Correction to: Mono vs. combo regimens with novel beta-lactam/ beta-lactamase inhibitor combinations for the treatment of infections due to carbapenemase-producing *Enterobacterales*: insights from the literature

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The original version of this article unfortunately contained a mistake. The presentation of Table 1 was incorrect. The corrected Table 1 is given below.

The original article has been corrected.

The original article can be found online at <https://doi.org/10.1007/s15010-021-01577-x>.

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Table 1 Clinical studies on the novel BLBLs administered as mono- or combo-regimens for infections due to CRE

First author, year [ref.]	Study design (adjustment for confounding)	BLBL	Source of CRE infection (number of patients)	CRE (number of isolates)	Carbapenemase type (% CRE isolates expressing)	Number of pts treated with mono vs combo
Shields, 2016 [11]	RSC (None)	CZA	Lung (12), BSI (10), IAI (4), SSTI (4), UTI (4), Other (3)	Kp (31), Ec (3), Ecl (2), Ka (1)	KPC (78%), OXA-1 (10.8%)	26 vs 11
Shields, 2017 [12]	RSC (MLR)	CZA	BSI (3 primary; 2 secondary to IAI, 3 to pneumonia, 5 to UTI)	Kp (13)	KPC (100%)	8 vs 5
Krapp, 2017 [13]	RSC (None)	CZA	UTI (5), Lung (1), BSI (1)	Kp (6)	KPC (100%), OXA-9 (100%)	2 vs 4
Caston, 2017 [14]	RMC (None)	CZA	BSI (2 primary; 1 secondary to CVC, 1 to IAI, 2 to pneumonia, 1 to SSTI, 1 to other)	Kp (6), Ko (1), Ec (1)	KPC (37.5%), OXA-48 (62.5%)	0 vs 8
Temkin, 2017 [15] ^a	RMC (None)	CZA	BSI (26), IAI (15), Lung (7), SSTI (4), UTI (3), Bone (3), Endocarditis (2), Other (3)	Kp (34), Ko (1), Ec (1)	KPC (63.9%), OXA-48 (36.1%)	13 vs 25
King, 2017 [16]	RMC (None)	CZA	BSI (23), UTI (17), Lung (16), Wound (8), IAI (4), Bone/Joint (2)	Kp (50), Ec (5), Ecl (4), Ko (1), Sm (1), Ps (1)	NR	33 vs 27
Shields, 2018 [17]	RSC (MLR)	CZA	Lung (33), Primary BSI (20), UTI (8), IAI (7) SSTI (6), Other (3)	Kp (60), Ec (9), Ecl (5), Ka (1), Ko (1), Sm (1)	KPC (75%), OXA not-48 (23%)	53 vs 24
Sousa, 2018 [18]	RSC (MLR)	CZA	IAI (16), Lung (15), UTI (14), BSI (26), SSTI (3)	Kp (54), Ec (2), Ecl (1)	OXA-48 (100%)	46 vs 11
De la Calle, 2019 [19]	RMC (None)	CZA	IAI (7), UTI (6), Lung (5), SSTI (4), Other (2)	Kp (23), Ec (1)	OXA-48 (100%)	14 vs 10
van Duin, 2018 [21]	PMC (IPTW)	CZA	BSI (15), Lung (9), UTI (6), SSTI (6), Other (2)	Kp (37), Ecl (1)	KPC (96.3%)	14 vs 24
Guimaraes, 2019 [22]	PMC (None)	CZA	BSI (12), UTI (8), IAI (4), Lung (3), SSTI (2)	Kp (28), Sm (2)	KPC (100%)	15 vs 14
Tumbarello, 2019 [6]	RMC (MLR)	CZA	BSI (104), Lung (13), IAI (12), UTI (6), Other (3)	Kp (138)	KPC (100%)	29 vs 109
Wunderink, 2018 [24]	MC, open-label RCT (Randomization)	MVB	BSI (14), UTI (12), Lung (4), IAI (2)	Kp (29), Ec (3), Ecl (1), Sm (1)	KPC (90.6%), NDM or OXA-48 (9.4%)	32 vs 0
Ackley, 2020 [20]	RMC (None)	CZA	BSI (44), UTI (13), Lung (37), SSTI (20), IAI (18), Other (5)	<i>Klebsiella</i> spp (76), <i>Enterobacter</i> spp. (20), Ec (9), <i>Citrobacter</i> spp (2)	KPC (71.9%) Data available only for 32 isolates	41 vs 64
Motsch, 2019 [25] ^c	MC double-blind RCT (Randomization)	MVB	BSI (9), UTI (1), Lung (12), SSTI (3), IAI (8), Other (1)	<i>Klebsiella</i> spp (15), <i>Enterobacter</i> spp (8), Ec (3), <i>Citrobacter</i> spp (2), Sm (1)	KPC (76.9%) Data available only for 13 isolates	22 vs 4
NCT03580044	MC open-label RCT, not yet recruiting (Randomization)	I-R ATM-AVI NR	IAI (1), UTI (4)	Kp (3), Ecl (1), <i>Citrobacter freundii</i> (1)	KPC (80%) NR	5 vs 0 NR (all mono)

