The Use and Effectiveness of Ceftazidime-Avibactam in Real-World Clinical Practice: EZTEAM Study

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SUPPLEMENTARY MATERIALS

Table S1. Definitions of categories of clinical outcome

Clinical Evaluation	Clinical Success	Cure	Resolution of all signs and symptoms of infection with no need for escalation of antimicrobials. De-escalation of antibiotic therapy is considered a treatment success unless ceftazidime-avibactam was used in a regimen with one or more other antibiotics and is the only antibiotic de-escalated.
	Clinical Failure	Failure	Inadequate response to ceftazidime-avibactam therapy or resistant, worsening, or new recurrent signs and symptoms at the end of ceftazidime-avibactam therapy. This may include antimicrobial escalation (ceftazidime-avibactam dose increase, or additional antibiotic) after 4 days of treatment, discontinuation of ceftazidime-avibactam without clinical cure (e.g. AE, insufficient effect), or readmission to a hospital with the same infection within 60 days of the initial hospital discharge date. This may also include cIAI patients who required an additional unplanned source control procedure after ceftazidime-avibactam initiation.
	Clinical Indeterminate	Indeterminate	There is not enough information to conclude whether the antibiotic regimen containing ceftazidime-avibactam was a clinical failure or a success.

Table S2. Demographic, baseline characteristics, and source of infection by indication (FAS72-)

Characteristic	cIAI (N=12)	cUTI (N=7)	HAP/VAP (N=10)	Other (N=24) [1]	TOTAL (N=53)
Age (years)					
Mean (SD)	58.2 (21.0)	60.9 (19.5)	62.0 (15.0)	59.2 (18.1)	59.7 (18.0)
Median	61.5	68.0	58.5	62.5	62.0
Q1, Q3	41.0, 73.5	40.0, 77.0	53.0, 74.0	52.5, 71.0	52.0, 73.0
Min, Max	21, 90	32, 80	41, 86	25, 99	21, 99
Age group, n (%)					
<40	2 (16.7)	1 (14.3)	-	4 (16.7)	7 (13.2)
40-49	2 (16.7)	1 (14.3)	2 (20.0)	1 (4.2)	6 (11.3)
50-59	1 (8.3)	1 (14.3)	4 (40.0)	5 (20.8)	11 (20.8)
60-69	3 (25.0)	1 (14.3)	-	6 (25.0)	10 (18.9)
70-79	2 (16.7)	2 (28.6)	3 (30.0)	7 (29.2)	14 (26.4)
80-89	1 (8.3)	1 (14.3)	1 (10.0)	-	3 (5.7)
≥90	1 (8.3)	-	-	1 (4.2)	2 (3.8)
Gender, n (%)					
n	12	7	10	24	53
Male	8 (66.7)	6 (85.7)	5 (50.0)	14 (58.3)	33 (62.3)
Female	4 (33.3)	1 (14.3)	5 (50.0)	10 (41.7)	20 (37.7)
Source of infection, n (%)					
Healthcare-associated infections	3 (25.0)	3 (42.9)	3 (30.0)	4 (16.7)	13 (24.5)
Hospital-acquired infections	9 (75.0)	3 (42.9)	7 (70.0)	17 (70.8)	36 (67.9)
Community-acquired infections	-	1 (14.3)	-	3 (12.5)	4 (7.5)

FAS72- analysis set included all patients exposed to ceftazidime-avibactam <72 hours.
BSI: Bloodstream infection; cIAI: Complicated Intra-Abdominal Infection; cUTI: Complicated Urinary Tract Infection; HAP: Hospital-Acquired Pneumonia; Max: Maximum; Min: Minimum; Q1: Quartile one; Q3: Quartile three; SD: Standard deviation; VAP: Ventilator-Associated Pneumonia
Note: Healthcare-associated infections and hospital-acquired infections are not mutually exclusive, in principle healthcare-associated infections include the hospital-acquired infections.
[1] Includes patients with BSI/sepsis.

Demographic, baseline Characteristics, and source of infection (FAS72-)

The mean (SD) age of FAS72- patients (n=53) was 59.7 (18.0) years, and most of them (14, 26.4%) belonged to the 70-79 years age group. The majority (33, 62.3%) of the FAS72- patients were males. Similar to the FAS72+ data set, causes for contracting infections in patients with cUTI were either hospital-acquired or healthcare-associated (42.9% each).

