

V Fórum Multidisciplinar
de la Enfermedad Tromboembólica

*“Profilaxis de la ETV
en
pacientes médicos”*

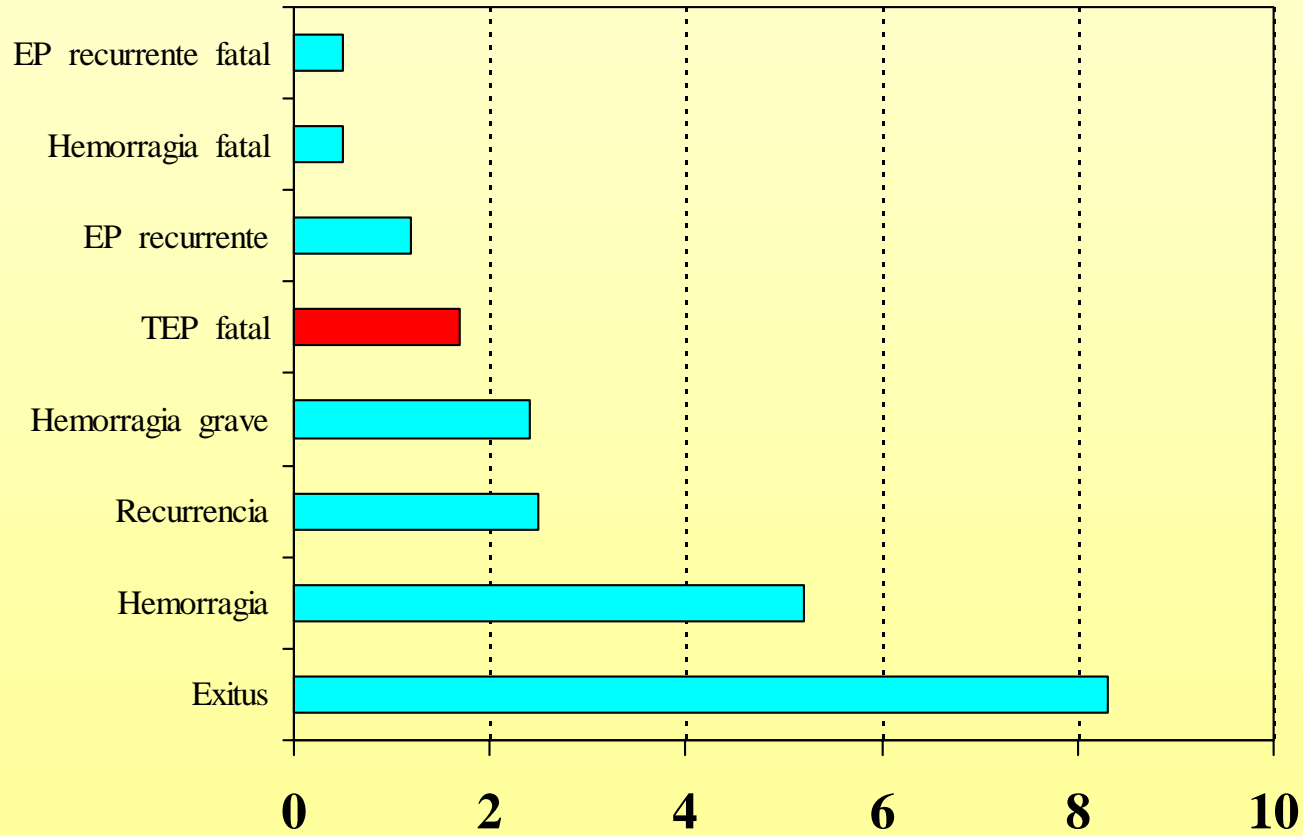
Dr. José A. Nieto Rodríguez

Hospital Virgen de la Luz

Cuenca

Palma de Mallorca 2009

RIETE: 17.368 pacientes. Evolución en 3 meses



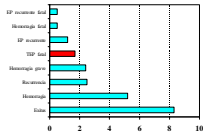
Blood Coagulation, Fibrinolysis and Cellular Haemostasis

Venous thromboembolism (VTE) in Europe

The number of VTE events and associated morbidity and mortality

Alexander T. Cohen¹, Giancarlo Agnelli², Frederick A. Anderson³, Juan I. Arcelus⁴, David Bergqvist⁵, Josef G. Brecht⁶, Ian A. Greer⁷, John A. Heit⁸, Julia L. Hutchinson⁹, Ajay K. Kakkar¹⁰, Dominique Mottier¹¹, Emmanuel Oger¹¹, Meyer-Michel Samama¹², Michael Spannagl¹³ for the VTE Impact Assessment Group in Europe (VITAE)

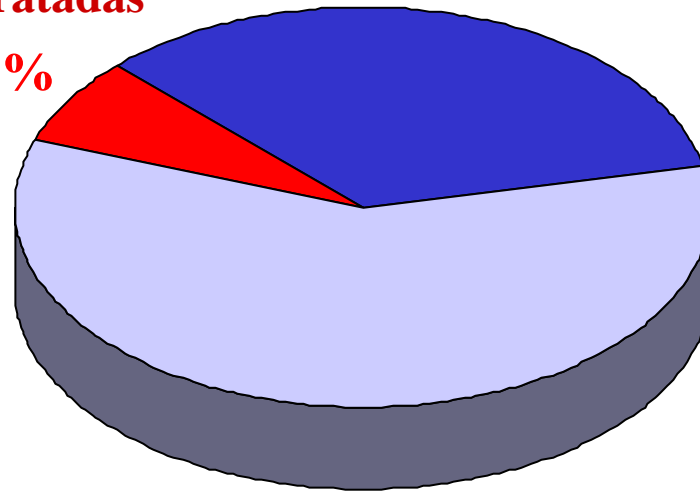
Thromb Haemost 2007; 98:756:764



EP tratadas

7%

34% EP : Muerte súbita



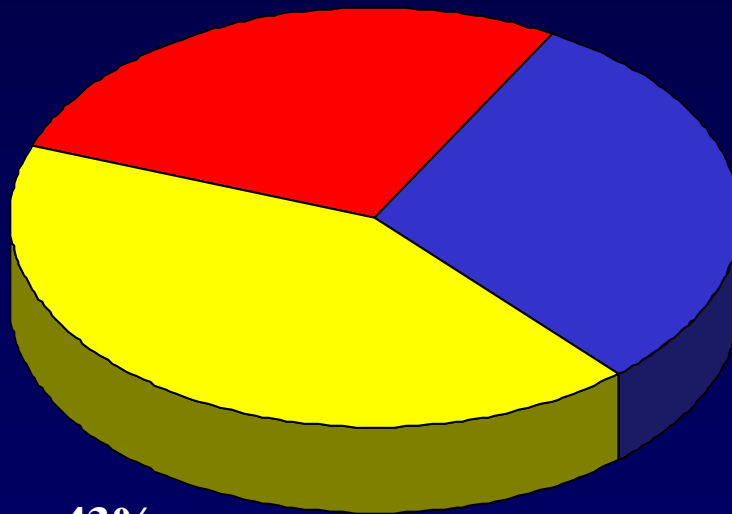
59%

EP no diagnosticadas

Embolismo pulmonar

Necropsias

EP fatal 27%



EP incidental

30% EP contribuye a la muerte

10 % fallecimientos en el hospital y en la población general

Fatal pulmonary embolism in hospitalised medical patients

T P Baglin, K White, A Charles

J Clin Pathol 1997; 50-609-610

200 pacientes médicos consecutivos ingresados

2 (1%) EP diagnosticado durante el ingreso

31 (15.5%) fallecimientos

14 autopsias 5 (36%) EP fatal

2.5% EP fatal confirmado

5 % EP fatal probable

Fatal pulmonary embolism in hospitalised medical patients

T P Baglin, K White, A Charles

J Clin Pathol 1997; 50-609-610

400 Necropsias consecutivas

Table 1 Clinical details of medical patients with pulmonary emboli identified from autopsy records

10 males, 11 females

Median age 78 years (range 45 to 92)

5/21 younger than 65 years

17/21 had multiple medical problems

15/17 living more than 48 hours had severe immobility

19/21 did not have DVT or PE suspected in life

8/21 died without warning

7/21 died after "collapsing"

13 received no prophylaxis, 9 of these were "for resuscitation"

Average inpatient stay before death 19 days (range 1 to 66)

DVT, deep vein thrombosis; PE, pulmonary embolism.

