FAKULTNÍ NEMOCNICE BRNO
A LÉKAŘSKÁ FAKULTA
MASARYKOVY UNIVERZITY

KLINIKA DĚTSKÉ
ANESTEZIOLOGIE
A RESUSCITACE

Top-10 publikací v IM

Milan Kratochvíl

FAKULTNÍ NEMOCNICE BRNO

MUNI MED

Excessive Oxygen Supplementation in the First Day of Mechanical Ventilation Is Associated With Multiple Organ Dysfunction and Death in Critically Ill Children*

OBJECTIVES: To determine if greater cumulative exposure to oxygen despite adequate oxygenation over the first 24 hours of mechanical ventilation is associated with multiple organ dysfunction syndrome at 7 days and inhospital mortality in critically ill children.

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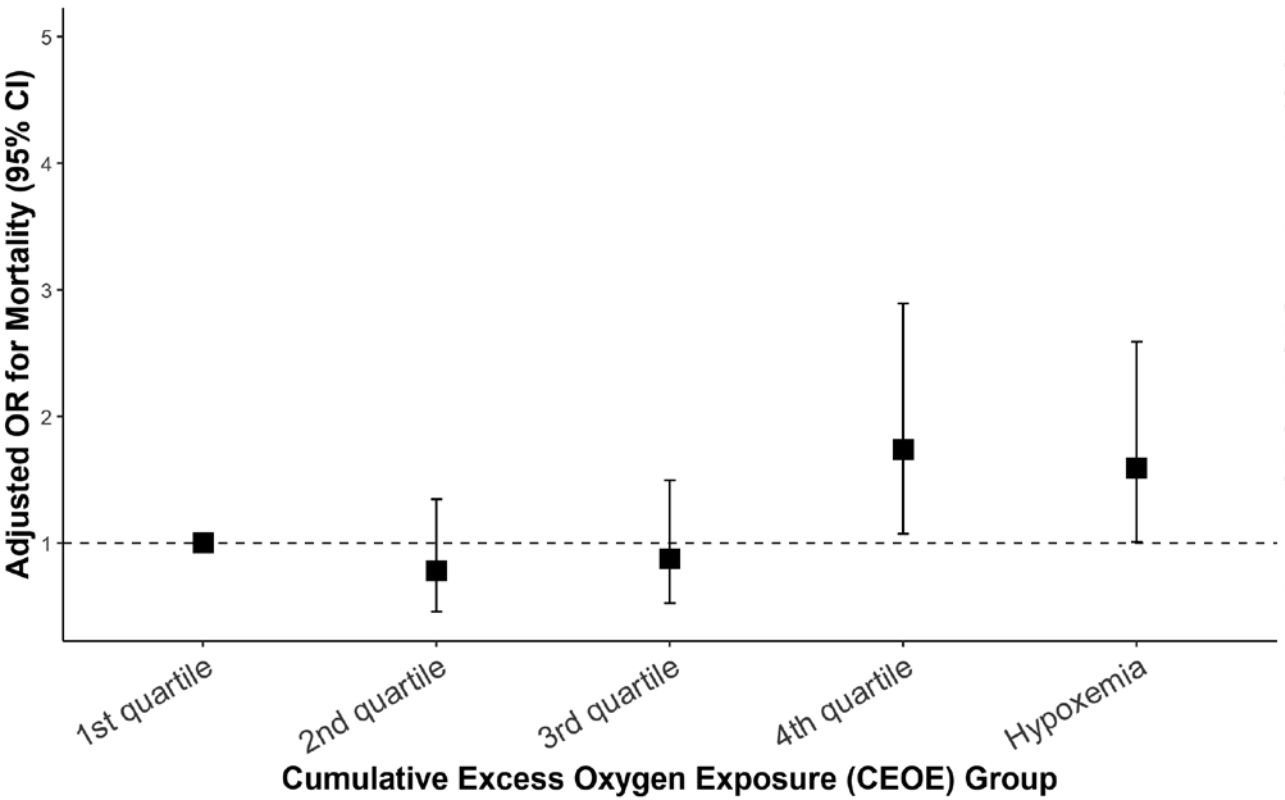
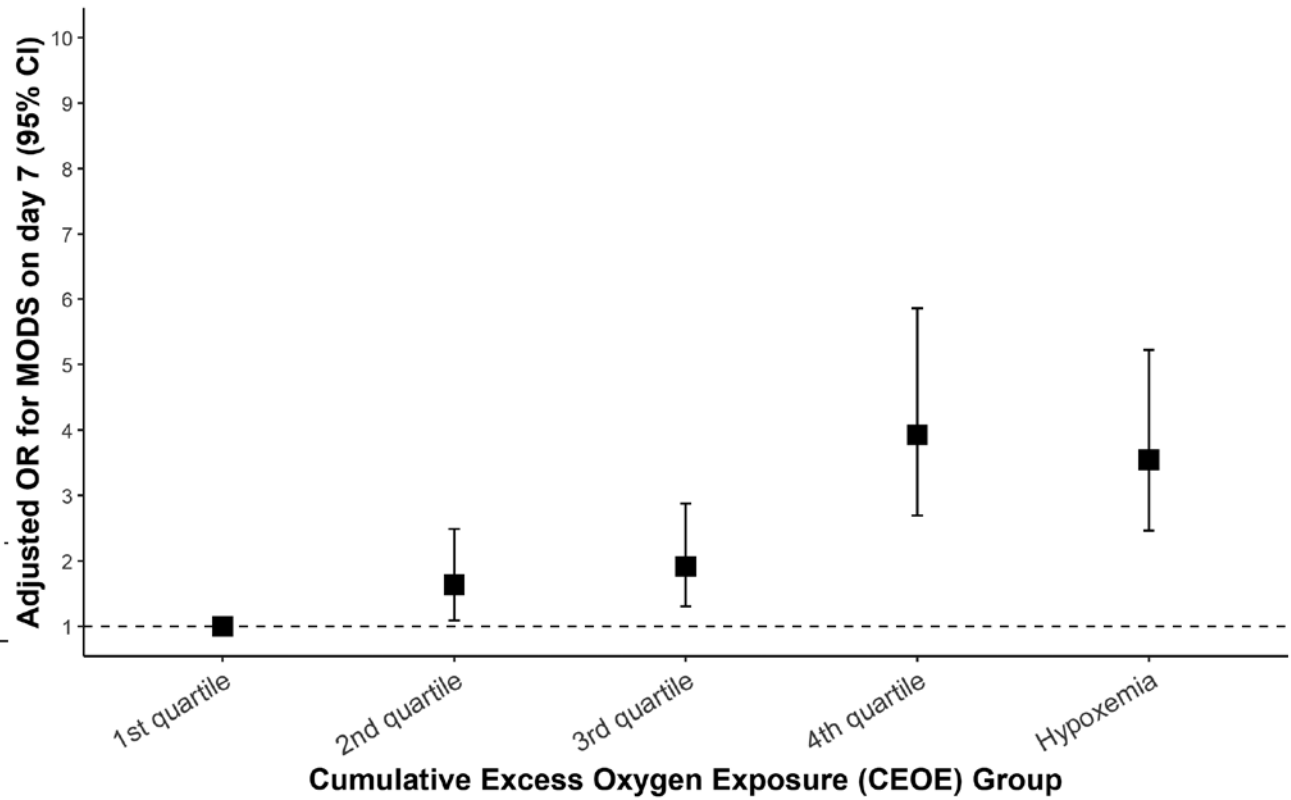
Grace Chong, MD[3]

