

Indications de la VNI en 2016

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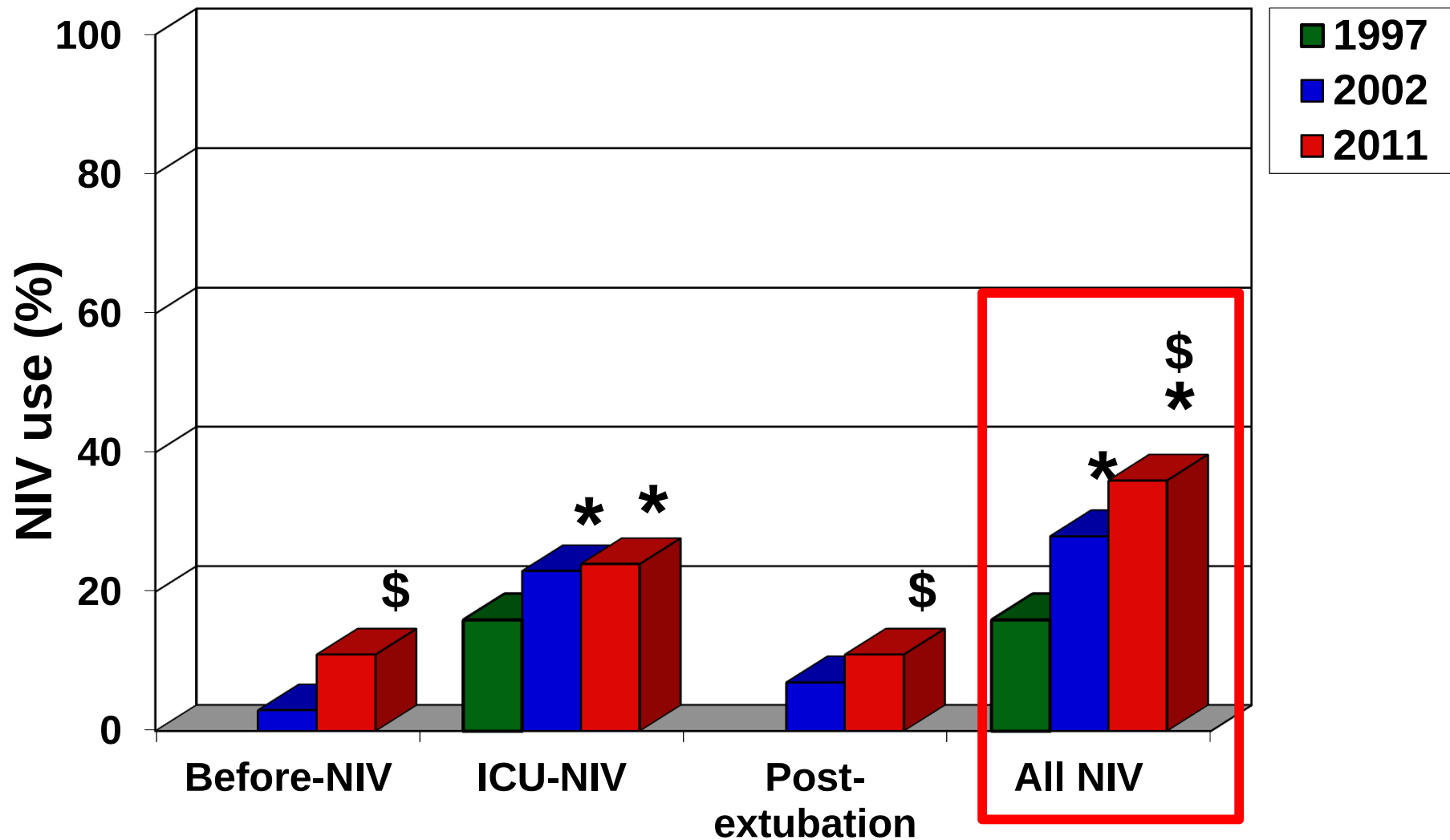


Liens d'intérêt

- Contrats de recherche, investigateur, consultants, interventions, inscriptions à des congrès :
- Maquet
- Covidien, Medtronic
- Dräger
- Philips
- Air Liquide santé
- MSD

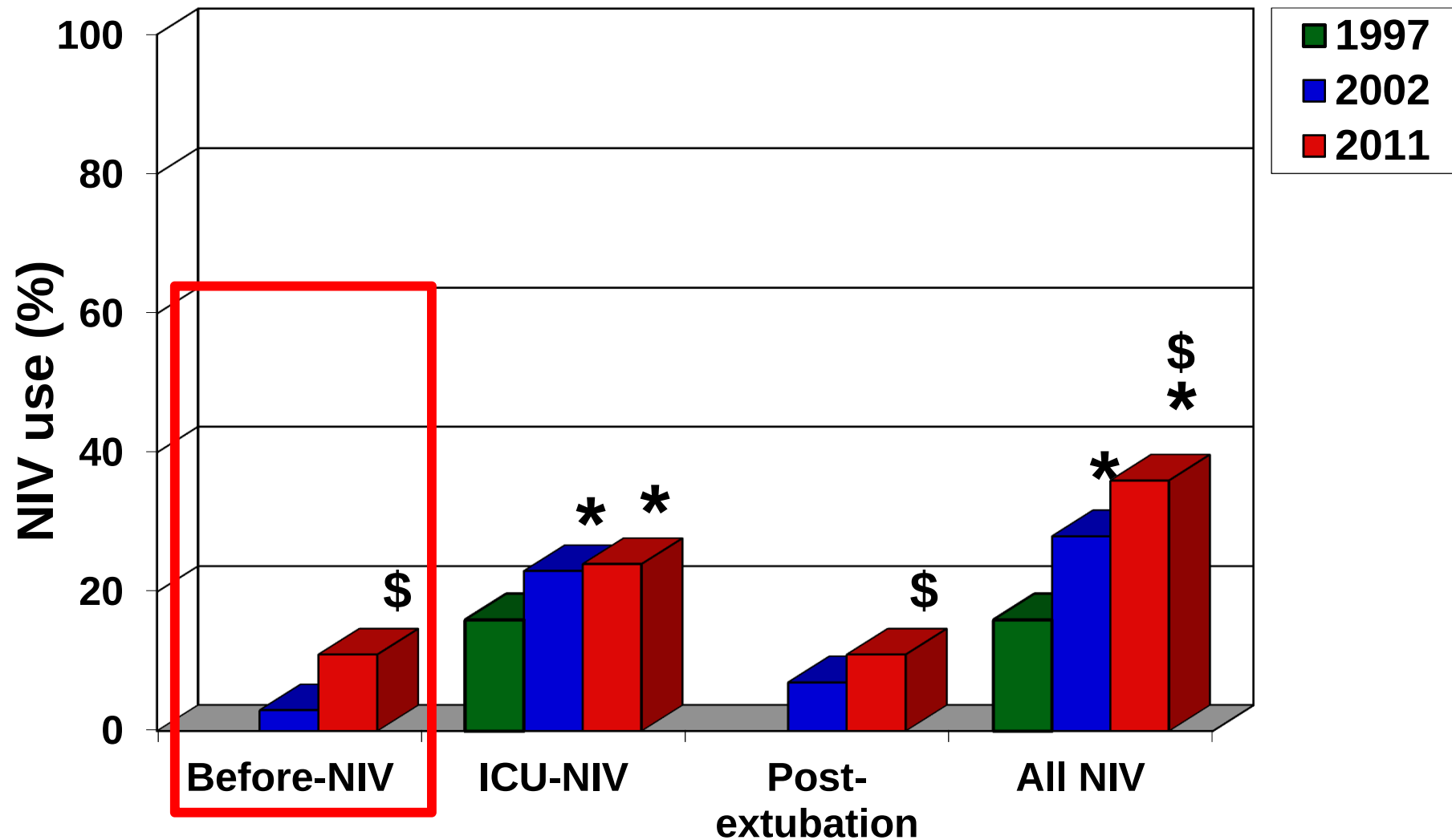
NIV use

Still increasing



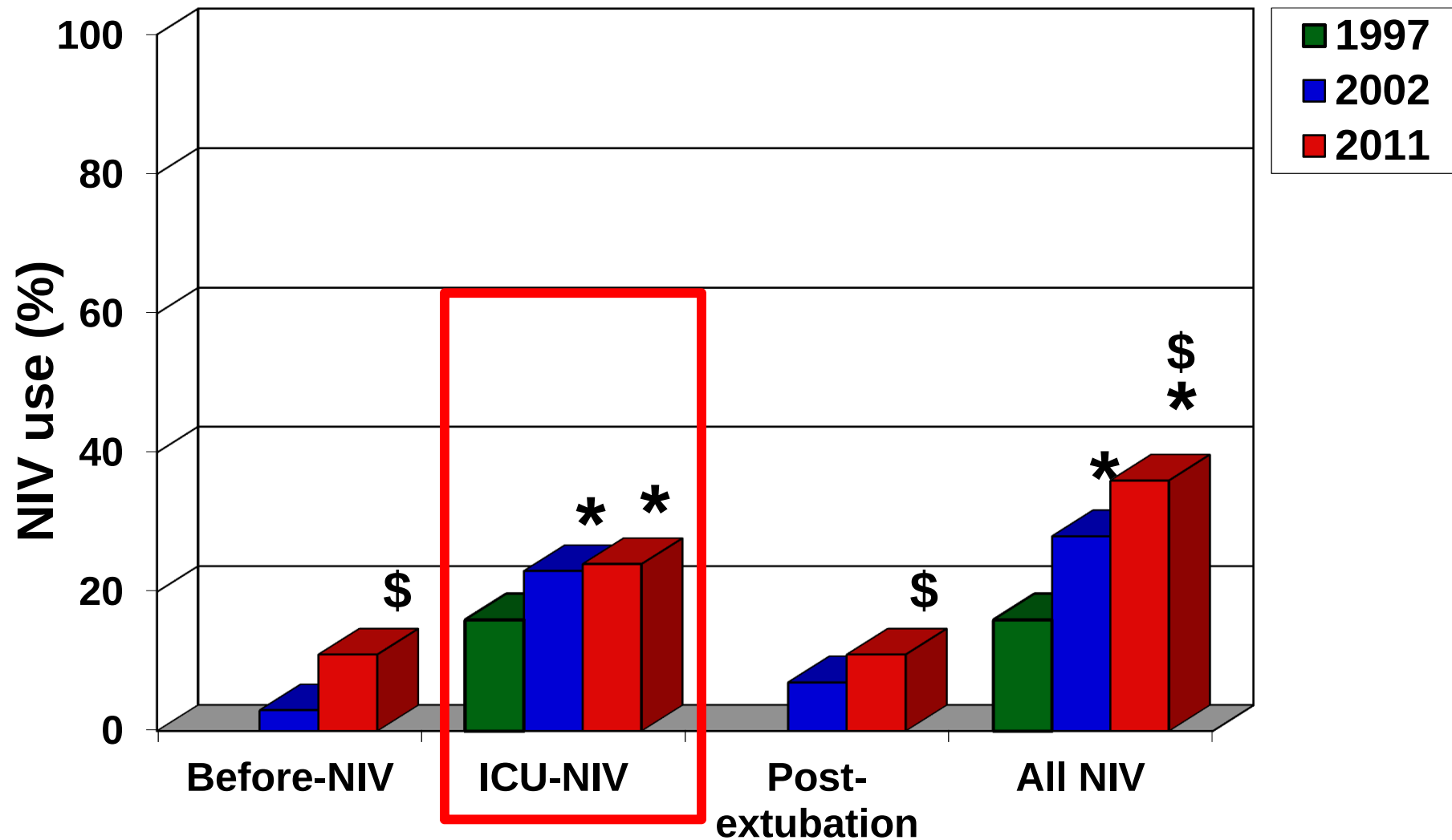
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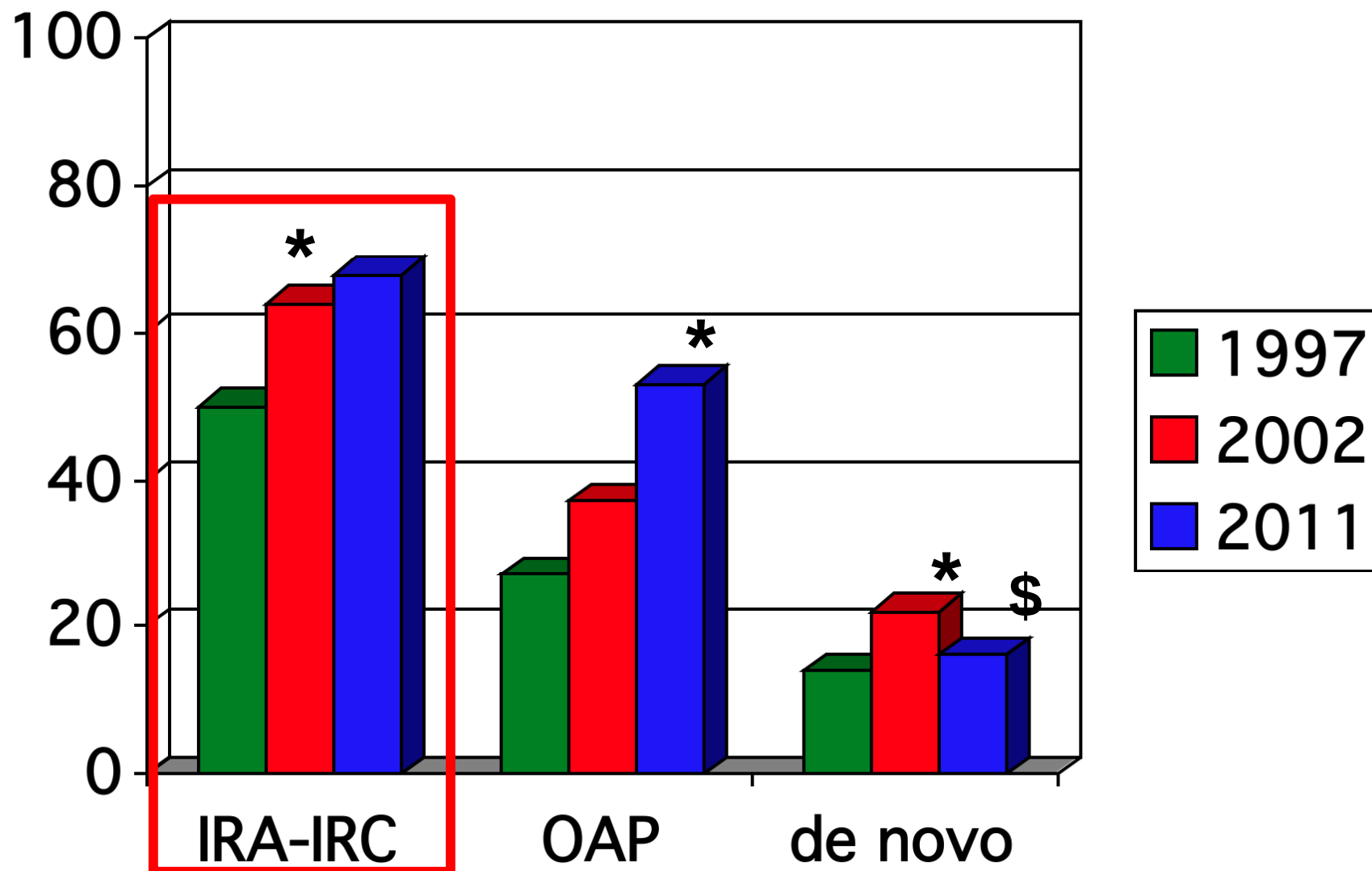
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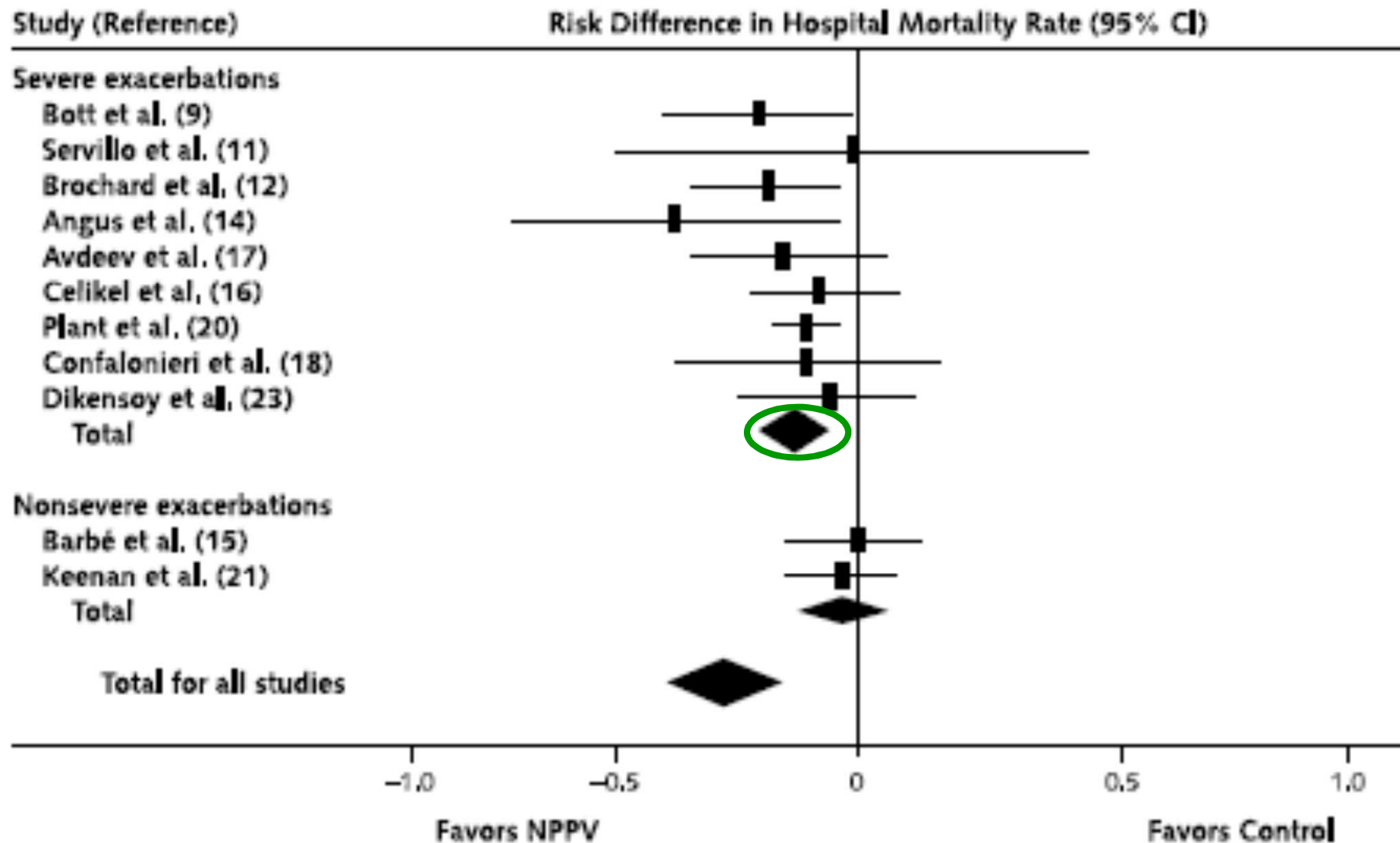
Utilisation de la VNI - France