Prevalence of Acute Pulmonary Embolism Among Patients in a General Hospital and at Autopsy

Paul D. Stein and Jerald W. Henry

Chest 1995;108;978-981

Table 2—Autopsy Patients 18 Years of Age or Older (n=404)

| | Caused Death | | Contributed to Death | | Incidental | | Total | |
|---|--------------|---------|----------------------|---------|------------|----------|-----------|-----------|
| | PE (%) | 95% CI | PE (%) | 95% CI | PE (%) | 95% CI | PE (%) | 95% CI |
| Diagnosed and treated | 3 (0.7) | 0.2-2.2 | 0 (0) | 0-0 | 1 (0.2) | 0.0-1.4 | 4 (1.0) | 0.3-2.5 |
| Suspected, but not diagnosed or treated | 3 (0.7) | 0.2-2.2 | 0 (0) | 0-0 | 0 (0) | 0-0 | 3 (0.7) | 0.2-2.2 |
| Unsuspected | 14 (3.5) | 1.9-5.7 | 2 (0.5) | 0.1-1.8 | 36 (8.9) | 0.6-1.2 | 52 (12.9) | 9.5-16.3 |
| Total | 20 (5.0) | 3.0-7.5 | 2 (0.5) | 0.1-1.8 | 37 (9.2) | 6.5-12.4 | 59 (14.6) | 11.3-18.4 |

65-78% en 1 hora

80-93% en 2.5 horas

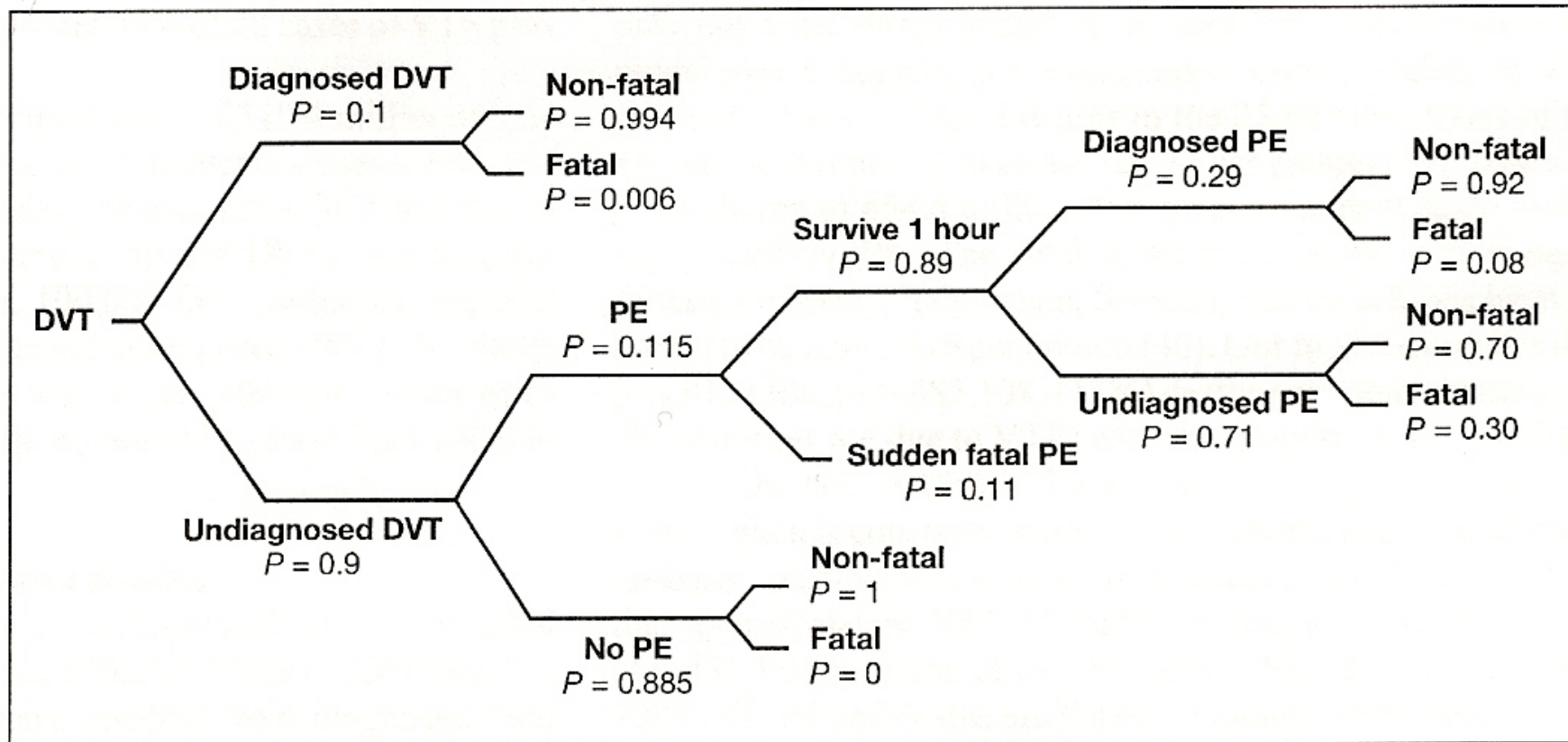
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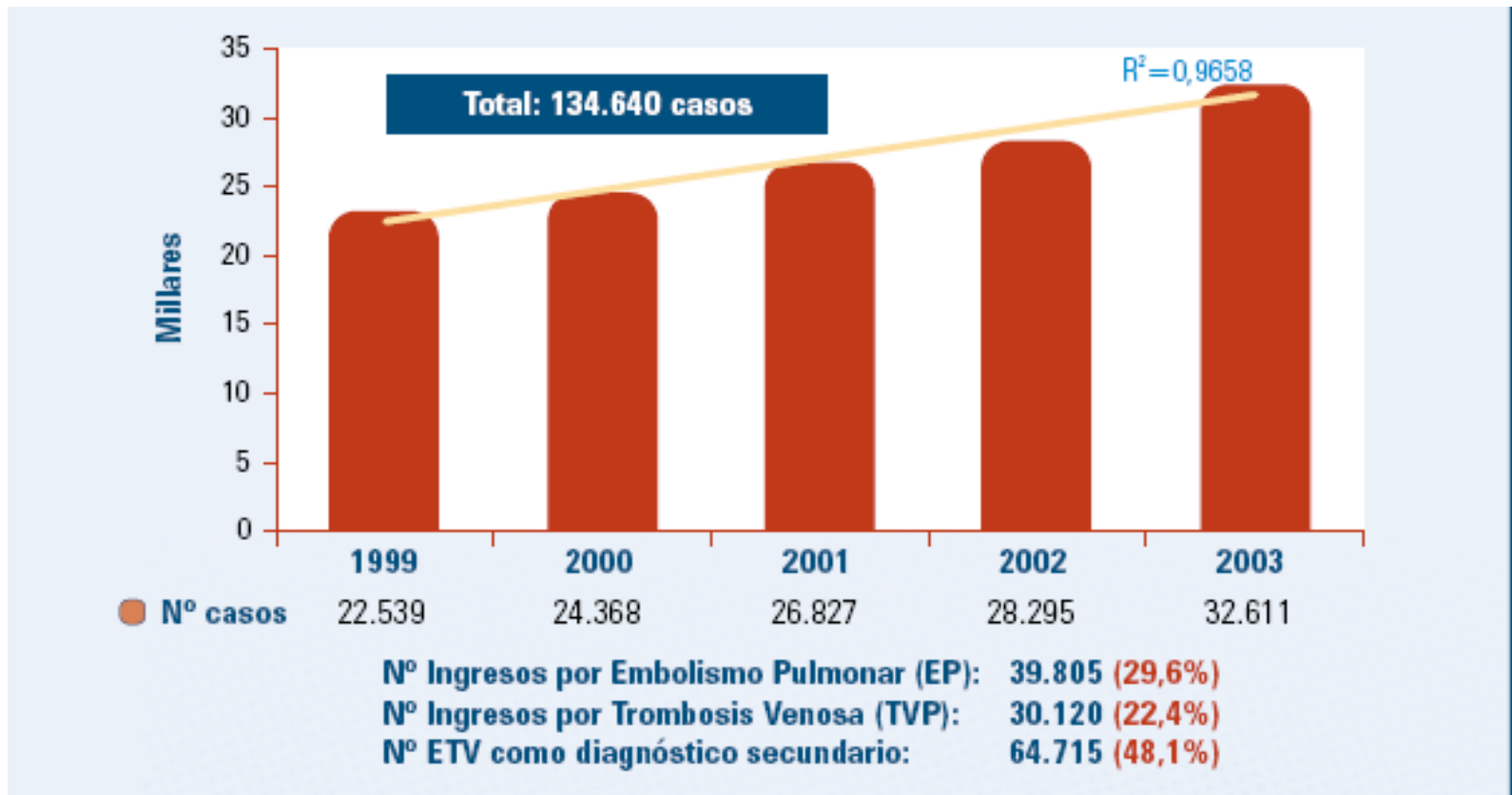
Estimación del número de fallecimientos por tromboembolismo pulmonar en la UE

| | | |
|-------------------------|----------|-----------|
| • Muertes por VTD | 543,454* | |
| • Muertes por | | |
| – SIDA | 5,860** | } 209,926 |
| – Cancer de mama | 86,831** | |
| – Cancer de próstata | 63,636** | |
| – Accidentes de tráfico | 53,599** | |

*Cohen AT. Presented at the 5th Annual Congress of the European Federation of Internal Medicine; 2005.

