

Faut-il sédater les patients en réanimation?

OUI

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Department d'Anesthésie-Réanimation
Médecine Periopératoire

Liens d'intérêt

AMHOMED

LFB

MSD

BAXTER

DRAGER

MAQUET

FRESENIUS-KABI

FRESENIUS-VIAL

HOSPAL

GE

ORION

ASTELLAS

ABBOTT

VIASYS

ALERE

EDWARDS

PFIZER

PHILIPS

HAMILTON

MASSIMO

BBRAUN

BiRD-Corporation

ASTUTE Medical

Fisher-Paykel

Sedana Medical

Ministère de la santé

PHRC

ANR-DGOS

Faut-il sédater les patients
en réanimation?



1995



2018

JANUARY 1, 2000

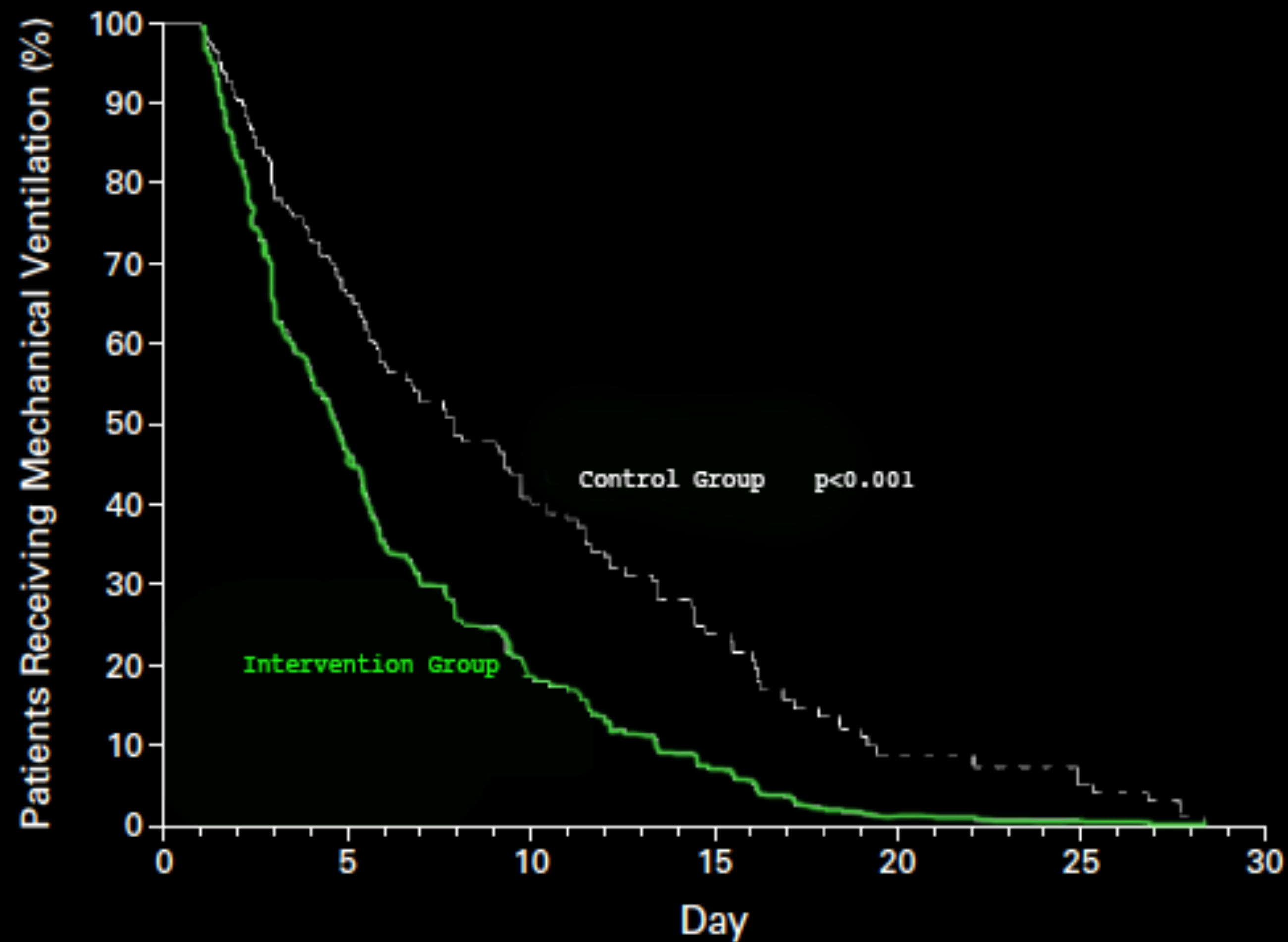


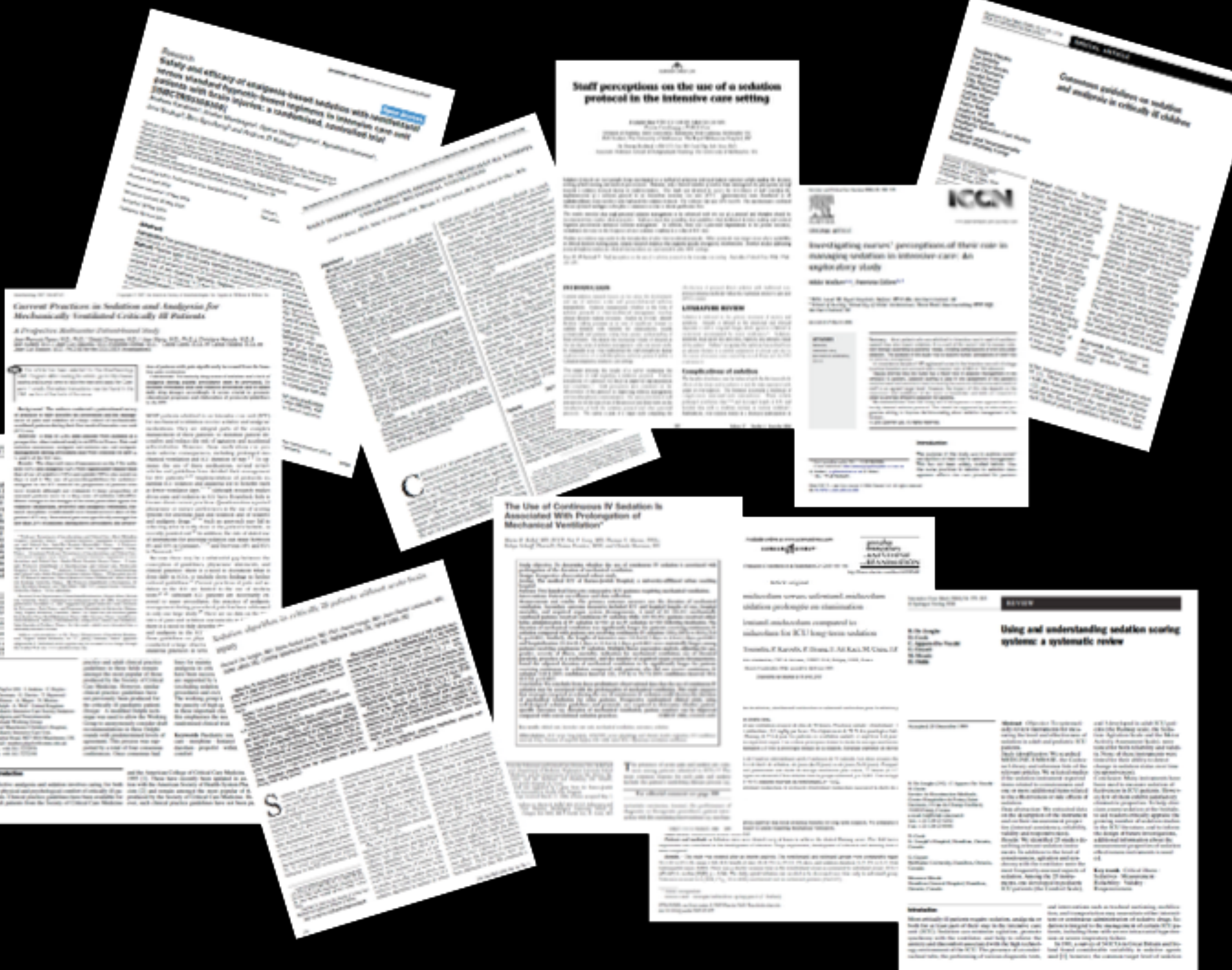
VELTSIN GOES



DAILY INTERRUPTION OF SEDATIVE INFUSIONS IN CRITICALLY ILL PATIENTS UNDERGOING MECHANICAL VENTILATION

JOHN P. KRESS, M.D., ANNE S. POHLMAN, R.N., MICHAEL F. O'CONNOR, M.D., AND JESSE B. HALL, M.D.







Disponible en ligne sur www.sciencedirect.com



Annales Françaises d'Anesthésie et de Réanimation 27 (2008) 541–551

**Annales
françaises
d'ANESTHÉSIE
ET DE RÉANIMATION**
<http://france.elsevier.com/direct/ANNFAR/>

Texte long du jury

Sédation-analgésie en réanimation (nouveau-né exclu)[☆]

Sedation and analgesia in intensive care (with the exception
of new-born babies)



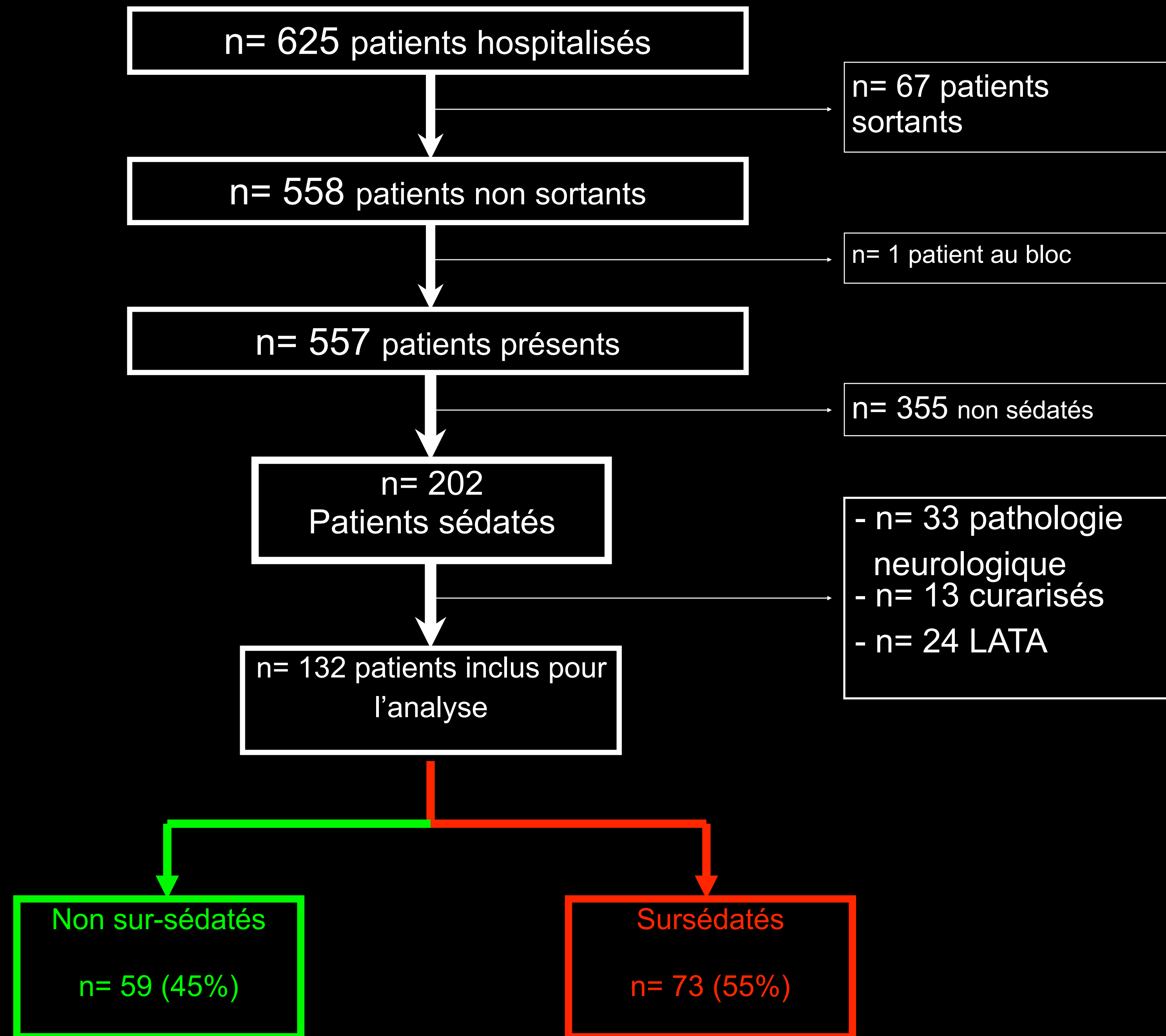
Que retenir de la conférence de consensus ?...

