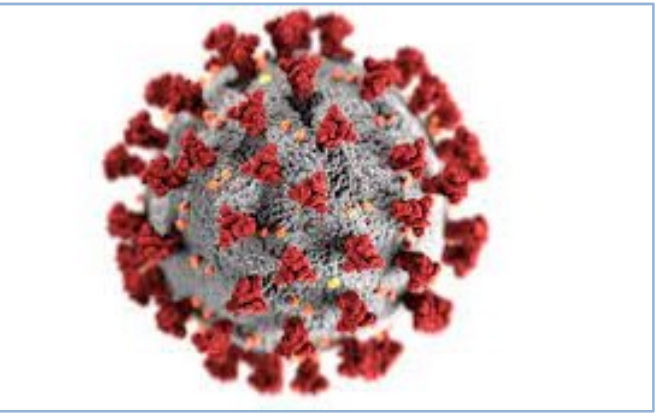
26e CONGRÈS NATIONAL

الجمعية التونسية لطب الانعاش
ASSOCIATION TUNISIENNE DE REANIMATION

Décubitus Ventral chez les patients Covid19 non intubés: la solution pour tous?



Fekri Abroug
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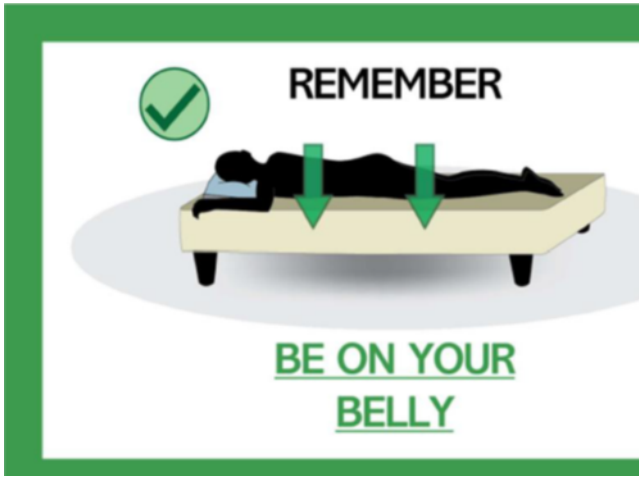
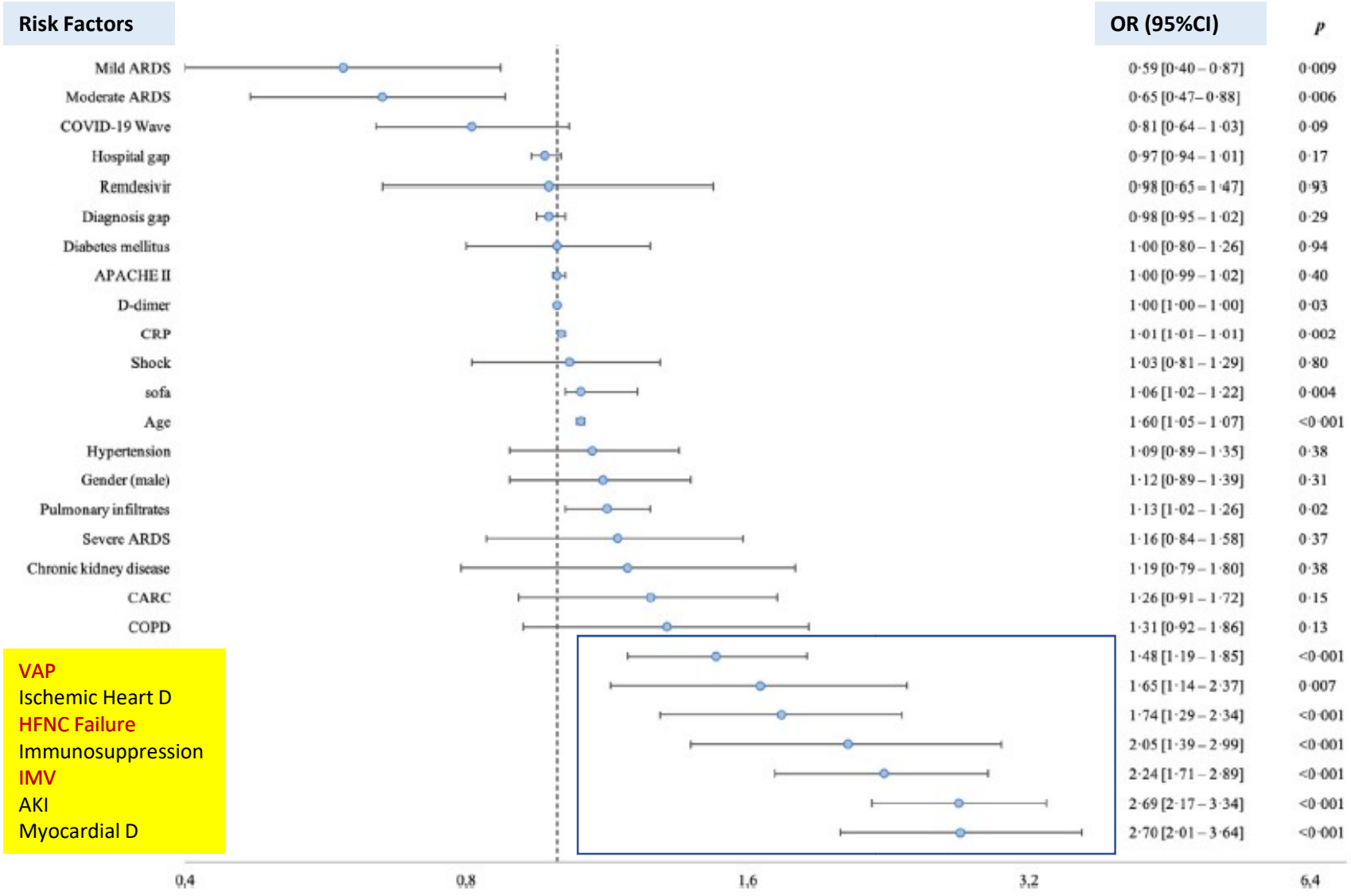


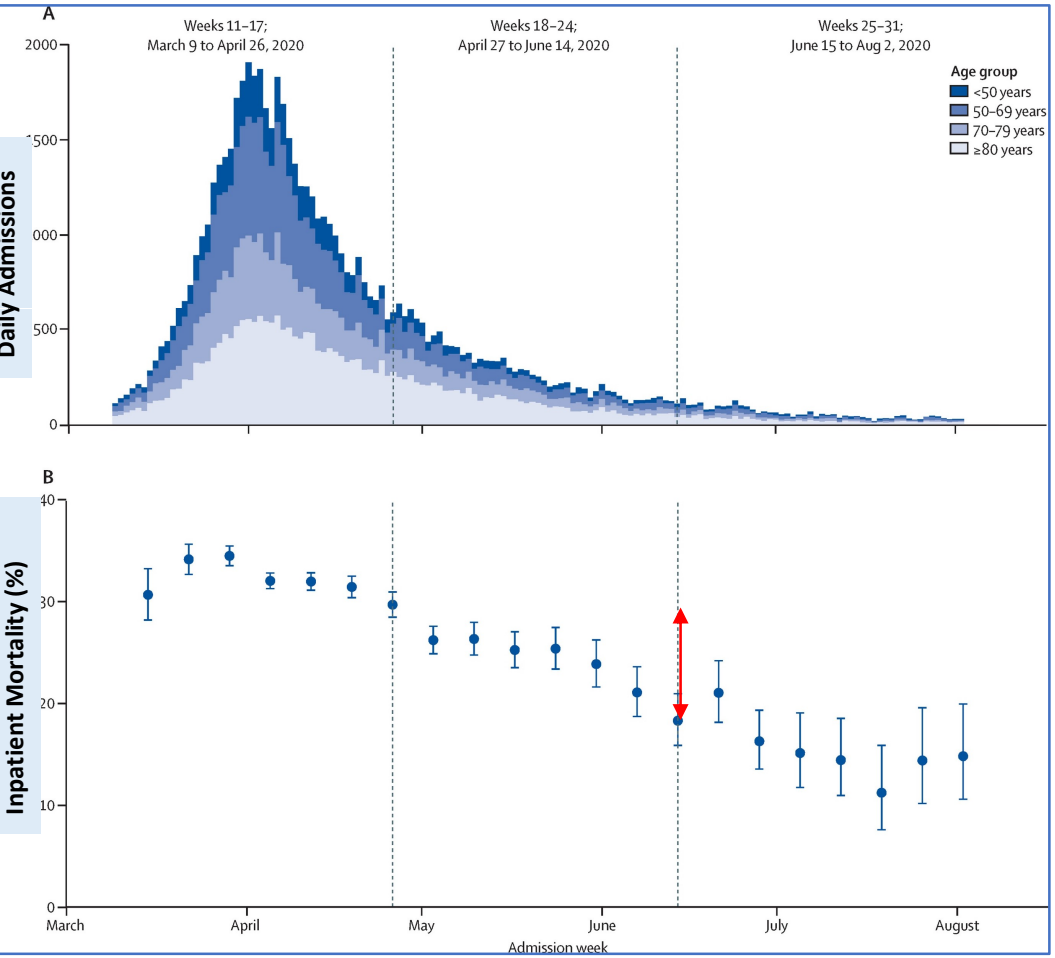
Covid-19 Ventilation

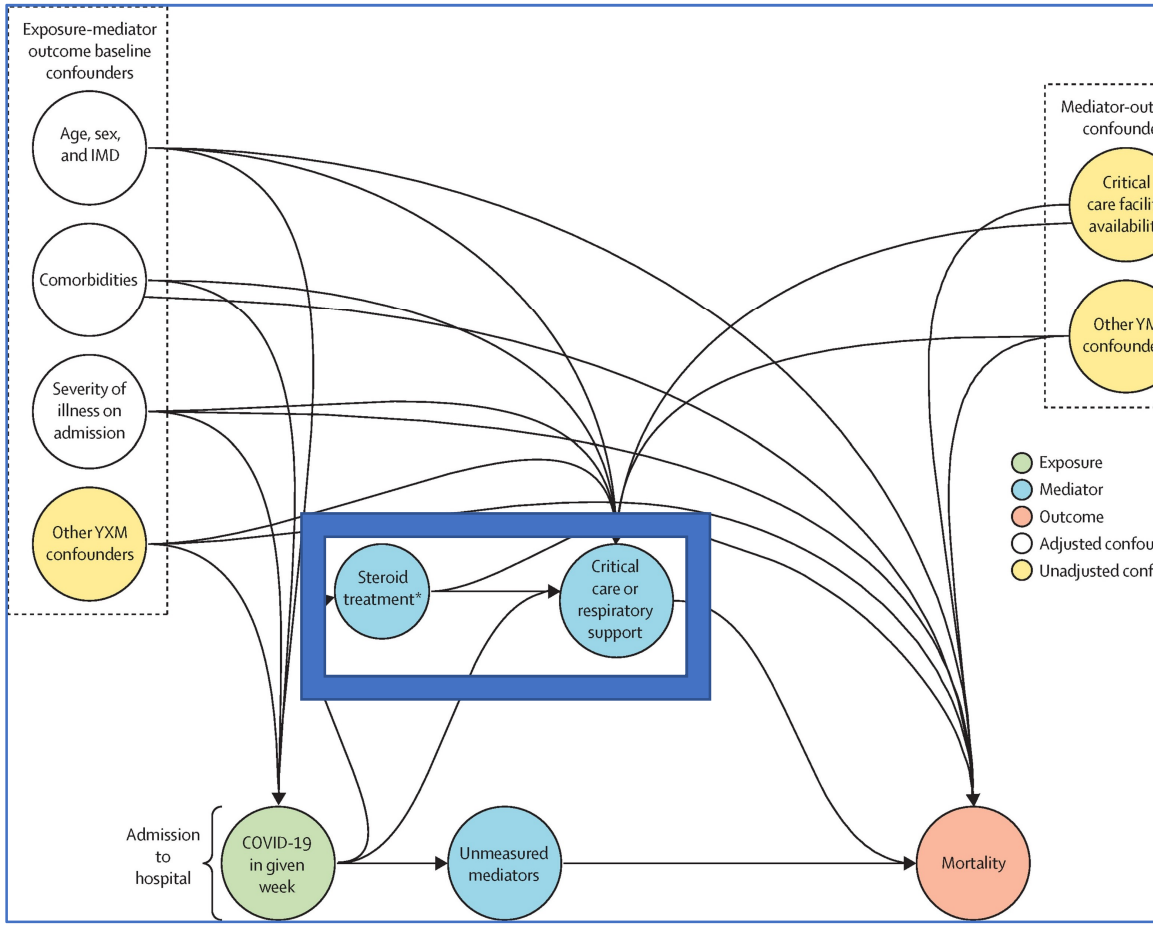
CHANGE OF PARADIGM: VMI/VNI

ortality comparison between the first and second/third waves among 3,795 itical COVID-19 patients with pneumonia admitted to the ICU: A multicentre trospective cohort study. *R.Carbonell. Lancet Regional Health. 2021*

