

Tratamiento de los pacientes  
con recidiva de ETV a pesar de  
tratamiento anticoagulante oral

## Enfermedad Tromboembólica

Gerona

22 al 24 de Marzo 2007

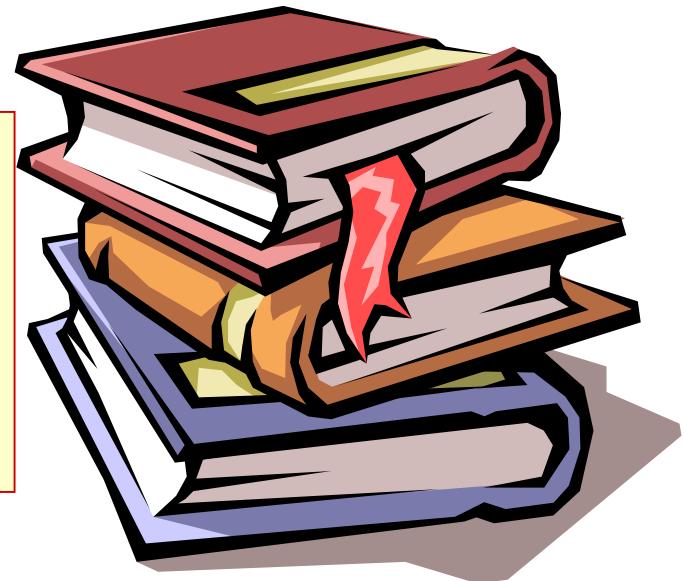
Dr Lobo  
S de Neumología.  
Hospital Txagorritxu. Vitoria

- anticoagulación oral con antivitaminas K (AVK) a largo plazo
- hep 4-7% presentan recidiva a pesar del tratamiento



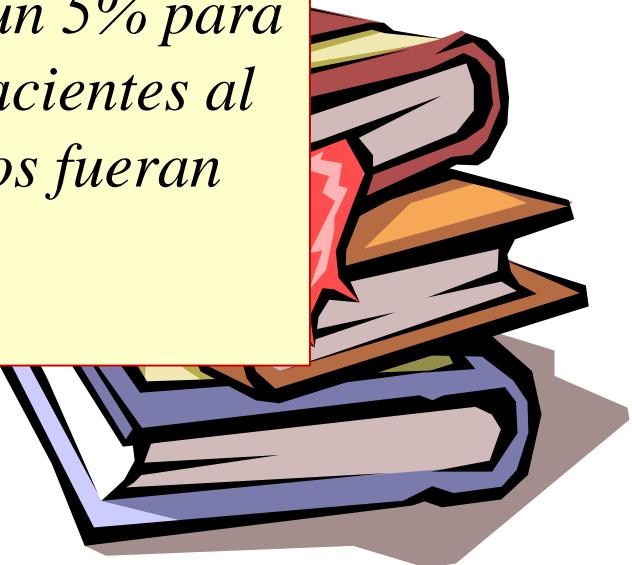
- El perfil clínico
- Evolución posterior

*...los pacientes que  
recidivan tienen  
mayor riesgo de  
seguir recidivando....*



- El perfil clínico
- Evolución
- **Manejos**

*...100 centros con 100 pacientes al año que recidivaran en un 5% para poder aleatorizar 500 pacientes al año, asumiendo que todos fueran incluibles y dieran su consentimiento*



