

# Enjeu du bon diagnostic de la détresse respiratoire

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# Aucun lien d'intérêt

Roche Diagnostics  
Abbott  
Novartis  
Boehringer Ingelheim  
AstraZeneca  
Novartis

NOVOTEL  
MONTE CARLO  
MONACO

**Emc<sup>2</sup>** ❖❖

EMERGENCY AND  
MASTER CLASS  
IN MONTE-CARLO

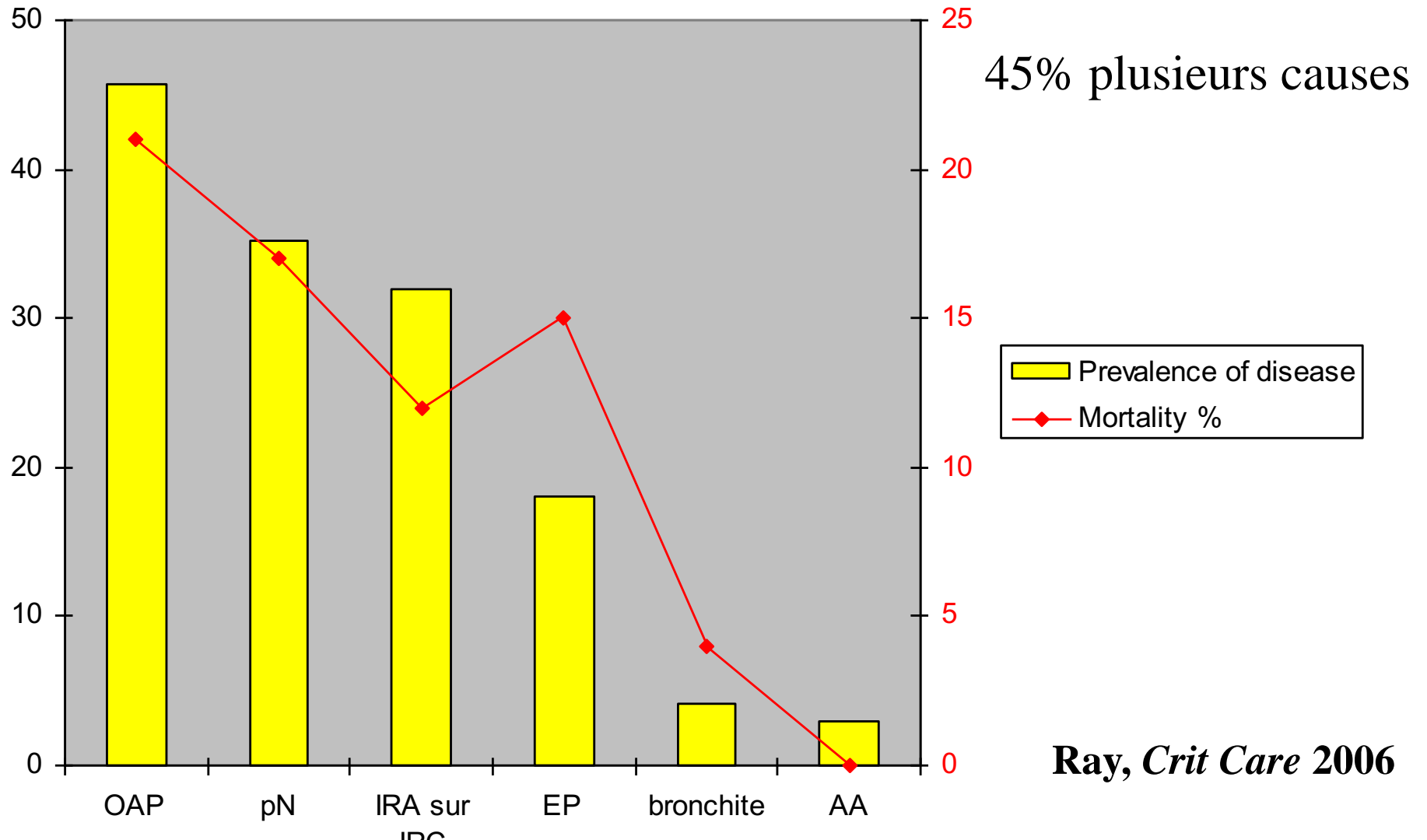
**À VOS AGENDAS !**  
10 | 11  
SEPTEMBRE **2020**