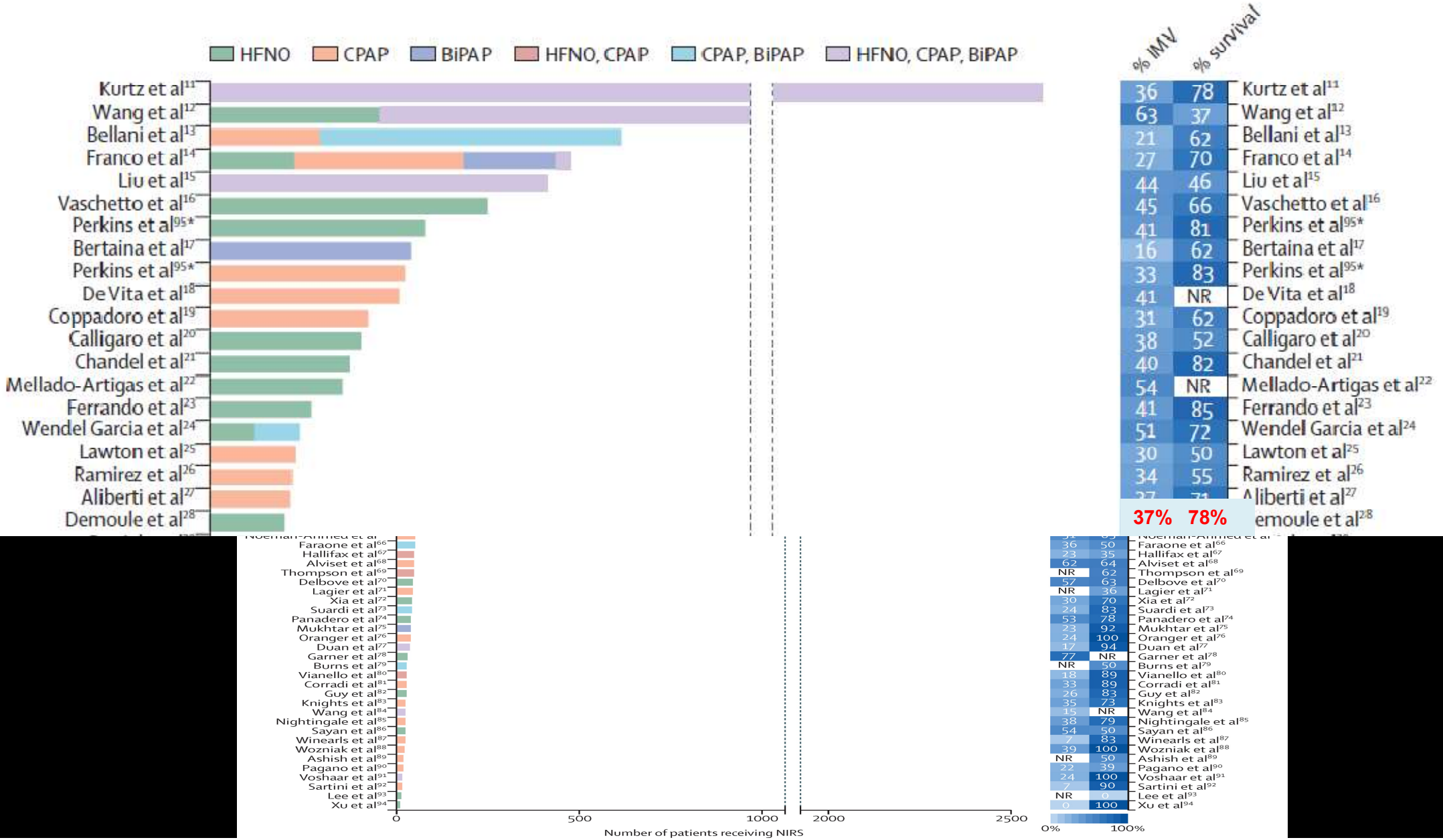


Changes in in-hospital mortality in the first wave of COVID-19: a multicentre prospective observational cohort study using the WHO Clinical Characterisation Protocol UK. *A.Docherty Lancet RM 2021.*

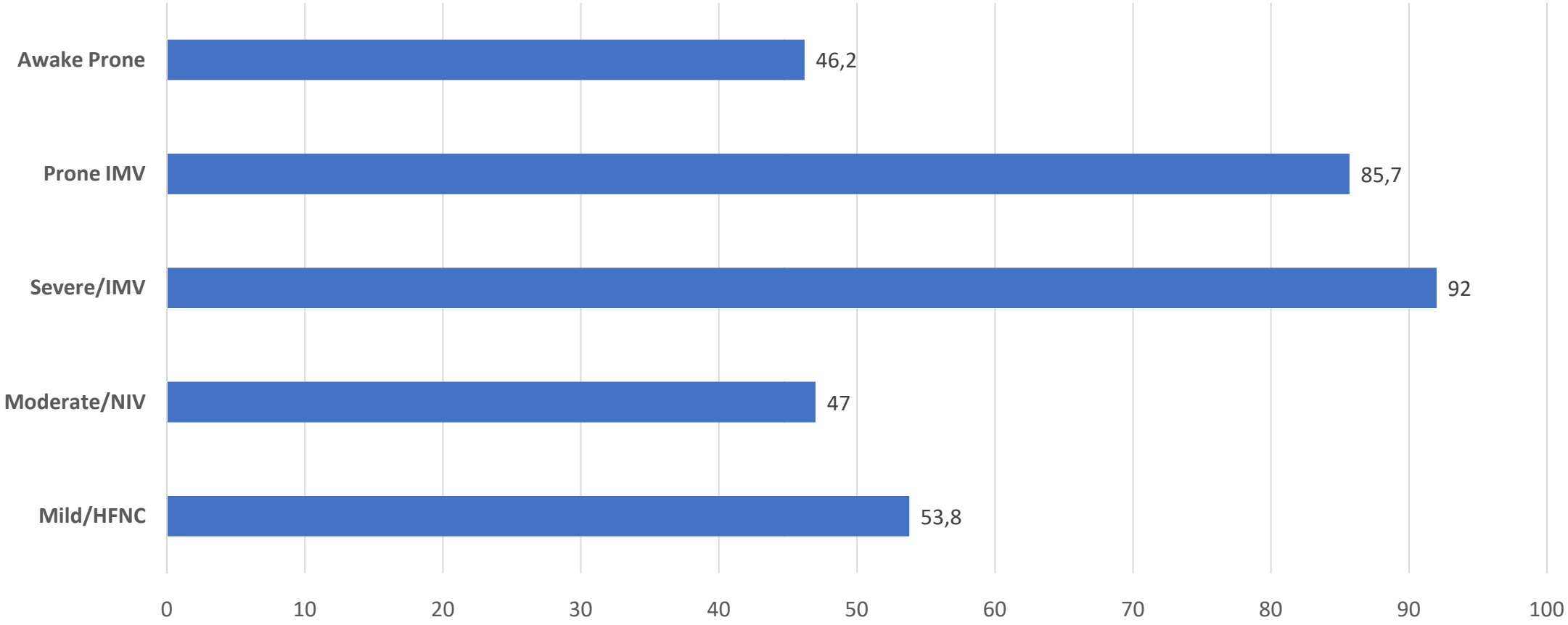




Non-invasive respiratory support in the management of acute COVID-19 pneumonia: considerations for clinical practice and priorities for research. S.Weerakkody, The Lancet RM, 2022

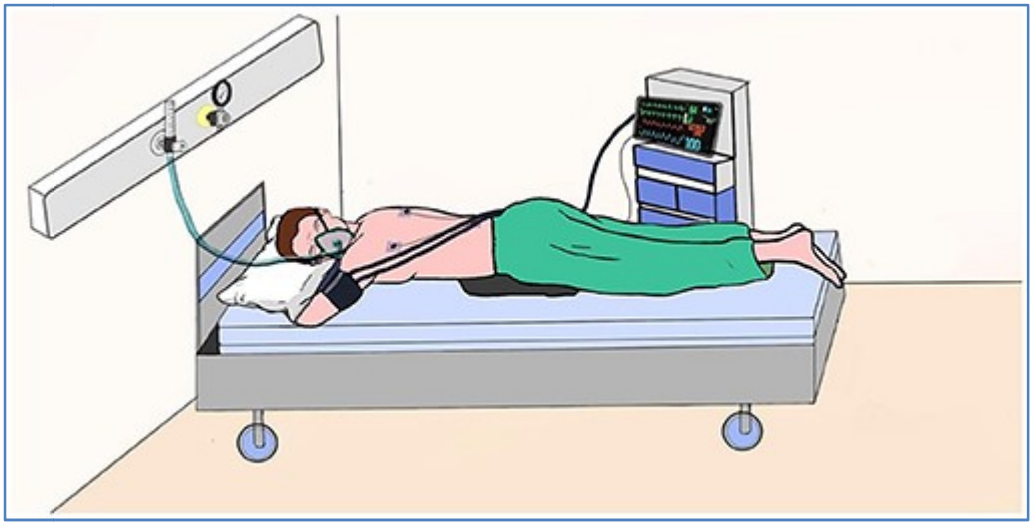


Global Current Practices of Ventilatory Support Management in COVID-19 Patients: An International Survey. *AlQahtani. J MultiDisc Healthcare. 2020*



Awake Prone Position

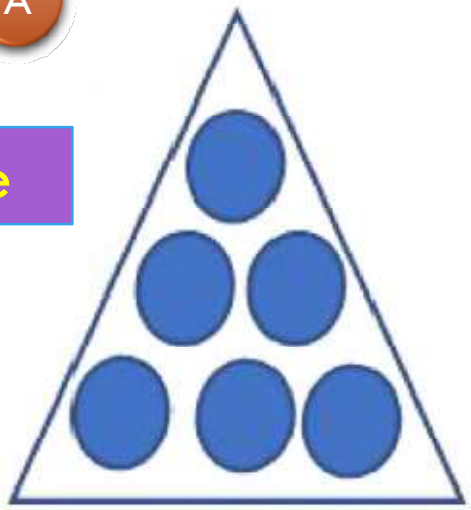
PHYSIOPATHOLOGIE



Absence of Gravity

A

pine



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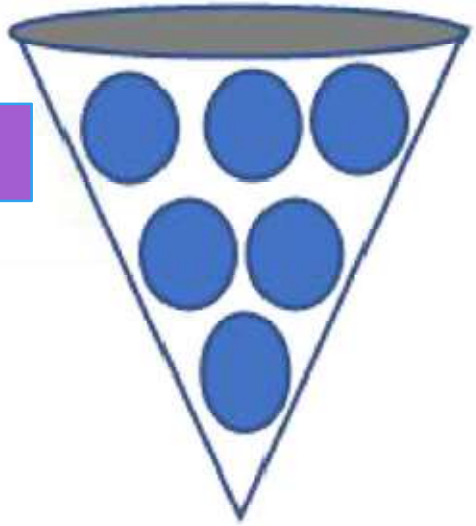
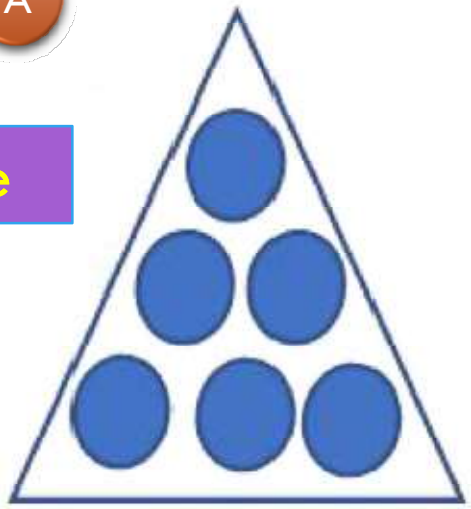


