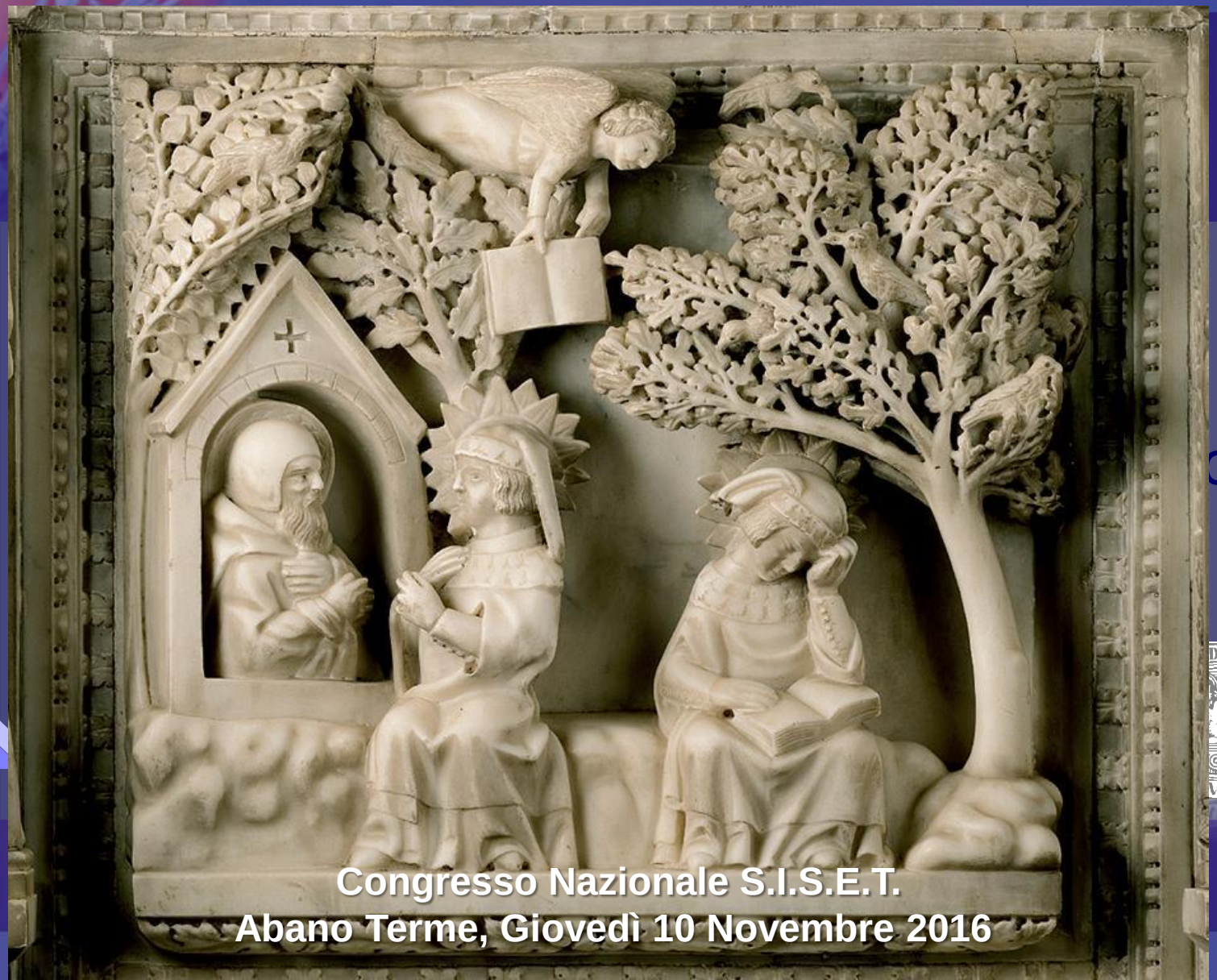
Guida alla comprensione della fibrinolisi e delle terapie fibrinolitiche