**COMITÉ SCIENTIFIQUE**  
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T2E  
EmC2

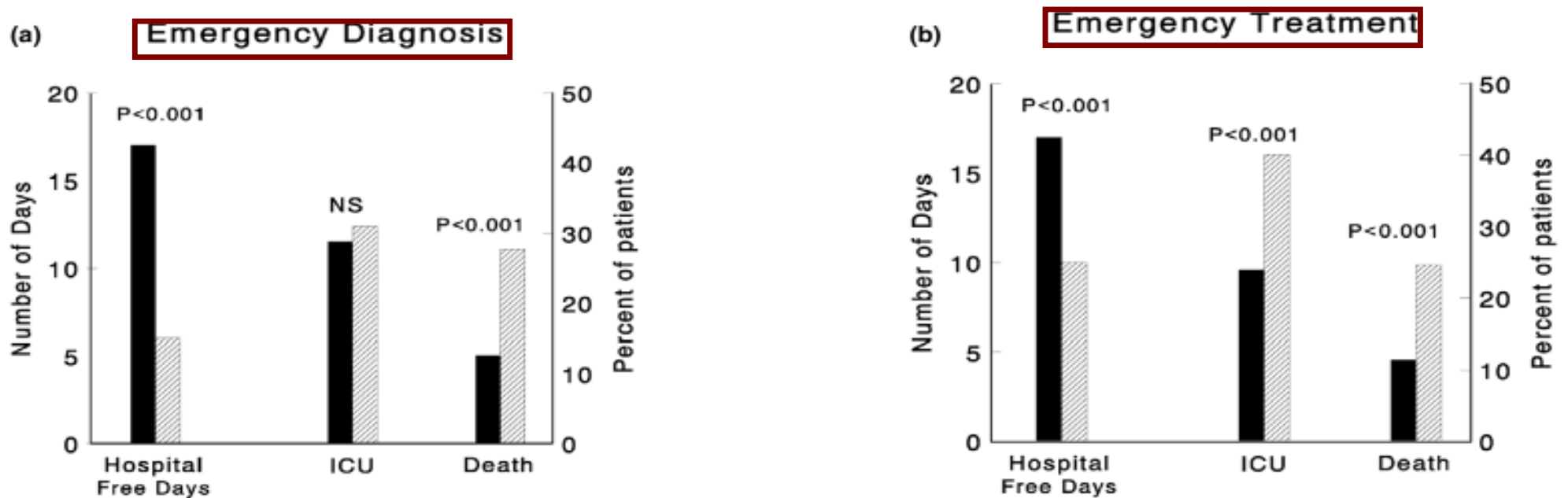
# Epidémiologie de la dyspnée chez les sujets âgés