Table 1 (continued)

First author, year [ref.]	Additional antibiotic in combo group	Overall 30-day mortality (mono vs combo)	Overall clinical success (mono vs combo)
Shields, 2016 [11]	GEN (8), CST (2), TGC (1)	24% (NR)	59% (58% vs 64%, ns)
Shields, 2017 [12]	GEN (5)	8% (12.5% vs 0%)	85% (75% vs 100%)
Krapp, 2017 [13]	TGC (2), PMB (2)	50% (0% vs 75%)	83.3% (100% vs 75%) as initial clinical cure
Caston, 2017 [14]	AG (7), CB (3), FOF (2), TGC (2), CST (2)	25% (NA)	85.7% (NA)
Temkin, 2017 [15] ^a	TGC (11), AMK (9), FOF (4), Other	39.5% (NR)	73.7% (69.2% vs 76.0%, ns)
King, 2017 [16]	AG (11), PMB/CST (7), TGC (6), CB (3)	32% (30% vs 33%, ns)	65% (67% vs 63%, ns)
Shields, 2018 [17]	GEN (19), CST (2), AMK (1), FQ (1), TGC (1)	19% (NR)	55% (56% vs 50%, ns)
Sousa, 2018 [18]	CST (7), TGC (2), AMK (1), CB (1)	23% (22% vs 27%, ns)	77% (80% vs 64%, ns)
De la Calle, 2019 [19]	AMK (1), CST (1), TGC (3), two out of AMK/CST/TGC (5)	8.3% (14.3% vs 30%, ns: 90-day mortality)	62.5% (64.3% vs. 60%, ns)
van Duin, 2018 [21]	GEN (12), TGC (12), AMK (6), SXT (4), CB (11), FOF (1)	9% (NR)	NR
Guimaraes, 2019 [22]	PMB (9), TGC (7), MEM (5), AMK (3), GEN (1), FOF (1)	51.7% (40% vs 21.4%, ns: 14-day mortality)	82.7% (NR)
Tumbarello, 2019 [6]	GEN (34), CB (21), CST (22), TGC (16), FOF (10), Other (6)	34.1% (40.9% vs 35.4% ^b)	NR
Wunderink, 2018 [24]	NA	15.6% (NA)	65.6% (NA)
Ackley, 2020 [20]	CST (20), TGC (18), AG (15), PMB (10), FQ (8), STX (4), CB (1)	19.1% (22.0% vs 31.2%, ns: 90-day mortality)	61.9% (63.4% vs 60.9%, ns)
Motsch, 2019 [25] ^c	CST (2), PMB (1), TGC (1)	11.5% (NR)	69.2% (NR)
NCT03580044	NA	20% (NA)	40% (NA)
	NR	NR	NR

MC multicenter, PMC Prospective multicenter, PSC Prospective single centre, RMC Retrospective multicenter, RCT randomized controlled trial, MLR Multivariate logistic regression, IPTW inverse probability of treatment weighting, BSI bloodstream infection, IAI intra-abdominal infection, SSTI skin/soft tissue infection (wound included), UTI urinary tract infection, *Ec Escherichia coli*, *Ecl Enterobacter cloacae*, *Ka Klebsiella aerogenes*, *Ko Klebsiella oxytoca*, *Kp Klebsiella pneumoniae*, *Ps Providencia stuartii*, *Sm Serratia marcescens*, *AG aminoglycosides*, *AMK amikacin*, *ATM aztreonam*, *AVI avibactam*, *CB carbapenems*, *CST colistin*, *CZA ceftazidime-avibactam*, *GEN gentamicin*, *FOF fosfomicin*, *FQ fluoroquinolones*, *I-R imipenem/relebactam*, *MEM meropenem*, *MVB meropenem-vaborbactam*, *PMB polymyxin B*, *SXT trimethoprim-sulfamethoxazole*, *TGC tigecycline*, *NR* not reported, *NA* not applicable, *ns* not significant

^aIn this case series most data (aggregated) relate to 36 patients infected with CRE, but two cases are carbapenem-resistant *Pseudomonas aeruginosa*

^bData only for the BSI group

^cIn this study on imipenem-non-susceptible Gram-negative bacteria, CRE infections were only a minority, for a total of only 5 pts treated with I-R as monotherapy, the remaining data regarding 16 infections due to *Pseudomonas aeruginosa*