L. Nelson Sanchez-Pinto, MD, MBI[1–4]



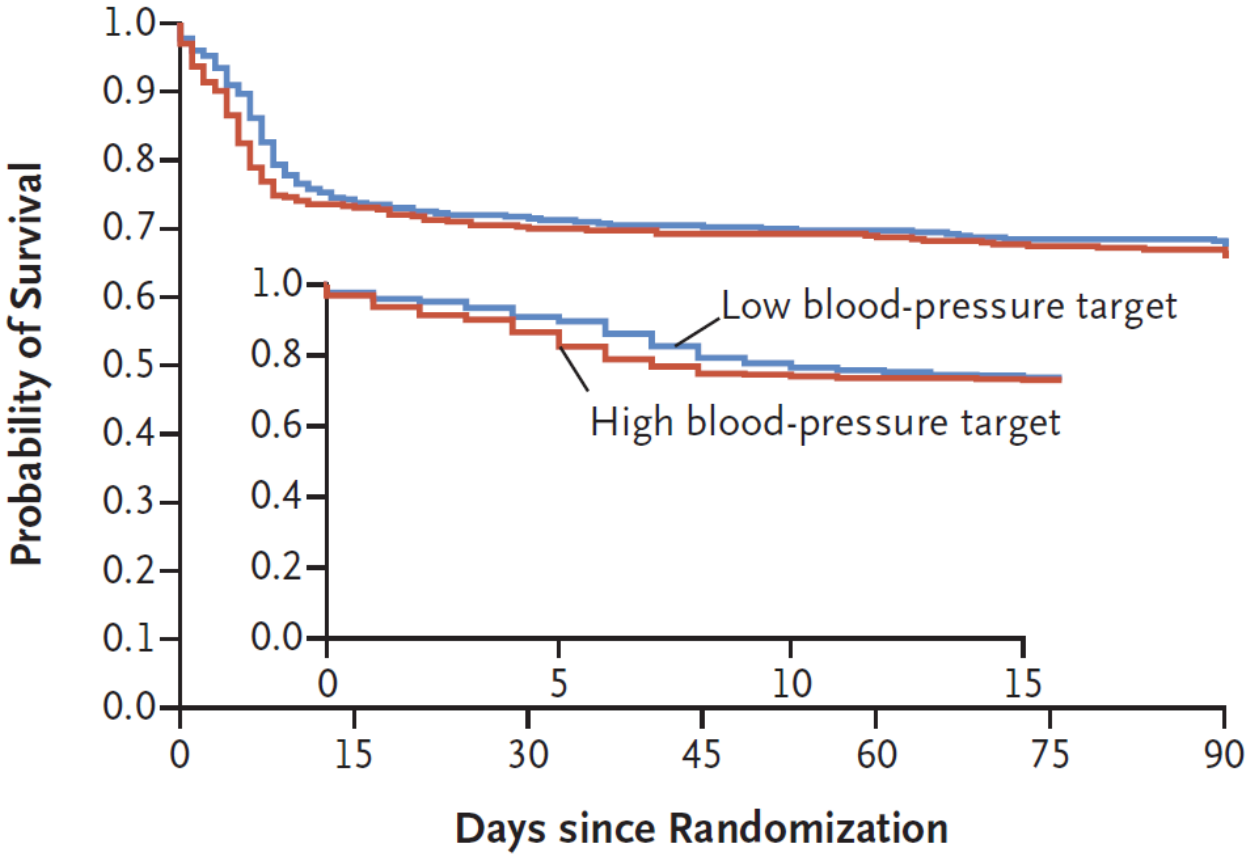


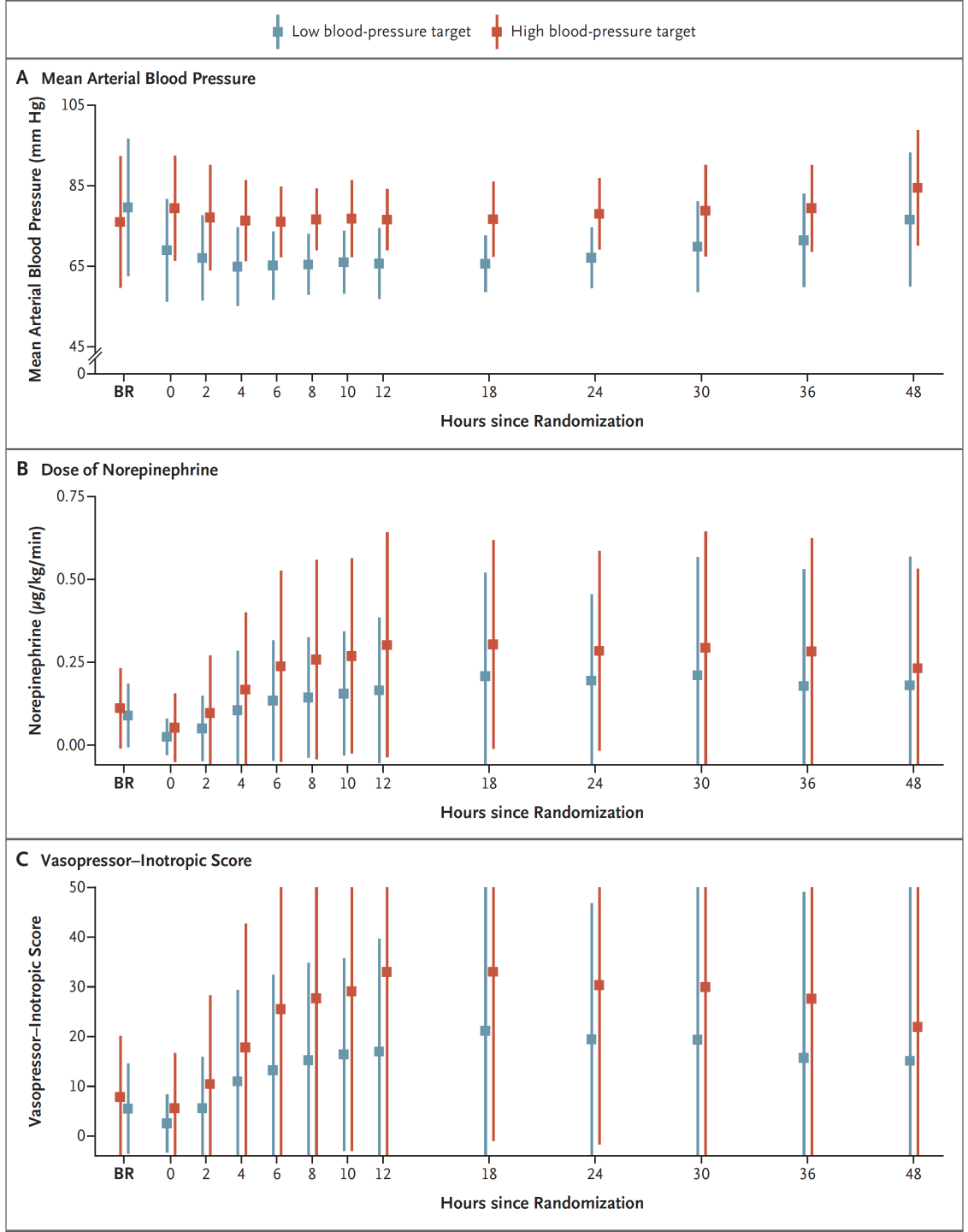
The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Blood-Pressure Targets in Comatose Survivors of Cardiac Arrest

J. Kjaergaard, J.E. Møller, H. Schmidt, J. Grand, S. Mølstrøm, B. Borregaard, S. Venø, L. Sarkisian, D. Mamaev, L.O. Jensen, B. Nyholm, D.E. Høfsten, J. Josiassen, J.H. Thomsen, J.J. Thune, L.E.R. Obling, M.G. Lindholm, M. Frydland, M.A.S. Meyer, M. Winther-Jensen, R.P. Beske, R. Frikke-Schmidt, S. Wiberg, S. Boesgaard, S.A. Madsen, V.L. Jørgensen, and C. Hassager