# 514 patients âgés admis pour dyspnée

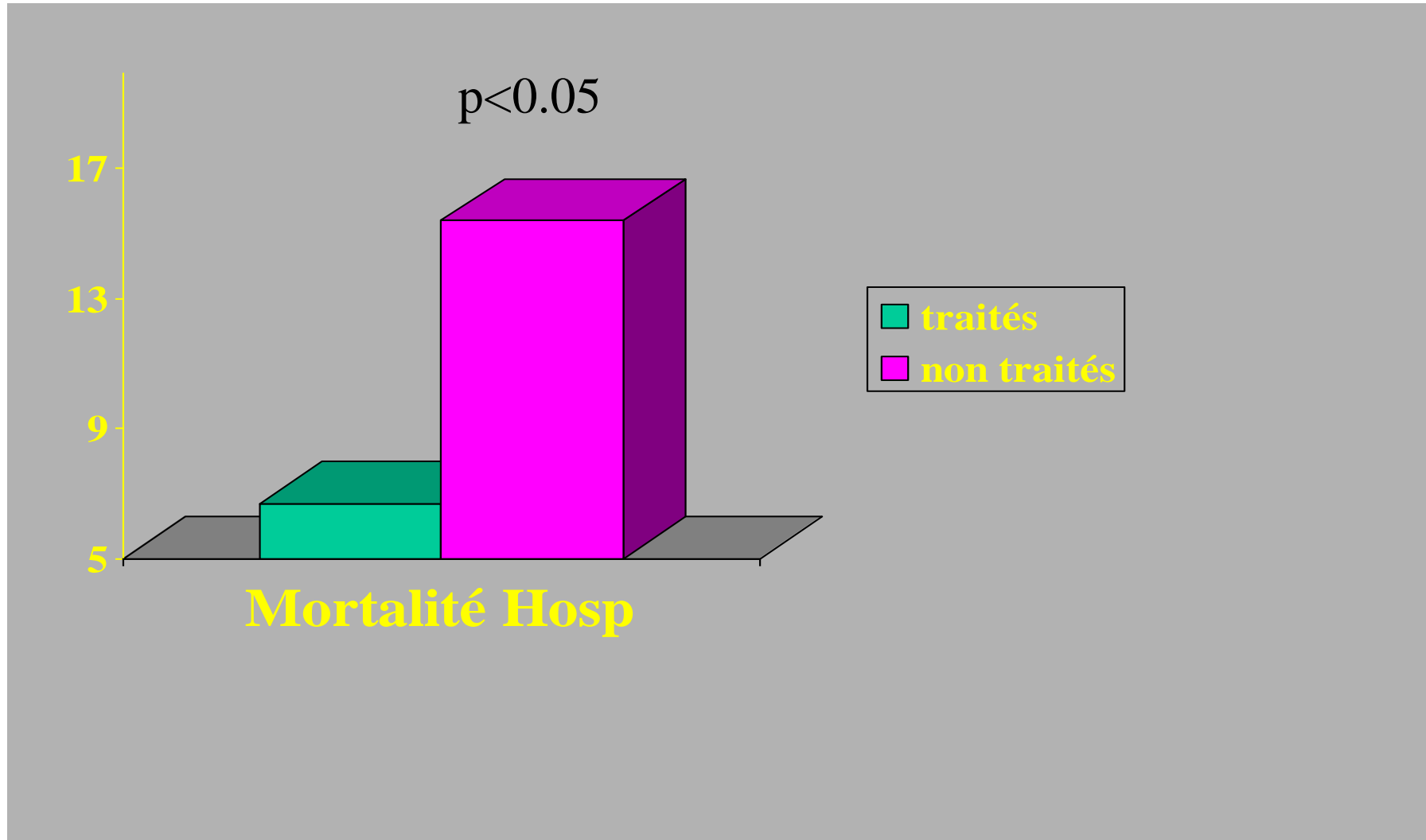
Impact d'un diagnostic erroné, 30% des patients, sur leur pronostic

Figure 1



Effects of an appropriate medical care in the emergency department on prognosis. Effects of an appropriate (full bars) or inappropriate (hatched bars) diagnosis in the emergency department (a) or initial emergency treatment (b) on the number of hospital-free days within 1 month after admission (expressed as median), percentage of patients admitted to intensive care unit (ICU), or mortality. NS, not significant.

# Impact d'un TTT pré-hospitalier adéquat sur la mortalité de l'ICA



## Association Between Prehospital Time Interval and Short-Term Outcome in Acute Heart Failure Patients

> 1000 patients

76 ans

Japon

EMS

Table 2. Predictors of In-Hospital Mortality as a Result of Logistic Regression Modeling

