel cancer ?
Métastases ?

Fonction rénale
DFG < 30 exclus des essais

Au-delà de 6 mois d'anticoagulation ?

Chez qui poursuivre ?



Taux d'incidence cumulée des récidives TEV chez les patients ayant stoppé l'anticoagulation pour une raison autre qu'une hémorragie

Progression tumorale

Clinical Outcomes	All Patients *n* = 432 *	According to the State of Cancer	
		Cancer Progression *n* = 217	Metastatic Cancer *n* = 320
VTE recurrence¶	8.0 (4.2; 15.1)	10.6 (5.3; 21.2)	8.7 (5.1; 14.9)
CRB **¶	4.9 (3.2; 7.4)	8.8 (5.6; 13.7)	5.3 (3.2; 8.8)
Major bleeding¶	2.6 (1.3; 5.1)	5.1 (2.8; 9.1)	2.8 (1.4; 5.6)
Deaths §	30.7 (22.8; 38.6)	52.9 (41.0; 64.8)	36.7 (27.6; 45.7)

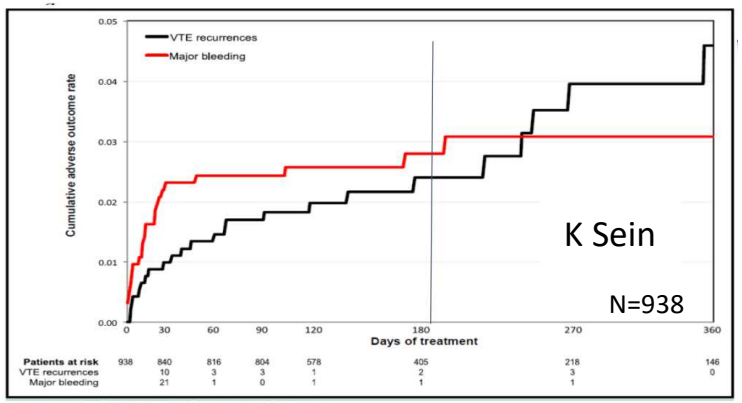
Van der Hulle T et al, Chest 2016, Kearon C et al, JTH 2016, Mahé et al, Cancers 2020

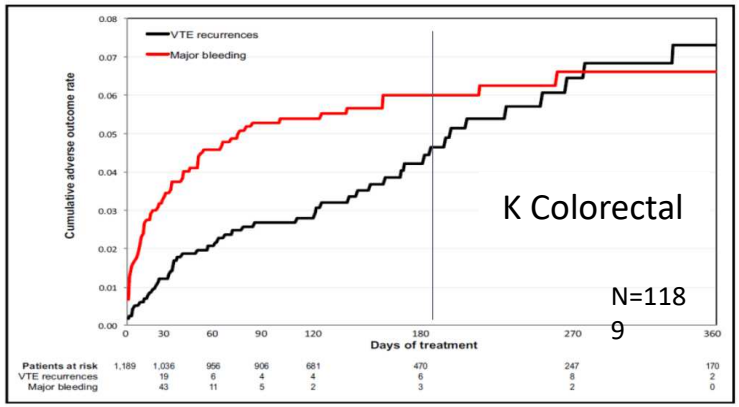
Au-delà de 6 mois d'anticoagulation ?

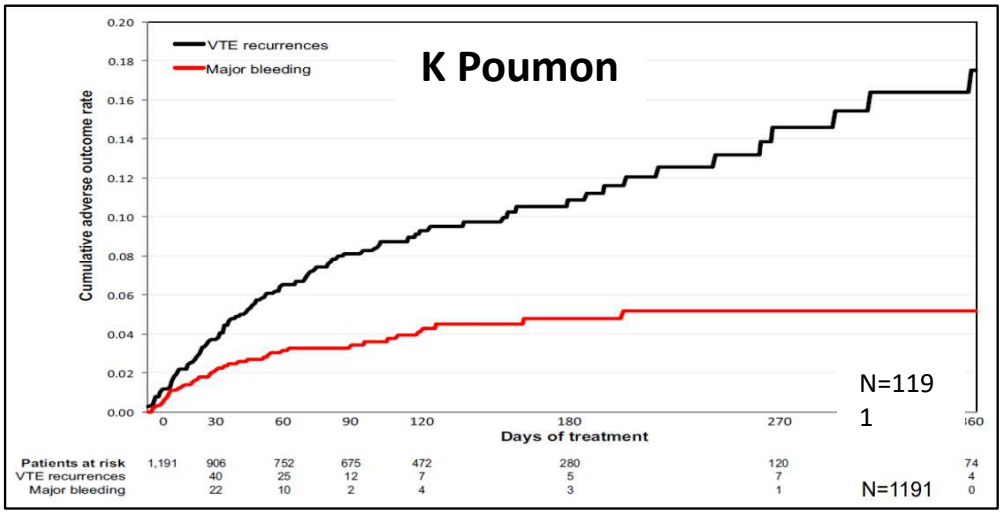
A partir du registre RIETE
— Récurrence
— Saignement majeur