Congresso Nazionale S.I.S.E.T.
Abano Terme, Giovedì 10 Novembre 2016

1972. La Sinoviale Emofilica: Aspetti Istopatologici

A. Castello, F. Piovella, Tesi di Laurea, 1972

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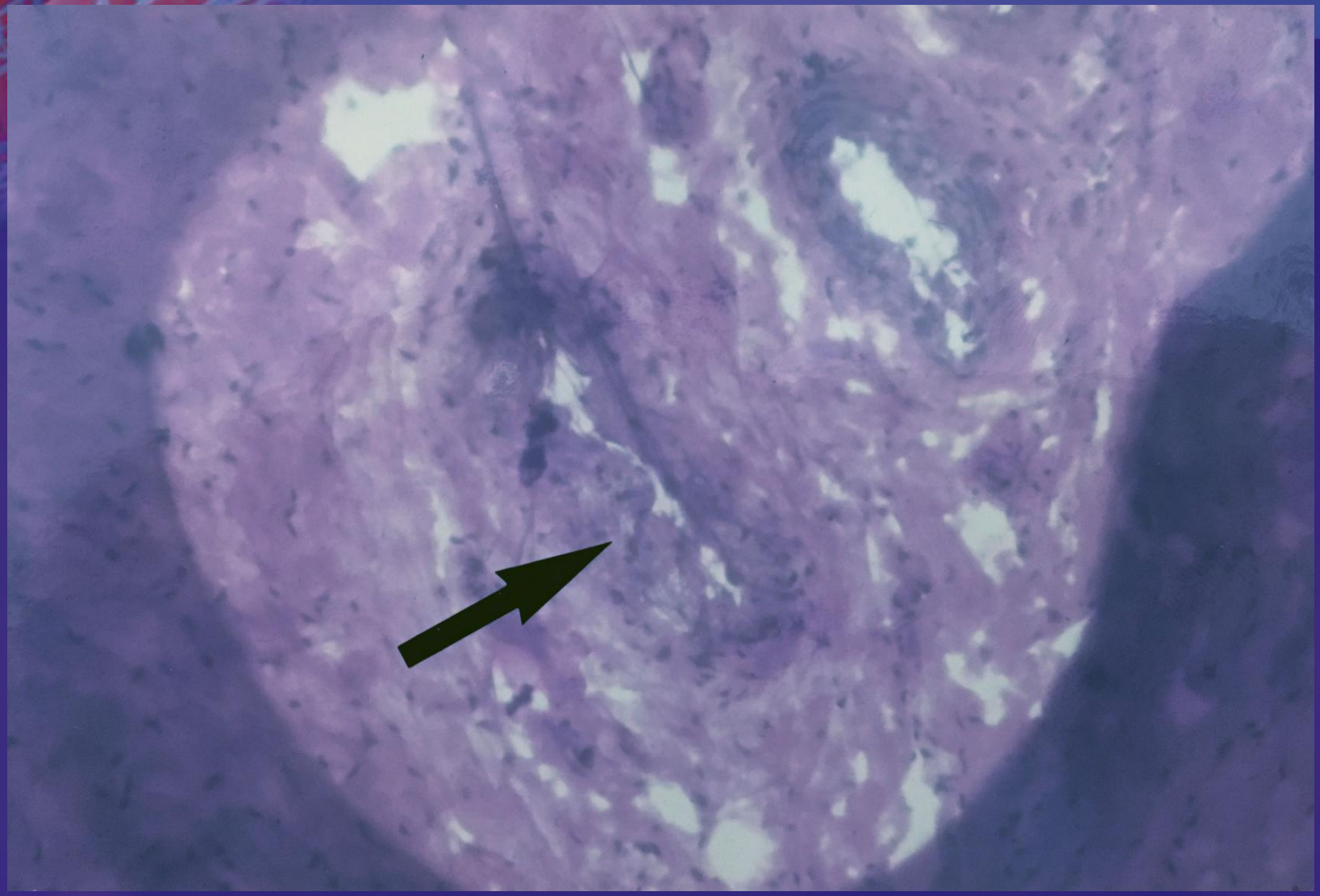

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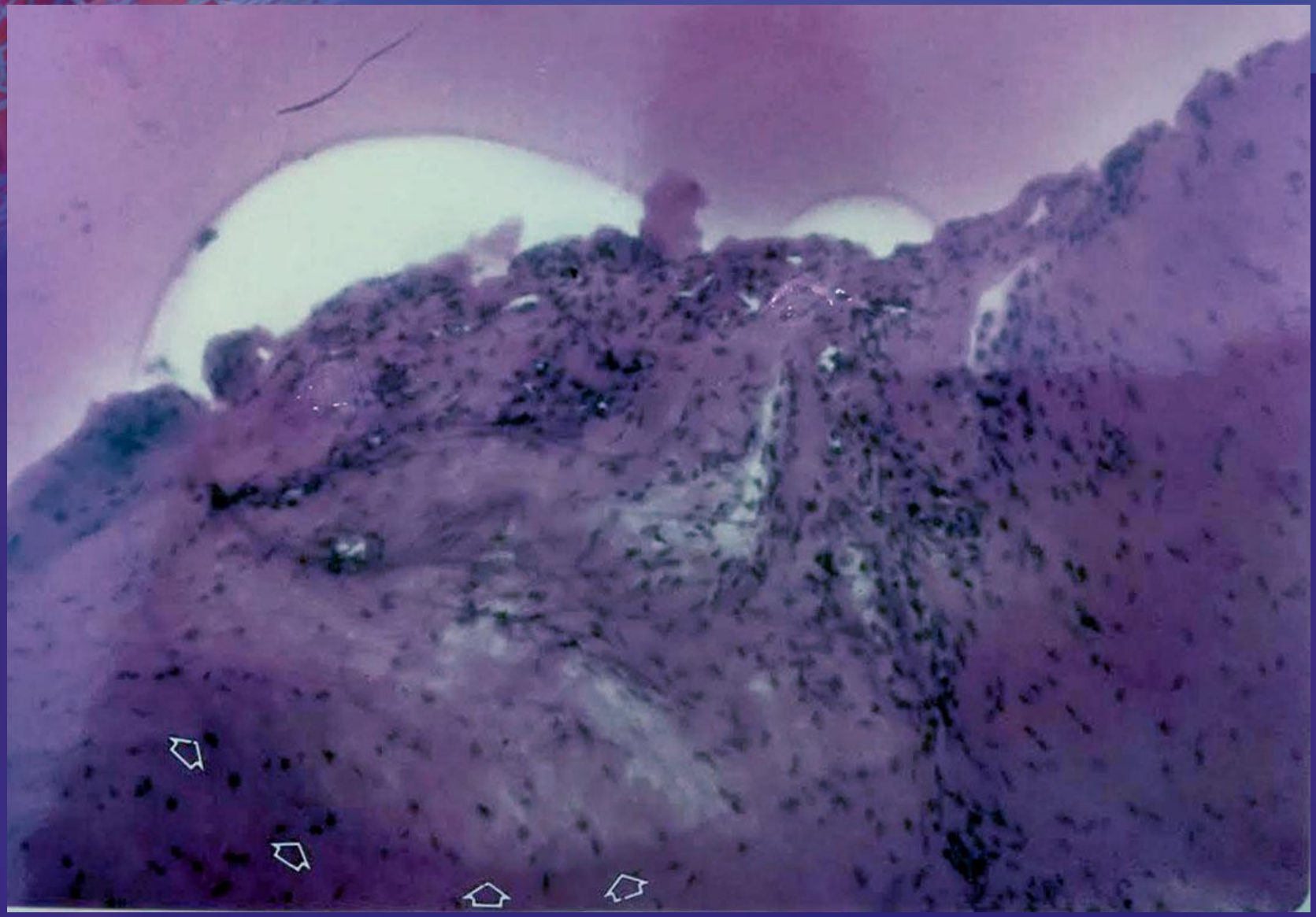