Les indications d'une sédation profonde sont :

SDRA à la phase initiale
Cérébro-lésé avec HTIC

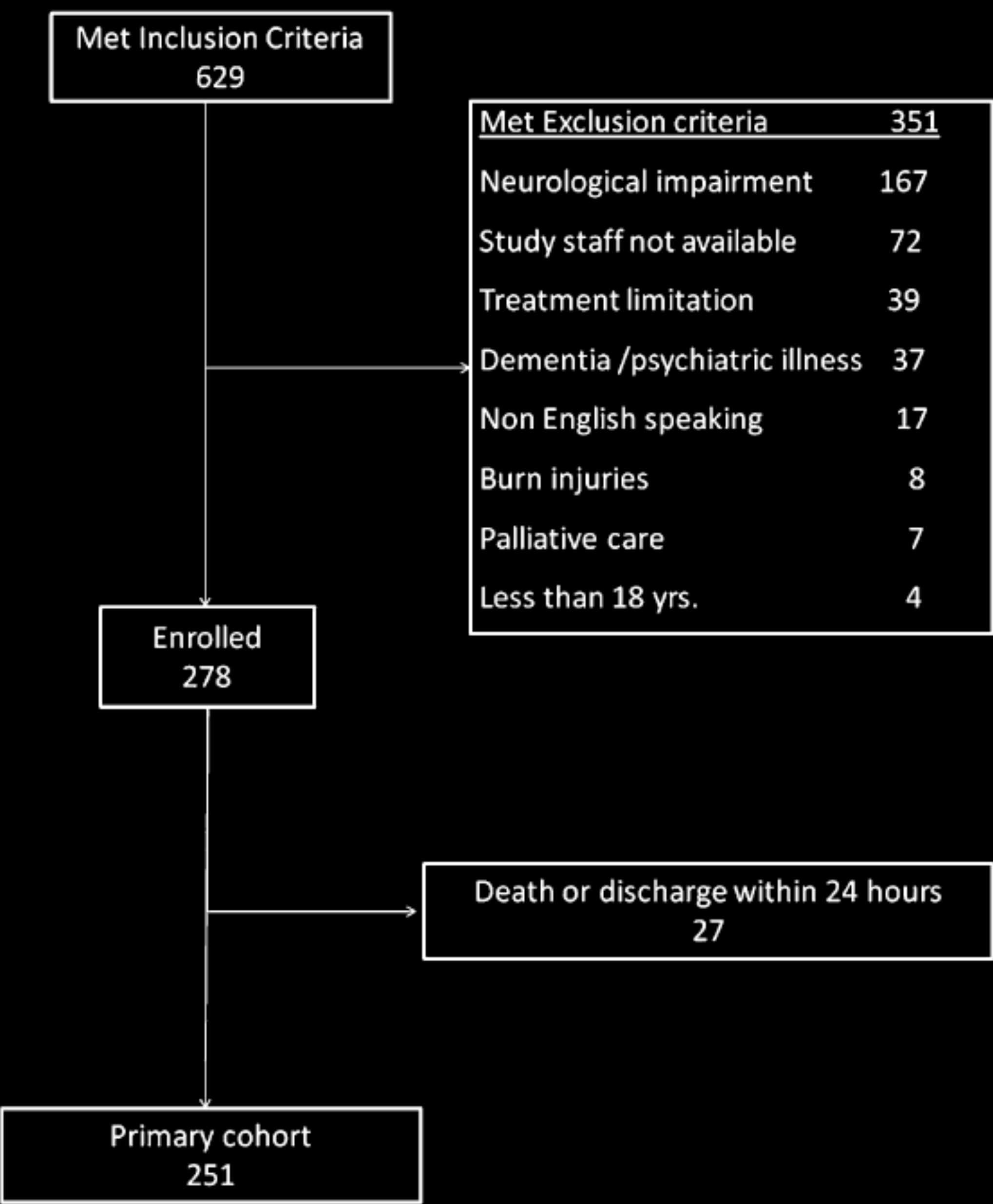
En dehors ...

**Pas d'indication, à une sédation
profonde**



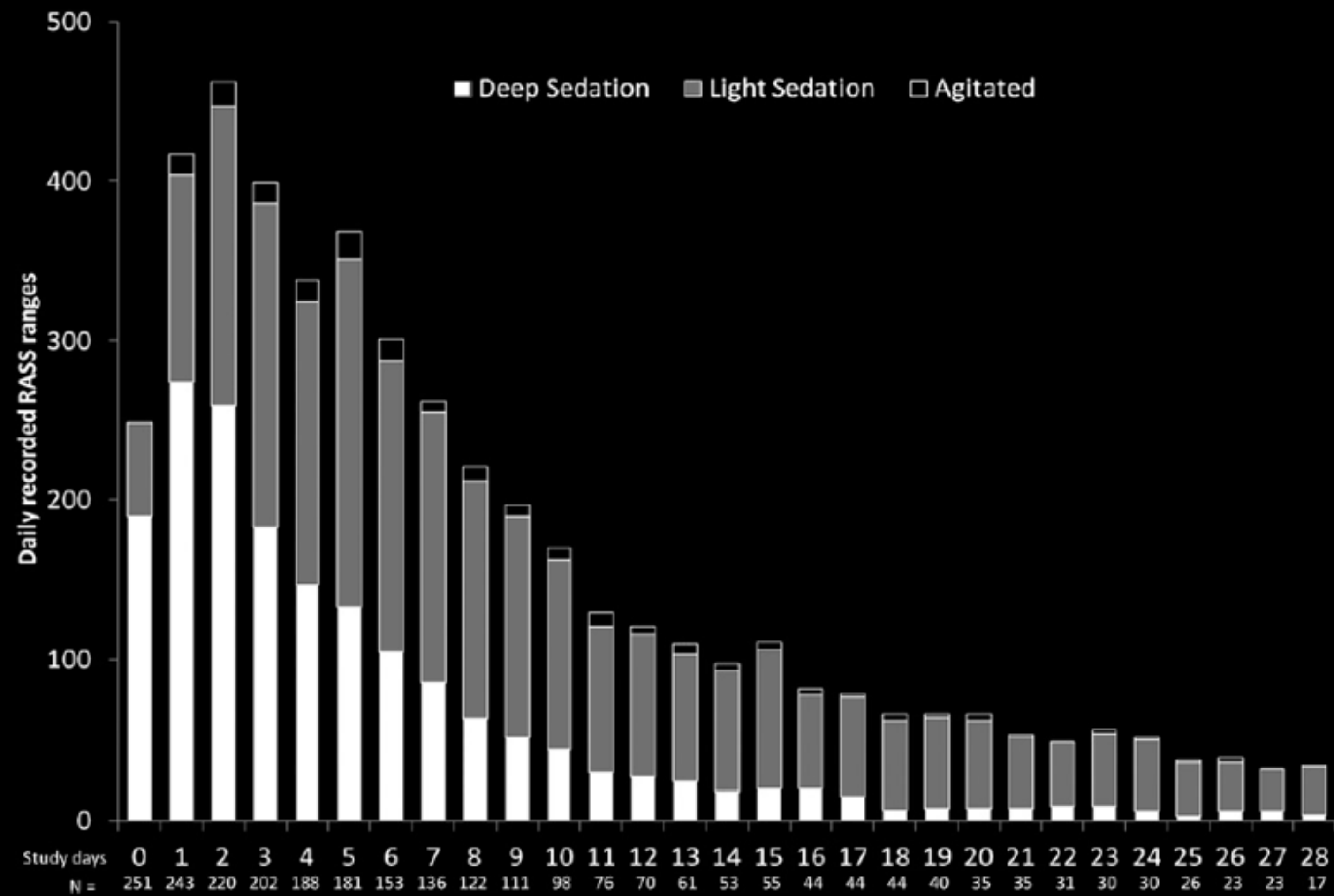
Early Intensive Care Sedation Predicts Long-Term Mortality in Ventilated Critically Ill Patients

Yahya Shehabi^{1,2}, Rinaldo Bellomo^{3,4,5,6}, Michael C. Reade^{7,8}, Michael Bailey⁵, Frances Bass², Belinda Howe⁵, Colin McArthur⁹, Ian M. Seppelt¹⁰, Steve Webb^{11,12}, and Leonie Weisbrodt¹³; Sedation Practice in Intensive Care Evaluation (SPICE) Study Investigators and the ANZICS Clinical Trials



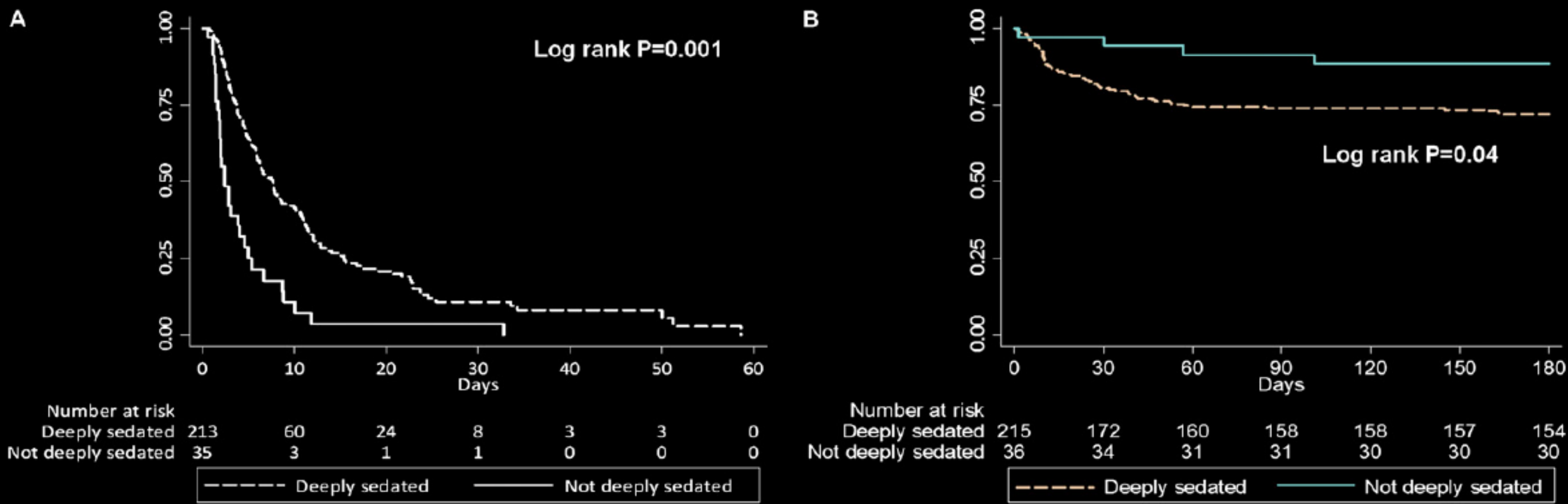
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	Time to Extubation			Delirium after 48 h			180-d Mortality		
	HR	95% CI	P Value	HR	95% CI	P Value	HR	95% CI	P Value
RASS, −3 to −5*	0.90	0.87–0.94	<0.001	1.05	0.99–1.11	0.10	1.08	1.01–1.16	0.027
APACHE II	0.99	0.97–1.02	0.79	1.01	0.99–1.04	0.47	1.02	0.99–1.06	0.21
Age	0.99	0.98–1.00	0.71	1.00	0.99–1.01	0.62	1.03	1.01–1.05	0.009
Male sex	0.63	0.46–0.87	0.02	1.10	0.72–1.70	0.64	1.05	0.78–2.34	0.25
Operative	0.77	0.48–1.24	0.33	0.98	0.48–2.01	0.96	1.20	0.52–2.79	0.67
Elective	1.25	0.74–2.11	0.36	0.41	0.16–1.09	0.07	1.18	0.50–2.85	0.71
Cardiac [†]	0.83	0.45–1.56	0.88	0.26	0.01–0.67	0.01	1.77	0.56–5.61	0.33
Respiratory [†]	0.48	0.30–0.77	0.01	0.65	0.34–1.25	0.20	1.43	0.47–4.38	0.53
Sepsis [†]	0.66	0.35–1.24	0.18	0.95	0.26–1.34	0.20	1.82	0.53–6.20	0.34
Gastrointestinal [†]	1.11	0.62–1.98	0.86	0.73	0.33–1.64	0.45	1.43	0.42–4.86	0.57
Vasopressors	0.69	0.49–0.97	0.02	1.33	0.82–2.18	0.25	0.68	0.36–1.28	0.23
Dialysis [‡]	0.59	0.36–0.95	0.03	1.70	0.96–3.01	0.07	2.45	1.31–4.56	0.005
Rural hospital	1.53	0.85–2.77	0.14	1.14	0.67–1.95	0.63	0.74	0.23–2.06	0.56
Metro hospital	1.00	0.67–1.49	0.89	1.26	0.60–2.61	0.5	1.05	0.53–2.09	0.88

En dehors de SDRA et HTiC

**PAS D'INDICATION À UNE
SÉDATION PROFONDE.**

Nécessité d'analgésie ...

Sédation basée sur l'Analgésie

Top 10 Myths Regarding Sedation and Delirium in the ICU

September 2013 • Volume 41 • Number 9 (Suppl.)

Gregory J. Peitz, PharmD, BCPS^{1,2}; Michele C. Balas, PhD, RN, APRN-NP, CCRN³;
Keith M. Olsen, PharmD, FCCP, FCCM²; Brenda T. Pun, RN, MSN, ACNP⁴; E. Wesley Ely, MD, MPH^{5,6}

Myth 3: Only Surgical ICU Patients Experience Pain

ICU patients routinely receive sedatives and analgesics during their care, and yet 27–77% of all ICU patients still experience significant pain (23), with resulting negative alterations in phys-



Que retenir de la conférence de consensus ?...