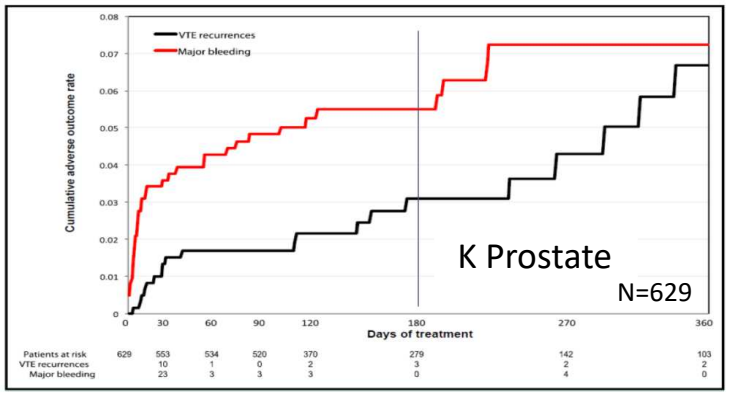
Chez qui poursuivre ?

L'évolution dépend du type de cancer



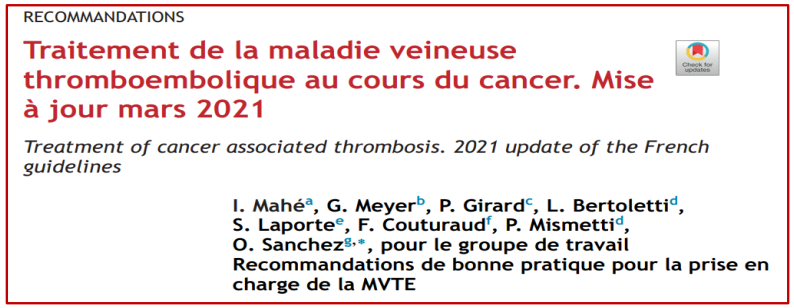






Mahé et al, Am J Med 2017

Chez qui poursuivre le traitement au-delà des 6 premiers mois ?



RECOMMANDATIONS

Traitement de la maladie veineuse thromboembolique au cours du cancer. Mise à jour mars 2021

Treatment of cancer associated thrombosis. 2021 update of the French guidelines

I. Mahé[a], G. Meyer[b], P. Girard[c], L. Bertoletti[d], S. Laporte[e], F. Couturaud[f], P. Mismetti[d], O. Sanchez[g,*], pour le groupe de travail Recommandations de bonne pratique pour la prise en charge de la MVTE

Recommandations

ARRÊT
de l'anticoagulant si

- le cancer n'est plus actif
= absence de maladie tumorale détectable + absence de ttt anticancéreux depuis plus de 6 mois (y compris hormonothérapie)

- en l'absence de récidive TEV dans les 6 premiers mois d'anticoagulation (Grade 2+).

POURSUITE
de l'anticoagulant si

Cancer actif
= maladie détectable (y compris biomarqueur), et/ou poursuite d'un traitement anticancéreux (y compris hormonothérapie) dans les 6 mois

ou **récidive TEV pendant les 6 premiers mois**

Réévaluer l'indication de l'anticoagulation tous les 6 mois

Choix du traitement au-delà des 6 premiers mois ?

Quel anticoagulant choisir ?

Recommandations

Pour le choix de l'anticoagulants , prendre en compte l'activité du cancer, le risque de rechute du cancer en cas de rémission, le traitement du cancer en cours, le type et la tolérance du traitement anticoagulant dans les 6 premiers mois, la survenue d'une récidive de TEV dans les 6 premiers mois, et la préférence du patient **(Grade 2+)**

Quand le traitement anticoagulant est poursuivi au-delà du 6ème mois, il est suggéré :

- **De poursuivre l'HBPM** quand ce traitement est bien toléré, efficace et accepté par le patient **(grade 2+)**

- **De remplacer l'HBPM par un anticoagulant oral**, de préférence un AOD plutôt qu'un AVK quand le traitement par HBPM est mal accepté ou mal toléré **(grade 2+)**