	OR	95% CI	P Value
EMS to ER > 45 min	2.243	1.17 4.313	.015
Symptom onset to call > 3 h	1.614	0.904 2.881	.105
Call to EMS arrival > 15 min	1.325	0.436 4.025	.620
Male subjects	0.726	0.421 1.253	.255
SBP < 90 mm Hg	2.904	1.097 7.688	.032
SBP 90–130 mm Hg	3.280	1.952 5.514	<.001
Killip 4	1.965	0.843 4.580	.118
JCS $\geq$ 1	2.189	1.264 3.792	.005
Valve disease	0.831	0.442 1.562	.565
Age classification*	1.501	1.220 1.847	<.001
EF < 30%	1.086	0.570 2.071	.802
EF $\geq$ 45%	0.687	0.370 1.276	.235
Non-CCU admission	0.874	0.423 1.808	.716

# BNP et étude d'impact sur la morbi-mortalité

## Critères de jugement

**Table 2. End Points.\***

End Point	B-Type Natriuretic Peptide Group (N=225)	Control Group (N=227)	P Value
Time to treatment — min			0.03†
Median	63	90	
Interquartile range	16–153	20–205	
Time to discharge — days			0.001†
Median	8.0	11.0	
Interquartile range	1.0–16.0	5.0–18.0	
Hospitalization — no. (%)	169 (75)	193 (85)	0.008
Admission to intensive care — no. (%)	33 (15)	54 (24)	0.01
Cost of intensive care — \$			0.07
Median	874	1,516	
95% Confidence interval	423–1,324	989–2,043	
Total treatment cost — \$			0.006
Median	5,410	7,264	
95% Confidence interval	4,516–6,304	6,301–8,227	
In-hospital mortality — no. (%)	13 (6)	21 (9)	0.21‡
30-day mortality — no. (%)	22 (10)	28 (12)	0.45‡
30-day readmission rate — no. (%)	26 (12)	23 (10)	0.63

\* The time to treatment was defined as the interval from presentation at the emergency department to the initiation of the appropriate therapy according to the final discharge diagnosis.

† The Mann–Whitney U test was used.

‡ Fisher's exact test was used.

**Durée d'Hosp.** 8 vs 11 jours \*

**% Hosp.** 75% vs 85% \*\*

**USI** 15% vs 24 % \*

**Prise en charge** 5410\$ vs 7264\$ \*

**USI** 874\$ vs 1516\$

**Hôpital :** 6% vs 9%

**A 30 jours :** 10% vs 12%

**À 30 jours** 10% vs 12%

Hospitalisation

Coûts

Mortalité

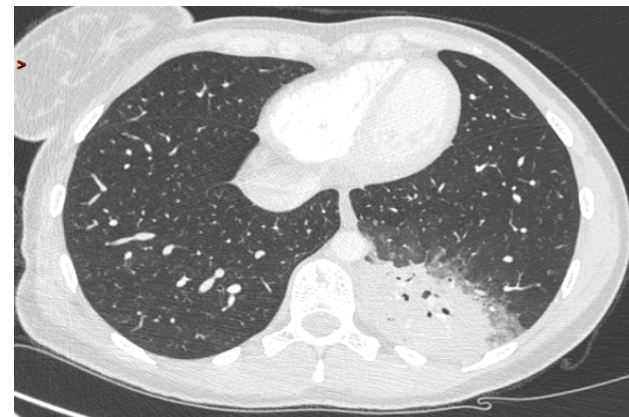
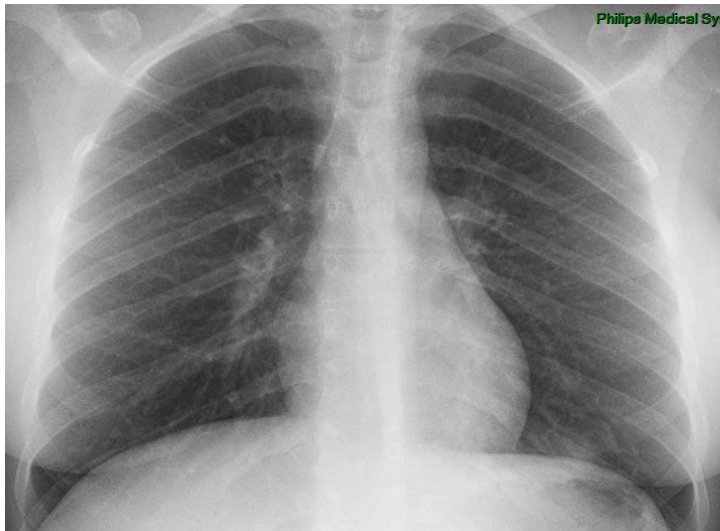
Readmission