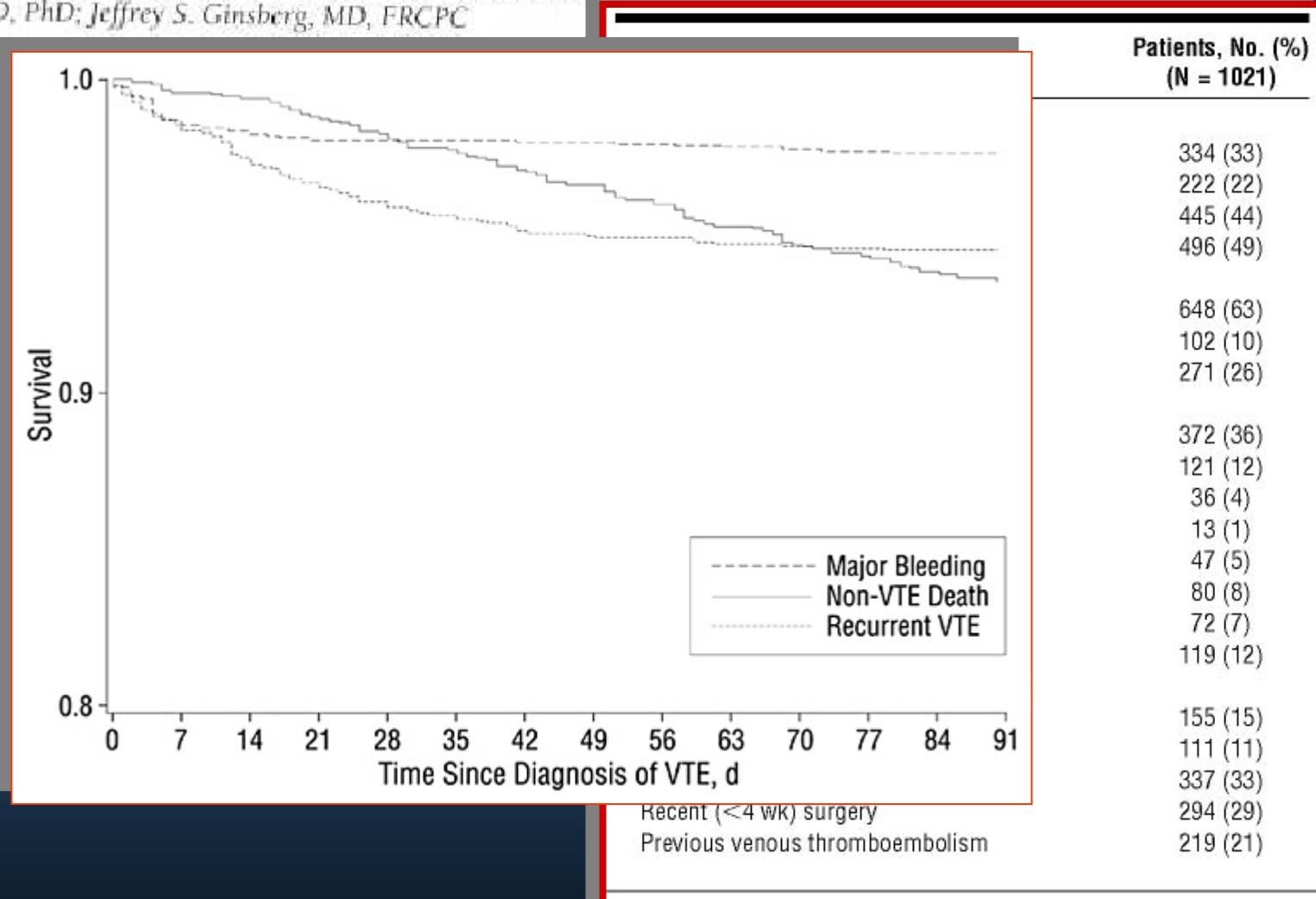
# Clinical Risk Factors and Timing of Recurrent Venous Thromboembolism During the Initial 3 Months of Anticoagulant Therapy



ARCHIVES  
OF  
INTERNAL MEDICINE

James D. Douketis, MD, FRCPC; Gary A. Foster, PhD; Mark A. Crowther, MD, MSc, FRCPC  
Martin H. Prins, MD, PhD; Jeffrey S. Ginsberg, MD, FRCPC

1021 consecutive patients were objectively



**Clinical Outcome**

Recurrent nonfatal

Recurrent fatal PE

Major bleeding

Non-VTE death

\*Data are given as  
vein thrombosis; PE,  
thromboembolism.

Clinical Characteristics	Odds Ratio (95% CI)	P
<b>Variables in Final Model</b>		
Cancer	2.72 (1.39-5.32)	<.01
Chronic cardiovascular disease	2.27 (1.08-4.97)	.03
Chronic respiratory disease	1.91 (0.85-4.26)	.11
Other concurrent disease†	1.79 (1.00-3.21)	.05
Older age (10-y increment)	0.76 (0.64-0.92)	<.01
<b>Variables Not in Final Model</b>		
Previous VTE	0.58 (0.26-1.32)	.19
Qualifying event (DVT or PE)	1.27 (0.69-2.34)	.44
Female	1.20 (0.69-2.11)	.52
Permanent risk factor‡ vs idiopathic	0.46 (0.17-1.26)	.14
Transient risk factor§ vs idiopathic	0.74 (0.37-1.49)	.40

\*CI indicates confidence interval; DVT, deep vein thrombosis; and PE, pulmonary embolism.

†One or more of the following diseases: renal, hepatic, gastrointestinal, neurologic, hematologic, or multisystem.

‡Cancer or previous VTE.

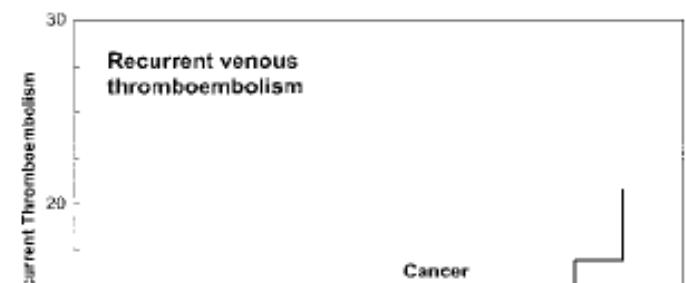
§Recent surgery, trauma, or immobility.

recurrent VTE occurred

# Recurrent venous thromboembolism and bleeding complications during anticoagulant treatment in patients with cancer and venous thrombosis

Paolo Prandoni, Anthonie W. A. Lensing, Andrea Piccioli, Enrico Bernardi, Paolo Simioni, Bruno Girolami, Antonio Marchiori, Paola Sabbion, Martin H. Prins, Franco Noventa, and Antonio Girolami

