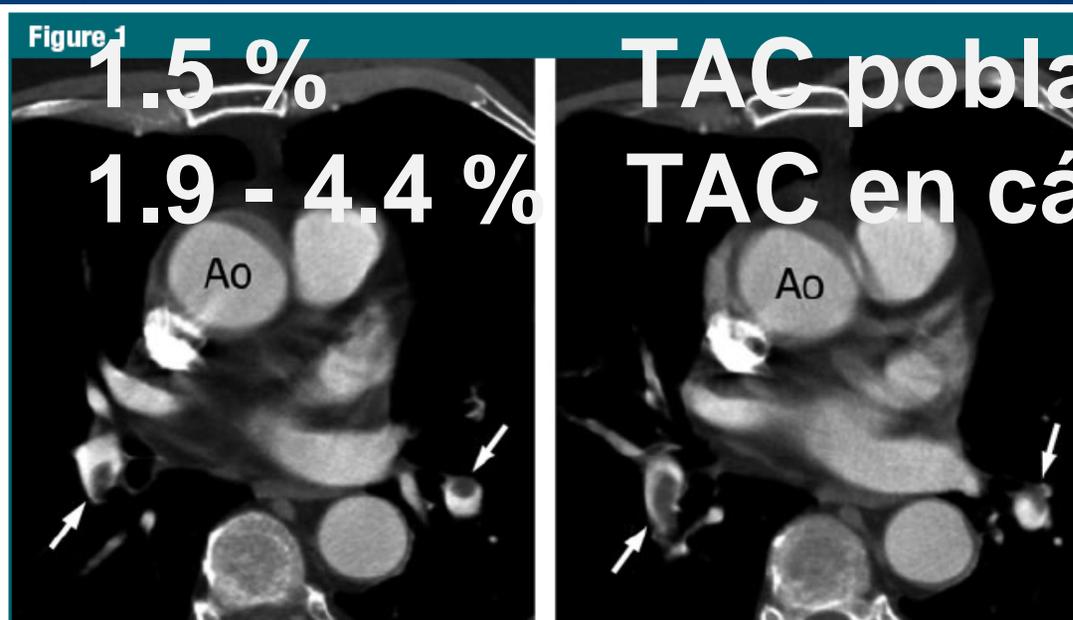


Embolia pulmonar incidental

Carme Font
Servicio de Oncología Médica
Hospital Clínic Barcelona
Mayo 2013

TEP incidental



Defecto de repleción
arterial pulmonares
al menos dos cortes
consecutivos

- Clasificación del nivel de la arteria en el lóbulo pulmonar:

principales
lobares
segmentarias

Table 1. Prevalence studies of unsuspected pulmonary embolism in cancer patients.

Study (year)	Prevalence	Inpatients vs outpatients (%)	Design	Symptoms of PE	Ref.
Boswell <i>et al.</i> (2005)	2.1% (44 out of 2085)	–	Prospective	Not reported	[12]
Gladish <i>et al.</i> (2006)	4.0% (16 out of 403)	6.0 vs 3.8	Retrospective	4 patients (25%). Symptoms not reported	[13]
Rita Larici <i>et al.</i> (2007)	1.9% (15 out of 787)	2.1 vs 0	Retrospective	All asymptomatic	[14]
Sebastian <i>et al.</i> (2006)	2.6% (10 out of 385)	–	Prospective	Not reported	[15]
Cronin <i>et al.</i> (2007)	3.3% (13 out of 397)	6.8 vs 0.5	Retrospective	Not reported	[16]
Browne <i>et al.</i> (2010)	4.4% (18 out of 407)	6.4 vs 3.4	Prospective	2 patients (11%): 1 dyspnea, 1 chest pain	[17]

PE: Pulmonary embolism.

Incidental venous thromboembolism in ambulatory cancer patients receiving chemotherapy

Marcello Di Nisio¹; Noemi Ferrante¹; Michele De Tursi²; Stefano Iacobelli²; Franco Cuccurullo¹; Harry R. Büller³; Beatrice Feragalli⁴; Ettore Porreca¹

¹Department of Medicine and Aging; Centre for Aging Sciences (Ce.S.I.), "University G.D'Annunzio" Foundation, Chieti, Italy; ²Department of Clinical Oncology, "University G.D'Annunzio" Foundation, Chieti, Italy; ³Department of Vascular Medicine, Academic Medical Center, Amsterdam, The Netherlands; ⁴Dipartimento di Scienze Cliniche e Bioimmagini, Istituto di Scienze Radiologiche, Università degli Studi G. d'Annunzio, Ospedale SS. Annunziata, Chieti, Italy