Table S3. Clinical evaluation outcome by indication and bacteria identified (genus)

	cIAI (N=18)	cUTI (N=9)	HAP/VAP (N=3)	Other (N=17) [1]	TOTAL (N=47)
Overall outcome, n (%)					
Escherichia coli infection					
n	18	9	3	17	47
Treatment success	14 (77.8)	9 (100)	1 (33.3)	16 (94.1)	40 (85.1)
Treatment failure	3 (16.7)	-	1 (33.3)	1 (5.9)	5 (10.6)
Indeterminate	1 (5.6)	-	1 (33.3)	-	2 (4.3)
Klebsiella spp. infection					
n	59	78	64	151	352
Treatment success	38 (64.4)	70 (89.7)	46 (71.9)	126 (83.4)	280 (79.5)
Treatment failure	13 (22.0)	5 (6.4)	8 (12.5)	15 (9.9)	41 (11.6)
Indeterminate	8 (13.6)	3 (3.8)	10 (15.6)	10 (6.6)	31 (8.8)
Enterobacter spp. infection					
n	9	6	10	15	40
Treatment success	9 (100)	4 (66.7)	7 (70.0)	14 (93.3)	34 (85.0)
Treatment failure	-	1 (16.7)	2 (20.0)	1 (6.7)	4 (10.0)
Indeterminate	-	1 (16.7)	1 (10.0)	-	2 (5.0)
Pseudomonas spp. infection					
n	7	13	22	32	74
Treatment success	3 (42.9)	12 (92.3)	17 (77.3)	23 (71.9)	55 (74.3)
Treatment failure	1 (14.3)	1 (7.7)	1 (4.5)	5 (15.6)	8 (10.8)
Indeterminate	3 (42.9)	-	4 (18.2)	4 (12.5)	11 (14.9)
Other Gram-negative bacteria infection					
n	12	7	22	18	59
Treatment success	10 (83.3)	5 (71.4)	12 (54.5)	12 (66.7)	39 (66.1)
Treatment failure	1 (8.3)	-	5 (22.7)	4 (22.2)	10 (16.9)
Indeterminate	1 (8.3)	2 (28.6)	5 (22.7)	2 (11.1)	10 (16.9)

BSI: Bloodstream infection; cIAI: Complicated Intra-Abdominal Infection; cUTI: Complicated Urinary Tract Infection; HAP: Hospital-Acquired Pneumonia; VAP: Ventilator-Associated Pneumonia

The clinical outcomes analysis set included all patients exposed to ceftazidime-avibactam ≥72 hours and non-missing clinical outcome.

[1] Includes patients with BSI/sepsis.

Table S4A. Vital status and mortality rates: patients infected by *Escherichia coli*

Characteristic	cIAI (N=18)	cUTI (N=9)	HAP/VAP (N=3)	Other (N=17) [1]	TOTAL (N=47)
Patient status at date of last available record, n (%)					
n	18	9	3	17	47
Alive	16 (88.9)	9 (100)	1 (33.3)	13 (76.5)	39 (83.0)
Patient died	2 (11.1)	-	2 (66.7)	4 (23.5)	8 (17.0)
Timing of death (if patient died), n (%)					
n	2	-	2	4	8
During Index hospitalization	2 (100)	-	2 (100)	4 (100)	8 (100)
Within 30 days of discharge	-	-	-	-	-
Within 60 days of discharge	-	-	-	-	-
Total in-hospital mortality rate	2 (11.1)	-	2 (66.7)	4 (23.5)	8 (17.0)
95% CI	1.4; 34.7	0.0; 33.6	9.4; 99.2	6.8; 49.9	7.6; 30.8
Cumulative mortality rate at 30 days post-discharge [2]	2 (11.1)	-	2 (66.7)	4 (23.5)	8 (17.0)
95% CI	1.4; 34.7	0.0; 33.6	9.4; 99.2	6.8; 49.9	7.6; 30.8
Cumulative mortality rate at 60 days post-discharge [3]	2 (11.1)	-	2 (66.7)	4 (23.5)	8 (17.0)
95% CI	1.4; 34.7	0.0; 33.6	9.4; 99.2	6.8; 49.9	7.6; 30.8

BSI: Bloodstream infection; CI: Confidence interval; cIAI: Complicated Intra-Abdominal Infection; cUTI: Complicated Urinary Tract Infection; HAP: Hospital-Acquired Pneumonia; VAP: Ventilator-Associated Pneumonia

[1] Includes patients with BSI/sepsis.