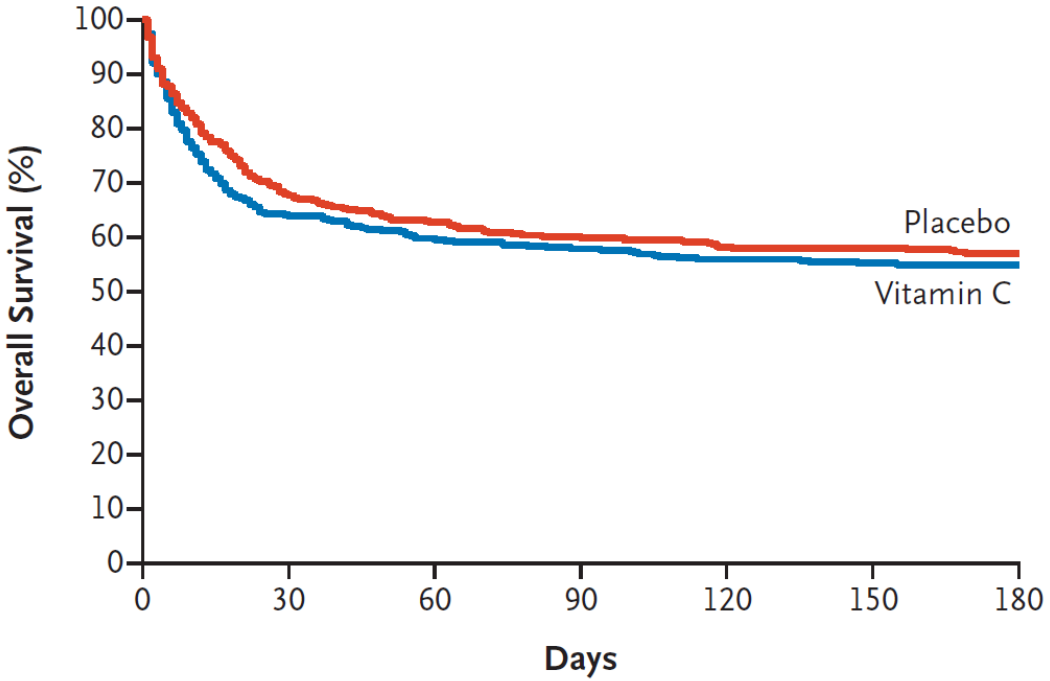


The NEW ENGLAND JOURNAL of MEDICINE

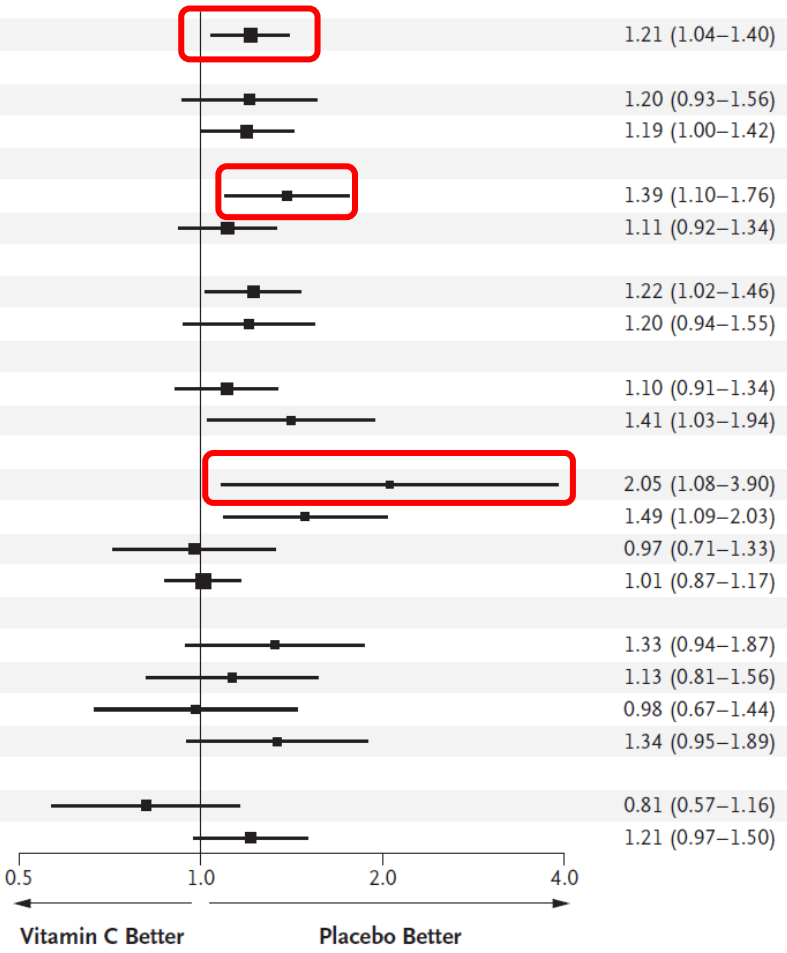
ORIGINAL ARTICLE

Intravenous Vitamin C in Adults with Sepsis in the Intensive Care Unit

F. Lamontagne, M.-H. Masse, J. Menard, S. Sprague, R. Pinto, D.K. Heyland
D.J Cook, M.-C. Battista, A.G. Day, G.H. Guyatt, S. Kanji, R. Parke,
S.P. McGuinness, B.-K. Tirupakuzhi Vijayaraghavan, D. Annane, D. Cohen
Y.M. Arabi, B. Bolduc, N. Marinoff, B. Rochwerg, T. Millen, M.O. Meade, L. H
I. Watpool, R. Porteous, P.J. Young, F. D'Aragon, E.P. Belley-Cote, E. Carbonn
F. Clarke, D.M. Maslove, M. Hunt, M. Chassé, M. Lebrasseur, F. Lauzier,
S. Mehta, H. Quiroz-Martinez, O.G. Rewa, E. Charbonney, A.J.E. Seely,
D.J. Kutsogiannis, R. LeBlanc, A. Mekontso-Dessap, T.S. Mele, A.F. Turgeo



Subgroup	Vitamin C	Placebo	Risk Ratio (95% CI)
	no. of events/total no.		
Overall	191/429	167/434	1.21 (1.04–1.40)
Age			
<65 yr	69/180	65/194	1.20 (0.93–1.56)
≥65 yr	122/249	101/239	1.19 (1.00–1.42)
Sex			
Female	72/151	62/173	1.39 (1.10–1.76)
Male	119/278	104/260	1.11 (0.92–1.34)
Clinical Frailty Scale			
1–4	133/312	114/308	1.22 (1.02–1.46)
≥5	58/117	51/124	1.20 (0.94–1.55)
Sepsis-3 definition of septic shock			
Yes	91/195	85/183	1.10 (0.91–1.34)
No	54/132	41/143	1.41 (1.03–1.94)
Predicted risk of death (%)			
Quartile 1 (8.5–31.9)	22/95	12/98	2.05 (1.08–3.90)
Quartile 2 (32.0–53.0)	55/117	39/118	1.49 (1.09–2.03)
Quartile 3 (53.1–70.0)	42/101	42/100	0.97 (0.71–1.33)
Quartile 4 (70.1–97.4)	72/116	73/117	1.01 (0.87–1.17)
Vitamin C level (μmol/liter)			
Quartile 1 (0.06–5.37)	44/92	27/71	1.33 (0.94–1.87)
Quartile 2 (5.38–12.38)	38/82	32/78	1.13 (0.81–1.56)
Quartile 3 (12.39–21.99)	26/72	35/90	0.98 (0.67–1.44)
Quartile 4 (22.00–1156.04)	35/78	30/83	1.34 (0.95–1.89)
SARS-CoV-2 infection			
Yes	19/37	18/26	0.81 (0.57–1.16)
No	172/392	148/407	1.21 (0.97–1.50)



The NEW ENGLAND JOURNAL of MEDICINE

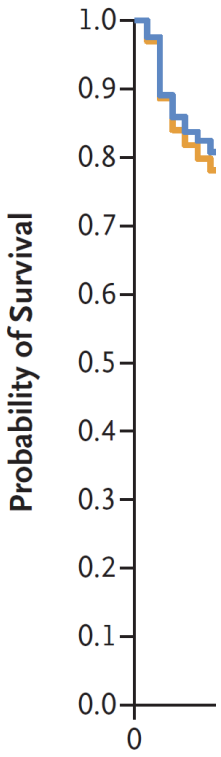
ESTABLISHED IN 1812 JUNE 30, 2022 VOL. 386 NO. 26