Absence of Gravity

Gravity

A



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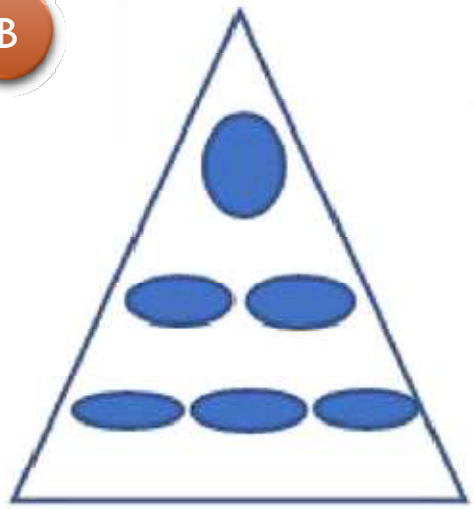
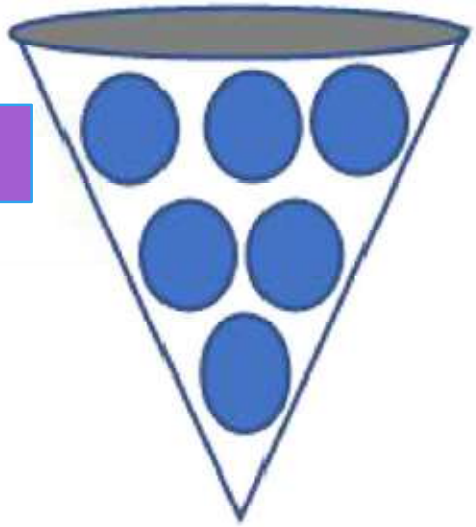


pine

C



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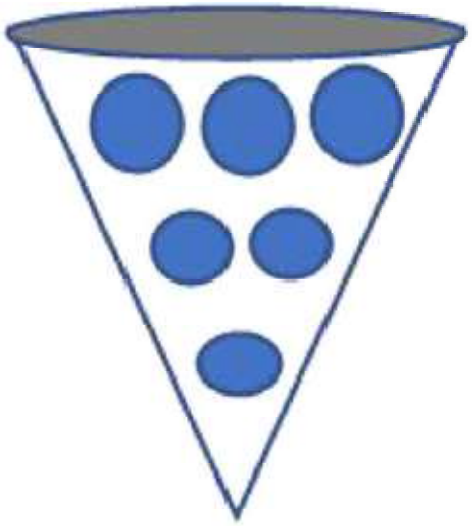


one

Absence of Gravity

Gravity

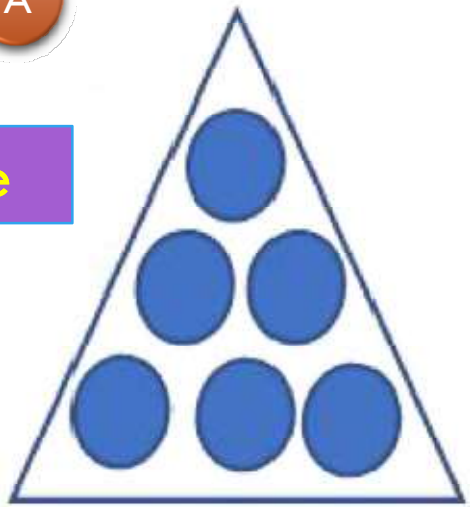
TPP

Blood Flow

Drain

pine

A



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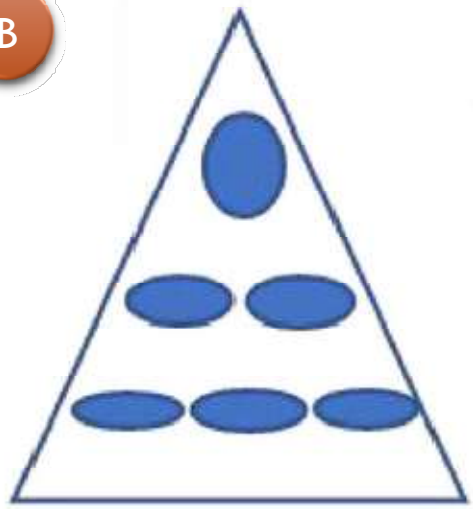

E

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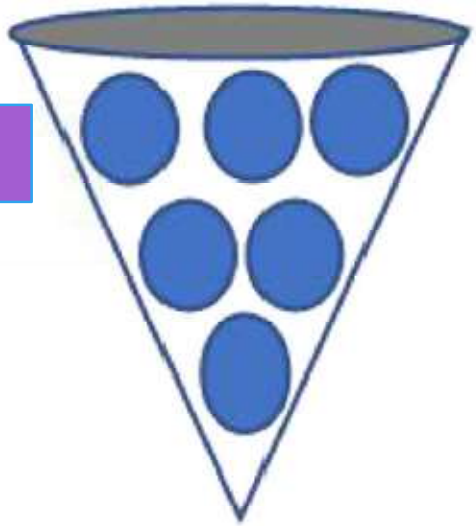

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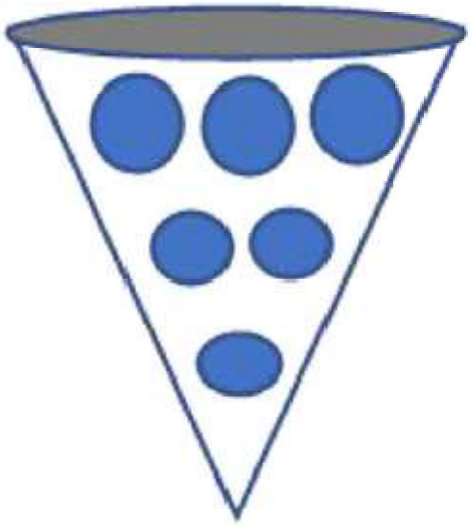

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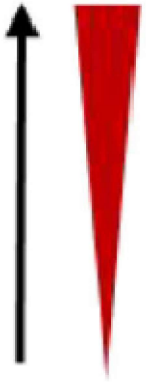


J

+ +

Absence of Gravity

Gravity

TPP

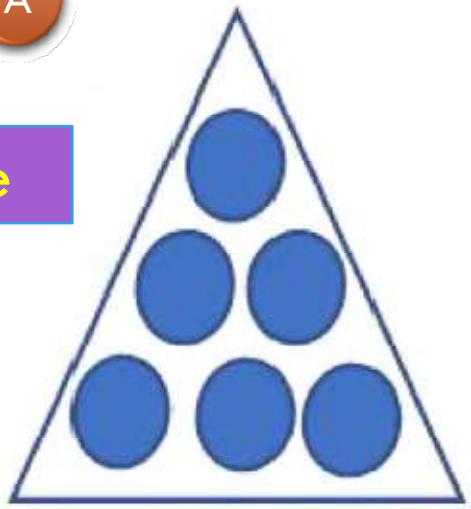
Blood Flow

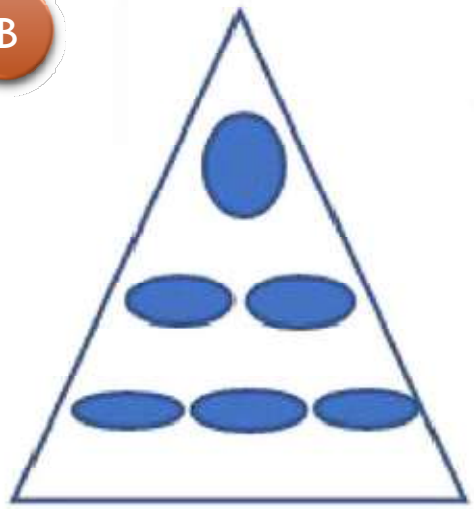
Drain

A

B

pine





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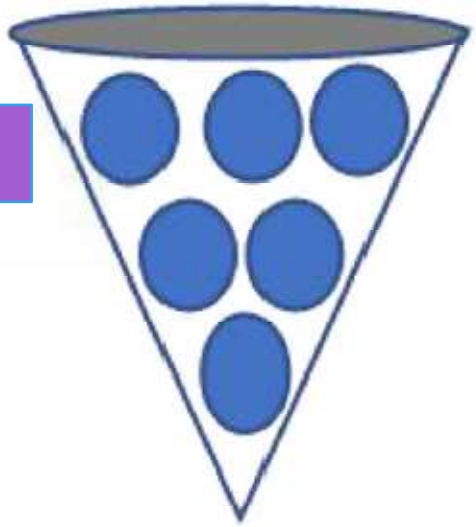
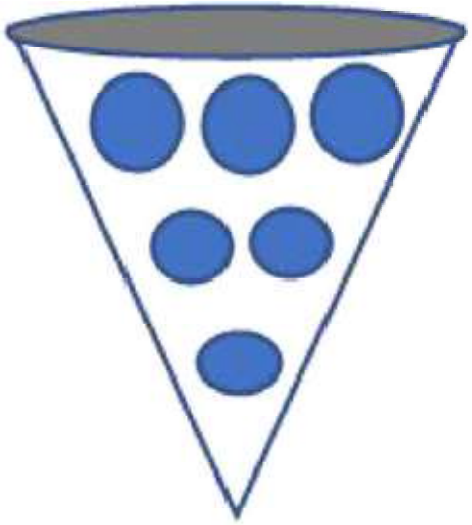
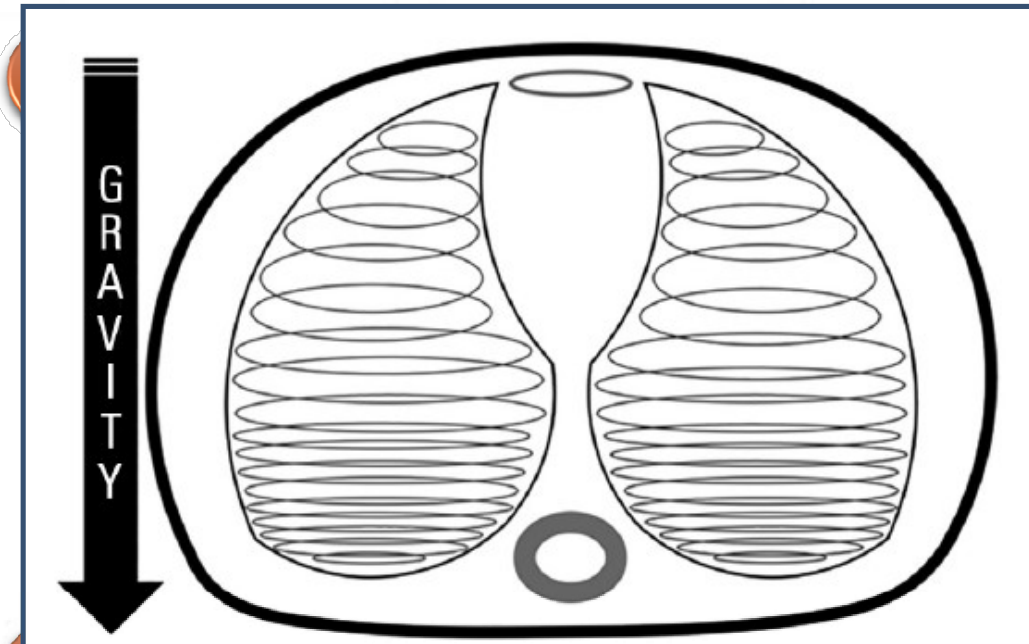
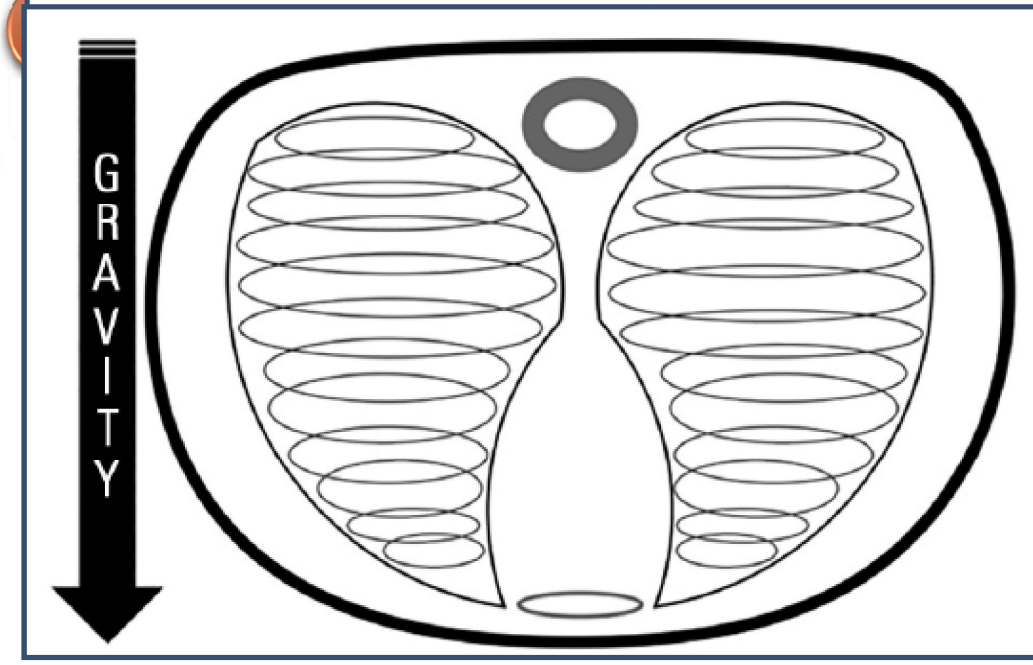
one