[2] Cumulative mortality up to 30 days post-discharge, including in-hospital mortality.

[3] Cumulative mortality up to 60 days post-discharge, including in-hospital mortality.

This table uses the pathogen identification in samples taken before the start of ceftazidime-avibactam.

Patients with two or more bacterial pathogen identified may be represented in more than one table.

Table S4B. Vital status and mortality rates: patients infected by *Klebsiella* spp.

Characteristic	cIAI (N=59)	cUTI (N=78)	HAP/VAP (N=64)	Other (N=151) [1]	TOTAL (N=352)
Patient status at date of last available record, n (%)					
n	59	78	64	150	351
Alive	38 (64.4)	65 (83.3)	43 (67.2)	102 (68.0)	248 (70.7)
Patient died	21 (35.6)	13 (16.7)	21 (32.8)	48 (32.0)	103 (29.3)
Timing of death (if patient died), n (%)					
n	21	13	21	47	102
During Index hospitalization	18 (85.7)	9 (69.2)	20 (95.2)	34 (72.3)	81 (79.4)
Within 30 days of discharge	-	-	-	7 (14.9)	7 (6.9)
Within 60 days of discharge	3 (14.3)	4 (30.8)	1 (4.8)	6 (12.8)	14 (13.7)
Total in-hospital mortality rate	18 (30.5)	9 (11.5)	20 (31.3)	34 (22.5)	81 (23.0)
95% CI	19.2; 43.9	5.4; 20.8	20.2; 44.1	16.1; 30.0	18.7; 27.8
Cumulative mortality rate at 30 days post-discharge [2]	18 (30.5)	9 (11.5)	20 (31.3)	41 (27.2)	88 (25.0)
95% CI	19.2; 43.9	5.4; 20.8	20.2; 44.1	20.2; 35.0	20.6; 29.9
Cumulative mortality rate at 60 days post-discharge [3]	21 (35.6)	13 (16.7)	21 (32.8)	47 (31.1)	102 (29.0)
95% CI	23.6; 49.1	9.2; 26.8	21.6; 45.7	23.8; 39.2	24.3; 34.0

BSI: Bloodstream infection; CI: Confidence interval; cIAI: Complicated Intra-Abdominal Infection; cUTI: Complicated Urinary Tract Infection; HAP: Hospital-Acquired Pneumonia; VAP: Ventilator-Associated Pneumonia

[1] Includes patients with BSI/sepsis.

[2] Cumulative mortality up to 30 days post-discharge, including in-hospital mortality.

[3] Cumulative mortality up to 60 days post-discharge, including in-hospital mortality.

This table uses the pathogen identification in samples taken before the start of ceftazidime-avibactam.

Patients with two or more bacterial pathogen identified may be represented in more than one table.

Table S4C. Vital status and mortality rates: patients infected by *Enterobacter* spp.

Characteristic	cIAI (N=9)	cUTI (N=6)	HAP/VAP (N=10)	Other (N=15) [1]	TOTAL (N=40)
Patient status at date of last available record, n (%)					
n	9	6	10	15	40
Alive	9 (100)	4 (66.7)	8 (80.0)	10 (66.7)	31 (77.5)
Patient died	-	2 (33.3)	2 (20.0)	5 (33.3)	9 (22.5)
Timing of death (if patient died), n (%)					
n	-	2	2	5	9
During Index hospitalization	-	1 (50.0)	2 (100)	4 (80.0)	7 (77.8)
Within 30 days of discharge	-	-	-	-	-
Within 60 days of discharge	-	1 (50.0)	-	1 (20.0)	2 (22.2)
Total in-hospital mortality rate	-	1 (16.7)	2 (20.0)	4 (26.7)	7 (17.5)
95% CI	0.0; 33.6	0.4; 64.1	2.5; 55.6	7.8; 55.1	7.3; 32.8
Cumulative mortality rate at 30 days post-discharge [2]	-	1 (16.7)	2 (20.0)	4 (26.7)	7 (17.5)
95% CI	0.0; 33.6	0.4; 64.1	2.5; 55.6	7.8; 55.1	7.3; 32.8
Cumulative mortality rate at 60 days post-discharge [3]	-	2 (33.3)	2 (20.0)	5 (33.3)	9 (22.5)
95% CI	0.0; 33.6	4.3; 77.7	2.5; 55.6	11.8; 61.6	10.8; 38.5

BSI: Bloodstream infection; CI: Confidence interval; cIAI: Complicated Intra-Abdominal Infection; cUTI: Complicated Urinary Tract Infection; HAP: Hospital-Acquired Pneumonia; VAP: Ventilator-Associated Pneumonia

[1] Includes patients with BSI/sepsis.