3 principales indications



BPCO - bénéfice - survie

méta analyse → survie



Keenan et Coll. Ann Intern Med 2003

VNI – alternative à l'intubation

BPCO – VNI en cas de coma

Variable	Success (n = 76)	Failure (n = 19)	p Value
GCS			
Admission	6.5 ± 1.8	6.1 ± 1.5	0.341
First hour	11.2 ± 2.0	7.9 ± 2.2	< 0.0001
pH			
Admission	7.13 ± 0.06	7.11 ± 0.08	0.631
First hour	7.23 ± 0.05	7.17 ± 0.05	< 0.0001
PaCO ₂ , mm Hg			
Admission	98 ± 18	102 ± 25	0.513
First hour	78 ± 16	95 ± 25	< 0.0001
PaO ₂ /FIO ₂ ratio			
Admission	138 ± 40	140 ± 50	0.907
First hour	195 ± 40	166 ± 42	0.008

Diaz et coll. Chest 2005

VNI – alternative à l'intubation

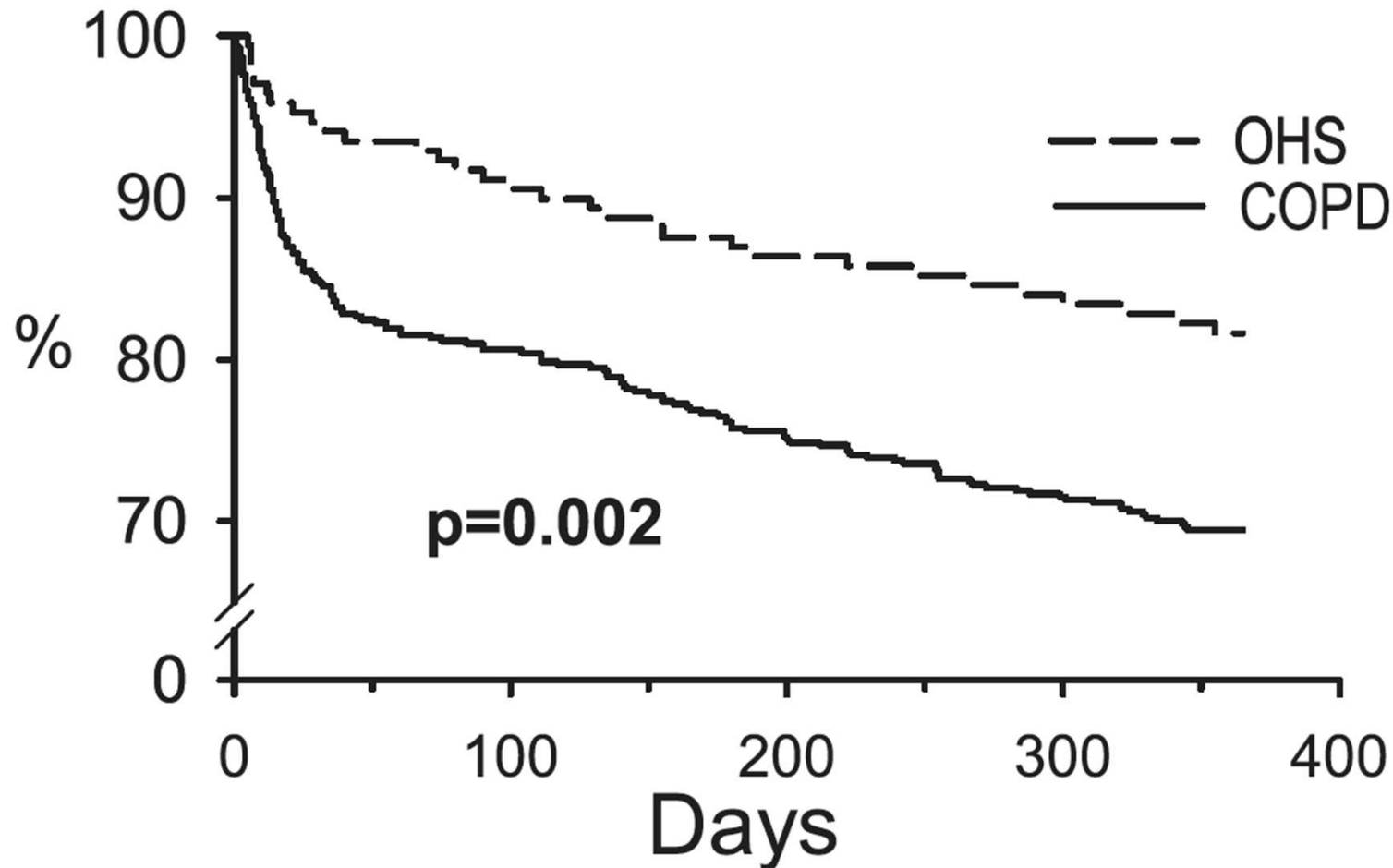
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Diaz et coll. Chest 2005