A small proportion of patients with vein thrombosis develop recurrent venous thromboembolic complications and bleeding during anticoagulant therapy. These complications may occur frequently if these patients have distant cancer. This prospective study sought to determine whether



sub- or overt anticoagulants with venous thrombosis are more likely to develop thromboembolic complications during anticoagulant therapy without malignancy. Update with the extent of evidence for improvement us

Site of cancer	No. (%)	Follow-up, patient-y	Recurrent VTE hazard ratio (95% CI)
Genitourinary*	47 (26.0)	26.4	3.7 (1.7-8.0)
Gastrointestinal†	37 (20.4)	18.4	5.1 (2.3-11.3)
Breast	27 (15.0)	18.5	0.7 (0.1-4.9)
Myelolymphoproliferative‡	24 (13.3)	18.9	2.3 (0.7-7.5)
Lung	24 (13.3)	14.9	6.9 (3.0-15.9)
Brain	14 (7.7)	6.2	3.7 (0.8-14.1)
Other§	8 (4.4)	5.0	2.3 (0.3-16.7)

# The Natural Course of Hemodynamically Stable Pulmonary Embolism\*

## Clinical Outcome and Risk Factors in a Large Prospective Cohort Study

Mathilde Nijkeuter, M

Pieter Willem Kamph

Laurens Laterveer, M

Marieke J. H. A. Kru

and Menno V. Huisman

Table 1—Baseline Characteristics of the 674 Patients With PE\*

Characteristics	Data
Age, yr†	58 (19–100)
Age < 55 yr	296 (44)
Age ≥ 55 to < 65 yr	117 (17)
Age ≥ 65 yr	
Female gender	

Table 1

Variables	Patients, No.	and (%)	R (95% CI)	
Patients, No.	674			
Age, yr†	58 (19–100)		2 (0.99–1.05)	
Female gender	383 (57)		3 (0.40–2.38)	
Inpatients	222 (33)		2 (0.58–4.04)	
Paralysis/paresis	7 (1)		7 (0.11–6.67)	
Immobilization > 3 d	10 (1)		0 (1.40–8.77)	
Travel by air or car	55 (8)		5 (0.35–6.88)	
Surgery	9 (1)		9 (0.23–4.36)	
Previous VTE	2 (0)		4 (0.21–2.57)	
Previous PE	1 (0)		2 (0.23–4.52)	
Heart failure	1 (0)		3.34 (0.92–0.96)	
COPD	2 (10)	60 (9)	0.71	1.09 (0.25–4.83)
Malignancy	4 (20)	126 (19)	1.00	1.05 (0.34–3.18)
Signs of DVT	5 (25)	95 (15)	0.20	1.96 (0.70–5.51)
Tachycardia	9 (45)	240 (37)	0.45	1.41 (0.58–3.46)



\*Data are presented as No. (%) or % unless otherwise indicated.



- Edad
- Comorbilidad cardiorespiratoria
- Neoplasia pulmonar o digestiva
- En las primeras 3-4 semanas
- Mortalidad ¿elevada?



- ¿Alternativas terapéuticas a largo plazo?