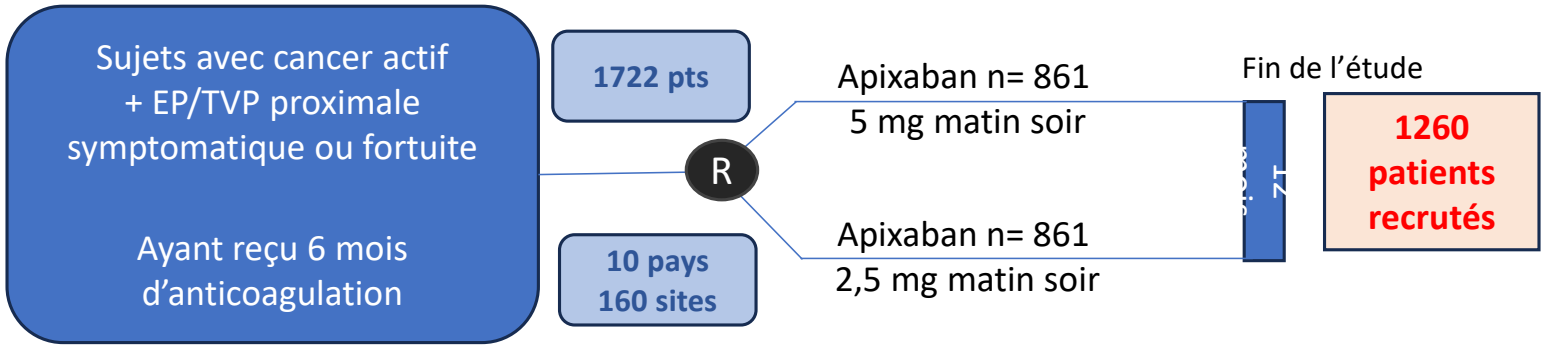
- **De poursuivre l'AOD** quand ce traitement est bien toléré, efficace et accepté par le patient **(grade 2+)**

Choix du traitement au-delà des 6 premiers mois ?

Perspectives : Essai APICAT

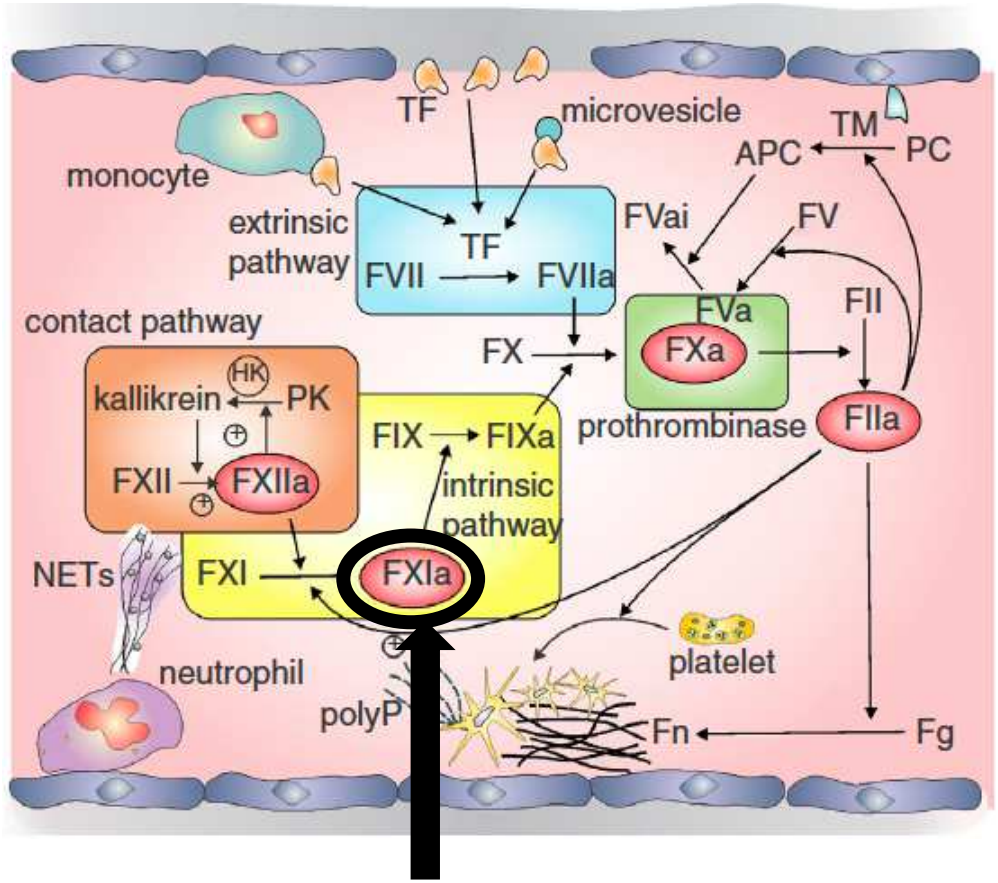
Essai multicentrique international randomisé en double aveugle.
Pr Isabelle Mahé pour F_CRIN INNOVTE group (NCT°3692065)