VNI – obésité-hypoventilation

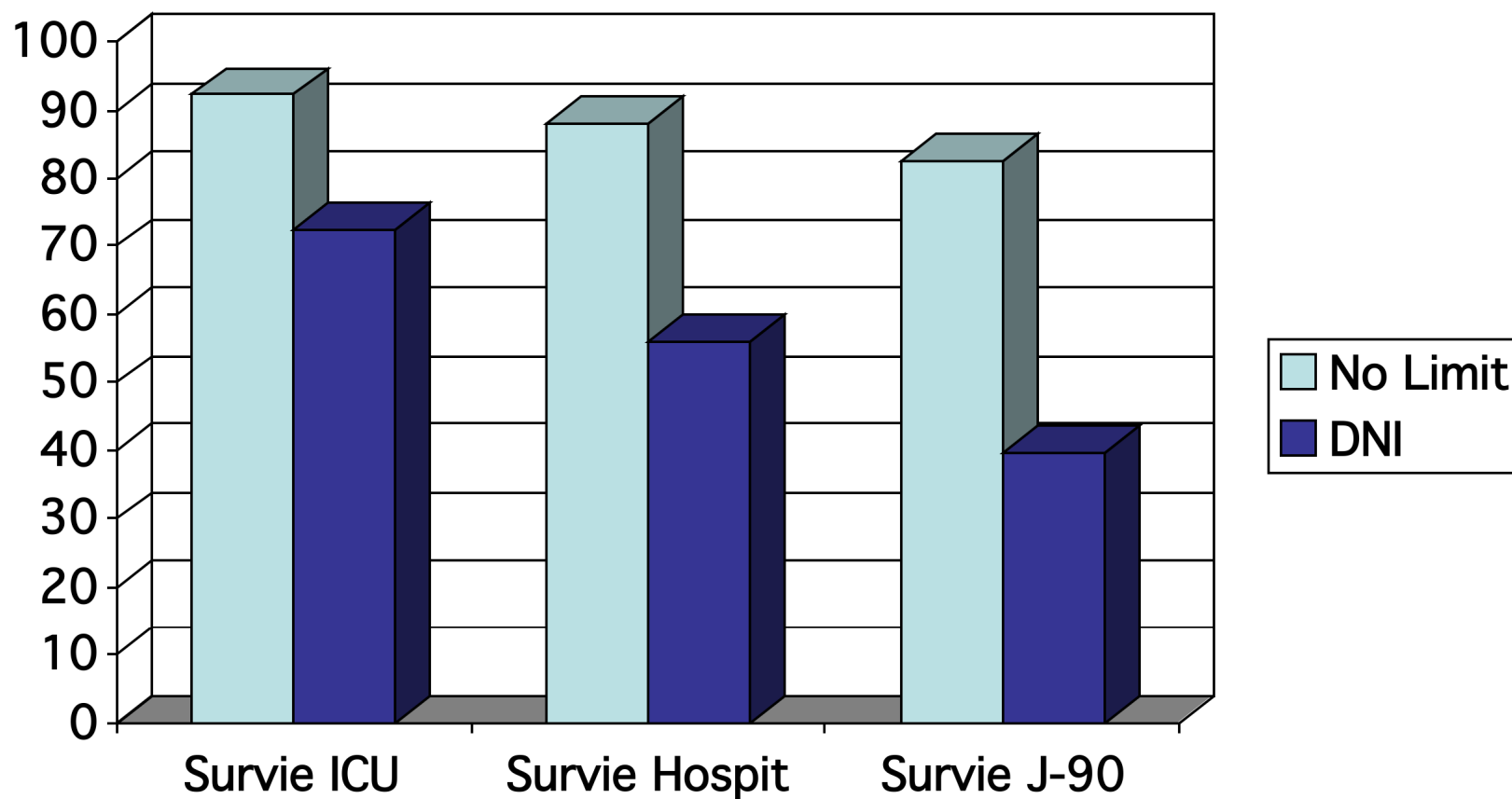
pronostic



Carrillio et coll. Am J Respir Crit Care Med

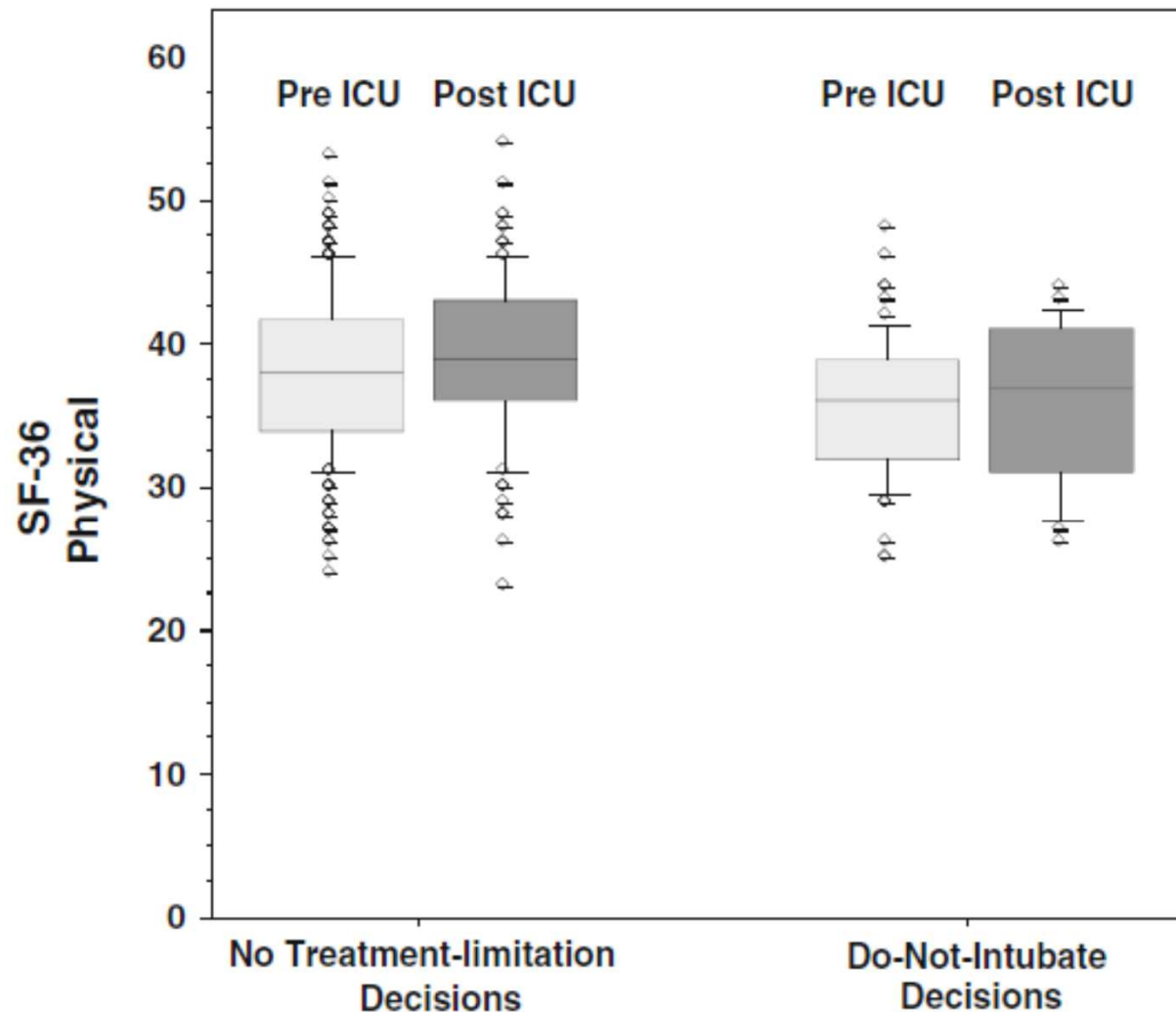
VNI et DNI – 20 % des VNI

mortalité : réanimation, hôpital, J90



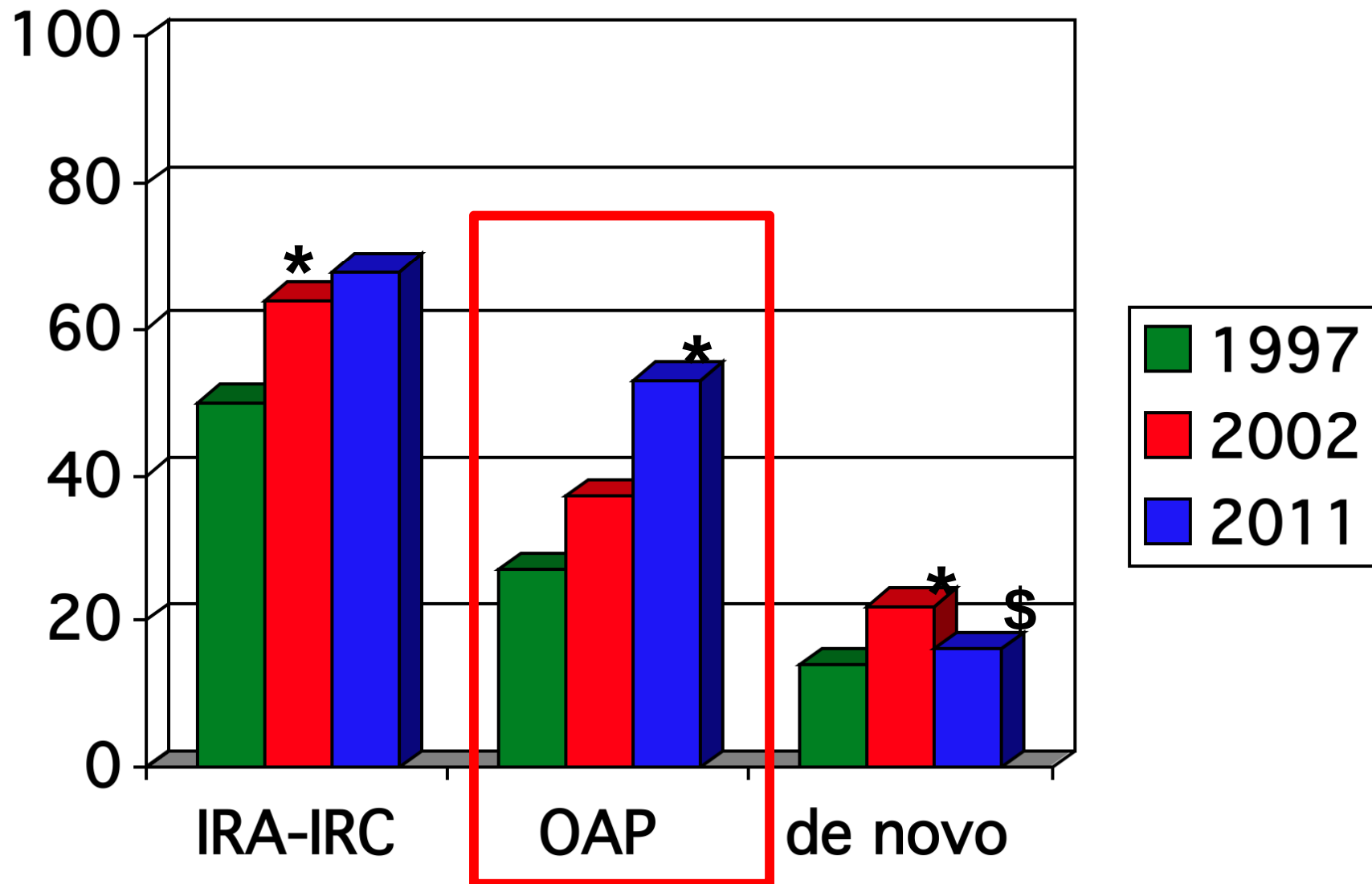
VNI et DNI – qualité de vie

SF36 - Physique

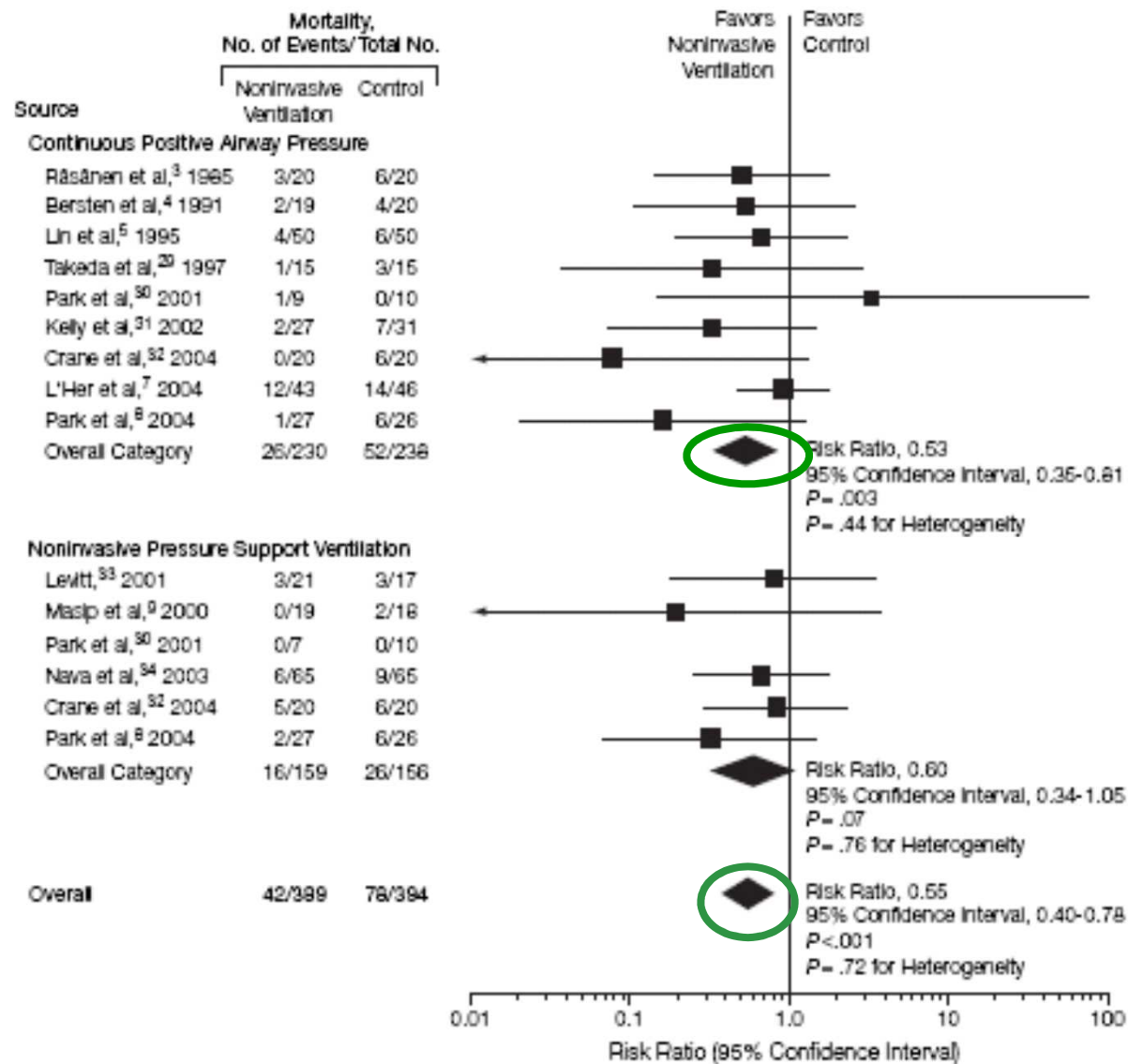


Utilisation de la VNI - France

3 principales indications

