

## CQ 9-2

成人敗血症患者の初期の呼吸不全に対して非侵襲的人工呼吸 (NIV) または経鼻高流量療法 (NHFT) を行うか？

### 検索データベース

- MEDLINE (PubMed/Ovid)
- CENTRAL
- 医学中央雑誌
- その他 (Embase)

### 検索式とヒット数

PubMed search strategy (検索日 2019 年 5 月 2 日)

#1	"adult respiratory distress syndrome"[tiab] OR "respiratory failure"[tiab] OR "Dyspnea"[tiab] OR "Dyspnea"[mesh] OR "shortness of breath"[tiab] OR "acute respiratory distress"[tiab] OR "Acute Respiratory Distress Syndrome" [tiab] OR "Respiratory Distress Syndrome, Adult" [mesh]	101092
#2	"Positive Pressure Respiration"[MeSH] OR "Noninvasive ventilation"[MeSH] OR "Noninvasive ventilation"[tiab] OR "Non invasive ventilation"[tiab] OR "Noninvasive positive pressure ventilation"[tiab] OR "Non invasive positive pressure ventilation"[tiab] OR "NIPPV"[tiab] OR "NPPV"[tiab] OR "NIV"[tiab] OR "Bilevel Positive Airway Pressure"[tiab] OR "Biphasic Positive Airway Pressure"[tiab] OR "BiPAP"[tiab] OR ("High Flow"[tiab] AND Nasal[tiab]) OR ("High Flow"[tiab] AND Therapy[tiab]) OR ("High Flow"[tiab] AND "Oxygen"[tiab]) OR "HFNC"[tiab] OR "HHFNC"[tiab] OR "HHHFNC"[tiab] OR "NHF"[tiab]	31742
#3	Randomized Controlled Trial[pt] OR Controlled Clinical Trial[pt] OR Randomized[tiab] OR Placebo[tiab] OR Drug Therapy[sh] OR Randomly[tiab] OR Trial[tiab] OR Groups[tiab] NOT (Animals [mh] NOT Humans [mh])	3890430
#4	#1 and #2 and #3	1683

CENTRAL search strategy (検索日 2019 年 4 月 30 日)

#1	MeSH descriptor: [Respiratory Distress Syndrome, Adult] explode all trees	1038
#2	("Acute Respiratory Distress Syndrome"):ti,ab,kw	1311
#3	("acute respiratory distress"):ti,ab,kw	1366
#4	("respiratory failure"):ti,ab,kw	3897
#5	("shortness of breath "):ti,ab,kw	943
#6	MeSH descriptor: [Dyspnea] explode all trees	1117
#7	("Dyspnea"):ti,ab,kw	10249
#8	#1or #2 or #3 or #4 or #5 or #6 or #7	15945
#9	MeSH descriptor: [Positive-Pressure Respiration] explode all trees	252 6
#10	MeSH descriptor: [Noninvasive Ventilation] explode all trees	183
#11	("Noninvasive ventilation"):ti,ab,kw	1598
#12	("Non invasive ventilation"):ti,ab,kw	905
#13	("Noninvasive positive pressure ventilation"):ti,ab,kw	390
#14	("Non invasive positive pressure ventilation"):ti,ab,kw	163
#15	("NIPPV"):ti,ab,kw	263
#16	("NPPV"):ti,ab,kw	196
#17	("NIV"):ti,ab,kw	905
#18	("Bilevel Positive Airway Pressure"):ti,ab,kw	170
#19	"Biphasic Positive Airway Pressure"	35
#20	("BiPAP"):ti,ab,kw	288
#21	MeSH descriptor: [Oxygen Inhalation Therapy] this term only	1055
#22	("High Flow"):ti,ab,kw AND ("Nasal"):ti,ab,kw	803
#23	("High Flow"):ti,ab,kw AND ("Therapy"):ti,ab,kw	653
#24	("High Flow"):ti,ab,kw AND ("Oxygen"):ti,ab,kw	763
#25	("HFNC"):ti,ab,kw	276
#26	("HHFNC"):ti,ab,kw	20
#27	("HHHFNC"):ti,ab,kw	57
#28	("NHF"):ti,ab,kw	99
#29	#10 or #11 or #12 or #13 or #14 or #15 or #16 or #17 or #18 or #19 or #20 or #21 #22 or #23 or #24 or #25 or #26 or #27 or #28	5324
#37	#9 and #29	1546