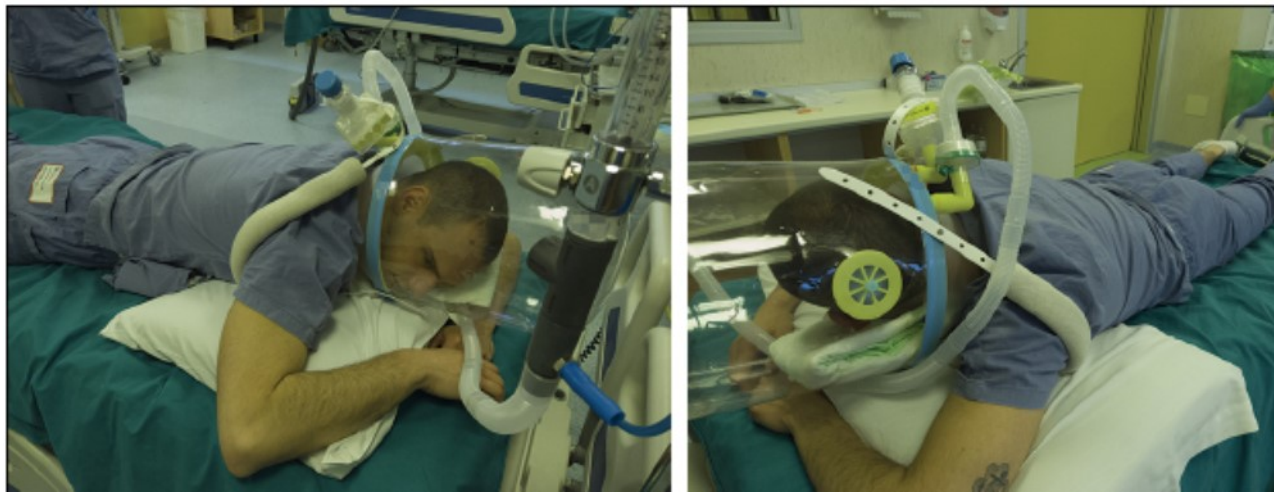






Awake Prone Position

CLINICAL EVIDENCE

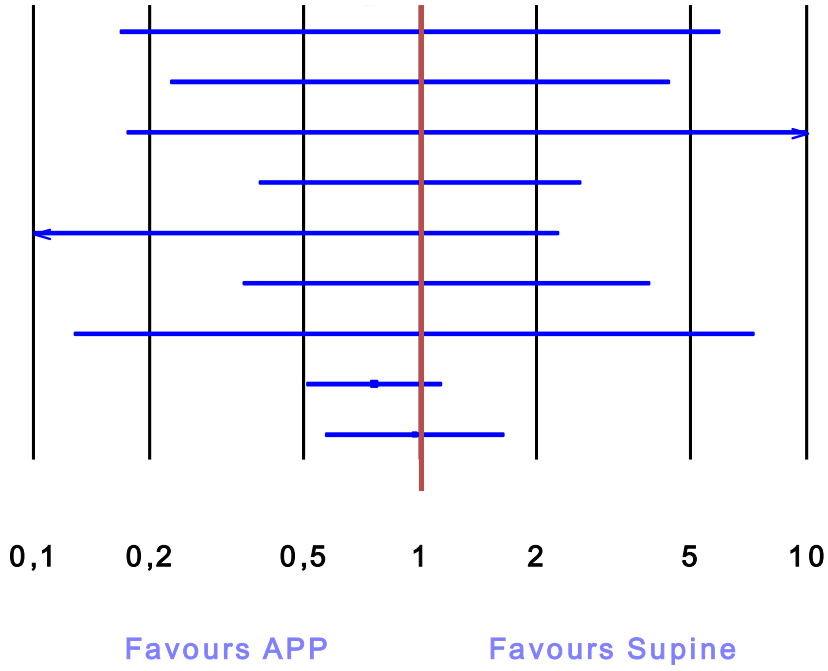


RCTs on Awake Prone Position in Covid-19

Study name	Odds ratio	Lower limit	Upper limit	Z-Value	p-Value
Gad__21	1,000	0,167	5,985	0,000	1,000
Jayakumar__21	1,000	0,226	4,431	0,000	1,000
Johnson__21	2,154	0,174	26,672	0,598	0,550
Rosen__21	1,000	0,383	2,614	0,000	1,000
Garcia__21	0,414	0,075	2,296	-1,009	0,313
Fralick__21	1,170	0,348	3,939	0,254	0,800
Harris	0,966	0,127	7,334	-0,034	0,973
AlHazzani__22	0,761	0,507	1,143	-1,315	0,188
Qian__22	0,970	0,567	1,657	-0,113	0,910

Statistics for each study

Odds ratio and 95% CI



RCTs on Awake Prone Position in Covid-19

Study name	Odds ratio	Lower limit	Upper limit	Z-Value	p-Value
Ehrmann_21	0,731	0,573	0,933	-2,514	0,012
Gad_21	1,000	0,167	5,985	0,000	1,000
Jayakumar_21	1,000	0,226	4,431	0,000	1,000
Johnson_21	2,154	0,174	26,672	0,598	0,550
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Fralick_21	1,170	0,348	3,939	0,254	0,800
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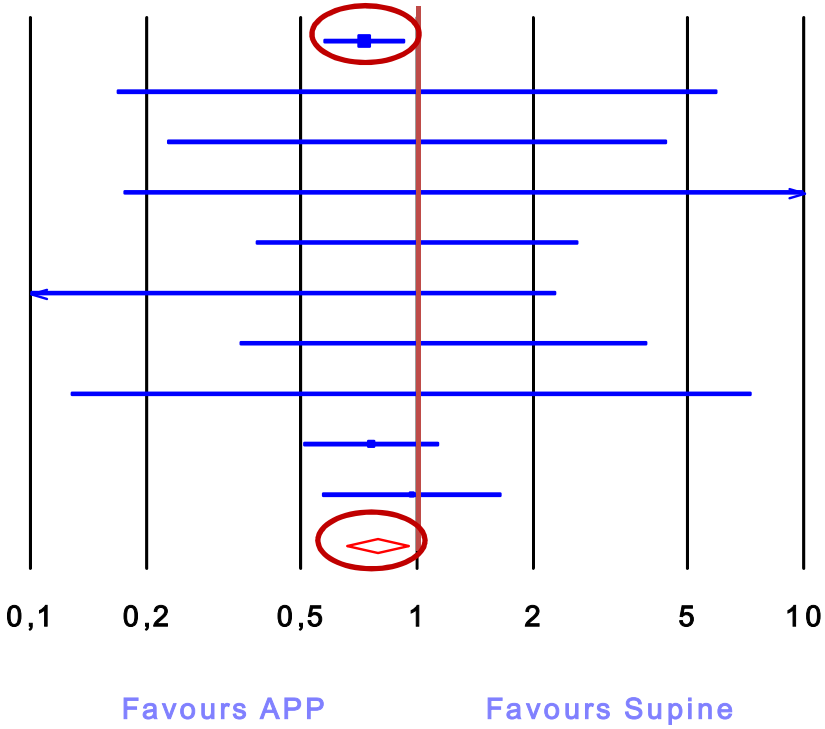
Qian_22	0,970	0,567	1,657	-0,113	0,910
	0,787	0,655	0,946	-2,556	0,011