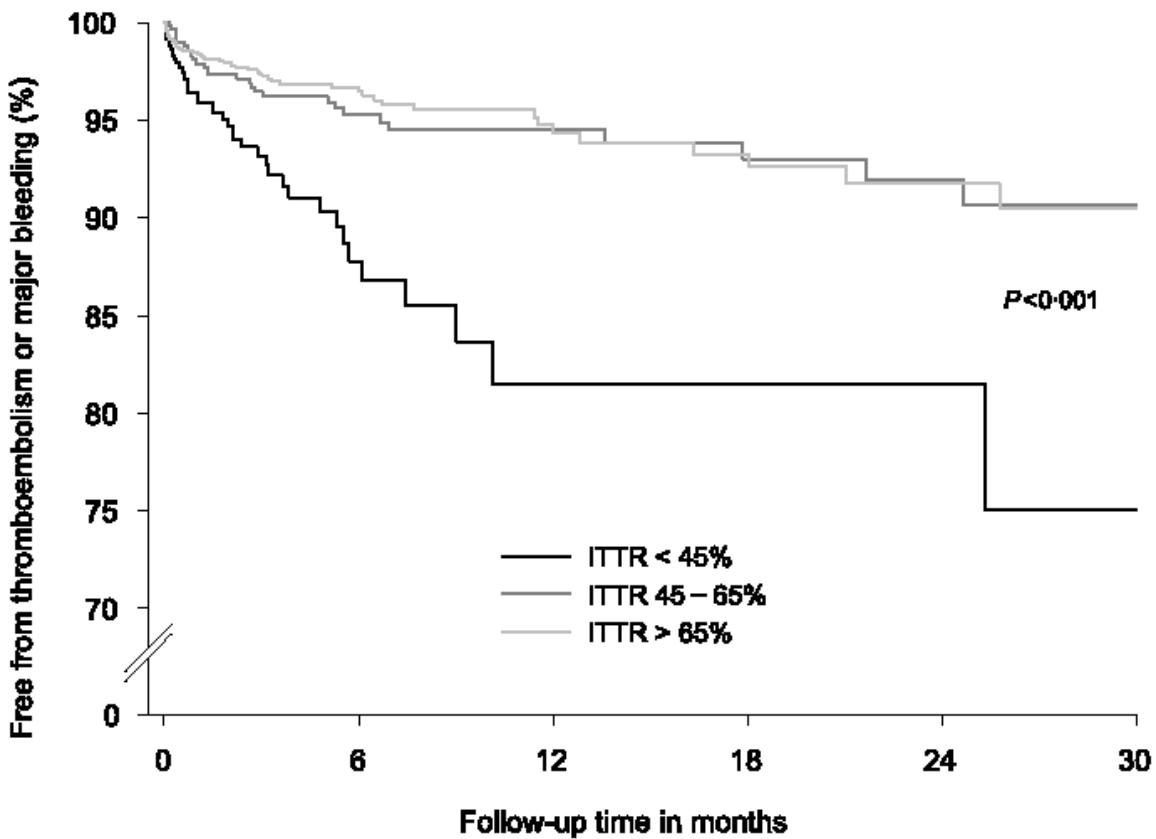
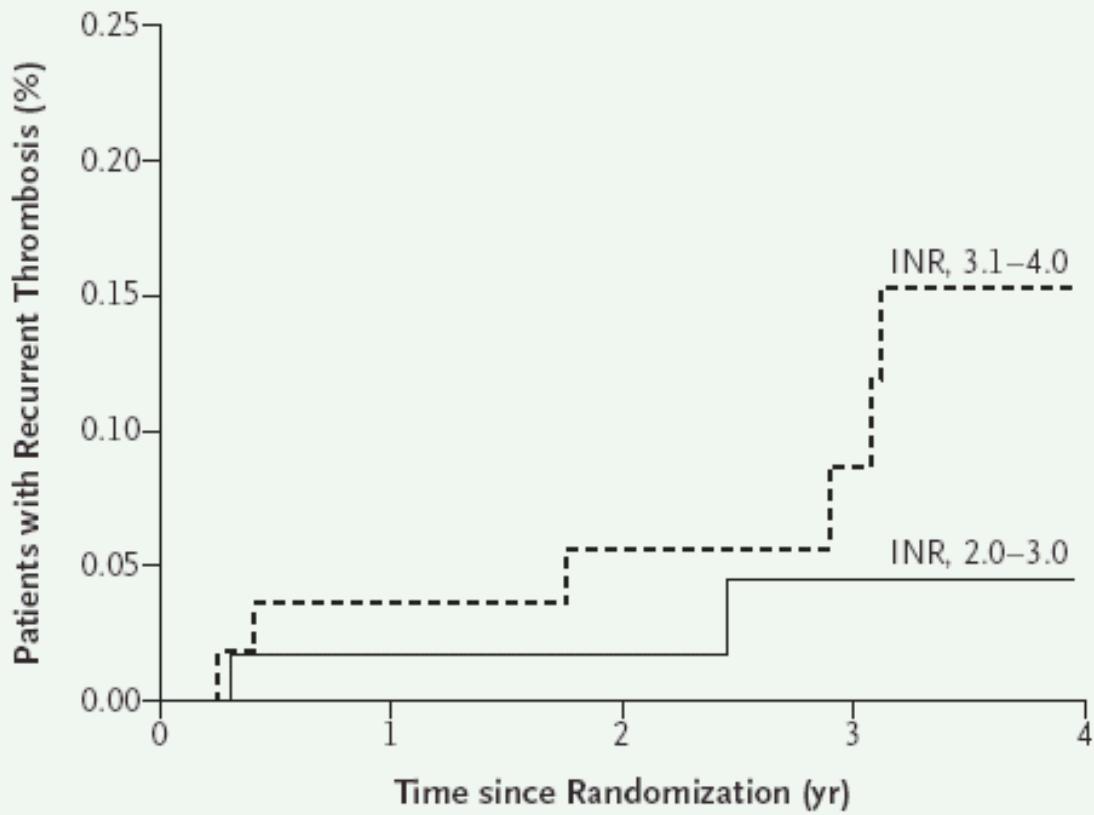


Fig 3. Freedom from recurrent thromboembolism and major bleeding in patients according to the percentage time within the therapeutic range (ITTR). RR<sub>ITTR<45%</sub> = 2.8 (95% CI 1.9–4.3,  $P < 0.001$ ) and RR<sub>ITTR45–65%</sub> = 1.2 (95% CI 0.7–1.8,  $P = 0.54$ ), compared with ITTR > 65%.

ORIGINAL ARTICLE



## A randomized clinical trial of high-intensity warfarin vs. conventional antithrombotic therapy for the prevention of recurrent thrombosis in patients with the antiphospholipid syndrome (WAPS).

[Finazzi G](#), [Marchioli R](#), [Brancaccio V](#), [Schinco P](#), [Wisloff F](#), [Musial J](#), [Baudo F](#), [Berrettini M](#), [Testa S](#), [D'Angelo A](#), [Tognoni G](#), [Barbui T](#).

The Ospedali Riuniti, Bergamo, Italy.