医学中央雑誌 search strategy(検索日 2019年4月20日)

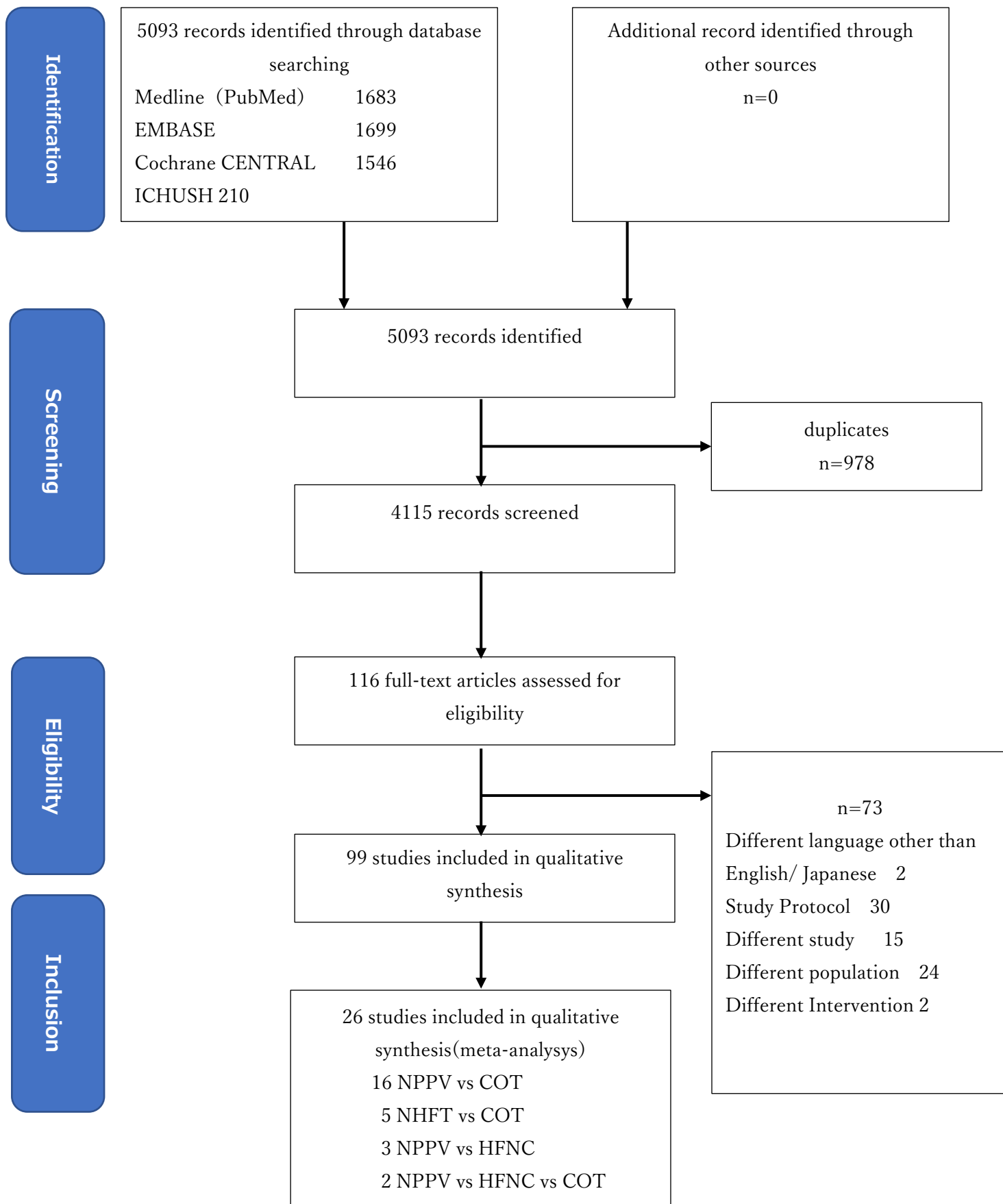
#1	((呼吸不全/TH or 呼吸不全/TA)) and (PT=会議録除く)	21275
#2	((呼吸窮迫症候群-急性/TH or 呼吸窮迫症候群-急性/TA)) and (PT=会議録除く)	4267
#3	((呼吸困難/TH or 呼吸困難/TA)) and (PT=会議録除く)	22446
#4	#1 or #2 or #3	45080
#5	((酸素吸入療法/TH or 酸素吸入療法/TA)) and (PT=会議録除く)	9873
#6	((非侵襲的陽圧呼吸/TH or 非侵襲的陽圧換気/TA)) and (PT=会議録除く)	3885
#7	((間欠的陽圧換気/TH or 間欠的陽圧換気/TA)) and (PT=会議録除く)	384
#8	((非侵襲的補助換気/TH or 非侵襲的補助換気/TA)) and (PT=会議録除く)	3755
#9	(陽圧呼吸/TH or 陽圧呼吸/TA) and (PT=会議録除く)	9023
#10	(持続気道陽圧/TH or 持続気道陽圧/TA) and (PT=会議録除く)	2569
#11	((酸素マスク/TH or 酸素マスク/TA)) and (PT=会議録除く)	676
#12	((マスク/TH or マスク/TA)) and (PT=会議録除く)	6214
#13	(ベンチュリーマスク/TA) and (PT=会議録除く)	15
#14	(HFNC/TA) and (PT=会議録除く)	78
#15	(HFOT/TA) and (PT=会議録除く)	2
#16	(高流量酸素療法/TA) and (PT=会議録除く)	35
#17	(NIV/TA) and (PT=会議録除く)	2620
#18	(NPPV/TA) and (PT=会議録除く)	1652
#19	(NIPPV/TA) and (PT=会議録除く)	356
#20	(NHFT/TA) and (PT=会議録除く)	11
#21	#5 or #6 or #7 or #8 or #9 or #10 or #11 or #12 or #13 or #14 or #15 or #16 or #17 or #18 or #19 or #20	25841
#22	ランダム化比較試験/TH or 準ランダム化比較試験/TH or ランダム化/AL or 無作為化/AL or 比較試験/AL or 臨床試験/AL or プラセボ/AL or 対照/AL or コントロール/AL or 臨床研究/AL	301704
#23	#4 and #21 and #22	210