Restriction of Intravenous Fluid in ICU Patients with Septic Sho

T.S. Meyhoff, P.B. Hj
M. Ostermann, M.
M. Winther-Olese
J. Engstrøm, L. Nebı
S.K. Pedersen

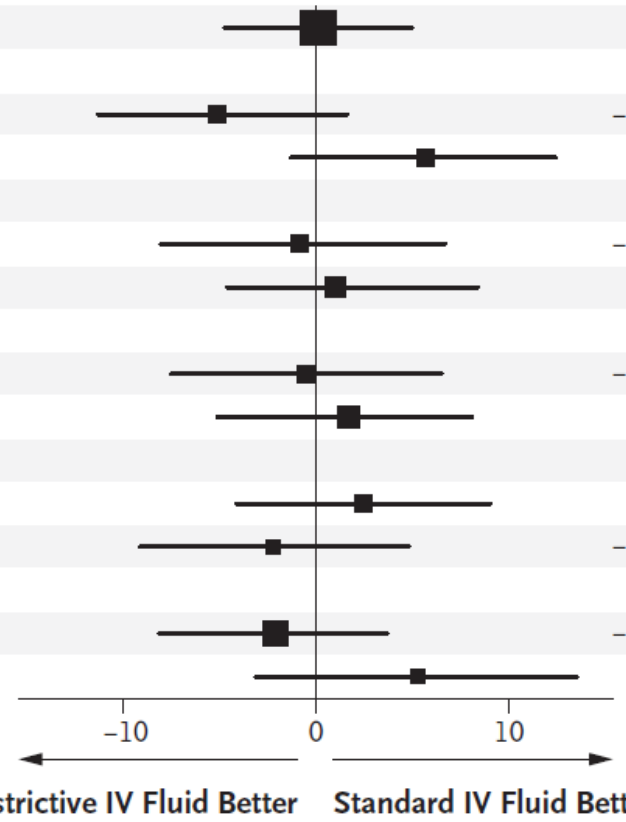
Table 2. Cumulative Fluid Volumes and Balances in ICU in the Two Intervention Groups.*

Variable	Restrictive-Fluid Group (N=755)	Standard-Fluid Group (N=776)	Difference (Restrictive vs. Standard)
		milliliters	
Intravenous fluid volume†			
After 1 day‡			
Median (IQR)	500 (0 to 1400)	1,313 (500 to 2500)	−813
Mean	1,024	1,724	−700
After 5 days			
Median (IQR)	1,450 (445 to 3200)	3,077 (1535 to 5300)	−1627
			−1509
			−2013
			−1861
			−865
			−755
			−1936
			−1551
			−2314
			−3113
			−617
			−589
			−744
			−890
			−723
			−815



B Death at 90 Days

Subgroup	Restrictive-Fluid Group	Standard-Fluid Group	Absolute Percentage Point Difference (95% CI)	P Value for Heterogeneity
	no. of events/no. of patients			
All patients	323/764	329/781	0.1 (−4.7 to 4.9)	
Respiratory support				0.03
Yes	184/396	196/377	−5.1 (−11.3 to 1.6)	
No	138/385	132/399	5.7 (−1.4 to 12.4)	
Acute kidney injury				0.57
Yes	146/309	169/360	−0.8 (−8.0 to 6.7)	
No	174/439	158/411	2.0 (−4.6 to 8.4)	
Plasma lactate				0.65
>4.0 mmol/liter	164/337	180/366	−0.5 (−7.5 to 6.5)	
≤4.0 mmol/liter	158/416	148/409	1.7 (−5.1 to 8.1)	
Body weight				0.34
≥76 kg	164/401	163/425	2.5 (−4.1 to 9.0)	
<76 kg	158/352	165/350	−2.2 (−9.1 to 4.8)	
IV fluid volume at randomization				0.15
≥30 ml/kg body weight	208/493	230/515	−2.1 (−8.1 to 3.7)	
<30 ml/kg body weight	114/260	98/260	5.3 (−3.1 to 13.5)	