# Early Chest Computed Tomography Scan to Assist Diagnosis and Guide Treatment Decision for Suspected Community-acquired Pneumonia

American Journal of Respiratory and Critical Care Medicine Volume 192 Number 8 | October 15 2015

**Table 3.** Radiologic Probability of CAP in ESCAPED Study Patients with Chest Radiograph and CT Scan Local Interpretation

Parenchymal Infiltrate on Chest Radiograph	Chest CT Scan Probability of CAP		Total
	High or Intermediate*	Low or Ruled Out*	
Yes	132	56	188 (61.1%)
No	40	80	120 (38.9%)
Total	172 (55.8%)	136 (44.2%)	308 (100%) <sup>†</sup>



Dans > 30% des cas, quand on pense qu'il y a une pneumonie, le scanner ne la confirme pas et quand on pense qu'il n'y en a pas, le scanner en affirme une.



# PACSCAN suite

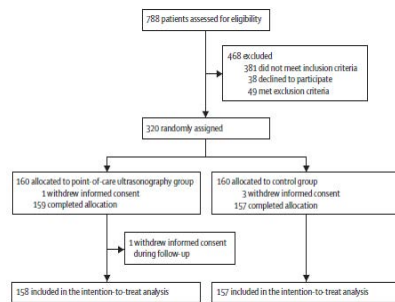
## Modifications thérapeutiques après CT-scan ; n=194 (61,0%)

	Pré CT-scan		Post CT-scan		
Traitement antibiotique	Initiation	n=207	(65%)	Arrêt	n=29 (9%)
				Instauration	n= 51 (16%)
				Modification de classe	n=70 (22%)
Autres traitements				Anti-coagulation (EP)	n=3
				Diurétiques (IC)	n=11
Lieu de prise en charge	Admission	n=250	(78%)	Admission	n=249 (78%)
				Modifications	n=45 (14%)
				- ambulatoire → admis	n=22
				- admis → ambulatoire	n=23