## Embase search strategy (検索日 2019年 5月 1日)

#1	'acute respiratory failure'	14,497
#2	'acute respiratory failure'/exp	10,948
#3	'shortness of breath'	15,689
#4	'adult respiratory distress syndrome'	35,005
#5	'acute respiratory distress syndrome'	17,779
#6	'adult respiratory distress syndrome'/exp	33,309
#7	#1 OR #2 OR #3 OR #4 OR #5 OR #6	67,644
#8	'noninvasive ventilation'/exp	8,042
#9	'noninvasive ventilation'	9,790
#10	'non invasive ventilation'	5,346
#11	'noninvasive positive pressure ventilation'	1,434
#12	'non invasive positive pressure ventilation'	1,034
#13	nippv	908
#14	nppv	863
#15	niv	7,275
#16	'bilevel positive airway pressure'	723
#17	'biphasic positive airway pressure'	165
#18	bipap	1,814
#19	hfnc	744
#20	hhfnc	46
#21	hhhfn	71
#22	nhf*	1,475
#23	#8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22	20,563
#24	'high flow' AND therapy	3,824
#25	'high flow' AND oxygen*	2,832
#26	'high flow' AND nasal	2,127
#27	#23 OR #24 OR #25 OR #26	24,270
#28	'randomized controlled trial'	714,739
#29	'controlled clinical trial'	446,278
#30	randomized	1,008,177
#31	placebo	436,005
#32	'drug therapy'	4,361,618

#33	randomly	406,062
#34	trial	1,995,164
#35	groups	2,694,378
#36	#28 OR #29 OR #30 OR #31 OR #32 OR #33 OR #34 OR #35	7,699,857
#37	#7 AND #27 AND #36	1,699

## CQ2 文献検索フローダイアグラム



## Risk of Bias サマリー

	Random sequence generation (selection bias)	Allocation concealment (selection bias)	Blinding of participants and personnel (performance bias)	Blinding of outcome assessment (detection bias)	Incomplete outcome data (attrition bias)	Selective reporting (reporting bias)	Other bias
Eman 2018	?	?	-	+	+	+	+
Frat 2015	+	?	-	+	+	+	+
Frat 2016	+	+	-	+	+	+	+