**Eurostat statistics on health and safety 2001. Available from: <http://epp.eurostat.cec.eu.int>.

Datos epidemiológicos:



Venous thromboembolism risk and prophylaxis in the acute hospital care setting (ENDORSE study): a multinational cross-sectional study



Alexander T Cohen, Victor F Tapson, Jean-Francois Bergmann, Samuel Z Goldhaber, Ajay K Kakkar, Bruno Deslandes, Wei Huang, Maksim Zayaruzny, Leigh Emery, Frederick A Anderson Jr, for the ENDORSE Investigators*

Lancet 2008; 371: 387-394

Objectives

Primary

- To identify patients at risk for venous thromboembolism (VTE) hospitalized in representative hospitals throughout the world
- To determine the proportion of patients who receive effective VTE prophylaxis

A worldwide study



32 countries -- 358 hospitals

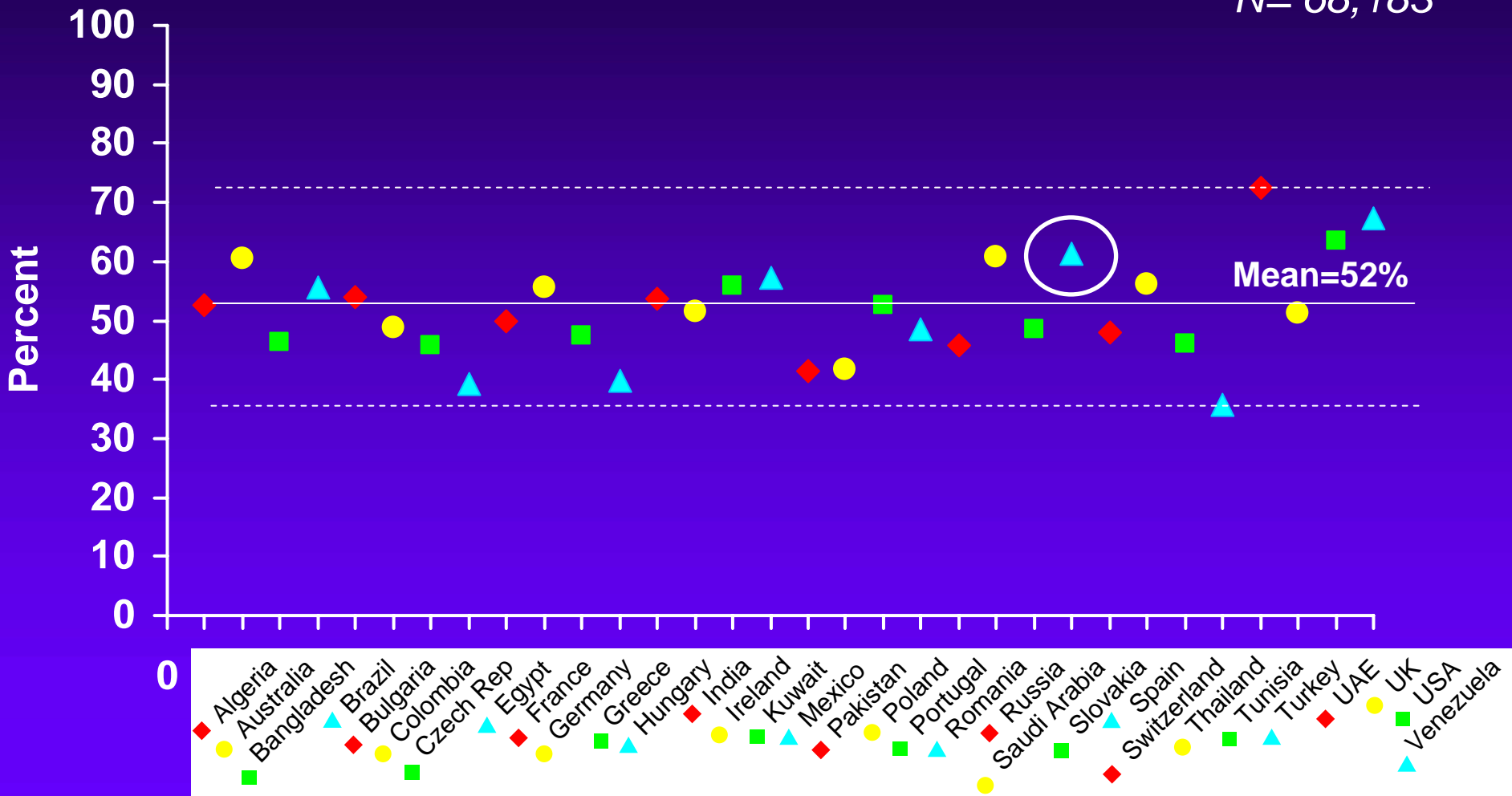
First patient enrolled August 2, 2006

Last patient enrolled January 4, 2007

Median of 8 days to enroll eligible patients/hospital

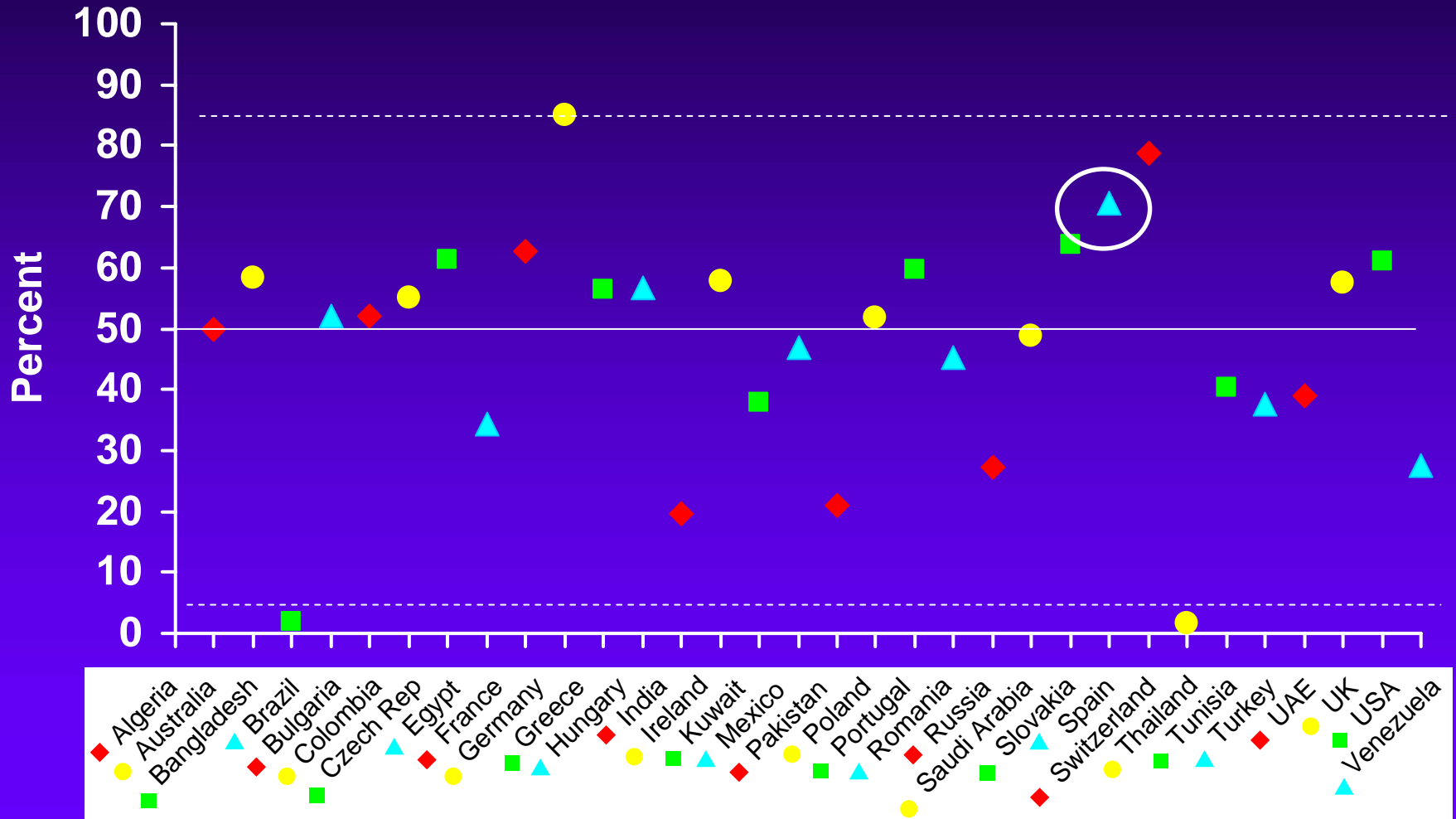
Pacientes con riesgo de ETV por países

N= 68,183



52% con riesgo de ETV. 64% Quirúrgicos 42% Médicos

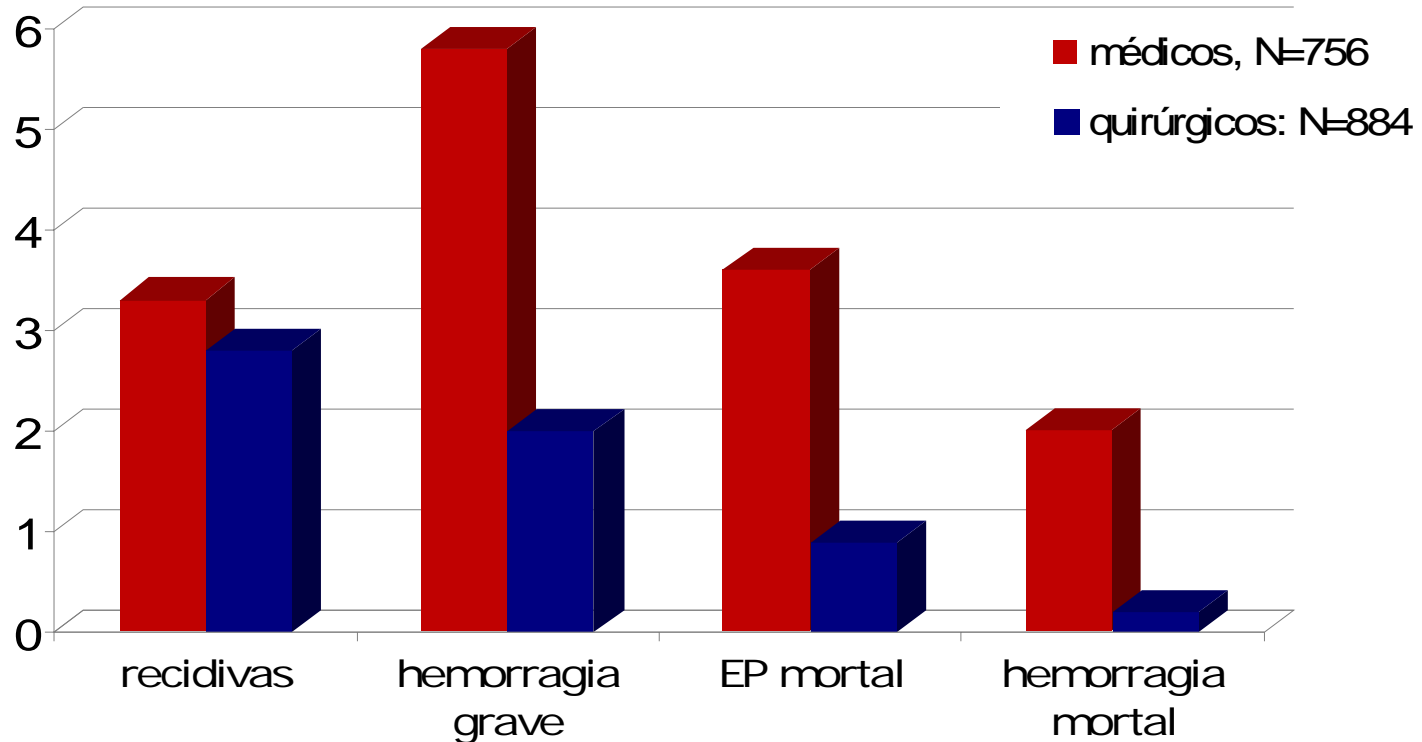
Profilaxis recomendada por la ACCCP en pacientes con riesgo de ETV, por países



50% recibieron profilaxis. 59% Quirúrgicos 40 % Médicos