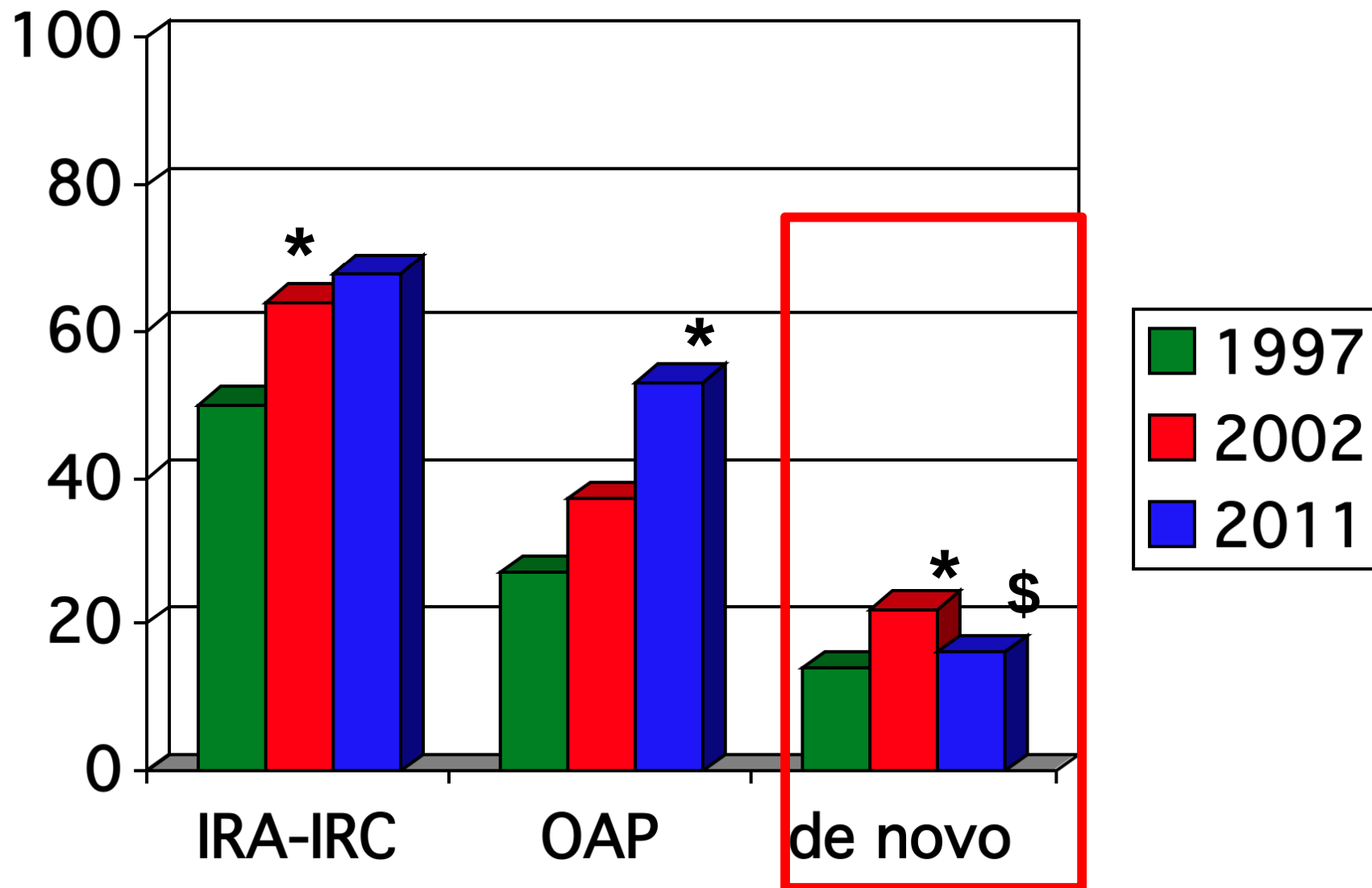


OAP - bénéfice – survie réanimation

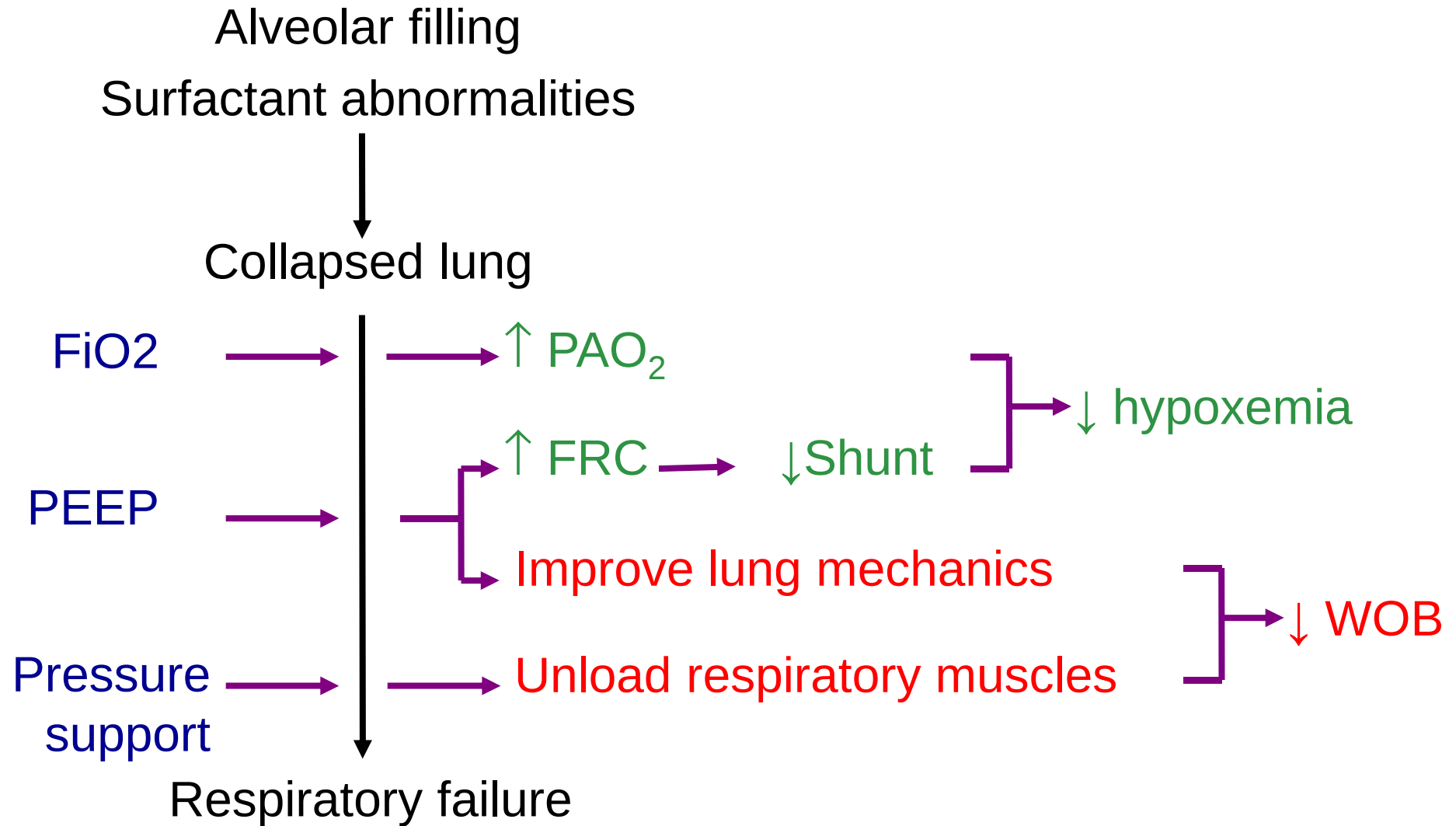


Utilisation de la VNI - France

3 principales indications

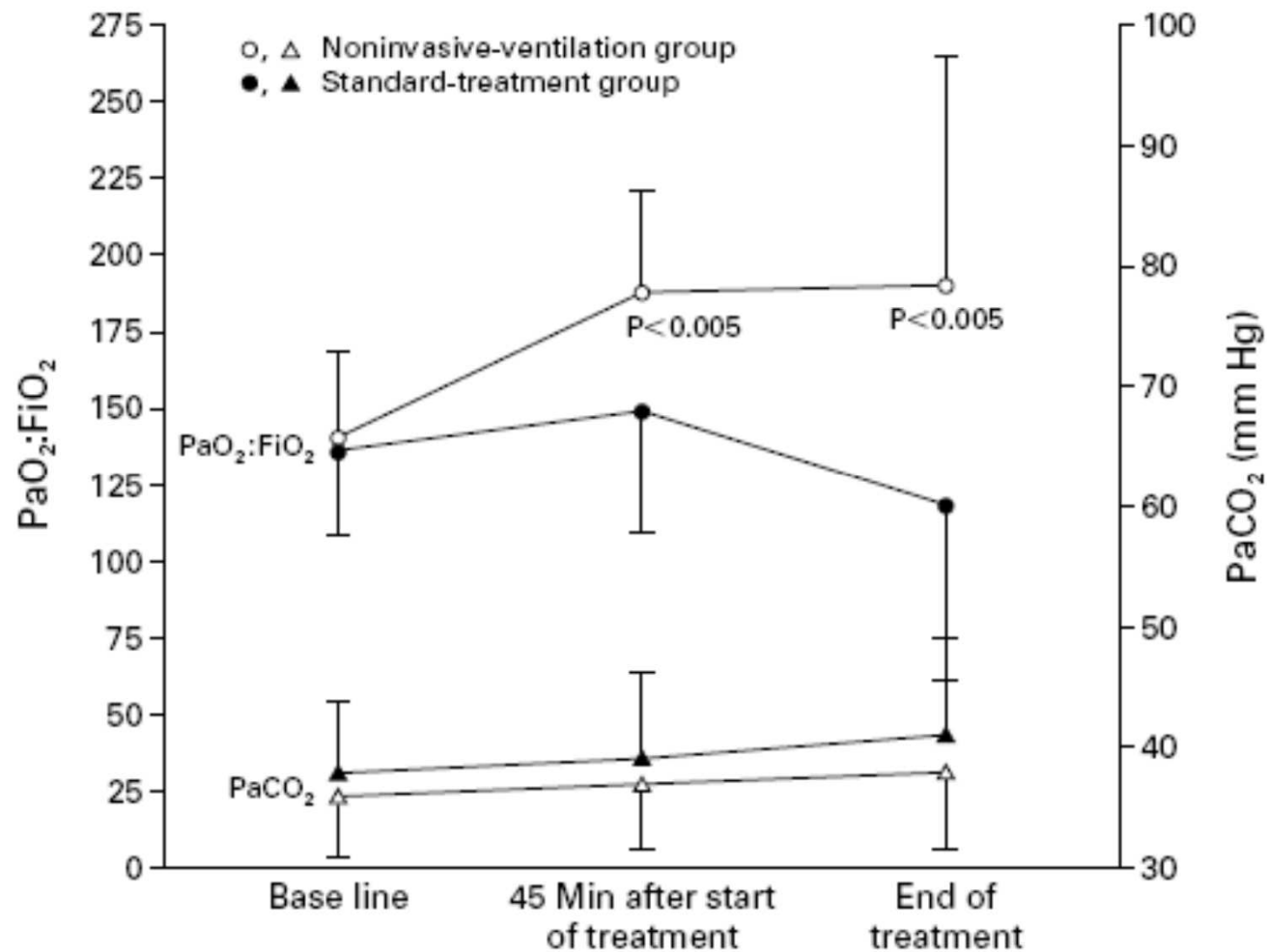


VNI dans l'IRA de novo : mécanisme



IRA *de novo*

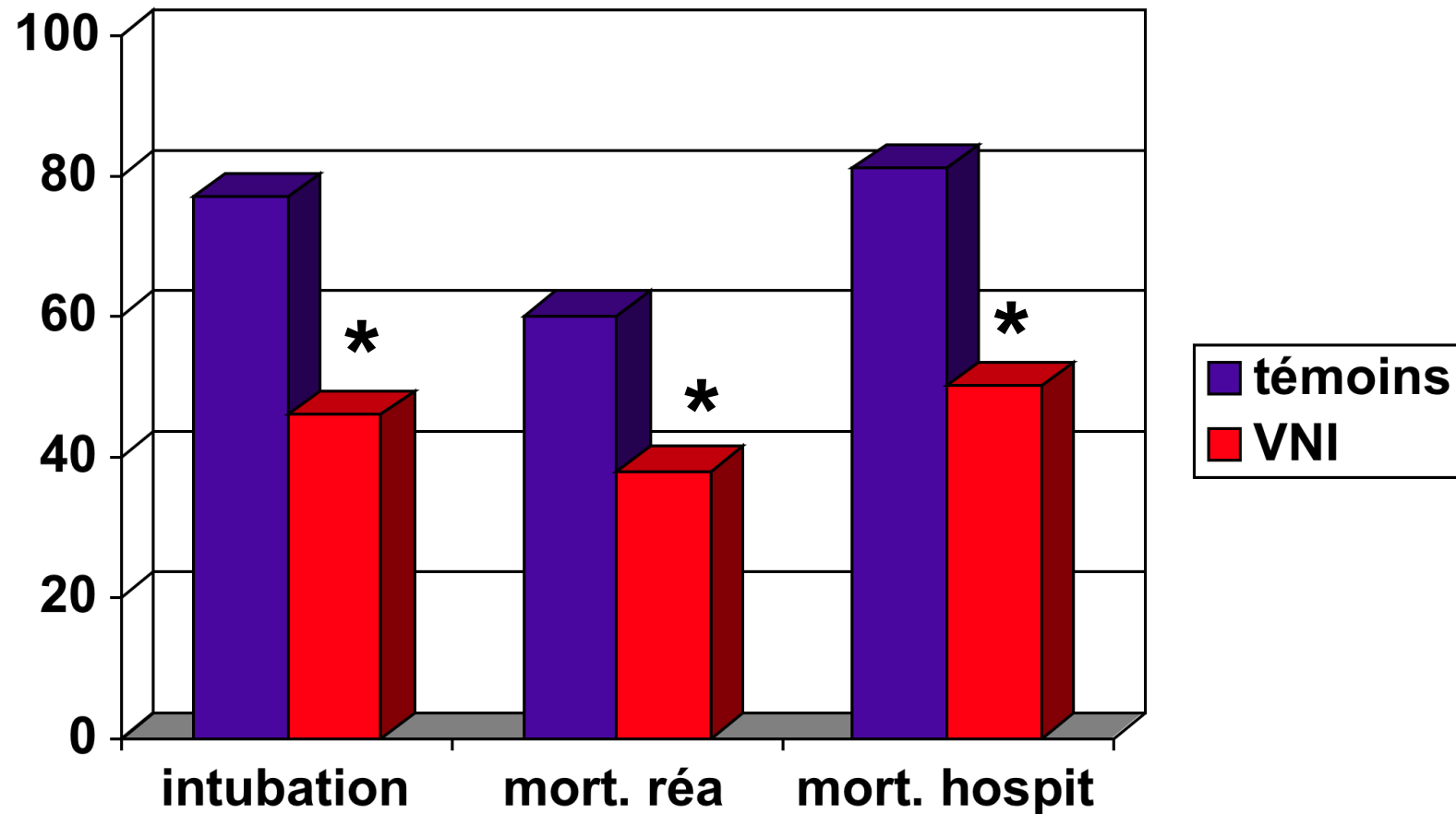
VNI : effet attendu



Hilbert et Coll. New Engl J Med 2001

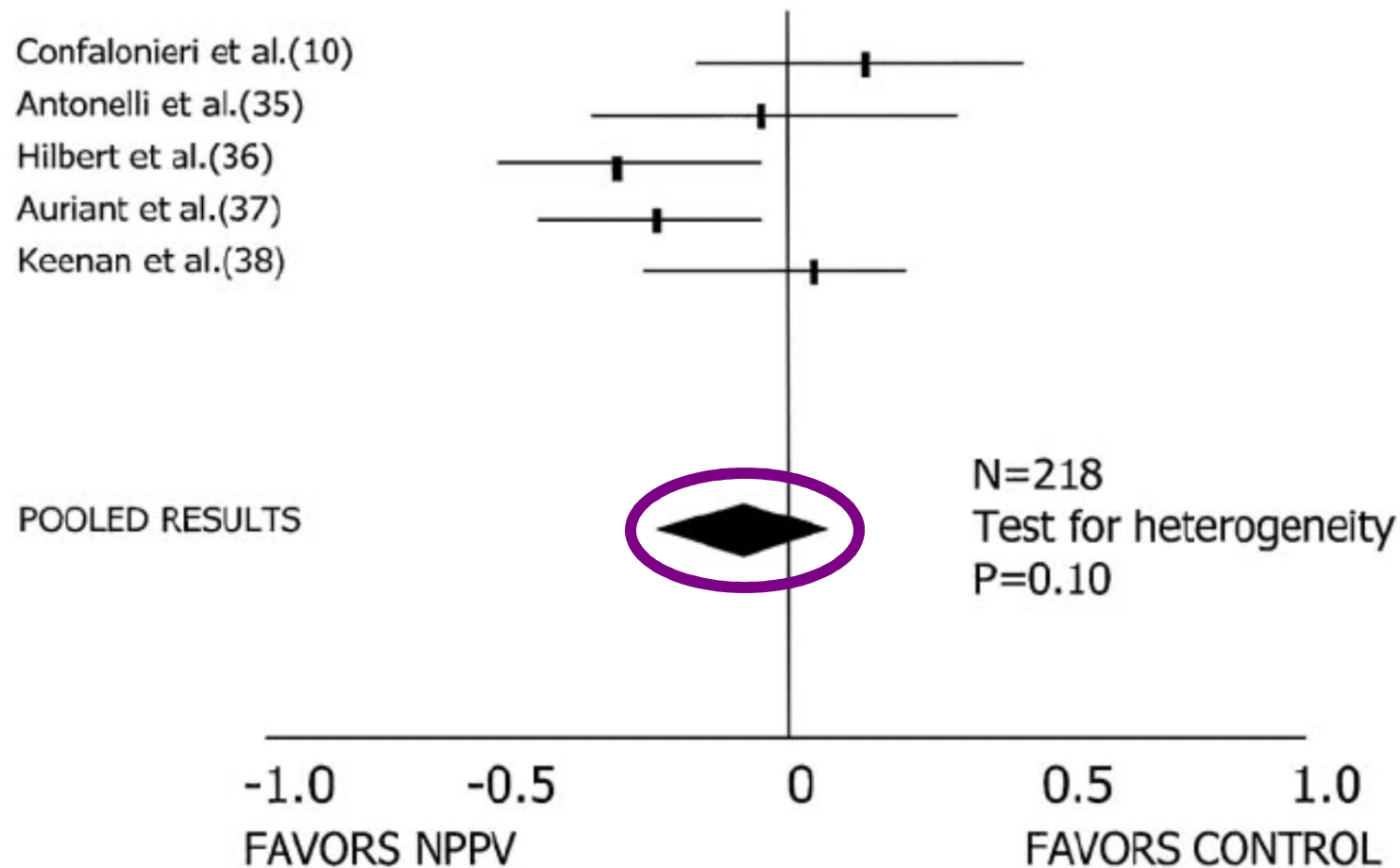
IRA *de novo* – l'étude positive...