**BACKGROUND:** The optimal intensity of oral anticoagulation for the prevention of recurrent thrombosis in patients with antiphospholipid antibody syndrome is uncertain. Retrospective studies show that only high-intensity oral anticoagulation [target international normalized ratio (INR) >3.0] is effective but a recent randomized clinical trial comparing high (INR range 3.0-4.0) vs. moderate (INR 2.0-3.0) intensities of anticoagulation failed to confirm this assumption. **METHODS:** We conducted a randomized trial in which 109 patients with antiphospholipid syndrome (APS) and previous thrombosis were given either high-intensity warfarin (INR range 3.0-4.5, 54 patients) or standard antithrombotic therapy (warfarin, INR range 2.0-3.0 in 52 patients or aspirin alone, 100 mg day(-1) in three patients) to determine whether intensive anticoagulation is superior to standard treatment in preventing symptomatic thromboembolism without increasing the bleeding risk. **RESULTS:** The 109 patients enrolled in the trial were followed up for a median time of 3.6 years. Mean INR during follow-up was 3.2 (SD 0.6) in the high-intensity warfarin group and 2.5 (SD 0.3) ( $P < 0.0001$ ) in the conventional treatment patients given warfarin. Recurrent thrombosis was observed in six of 54 patients (11.1%) assigned to receive high-intensity warfarin and in three of 55 patients (5.5%) assigned to receive conventional treatment [hazard ratio for the high intensity group, 1.97; 95% confidence interval (CI) 0.49-7.89]. Major and minor bleeding occurred in 15 patients (two major) (27.8%) assigned to receive high-intensity warfarin and eight (three major) (14.6%) assigned to receive conventional treatment (hazard ratio 2.18; 95% CI 0.92-5.15). **CONCLUSIONS:** High-intensity warfarin was not superior to standard treatment in preventing recurrent thrombosis in patients with APS and was associated with an increased rate of minor hemorrhagic complications.

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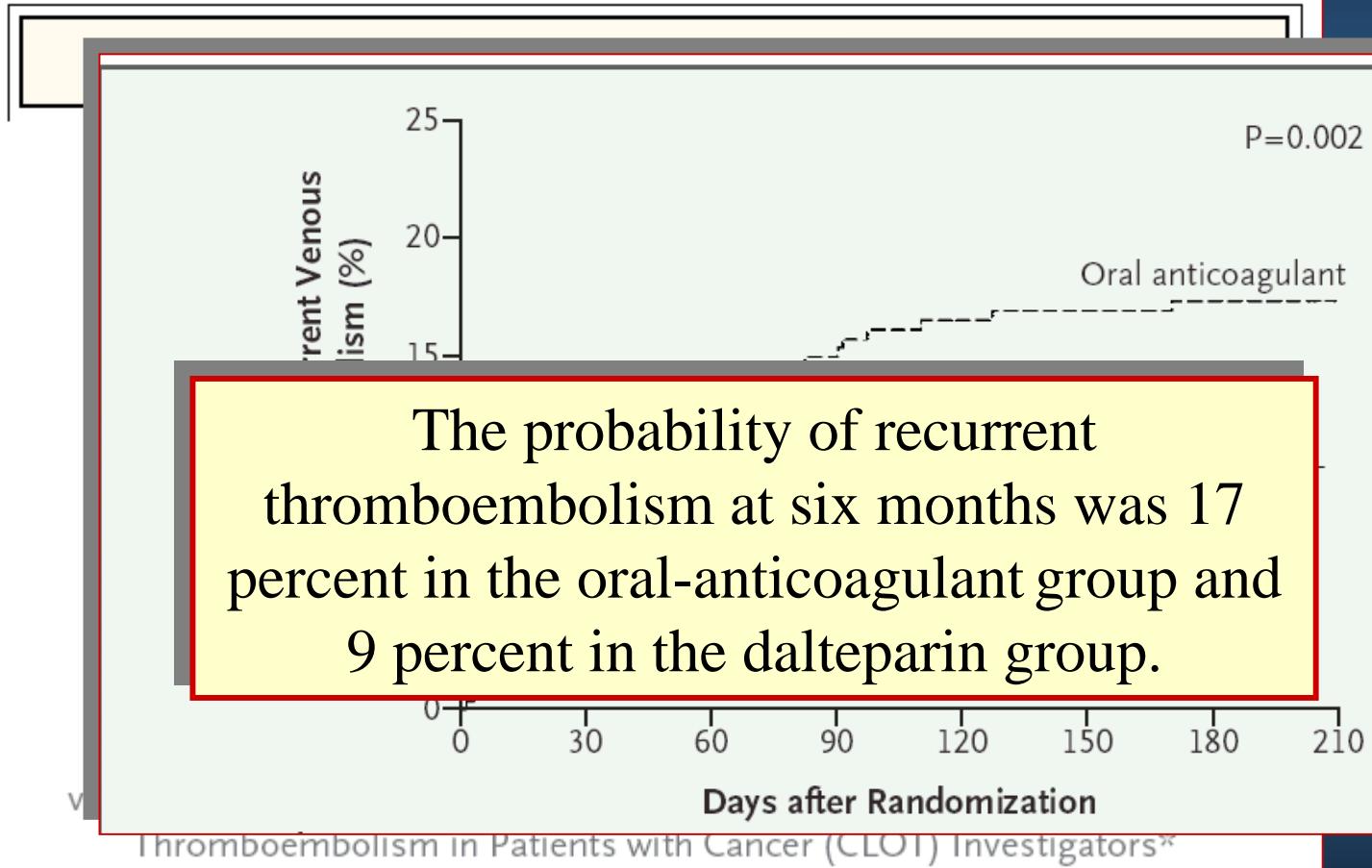
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1.8.2. We suggest the placement of an inferior vena caval filter in patients with a contraindication for, or a complication of anticoagulant treatment (**Grade 2C**), as well as in those with recurrent thromboembolism despite adequate anticoagulation (**Grade 2C**).