The outcome after treatment of venous thromboembolism is different in surgical and acutely ill medical patients. Findings from the RIETE registry

M. MONREAL, A. K. KAKKAR,* J. A. CAPRINI,† R. BARBA,‡ F. URESANDI,§ R. VALLE,¶ C. SUAREZ,**
R. OTERO†† and THE RIETE INVESTIGATORS
*Servicio de Medicina Interna, Hospital Universitari Germans Trias i Pujol, Badalona, Spain; *Center for Surgical Sciences, St Bartholemew's and the Royal London School of Medicine, London, UK; †Department of Surgery, Evanston North-western Healthcare, Evanston, IL, USA; ‡Servicio de Medicina Interna, Fundación Hospital Alcorcón, Madrid, Spain; §Servicio de Neumología, Hospital de Cruces, Bilbao, Spain; ¶Servicio de Medicina Interna, Hospital de Sierrallana, Cantabria, Spain; **Servicio de Medicina Interna, Hospital de la Princesa, Madrid, Spain; and ††Servicio de Neumología, Hospital Virgen del Rocío, Sevilla, Spain*



6.554 camas evaluadas



2.361 camas en plantas excluidas

4.193 camas en plantas incluidas



384 camas vacías

3.809 pacientes en camas seleccionadas



744 pacientes excluidos

3.065 pacientes evaluables



996 (32.5%) quirúrgicas



2.069 (67.5%) médicas

738 (74.1%) riesgo ETV

1.140 (55.1%) riesgo ETV

ENDORSE – España

Principales resultados

Objetivo principal

61.3% con riesgo de VTE

Total
(N= 3.065)

75.3% profilaxis ACCP

Objetivo secundario

Quirúrgicos
(n = 996)

Médicos
(n = 2.069)

