



## **MESA REDONDA N° 4**

**Miscelánea**

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**Diferencias entre países en la ETV**

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# DEFINIZIONI DI EPIDEMIOLOGIA

- campo della scienza medica che si interessa delle relazioni tra i fattori che condizionano la frequenza e la distribuzione di una malattia o di uno stato fisiologico in una popolazione

*(Maxcy)*

- studio della distribuzione e dei determinanti di salute o di stati correlati con la salute in determinate popolazioni, e applicazione di questo studio al controllo dei problemi sanitari.

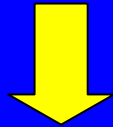
*(Last)*

- strategia di studio dei fattori riguardanti: **(a)** l'eziologia, la prevenzione ed il controllo delle malattie; **(b)** l'allocazione efficiente delle risorse per promuovere e mantenere uno stato di salute in popolazioni umane.

*(Detels)*

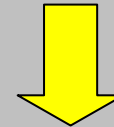
# Contenuto delle attività epidemiologiche

## Epidemiologia osservazionale



- Osservazione e analisi dell'insorgenza delle malattie in gruppi di popolazioni e formulazione di ipotesi circa i fattori eziologici che influenzano l'insorgenza

## Epidemiologia sperimentale



Esperimenti pianificati dove si controllano gruppi di popolazione determinando quali gruppi sono esposti ad un possibile fattore eziologico o ad una misura preventiva

# Registro versus Studi clinici

- Studio frutto di osservazioni
- Basato sulla popolazione
- Reali comportamenti

- Studio basato sull'intervento
- Popolazione selezionata
- Studio della terapia



**I registri sono uno strumento di sorveglianza epidemiologica tra i più antichi tanto che la nascita dei registri coincide storicamente con quella dell'epidemiologia stessa, anche se inizialmente lo scopo dei registri era solo quello di tenere traccia della diffusione di malattie infettive.**

**Lo sviluppo dell'epidemiologia come disciplina autonoma ha esteso l'uso dei registri alle malattie cronico-degenerative, come il cancro e le malattie cardiovascolari.**





Computerized Registry of Patients with Venous Thromboembolism (R.I.E.T.E.)

Español | English

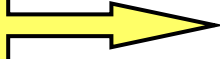
R.I.E.T.E.

enter





Popolazione




- Pazienti con DVT/PE
- Conferma della diagnosi
- Follow-up a 3 mesi

## Caratteristiche

- Internazionale
- Multicentrico
- Prospettico
- Indipendente
- web

## Obiettivo:

- Condivisione delle informazioni in tempo reale



Il registro permette di studiare associazioni tra eventi sia nella dimensione trasversale (**sincronica**) sia nella dimensione longitudinale (**diacronica**). Lo studio delle associazioni, pur non producendo risposte di tipo causale, è un formidabile strumento di produzione di ipotesi scientifiche, consentendo di ottenere stime e di produrre inferenze sulla base dei dati degli individui che compongono il registro attraverso strategie analitiche e descrittive.

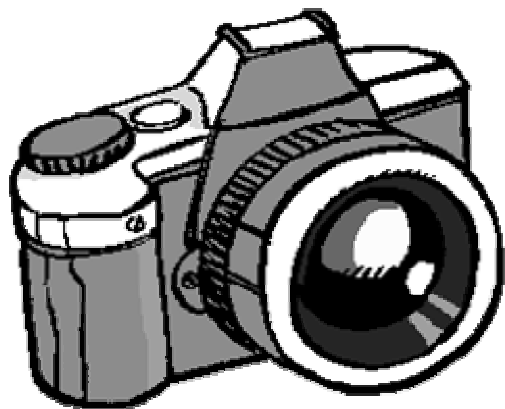




# Registro Informatizzato de la Enfermedad TromboEmbólica

**RIETE** è un registro internazionale per pazienti affetti da TEV con centri di osservazione europei ed extraeuropei (Spagna, Italia, Francia, Israele, Argentina, Messico) che si prefigge di migliorare le conoscenze generali sulla patologia tromboembolica ma soprattutto di incoraggiare a osservare i fattori di rischio, i trattamenti e gli outcome dei pazienti esclusi da trials clinici perché affetti da patologie con evoluzione imprevedibile come gli individui anziani con età > 80 aa, le pazienti in gravidanza, gli ammalati oncologici, quelli affetti da insufficienza renale grave o da sindrome da anticorpi antifosfolipidi.