Para los pacientes  
con EP



# Extended Outpatient Therapy with Low Molecular Weight Heparin for the Treatment of Recurrent Venous Thromboembolism Despite Warfarin Therapy



2001

Cynthia Luk, MD, Philip S. Wells, MD, David Anderson, MD, Michael J. Kovacs, MD

**Table.** Comparison of Patients with and without Recurrence of Venous Thromboembolism

Characteristic	No Recurrence (n = 855)	Recurrence (n = 32)
	Number (%) or Mean ± SD	
Male sex	410 (48)	15 (47)
Age (years)	64 ± 17	56 ± 17
Prior history of venous thromboembolism	129 (15)	4 (13)
Initial presentation		
Deep vein thrombosis	677 (79)	27 (84)
Pulmonary embolism	152 (18)	4 (13)
Deep vein thrombosis + pulmonary embolism	27 (3)	1 (3)
Risk Factor		
Cancer		
Idiopathic		
Transient (e.g., surgery)		

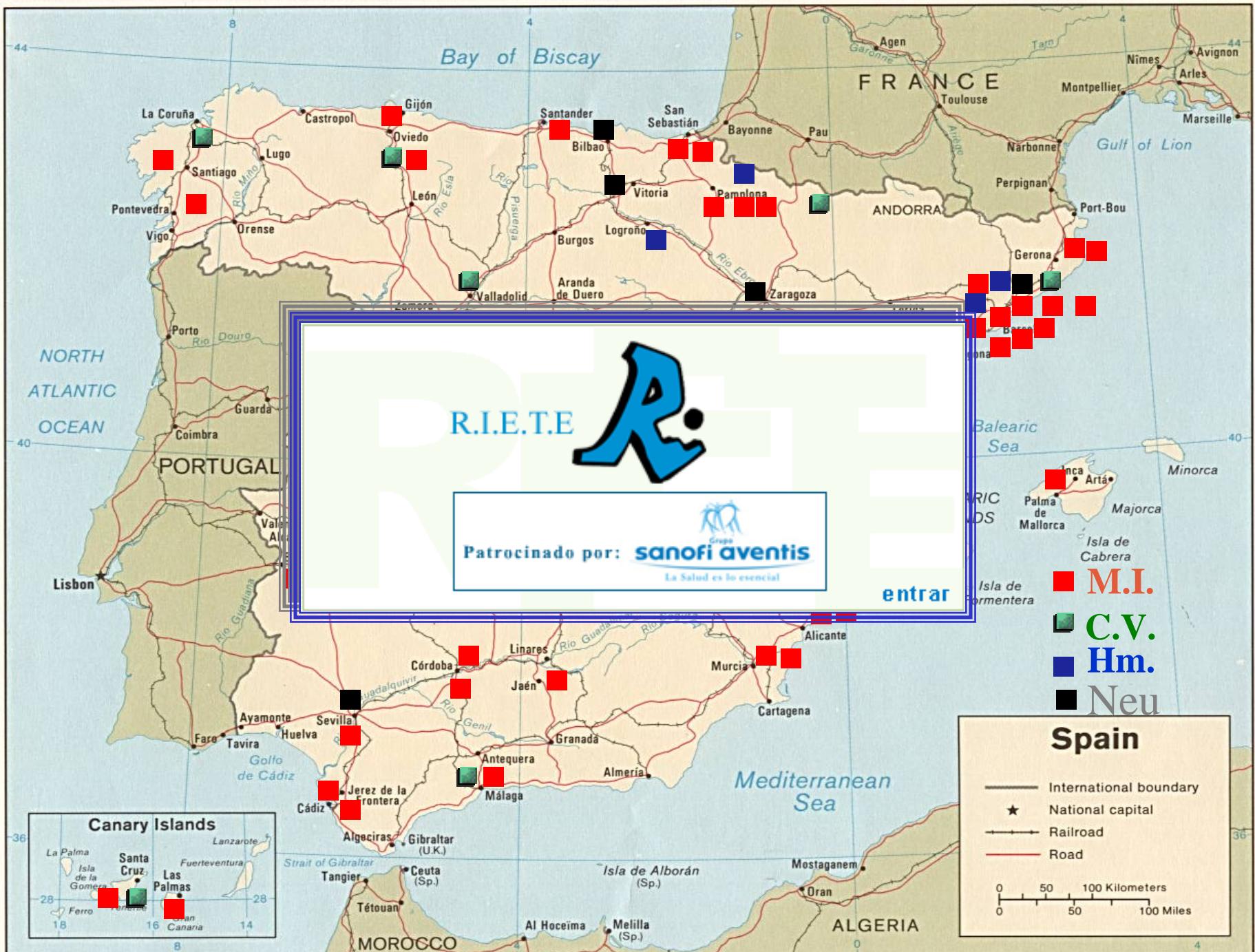
(1–4). It would require 100 centers, each averaging 100 patients per year with a 5% recurrence rate, to provide 500 patients per year for a randomized study, assuming all patients consent and are eligible.