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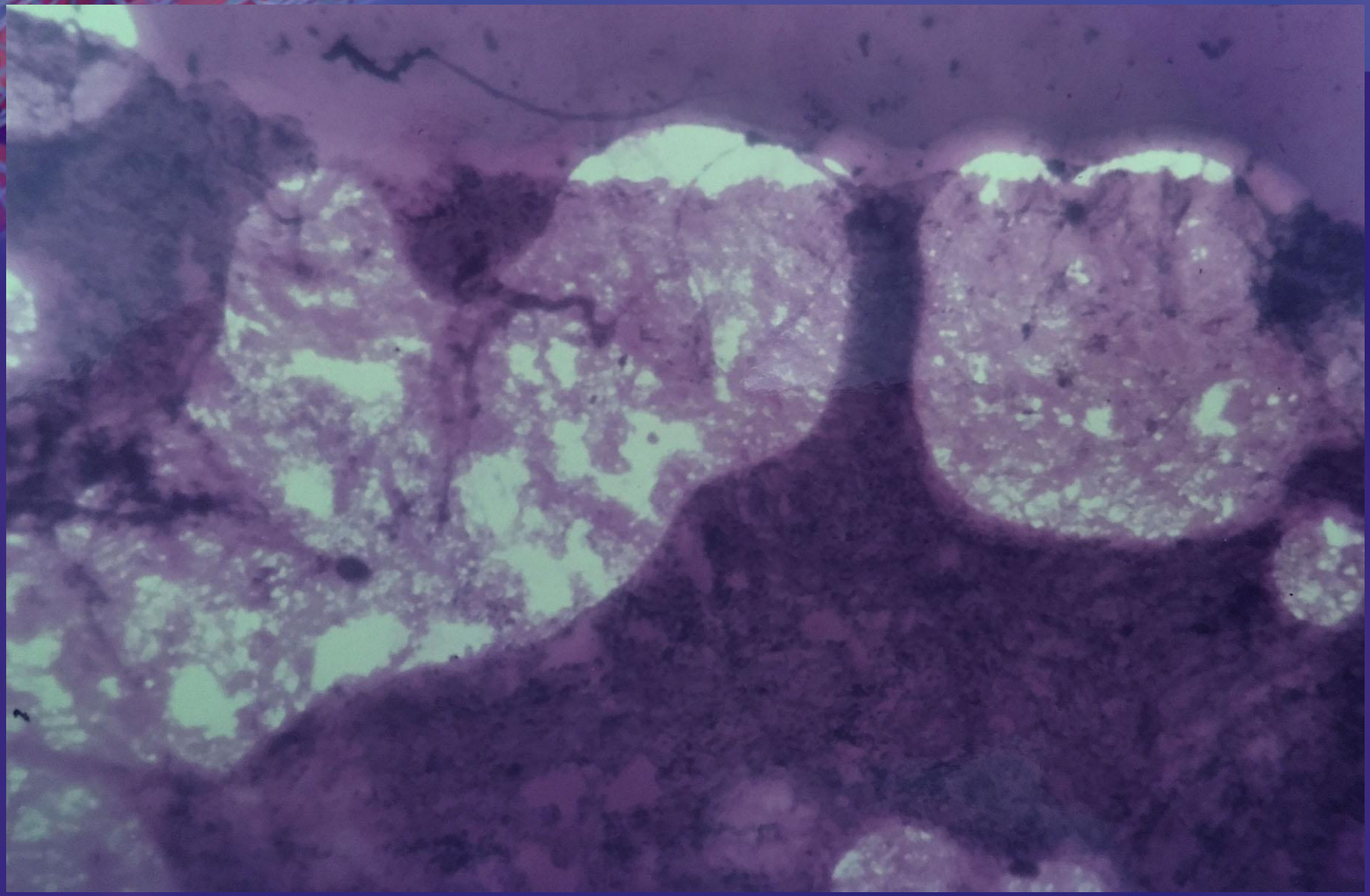