Chaque service de Réanimation doit disposer d'un Protocole écrit de sédation.

Impact d'un protocole de sédation

	n=	Type d'étude	Protocole	DDV	DMS
Brook et al. CCM 99	321	RCT	<i>presc. méd. vs. protocole</i>	4.9 VS 2.3 j	7.5 VS 5.7
Kress et al. NEJM 00	128	RCT	Protocol vs DI	7.3 VS 4.9 j	9.9 VS 6.4 j
Brattebo et al. BMJ 02	285	Before-After	<i>presc. méd. vs. protocole</i>	7.4 VS 5.3 j	9.3 VS 8.3 j
De Jonghe CCM 05	102	Before-After	<i>presc. méd. vs. protocole</i>	10.3 VS 4.4 j	15 VS 8 j
Elliott ICM 06	322	Before-Afetr	Presc. Med VS protocole	4.8 vs 5.6 j	7.1 VS 8.2 j
Quenot et al. CCM 07	423	Before-After	Presc. Med VS protocol	8 VS 4.2 j	11 VS 5 j
De Wit CC 08	74	RCT	DI VS protocol	6.7 VS 3.9 j	15 VS 8 j
Arias-Ribeira CCM	356	Before-after	<i>presc. méd. vs. protocole</i>	↘ Sevrage	↗ « Ventialtor free Days »
Bucknall CCM 08	312	RCT	Protocol vs Press Med	79 VS 58 h	94 VS 88 h

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Etudes Australiennes
Infirmières de réanimation
Ratio 1/1
Pas de preuve du suivi du protocole

**Qu'est-ce qu'un protocole de
sédation ?**

Formation

Choisir des molécules

Elaborer un algorithme

Evaluer la vigilance et l'analgésie

Protocoles écrits pour

- 85% protocole de contrôle strict de la glycémie
- 44% protocole de prise en charge du choc septique
- 47% protocole de sevrage de la VM

Do you have a sedation guideline?	
Yes	148 (80%)
No	37

Reischreiter *crit care* 2008

30% des services ont un protocole écrit de sédation

84% des personnes interrogées pensent qu'un protocole pourrait améliorer la sédation dans leur service.

2007

30% des services ont un protocole écrit de sédation

34 % des services évaluent la sédation et l'analgésie

2009

52%

~~30%~~ des services ont un protocole écrit de sédation

~~34%~~ des services évaluent la sédation et l'analgésie

80%

2015

~~52%~~

60%

~~30%~~ des services ont un protocole écrit de sédation

~~34%~~ des services évaluent la sédation et l'analgésie

~~80%~~

90 %

Révolution en Réanimation

New Trends in ICU ?

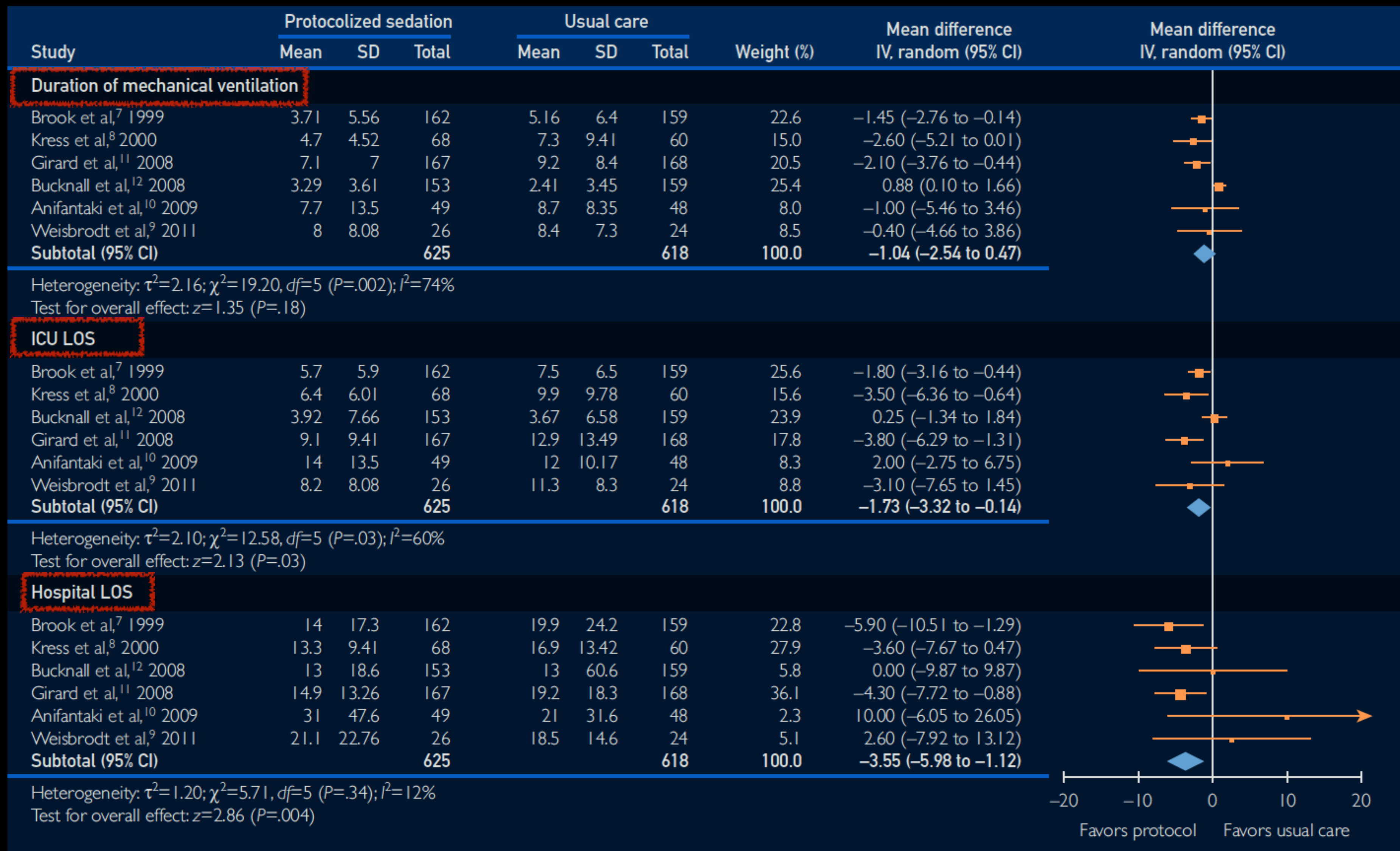
Less is more

Moins ventiler

Moins Remplir

Moins Sédater

Effect of Protocolized Sedation on Clinical Outcomes in Mechanically Ventilated Intensive Care Unit Patients. A MetaAnalysis.



**Que deviennent nos
patients ?**

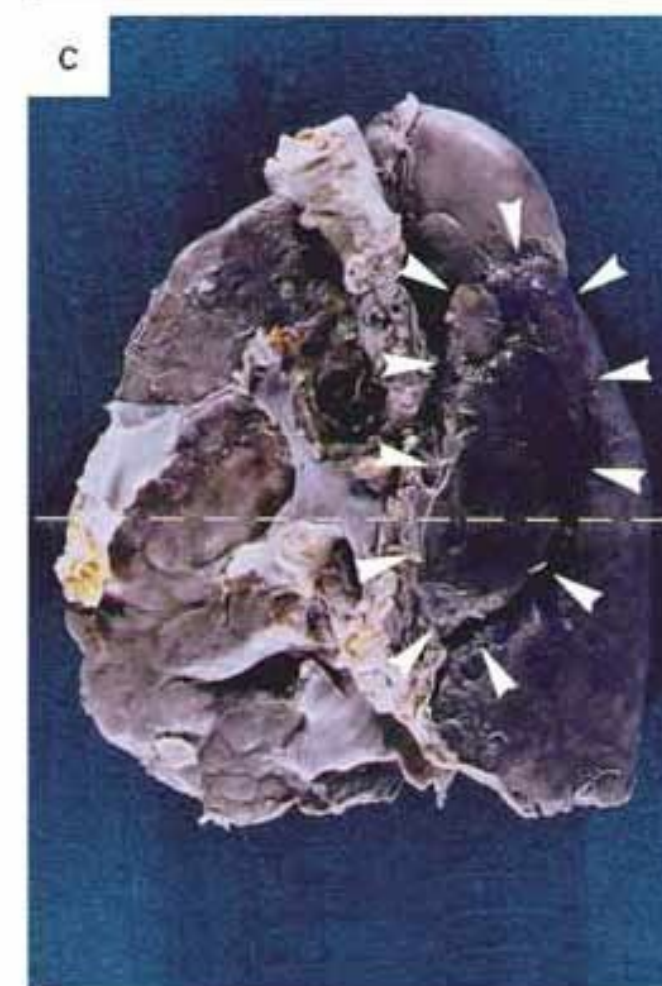
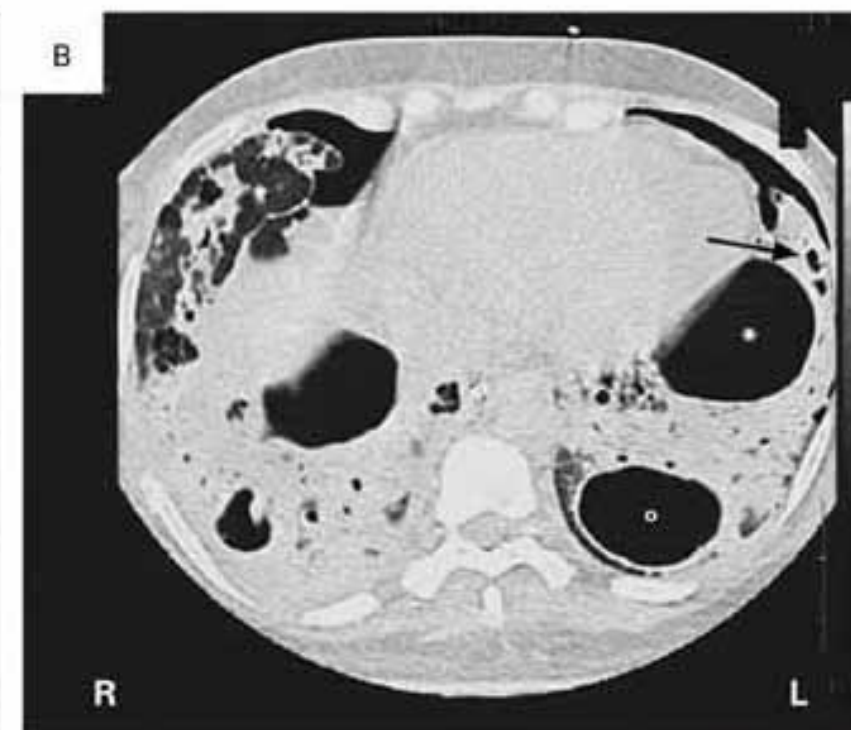


**Que deviennent les
survivants ?**

PICS

Que deviennent les
survivants du SDRA ?