Cohorte de pacientes que inició quimioterapia N=1921

Type of malignancy	Patients	Incidental VTE	Symptomatic VTE	Overall VTE
Breast	764 (40)	5 (0.6)	7 (0.9)	12 (1.6)
Colorectal cancer	492 (26)	21 (4.3)	13 (2.6)	34 (6.9)
Lung	205 (11)	14 (6.8)	5 (2.4)	19 (9.3)
Genitourinary	95 (5)	5 (5.3)	2 (2.1)	7 (7.4)
Upper gastrointestinal	87 (4)	2 (2.3)	5 (5.7)	7 (8.0)
Pancreas, liver	68 (3)	3 (4.4)	3 (4.4)	6 (8.8)
Ovary	58 (3)	3 (5.2)	0 (0)	3 (5.2)
Prostate	56 (3)	2 (3.6)	2 (3.6)	4 (7.1)
Gynaecological	40 (2)	6 (15)	2 (5.0)	8 (20.0)
Others	56 (3)	1 (1.8)	0	1 (1.8)
Total	1921 (100)	62 (3.2)	39 (2.0)	101 (5.3)

Unsuspected pulmonary embolism on CT scanning: yet another headache for clinicians?

Sujal R Desai

Thorax 2007;62:470-472

Arguments for and against treatment of small unsuspected pulmonary emboli

- Presunción de que són 'pequeños'
'asintomáticos' los TEP incidentales?
- Són necesarias más exploraciones complementarias?
ECO Doppler ? AngioTAC ?
- Pronóstico del TEP incidental? Tratamiento indicado?

Són 'pequeños' o 'dudosos' radiológicamente los TEP incidentales ?

2036 M. Sahut D'Izarn et al

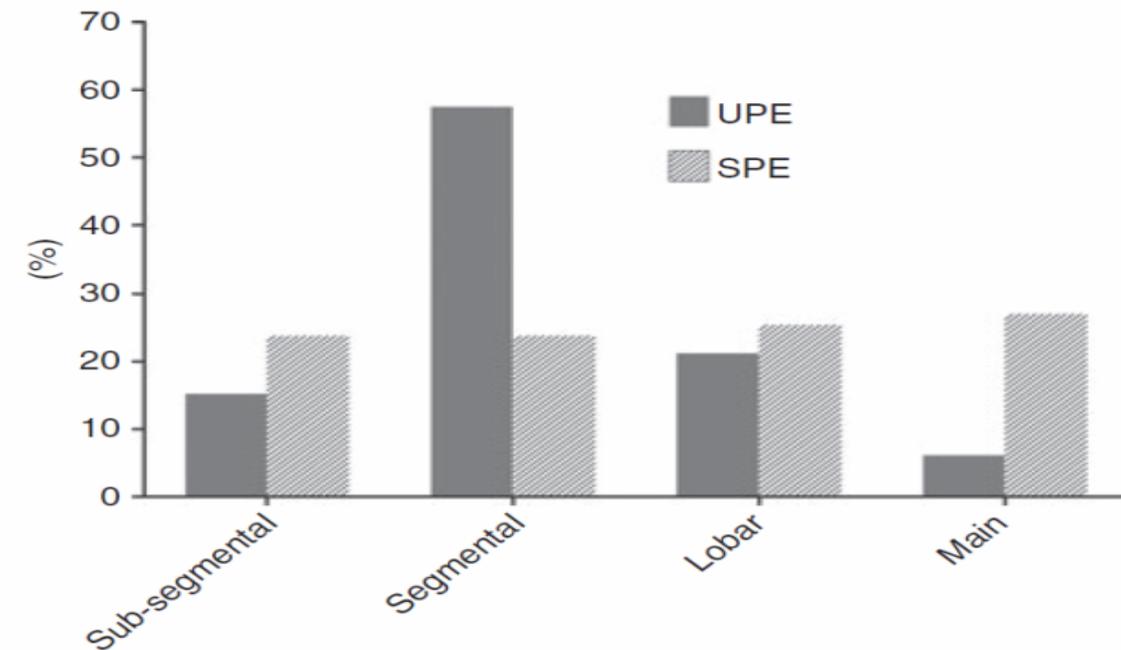


Fig. 1. Level of the most proximal clot in patients with clinically unsuspected pulmonary embolism (UPE) and patients with clinically suspected pulmonary embolism (SPE).

Són 'pequeños' o 'dudosos' radiológicamente los TEP incidentales ?