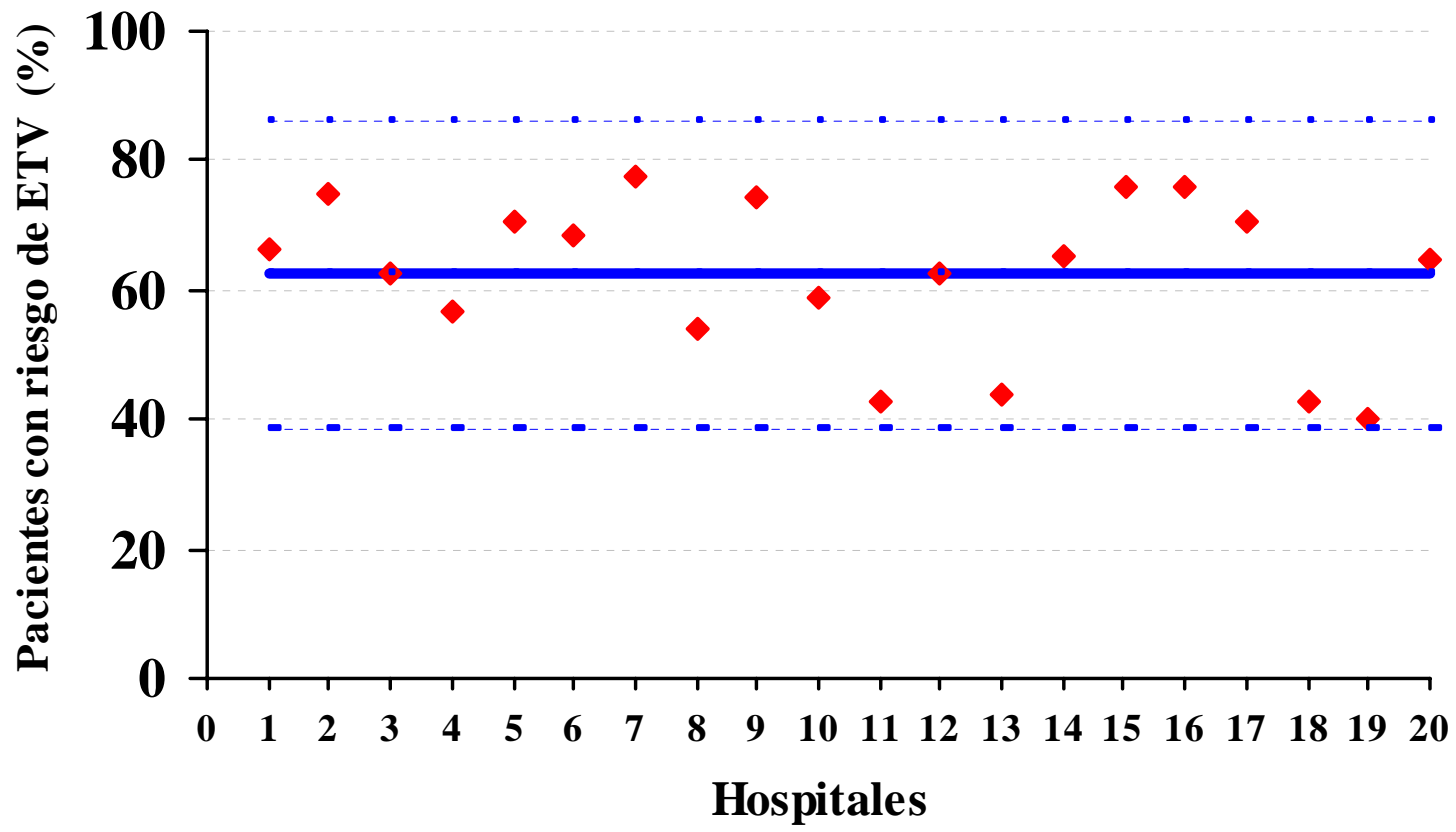
74.1% con riesgo de VTE

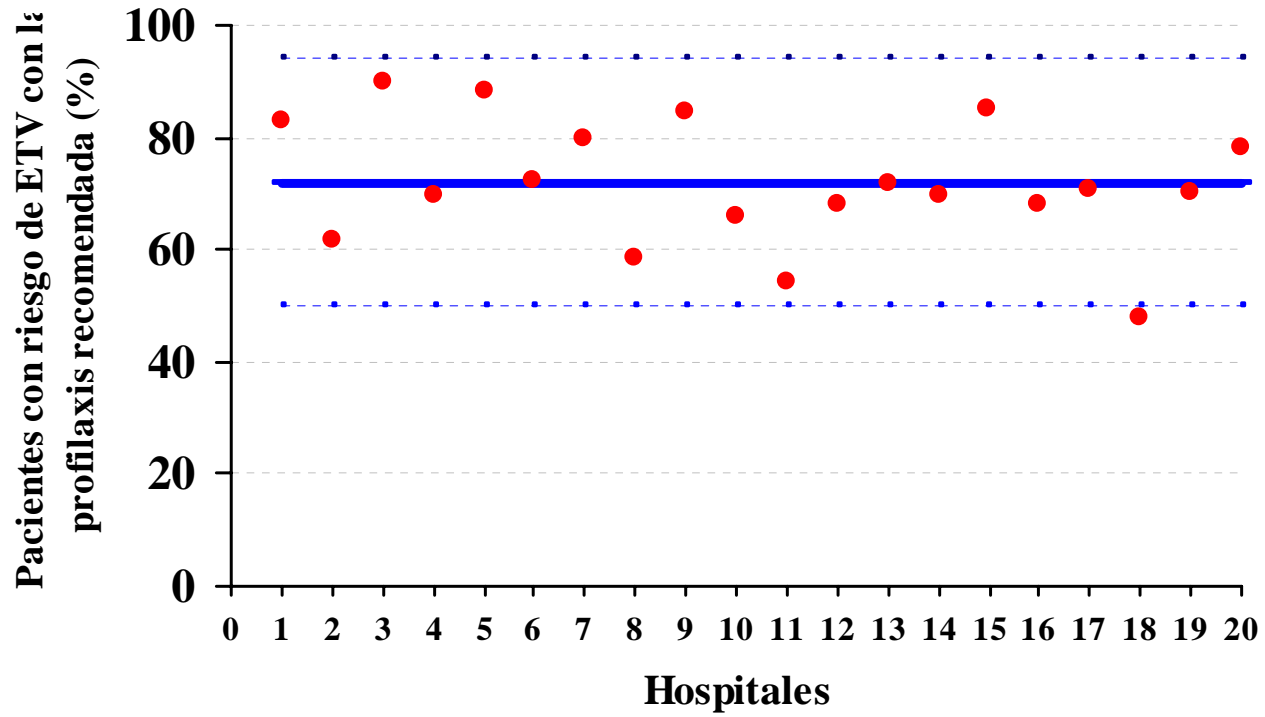
55.1% con riesgo de VTE

82% profilaxis ACCP

64.1% profilaxis ACCP

$p < 0,001$





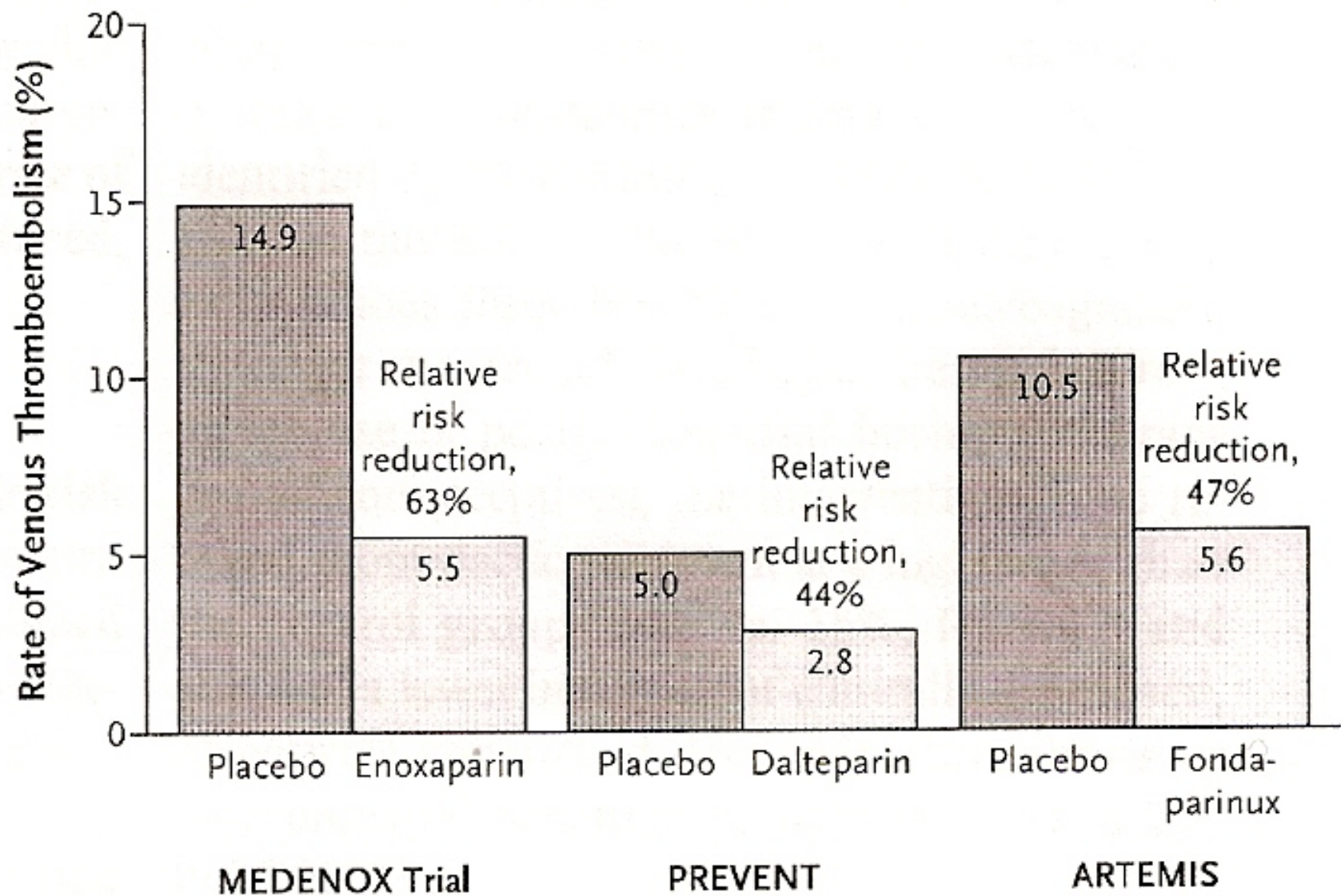
| Hospital | % | p |
|--|----------|----------|
| Mas de 300 camas (n, 8) | 72,9 | 0,64 |
| Menos de 300 camas (n, 12) | 70,4 | |
| Con formación pregraduada (n,5) | 67,9 | 0,37 |
| Sin formación pregraduada (n,15) | 73,3 | |
| Con formación MIR (n,18) | 72,3 | 0,69 |
| Sin formación MIR (n,2) | 68,8 | |
| Con guías o documentos de profilaxis tromboembólica (n,7) | 69,3 | 0,46 |
| Sin guías o documentos de profilaxis tromboembólica (n,13) | 73,3 | |