Right Lung



Left Lung

The NEW ENGLAND JOURNAL *of* MEDICINE

ESTABLISHED IN 1812

APRIL 7, 2011

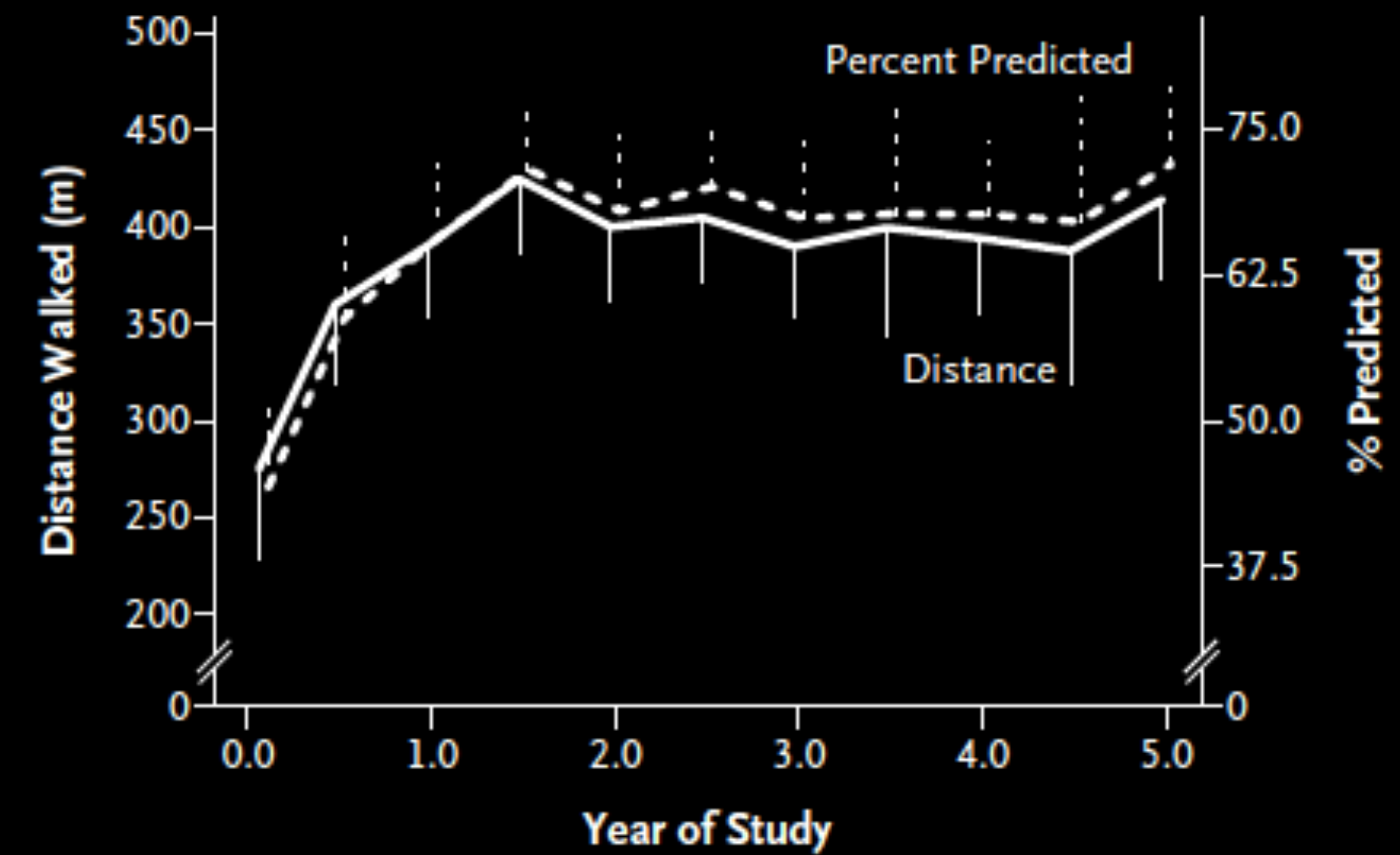
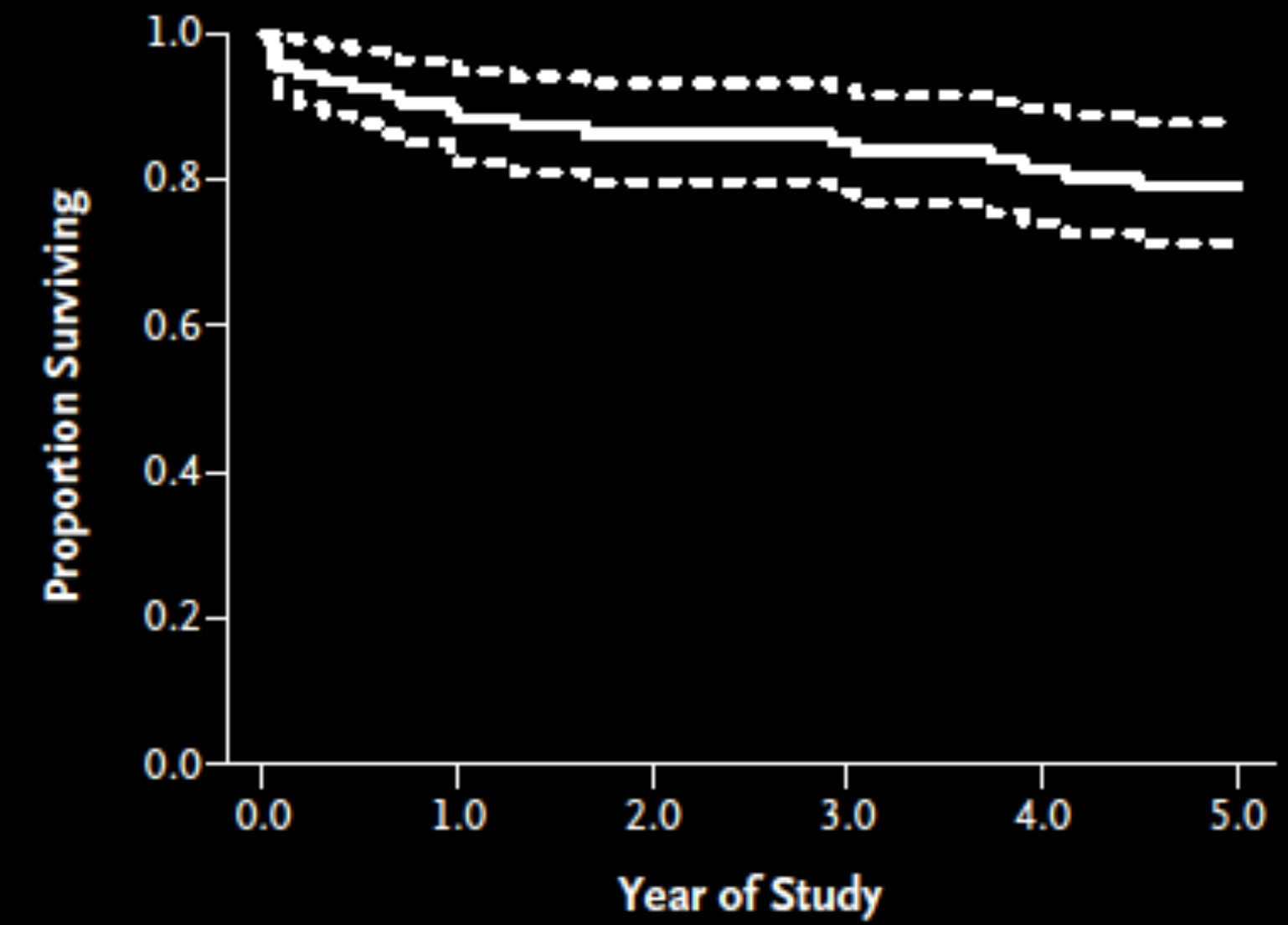
VOL. 364 NO. 14

Functional Disability 5 Years after Acute Respiratory Distress Syndrome

Margaret S. Herridge, M.D., M.P.H., Catherine M. Tansey, M.Sc., Andrea Matté, B.Sc., George Tomlinson, Ph.D.,
Natalia Diaz-Granados, M.Sc., Andrew Cooper, M.D., Cameron B. Guest, M.D., C. David Mazer, M.D.,
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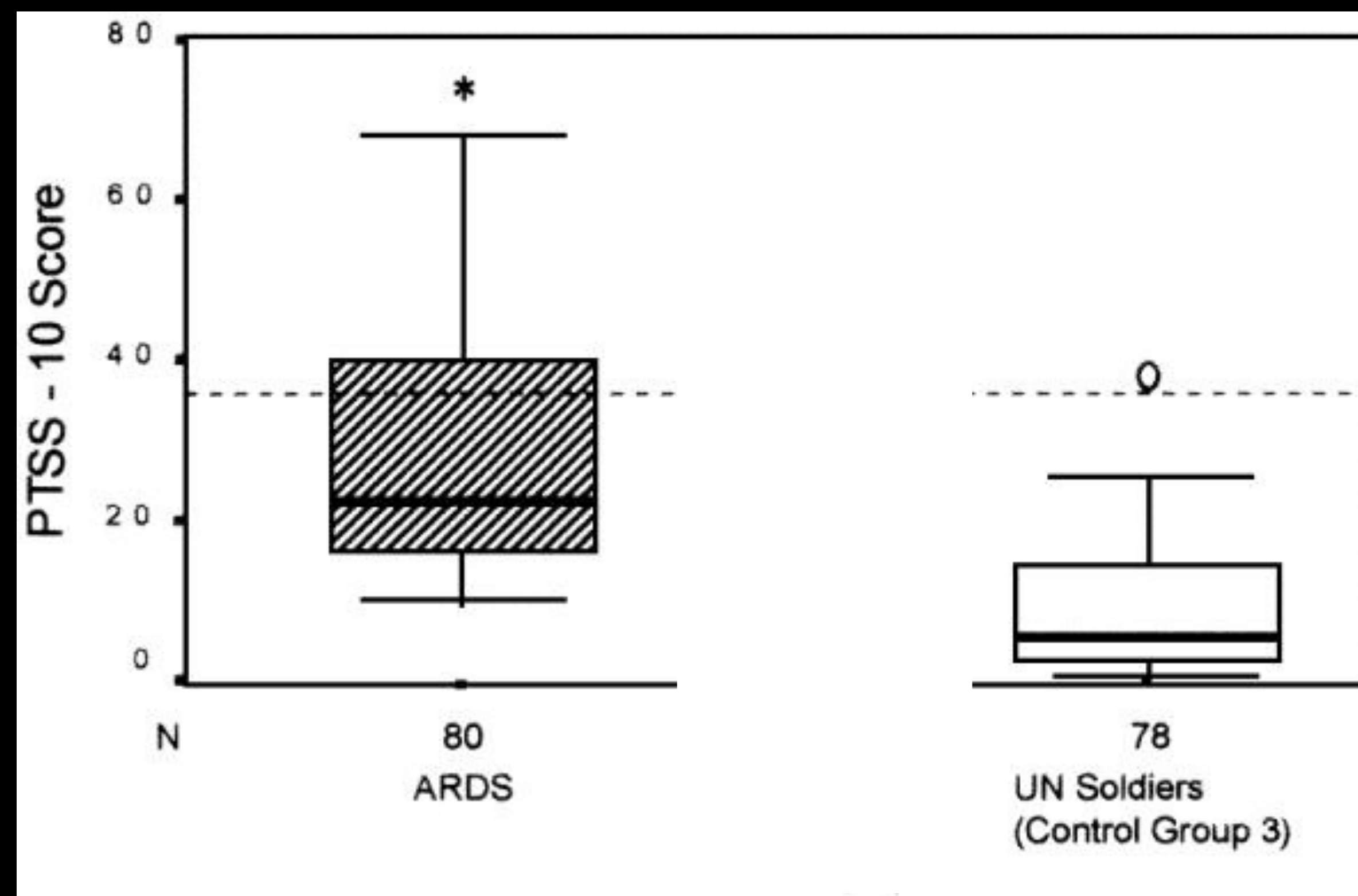


Syndrome de stress post traumatique (PTSD)



SSPT : trouble anxieux sévère qui se manifeste à la suite d'une expérience vécue comme traumatisante (attentats, viol, guerre...).

Health-related quality of life and posttraumatic stress disorder in survivors of the acute respiratory distress syndrome.



Schelling, CCM 1998.

Functional Disability 5 Years after Acute Respiratory
Distress Syndrome

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OUVRIR

In summary, young, previously working patients with ARDS who have few coexisting illnesses may not recover completely and may have ongoing functional limitations after an episode of critical illness. This may be attributed to persistent ICU-acquired weakness, in addition to a variety of other physical and mental health impairments. Family members may also have psychological dysfunction, which may further compromise outcomes. The health burden of critical illness may be likened to that of chronic disease with similar health care utilization. Research priorities include a better understanding of the pathophysiology of ICU-acquired weakness and an evaluation of the effects of a customized, family-centered, rehabilitation program on long-term outcomes after a critical illness.

Impact d'un protocole
de sédation ?

Protocolized sedation effect on post-ICU posttraumatic stress disorder prevalence: A systematic review and network meta-analysis