JAMA Network Open

Original Investigation | Critical

Effect of Gram Stai in Patients With Ve The GRACE-VAP Ra

Jumpei Yoshimura, MD; Kazuma Yama
Hiroki Takahashi, MD; Takeshi Yamagiv

Table 2. Primary and Secondary Outcomes

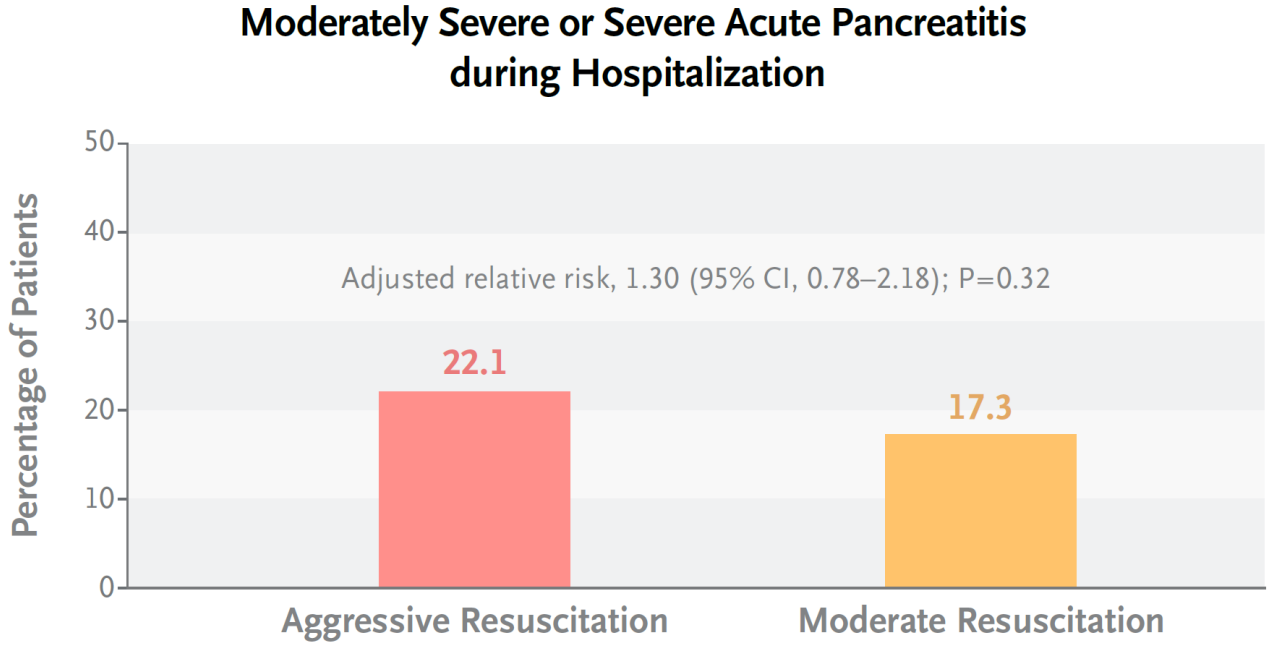
Outcome	No. (%)		*P* value
	Gram stain-guided group (n = 103)	Guideline-based group (n = 103)	
Primary outcome			
Clinical response rate	79 (76.7)	74 (71.8)	<.001[a]
Completion of antibiotic therapy within 14 d[b]	98 (95.1)	94 (91.3)	NA
Improvement or lack of progression of baseline radiographic findings[b]	85 (82.5)	78 (75.7)	NA
Resolution of signs and symptoms of pneumonia[b]	87 (84.5)	85 (82.5)	NA
Lack of antibiotic agent readministration[b]	85 (82.5)	85 (82.5)	NA
Secondary outcomes			
28-d mortality	14 (13.6)	18 (17.5)	.44
28-d ventilator-free days, median (IQR)	22 (15-24)	22 (18-25)	.21
28-d ICU-free days, median (IQR)	19 (15-22)	20 (16-23)	.42
Administration of antibiotic therapy			
Antipseudomonal agents	72 (69.9)	103 (100)	<.001
Anti-MRSA agents	63 (61.2)	103 (100)	<.001
Coverage rate of initial antibiotic therapy	89 (86.4)	95 (92.2)	.18
Escalation[b]	7 (6.8)	1 (1.0)	.03
De-escalation	67 (65.0)	79 (76.7)	.07
Antibiotic therapy days until de-escalation, median (IQR)	3 (2-4)	3 (2-4)	.22
Antibiotic therapy days, median (IQR)	8 (7-11)	8 (7-11)	.09