Risk of bias summary: HFNC vs NIV mortality

	Random sequence generation (selection bias)	Allocation concealment (selection bias)	Blinding of participants and personnel (performance bias)	Blinding of outcome assessment (detection bias)	Incomplete outcome data (attrition bias)	Selective reporting (reporting bias)	Other bias
Antonelli 2000	?	+	-	+	+	+	+
Bersten 1991	?	?	-	+	+	+	+
Cosentini 2010	+	+	-	+	+	+	+
Delclaux 2000	?	?	-	+	+	+	+
Ferrer 2003	?	?	-	?	+	+	+
Frat 2015	+	?	-	+	+	+	+
Frat 2016	+	+	-	+	+	+	+
Gray 2008	+	+	-	+	?	+	+
Hilbert 2001	?	+	-	+	+	+	+
Lemiale 2015	+	+	-	+	+	+	+
L' Her 2004	?	?	-	+	+	+	+
Marc 1995	+	?	-	+	+	+	+
Park 2004	+	+	-	+	+	+	+
Qingyuan 2012	+	?	-	+	+	+	-

Risk of bias summary: NIV vs COT mortality

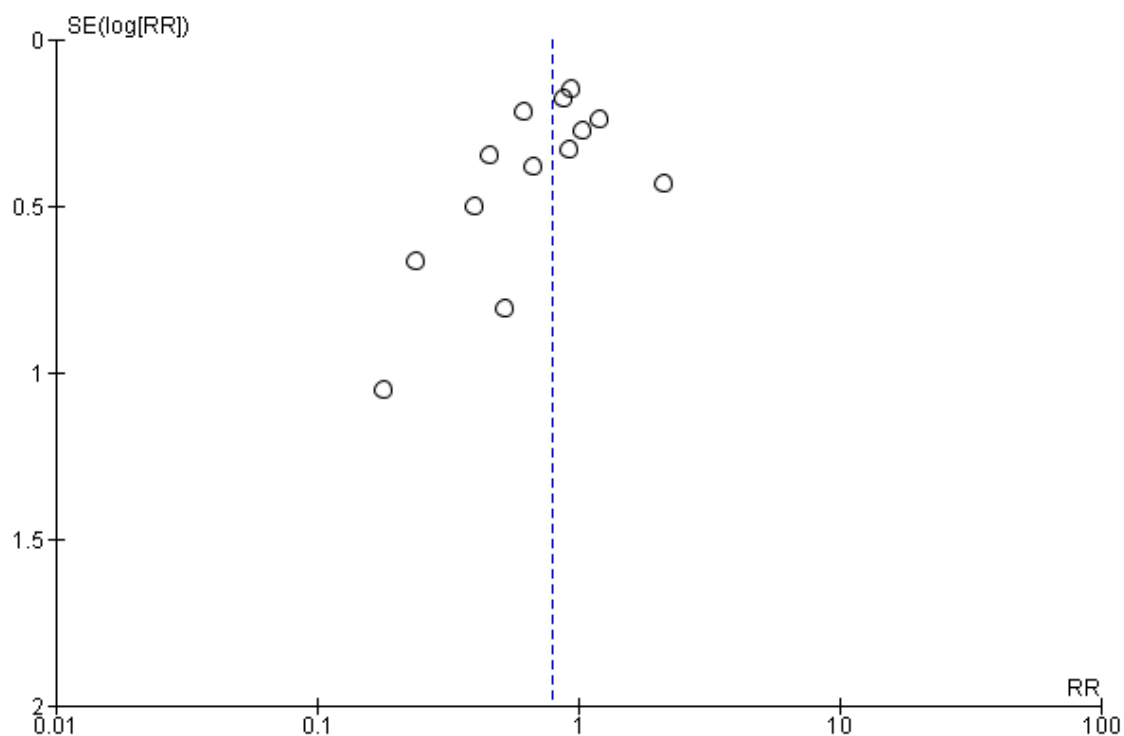
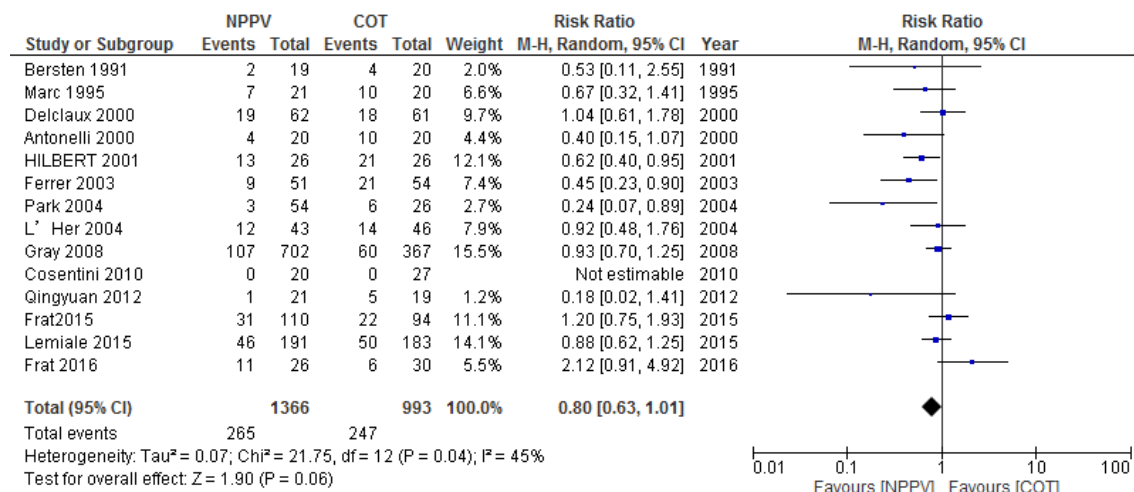