Statistics for each study

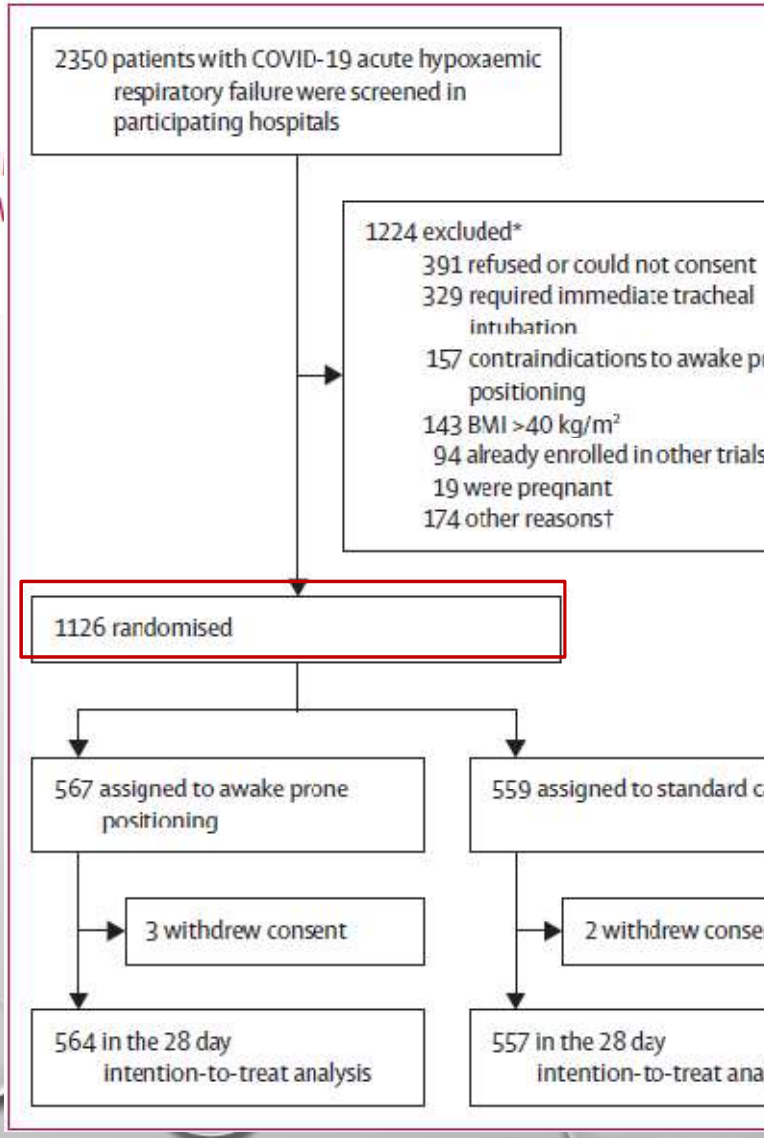
Odds ratio and 95% CI



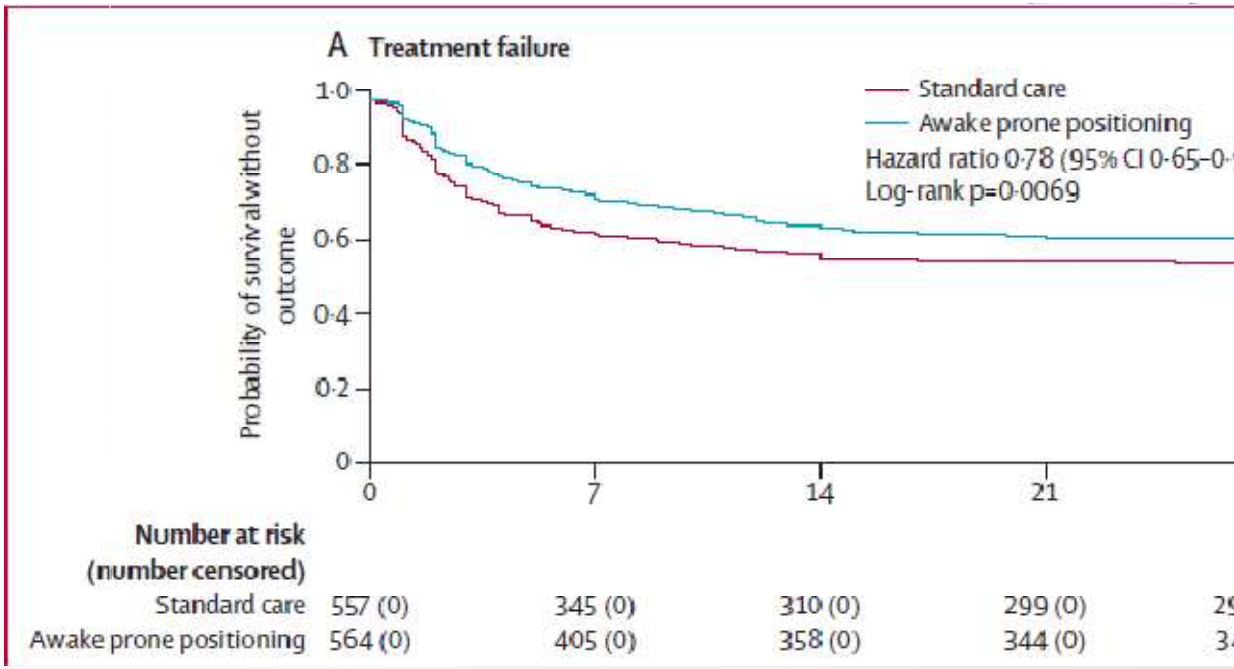
ake prone positioning for COVID-19 acute hypoxaemic piratory failure: a randomised, controlled, multinational, n-label meta-trial

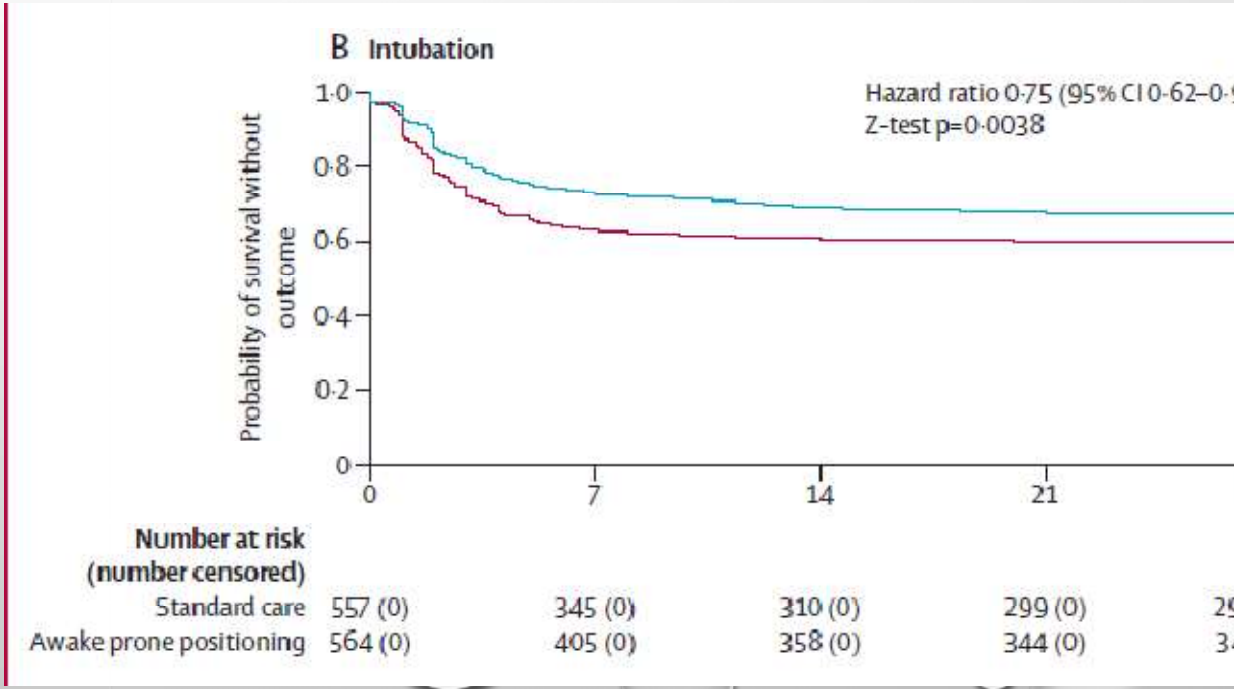
Ehrmann*, Jie Li*, Miguel Ibarra-Estrada*, Yonatan Perez*, Ivan Pavlov*, Bairbre McNicholas*, Oriol Roca*, Sara M
Garcia-Salcido, Guadalupe Aguirre-Avalos, Matthew W Trump, Mai-Anh Nay, Jean Dellamonica, Saad Nseir, Idrees M
raman, Joan R Masclans, John G Laffey, Elsa Tavernier, for the Awake Prone Positioning Meta-Trial Group†

	Awake prone positioning group (n=564)	Standard care group (n=557)
Age, years	61·5 (13·3)	60·7 (14·0)
Female sex	184 (33%)	191 (34%)
Male sex	380 (67%)	366 (66%)
Body-mass index, kg/m²	29·7 (4·6)	29·7 (4·6)
Clinical parameters at enrolment		
Respiratory rate, breaths/min	24·7 (5·1)	24·9 (5·6)
Mean arterial pressure, mmHg	88·2 (12·1)	87·4 (11·4)
SpO_2:FiO_2	147·9 (43·9)	148·6 (43·1)
Recruitment of individual trials		
Mexico	216 (38%)	214 (38%)
France	200 (35%)	202 (36%)
USA	112 (20%)	110 (20%)
Spain	17 (3%)	13 (2%)
Ireland	12 (2%)	12 (2%)
Canada	7 (1%)	6 (1%)

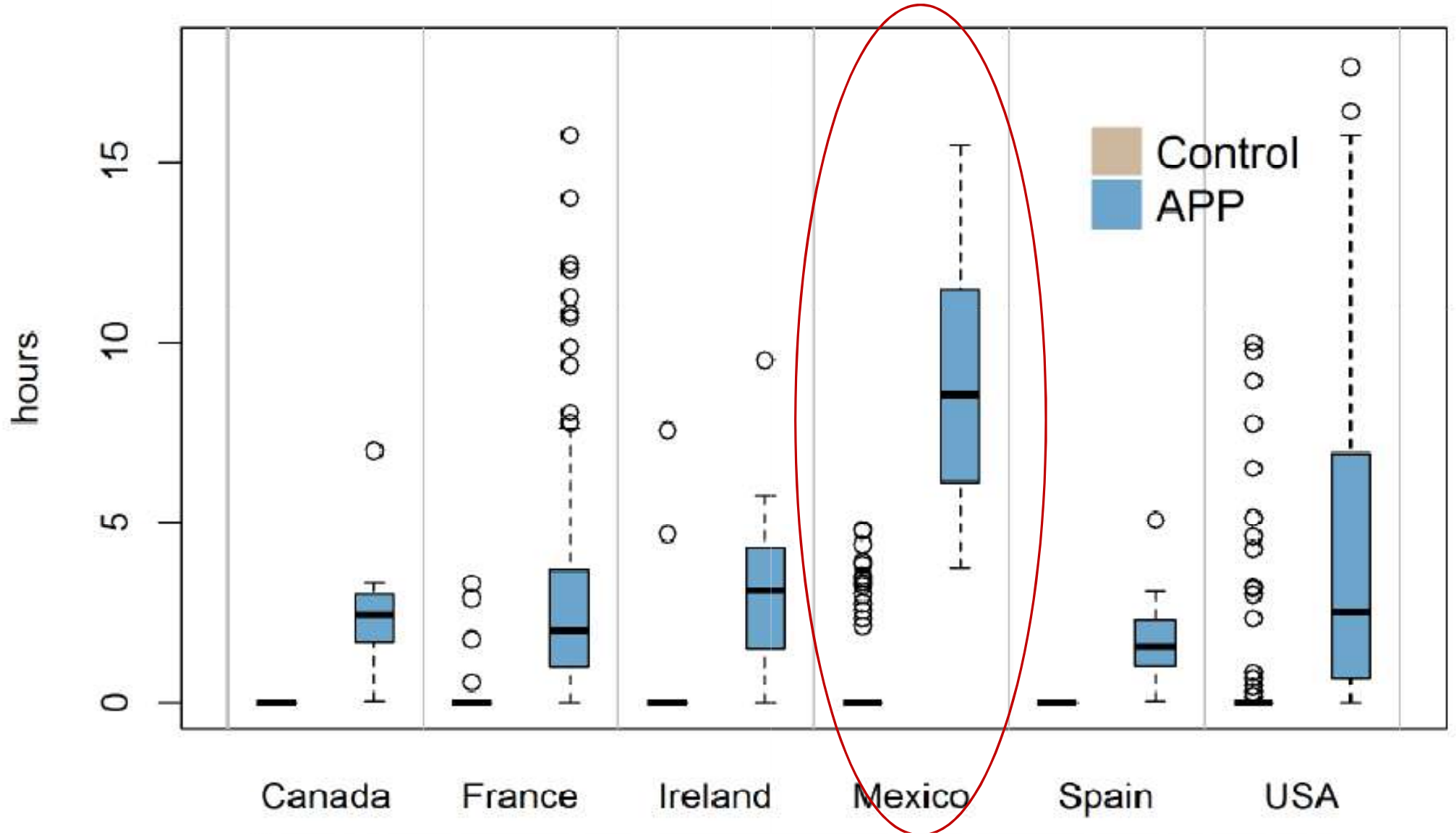


	Awake prone positioning group (n=564)	Standard care group (n=557)	RR (95% CI), HR (95% CI), or mean difference (95% CI)
tcome			
ailure at day 28 or death)	223/564 (40%)	257/557 (46%)	RR 0·86 (0·75 to 0·98)
outcomes			
ate at day 28	185/564 (33%)	223/557 (40%)	..
day 28			
ts	117/564 (21%)	132/557 (24%)	RR 0·87 (0·71 to 1·07)
mechanically ventilated	79/185 (43%)	98/223 (44%)	..