[2] Cumulative mortality up to 30 days post-discharge, including in-hospital mortality.

[3] Cumulative mortality up to 60 days post-discharge, including in-hospital mortality.

This table uses the pathogen identification in samples taken before the start of ceftazidime-avibactam.

Patients with two or more bacterial pathogen identified may be represented in more than one table.

Table S4D. Vital status and mortality rates: patients infected by *Pseudomonas* spp.

Characteristic	cIAI (N=7)	cUTI (N=13)	HAP/VAP (N=22)	Other (N=32) [1]	TOTAL (N=74)
Patient status at date of last available record, n (%)					
n	7	13	22	32	74
Alive	3 (42.9)	11 (84.6)	16 (72.7)	22 (68.8)	52 (70.3)
Patient died	4 (57.1)	2 (15.4)	6 (27.3)	10 (31.3)	22 (29.7)
Timing of death (if patient died), n (%)					
n	4	2	6	10	22
During Index hospitalization	4 (100)	1 (50.0)	6 (100)	8 (80.0)	19 (86.4)
Within 30 days of discharge	-	-	-	1 (10.0)	1 (4.5)
Within 60 days of discharge	-	1 (50.0)	-	1 (10.0)	2 (9.1)
Total in-hospital mortality rate	4 (57.1)	1 (7.7)	6 (27.3)	8 (25.0)	19 (25.7)
95% CI	18.4; 90.1	0.2; 36.0	10.7; 50.2	11.5; 43.4	16.2; 37.2
Cumulative mortality rate at 30 days post-discharge [2]	4 (57.1)	1 (7.7)	6 (27.3)	9 (28.1)	20 (27.0)
95% CI	18.4; 90.1	0.2; 36.0	10.7; 50.2	13.7; 46.7	17.4; 38.6
Cumulative mortality rate at 60 days post-discharge [3]	4 (57.1)	2 (15.4)	6 (27.3)	10 (31.3)	22 (29.7)
95% CI	18.4; 90.1	1.9; 45.4	10.7; 50.2	16.1; 50.0	19.7; 41.5

BSI: Bloodstream infection; CI: Confidence interval; cIAI: Complicated Intra-Abdominal Infection; cUTI: Complicated Urinary Tract Infection; HAP: Hospital-Acquired Pneumonia; VAP: Ventilator-Associated Pneumonia

[1] Includes patients with BSI/sepsis.

[2] Cumulative mortality up to 30 days post-discharge, including in-hospital mortality.

[3] Cumulative mortality up to 60 days post-discharge, including in-hospital mortality.

This table uses the pathogen identification in samples taken before the start of ceftazidime-avibactam.

Patients with two or more bacterial pathogen identified may be represented in more than one table.

Table S4E. Vital status and mortality rates: patients infected by other Gram-negative bacteria

Characteristic	cIAI (N=12)	cUTI (N=7)	HAP/VAP (N=22)	Other (N=18) [1]	TOTAL (N=59)
Patient status at date of last available record, n (%)					
n	12	7	22	18	59
Alive	9 (75.0)	7 (100)	12 (54.5)	15 (83.3)	43 (72.9)
Patient died	3 (25.0)	-	10 (45.5)	3 (16.7)	16 (27.1)
Timing of death (if patient died), n (%)					
n	3	-	10	3	16
During Index hospitalization	3 (100)	-	10 (100)	3 (100)	16 (100)
Within 30 days of discharge	-	-	-	-	-
Within 60 days of discharge	-	-	-	-	-
Total in-hospital mortality rate	3 (25.0)	-	10 (45.5)	3 (16.7)	16 (27.1)
95% CI	5.5; 57.2	0.0; 41.0	24.4; 67.8	3.6; 41.4	16.4; 40.3
Cumulative mortality rate at 30 days post-discharge [2]	3 (25.0)	-	10 (45.5)	3 (16.7)	16 (27.1)
95% CI	5.5; 57.2	0.0; 41.0	24.4; 67.8	3.6; 41.4	16.4; 40.3
Cumulative mortality rate at 60 days post-discharge [3]	3 (25.0)	-	10 (45.5)	3 (16.7)	16 (27.1)
95% CI	5.5; 57.2	0.0; 41.0	24.4; 67.8	3.6; 41.4	16.4; 40.3