	Random sequence generation (selection bias)	Allocation concealment (selection bias)	Blinding of participants and personnel (performance bias)	Blinding of outcome assessment (detection bias)	Incomplete outcome data (attrition bias)	Selective reporting (reporting bias)	Other bias
Azoulay 2018	+	+	-	+	+	+	+
Frat 2015	+	?	-	+	+	+	+
Frat 2016	+	+	-	+	+	+	+
Jone 2016	?	?	-	+	?	+	+
Makdee 2017	+	?	-	+	+	+	+

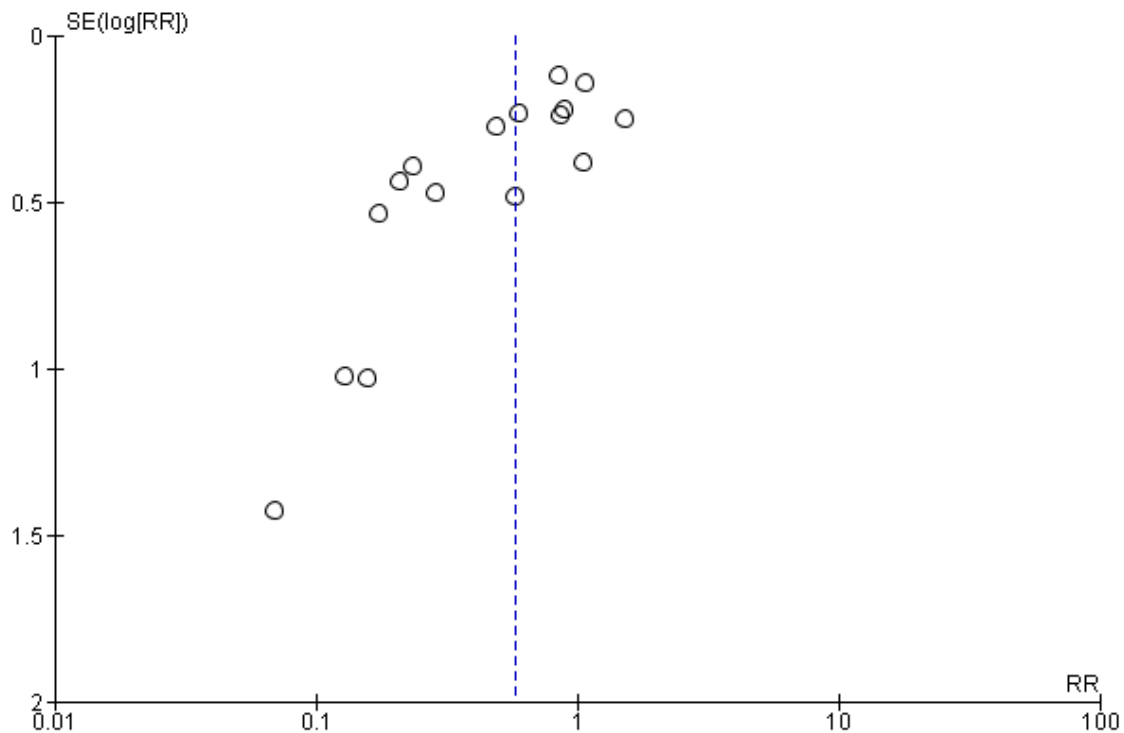
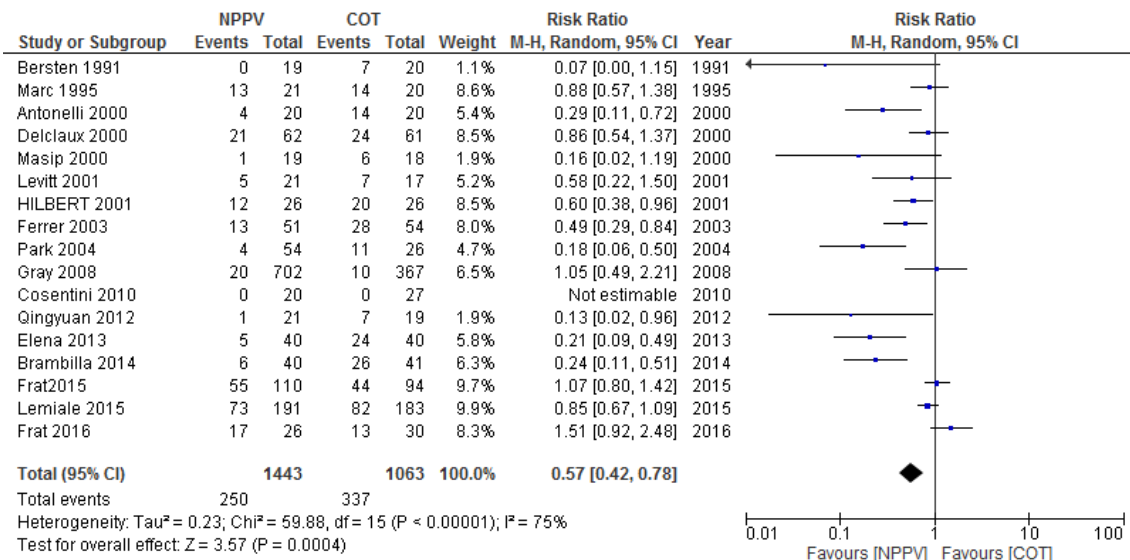
Risk of bias summary: HFNC vs COT mortality