Most proximal divisional location of PE per patient

Main	4 (22)
Lobar	5 (28)
Segmental	6 (33)
Subsegmental	3 (17)

Brown AM J Thorac Oncol 2010

Table 3. Radiological findings in patients with PE according to SVT and IVT

	SVT (%) N = 63	IVT (%) N = 56	P
Central arteries	33 (52)	36 (64)	NS
Bilateral	41 (65)	23 (41)	0.009
Multiple PE	55 (87)	42 (75)	NS
Single peripheral PE	6 (10)	7 (13)	NS
CT signs of lung infarction	3 (5)	2 (4)	NS
Associated DVT in CT scans	8 (13)	4 (7)	NS

Font C Ann Oncol 2011

Son 'asintomáticos' los TEP incidentales?

Table 3. Signs and Symptoms Among Patients With and Without Unsuspected PE

Symptom	Case Patients		Control Patients		Odds Ratio*	P*
	No.	%	No.	%		
Chest pain	3	7	6	7	0.94	.93
Fatigue	25	54	18	20	4.88	.0002
Limb pain or swelling	7	15	14	15	1.02	.97
Shortness of breath	10	22	7	8	5.03	.02
Tachycardia or palpitations	7	15	12	13	1.21	.72

44% TEP incidental síntomas atribuibles a TEP

75% si añadan 'fatiga'

Son 'asintomáticos' los TEP incidentales?

original article

Annals of Oncology
doi:10.1093/annonc/mdq720

Incidental versus symptomatic venous thrombosis in cancer: a prospective observational study of 340 consecutive patients

C. Font^{1*}, B. Farrús^{2,3,4}, L. Vidal¹, T. M. Caralt⁵, L. Visa¹, B. Mellado^{1,3}, D. Tàssies^{3,6},
J. Monteagudo⁶, J. C. Reverter^{3,4,6} & P. Gascon^{1,3,4}

17% de las trombosis venosas incidentales -> 'sintomáticas'

23% de los TEP incidentales -> 'sintomáticos'

Estudio	Design	n TEP Incid	Follow-up	Recurrence	Major bleeding	Survival
Dentali F 2011 TEP + TVP	Retrospectivo -Cancer sin TEP -TEP sintomático	51	6 meses	-	-	DIF ND
Font C 2011 TEP + TVP	Prospectivo observacional Vs trombosis sintomática	56	447 dias	Incidental menor retrombosis	ND	ND
Den Exter P 2011	Retrospectivo Vs TEP sintomático	51	12 meses	ND	ND	ND
Soler S 2012	Prospectivo observacional RIETE Vs TEP sintomático	78	≥ 3 meses	ND	ND	-
Shinagare A 2012 C. de pulmón	Retrospectivo Vs TEP sintomático	94	-	ND	-	ND
D'Izarn M 2012	Retrospectivo - cancer sin TEP - TEP sintomático	66	6 meses	ND	ND	ND ND
O'Connell C 2011	Reospectivo Incidental vs cancer sin TEP	70	48 meses	-	-	DIF

Risk of Recurrent Venous Thromboembolism and Mortality in Patients With Cancer Incidentally Diagnosed With Pulmonary Embolism: A Comparison With Symptomatic Patients