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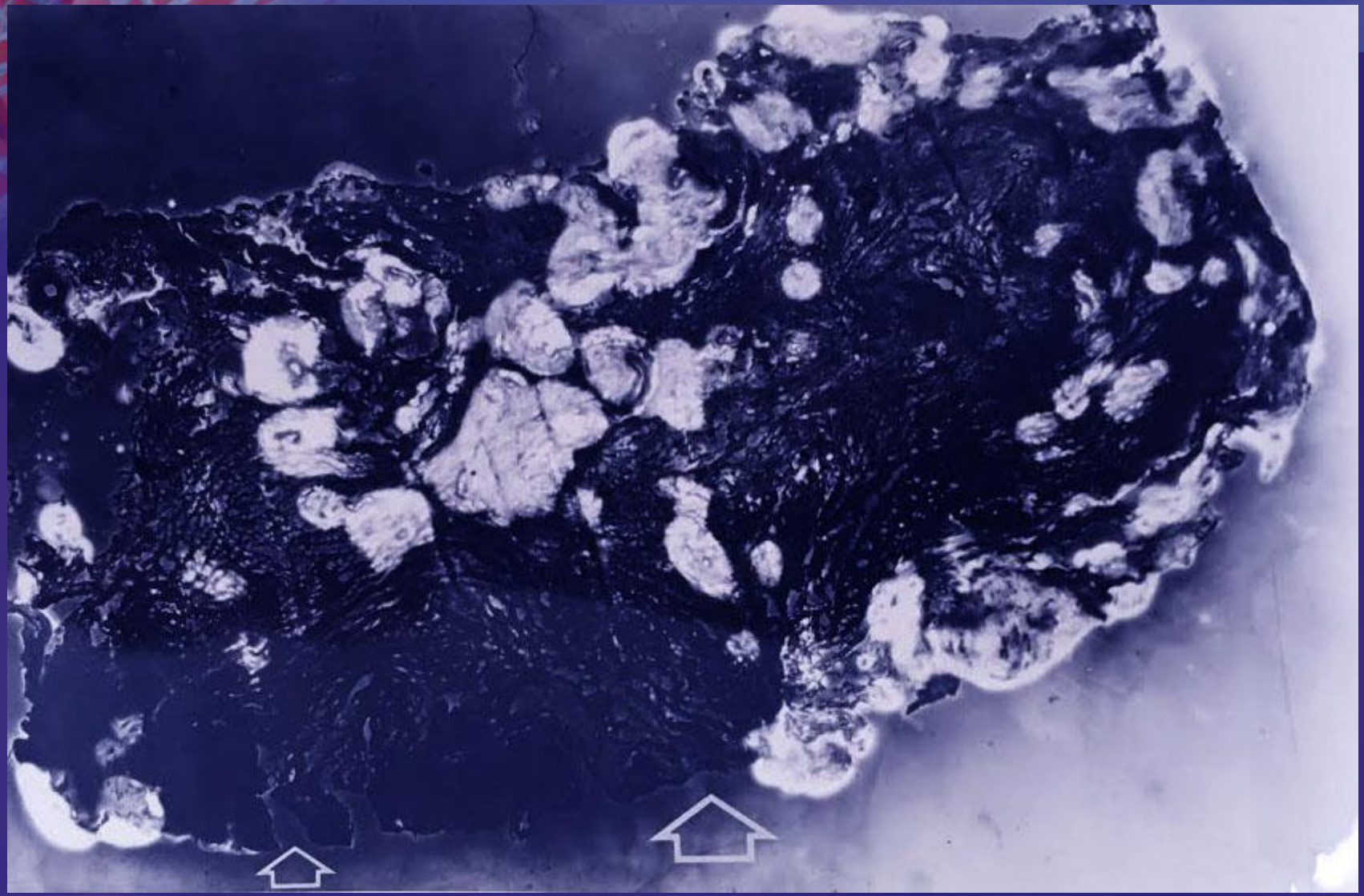