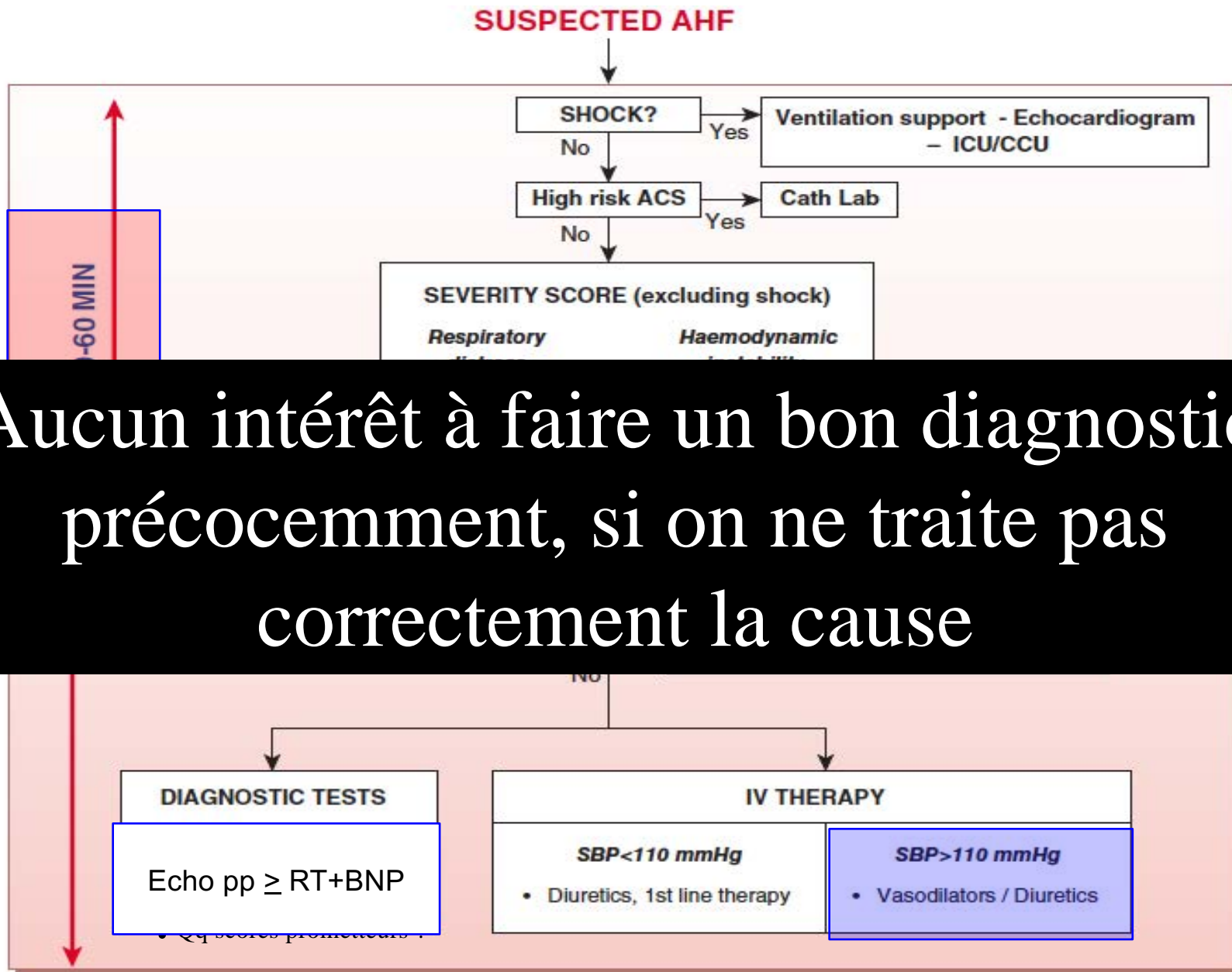
# Point-of-care ultrasonography in patients admitted with respiratory symptoms: a single-blind, randomised controlled trial

*Lancet Respir Med* 2014;  
2: 638-46

Christian B Laursen, Erik Sloth, Annmarie Touborg Lassen, René dePont Christensen, Jess Lambrechtsen, Poul Henning Madsen, Daniel Pilgaard Henriksen, Jesper Romhild Davidsen, Finn Rasmussen



	Point-of-care ultrasonography group (n=158)	Control group (n=157)	
Age (years; median [IQR])	73 (63-81)	72 (59-81)	
Sex			
Vital signs at admission			
Respiratory rate (breaths per min)	20 (16-24)	20 (16-24)	
Saturation (%)	96 (93-98)	96 (92-99)	
Systolic blood pressure (mm Hg)	132 (119-149)	136 (119-155)	
Diastolic blood pressure (mm Hg)	76 (66-87)	79 (66-90)	
Heart rate (beats per min)	96 (82-110)	94 (81-106)	
Temperature (°C)	36.9 (36.5-37.6)	37.0 (36.6-37.6)	
4 h after admission to emergency department			
Patients with correct presumptive diagnoses	139 (88.0%; 82.8 to 93.1)	100 (63.7%; 56.1 to 71.3)	<0.0001
Appropriate treatment ordered*	123 (78%; 71.3 to 84.4)	89 (56.7%; 48.9 to 64.5)	<0.0001
Treatment ordered 4 h after admission to emergency department			
Intravenous fluids	45 (28.5%; 21.4 to 35.6)	21 (13.4%; 8.0 to 18.8)	0.001
Antibiotics	90 (57.0%; 49.2 to 64.8)	71 (45.2%; 37.4 to 53.1)	0.04
Diuretics	28 (17.7%; 11.7 to 23.7)	16 (10.2%; 5.4 to 15.0)	0.05
Anticoagulants	13 (8.2%; 3.9 to 12.6)	4 (2.6%; 0.1 to 5.0)	0.03