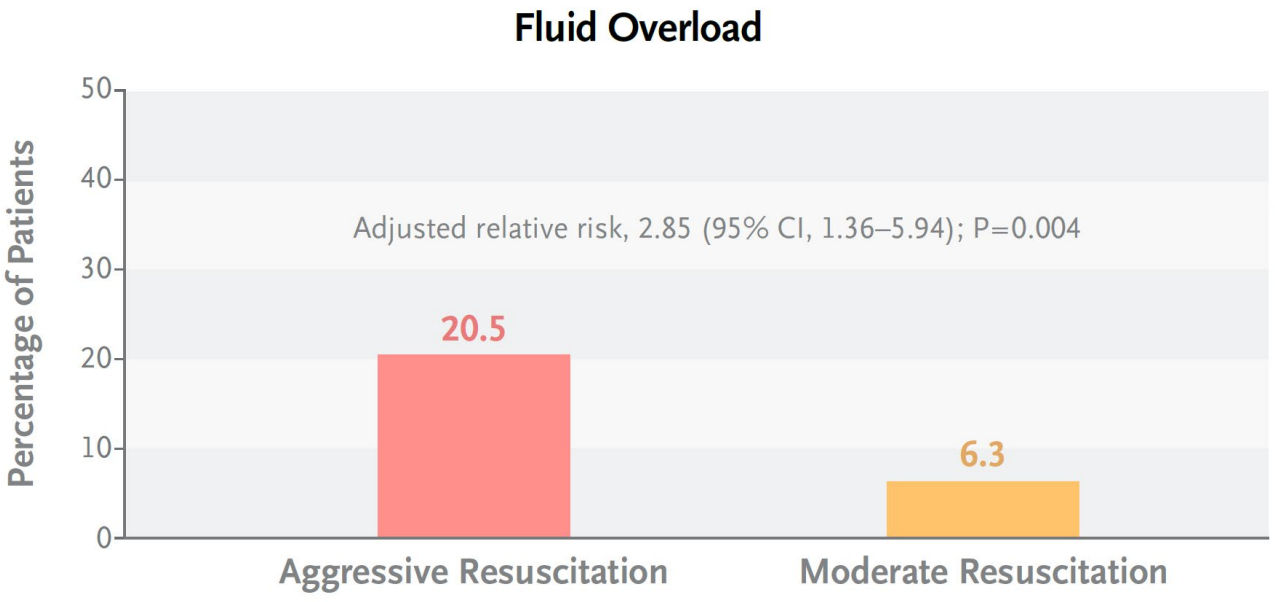
The NEW ENGLAND JOURNAL of MEDICINE

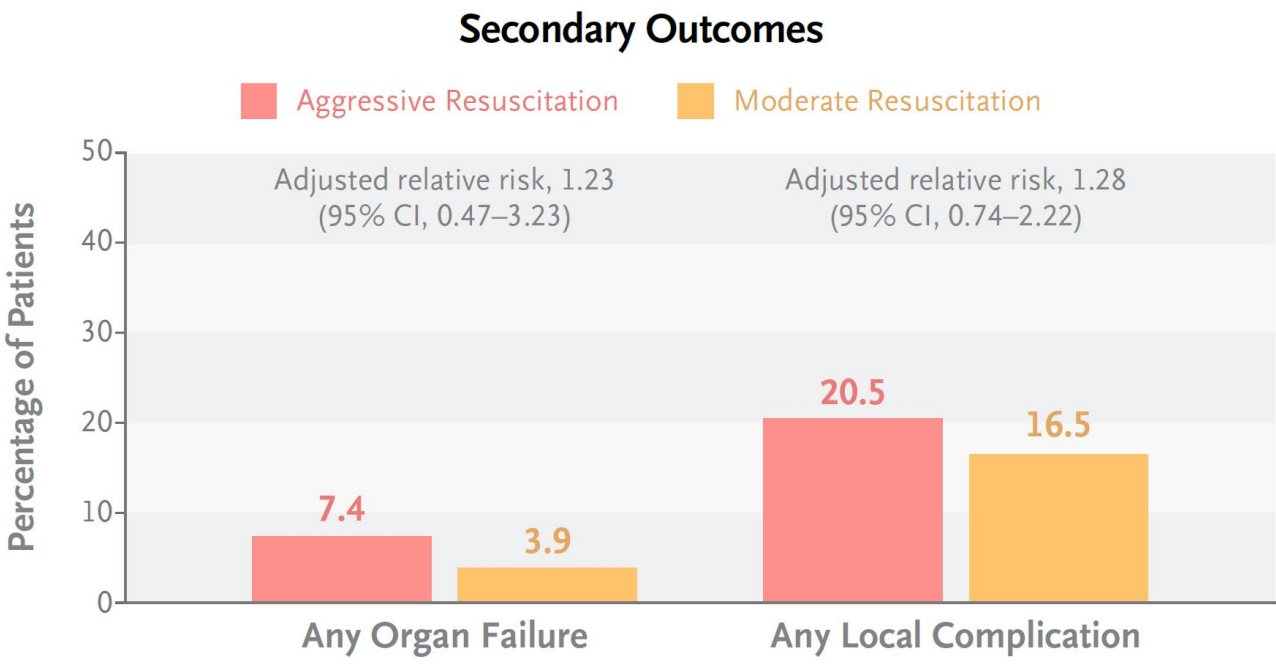
ORIGINAL ARTICLE

Aggressive or Moderate Fluid Resuscitation in Acute Pancreatitis

E. de-Madaria, J.L. Buxbaum, P. Maisonneuve, A. García García de Paredes, P. Zapater, L. Guilabert, A. Vaillo-Rocamora, M.Á. Rodríguez-Gandía, J. Donate-Ortega, E.E. Lozada-Hernández, A.J.R. Collazo Moreno, A. Lira-Aguilar, L.P. Llovet, R. Mehta, R. Tandel, P. Navarro, A.M. Sánchez-Pardo, C. Sánchez-Marin, M. Cobreros, I. Fernández-Cabrera, F. Casals-Seoane, D. Casas Deza, E. Lauret-Braña, E. Martí-Marqués, L.M. Camacho-Montaño, V. Ubieto, M. Ganuza, and F. Bolado, for the ERICA Consortium*