**R.**

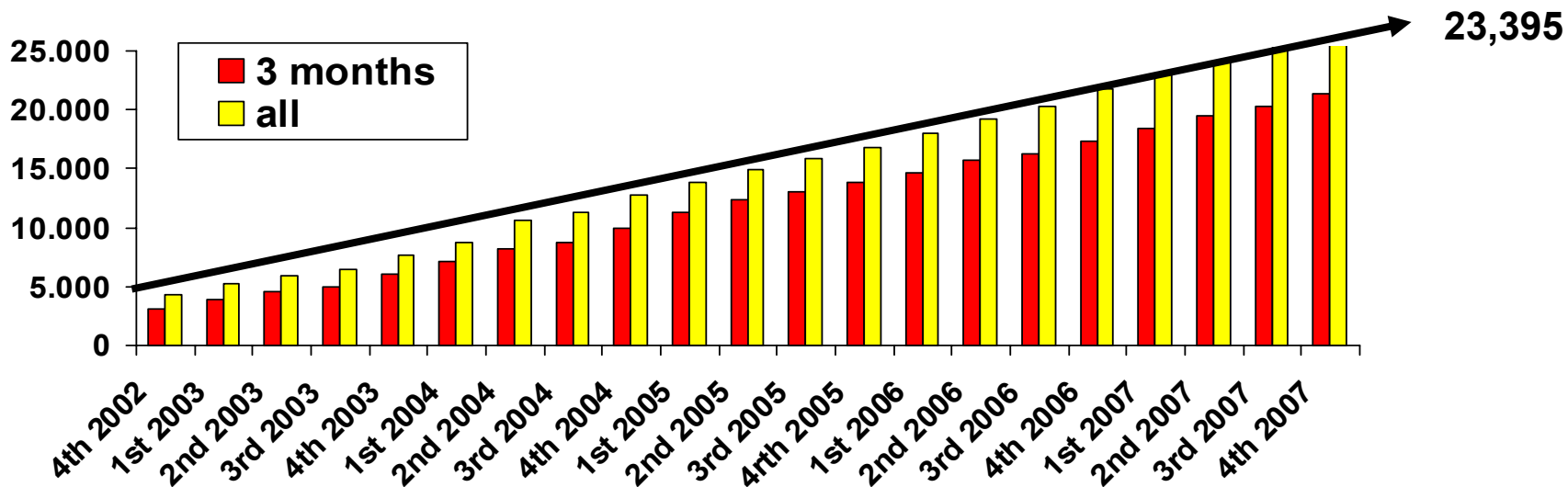


**23.273**

**N° totale di pazienti reclutati al 31 dicembre 2008**



# Tasso di reclutamento



104 centers



13 centers



4 centers



1 center



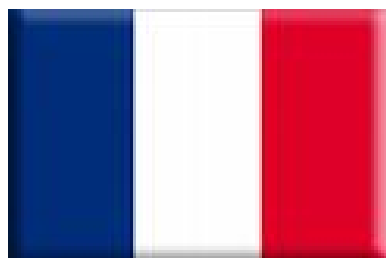
12 centers



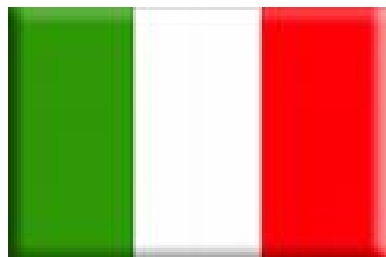
2 centers



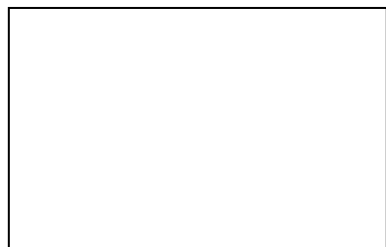
Spagna 21397



Francia 837



Italia 896



Altri 143

Italian and French  
populations  
with VTE in RIETE vs  
the Spanish model \ data