Tipo de profilaxis:

| | E | G |
|-----------------------------------|------|----|
| Ninguna | 25.4 | |
| Cualquier anticoagulante | 74.4 | |
| Compresión neumática intermitente | 0 | 7 |
| Medias elásticas | 0.1 | 13 |
| Bomba plantar | 0 | 1 |

Medios mecánicos ENDORSE global = 14 %

Riesgo de sangrado en hospitales españoles = 8 %



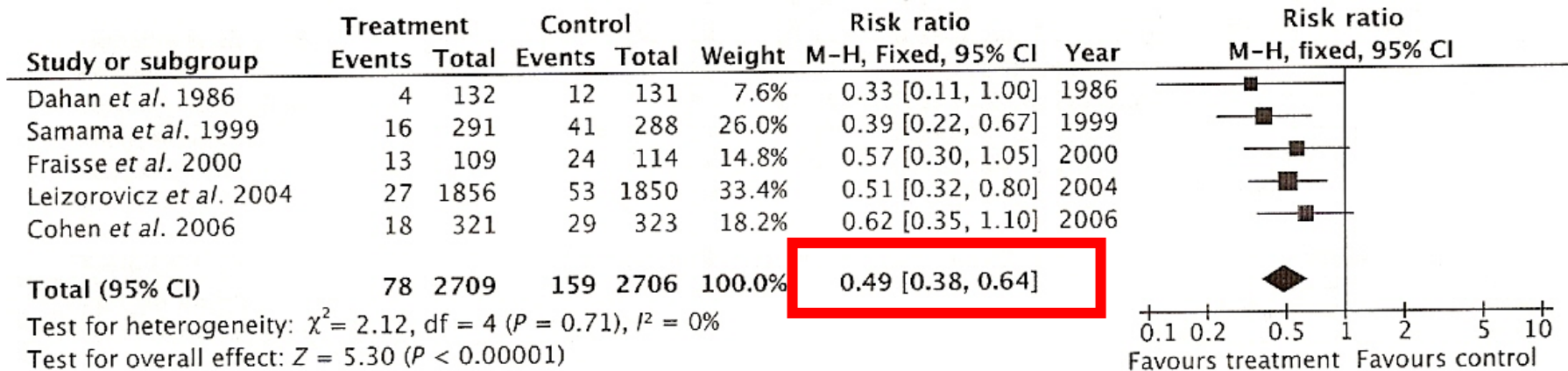


Fig. 1 Heparin prophylaxis versus control. Asymptomatic deep vein thrombosis during follow-up.

NNT = 10 - 45

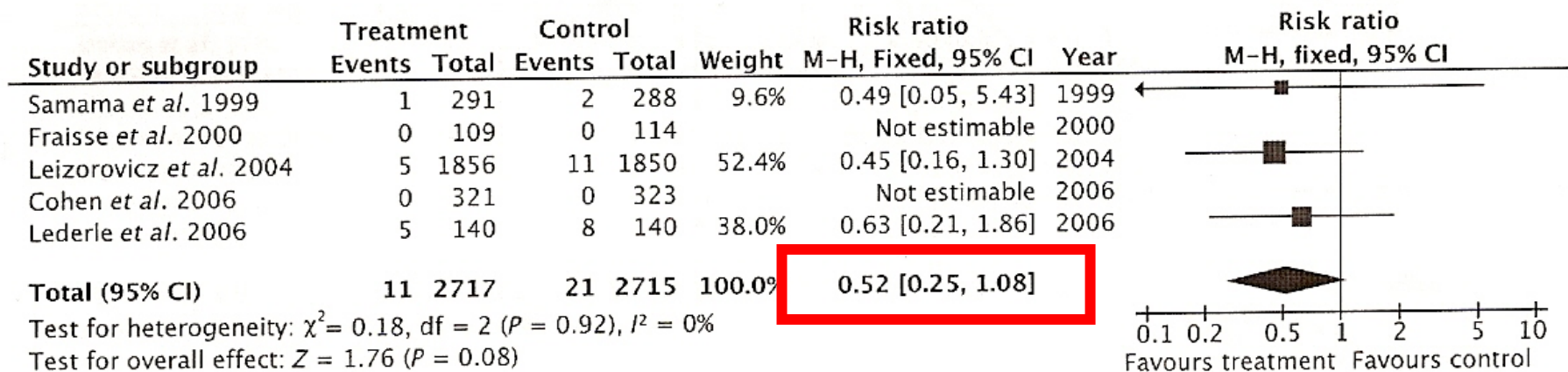


Fig. 2 Heparin prophylaxis versus control. Symptomatic deep vein thrombosis during follow-up.

NNT = 232

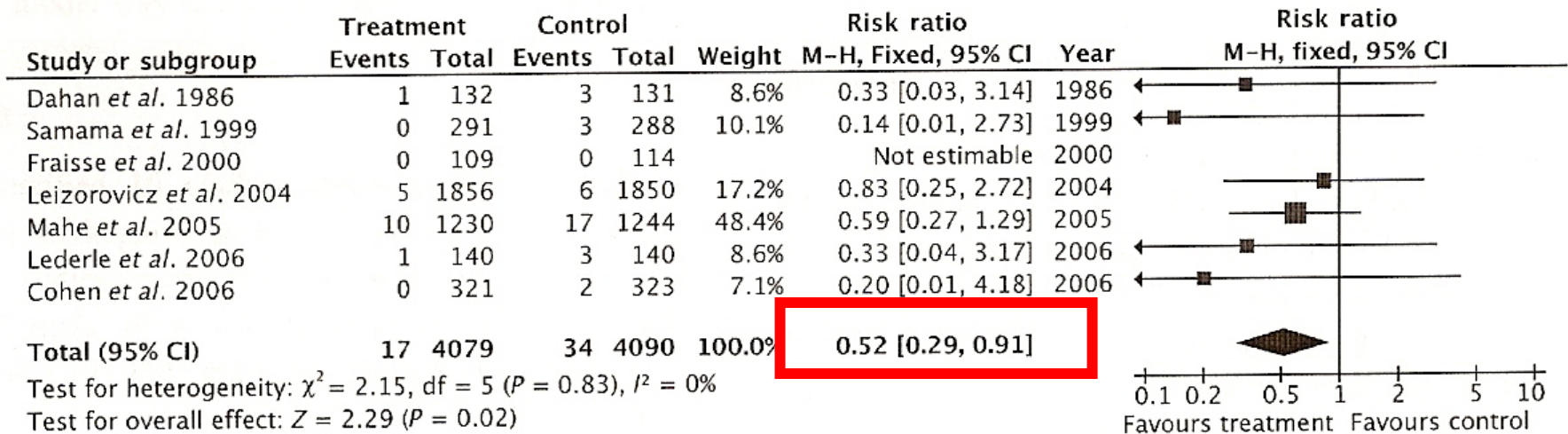


Fig. 3 Heparin prophylaxis versus control. Symptomatic pulmonary embolism during follow-up.