The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

A Randomized Trial of Enteral Glutam for Treatment of Burn Injuries

Daren K. Heyland, M.D., Lucy Wibbenmeyer, M.D., Jonathan A. Pollack,

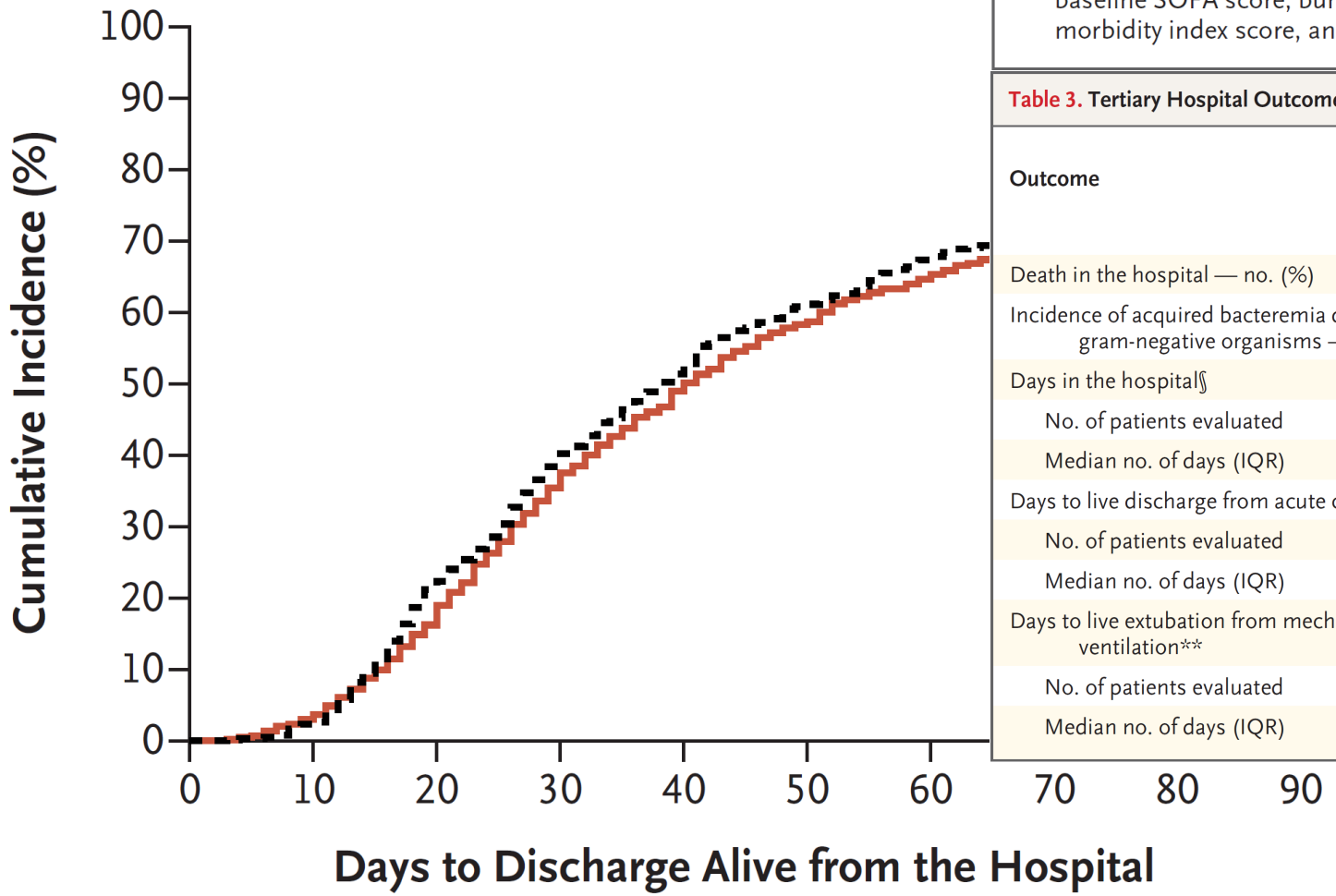


Table 2. Time to Discharge Alive from the Hospital.

Analysis	Glutamine (N = 596)	Placebo (N = 604)	Subdistribution Hazard Ratio (95% CI)*	P Value
Primary analysis: median no. of days to discharge alive from the hospital (IQR)	40 (24–87)	38 (22–75)	0.91 (0.80–1.04)†	0.17
Secondary analysis stratified according to site			0.89 (0.78–1.02)	0.08
Secondary analysis with site as a random effect			0.88 (0.77–1.00)	0.06
Secondary analysis with site as a random effect and with adjustment for age, APACHE II score, baseline SOFA score, burn size, Charlson co-morbidity index score, and geographic region			0.92 (0.81–1.05)	0.22

Table 3. Tertiary Hospital Outcomes.

Outcome	Glutamine (N = 596)	Placebo (N = 604)	Treatment Effect (95% CI)*	
			Unadjusted	Adjusted†
Death in the hospital — no. (%)	91 (15.3)	84 (13.9)	1.10 (0.83 to 1.44)‡	0.96 (0.79 to 1.16)‡
Incidence of acquired bacteremia due to gram-negative organisms — no. (%)	113 (19.0)	109 (18.0)	1.05 (0.83 to 1.33)‡	0.97 (0.80 to 1.16)‡
Days in the hospital§				
No. of patients evaluated	587	597		
Median no. of days (IQR)	32.0 (20.0 to 53.0)	30.0 (18.0 to 53.0)	1.61 (–1.20 to 4.42)¶	0.92 (–1.57 to 3.41)¶
Days to live discharge from acute care unit‖**				
No. of patients evaluated	596	604		
Median no. of days (IQR)	36.0 (21.0 to 81.5)	35.0 (19.0 to 67.0)	0.90 (0.80 to 1.03)††	0.91 (0.79 to 1.03)††
Days to live extubation from mechanical ventilation**				
No. of patients evaluated	340	351		
Median no. of days (IQR)	17.0 (7.0–29.0)	15.0 (6.0–28.0)	0.91 (0.77 to 1.07)††	0.91 (0.77 to 1.08)††

ERC-ESICM guidelines on temperature control after cardiac arrest in adults

Claudio Sandroni[1,2*]
Tobias Cronberg[10], Ha
Theresa M. Olasveeng

GOOD PRACTICE

We **recommend** continuous monitoring of core temperature in patients who remain comatose after ROSC from cardiac arrest.

LOW

We **recommend** actively preventing fever (defined as a temperature > 37.7°C) in post-cardiac arrest patients who remain comatose.

GOOD PRACTICE

We **recommend** actively preventing fever for at least 72 hours in post-cardiac arrest patients who remain comatose.

GOOD PRACTICE

Temperature control can be achieved by exposing the patient, using anti-pyretic drugs, or if this is insufficient, by using a cooling device with a target temperature of 37.5°C.