immunodéprimés



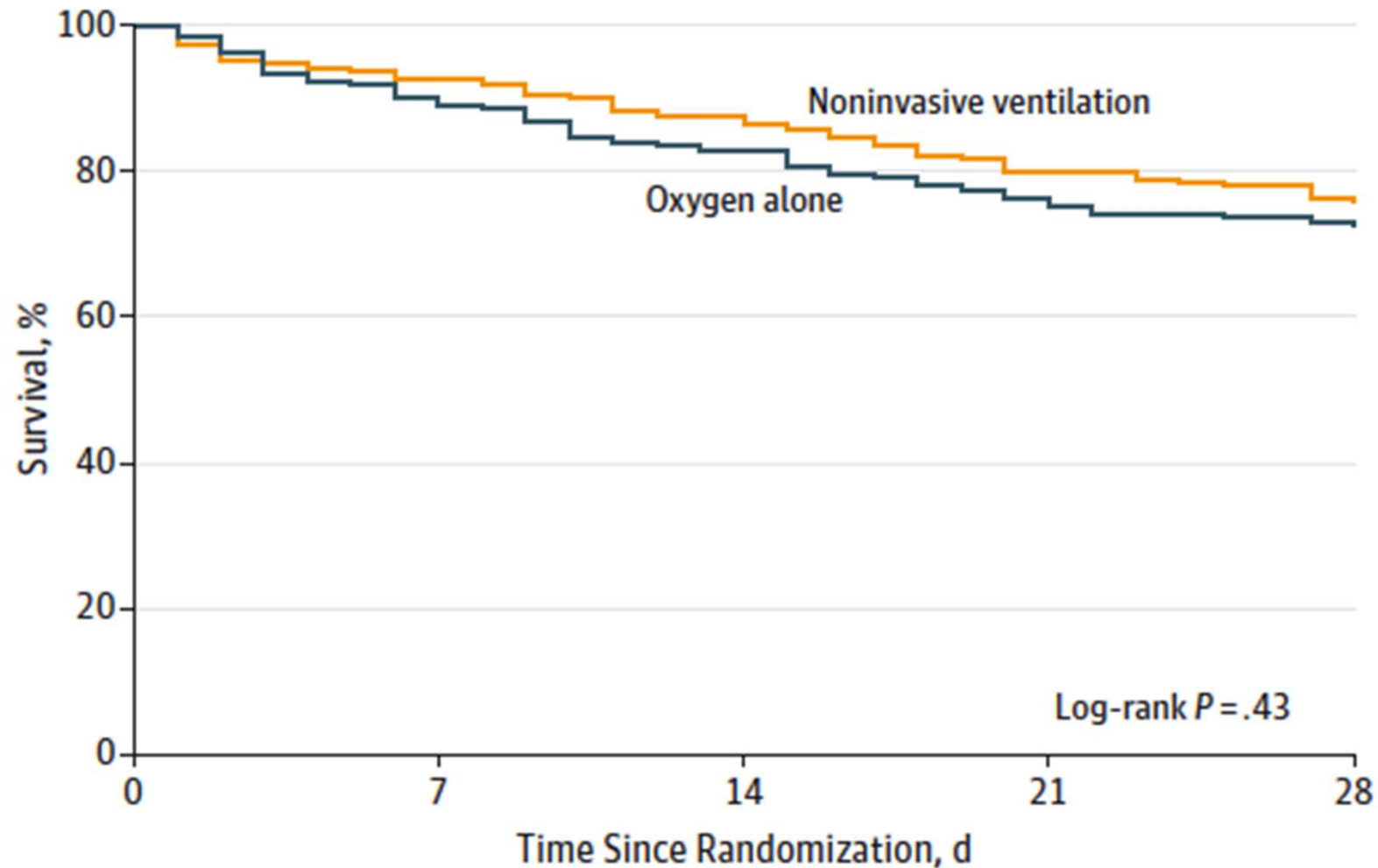
IRA *de novo* - méta analyse

mortalité en réanimation



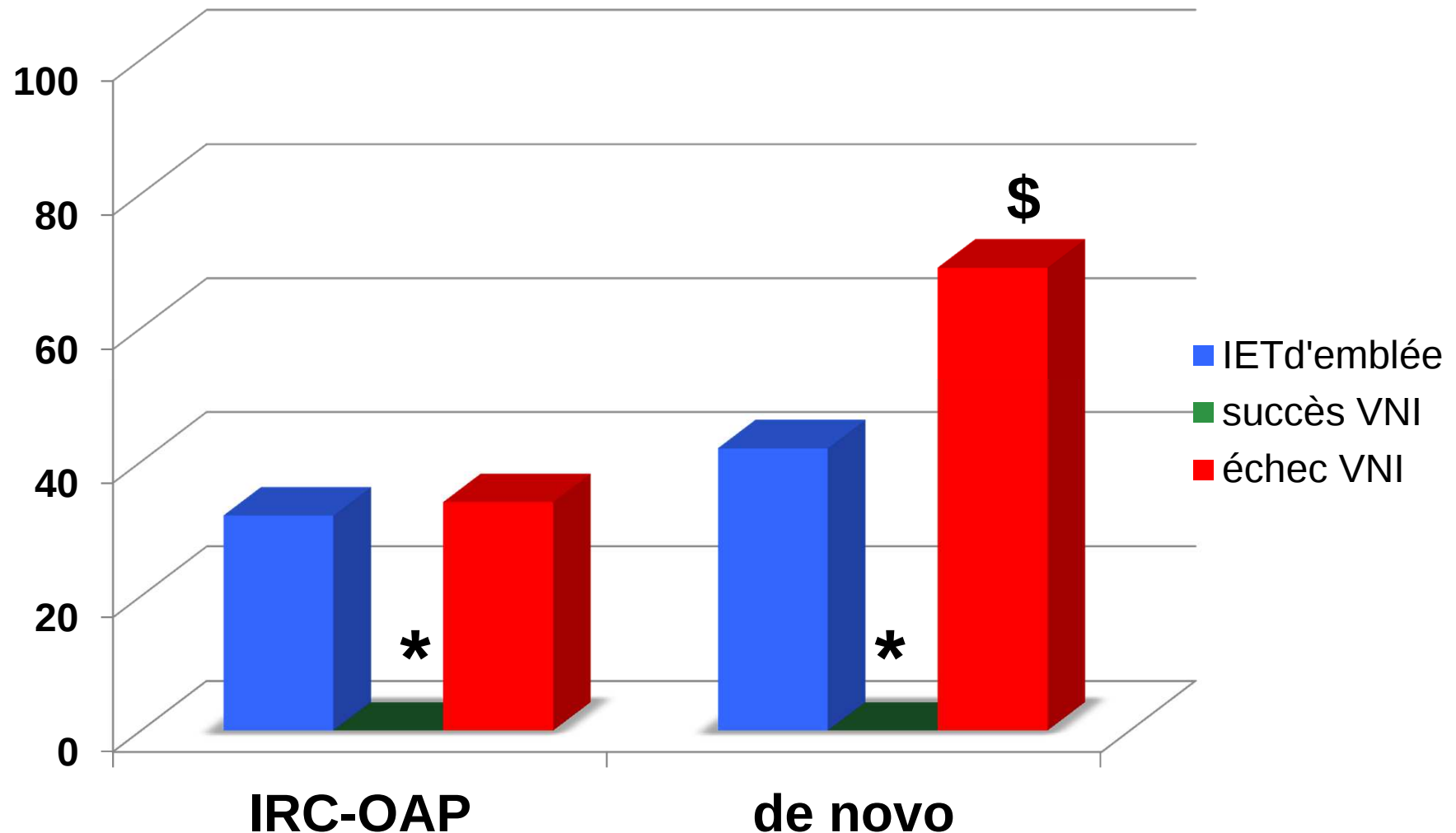
IRA *de novo* – immunodéprimé

Survie



IRA de novo – Est ce raisonnable ?

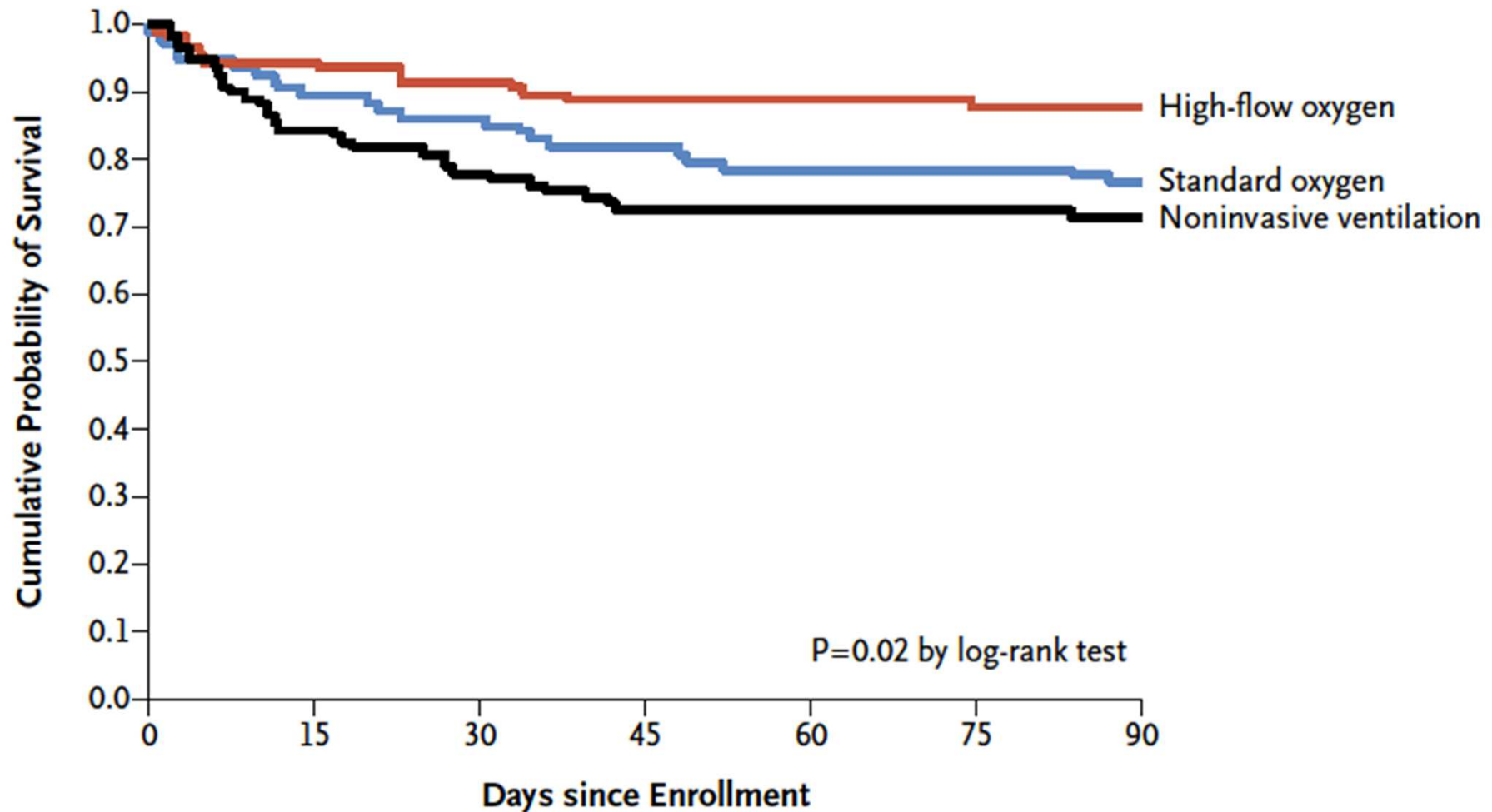
Impact de l'échec de la VNI sur la mortalité



Demoule et coll. Intensive Care Med 2006

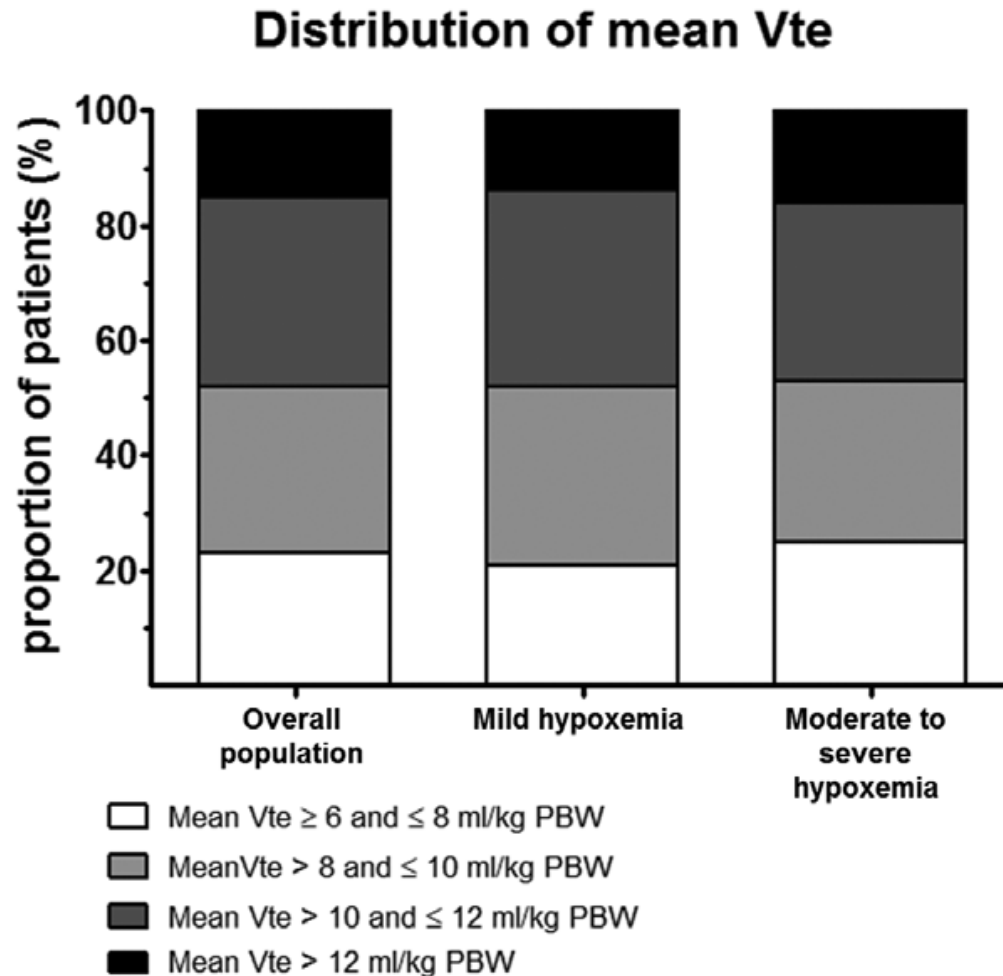
Oxygène haut débit

Mortalité



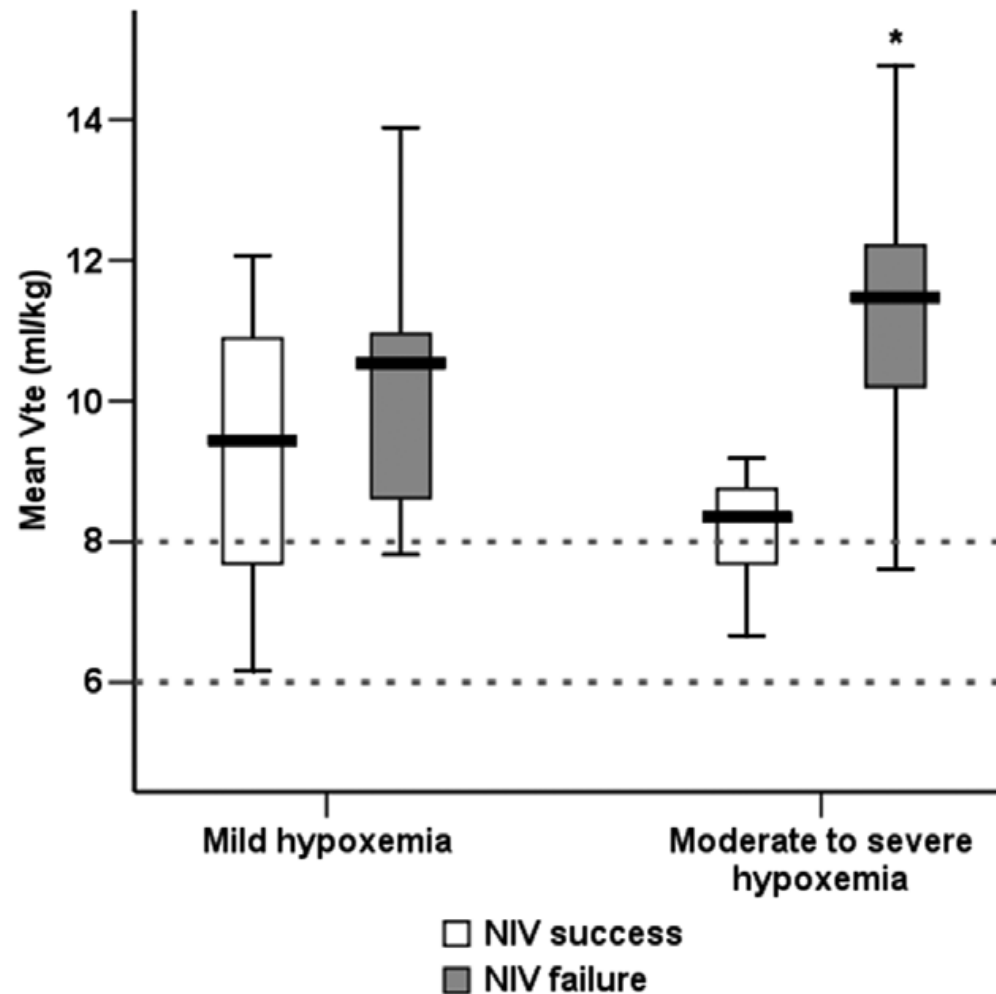
Pourquoi la VNI serait elle délétère ?

Impact du volume courant



Pourquoi la VNI serait elle délétère ?