# RIETE in Spagna



**21397 pazienti  
inseriti e validati**

**Centri attivi: 95**

**82 Medicina Interna**

**10 Pneumologia**

**12 Ematología**

**2 Chirurgia vascolare**

**Chirurgia generale**

**1 Pronto soccorso**

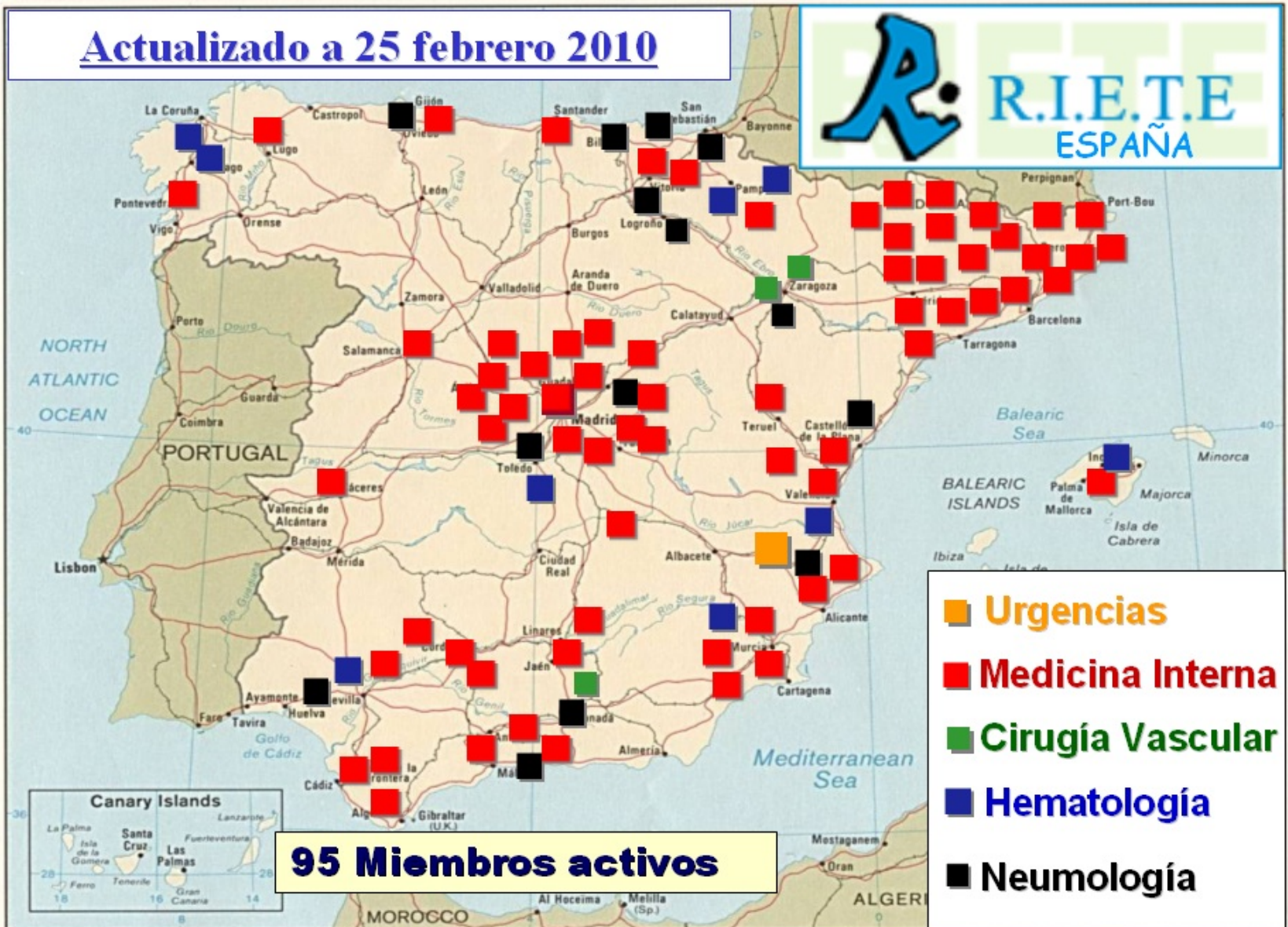




**Actualizado a 25 febrero 2010**



**R.I.E.T.E  
ESPAÑA**



**MASCHI 10.608 (49,6%)**

**FEMMINE 10.789 (50,4%)**

**Età 66 ± 17 anni**

**Peso corporeo 74 ± 14 kg**



# RIETE in Francia



**Centri attivi: 12**

**7 Medicina Interna**

**1 Medicina d'Urgenza  
e Pronto Soccorso**

**3 Chirurgia vascolare**

**1 Metologia clinica**

**1 Ematologia**

**837 pazienti  
inseriti e validati**



Actualizado a 25 febrero 2010



**MASCHI 379 (45,28%)**

**FEMMINE 458 (54,72%)**

**Età 63 ± 19 anni**

**Peso corporeo 73 ± 17 kg**

# RIETE in Italia



**896 pazienti  
inseriti e validati**

**Centri attivi: 13**

- **8 Medicina Interna**
- **2 Chirurgia vascolare**
- **1 pronto Soccorso**
- **2 Centri Trombosi**