GOOD PRACTICE

There is currently insufficient evidence to recommend for or against temperature control at 32-36°C in sub-populations of cardiac arrest patients or using early cooling, and future research may help elucidate this. We **recommend not** actively rewarming comatose patients with mild hypothermia after ROSC to achieve normothermia.

MODERATE

We **recommend not** using prehospital cooling with rapid infusion of large volumes of cold IV fluid immediately after ROSC.

2022 Society of Critical Care Medicine Clinical Practice Guidelines on Prevention and Management of Pain, Agitation, Neuromuscular Blockade, and Delirium in Critically Ill Pediatric Patients With Consideration of the ICU Envi

6) *We suggest* strategies to minimize overall sedation exposure whenever feasible to reduce coma and the incidence and/or severity of delirium in critically ill children.	Conditional	Low
8) *We recommend* that dexmedetomidine be considered as a primary agent for sedation in critically ill pediatric post-operative cardiac surgical patients with expected early extubation.	Strong	Moderate
9) *We suggest* the use of dexmedetomidine for sedation in critically ill pediatric postoperative cardiac surgical patients to decrease the risk of tachyarrhythmias.	Conditional	Low
2) *We recommend* routine screening for ICU delirium using a validated tool in critically ill pediatric patients upon admission through ICU discharge or transfer.	Strong	High
3) Given low patient risk, and possible patient benefit to reduce the incidence and/or decrease duration or severity of delirium *we suggest* the following *non-pharmacologic strategies*: optimization of sleep hygiene, use of interdisciplinary rounds, family engagement on rounds, and family involvement with direct-patient care.	Conditional	Low
4) *We suggest* performing EM, when feasible, to reduce the development of delirium.	Conditional	Low
5) *We recommend* minimizing benzodiazepine-based sedation when feasible in critically ill pediatric patients to decrease incidence and/or duration or severity of delirium.	Strong	Moderate

RESEARCH Open Access

Palliative care practice and moral distress during COVID-19 pandemic (PEOpLE-C19 study): a national, cross-sectional study in intensive care units in the Czech Republic

Tereza Prokopová[1,2†], Jan Hudec[1]
Kateřina Rusinová[7], Paulína Kerpr
of RIPE-ICU study group