Paul L. den Exter, José Hooijer, Olaf M. Dekkers, and Menno V. Huisman

Retrospective

N=144 TEP sintomático

N=51 TEP incidental

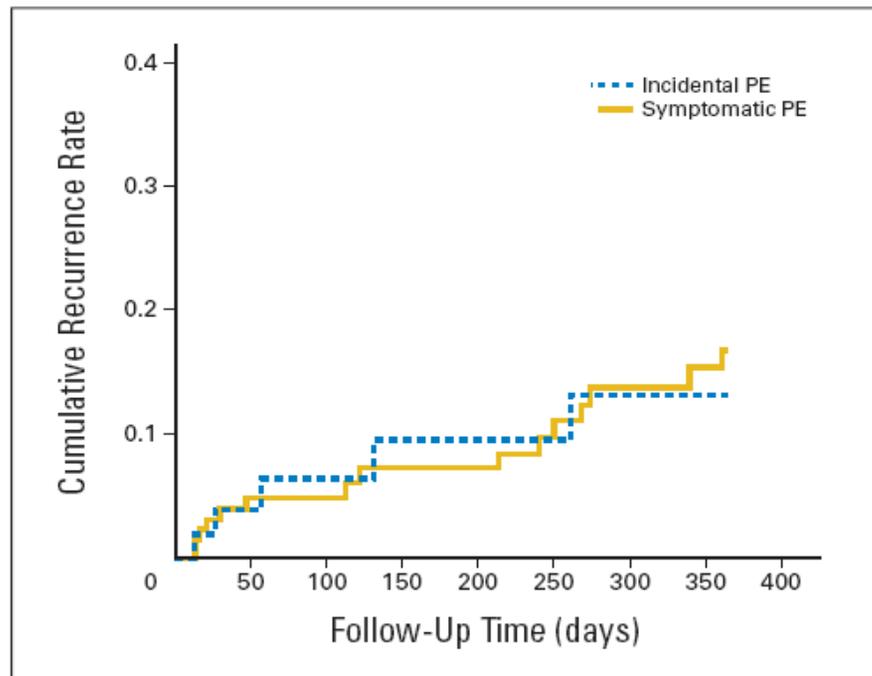


Fig 1. Cumulative risk of recurrent venous thromboembolism for patients with cancer with incidental versus symptomatic pulmonary embolism (PE; $P = .77$).

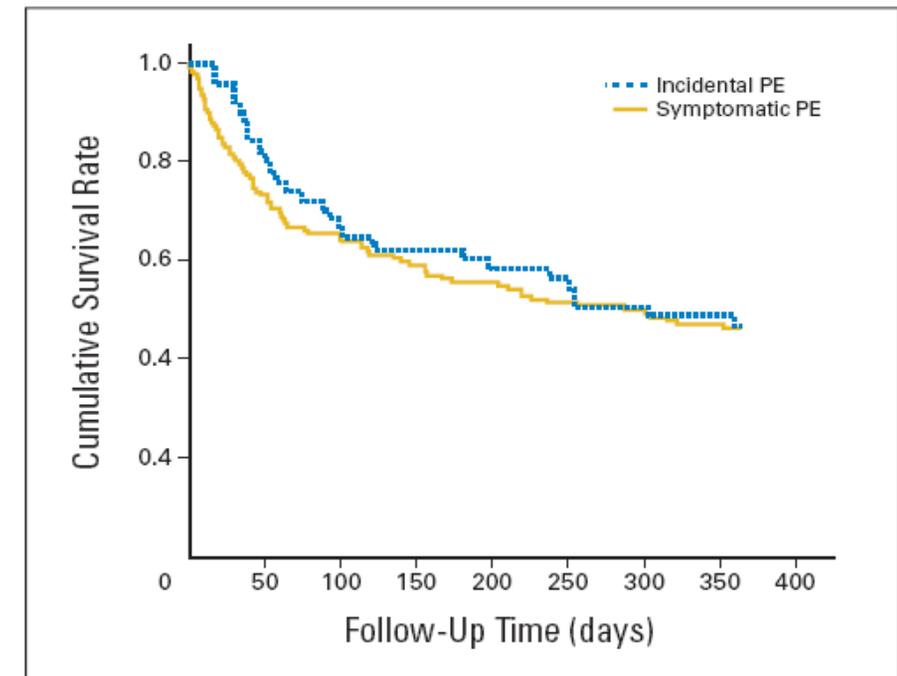


Fig 2. Kaplan-Meier cumulative survival curve until overall death for patients with cancer with incidental versus symptomatic pulmonary embolism (PE; $P = .70$).

Prognostic relevance of an asymptomatic venous thromboembolism in patients with cancer

F. DENTALI,* W. AGENO,* M. G. PIERFRANCESCHI,† D. IMBERTI,† A. MALATO,‡ C. NITTI,§ A. SALVI,§ S. SIRAGUSA,‡ A. SQUIZZATO,* J. VITALE* and G. AGNELLI¶