NNT = 185 - 345

NNT EP fatal = 400

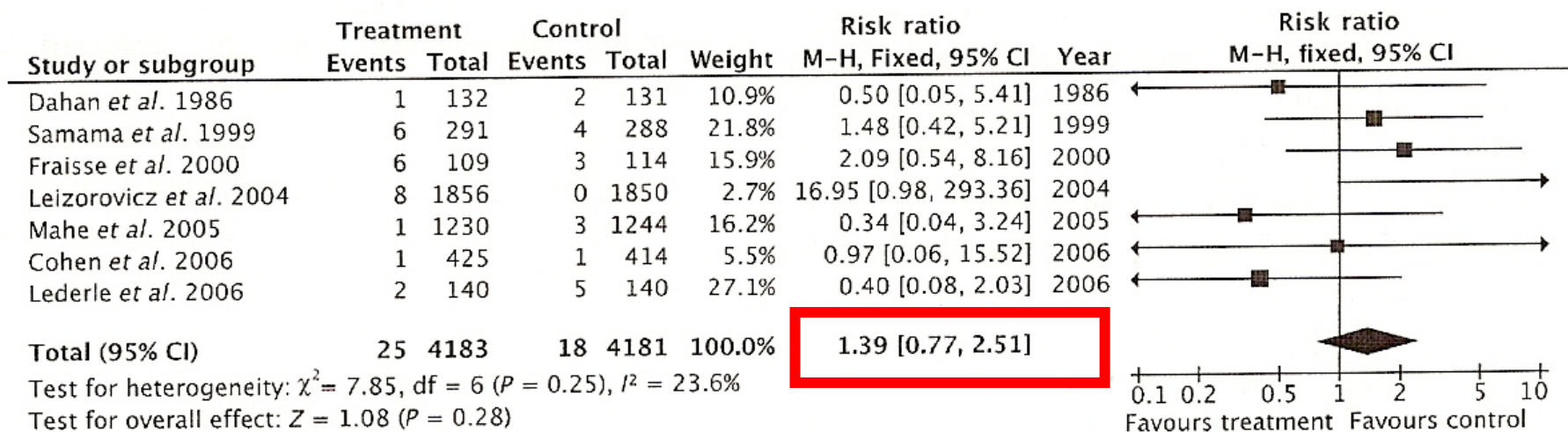


Fig. 4 Heparin prophylaxis versus control. Major bleeding during follow-up.

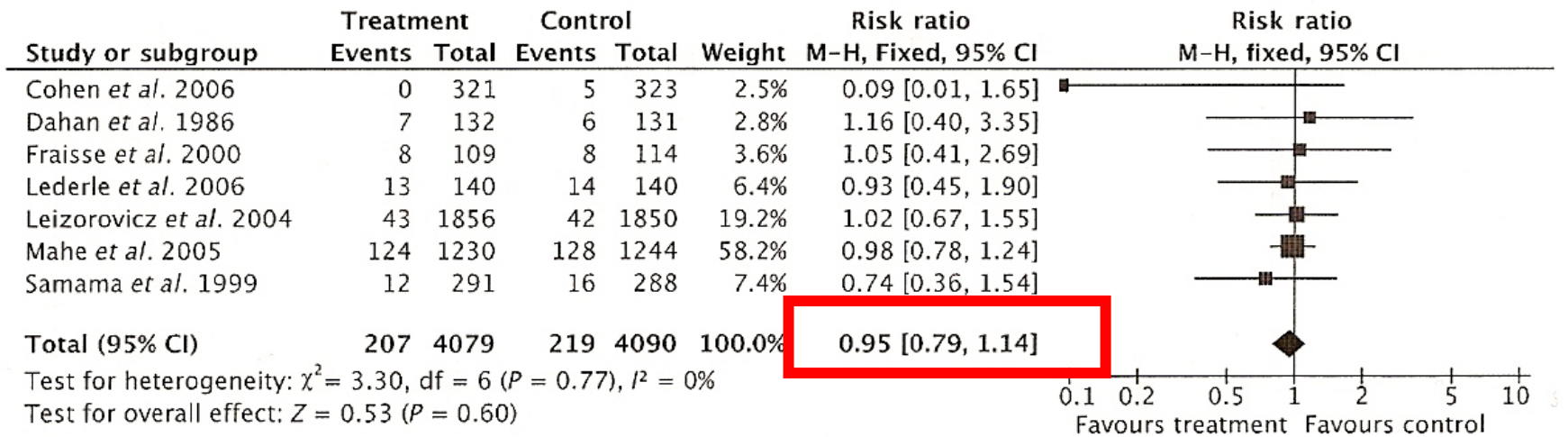


Fig. 5 Heparin prophylaxis versus control. All-cause death during follow-up.

Profilaxis extendida. Estudio EXCLAIM

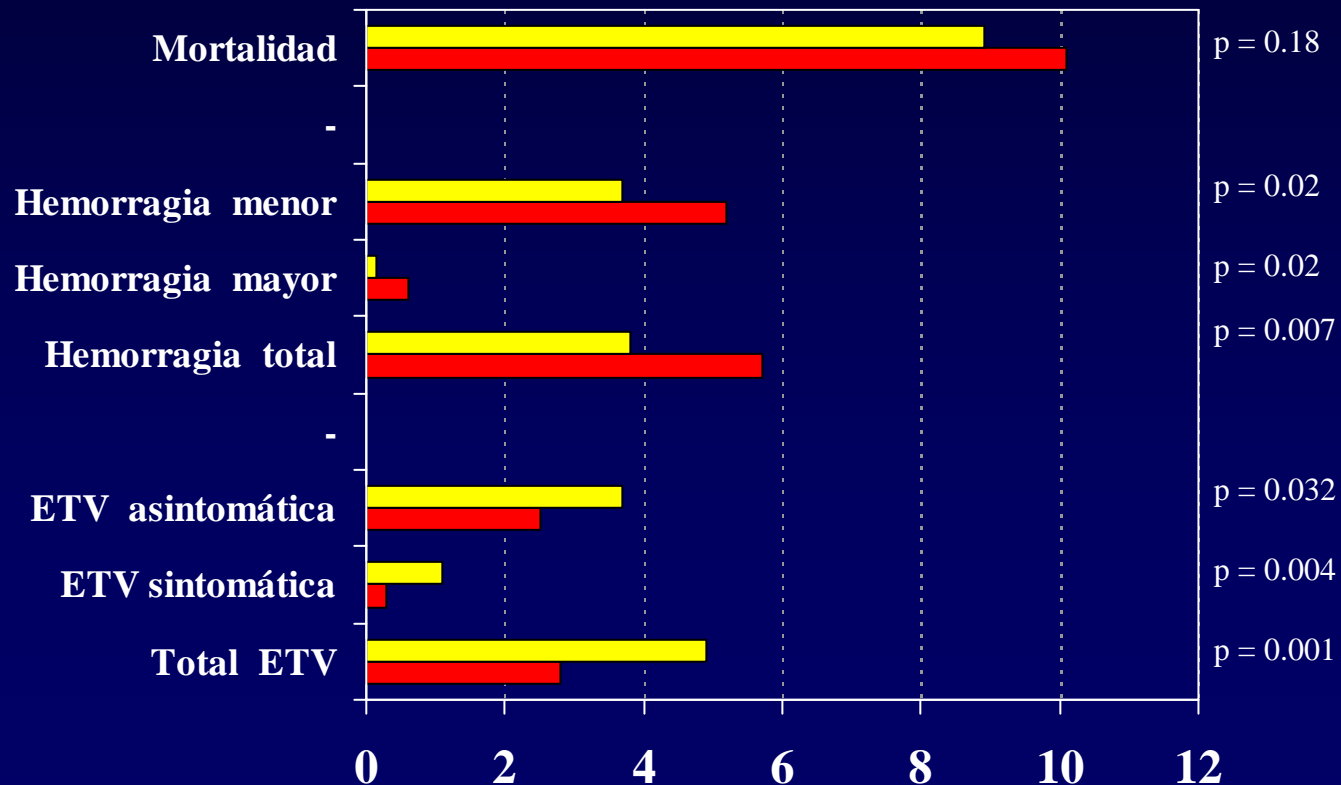
Pacientes médicos

21 Congress of the ISTH. 2007

5.101 pacientes médicos ingresados.

Enoxaparina 10 días + Placebo 28 días

Enoxaparina 10 días + Enoxaparina 28 días



Medias elásticas de compresión gradual

Cirugía

Medias vs. no intervención.