- Todos fueron tratados con 200 UI/Kg de Dalteparina, independientemente del INR.
- 15/32 fallecieron antes de finalizar el tratamiento de 12 semanas de Dalteparina.
- los otros 17/32 regresaron a las AVK tras períodos de 6-36 semanas; 3 (**9%**) presentaron recurrencia durante el tratamiento HBPM.

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- un 9% de recurrencias con tratamiento HBPM a largo plazo es muy aceptable
- no tuvieron sangrados mayores durante el ttmtto HBPM





**Clinical characteristics, treatment details and outcome of 15,862 VTE patients,  
according to the existence of prior VTE and AVK therapy.**

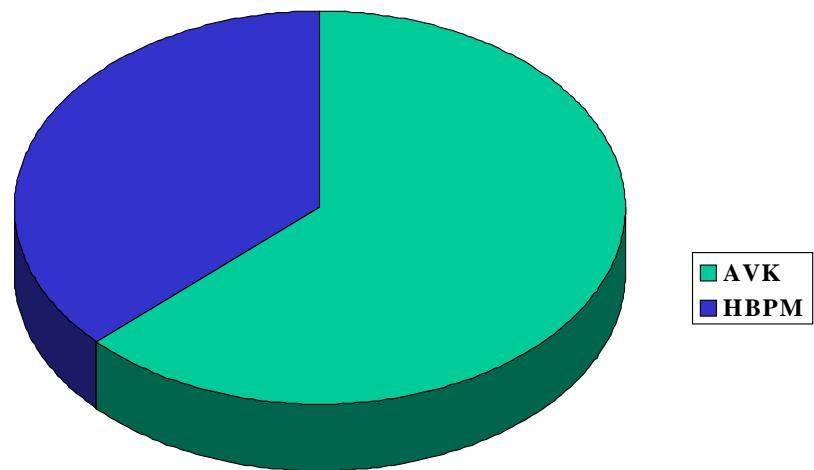
	Prior VTE, AVK	Prior VTE, no AVK	No prior VTE	AVK vs. no AVK	AVK vs. no prior VTE
	<b>177</b>	<b>2361</b>	<b>13324</b>		
Gender (males)	107 (61%)	1243 (53%)	6532 (49%)	1.4 (1.0-1.9)*	1.6 (1.2-2.2)†
Age >65 years	101 (57%)	1590 (67%)	8545 (64%)	0.6 (0.5-0.9)†	0.7 (0.6-1.0)*
Body weight >65 kg	125 (71%)	1848 (78%)	9713 (73%)	0.7 (0.5-0.9)*	0.9 (0.6-1.2)
Cancer	54 (31%)	426 (18%)	2772 (21%)	2.0 (1.4-2.8)‡	1.7 (1.2-2.3)†
Symptom PE	69 (39%)	1043 (44%)	6159 (46%)	0.8 (0.6-1.1)	0.7 (0.5-1.0)

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LMWH	135 (76%)	2143 (91%)	12143 (91%)	0.3 (0.2-0.5)‡	0.3 (0.2-0.4)‡
UFH	35 (20%)	193 (8.2%)	994 (7.5%)	2.8 (1.9-4.1)†	3.1 (2.1-4.4)†
IVC filter	24 (14%)	51 (2.2%)	255 (1.9%)	7.1 (4.2-12)‡	8.0 (5.1-13)‡
AVK drugs	107 (62%)	1802 (78%)	9145 (72%)	0.5 (0.3-0.6)‡	0.6 (0.5-0.9)†
LMWH	63 (37%)	490 (21%)	4531 (29%)	2.1 (1.5-3.0)‡	1.5 (1.1-2.0)*

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¿Utilizamos poco las  
HBPM como ttmt  
a largo plazo?



## ¿Qué pudo mover a uno u otro Ttmt?

	LMWH (n=66)	AVK (n=107)	Odds ratio (95% CI)	P value
<b>A Protromb &lt;40%</b>	19 (29%)	46 (43%)	0.5 (0.3-1.0)	0.061
<b>A Protromb &gt;40%</b>	47 (71%)	61 (57%)	1.9 (0.97-3.6)	0.061
<b>IVC Filter</b>	5 (7.6%)	18 (17%)	0.4 (0.1-1.1)	0.082

	<b>LMWH (n=66)</b>	<b>AVK (n=107)</b>	<b>Odds ratio (95% CI)</b>	<b>P value</b>
Symptomatic PE	25 (38%)	41 (38%)	1.0 (0.5-1.8)	0.954
Proximal DVT (N=98)	32 (82%)	47 (80%)	1.2 (0.4-3.3)	0.770

