

1 **Supplemental Table S1.** MIC and cumulative percent inhibited distributions for ceftazidime and ceftazidime-avibactam against 1,627

2 clinical isolates of ceftazidime non-susceptible *P. aeruginosa* collected in 2012-2014 in four geographic regions^a.

Region	Phenotype/ genotype (no.)	Antimicrobial agent	No. of isolates / (cumulative % of isolates) inhibited at MIC (µg/ml) of:										
			≤0.5	1	2	4	8	16	32	64	128	>128	
All regions	All isolates (1,627)	Ceftazidime	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	320 (19.7)	479 (49.1)	452 (76.9)	190 (88.6)	186 (100)	
		Ceftazidime-avibactam	3 (0.2)	37 (2.5)	218 (15.9)	318 (35.4)	488 (65.4)	176 (76.2)	163 (86.2)	115 (93.3)	47 (96.2)	62 (100)	
	MBL-negative (1,329) ^{b,c}	Ceftazidime	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	285 (21.4)	390 (50.8)	364 (78.2)	163 (90.4)	127 (100)	
		Ceftazidime-avibactam	3 (0.2)	37 (3.0)	217 (19.3)	318 (43.3)	482 (79.5)	130 (89.3)	68 (94.4)	43 (97.7)	15 (98.8)	16 (100)	
	Europe	All isolates (880)	Ceftazidime	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	178 (20.2)	272 (51.1)	255 (80.1)	94 (90.8)	81 (100)
			Ceftazidime-avibactam	1 (0.1)	23 (2.7)	140 (18.6)	168 (37.7)	260 (67.3)	99 (78.5)	92 (89.0)	58 (95.6)	18 (97.6)	21 (100)
MBL-negative (730) ^{b,c}		Ceftazidime	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	159 (21.8)	227 (52.9)	202 (80.5)	84 (92.1)	58 (100)	
		Ceftazidime-avibactam	1 (0.1)	23 (3.3)	139 (22.3)	168 (45.3)	258 (80.7)	74 (90.8)	35 (95.6)	20 (98.4)	7 (99.3)	5 (100)	
Asia/ South Pacific		All isolates (305)	Ceftazidime	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	51 (16.7)	79 (42.6)	84 (70.2)	38 (82.6)	53 (100)
			Ceftazidime-avibactam	1 (0.3)	7 (2.6)	34 (13.8)	65 (35.1)	103 (68.9)	17 (74.4)	12 (78.4)	21 (85.2)	17 (90.8)	28 (100)
	MBL-negative (254) ^{b,c}	Ceftazidime	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	51 (20.1)	72 (48.4)	73 (77.2)	32 (89.8)	26 (100)	
		Ceftazidime-avibactam	1 (0.4)	7 (3.1)	34 (16.5)	65 (42.1)	103 (82.7)	16 (89.0)	8 (92.1)	6 (94.5)	6 (96.9)	8 (100)	
	Latin America	All isolates (310)	Ceftazidime	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	70 (22.6)	85 (50.0)	70 (72.6)	38 (84.8)	47 (100)
			Ceftazidime-avibactam	1 (0.3)	4 (1.6)	31 (11.6)	53 (28.7)	98 (60.3)	47 (75.5)	43 (89.4)	17 (94.8)	6 (96.8)	10 (100)
MBL-negative (254) ^{b,c}		Ceftazidime	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	60 (23.6)	60 (47.2)	60 (70.9)	33 (83.9)	41 (100)	
		Ceftazidime-avibactam	1 (0.4)	4 (2.0)	31 (14.2)	53 (35.0)	95 (72.4)	33 (85.4)	20 (93.3)	12 (98.0)	2 (98.8)	3 (100)	

Region	Phenotype/ genotype (no.)	Antimicrobial agent	No. of isolates / (cumulative % of isolates) inhibited at MIC ($\mu\text{g/ml}$) of:									
			≤ 0.5	1	2	4	8	16	32	64	128	>128
Middle East/ Africa	All isolates (132)	Ceftazidime	0	0	0	0	0	21	43	43	20	5
			(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(15.9)	(48.5)	(81.1)	(96.2)	(100)
	Ceftazidime-avibactam	0	3	13	32	27	13	16	19	6	3	
		(0.0)	(2.3)	(12.1)	(36.4)	(56.8)	(66.7)	(78.8)	(93.2)	(97.7)	(100)	
MBL-negative (91) ^{b,c}	Ceftazidime	0	0	0	0	0	15	31	29	14	2	
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(16.5)	(50.5)	(82.4)	(97.8)	(100)	
	Ceftazidime-avibactam	0	3	13	32	26	7	5	5	0	0	
		(0.0)	(3.3)	(17.6)	(52.7)	(81.3)	(89.0)	(94.5)	(100)	(-)	(-)	

3 ^a The MIC inhibiting 90% of isolates (MIC₉₀) is bolded.

4 ^b MBL: metallo- β -lactamase

5 ^c Carbapenem-sensitive and carbapenem non-susceptible metallo- β -lactamase-negative.

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7 **Supplemental Table S2.** MIC and cumulative percent inhibited distributions for ceftazidime and ceftazidime-avibactam against 1,926

8 clinical isolates of meropenem non-susceptible *P. aeruginosa* collected in 2012-2014 in four geographic regions^a.