Estudio retrospectivo multicéntrico

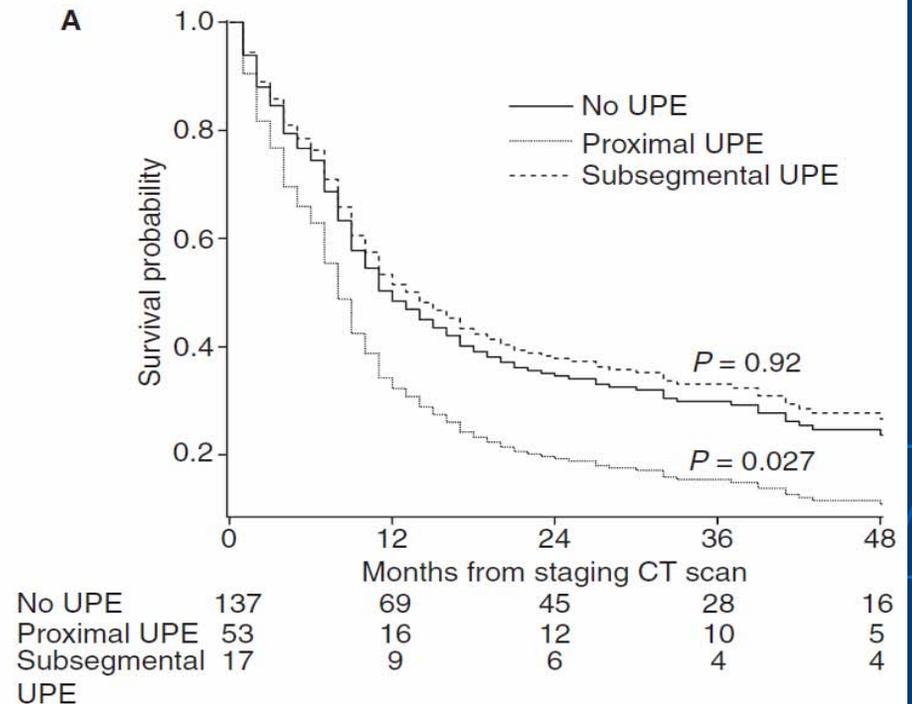
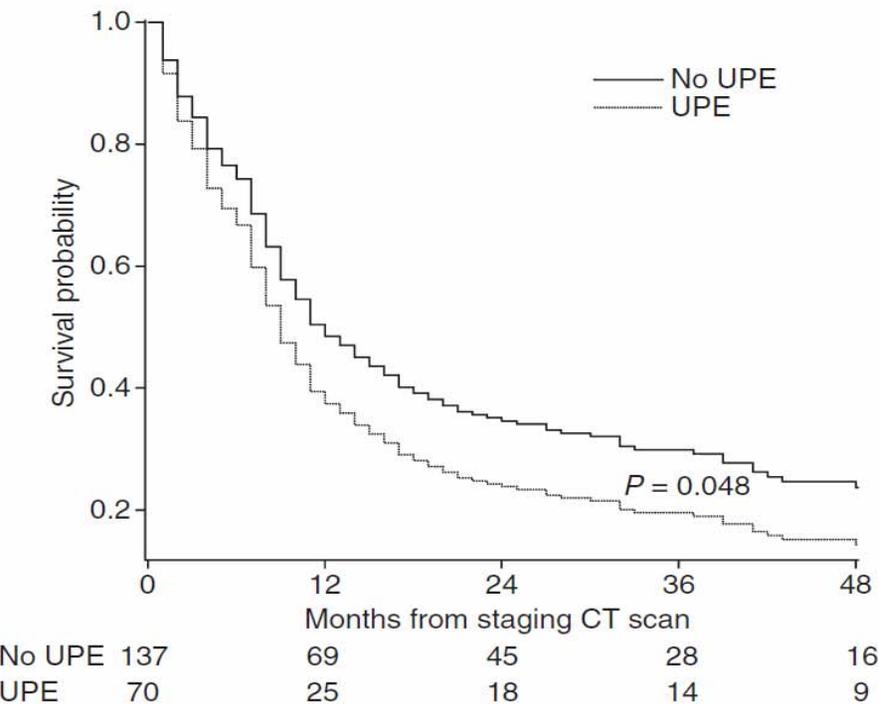
Table 1 Baseline characteristics of included patients

	Asympomatic VTE	Symptomatic VTE	No VTE
Number	60	120	60
Male sex, <i>n</i> (%)	31 (52)	65 (54)	29 (48)
Mean age (SD)	65.8 (10.9)	69.6 (11.5)	68.6 (10.2)
Advanced stage, <i>n</i> (%)	58 (96.6)	112 (93.3)	58 (96.6)
Cancer site	28 gastroenteric	37 gastroenteric	18 gastroenteric
	8 pulmonary	17 pulmonary	14 pulmonary
	6 lymphatic	15 lymphatic	5 lymphatic
	6 breast	16 breast	12 breast
	12 others	35 others	11 others
Venous thrombosis location	37 PE + DVT	20 PE + DVT	–
	9 isolated DVT	96 isolated DVT	
	14 isolated PE	4 isolated PE	
Antithrombotic treatment	44 therapeutic LMWH	94 therapeutic LMWH	
	4 prophylactic LMWH	0 prophylactic LMWH	
	12 LMWH + warfarin	26 LMWH + warfarin	
Cancer treatment	55 chemotherapy	101 chemotherapy	49 chemotherapy
	2 hormonal therapy	7 hormonal therapy	6 hormonal therapy
	15 radiotherapy	30 radiotherapy	12 radiotherapy
	9 erythropoietin	13 erythropoietin	8 erythropoietin
Mortality, <i>n</i> (%)	27 (45)	57 (47.5)	16 (26.7)