Rationnel : **évaluer l'efficacité et la sécurité d'une dose réduite d'Apixaban vs une dose pleine d'Apixaban pour le traitement de la MTEV au-delà de 6 mois chez patients avec cancer**



Critère de jugement P[al]	**TVP proximale symptomatique ou EP symptomatique ou fortuite**
Critères secondaires	Hémorragie (majeure ou non majeure cliniquement significative)

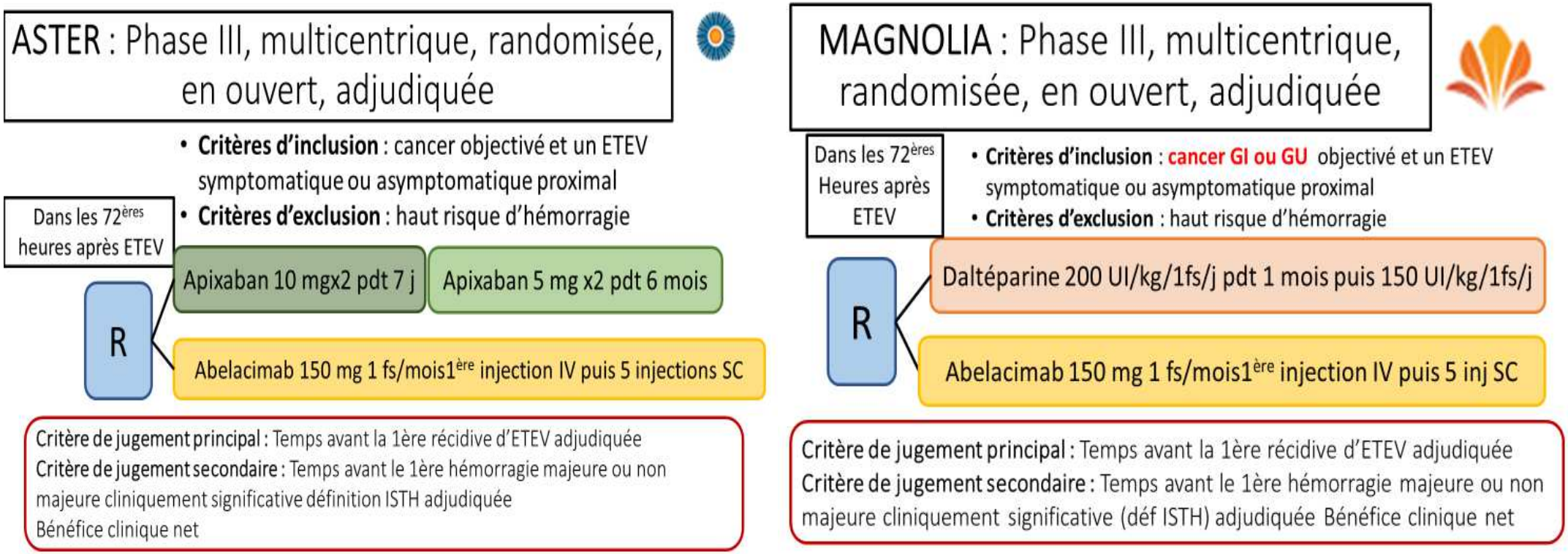
Perspectives : les anti XI ?

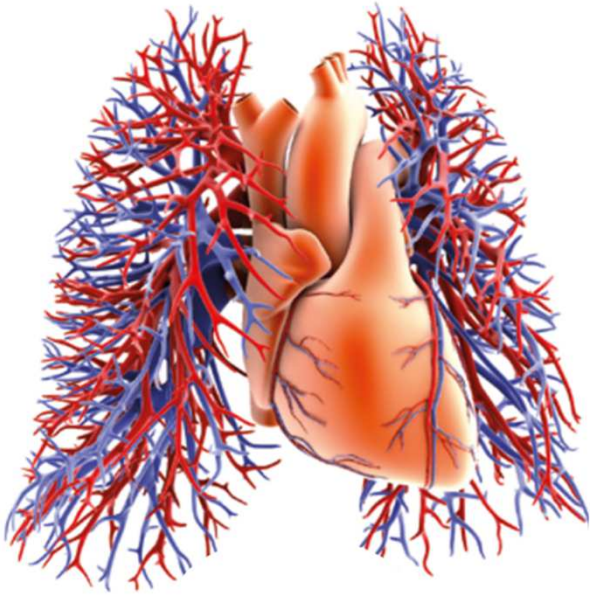


ARN antisens (FXI-ASO) / **AC anti-XI** (osocimab et abelacimab) **/ peptides anti-XI** (milvexian et asundexia)

Fredenburgh et al JTH 2021

Anti XI : 2 essais de phase III en cours





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