Aucun intérêt à faire un bon diagnostic précocement, si on ne traite pas correctement la cause

**Figure 1** Algorithm for the management of acute heart failure (AHF – acute heart failure, VAS - Visual Analogue Scale for dyspnea assessment, RR – respiration rate, SpO2 – blood oxygen saturation, HR – heart rate, ICU – intensive care unit, Cathlab – cardiac catheterisation laboratory, CCU – coronary care unit, IV – intravenous, SBP – systolic blood pressure, cTn – cardiac troponin) therapy. ACS: Acute

# Inadéquation des stratégies diagnostiques des EP

- En France : EMPEDU: 1529 patients suspicion d'EP (116 centres)  
→ 1100 diag. EP éliminé, dont 924 non traités:

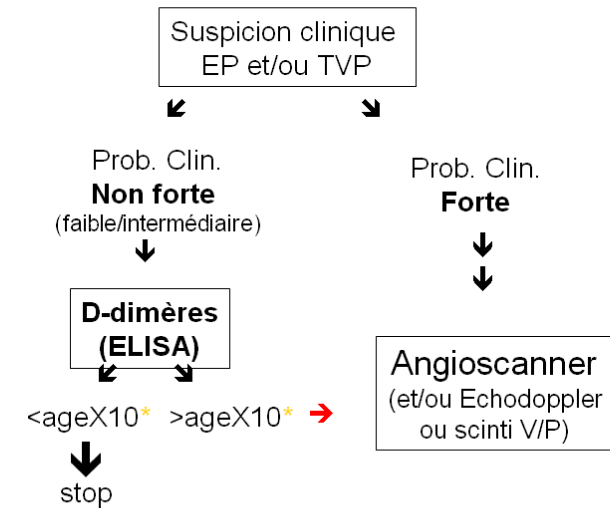
• A 3 mois	Management approprié n=418	Management inapproprié n=506	p
Evènements MTEV	5 (1.2%)	39 (7.7%)	<0.001
- non fatals	2	10	0.045
- fatals (morts sub.)	3	29	<0.001

# Inadéquation des stratégies diagnostiques des EP

Tableau 2 Analyse multivariée de la survenue d'événements thromboemboliques pendant la période de suivi de trois mois

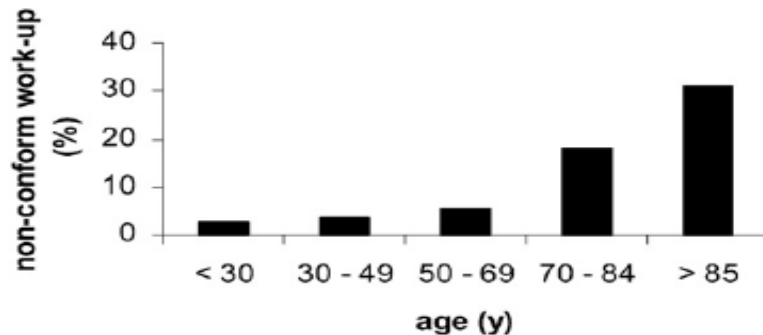
	TE Event	Odds ratio (95% CI)	P value
<b>Group</b>			
Conform	1		
Non-conform	3.3	(1.1-10)	0.03
<b>Surgery</b>			
No	1		
Yes	6.2	(2.3-16.6)	< 0.01
<b>Cancer</b>			
No	1		
Yes	3.6	(1.3-10)	0.02

## Stratégies diagnostiques: résumé...



\* non encore validé

Perrier, Chest 2004  
Stein et al. Radiology 2007



Roy PM, *Annals Internal Medicine* 2006  
 Bosson, *J Maladies Vasculaires* 2007  
 Delerme, *Age Ageing* 2008

# Take home messages

- **Concept nouveau de « *time is...* », en particulier dans l'ICA**
- **Pas de certitude scientifique, mais...**
- **Urgence à faire le bon diagnostic et à donner le bon TTT**