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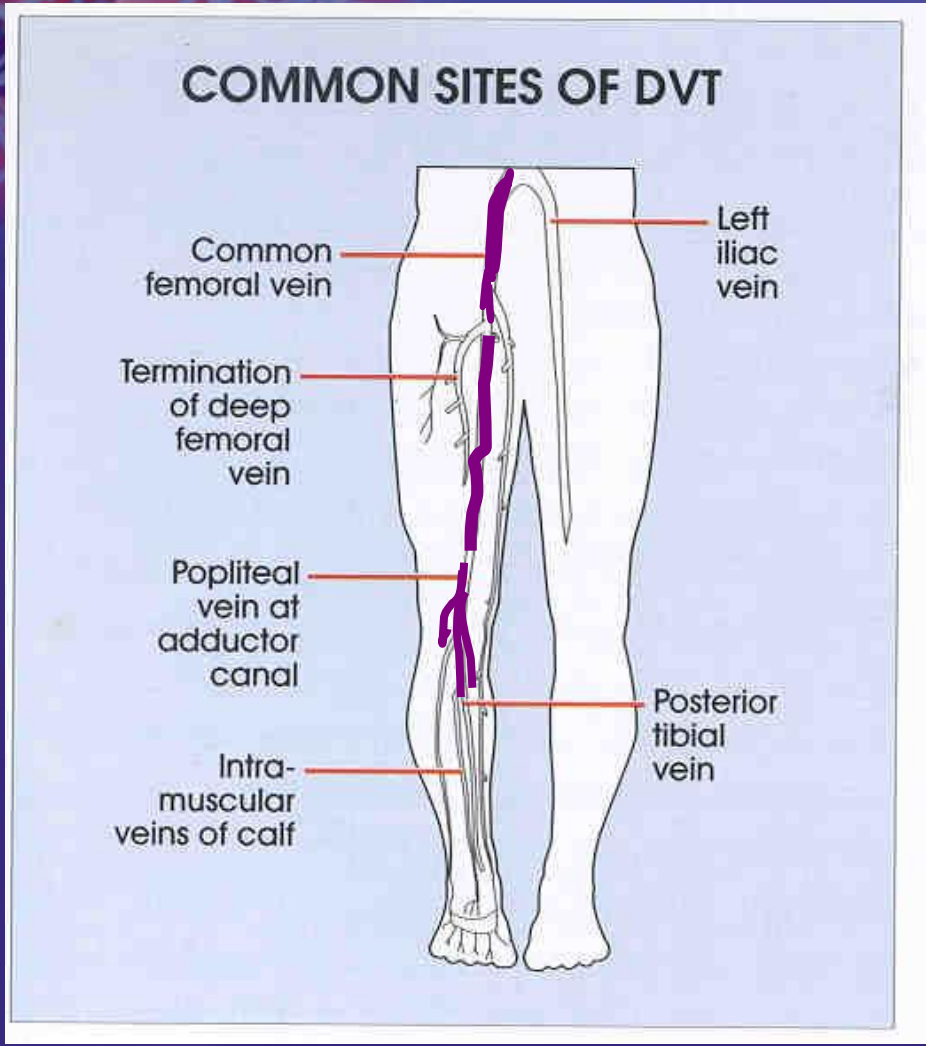
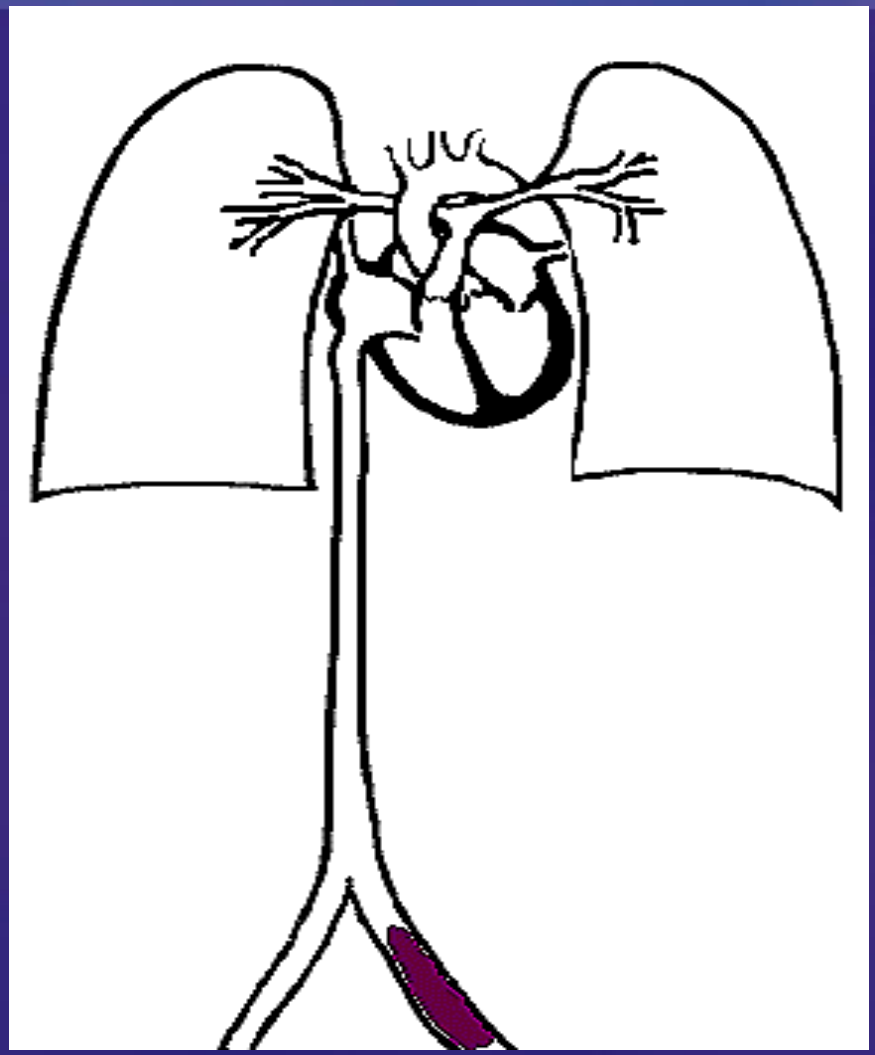
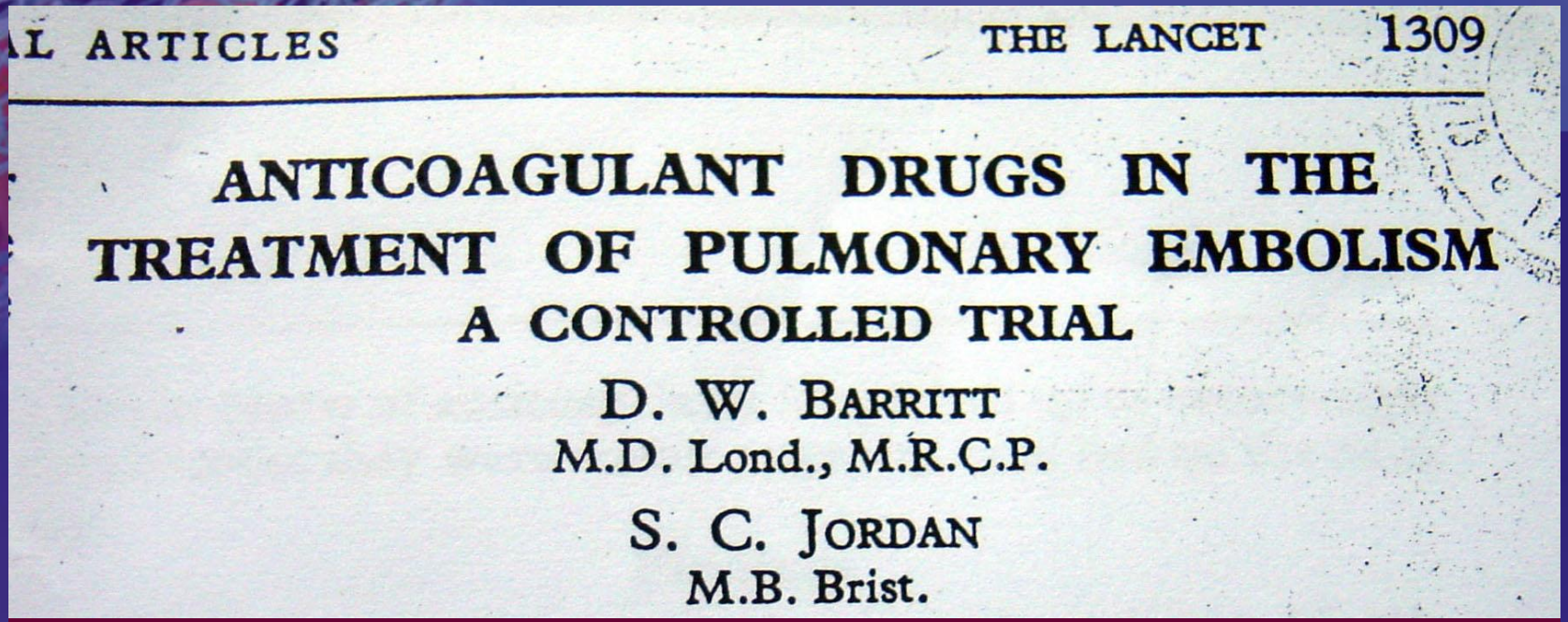
Tromboembolismo Venoso







L ARTICLES THE LANCET 1309

ANTICOAGULANT DRUGS IN THE TREATMENT OF PULMONARY EMBOLISM

A CONTROLLED TRIAL

D. W. BARRITT
M.D. Lond., M.R.C.P.

S. C. JORDAN
M.B. Brist.

	N	fatal PE	non fatal PE
Untreated	19	5 *(26%)*	5 *(26%)*
Treated	16	-	-

Barrit & Jordan, Lancet; June 18, 1960

Antithrombotic treatment in venous thromboembolism

pulmonare has yet been diagnosed in these cases.