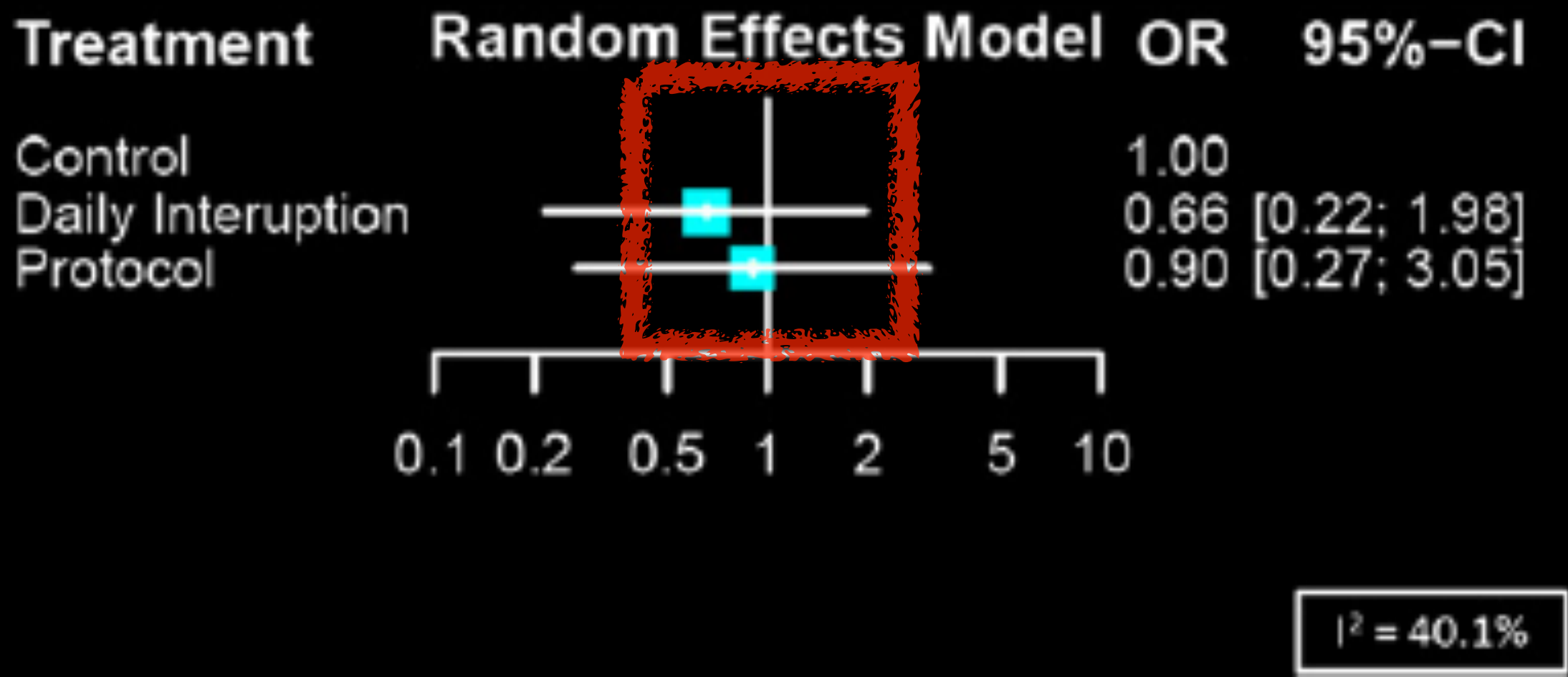
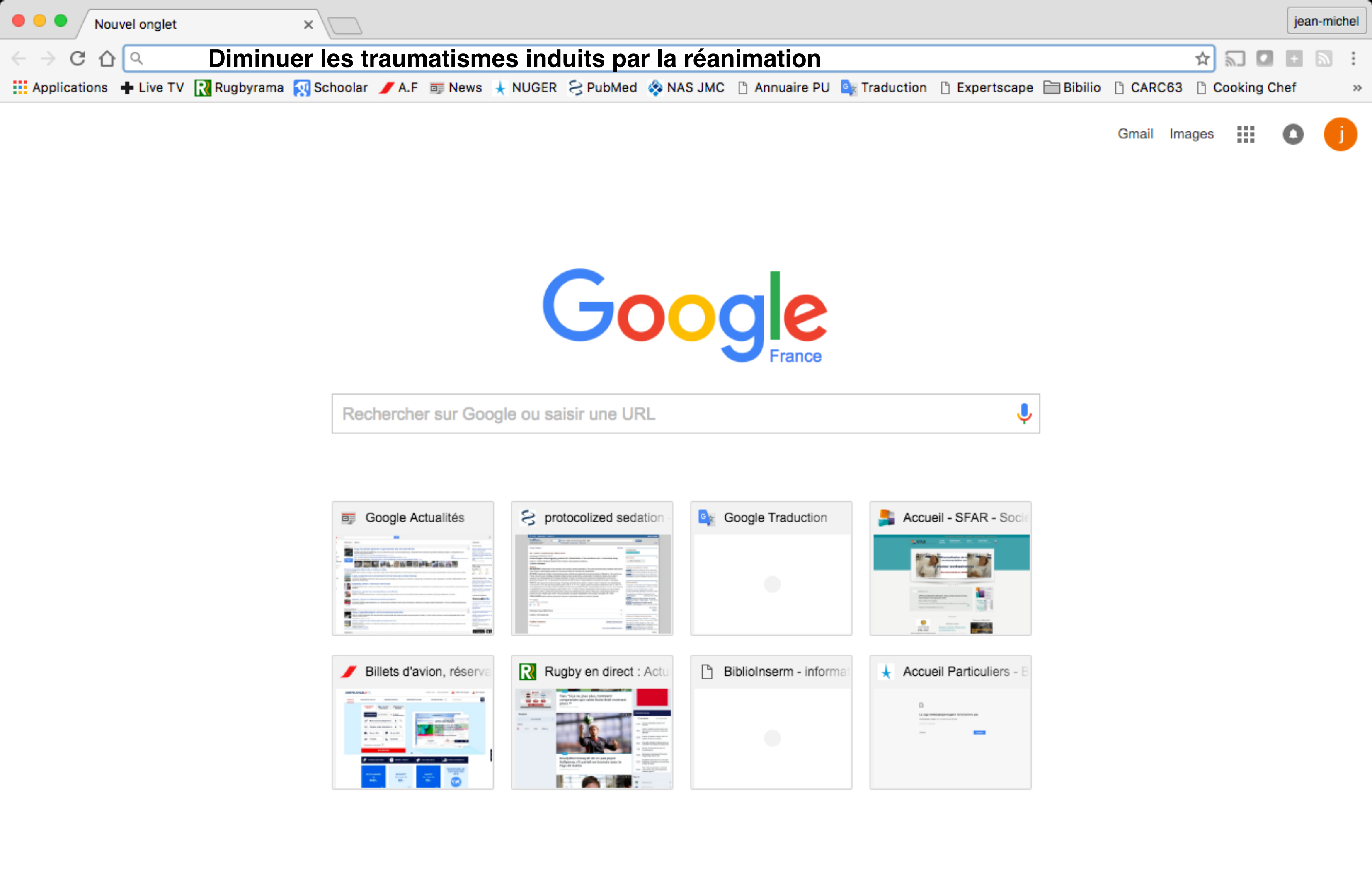


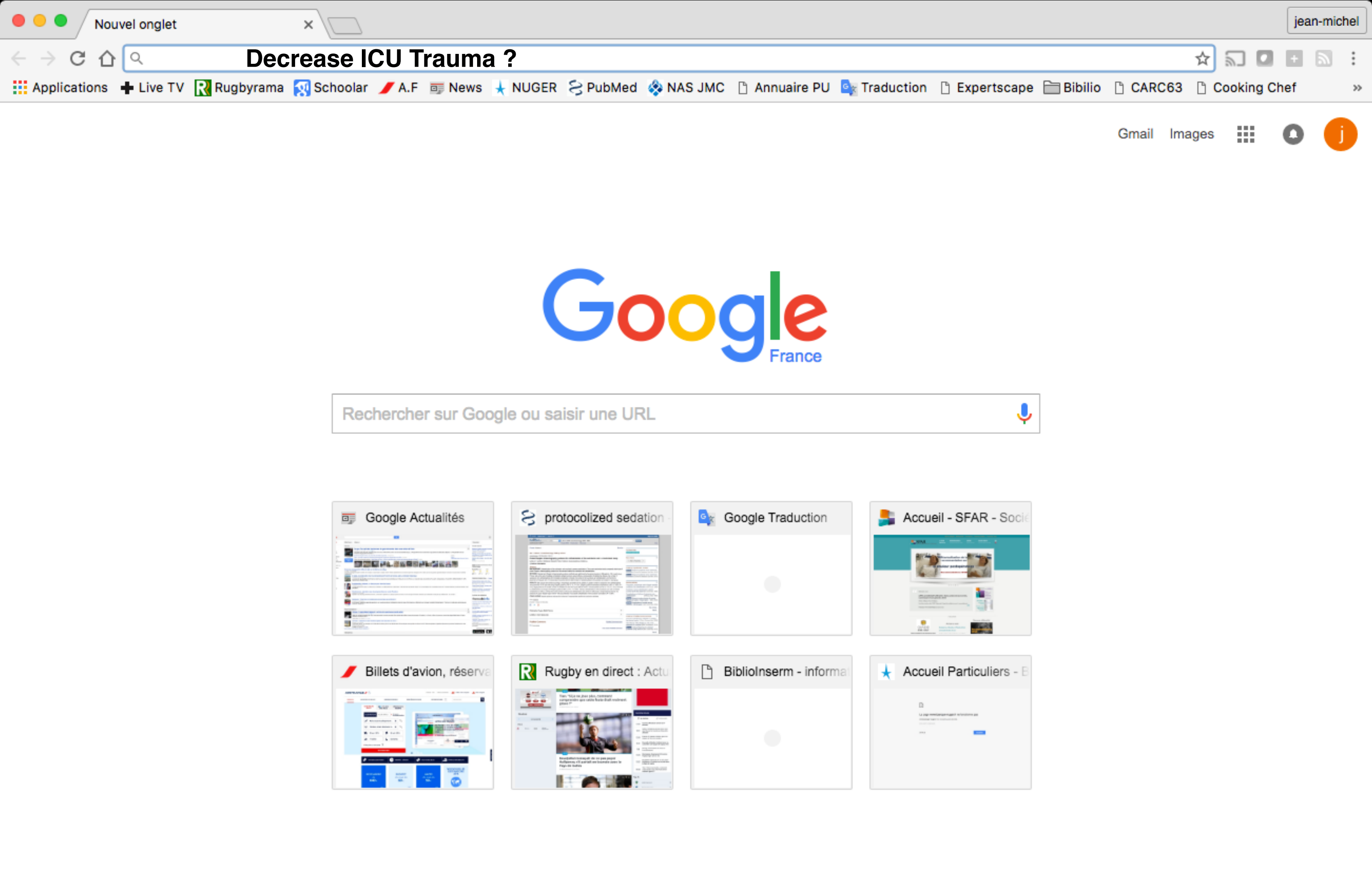
Fig. 3. Forest plot for PTSD prevalence.





Solutions ?





"All the News
That's Fit to Print"

The New York Times

Washington Edition

Today, a mix of sun and clouds,
highs in low 40s. Tonight, partly
cloudy, lows around 30. Tomorrow,
thickening clouds, colder late, highs
in low 40s. Weather map, Page D8.

OL CLVIII . . . No. 54,553

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MONDAY, JANUARY 12, 2009

\$1.50

New Idea to Cut I.C.U. Trauma: Get Patients Up, Tubes and All

By GINA KOLATA

For years, doctors thought they had done their jobs if patients came out of an intensive care unit alive.

Now, though, researchers say they are alarmed by what they are finding as they track patients for months or years after an I.C.U. stay. Patients, even young ones, can be weak for years. Some have difficulty thinking and concentrating or have post-traumatic stress disorder and terrible memories of nightmares they had while heavily sedated.

While patients may be suffering lingering effects from illnesses that brought them to the I.C.U.,

researchers are increasingly convinced that spending days, weeks or months on life support in the units can elicit unexpected, long-lasting effects.

So now some I.C.U.'s are trying what seems like a radical solution: reducing sedation levels and getting patients up and walking even though they are gravely ill, complete with feeding tubes, intravenous lines and tethers to ventilators.

Even a few days in an I.C.U. can be physically devastating immediately afterward, said Dr. Naeem Ali of Ohio State University.

Continued on Page A11

New Approach to Cut Trauma From I.C.U.: Get Patients Walking

From Page A1

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Alarming Findings in the Tracking of patients for years.

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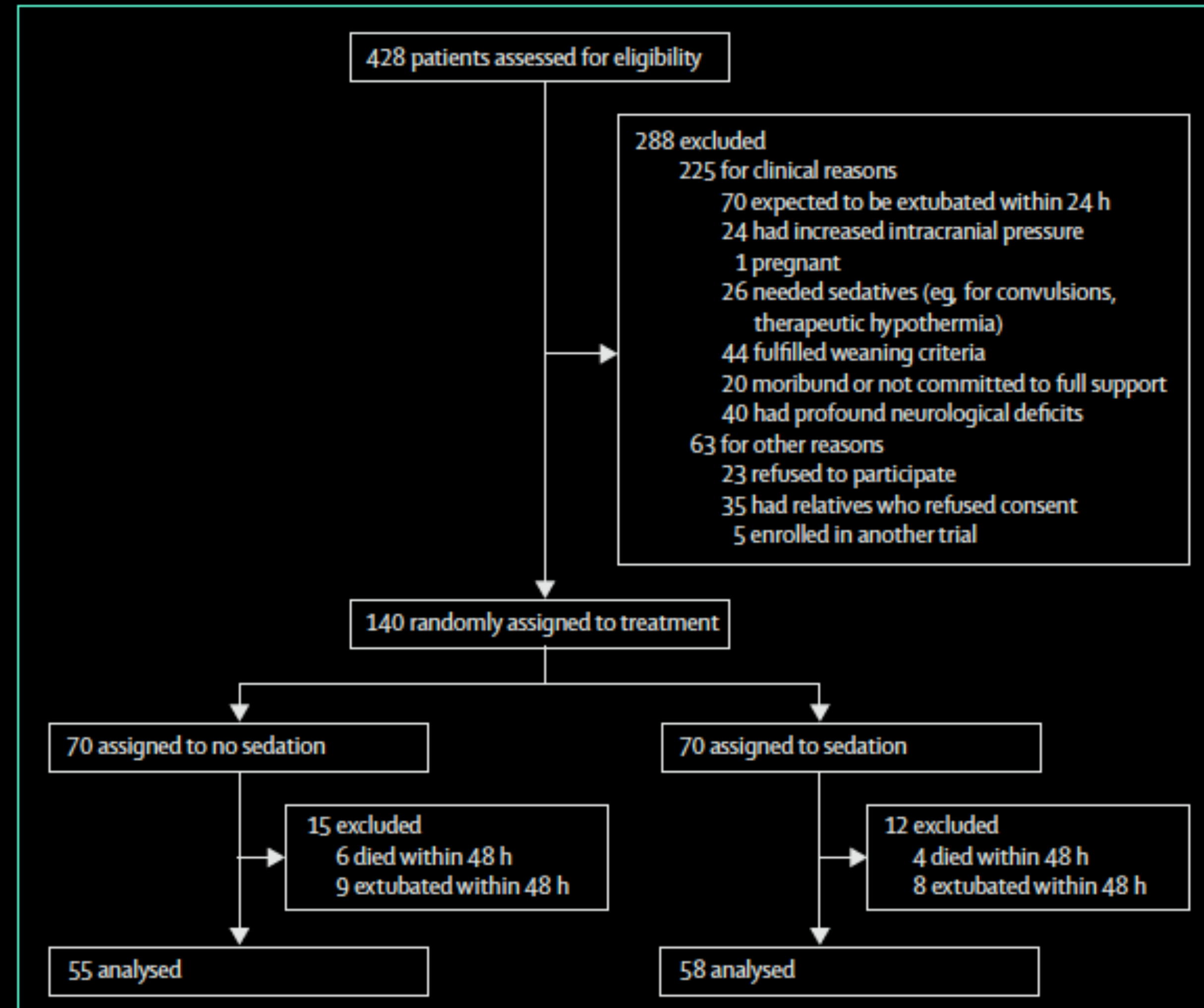
wow !