## ¿Qué pudo mover a uno u otro Ttmt?

	LMWH (n=66)	AVK (n=107)	Odds ratio (95% CI)	P value
<b>Chronic lung disease</b>	7 (11%)	13 (12%)	0.9 (0.3-2.3)	0.759
<b>Chronic heart failure</b>	3 (4.5%)	8 (7.5%)	0.6 (0.2-2.3)	0.443
<b>Abnormal creatinine</b>	13 (20%)	14 (13%)	1.6 (0.7-3.7)	0.224
<b>Cancer</b>	30 (46%)	22 (21%)	3.2 (1.6-6.3)	0.001

	Prior VTE, AVK <b>177</b>	Prior VTE, no AVK	No prior VTE	AVK vs. no AVK	AVK vs. no prior VTE
<b>Fatal, initial PE</b>	2 (1.1)	14 (0.6)	171 (1.3)	1.9 (0.6-8.9)	0.9 (0.2-3.5)
<b>Major bleeding</b>	4 (2.3)	38 (1.6)	339 (2.5)	1.4 (0.5-3.5)	0.9 (0.3-2.4)
<b>Fatal bleeding</b>	3 (1.7)	6 (0.3)	70 (0.5)	<b>4.8 (1.9-12) *</b>	<b>3.2 (1.04-9.7) *</b>
<b>Recurrent VTE</b>	<b>12 (6.8%)</b>	57 (2.4%)	330 (2.5%)	<b>2.9 (1.5-5.5) †</b>	<b>2.9 (1.5-5.0) †</b>
<b>Recurrent DVT</b>	8 (4.5)	31 (1.3)	166 (1.2)	3.0 (1.6-5.7) †	3.6 (1.8-7.3) †
<b>Recurrent PE</b>	4 (2.3)	26 (1.1)	164 (1.2)	1.9 (0.8-4.9)	1.8 (0.7-4.9)
<b>Fatal, recurrent PE</b>	4 (2.3)	10 (0.4)	59 (0.4)	4.2 (1.8-9.7) †	4.9 (1.9-13) †
<b>Overall death</b>	24 (14%)	112 (4.7)	1179 (8.8%)	2.8 (1.9-4.1) ‡	1.6 (1.05-2.5 *)

	<b>VTE recurrence 12</b>	<b>No VTE recurrence 165</b>	<b>OR (95% CI)</b>	<b>P value</b>
Cancer	5 (42%)	49 (30%)	1.7 (0.5-5.7)	0.201
Body weight >65 k	11 (92%)	114 (69%)	4.9 (0.8-108)	0.050
Protromb <35%	5 (42%)	83 (50%)	0.7 (0.2-2.4)	0.291
UFH	7 (58%)	28 (17%)	6.7 (1.9-2.5)	0.001
IVC filter	3 (25%)	21 (13%)	2.3 (0.5-8.8)	0.136
<i>Long-term AVK</i>	6 (50%)	101 (61%)	0.6 (0.2-2.2)	0.230
<i>Long-term LMWH</i>	6 (50%)	57 (35%)	1.9 (0.6-6.5)	0.151

# Desenlace a 15 días

	LMWH (n=66)	AVK (n=107)	Odds ratio (95% CI)	P value
<b>Major bleeding</b>	0 (0%)	1 (0.9%)		0.431j
<b>Fatal bleeding</b>	0 (0%)	1 (0.9%)		0.431j
<b>Recurrent VTE</b>	2 (3.0%)	1 (0.9%)	3.3 (0.3-37)	0.305j
<b>Overall death</b>	1 (1.5%)	2 (1.9%)	0.8 (0.1-9.1)	0.862j

# Desenlace a 15-90 días

	LMWH (n=66)	AVK (n=107)	Odds ratio (95% CI)	P value
<b>Major bleeding</b>	2 (3.0%)	1 (0.9%)	3.3 (0.3-37)	<b>0.309i</b>
<b>Fatal bleeding</b>	2 (3.0%)	0 (0%)		<b>0.071i</b>
<b>Recurrent VTE</b>	4 (6.3%)	5 (4.7%)	1.3 (0.3-5.2)	<b>0.665i</b>
<b>Overall death</b>	12 (19%)	5 (4.8%)	4.5 (1.5-14)	<b>0.004</b>

# Conclusiones

- Los pacientes recidivantes a pesar de AVK son varones, jóvenes, de menor peso y con frecuente (no siempre) neoplasia.
- Muestran mayor tendencia (moderada) a volver a recidivar y a sangrar

# Conclusiones II

- El Ttmt agudo con HNF no ofrece ventajas
- Si el *perfil INR* previo al episodio fuera manifiestamente mejorable debe considerarse AVK con monitorización más estrecha
- Para los casos con EP parece razonable considerar la adición de Filtro de cava.

# Conclusiones III

- Los pacientes neoplásicos deberían ser tratados con HBPM
- No parece haber base para recomendar sistemáticamente HBPM a largo plazo.

9-15%



Treatment at Recurrence	Patient-years of Follow-up	Recurrent Events	Events per Year of Follow-up	P†
Warfarin only	64.2	0	0.000	...
None	127.5	14	0.110	.008
Warfarin plus aspirin	30.6	0	0.000	>.99
Aspirin only	36.6	1	0.027	.19
Any prednisone	33.1	8	0.242	<.001

\* Warfarin was given as warfarin sodium.

† Statistical significance according to Poisson heterogeneity test, when compared with warfarin plus aspirin therapy.