**R.I.E.T.E.**  
ITALIA



**13 Miembros activos**

Actualizado a 25 febrero 2010

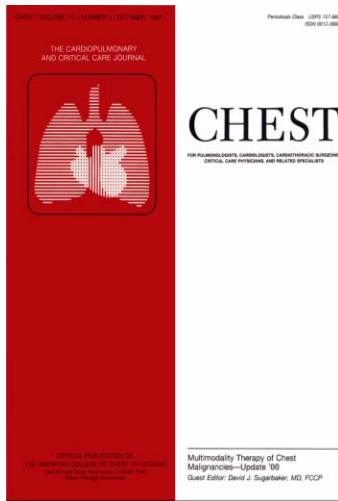
**MASCHI 423 (47,21%)**

**FEMMINE 473 (52,79%)**

**Età 64 ± 11 anni**

**Peso corporeo 73 ± 14 kg**

# VTE only GL???



Clinical Outcome	Spain		Italy		France		OR (95% CI) Italy vs. Spain	OR (95% CI) France vs. Spain
	Gender (males)	10608 (50%)	423 (47%)	379 (45%)			0.9 (0.8-1.0)	0.8 (0.7-0.97)*
Age (years±SD)	66±17	64±11	63±19			p<0.001	p<0.001	
Body weight (kg±SD)	74±14	73±14	73±17			p=NS	p=NS	
Clinically overt PE	10078 (47%)	360 (40%)	508 (61%)			0.8 (0.7-0.9)‡	1.7 (1.5-2.0)‡	
Proximal DVT	8627 (83%)	351 (76%)	235 (78%)			0.7 (0.5-0.8)‡	0.7 (0.5-0.9)*	
Upper-extremity DVT	609 (5.4%)	65 (12%)	16 (4.9%)			2.4 (1.8-3.2)‡	0.9 (0.5-1.5)	
Chronic lung disease	2228 (10%)	59 (6.6%)	60 (7.2%)			0.6 (0.5-0.8)‡	0.7 (0.5-0.9)†	
Chronic heart failure	1190 (5.6%)	48 (5.4%)	39 (4.7%)			1.0 (0.7-1.3)	0.8 (0.6-1.2)	
CrCl <30 mL/min	1242 (5.8%)	41 (4.7%)	45 (5.5%)			0.8 (0.6-1.1)	0.9 (0.7-1.3)	
Postoperative	2652 (12%)	137 (15%)	80 (9.6%)			1.3 (1.1-1.5)*	0.7 (0.6-0.9)*	
Immobility ≥4 days	5284 (25%)	156 (17%)	147 (18%)			0.6 (0.5-0.8)‡	0.7 (0.5-0.8)‡	
Cancer	4357 (20%)	253 (28%)	184 (22%)			1.5 (1.3-1.8)‡	1.1 (0.9-1.3)	
Prior VTE	3237 (15%)	135 (15%)	243 (29%)			1.0 (0.8-1.2)	2.3 (2.0-2.7)‡	
Idiopathic	8599 (40%)	337 (38%)	322 (39%)			0.9 (0.8-1.0)	0.9 (0.8-1.1)	
Initial therapy, UFH	1366 (6.4%)	130 (15%)	243 (29%)			2.5 (2.0-3.0)‡	6.0 (5.1-7.0)‡	
Initial therapy, LMWH	19711 (92%)	741 (83%)	545 (65%)			0.4 (0.3-0.5)‡	0.16 (0.14-0.18)‡	
Long-term, AVK drugs	14962 (70%)	566 (63%)	668 (80%)			0.7 (0.6-0.8)‡	1.7 (1.4-2.0)‡	
Long-term, LMWH	6236 (29%)	299 (33%)	125 (15%)			1.2 (1.1-1.4)†	0.43 (0.35-0.52)‡	
Inferior vena cava filter	402 (1.9%)	35 (3.9%)	56 (6.7%)			2.1 (1.5-3.0)‡	3.8 (2.8-5.0)‡	
Major bleeding	494 (2.3%)	19 (2.1%)	13 (1.6%)			0.9 (0.6-1.5)	0.7 (0.4-1.2)	
Fatal bleeding	120 (0.6%)	7 (0.8%)	1 (0.1%)			1.4 (0.7-3.0)	0.2 (0.03-1.5)	