## フォレストプロットおよびファンネルプロット

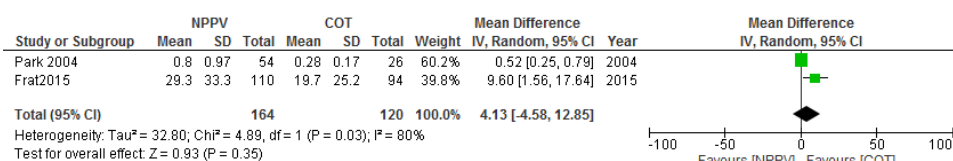
### アウトカム① 短期死亡 NPPV vs COT



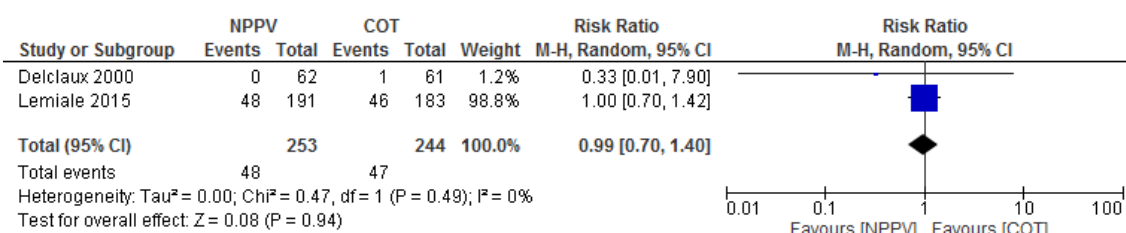
## アウトカム② 気管挿管 NPPV vs COT



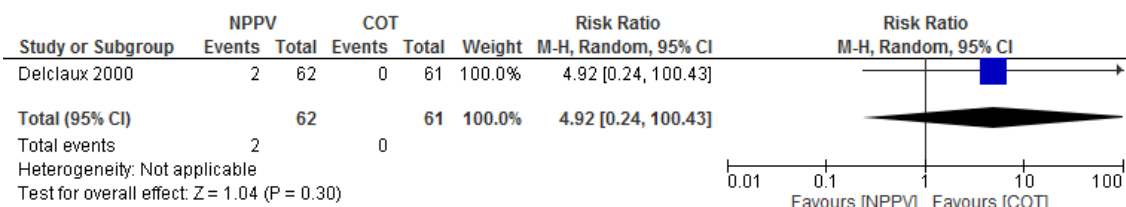
### アウトカム③ 挿管までの時間 (hour) NPPV vs COT



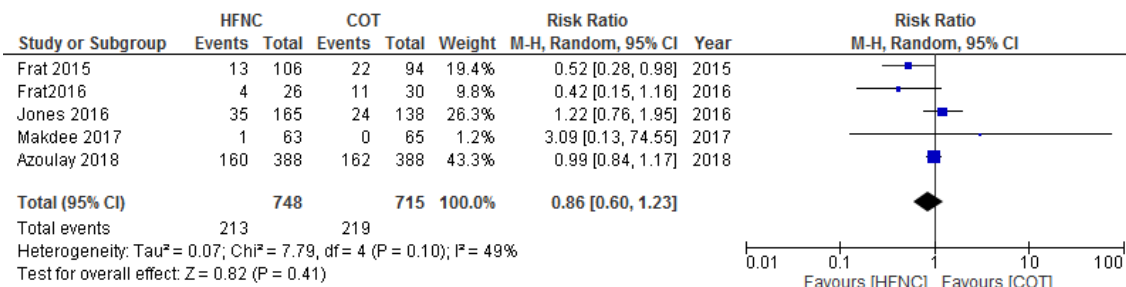
### アウトカム④ 感染 NPPV vs COT



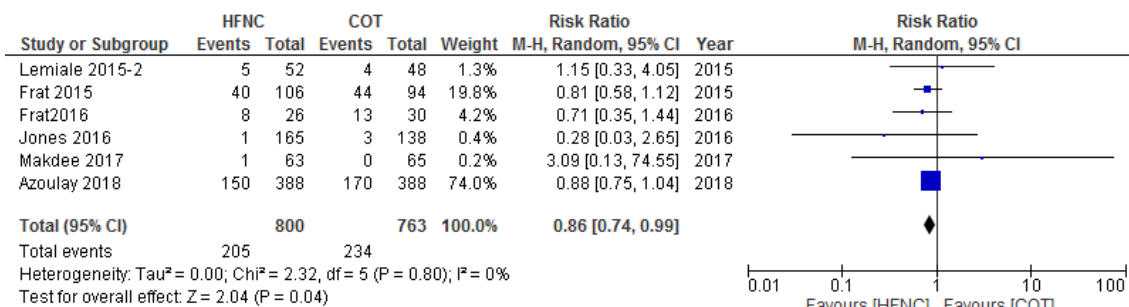
### アウトカム⑤ 皮膚障害 NPPV vs COT



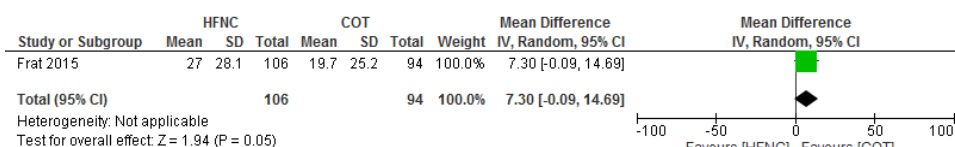