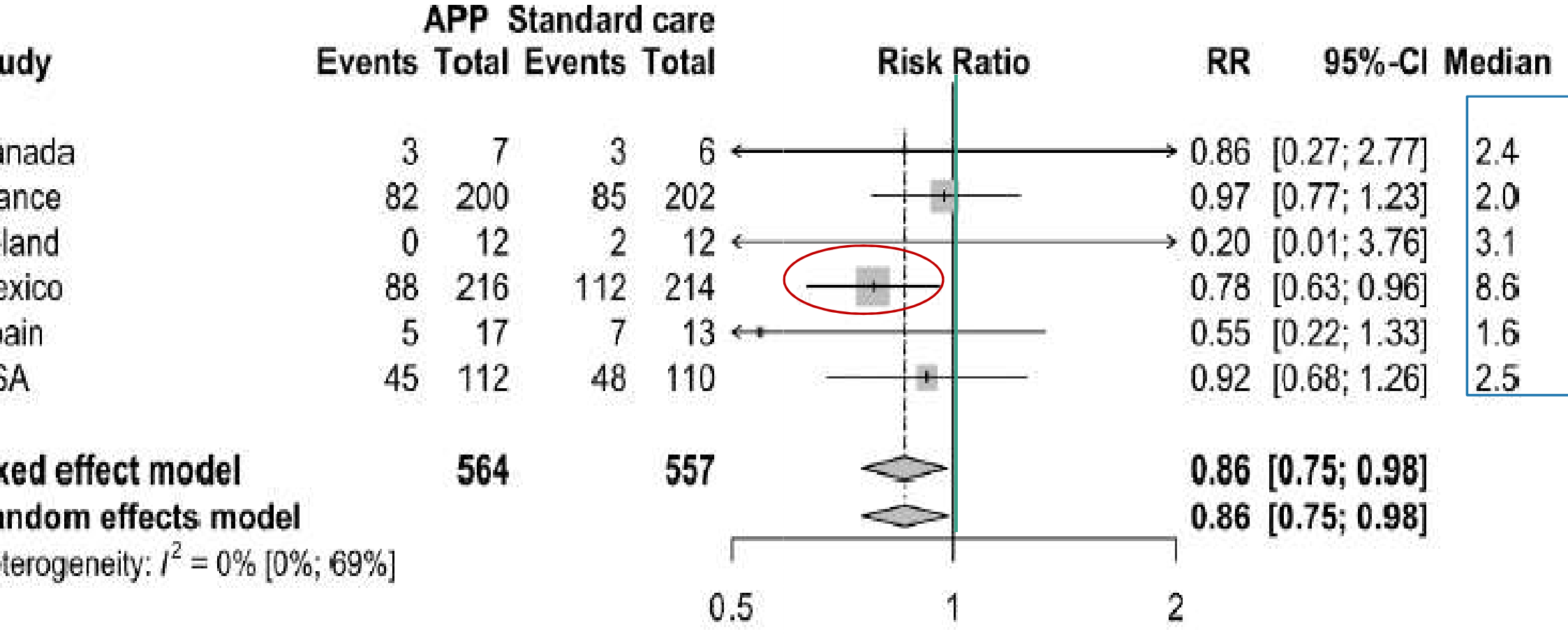


APP: DURÉE QUOTIDIENNE

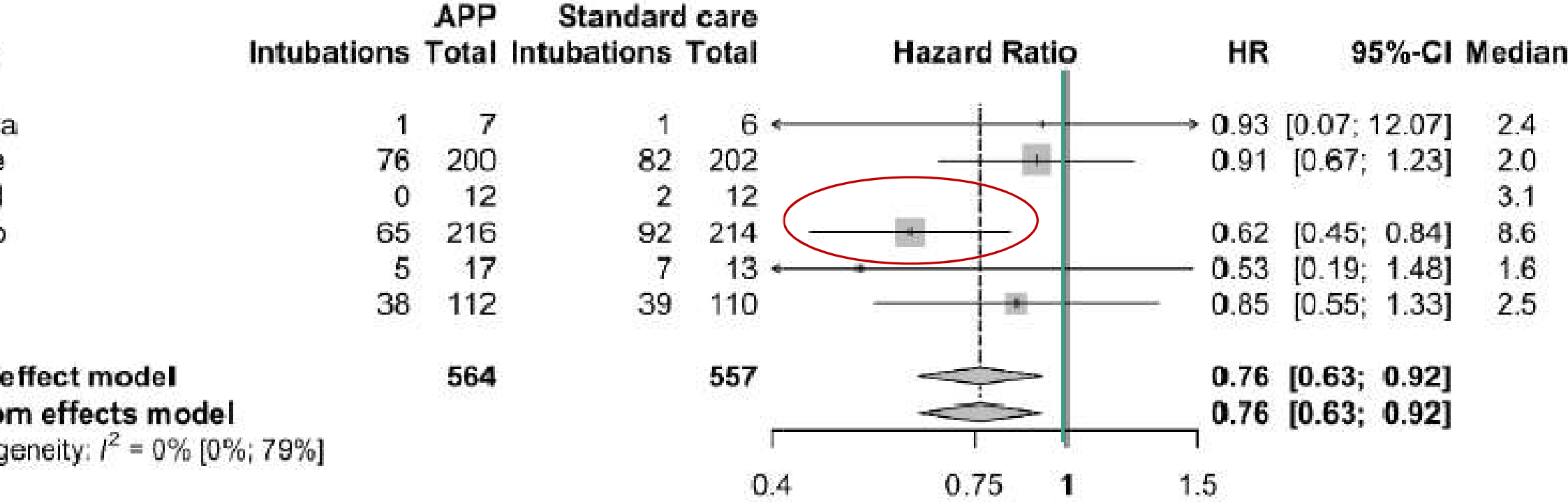


EFFECT ON INTUBATION OR DEATH (PRIMARY OUTCOME) AT DAY 28.

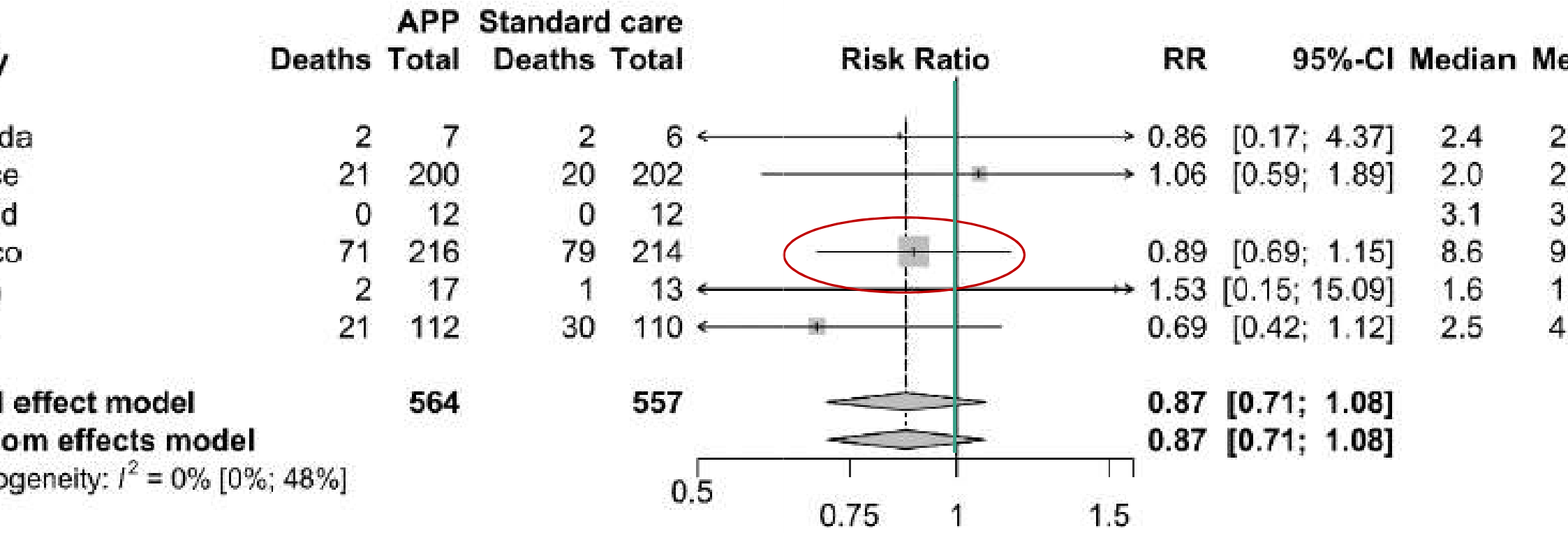
MEDIAN AND MEAN DURATIONS OF PRONE POSITIONING SESSIONS IN HOURS



FOREST PLOT WITH MIXED EFFECTS LINEAR MODEL WITH GROUP AS A FIXED EFFECT AND COUNTRY AS A RANDOM EFFECT ON INTUBATION AT DAY 28



FOREST PLOT WITH MIXED EFFECTS LINEAR MODEL WITH GROUP AS A FIXED EFFECT AND COUNTRY AS A RANDOM EFFECT ON DEATH AT DAY 28.



Forest Plot des RCTs Publiées

Study name	Odds ratio	Lower limit	Upper limit	Z-Value	p-Value
Ehrmann_21	0,731	0,573	0,933	-2,514	0,012
Gad_21	1,000	0,167	5,985	0,000	1,000
Jayakumar_21	1,000	0,226	4,431	0,000	1,000
Johnson_21	2,154	0,174	26,672	0,598	0,550
Rosen_21	1,000	0,383	2,614	0,000	1,000
Garcia_21	0,414	0,075	2,296	-1,009	0,313
Fralick_21	1,170	0,348	3,939	0,254	0,800
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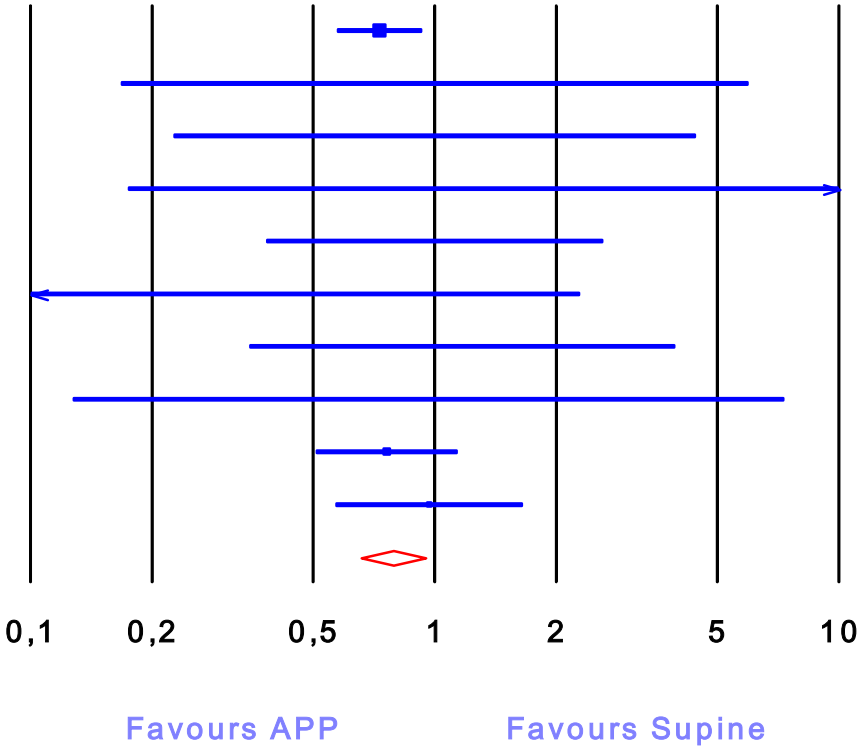
AlHazzani_22	0,761	0,507	1,143	-1,315	0,188
Qian_22	0,970	0,567	1,657	-0,113	0,910
	0,787	0,655	0,946	-2,556	0,011