VT et succès de la VNI



Carteaux et coll. Crit Care Med 2015

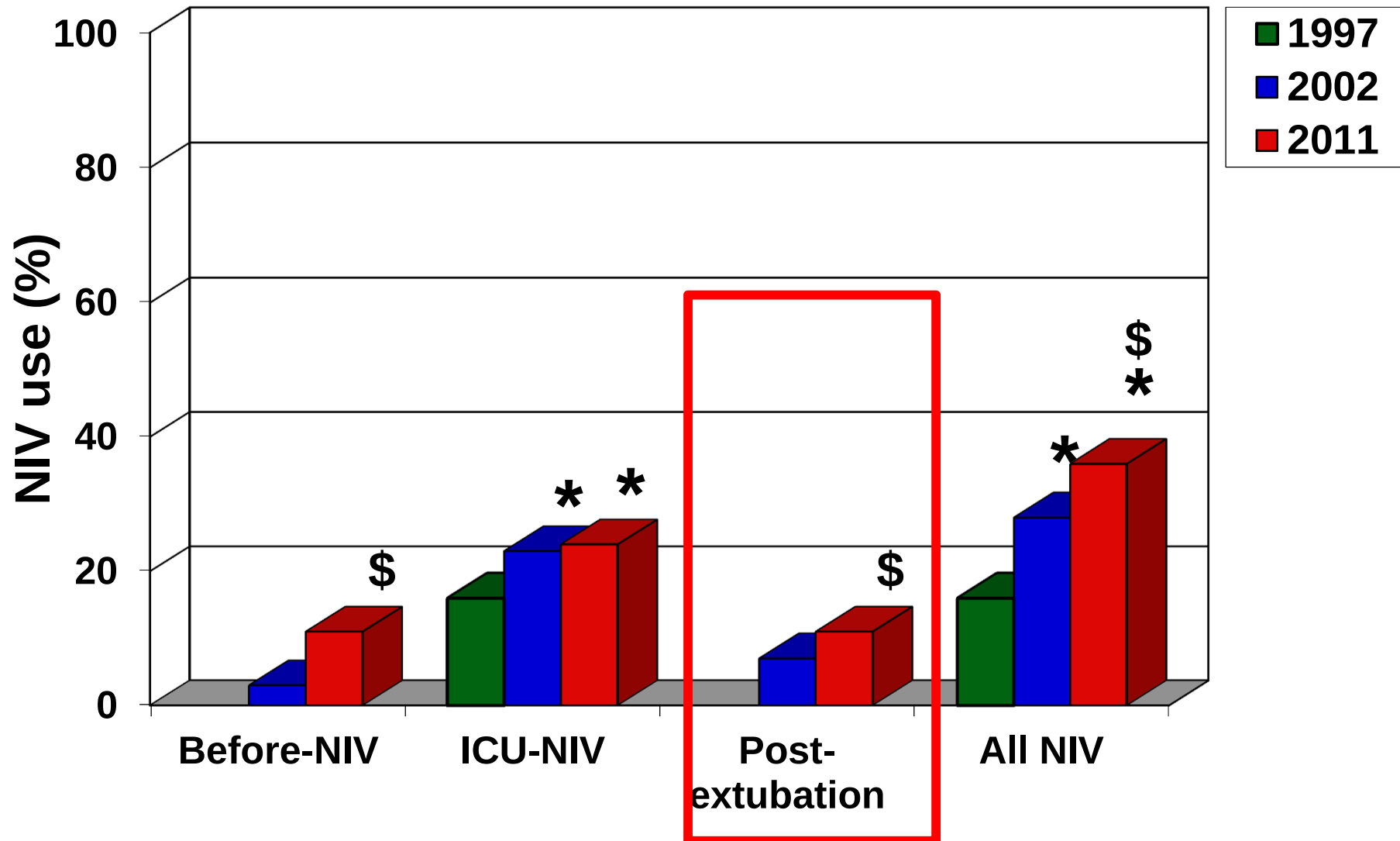
Pourquoi la VNI serait elle délétère ?

VT et mortalité

Risk Factors	Adjusted Hazard Ratio (95% CI) ^a	<i>p</i>
Simplified Acute Physiology Score II (30)	1.024 (1.007–1.041)	0.013
Immunosuppression	1.351 (0.598–3.056)	0.476
Pao ₂ /Fio ₂ before NIV	0.995 (0.989–1.001)	0.109
Mean expired tidal volume during NIV, per mL/kg predicted body weight	1.286 (1.069–1.547)	0.008

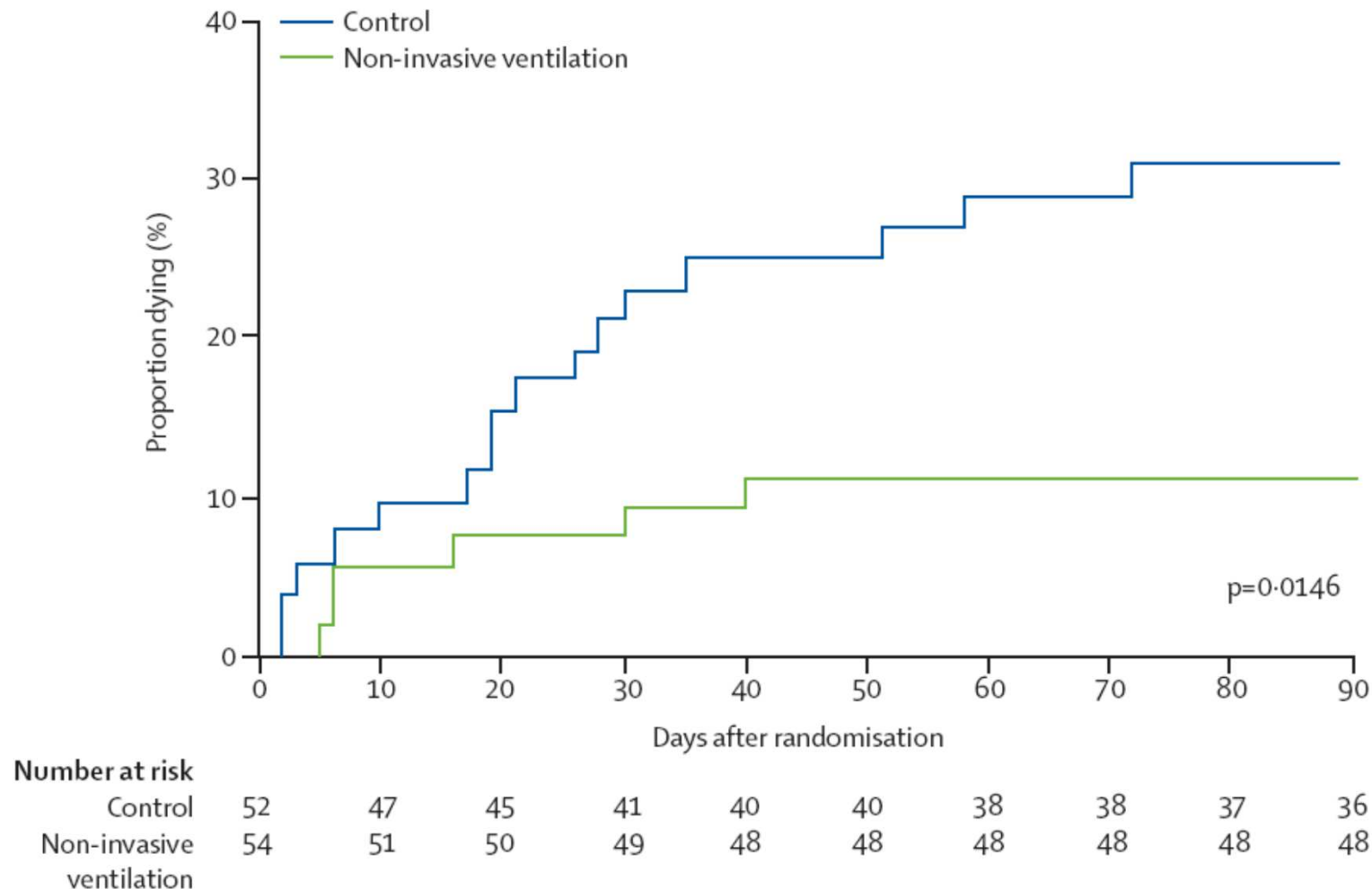
NIV use

Still increasing



post-extubation - prophylactique

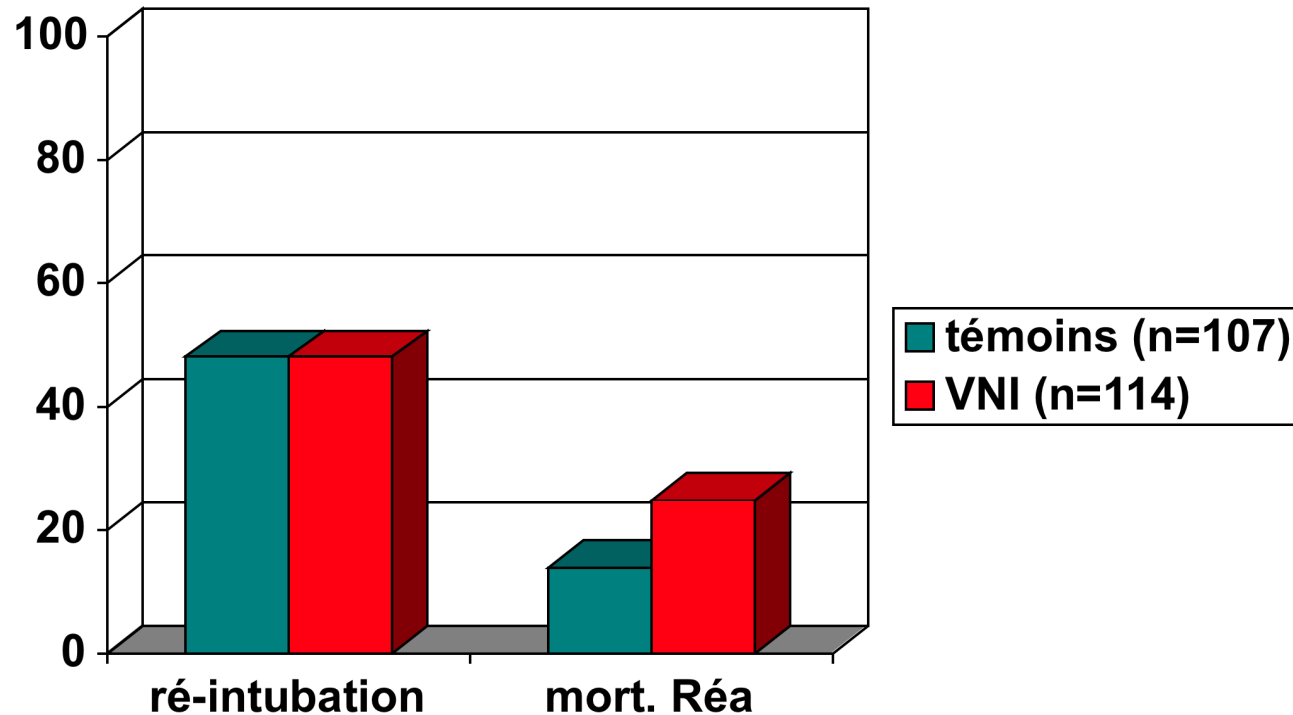
$PaCO_2 > 45 \text{ mmHg}$



Ferrer et Coll. Lancet 2009

post-extubation - curatif

multicentrique – non sélectionnés

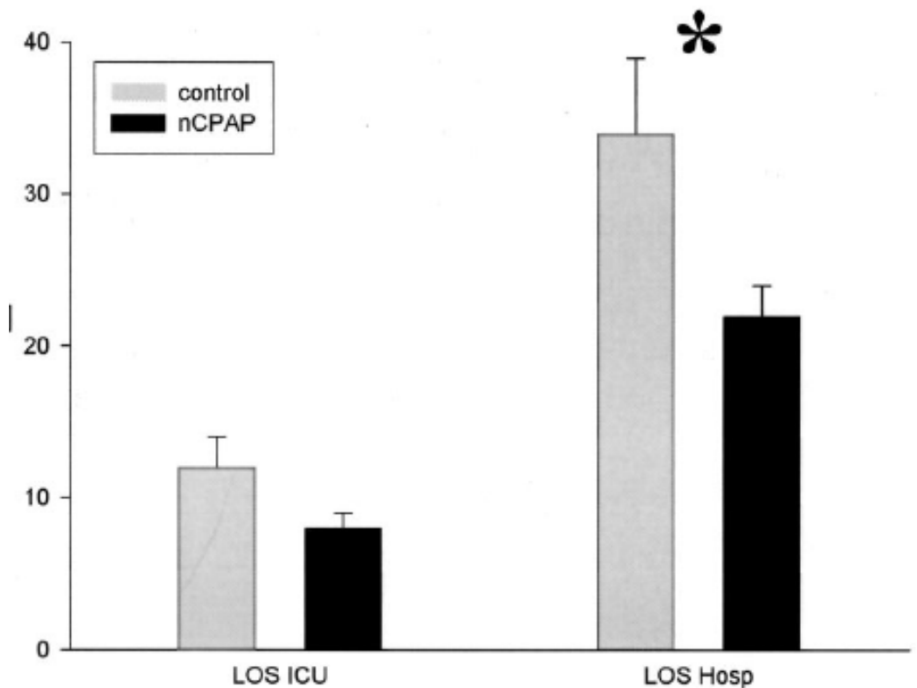
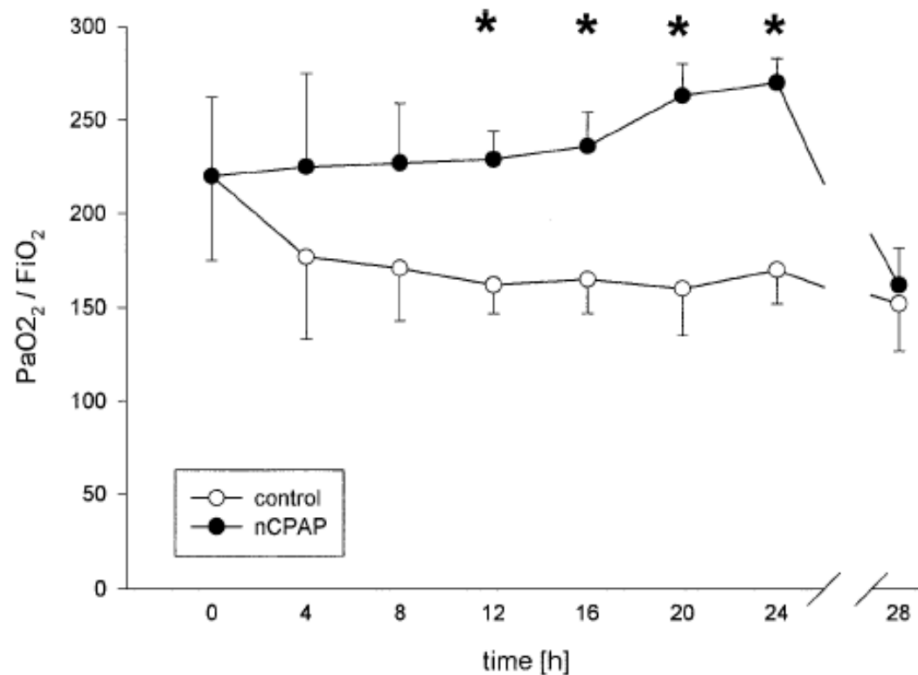


	témoins (n=107)	VNI (n=114)	p
délai ré-intubation (j)	3 [0-17]	12 [2-28]	0,02
durée hospit. réa (j)	18 [11-26]	18 [11-30]	0,59