No Sédation

A protocol of no sedation for critically ill patients receiving mechanical ventilation: a randomised trial



Thomas Strøm, Torben Martinussen, Palle Toft



A protocol of no sedation for critically ill patients receiving mechanical ventilation: a randomised trial

Thomas Strøm, Torben Martinussen, Palle Toft

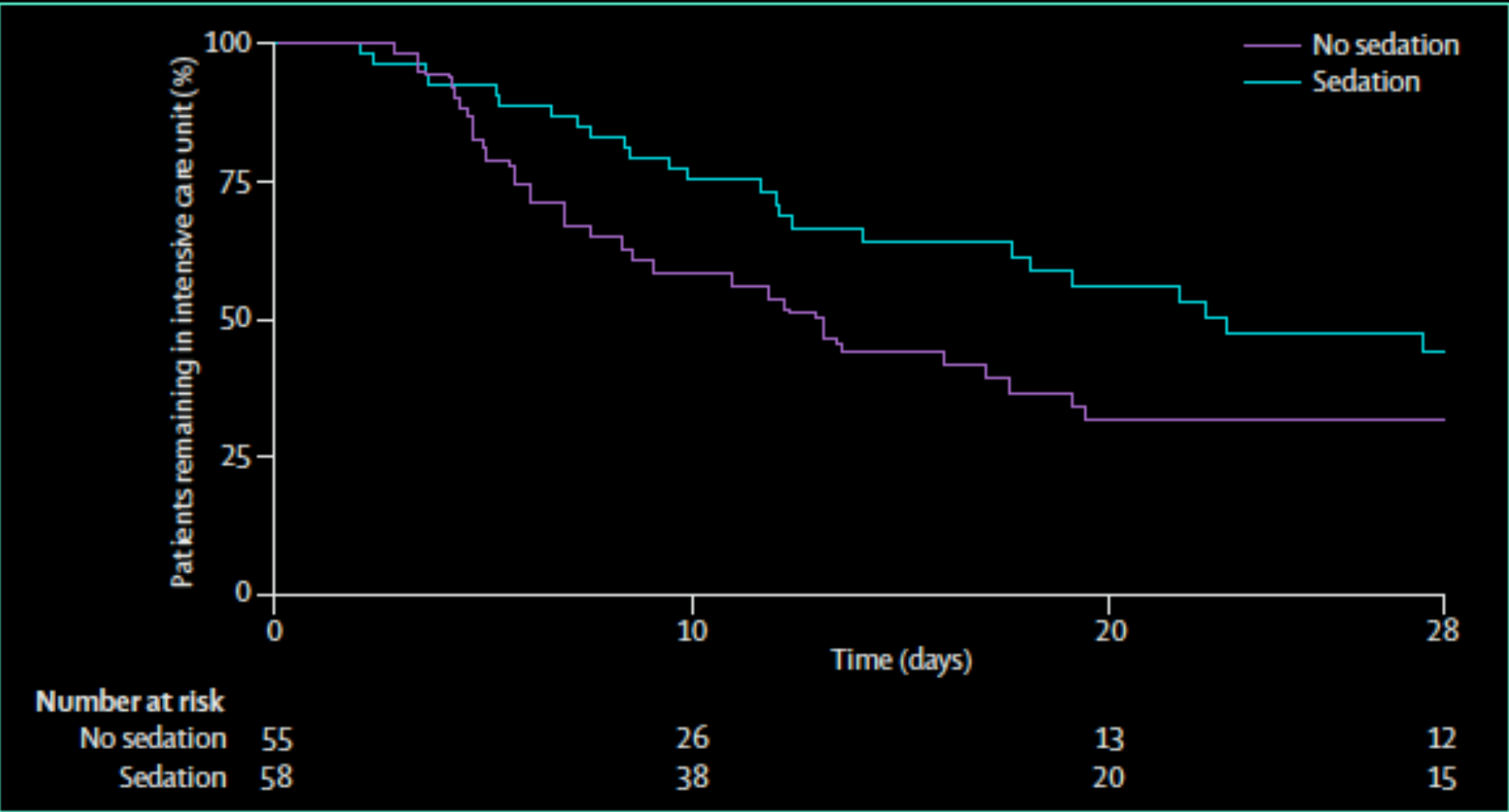


Figure 2: Kaplan-Meier plot of length of stay in the intensive care unit and number at risk from admission to 28 days

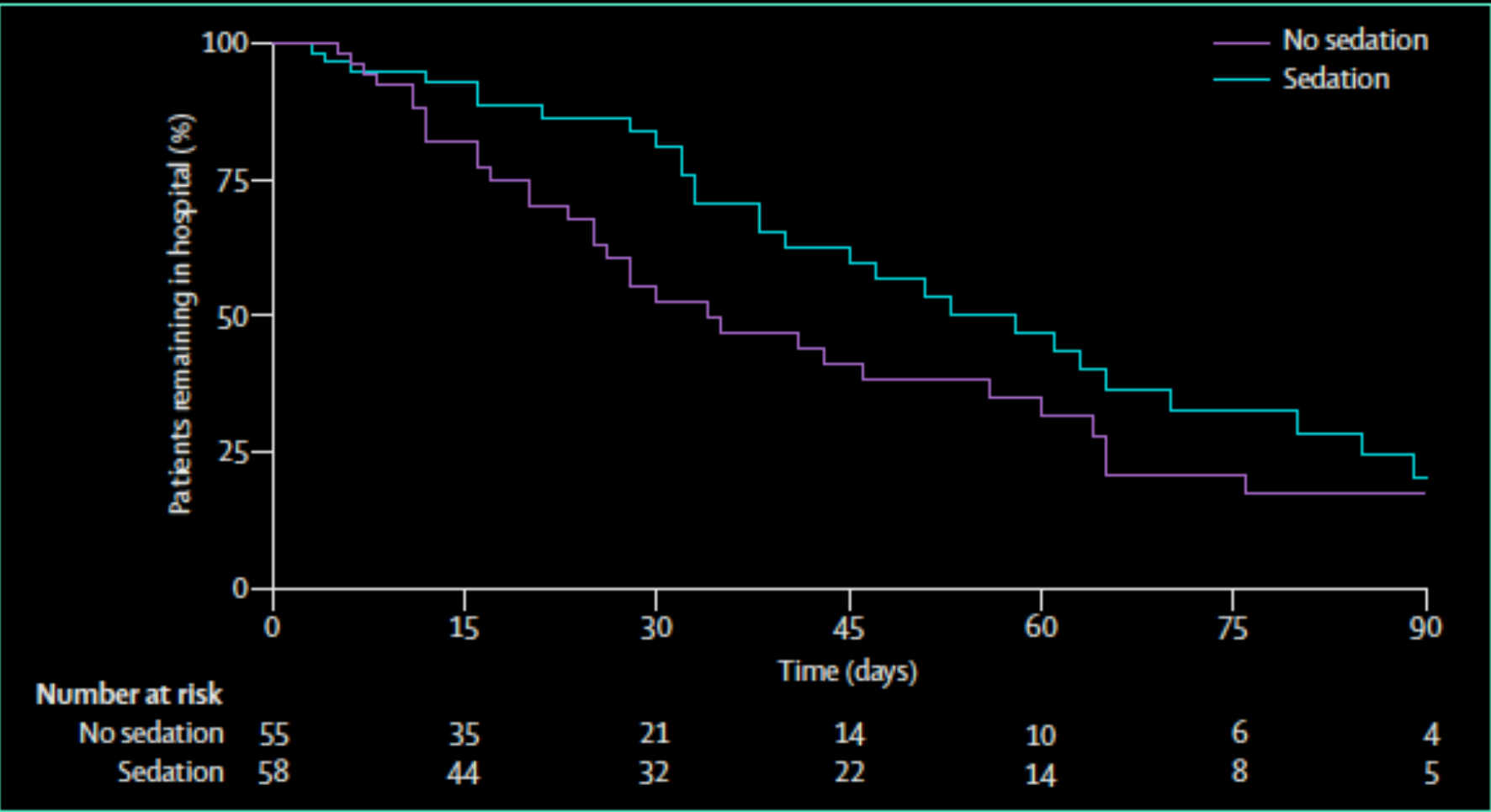


Figure 3: Kaplan-Meier plot of length of stay in hospital and number at risk from admission to 90 days

A protocol of no sedation for critically ill patients receiving mechanical ventilation: a randomised trial



Thomas Strøm, Torben Martinussen, Palle Toft

	No sedation (n=55)	
Days without mechanical ventilation (from intubation to day 28)	13·8 (11·0); 18·0 (0·2)	
Length of stay (days)		
Intensive care unit	13·1 (5·7)	
Hospital	15·1 (10·0)	
Mortality		
Intensive care unit	10 (18·2%)	
Hospital	14 (25·5%)	
Drug doses (mg/kg)		
Propofol (per h of infusion)**	0·14	0·0001
Midazolam (per h of infusion)	0·01	<0·0001
Morphine (per h of morphine infusion)	0·39	0·39
Haloperidol (per h of infusion)	0·0140	0·0140
Tracheostomy	0·98	0·98
Ventilator-associated pneumonia	0·85	0·85
Data are mean (SD) or number (percentage) of patients. †Calculated for baseline variables: age, sex, weight, acute physiology and chronic health evaluation (APACHE) II score, and Sequential Organ Failure Assessment (SOFA) at day 1. ‡Calculated from multiple linear regression analysis. §Calculated from Cox regression analysis. ¶Calculated for proportion of bodyweight (kg). **Maximum dose during 48 h of treatment.		

Table 2: Outcomes





"All the News
That's Fit to Print"

The New York Times

Washington Edition

Today, a mix of sun and clouds, highs in low 40s. Tonight, partly cloudy, lows around 30. Tomorrow, thickening clouds, colder late, highs in low 40s. Weather map, Page D8.