ORIGINAL ARTICLE

Undiscovered pulmonary emboli adversely impact survival in patients with cancer undergoing routine staging multi-row detector computed tomography scanning

C. O'CONNELL,* P. RAZAVI,† M. GHALICHI,* S. BOYLE,‡ S. VASAN,§ L. MARK,* A. CATON,¶



Symptoms Adversely Impact Survival Among Patients With Cancer and Unsuspected Pulmonary Embolism

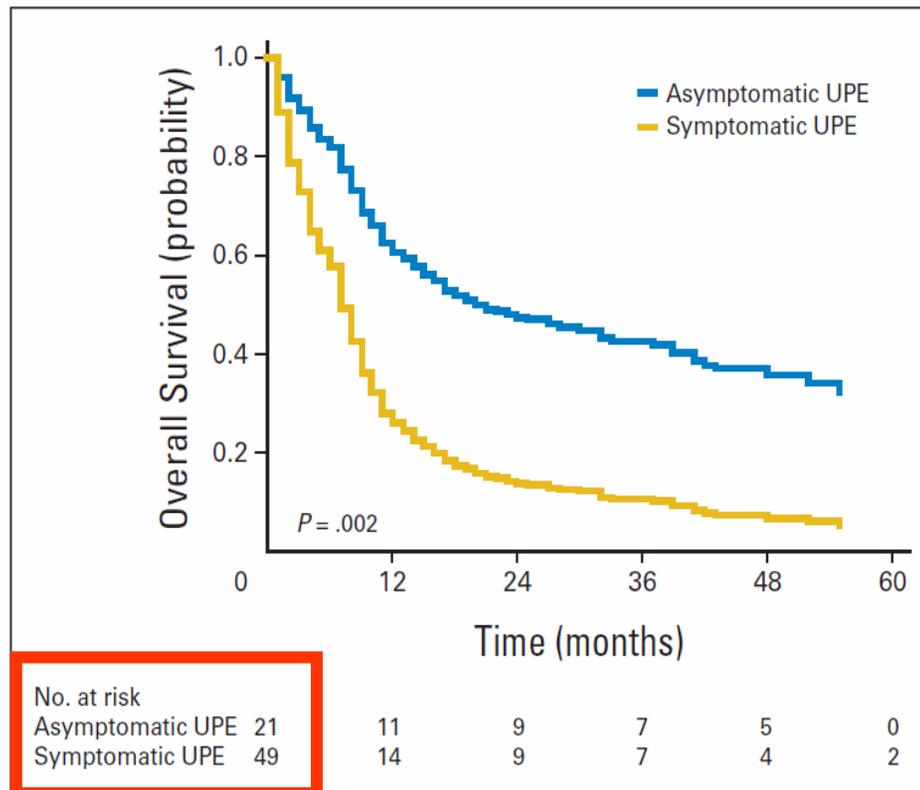
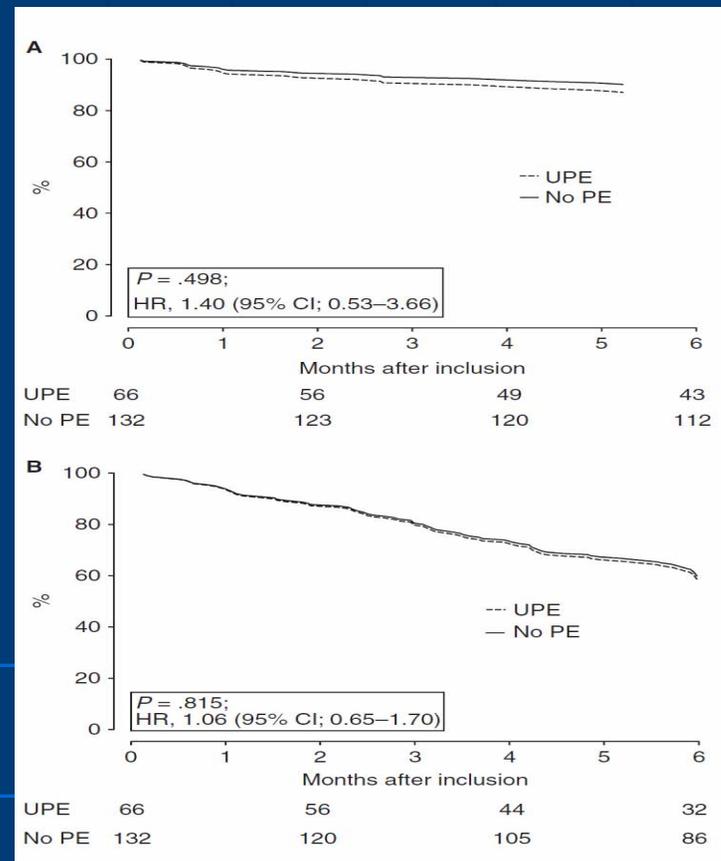
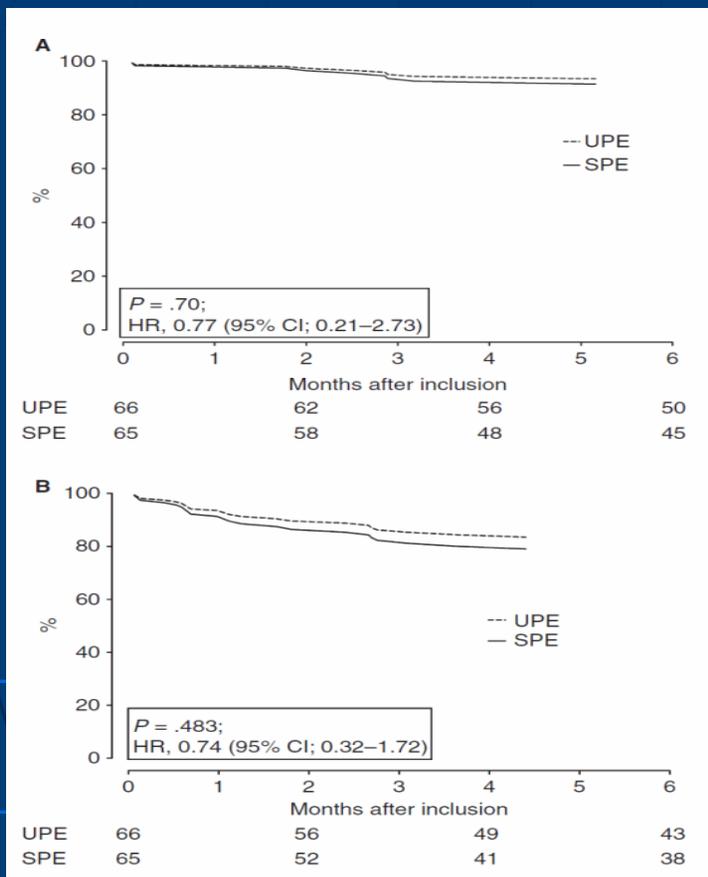