Esteban et Coll. New Engl J Med 2006

post-op – aorte thoracoabdominale

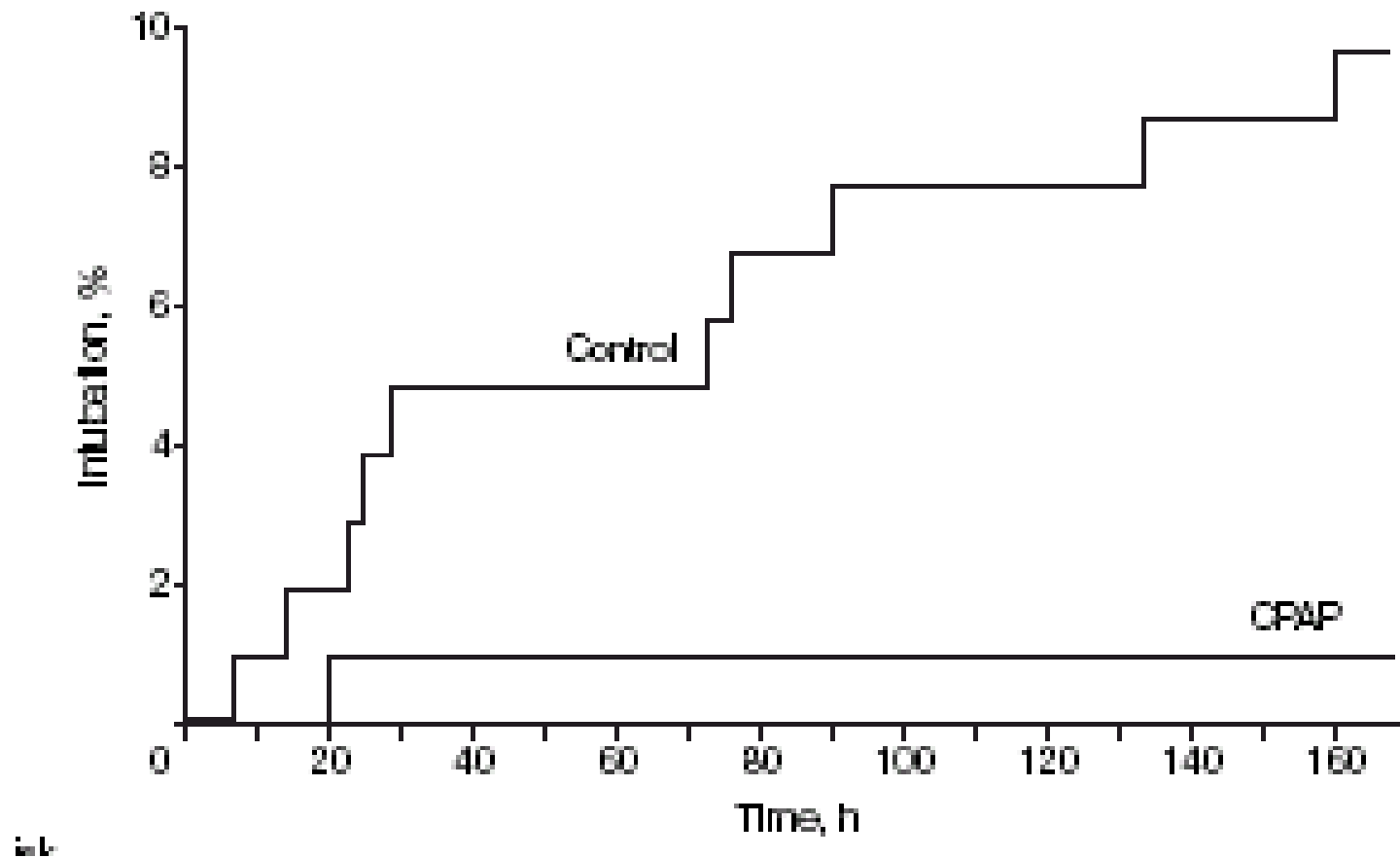
VNI prophylactique



Kingden-Milles et Coll. Chest 2005

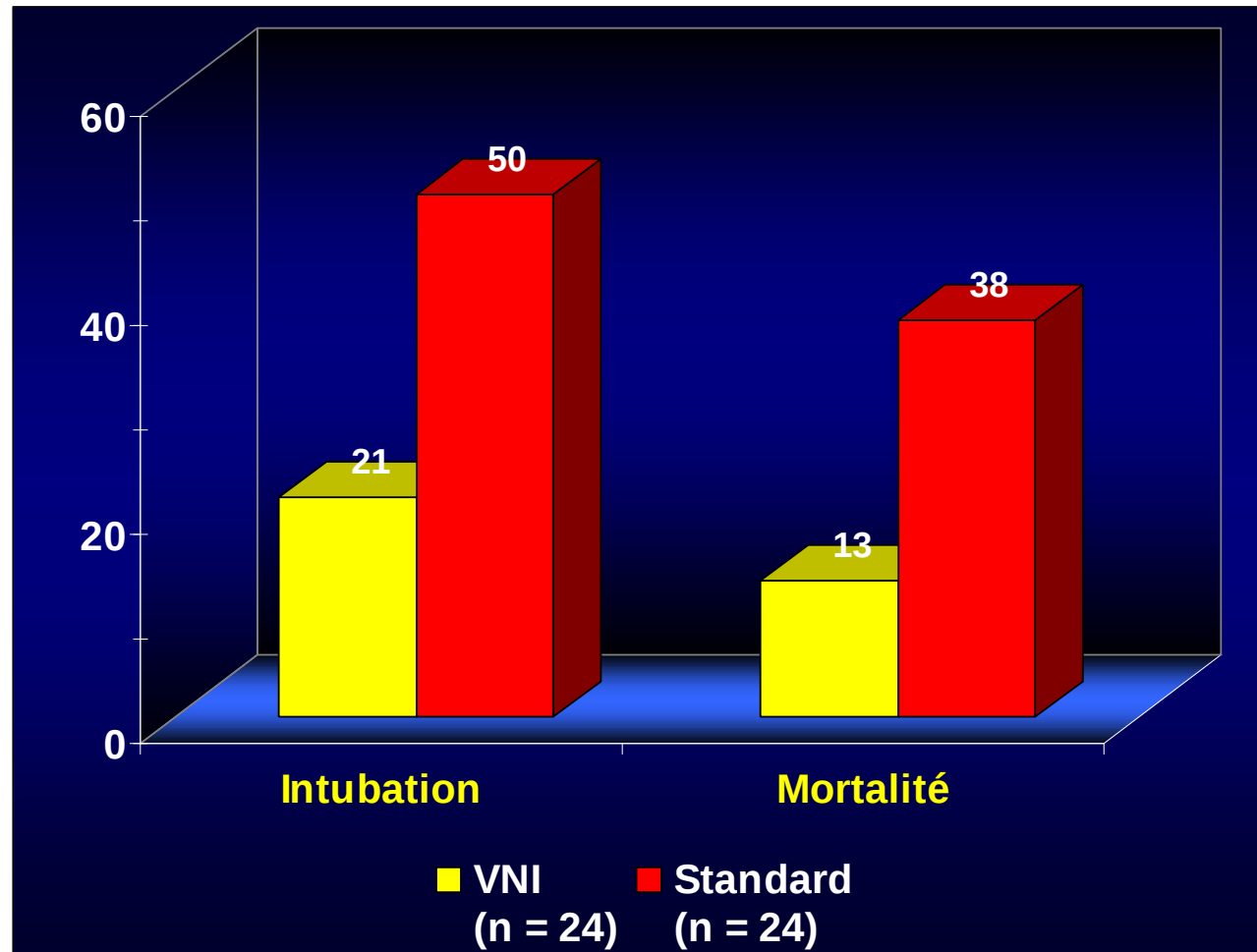
post-op – laparotomie

laparo > 90 min – $PaO_2/FiO_2 < 300$ à H1



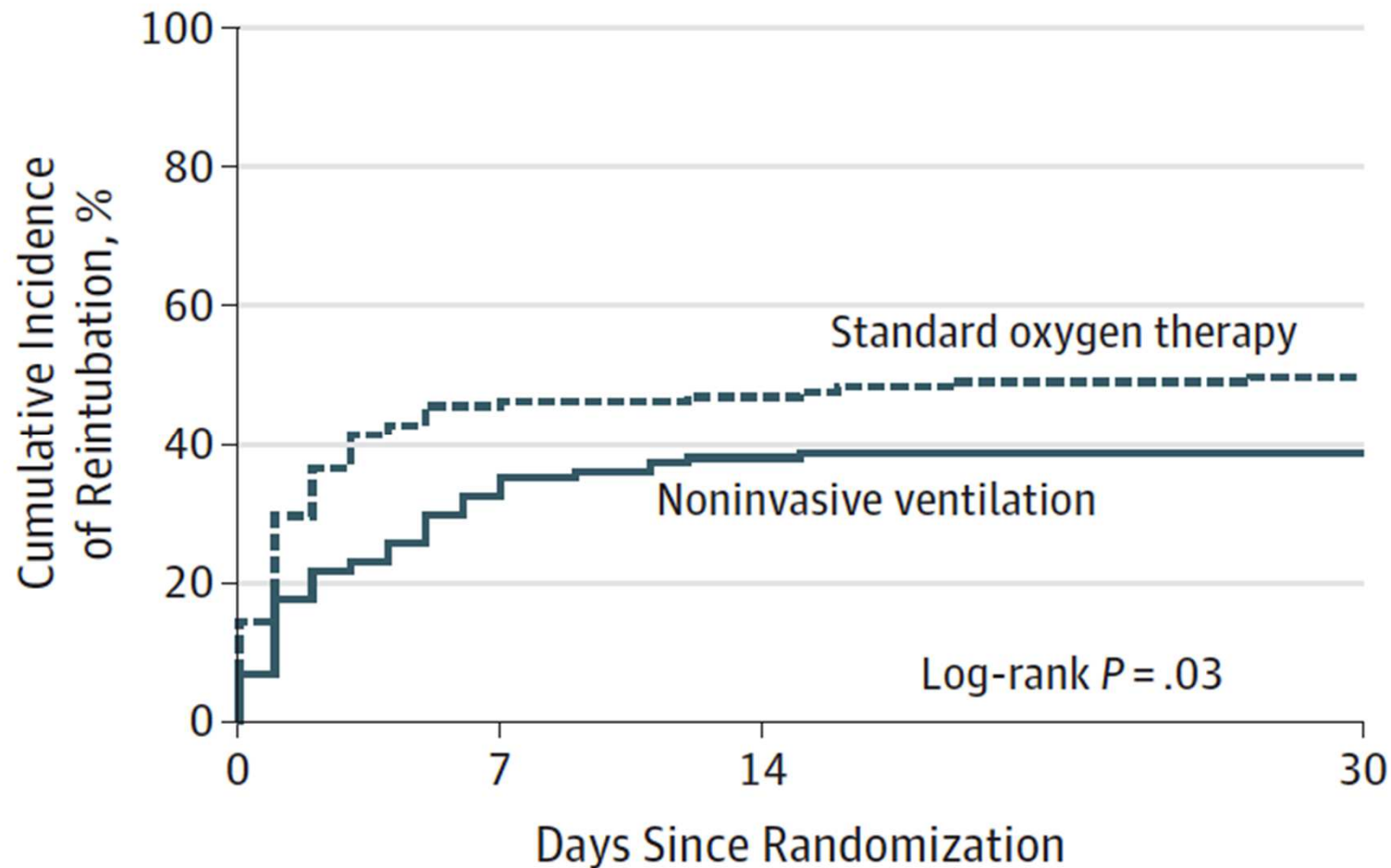
post-opératoire - curatif

résection pulmonaire -



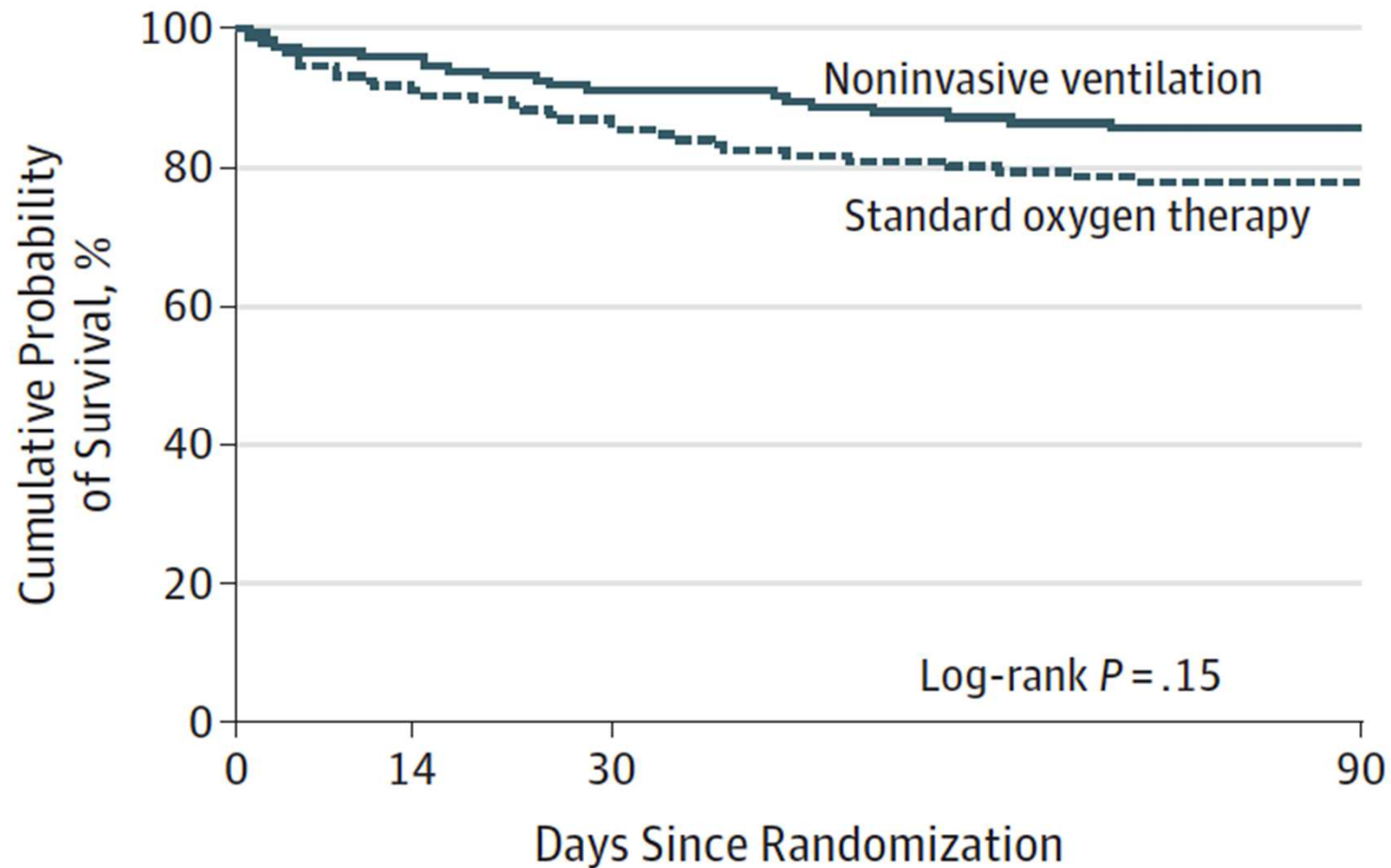
post-opératoire – curatif – Chir dig

Ré-intubation



post-opératoire – curatif – Chir dig

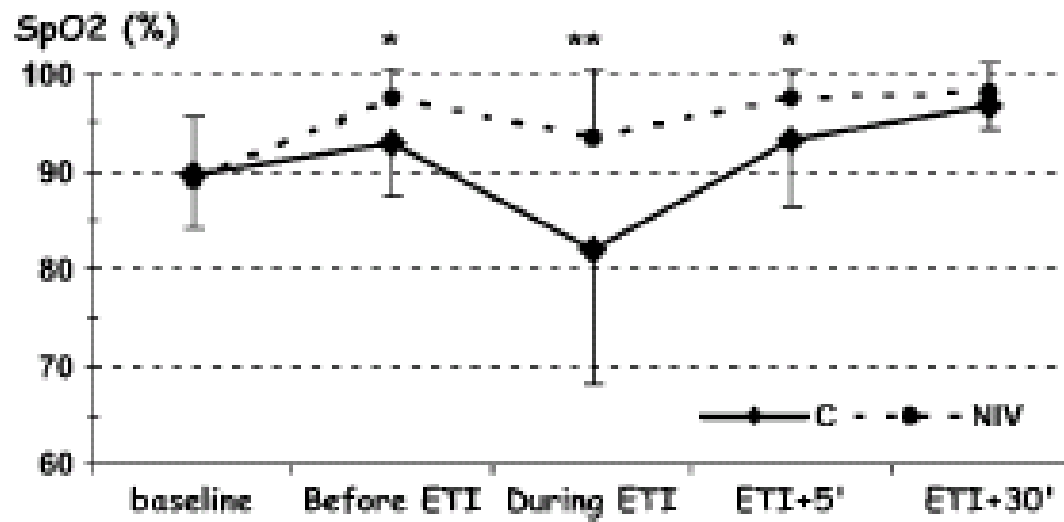
Mortalité



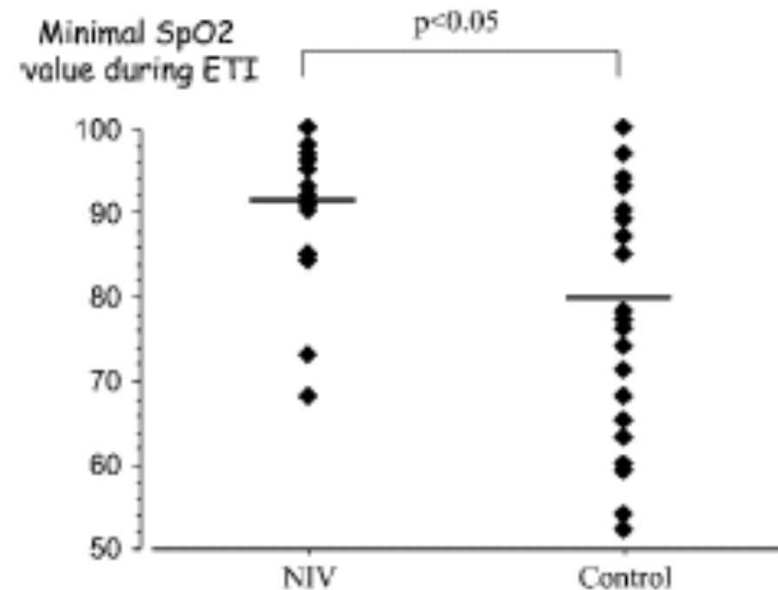
intubation - préoxygénation

$PaO_2 < 100$ mmHg / $O_2 = 10$ l/min

SpO₂ moyenne