The diagnosis of pulmonary embolism can never be established with absolute certainty during life, and there is always a risk of mistakenly treating postoperative pneumonia with anticoagulants. This not only entails additional risk, but also deprives the patient of the benefit of specific treatment. Case 6 shows that the two conditions

Barrit & Jordan, Lancet; June 18, 1960

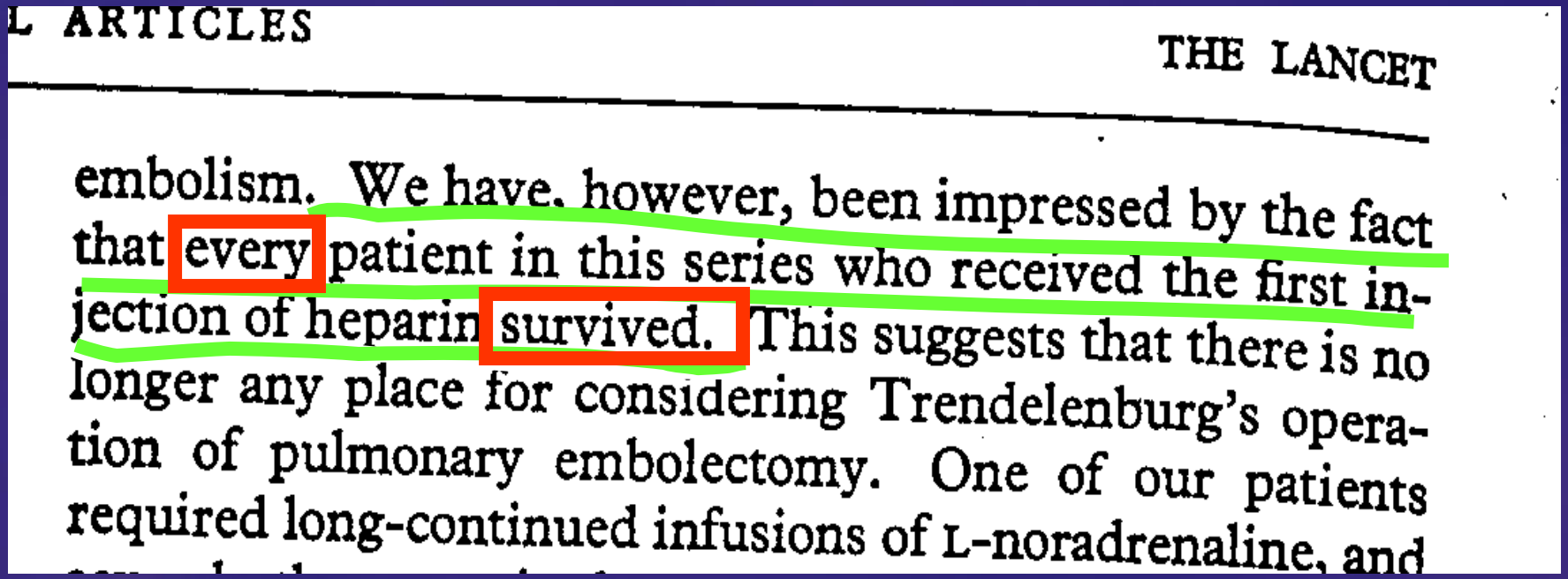
Antithrombotic treatment in venous thromboembolism

series.

The risk of hæmorrhage has made many physicians and surgeons unwilling to use anticoagulants routinely in the treatment of pulmonary embolism on existing evidence. There is some further support for scepticism of the protection afforded by anticoagulants in a report by Marks et al. (1954). They reported favourably on the value of anticoagulants in cases of venous thrombosis but found that it did not reduce the incidence of fatal pulmonary emboli. Once pulmonary embolism has occurred it may appear to be too late for anticoagulants to be effective.

Barrit & Jordan, Lancet; June 18, 1960

Antithrombotic treatment in venous thromboembolism



L ARTICLES THE LANCET

embolism. We have, however, been impressed by the fact that every patient in this series who received the first injection of heparin survived. This suggests that there is no longer any place for considering Trendelenburg's operation of pulmonary embolectomy. One of our patients required long-continued infusions of L-noradrenaline, and

Barrit & Jordan, Lancet; June 18, 1960

Il Trattamento del TEV, 2013

UFH (e.v., s.c., s.c. a dosi fisse)
EBPM
Fondaparinux
Trombolisi
Embolectomia

Antagonisti della vitamina K

Trattamento iniziale

INR 2.0-3.0

INR 2.0-3.0 oppure:
INR 1.5-1.9

Trattamento a lungo termine

Trattamento esteso

≥ 5 giorni

almeno tre mesi

indefinito*

* Con rivalutazione del rapporto rischio/beneficio individuale ad intervalli periodici

Courtesy G. Agnelli

La presentazione clinica della EP

Oligo- o asintomatica

Shock

L’outcome clinico della EP

<1%

Mortalità

>30%

La gestione della EP

UFH, LMWH, Fondaparinux, Dabi, Xabans

Thrombolisi/Embolectomia

Risk stratification

Rapid risk stratification and prompt treatment are paramount because of the high mortality rate associated with PE.

Although clinical severity is usually associated with the size of the embolus and the degree of vessel occlusion, anatomically massive PE is not synonymous with clinically massive PE.