Recurrent VTE	493 (2.3%)	12 (1.3%)	19 (2.3%)			0.6 (0.3-1.0)*	1.0 (0.6-1.5)	
Fatal PE	354 (1.7%)	21 (2.3%)	10 (1.2%)			1.4 (0.9-2.2)	0.7 (0.4-1.4)	
Overall death	1702 (8.0%)	77 (8.6%)	53 (6.3%)			1.1 (0.6-1.4)	0.8 (0.6-1.0)	



# Table 1. General data

- Italy showed an increased rate of UEDVT
- Italy showed an increased rate of post-surgical VTE
- Spain approached initial treatment with LMWH
- France placed an increased number of IVCF
- The rate of idiopathic VTE is similar
- Bleeding complications (major or minor) are similar for all countries
- The rate of fatal PE and overall death is similar in all countries
- Italy showed a reduced rate of recurrent VTE (prolonged OAT??)

# Caratteristiche cliniche e risultati a 3 mesi in 2869 patients with VTE post operatoria

	Spain (2652)	Italy (137)	France (80)	OR (95% CI) Italy vs. Spain	OR (95% CI) France vs. Spain
Gender (males)	1217 (46%)	64 (47%)	37 (46%)	1.0 (0.7-1.5)	1.0 (0.6-1.6)
Age (years±SD)	63±17	60±20	60±17	p=NS	p=NS
Body weight (kg±SD)	74±14	72±16	72±15	p=NS	p=NS
<b>VTE characteristics</b>					
Clinically overt PE	1310 (49%)	67 (49%)	51 (64%)	1.0 (0.7-1.4)	1.8 (1.1-2.9)*
<b>Type of surgery</b>					
Major orthopedic	643 (24%)	24 (18%)	12 (15%)	0.7 (0.4-1.0)	0.6 (0.3-1.0)
Other orthopedic	348 (13%)	14 (10%)	16 (20%)	0.8 (0.4-1.3)	1.7 (0.9-2.9)
Cancer	366 (14%)	15 (11%)	5 (6.3%)	0.8 (0.4-1.3)	0.4 (0.2-1.0)
Abdominopelvic	380 (14%)	28 (20%)	10 (13%)	1.5 (1.0-2.4)*	0.9 (0.4-1.7)
Genitourinary	229 (8.6%)	19 (14%)	10 (13%)	1.7 (1.0-2.8)*	1.5 (0.8-3.0)
Neurosurgery	214 (8.1%)	9 (6.6%)	4 (5.0%)	0.8 (0.4-1.6)	0.6 (0.2-1.7)
Vascular	149 (5.6%)	5 (3.6%)	5 (6.3%)	0.6 (0.3-1.6)	1.1 (0.4-2.8)
Other	323 (12%)	23 (17%)	18 (23%)	1.5 (0.9-2.3)	2.1 (1.2-3.6)†
<b>Thromboprophylaxis</b>					
Yes	1789 (68%)	84 (61%)	49 (61%)	0.8 (0.5-1.1)	0.8 (0.5-1.2)
Duration (days±SD)	16±15	30±58	20±16	p=0.035	p=NS
LMWH	1691 (98%)	72 (94%)	33 (83%)	0.3 (0.1-0.8)*	0.1 (0.04-0.2)‡