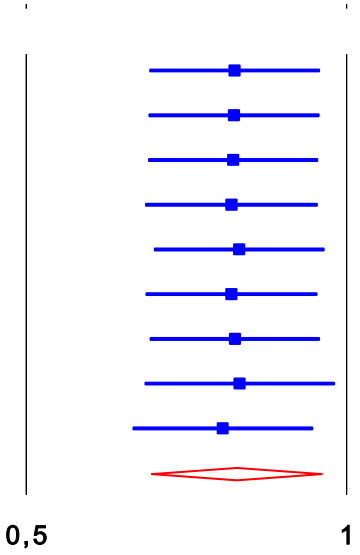
Statistics for each study

Odds ratio and 95% CI



A study removed

Study name	Point	Lower limit	Upper limit	Z-Value	p-Value
Gad__21	0,785	0,652	0,944	-2,570	0,010
Jayakumar__21	0,784	0,651	0,943	-2,576	0,010
Johnson__21	0,783	0,651	0,941	-2,607	0,009
Rosen__21	0,780	0,646	0,940	-2,604	0,009
Garcia__21	0,793	0,659	0,954	-2,462	0,014
Fralick__21	0,779	0,647	0,939	-2,625	0,009
Harris	0,785	0,653	0,945	-2,564	0,010
AlHazzani__22	0,793	0,646	0,975	-2,199	0,028
Qian__22	0,765	0,629	0,931	-2,680	0,007
	0,787	0,655	0,946	-2,556	0,011



A study removed

Study name	Point	Lower limit	Upper limit	Z-Value	p-Value
Ehrmann_21	0,866	0,655	1,145	-1,008	0,314
Gad_21	0,785	0,652	0,944	-2,570	0,010
Jayakumar_21	0,784	0,651	0,943	-2,576	0,010
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Garcia_21	0,793	0,659	0,954	-2,462	0,014
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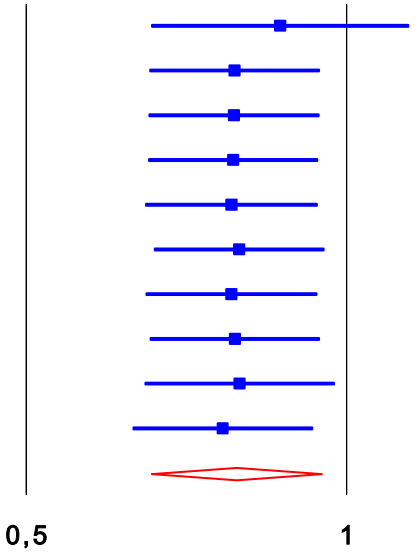
Qian_22	0,765	0,629	0,931	-2,680	0,007
	0,787	0,655	0,946	-2,556	0,011

Statistics with study removed

Odds ratio (95% CI) with study re



Pooled Analysis with Ehrmann's Study Components

Study name	Odds ratio	Lower limit	Upper limit	Z-Value	p-Value
Mexico	0,571	0,384	0,849	-2,766	0,006
France	0,897	0,601	1,339	-0,532	0,594
Canada	0,833	0,041	16,994	-0,119	0,906
Ireland	0,168	0,007	3,902	-1,112	0,266
Spain	0,357	0,079	1,615	-1,337	0,181
USA	0,935	0,538	1,625	-0,239	0,811
Gad__21	1,000	0,167	5,985	0,000	1,000
Jayakumar__21	1,000	0,226	4,431	0,000	1,000
Johnson__21	2,154	0,174	26,672	0,598	0,550
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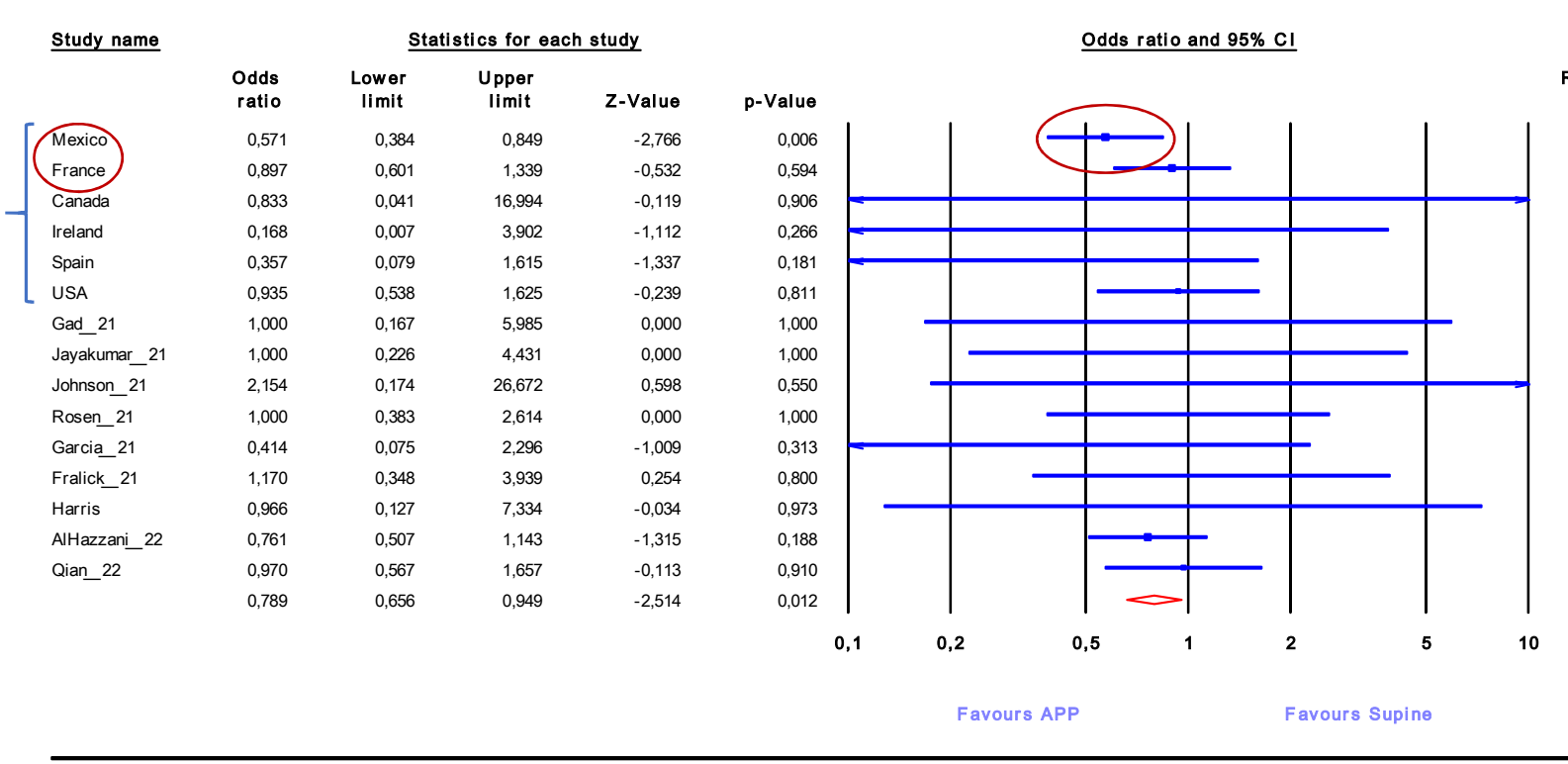
Fralick__21	1,170	0,348	3,939	0,254	0,800
Harris	0,966	0,127	7,334	-0,034	0,973
AlHazzani__22	0,761	0,507	1,143	-1,315	0,188
Qian__22	0,970	0,567	1,657	-0,113	0,910
	0,789	0,656	0,949	-2,514	0,012

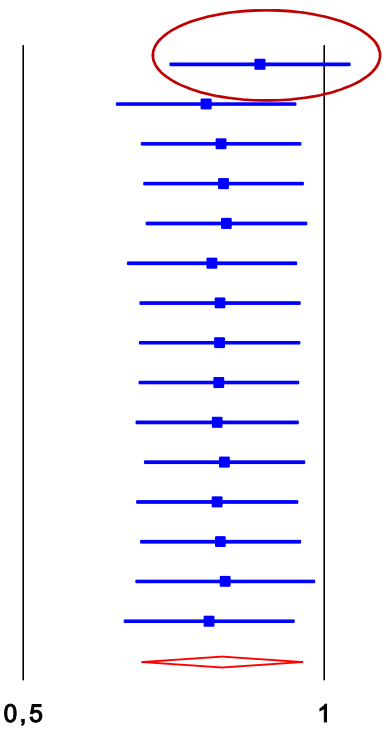


A study removed with Ehrman's study components

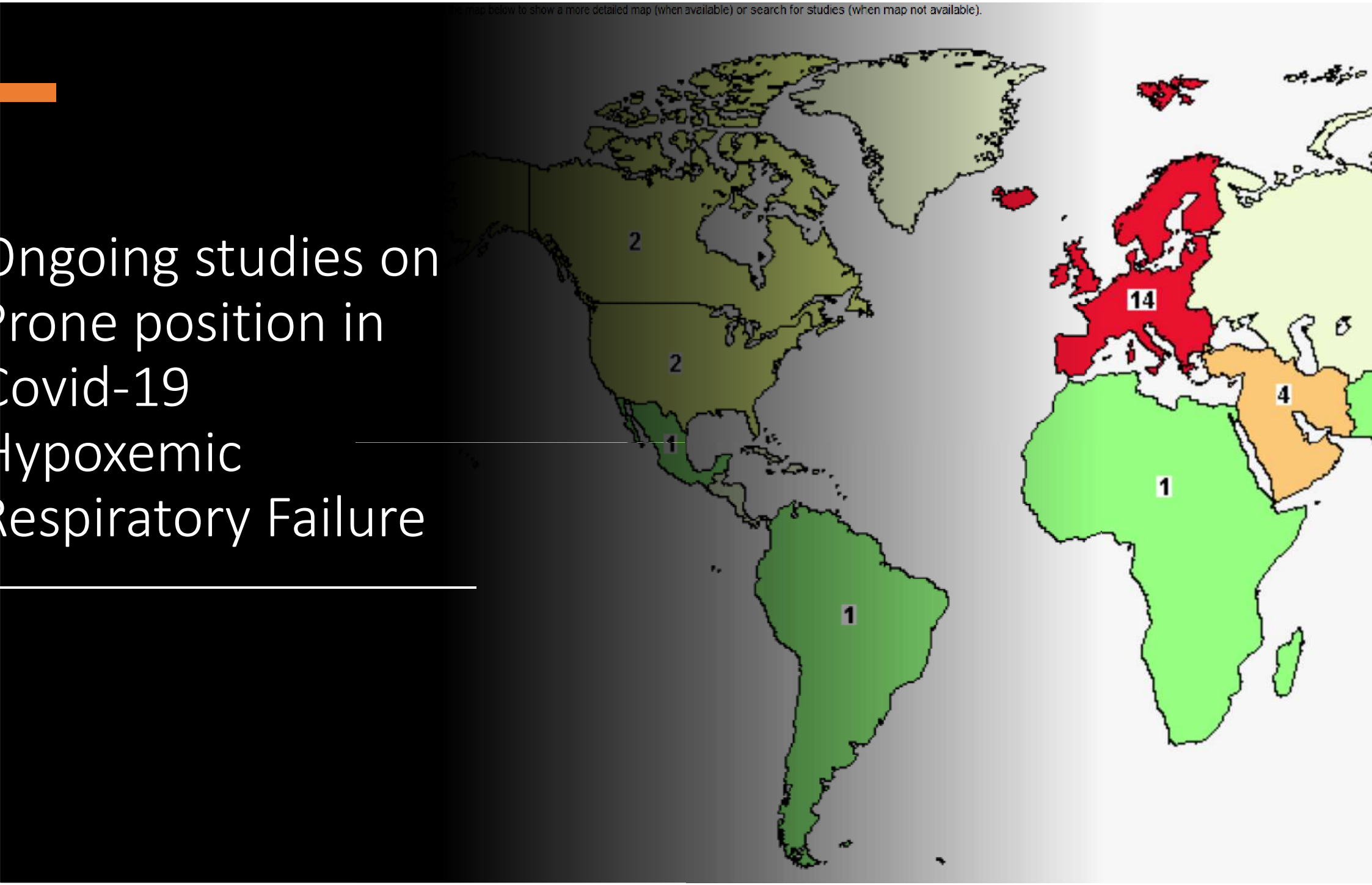
Study name	Point	Lower limit	Upper limit	Z-Value	p-Value
Mexico	0,863	0,700	1,063	-1,387	0,165
France	0,762	0,619	0,939	-2,557	0,011
Canada	0,789	0,656	0,949	-2,512	0,012
Ireland	0,793	0,659	0,954	-2,453	0,014
Spain	0,799	0,663	0,962	-2,369	0,018
USA	0,772	0,635	0,940	-2,583	0,010
Gad__21	0,787	0,654	0,948	-2,528	0,011
Jayakumar__21	0,786	0,653	0,947	-2,534	0,011
Johnson__21	0,785	0,652	0,944	-2,565	0,010
Rosen__21	0,782	0,648	0,944	-2,562	0,010
Garcia__21	0,795	0,660	0,957	-2,420	0,016
Fralick__21	0,782	0,648	0,942	-2,583	0,010
Harris	0,788	0,654	0,948	-2,522	0,012
AlHazzani__22	0,796	0,647	0,980	-2,152	0,031
Qian__22	0,767	0,630	0,934	-2,637	0,008
	0,789	0,656	0,949	-2,514	0,012