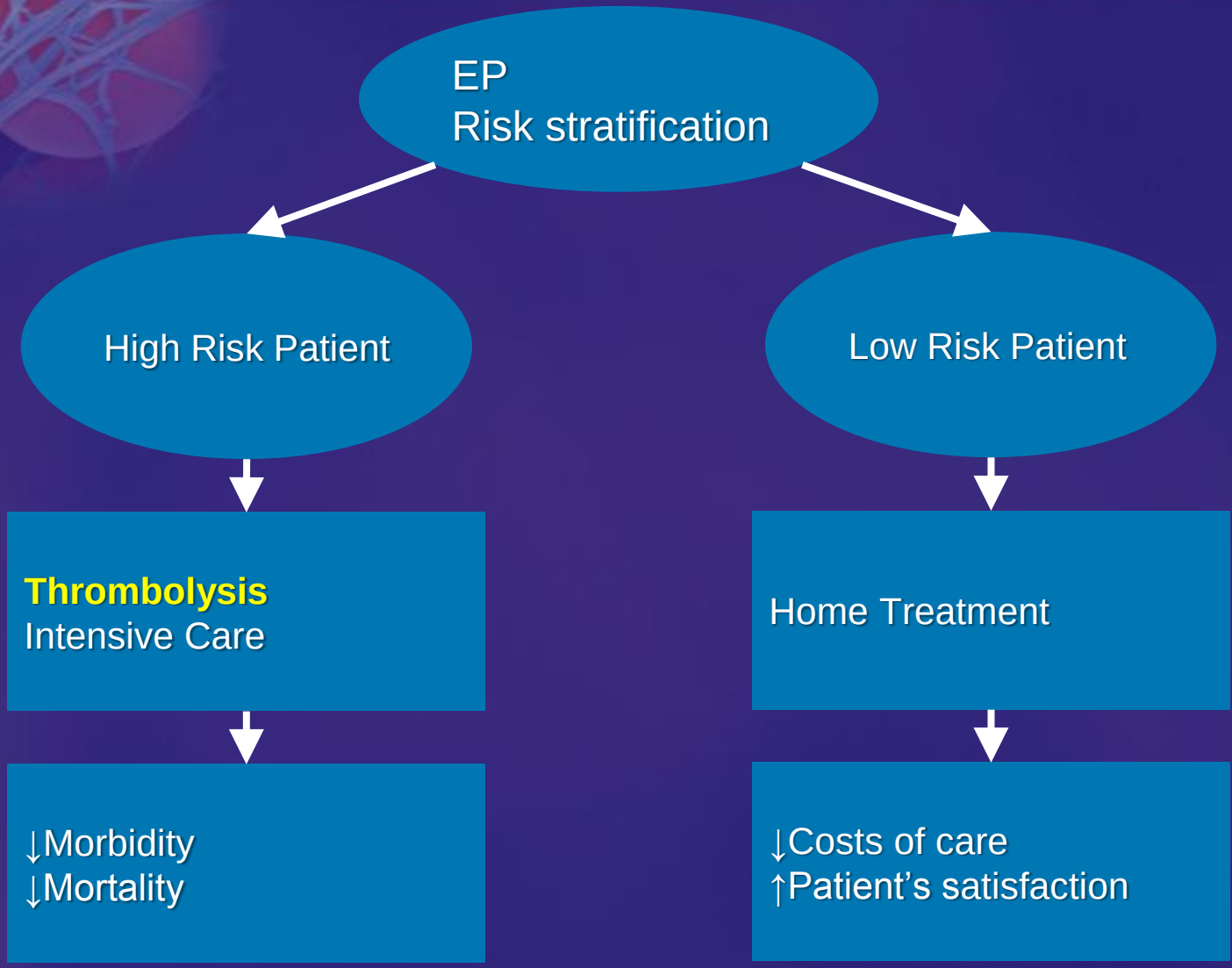
Anatomically massive PE can sometimes occur with few signs or symptoms, whereas co-morbidities, age and medical status of the patient may transform a relatively small embolus, involving limited lung segments, into a clinically serious condition.

How to Assess the Disease Severity in a Patient with Pulmonary Embolism

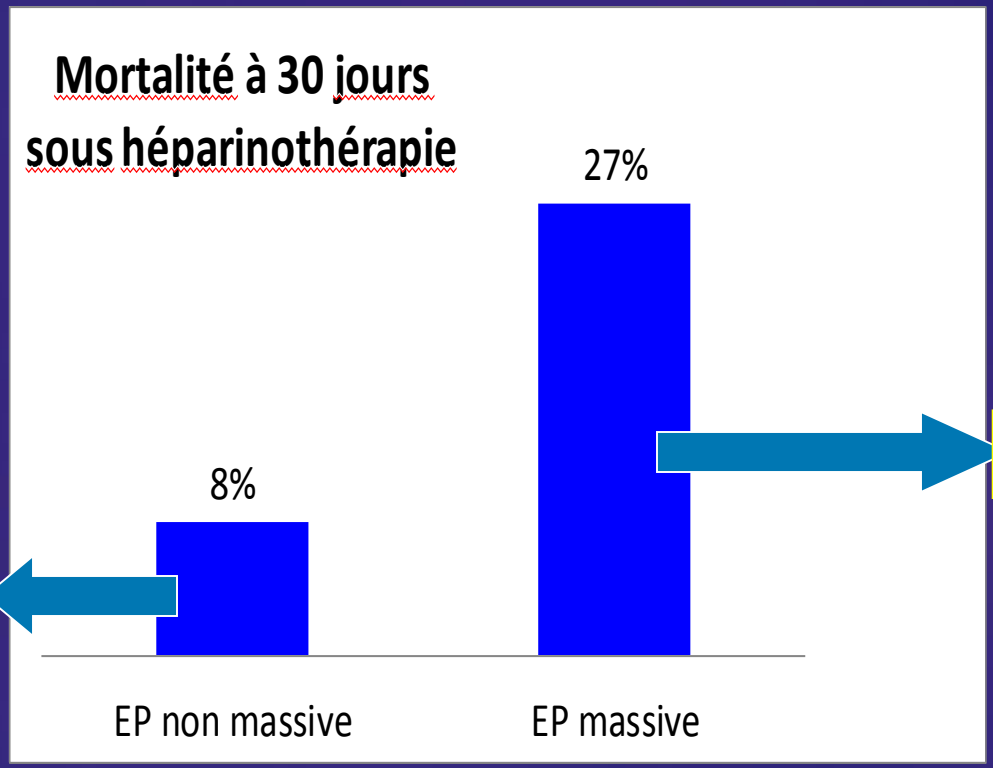
RISK STRATIFICATION

- Hemodynamic status
- Right Ventricular Dysfunction (Ultrasound♥, angio-scanner)
- Biological markers ♥ (Troponine, Brain Natriuretic Peptide (BNP)/NT-proBNP)
- Clinical scores