OL CLVIII . . . No. 54,553

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Continued on Page A11





Il faut sédater les patients

Sédation légère

Sédation Coopérative



Réhabilitation précoce

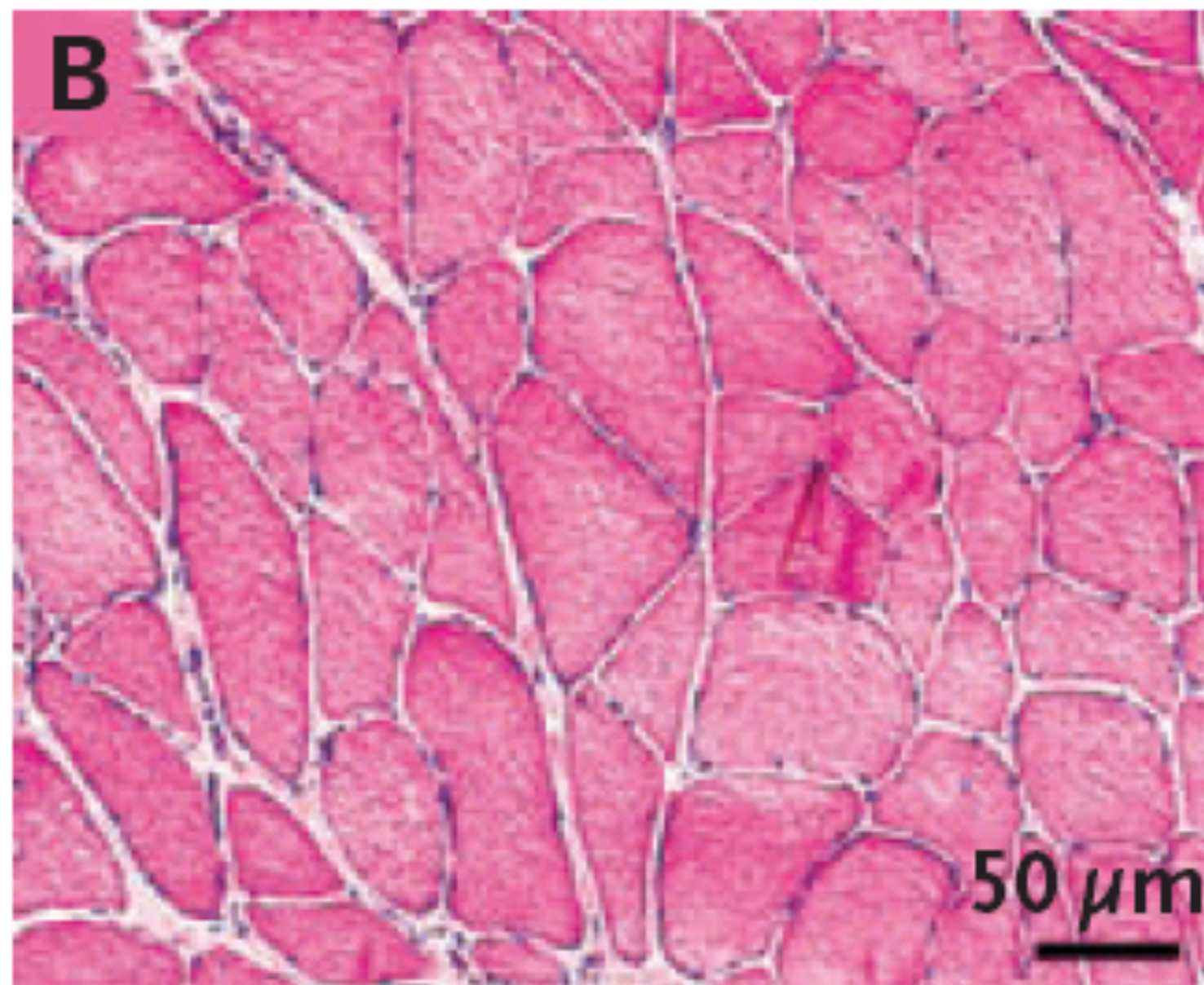
**C'est mieux de ne pas
sédaté !**

Atrophie Diaphragme

Short-term MV

2 - 3 hours

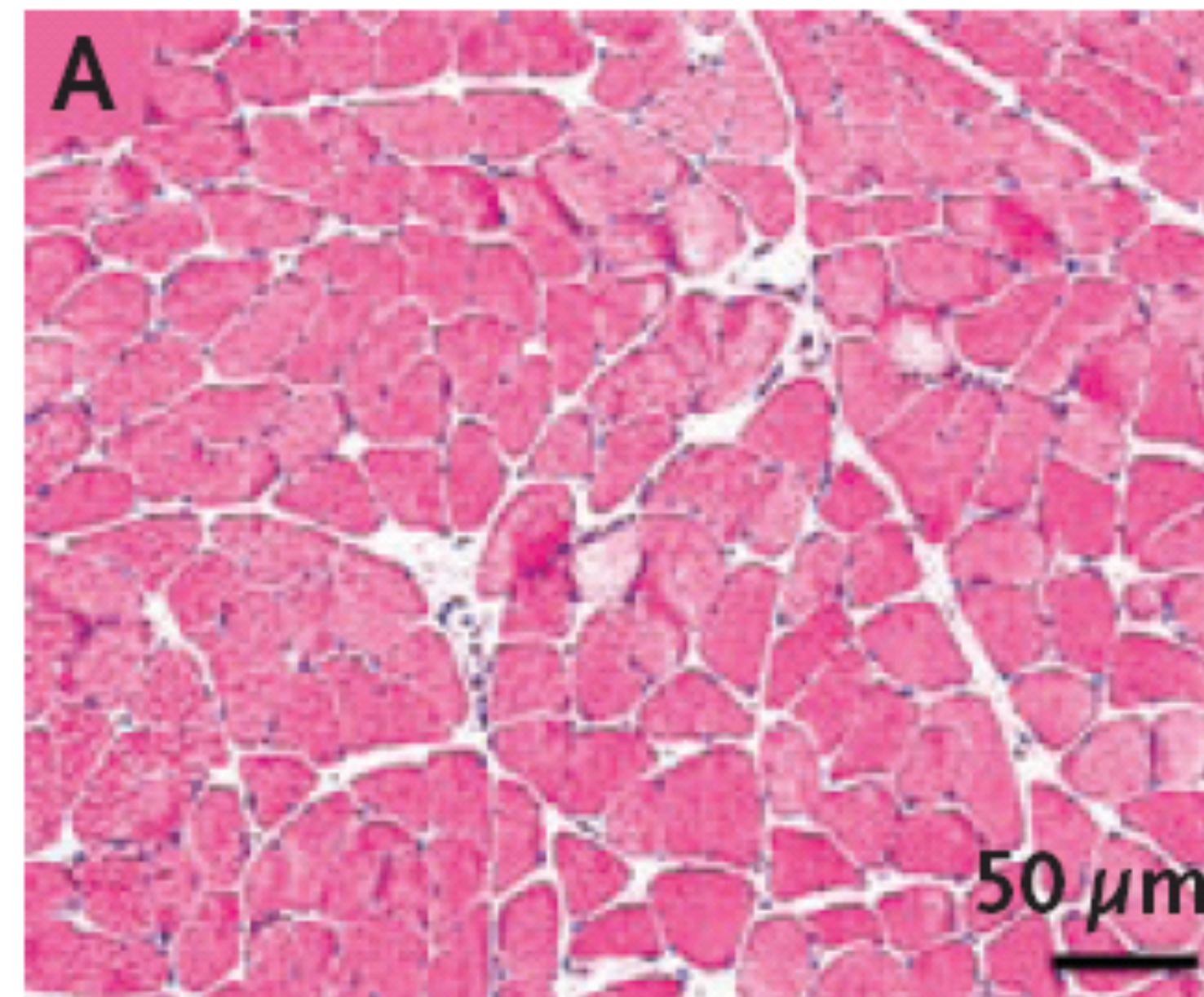
Control



Prolonged MV

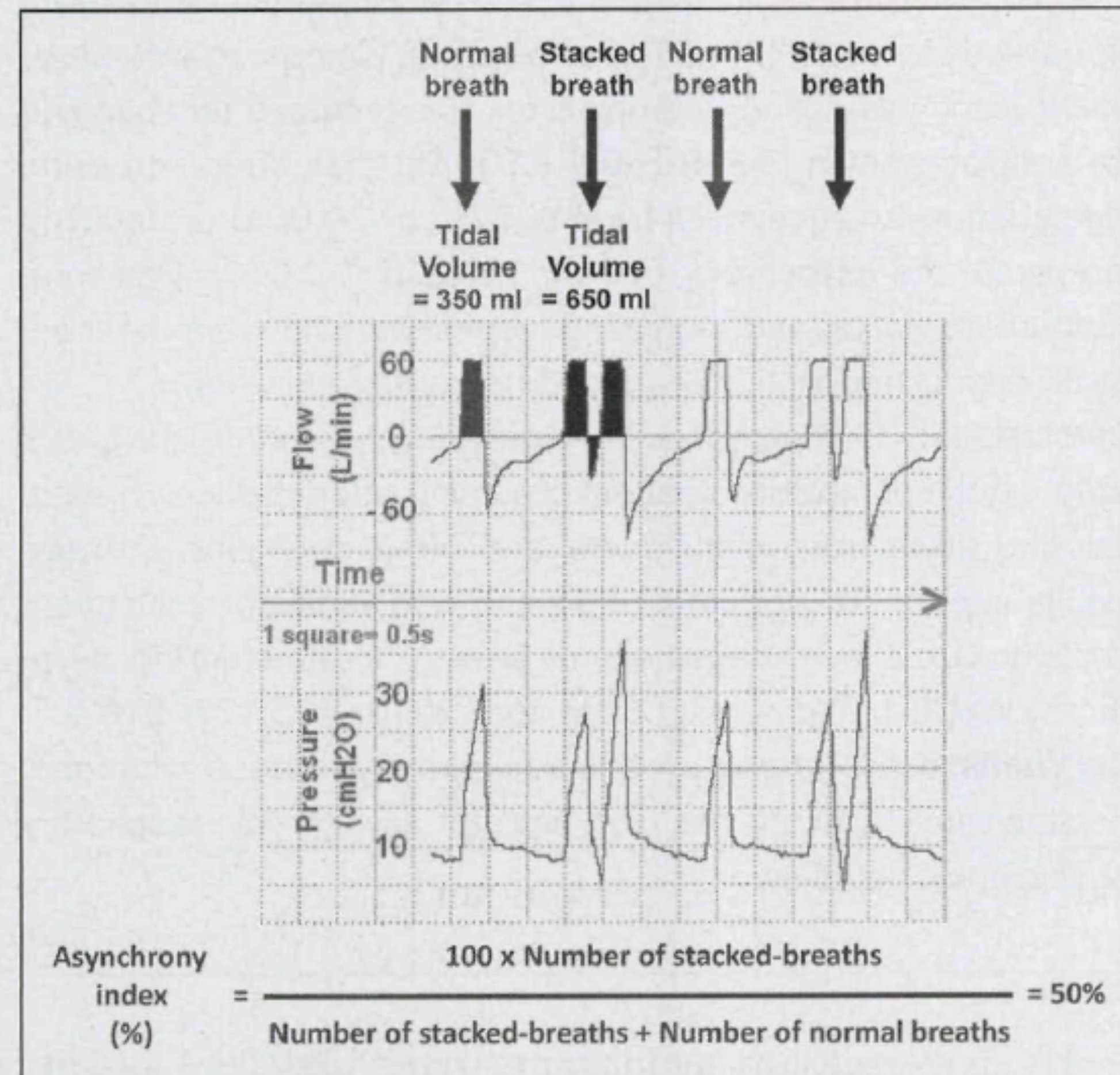
18 - 69 hours

Case



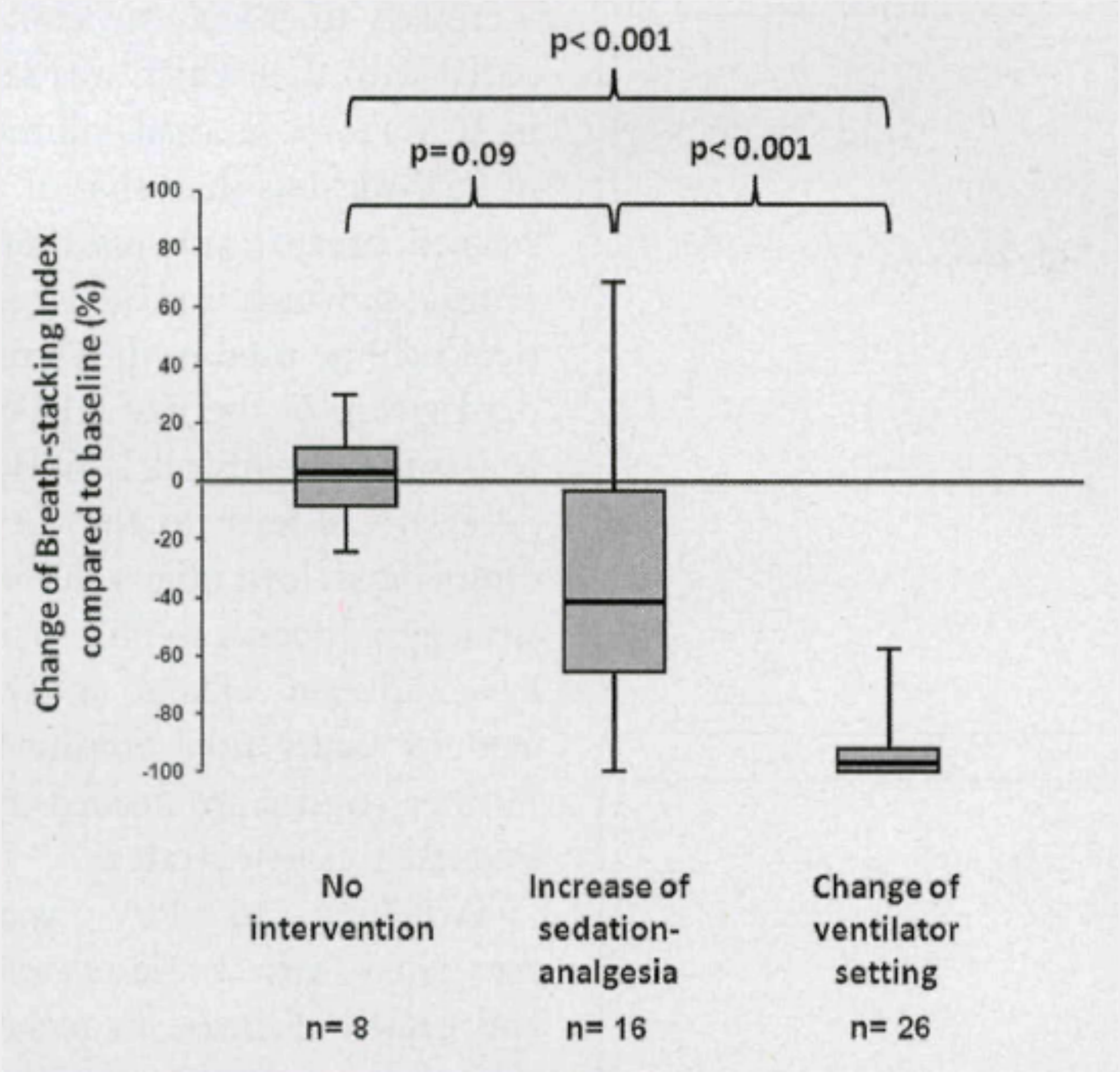
Impact of Ventilator Adjustment and Sedation–Analgesia Practices on Severe Asynchrony in Patients Ventilated in Assist-Control Mode*