Statistics with study removed

Odds ratio (95% CI) with study remo



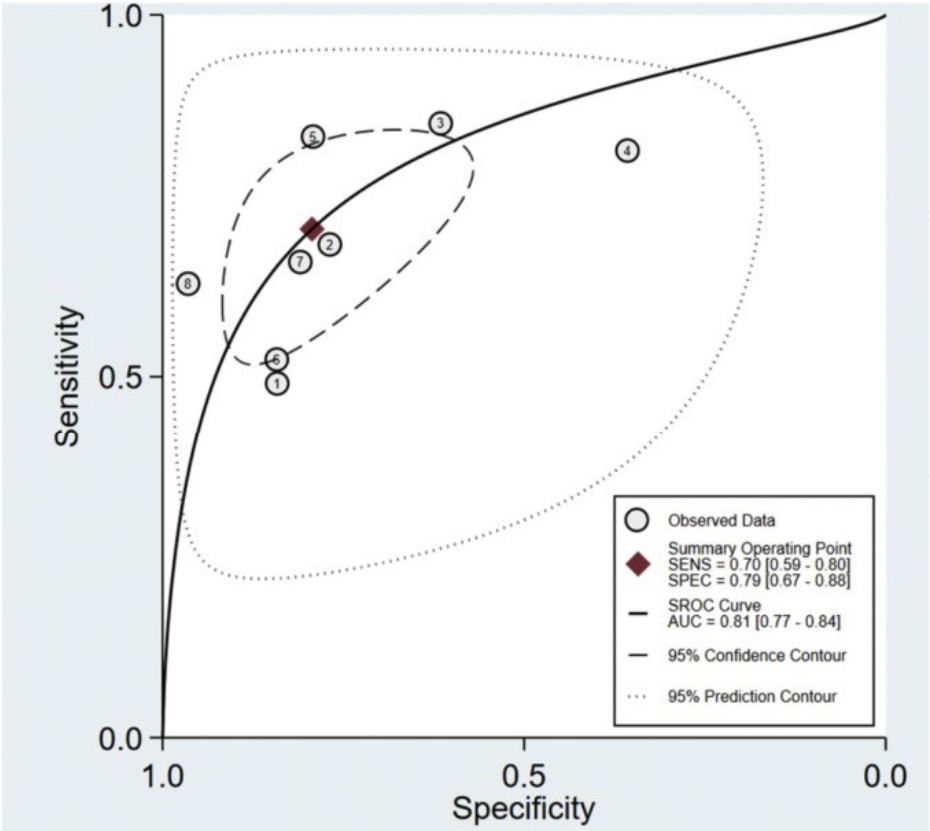
Ongoing studies on Prone position in Covid-19 Hypoxemic Respiratory Failure



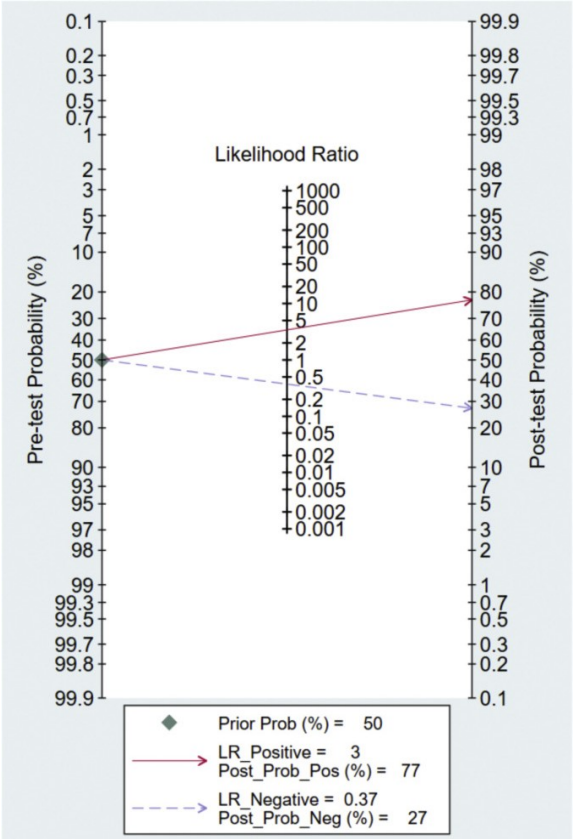
ROX index as a good predictor of high flow nasal cannula failure in COVID-19 patients with acute hypoxemic respiratory failure: A systematic review and meta-analysis.

J.Prakash. Journal of Critical Care, 2021

ROX index *((SpO2/FiO2)/respiratory rate)*



The AUC of ROX-index for probability in predicting HNFC failure was 0.81



Pre-test and post-test probability using ROX index for predicting HNFC failure

RESPIRATORY CARE

Report | Short Report

rly Variation of ROX Index Predicts High-Flow Nasal Cannula Outcome in Awake bjects With Severe Hypoxemic COVID-19

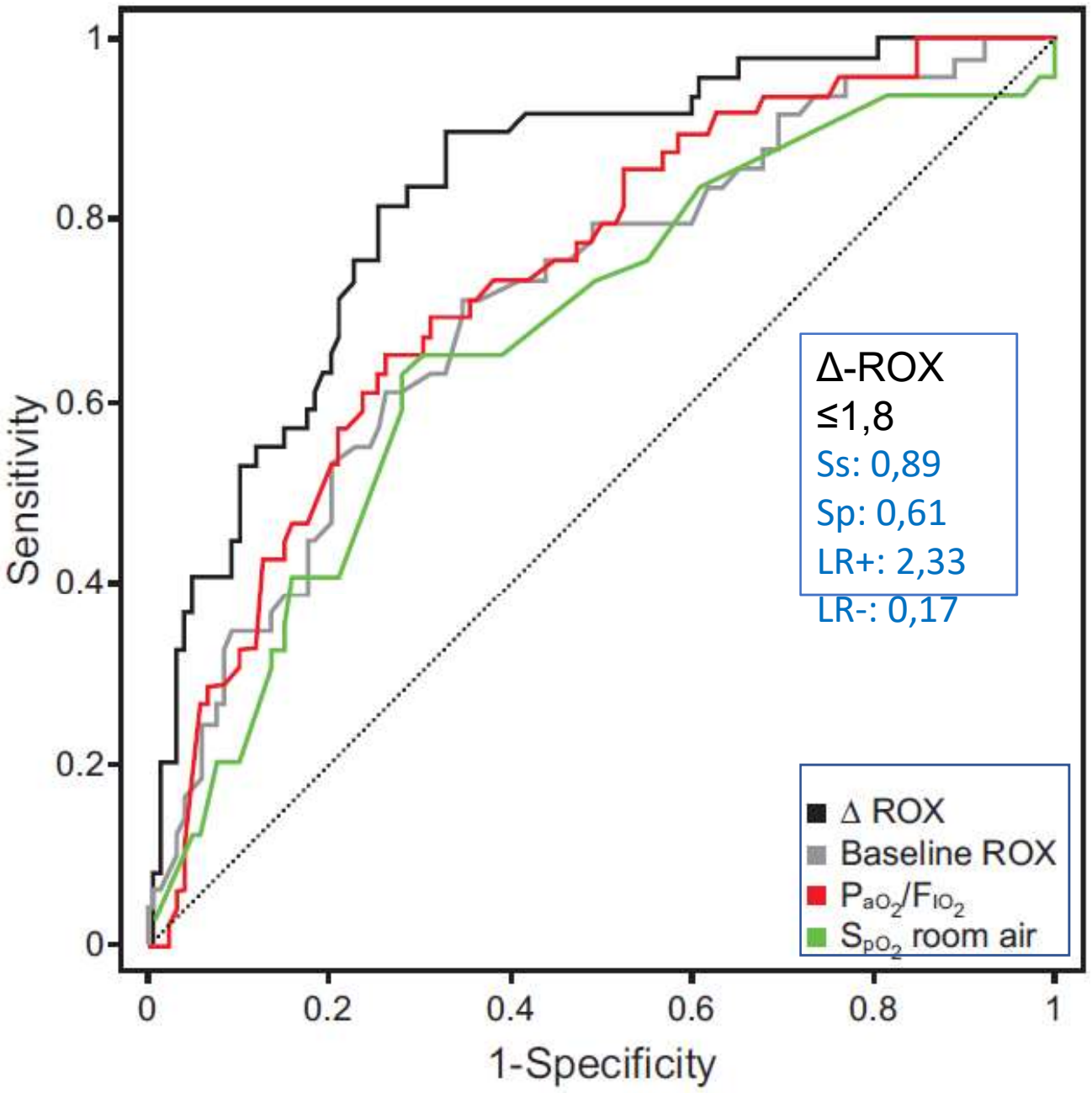
Abroug, Zeineb Hammouda, Manel Lahmar, Wiem Nouira, Syrine Maatouk, Sourour Belhaj Youssef, Fahmi Dachraoui, Laurent Brochard and Lamia Ouanes-Besbes

ratory Care September 2022, respcare.10125; DOI: https://doi.org/10.4187/respcare.10125

Baseline Characteristics of Subjects Receiving High-Flow Nasal Cannula

	All Subjects $N = 213$	HFNC Success $n = 152$	HFNC Failure $n = 61$
between first symptoms and hospitalization, d	10 (7–14)	10 (8–14)	10 (7.0–14.5)
o transfer to ICU, d	2 (1–4)	2 (1–4)	3 (1.5-4.5)
II	27 (26–32)	25 (19–30)	32 (27–38)
score	3 (2–4)	3 (2–3)	4 (3–6)
oom air, %	85 (77–88)	86 (80–88)	80 (70–87)
O_2	104 (73–143)	114 (82–160)	76 (60–109)
rate, beats/min	81 (75–95)	80 (75–89)	85 (80–106)
ency, breaths/min	26 (24–30)	25 (23–29)	30 (25–35)
ndex at baseline	4.0 (3.4–5.2)	4.2 (3.6-5.8)	3.5 (3.0–4.2)

Comparative Operative Charachteristics



Awake Prone Position

- Bases théoriques d'efficacité chez les patients hypoxémiques
- Preuves cliniques: en attente de confirmation
- A essayer dès lors que c'est toléré/faisable
- Besoin d'indicateurs précoces d'efficacité:
  - ROX, Delta ROX
  - Imagerie (US, CT scan)