Fig 1. Kaplan-Meier curve for overall survival of patients with asymptomatic versus symptomatic unsuspected pulmonary emboli (UPE).

ORIGINAL ARTICLE

Risk factors and clinical outcome of unsuspected pulmonary embolism in cancer patients: a case-control study

M. SAHUT D'IZARN,* A. CAUMONT PRIM,†‡ B. PLANQUETTE,* M. P. REVEL,§¶ P. AVILLACH,†¶** G. CHATELLIER,†‡¶ O. SANCHEZ*¶†† and G. MEYER*¶††



No diferencias supervivencia TEP incidental vs TEP sintomático
TEP incidental vs cáncer sin TEP

CHEST[®]

Official publication of the American College of Chest Physicians



Antithrombotic Therapy for Venous Thromboembolic Disease: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines (8th Edition)

Clive Kearon, Susan R. Kahn, Giancarlo Agnelli, Samuel Goldhaber, Gary E. Raskob and Anthony J. Comerota

Chest 2008;133:454-545
DOI 10.1378/chest.08-0658

The online version of this article, along with updated information and services can be found online on the World Wide Web at:
http://chestjournal.org/cgi/content/abstract/133/6_suppl/454S

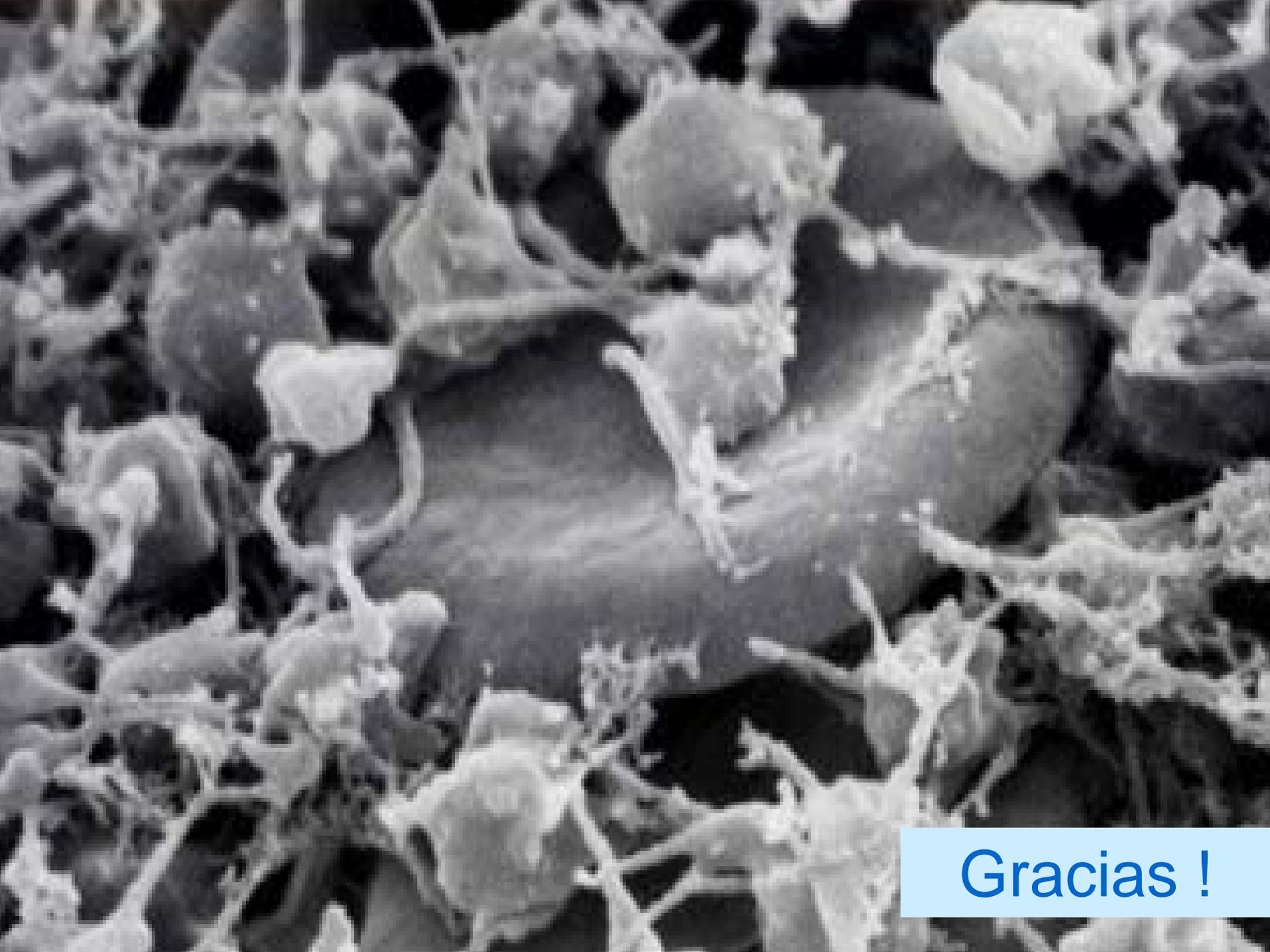
2.6.1. In patients who are unexpectedly found to have asymptomatic DVT, we recommend the same initial and long-term anticoagulation as for comparable patients with symptomatic DVT (Grade 1C).

5.1.6. In patients who are unexpectedly found to have asymptomatic PE, we recommend the same initial and long-term anticoagulation as for comparable patients with symptomatic PE (Grade 1C).

CONCLUSIONES

- **TEP incidental forma de presentación frecuente en el paciente oncológico: \geq mitad TEP en oncología incidentales**
- **TEP incidental NO es pequeño / radiológicamente dudoso**
- **TEP incidental NO equivale a TEP asintomático**
- **Información clínica de estudios retrospectivos y observacionales**
Similar frecuencia de: Complicaciones hemorrágicas
Retrombosis

Curvas de supervivencia similares TEP sintomático / TEP incidental
- **Se recomienda el tratamiento del TEP incidental**
- **Son necesarios estudios prospectivos dirigidos a evaluar el impacto clínico y el tratamiento óptimo del TEP en el paciente oncológico.**



Gracias !