Region	Phenotype/ genotype (no.)	Antimicrobial agent	No. of isolates / (cumulative % of isolates) inhibited at MIC (µg/ml) of:										
			≤0.5	1	2	4	8	16	32	64	128	>128	
All regions	All isolates (1,926)	Ceftazidime	3 (0.2)	24 (1.4)	231 (13.4)	275 (27.7)	284 (42.4)	173 (51.4)	304 (67.2)	317 (83.6)	137 (90.8)	178 (100)	
		Ceftazidime-avibactam	7 (0.4)	99 (5.5)	376 (25.0)	420 (46.8)	493 (72.4)	160 (80.7)	155 (88.8)	107 (94.3)	47 (96.8)	62 (100)	
	MBL-negative (1,626) ^b	Ceftazidime	3 (0.2)	24 (1.7)	229 (15.7)	275 (32.7)	278 (49.8)	140 (58.4)	219 (71.8)	229 (85.9)	110 (92.7)	119 (100)	
		Ceftazidime-avibactam	7 (0.4)	99 (6.5)	374 (29.5)	420 (55.4)	481 (84.9)	116 (92.1)	62 (95.9)	36 (98.1)	15 (99.0)	16 (100)	
	Europe	All isolates (1,056)	Ceftazidime	2 (0.2)	15 (1.6)	123 (13.3)	142 (26.7)	154 (41.3)	103 (51.0)	182 (68.3)	187 (86.0)	72 (92.8)	76 (100)
			Ceftazidime-avibactam	5 (0.5)	64 (6.5)	205 (25.9)	241 (48.8)	269 (74.2)	89 (82.7)	88 (91.0)	56 (96.3)	18 (98.0)	21 (100)
MBL-negative (904) ^b		Ceftazidime	2 (0.2)	15 (1.9)	122 (15.4)	142 (31.1)	152 (47.9)	85 (57.3)	137 (72.5)	134 (87.3)	62 (94.1)	53 (100)	
		Ceftazidime-avibactam	5 (0.6)	64 (7.6)	204 (30.2)	241 (56.9)	265 (86.2)	64 (93.3)	31 (96.7)	18 (98.7)	7 (99.4)	5 (100)	
Asia/ South Pacific		All isolates (314)	Ceftazidime	1 (0.3)	5 (1.9)	44 (15.9)	42 (29.3)	51 (45.5)	18 (51.3)	38 (63.4)	46 (78.0)	18 (83.8)	51 (100)
			Ceftazidime-avibactam	1 (0.3)	14 (4.8)	67 (26.1)	64 (46.5)	79 (71.7)	14 (76.1)	12 (79.9)	18 (85.7)	17 (91.1)	28 (100)
	MBL-negative (263) ^b	Ceftazidime	1 (0.4)	5 (2.3)	44 (19.0)	42 (35.0)	50 (54.0)	18 (60.8)	32 (73.0)	35 (86.3)	12 (90.9)	24 (100)	
		Ceftazidime-avibactam	1 (0.4)	14 (5.7)	67 (31.2)	64 (55.5)	78 (85.2)	13 (90.1)	8 (93.2)	4 (94.7)	6 (97.0)	8 (100)	
	Latin America	All isolates (382)	Ceftazidime	0 (0.0)	2 (0.5)	39 (10.7)	60 (26.4)	53 (40.3)	38 (50.3)	57 (65.2)	54 (79.3)	33 (88.0)	46 (100)
			Ceftazidime-avibactam	1 (0.3)	11 (3.1)	67 (20.7)	84 (42.7)	105 (70.2)	44 (81.7)	39 (91.9)	15 (95.8)	6 (97.4)	10 (100)
MBL-negative (329) ^b		Ceftazidime	0 (0.0)	2 (0.6)	39 (12.5)	60 (30.7)	52 (46.5)	29 (55.3)	35 (66.0)	44 (79.3)	28 (87.8)	40 (100)	
		Ceftazidime-avibactam	1 (0.3)	11 (3.6)	67 (24.0)	84 (49.5)	101 (80.2)	32 (90.0)	18 (95.4)	10 (98.5)	2 (99.1)	3 (100)	

Region	Phenotype/ genotype (no.)	Antimicrobial agent	No. of isolates / (cumulative % of isolates) inhibited at MIC ($\mu\text{g/ml}$) of:									
			≤ 0.5	1	2	4	8	16	32	64	128	>128
Middle East/ Africa	All isolates (174)	Ceftazidime	0 (0.0)	2 (1.1)	25 (15.5)	31 (33.3)	26 (48.3)	14 (56.3)	27 (71.8)	30 (89.1)	14 (97.1)	5 (100)
		Ceftazidime-avibactam	0 (0.0)	10 (5.7)	37 (27.0)	31 (44.8)	40 (67.8)	13 (75.3)	16 (84.5)	18 (94.8)	6 (98.3)	3 (100)
	MBL-negative (130) ^b	Ceftazidime	0 (0.0)	2 (1.5)	24 (20.0)	31 (43.8)	24 (62.3)	8 (68.5)	15 (80.0)	16 (92.3)	8 (98.5)	2 (100)
		Ceftazidime-avibactam	0 (0.0)	10 (7.7)	36 (35.4)	31 (59.2)	37 (87.7)	7 (93.1)	5 (96.9)	4 (100)	0 (-)	0 (-)

9 ^a The MIC inhibiting 90% of isolates (MIC₉₀) is bolded.

10 ^b MBL: metallo- β -lactamase