-

I 125

9 estudios RCT, 1.205 pacientes

medias 81 / 624 pacientes

13%

no intervención 154 / 581 pacientes

27%

OR = 0.34

(0.25 – 0.46)

Medias y profilaxis vs. profilaxis

7 estudios RCT, 1.006 pacientes

medias y profilaxis 10 / 501 pacientes

2%

sólo profilaxis 74 / 505 pacientes

15%

OR = 0.24

(0.15 – 0.37)

Medias elásticas de compresión gradual

Pacientes médicos

97 **pacientes con ACVA** . 1 TVP sintomática

7/65 TVP con medias **11 %**
proximales 3/65 (4.6%)

7/32 TVP controles **22 %**
proximales 2/32 (6.3%)

OR = 0.43
(0.14 – 1.36)

QJM 2000; 93: 359-64

Cochrane Database Sys Rev 2004; CD001922

1.310 **pacientes “postacute care” mayores de 65 años**

21 / 371 TVP prox. con medias **5.7 %**

49 / 939 TVP prox. controles **5.2 %**

OR = 1.11
(0.59 – 2.10)

J Gen Intern Med 2006; 21: 1282-1287

82 **IAM mayores de 80 años** ¹²⁵I fibrinógeno

0 / 80 TVP con medias **0 %**

8 / 80 TVP controles **10 %**

OR = N.A.
(-)

Eur Heart J 1993; 14: 1365-1368

Pneumatic sequential compression reduces the risk of deep vein thrombosis in stroke patients

Saadat I. Kamran, MD; Deborah Downey, RN, MSN; and Robert L. Ruff, MD, PhD

Neurology 1998; 50:1683-1688

Cochrane Database Sys Rev 2008; (4):CD005258

N = 432 HNF+ medias + CNI

TVP sintomática 1 **0.23 %**

PE 0

PE fatal 0

N = 249 HNF + medias

TVP sintomática 23 **9.2 %**

PE 6

PE fatal 3

OR 42.7

RRR 97.7

Pacientes de alto riesgo 7.431

| | CNI + heparina | Sólo heparina | |
|-----|-----------------------|----------------------|----------------|
| TVP | 0,65 | 4,21 | OR 0.16 |

| | CNI + heparina | Sólo CNI | |
|-----|-----------------------|-----------------|----------------|
| TVP | 1 % | 4 % | OR 0.43 |
| PE | 1 % | 3 % | OR 0.39 |

Table 1. Risk Factors for Venous Thromboembolism in Hospitalized Patients.

Condition

Acute infectious disease
Congestive heart failure*
Acute myocardial infarction
Acute respiratory disease
Stroke
Rheumatic disease (e.g., acute arthritis)
Inflammatory bowel disease

Clinical characteristic

Previous venous thromboembolism
Older age (especially >75 yr)
Recent surgery or trauma
Immobility or paresis
Obesity (BMI >30)[†]
Central venous catheterization
Inherited or acquired thrombophilic states
Varicose veins
Estrogen therapy

* Congestive heart failure is defined as New York Heart Association class III or IV disease.

[†] The body-mass index (BMI) is the weight in kilograms divided by the square of the height in meters.

| PESOS AJUSTADOS | | | |
|------------------------|--|---|--|
| | 1 | 2 | 3 |
| PROCESOS PRECIPITANTES | <ul style="list-style-type: none"> *Embarazo/puerperio^a *Viajes en avión > 6 horas | <ul style="list-style-type: none"> *E. inflamatoria intestinal activa *Infección aguda grave *Insuficiencia cardiaca clase III *Neoplasia | <ul style="list-style-type: none"> *AVCA con parálisis de miembros inferiores *EPOC con descompensación grave *Infarto Agudo de Miocardio *Insuficiencia cardiaca clase IV *Mieloma con quimioterapia^d *Traumatismos de MMII sin fractura |
| PROCESOS ASOCIADOS | <ul style="list-style-type: none"> *Diabetes mellitus *Hiperhomocisteínemia *Infección por VIH *Parálisis de MMII *TVS previa | <ul style="list-style-type: none"> *Síndrome nefrótico *Trombofilia^b *TVP previa^c *Vasculitis (Beçhet/ Wegener) | |
| FÁRMACOS | <ul style="list-style-type: none"> *Anticonceptivos hormonales *Antidepresivos *Antipsicóticos *Inhibidores de la aromatasa *Tamoxifeno-Raloxifeno *Terapia hormonal sustitutiva | <ul style="list-style-type: none"> *Quimioterapia | |
| OTROS | <ul style="list-style-type: none"> *Catéter venoso central *Edad > 60 años *Obesidad (IMC >30) *Tabaquismo >35 cigarrillos | <ul style="list-style-type: none"> *Encamamiento > 4 días | |

Cálculo del riesgo Ajustado (RA)

RA= Procesos precipitantes (rojo) + Otras circunstancias de riesgo (verde)

Aplicar solo si al menos un proceso rojo o un proceso asociado con peso ≥ 2

| Riesgo ajustado | Recomendación |
|-----------------|--------------------------------------|
| 1-3 | Considerar el uso de medidas físicas |
| 4 | Se sugiere profilaxis con HBPM |
| > 4 | Se recomienda profilaxis con HBPM |

Sesiones clínicas

Guías / Protocolos de práctica clínica

Alertas electrónicas

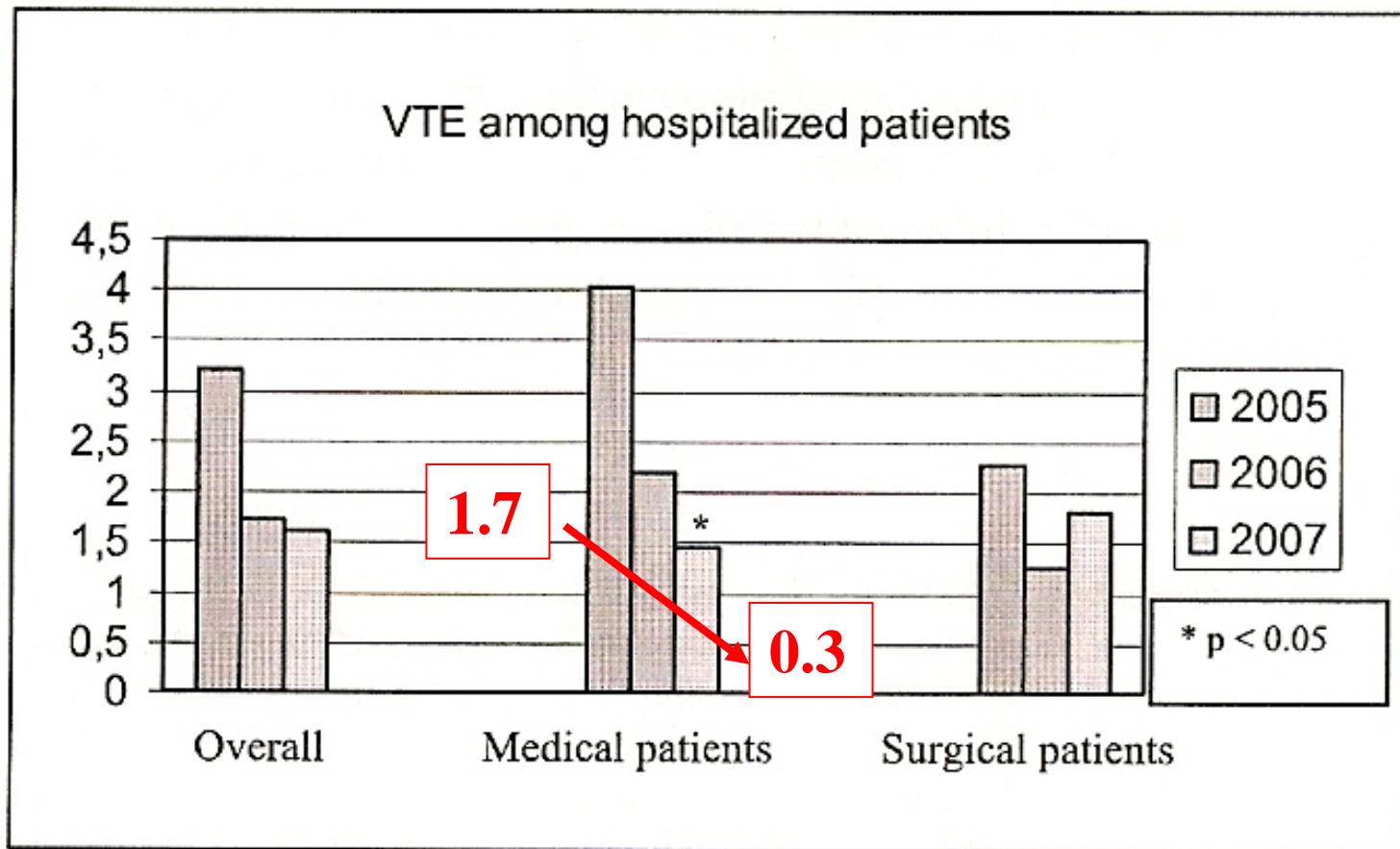
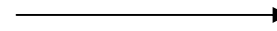


Figure I: Rates of VTE among hospitalized patients (incidence/1,000 patients) in the pre-intervention (year 2005) and post-intervention periods (years 2006 and 2007). *p<0.05 as compared with 2005.

Bases del cálculo: 64% de profilaxis actual
RRR 50% sobre el 36% restante
con riesgo medio del 15% de ETV



Reducción
2.7 % ETV

En términos relativos:

$$64 \times 0.075 + 36 \times 0.15 = 10.2 \% \text{ actual ETV}$$

$$100 \times 0.075 = 7.5 \% \text{ si profilaxis}$$

Reducción global de ETV = 36% en pacientes médicos