### アウトカム① 短期死亡 HFNC vs COT



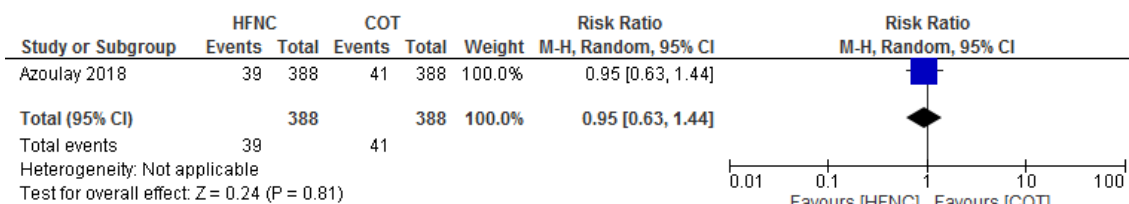
## アウトカム② 気管挿管 HFNC vs COT



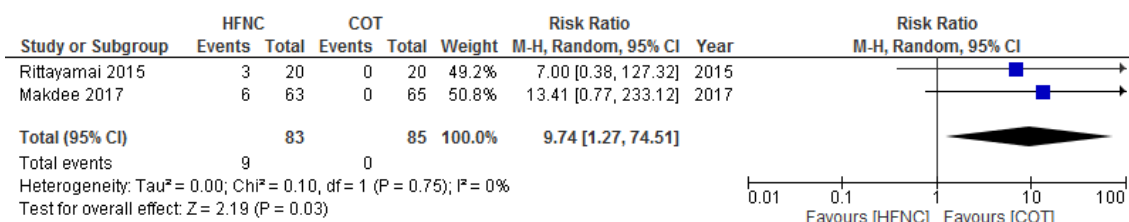
## アウトカム③ 気管挿管までの時間(hour) HFNC vs COT



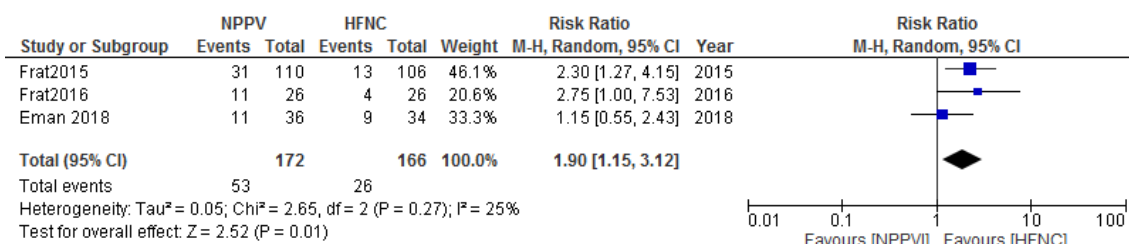
## アウトカム④ 感染 HFNC vs COT



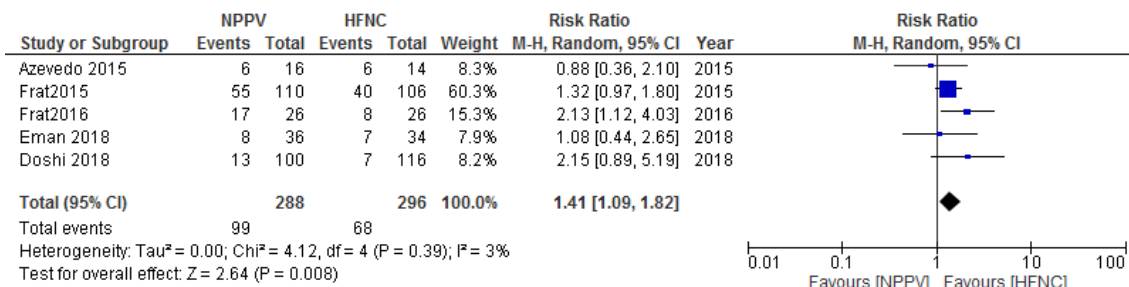
## アウトカム⑥ 不快感 HFNC vs COT



## アウトカム① 短期死亡 NPPV vs HFNC



## アウトカム② 気管挿管 NPPV vs HFNC



## アウトカム③ 気管挿管までの時間(hour) NPPV vs HFNC