Gerald Chanques, MD¹⁻³; John P. Kress, MD¹; Anne Pohlman, MSN¹; Shruti Patel, MD¹; Jason Poston, MD¹; Samir Jaber, MD^{2,3}; Jesse B. Hall, MD¹



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Adapter le patient au ventilateur

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Adapter le ventilateur au patient

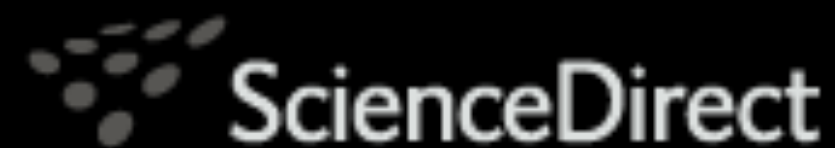


Conclusion

2007



Disponible en ligne sur www.sciencedirect.com



Annales Françaises d'Anesthésie et de Réanimation 27 (2008) 541–551



Texte long du jury

Sédation-analgésie en réanimation (nouveau-né exclu)[☆]

Sedation and analgesia in intensive care (with the exception
of new-born babies)

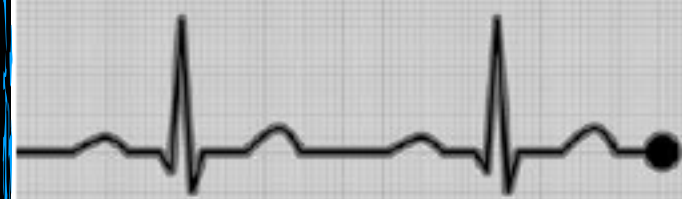
2013



Special Article

Clinical Practice Guidelines for the Management of Pain, Agitation, and Delirium in Adult Patients in the Intensive Care Unit

2018



Online Special Article

Clinical Practice Guidelines for the Prevention and Management of Pain, Agitation/Sedation, Delirium, Immobility, and Sleep Disruption in Adult Patients in the ICU

Physical Restraints

Question: What are the prevalence rates, rationale, and outcomes (harm and benefit) associated with physical restraint use in intubated or nonintubated critically ill adults?

Light Sedation

Question: Does light sedation (vs deep sedation), regardless of the sedative agent(s) used, significantly affect outcomes in critically ill, mechanically ventilated adults?

DELIRIUM

Delirium is common in critically ill adults. The delirium encountered in the ICU and other settings are assumed to be equivalent pathophysiologic states. Delirium is a clinical diag-

PAIN

Pain management is complex because pain patterns are highly individual (e.g., acute, chronic, and acute-on-chronic), it arises

Noise and Light Reduction

Question: Should noise and light reduction strategies (vs not using these strategies) be used at night to improve sleep in critically ill adults?

IMMOBILITY (REHABILITATION/ MOBILIZATION)

Survivors of critical illness frequently experience many long-term sequelae, including ICU-acquired muscle weakness

Assessment

Question: What are the most reliable and valid methods to use in critically ill adults?

Daily Sedative Interruption/Nurse-Protocolized Sedation

Question: In critically ill, intubated adults, is there a difference between daily sedative interruption (DSI) protocols and

Objective Sedation Monitoring

Question: Are objective sedation monitoring tools (electroencephalogram-based tools or tools such as HR variability, actigraphy, and evoked potentials) useful in managing sedation in critically ill, intubated adults?

Pharmacologic Adjuvants to Opioid Therapy

Opioids remain a mainstay for pain management in most ICU settings. However, their side effects preoccupy clinicians because of

Protocol-Based Pain Assessment and Management

Question: Should a protocol-based (analgesia/analgo-sedation) pain assessment and management program be used in the care

Pharmacologic Interventions to Reduce Procedural Pain

Bedside procedures in the ICU can include regular activities (e.g., turning) and discrete procedures (e.g., arterial catheterization). Pain should be assessed and appropriately managed.

SLEEP DISRUPTION

Poor sleep is a common complaint and a source of distress for many critically ill patients (436, 437). Sleep disruption in the critically ill can be severe and is characterized by sleep fragmentation, abnormal circadian rhythms, increased light sleep (stage

Objective

Question: Are objective sedation monitoring tools (electroencephalogram-based tools or tools such as HR variability, actigraphy, and evoked potentials) useful in managing sedation in critically ill, intubated adults?

AGITATION/SEDATION

Sedatives are frequently administered to critically ill patients to relieve anxiety, reduce the stress of being mechanically ventilated, and prevent agitation-related harm (1). These medi-

Pharmacologic Prevention and Treatment

Question: Should a pharmacologic agent (vs no use of this agent) be used for the prevention and treatment of delirium in critically ill, mechanically ventilated adults?

Medical and Surgical Patients Not Undergoing Cardiac Surgery

Questions: Should benzodiazepines be used for sedation in critically ill, mechanically ventilated adults? Should propofol, when compared with a benzodiazepine, be used for sedation in critically ill, mechanically ventilated adults?

Nonpharmacologic Interventions to Reduce Pain

Question: Should a pharmacologic agent (vs no use of this agent) be used for the prevention and treatment of delirium in critically ill, mechanically ventilated adults?

Prevention.

Question: Should a pharmacologic agent (vs no use of this agent) be used for the prevention and treatment of delirium in critically ill, mechanically ventilated adults?

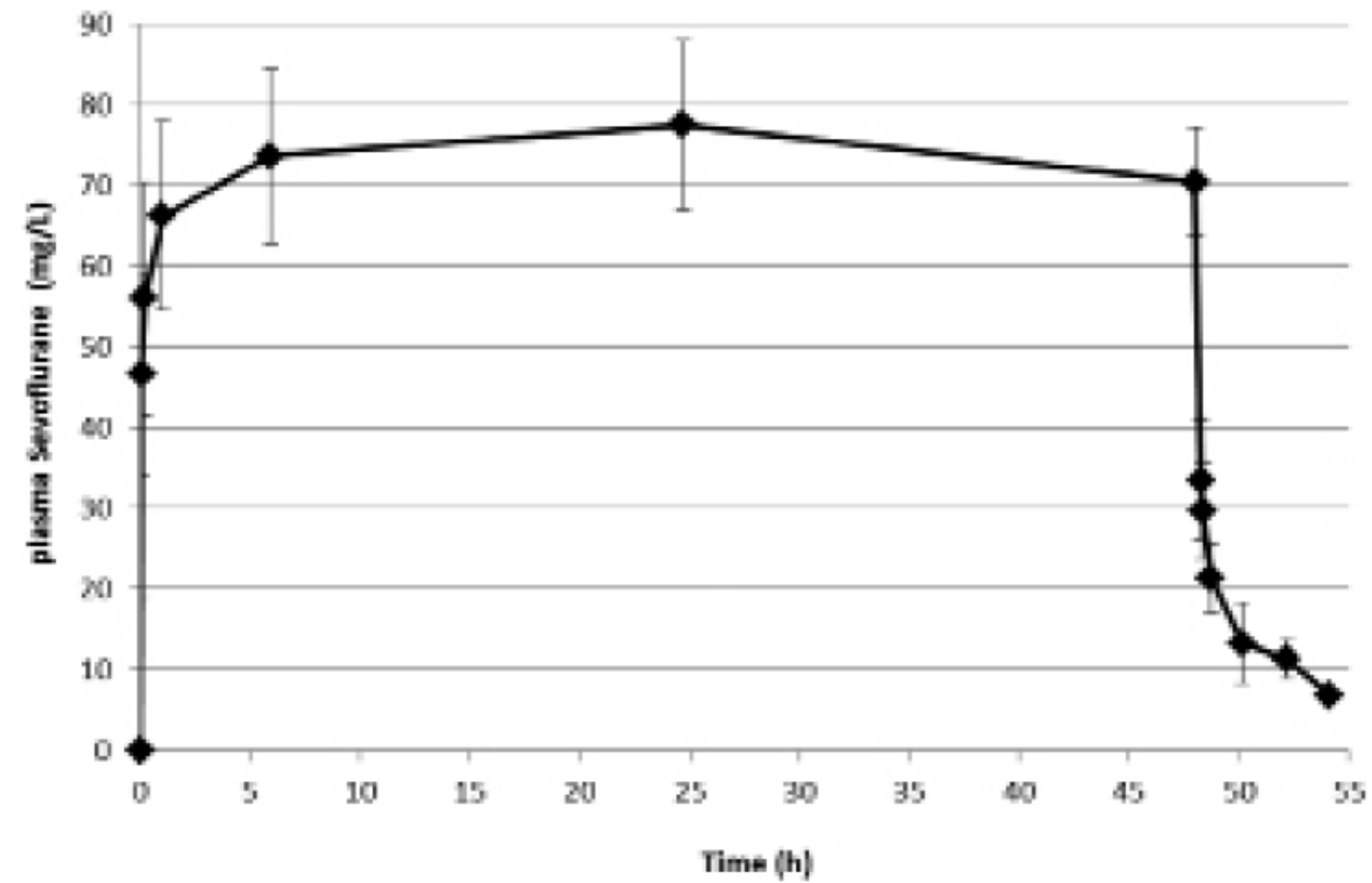
Faut-il sédater les patients
en réanimation?

Pour

Pour

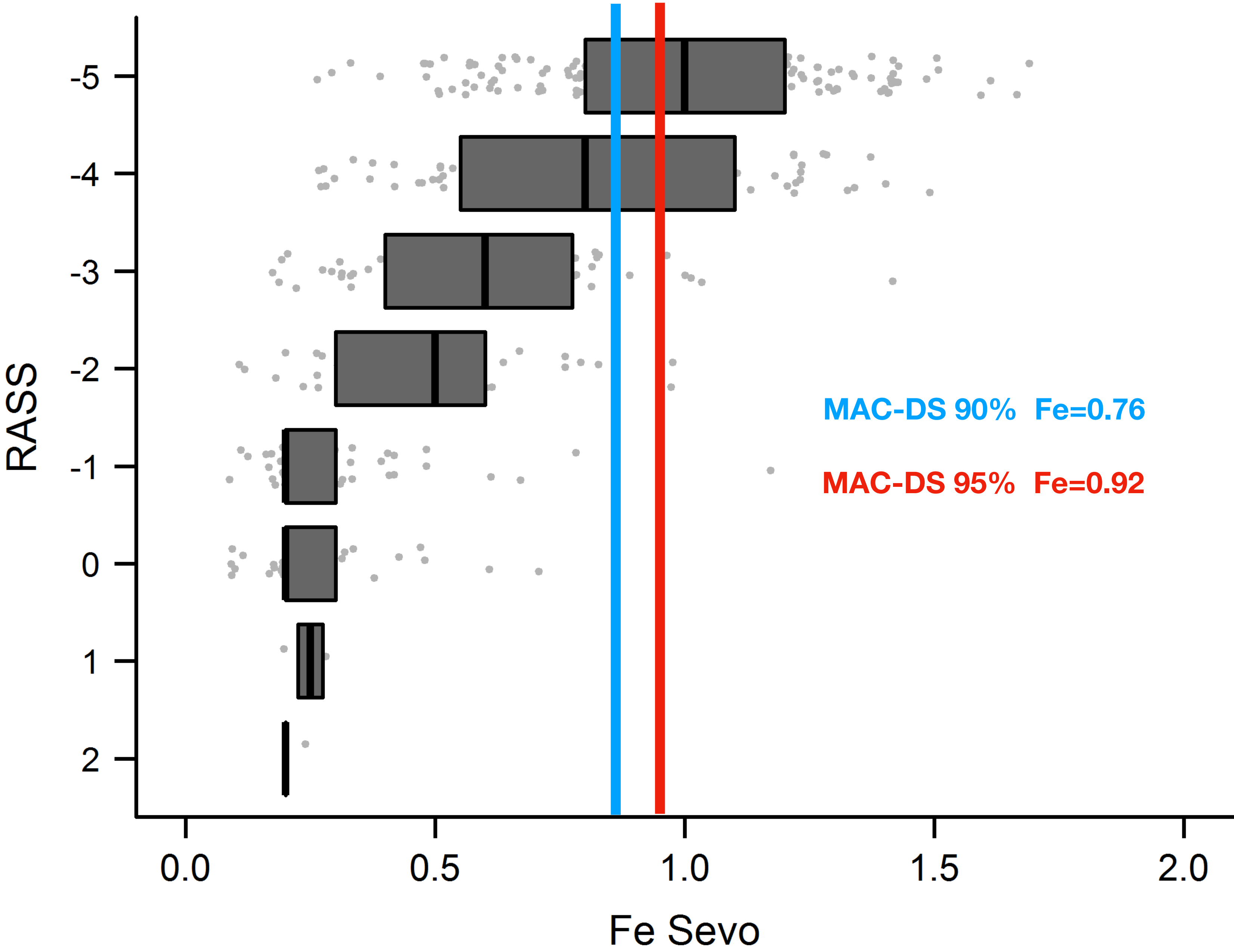
la sédation profonde quand on en a besoin

Sevoflurane



30 patients

570 measurements



Pour

Arrêt des sédations profondes inutiles

Contre

**Absence de sedation, contention mécanique,
agitation, douleur, stress ...**



Pour

Sédation légère et coopérative

centrée sur le patient



Merci de votre attention ...