## Table 2. Post-operative VTE

- France showed an increased number of post-operative clinically overt PE
- Italy showed an increased rate of VTE after abdominopelvic surgery although a prolonged thromboprophylaxis (type of prophylaxis or better surveillance??)
- Spain performed surgical thromboprophylaxis with LMWH

# Caratteristiche cliniche e risultati a tre mesi in 5587 pazienti con VTE dopo immobilità ≥4 giorni

	Spain (5284)	Italy (156)	France (147)	OR (95% CI) Italy vs. Spain	OR (95% CI) France vs. Spain
Gender (males)	2355 (45%)	56 (36%)	61 (42%)	0.7 (0.5-0.97)*	0.9 (0.6-1.2)
Age (years±SD)	69±17	74±16	67±18	p=0.001	p=NS
Body weight (kg±SD)	73±15	71±12	73±18	p=NS	p=NS
Clinically overt PE	2468 (45%)	77 (49%)	81 (55%)	1.1 (0.8-1.5)	1.4 (1.0-1.9)*
Trauma with no surgery	1041 (20%)	26 (17%)	37 (25%)	0.8 (0.5-1.2)	1.4 (0.9-2.0)
Mental disorders	706 (13%)	31 (20%)	18 (12%)	1.6 (1.1-2.4)*	0.9 (0.5-1.5)
Acute infection	783 (15%)	8 (5.1%)	18 (12%)	0.3 (0.2-0.6)†	0.8 (0.5-1.3)
Arthropathy	432 (8.2%)	16 (10%)	12 (8.2%)	1.3 (0.8-2.2)	1.0 (0.5-1.8)
Leg paralysis	441 (8.3%)	2 (1.3%)	7 (4.8%)	0.1 (0.04-0.6)†	0.5 (0.3-1.2)
Cancer	310 (5.9%)	10 (6.4%)	10 (6.8%)	1.1 (0.6-2.1)	1.2 (0.6-2.2)
Chronic lung disease	257 (4.9%)	8 (5.1%)	3 (2.0%)	1.1 (0.5-2.2)	0.4 (0.1-1.3)
Acute stroke	238 (4.5%)	5 (3.2%)	1 (0.7%)	0.7 (0.3-1.7)	0.15 (0.02-1.0)
Heart failure	200 (3.8%)	9 (5.8%)	1 (0.7%)	1.6 (0.8-3.1)	0.2 (0.02-1.3)
Ischemic heart disease	84 (1.6%)	3 (1.9%)	3 (2.0%)	1.2 (0.4-3.9)	1.3 (0.4-4.1)
Other	792 (15%)	38 (24%)	37 (25%)	1.8 (1.3-2.7)†	1.9 (1.3-2.8)†
Hospital	508 (12%)	5 (3.2%)	16 (11%)	0.2 (0.08-0.5)‡	0.9 (0.5-1.4)
Home	3359 (83%)	145 (93%)	122 (83%)	2.8 (1.5-5.4)‡	1.0 (0.7-1.6)
Long-term facilities	199 (4.9%)	6 (3.8%)	5 (3.4%)	0.8 (0.3-1.7)	0.7 (0.2-1.6)
thromboprophylaxis Yes	1274 (24%)	38 (24%)	34 (23%)	1.0 (0.7-1.5)	0.9 (0.6-1.4)
Duration (days±SD)	20±36	32±47	29±37	p=NS	p=NS
LMWH	1186 (96%)	22 (59%)	27 (82%)	0.06 (0.03-0.1)‡	0.2 (0.1-0.5)‡