Risk Stratification: potential impact on treatment



Hemodynamic Status



Thrombolysis

Intensive care

In-hospital anticoagulation

Home treatment

Thrombolysis

Ibrahim & Aujesky, Arch Intern Med 2008

Right Ventricular Dysfunction (Ultrasound♥, angio-scanner)

Meta-analysis including 5 prospectives studies with 505 hemodynamically stable patients (44% of the patients had right ventricular dysfunction, VD+)

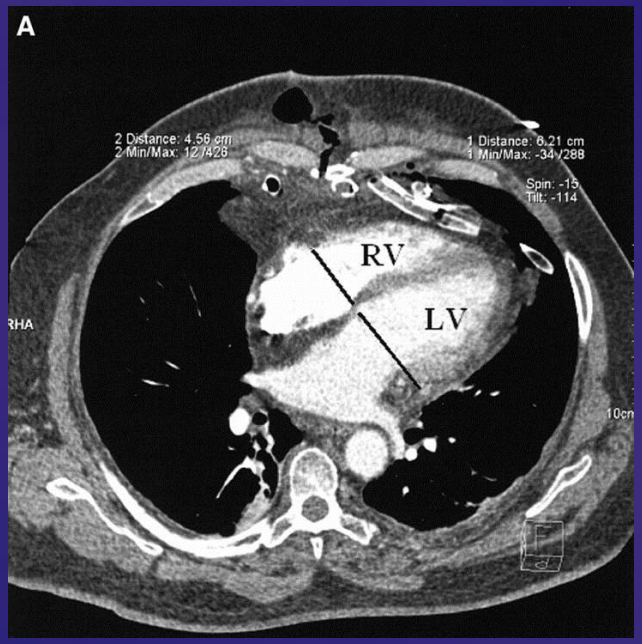
	VD+	VD-
Absolute Mortality	10.0%	3.0%
Mortality Risk	OR 2.5 (95% CI: 1.2-5.5)	

Sanchez & Meyer, Eur Heart J 2008

RVD and angio-CT scan

Meta-analysis including 2 retrospectives studies with 210 hemodynamically stable patients (50% of the patients had right ventricular dysfunction, VD+)

	VD+	VD-
Absolute Mortality	14.0%	6.1%
Mortality Risk	OR 2.3 (95% CI: 0.9-6.0)	



Sanchez & Meyer, Eur Heart J 2008

RVD: Brain natriuretic peptides (BNP/NT-proBNP)

Meta-analysis including 7 prospectives studies with 442 hemodynamically stable patients (39% of the patients with BNP / NT-proBNP +)

	BNP+	BNP –
Absolute Mortality	18.1%	1.1%
Mortality Risk	OR 9.5 (95% CI: 3.2-28.6)	

	NT-proBNP+	NT-proBNP-
Absolute Mortality	26.0%	6.4%
Mortality Risk	OR 5.7 (95% CI: 2.2-15.1)	

Sanchez & Meyer, Eur Heart J 2008

Lésion myocardique: troponines

Méta-analyse incluant 9 études prospectives avec 1366 patients hémodynamiquement stables (28% des patients avec troponines +)

	Troponines +	Troponines –
Mortalité absolue	16.0%	3.4%
Risque de mortalité	OR 4.3 (95% CI: 2.1-8.5)	

Jiménez & Aujesky, Chest 2009

The PESI scores

The PESI is a reproducible scoring system that predicts 30-day mortality risk based on 11 patient characteristics, including age, male sex, three co-morbid illnesses (cancer, heart failure, chronic lung disease) and six clinical findings (pulse ≥110 beats/minute, systolic blood pressure <100 mm Hg, respiratory rate ≥30 breaths/minute, body temperature <36°C, altered mental status and oxygen saturation <90%). Points are assigned for each of these variables. The original PESI system stratifies patients into five risk classes including very low (≤65 points), low (66–85 points), intermediate (86–105 points), high (106–125 points) and very high (>125 points) risk.

Owing to the complexity of the original PESI, a simplified PESI has been introduced. In the simplified PESI score, one or more of the following variables equates to a high risk of PE: age >80 years, history of cancer or chronic cardiopulmonary disease, high heart rate (pulse ≥110 beats/minute), low blood pressure (systolic blood pressure <100 mm Hg) and arterial oxyhaemoglobin saturation <90%.

Pulmonary Embolism Severity Index (PESI)

Facteur de prédiction	Points
Age	Age (ans)
Sexe masculin	+10
Cancer	+30
Insuffisance cardiaque	+10
Maladie respiratoire chronique	+10
Température <36°C	+20
Pouls ≥110/minute	+20
TA systolique <100 mm Hg	+30
Fréquence resp. ≥30/minute	+20
Etat de conscience altéré	+60
SO2 <90%	+20

Points	Classe de risque	Mortalité à 30 jours
≤ 65	I	1.1%
66-85	II	3.1%
86-105	III	6.5%
106-125	IV	10.4%
≥ 125	V	24.5%

Risque faible: mortalité =2.6%

Aujesky & Roy, Am J Resp Crit Care Med 2005