Table S1-1. Characteristics of the included studies.

Study, year published	Study design	Study duration	Study site	Study population	No. of patients (ITT population)		Dose regimen	
					Meropenem-vaborbactam	Comparator	Meropenem-vaborbactam	Comparator
Wunderink et al., 2018 [20]	Randomized multinational, open-label, phase 3 trial	2014–2017	27 hospitals in 8 countries	Adults with cUTI/AP, HABP/VABP, bacteremia, cIAI and confirmed/suspected CRE pathogen	32	15	2g-2g meropenem-vaborbactam every 8 h for 7-14 days	mono/combination therapy with polymyxins, carbapenems, aminoglycosides, tigecycline; or ceftazidime-avibactam alone
Ackley et al., 2020 [21]	Retrospective, multicenter cohort study	2015–2018		Adults with bacteremia with common sources urinary tract and intra-abdominal, respiratory infections	26	105		ceftazidime-avibactam
Kaye et al., 2018 [22]	Randomized, double-blind, multicenter, active control phase 3 trial	2014–2016	60 hospitals in 17 countries	Adults with cUTI/AP	272	273	2g-2g meropenem-vaborbactam every 8h for 1-15days	4g-0.5g piperacillin-tazobactam every 8 h for 2-15 days
Bassetti et al., 2019 [23]	Randomized, multicenter, multinational, open-label, active controlled, phase 3 trial	2014-2017		Adults with cUTI, AP, HABP/VABP, bacteremia, cIAI	23	15	2g-2g meropenem-vaborbactam every 8h for 10 days	mono/combination therapy with carbapenems, aminoglycosides, polymyxin B, colistin, tigecycline,

Study, year published	Study design	Study duration	Study site	Study population	No. of patients (ITT population)		Dose regimen	
					Meropenem-vaborbactam	Comparator	Meropenem-vaborbactam	Comparator
								or monotherapy ceftazidime–avibactam

cUTI - complicated urinary tract infection;

AP – acute pyelonephritis;

HABP – hospital-acquired bacterial pneumonia;

HAP – hospital-acquired pneumonia;

VABP – ventilator-associated bacterial pneumonia;

VAP – ventilator-associated pneumonia;

cIAI - complicated intra-abdominal infection.

Table S1-2. Baseline demographic characteristics of the study populations.

Study, published year	Female (%)		Mean ± S.D. age (years)		CL_{Cr} (mL/min): no (%) of patients		Clinical diagnosis: no. (%) of patients	
	MV	**Comparator**	**MV**	**Comparator**	**MV**	**Comparator**	**MV**	**Comparator**
Wunderink et al., 2018 [20]	18 (56.3)	5 (33.3)	63.6 (15.3)	63.2 (13.1)	≥50: 36 (72.0)	≥50: 14 (56.3)	Bacteremia: 14 (43.8)	Bacteremia: 8 (53.3)
					30-49: 6 (12.0)	30-49: 7 (28.0)	cUTI/AP 12 (37.5)	cUTI/AP: 4 (26.7)
					20-29: 1 (2.0)	20-29: 2 (8.0)	HABP/VABP: 4 (12.5)	HABP/VABP: 1 (6.7)
					<20 5 (10.0)	<20: 0 (0)		
Ackley et al., 2020 [21]	14 (53.8)	47 (44.8)	57.5	62.0			Primary bacteremia: 1 (3.8) Secondary bacteremia - 8 (30.8): Urinary tract: 1 (12.5)	Primary bacteremia: 7 (6.7) Secondary bacteremia - 37 (35.2): Urinary tract: 13 (35.1)
							Intra-abdominal: 3 (37.5)	Intra-abdominal: 6 (16.2)
							Respiratory: 2 (25.0)	Respiratory: 7 (18.9)
							Catheter-associated: 0	Catheter-associated: 5 (13.5)
							Soft tissue: 1 (12.5)	Soft tissue: 2 (5.4)
							Other: 1 (12.5) Nonbloodstream infections – 17 (65.4): Respiratory: 10 (58.8) Soft tissue: 2 (11.8)	Other: 4 (10.8) Nonbloodstream infections – 61 (58.1) Respiratory: 30 (49.2) Sodft tissue: 2 (11.8)

Study, published year	Female (%)		Mean ± S.D. age (years)		CL_{Cr} (mL/min): no (%) of patients		Clinical diagnosis: no. (%) of patients	
	MV	**Comparator**	**MV**	**Comparator**	**MV**	**Comparator**	**MV**	**Comparator**
							Intra-abdominal: 5 (29.4) Other: 0	Intra-abdominal: 12 (19.7) Other: 1 (1.6)
Kaye et al., 2018 [22]	181 (66.5)	180 (65.9)	53.0 (19.4)	52.6 (20.9)	≤ 50: 31 (11.4)	≤ 50: 37 (13.5)	AP: 161 (59.2)	AP: 161 (59.2)
Bassetti et al., 2019 [23]	12 (52.2)	5 (33.3)	62.3 (14.6)	60.2 (13.0)	≥50: 17 (73.9) 30-49: 3 (13.0) 20-29: 1 (4.3) <20: 1 (4.3)	≥50: 9 (60.0) 30-49: 2 (13.3) 20-29: 2 (13.3) <20: 0 (0)	cUTI: 111 (40.8) Bacteremia: 10 (43.5) cUTI/AP: 9 (39.1) HABP/VABP: 3 (13.0) cIAI: 1 (4.3)	cUTI: 112 (41.0) Bacteremia: 8 (53.3) cUTI/AP: 4 (26.7) HABP/VABP: 1 (6.7) cIAI: 2 (13.3)

Table S1-3. Microbial distribution in the study populations.

Pathogen	**Wunderink et al., 2018 [20]**		**Ackley et al., 2020 [21]**		**Kaye et al., 2018 [22]**		**Basseti et al., 2019 [23]**	
	Meropenem-Vaborbactam (n = 32)	Comparator (n = 15)	Meropenem-Vaborbactam (n = 26)	Comparator (n = 105)	Meropenem-vaborbactam (n = 272)	Comparator (n=273)	Meropenem-Vaborbactam (n=23)	Comparator (n=15)
Klebsiella pneumoniae	29 (90.6)	12 (80.0)	15 (57.7)	76 (72.4)	30 (15.6)	28 (15.4)	22 (95.7)	12 (80.0)
Escherichia coli	3 (9.4)	1 (6.7)	3 (11.5)	9 (8.6)	125 (65.1)	117 (64.3)	2 (8.7)	1 (6.7)
Enterobacter cloacae sp.	1 (3.1)	2 (13.3)	8 (30.8)	20 (19.1)	10 (5.2)	5 (2.7)	0 (0)	2 (13.3)
Proteus mirabilis	0 (0)	2 (13.3)	NA	NA	6 (3.1)	12 (6.6)	0 (0)	2 (13.3)
Serratia marcescens	1 (3.1)	1 (6.7)	1 (3.9)	0	NA	NA	1 (4.3)	1 (6.7)
Citrobacter	NA	NA	2 (7.7)	2 (1.9)	NA	NA	NA	NA
Enterococcus faecalis	NA	NA	NA	NA	13 (6.8)	14 (7.7)	NA	NA

NA – not applicable