## Table 3. Hypomobility and VTE

- France showed an increased number of clinically overt PE
- Spain showed an increase rate of VTE in patients with acute infections, leg paralysis and acute stroke
- Italy showed an increased rate of VTE in patients with mental disorders and hearth failure (ageing??)
- The rate of VTE in patients with ischaemic hearth disease is similar in all countries (LMWH as therapy?)
- Hypomobility is realised at home in Italy more than in France and Spain
- Spain performed thromboprophylaxis with LMWH but Italy performed a prolonged thromboprophylaxis
- Thromboprophylaxis is very rare in all countries (2-3-25%)

# Test per la trombofilia

	Spain	Italy	France	OR (95% CI) Italy vs. Spain	OR (95% CI) France vs. Spain
<b><i>Thrombophilia, Tested</i></b>	<b>4154</b>	<b>213</b>	<b>342</b>		
<b>Tested, positive</b>	1437 (35%)	92 (43%)	94 (27%)	1.4 (1.1-1.9) <sup>†</sup>	0.7 (0.6-0.9) <sup>†</sup>
<b>Factor V Leiden</b>	394 (9.5%)	33 (15%)	28 (8.2%)	1.7 (1.2-2.5) <sup>†</sup>	0.9 (0.6-1.3)
<b>Prothrombin mutation</b>	308 (7.4%)	30 (14%)	20 (5.8%)	2.0 (1.3-3.0) <sup>‡</sup>	0.8 (0.5-1.2)
<b>Antiphospholipid syndrome</b>	347 (8.4%)	14 (6.6%)	11 (3.2%)	0.8 (0.4-1.3)	0.4 (0.2-0.6) <sup>‡</sup>
<b>Protein C deficiency</b>	90 (2.2%)	3 (1.4%)	2 (0.6%)	0.6 (0.2-1.8)	0.3 (0.04-0.9) <sup>*</sup>
<b>Protein S deficiency</b>	167 (4.0%)	9 (4.2%)	10 (2.9%)	1.1 (0.5-2.0)	0.7 (0.4-1.3)
<b>Antithrombin deficiency</b>	71 (1.7%)	5 (2.3%)	6 (1.8%)	1.4 (0.5-3.2)	1.0 (0.4-2.2)
<b>Other, combinations</b>	473 (11%)	34 (16%)	37 (11%)	1.5 (1.0-2.1) <sup>*</sup>	0.9 (0.7-1.3)

# Table 4. Thrombophilia testing.

Italian population is more thrombophilic than similar population in southern Europe???



- Different age of populations
- Different prognosis of enrolled patients
- Lost follow up
- Thrombophilia testing in acute VTE or in follow up
- Different dimension of populations
- Different type of involved centers
- Different rate of in\outpatients
- Different median age and co-morbidities
- Different ratio UEDVT \ LEDVT \ isolated PE

# Comments

- VTE is a relevant disease for its morbidity and mortality
- Last decades updated us with several articles on risk factors, prophylaxis, treatments and outcome on VTE but data differ according to patients' selection
- Also data from RIETE underlined several differences according to the type of center, co-morbidities
- Experience and technical supports may alter selection (clinically overt PE and thrombophilia testing)
- Outcome are similar although there are differences in pharmacological thromboprophylaxis (Type of drugs and duration)
- Long term hypomobility for elderly patients and its thromboprophylaxis seem to be the new area to be explored concerning risk factors diagnosis methods of prophylaxis and outcome



# Questions

But are we looking for:

- Different tales of same medal \ disease ?
- Different approaches due to speciality's area for similar patients \ disease ?
- Different outcome for last improvement in diagnostic and therapies ?



Gracias

Grazie

Merci

Thanks