SpO₂ mini



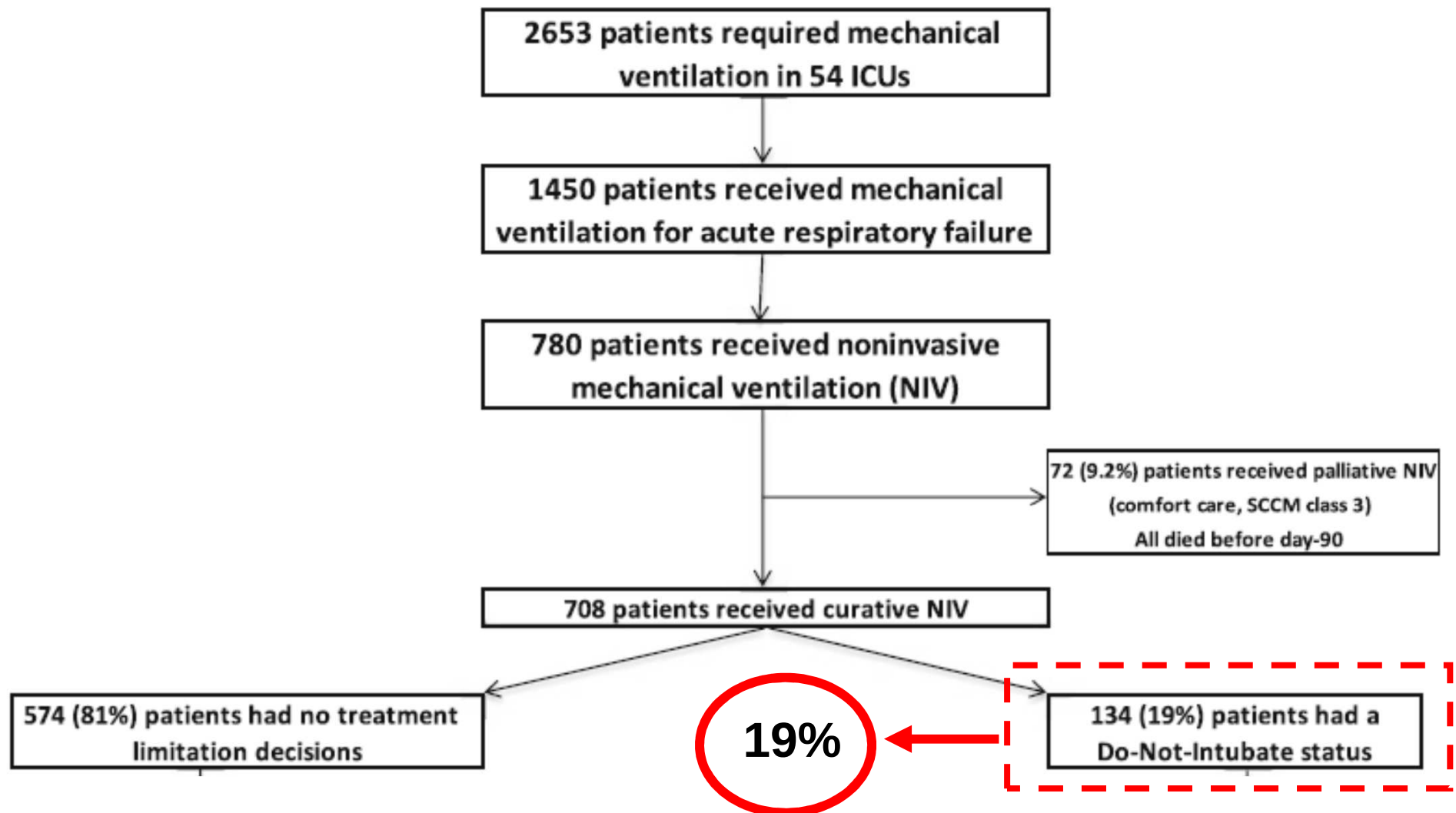
Baillard et Coll. Am j Respir Crit Care Med 2006

Conclusion

La VNI en 2016

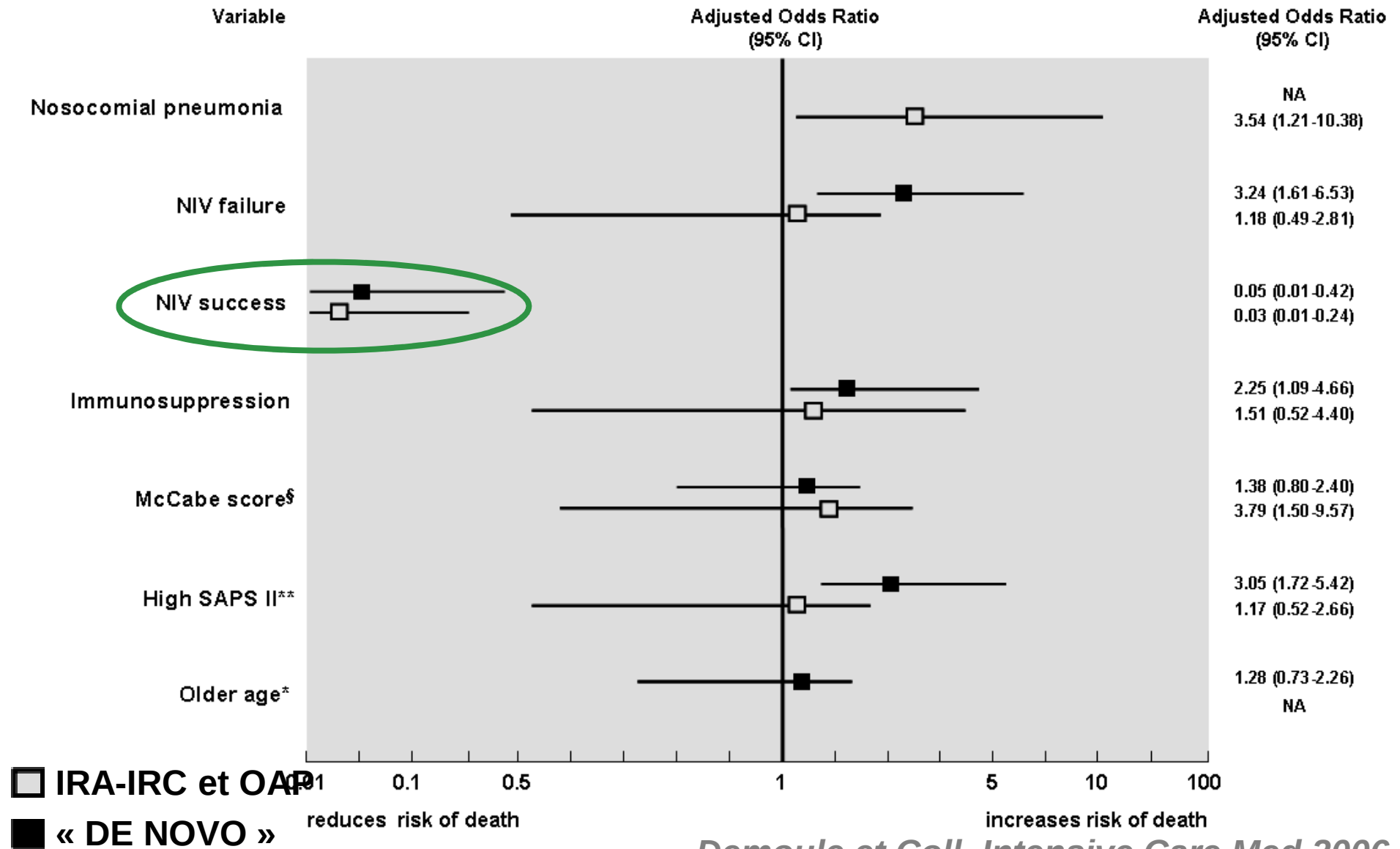
- **indications bien démontrées**
 - *BPCO : toujours des enjeux*
 - *OAP*
- **indications moins bien montrées**
 - *IRA de novo*
 - *Oxygène humidifié à haut débit ?*
 - *nouvelles études nécessaires ?*
- **VNI prophylactique post-extubation**
 - *Expansion*
 - *Oxygène humidifié à haut débit ?*

utilisation de la VNI - DNI



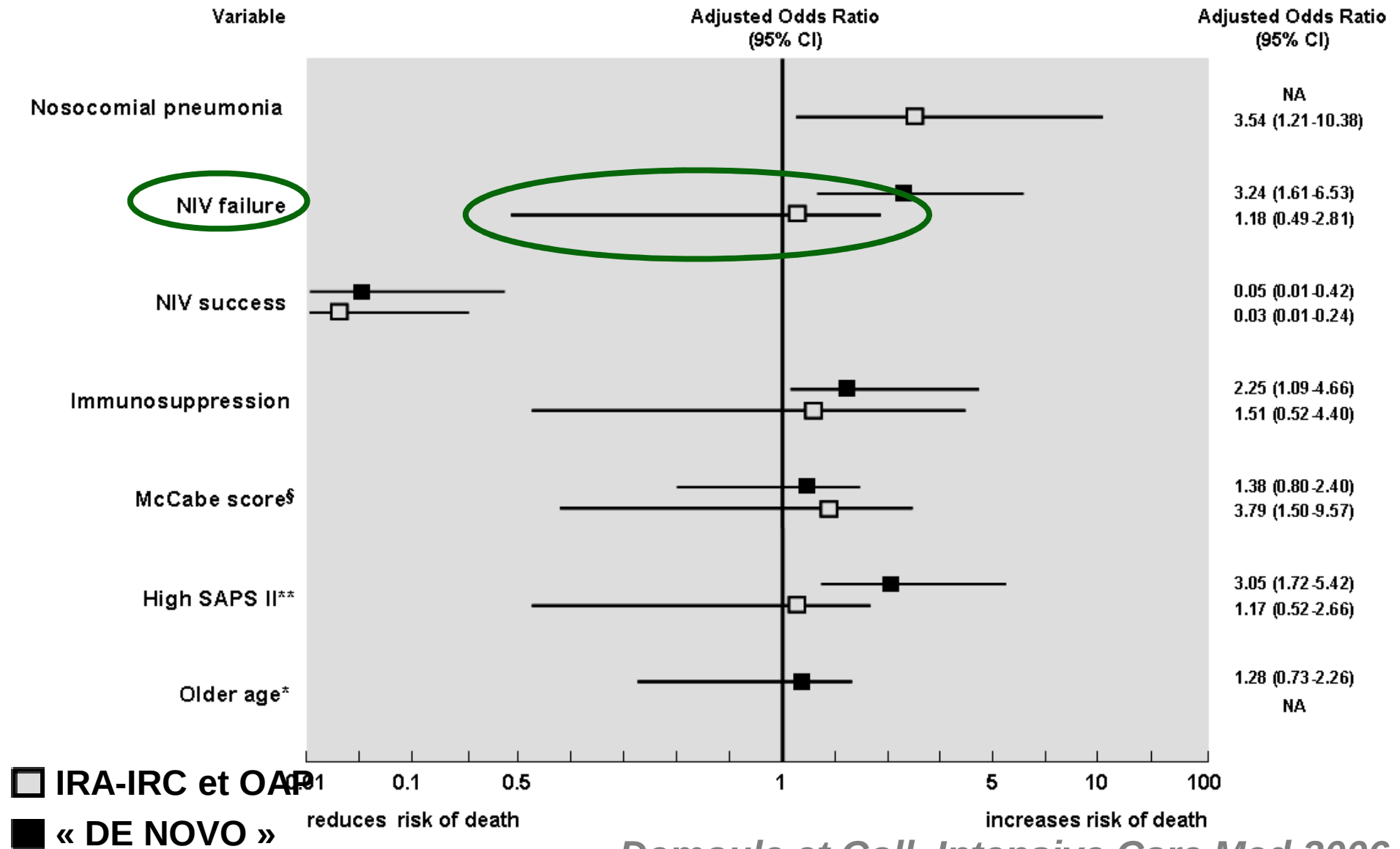
BPCO et OAP - « vraie vie »

mortalité



BPCO et OAP - « vraie vie »

mortalité



Demoule et Coll. Intensive Care Med 2006

IRA *de novo* – Un risque ?