BSI: Bloodstream infection; CI: Confidence interval; cIAI: Complicated Intra-Abdominal Infection; cUTI: Complicated Urinary Tract Infection; HAP: Hospital-Acquired Pneumonia; VAP: Ventilator-Associated Pneumonia

[1] Includes patients with BSI/sepsis.

[2] Cumulative mortality up to 30 days post-discharge, including in-hospital mortality.

[3] Cumulative mortality up to 60 days post-discharge, including in-hospital mortality.

This table uses the pathogen identification in samples taken before the start of ceftazidime-avibactam.

Patients with two or more bacterial pathogen identified may be represented in more than one table.

Table S5. Logistic regression models for clinical success at initial hospitalization

	n (%)	Odds ratio	95% CI	p-value
Age (continuous)	459 (100)	0.99	0.97, 1.00	0.0601
Age class				
<60	216 (47.1)	Ref		
60 - 69	106 (23.1)	0.65	0.32, 1.33	0.2385
70 - 79	93 (20.3)	0.61	0.29, 1.25	0.1781
80+	44 (9.6)	0.37	0.16, 0.85	0.0186
Baseline BMI (kg/m²)	459 (100)	1.03	0.96, 1.09	0.4418
Gender	459 (100)			
Male	310 (67.5)	1.58	0.91, 2.76	0.1045
Female	149 (32.5)	Ref		
Alcohol use	459 (100)			
Yes	32 (7.0)	2.32	0.53, 10.13	0.2622
No	276 (60.1)	Ref		
Smoking status	262 (57.1)			
Current smoker	33 (7.2)	0.65	0.22, 1.92	0.4345
Previous smoker	75 (16.3)	1.13	0.44, 2.87	0.8030
Never smoked	154 (33.6)	Ref		
Recent hospitalization [1]	457 (99.6)			
Yes	225 (49.0)	2.01	1.13, 3.57	0.0177
No	232 (50.5)	Ref		
LOS of prior hospitalization	214 (46.6)	1.00	0.99, 1.01	0.7995
History of antibiotic exposure [1]	457 (99.6)			
Yes	237 (51.6)	1.01	0.58, 1.75	0.9823
No	220 (47.9)	Ref		
Recent healthcare procedure [2]	456 (99.3)			
Yes	276 (60.1)	0.62	0.34, 1.12	0.1136
No	180 (39.2)	Ref		
Patients with bacteremia, n (%)	459 (100)			
Primary	90 (19.6)	0.92	0.45, 1.87	0.8097
Secondary	110 (24.0)	0.83	0.43, 1.58	0.5677
No	259 (56.4)	Ref		
Immunocompromised status	459 (100)			
Yes	225 (49.0)	0.70	0.41, 1.21	0.2053
No	234 (51.0)	Ref		

	n (%)	Odds ratio	95% CI	p-value
DCCI score	459 (100)	0.99	0.92, 1.06	0.7559
Indication	459 (100)			
cIAI	76 (16.6)	0.21	0.08, 0.57	0.0020
cUTI	97 (21.1)	Ref		
HAP/VAP	92 (20.0)	0.37	0.13, 1.00	0.0504
Other [3]	194 (42.3)	0.52	0.20, 1.32	0.1661
Source of admission	457 (99.6)			
Outpatient	331 (72.1)	0.65	0.25, 1.73	0.3918
Long-term care facility	17 (3.7)	0.87	0.15, 4.98	0.8776
Transfer from acute care hospital	61 (13.3)	2.25	0.51, 9.92	0.2849
Other	48 (10.5)	Ref		
Ward admitted to at initial hospitalization	459 (100)			
ICU	101 (22.0)	1.48	0.72, 3.03	0.2869
Other	358 (78.0)	Ref		
Source of infection	459 (100)			
Hospital-acquired infections	318 (69.3)	1.04	0.38, 2.82	0.9418
Healthcare-associated infections [4]	106 (23.1)	1.44	0.46, 4.47	0.5290
Community-acquired infections	35 (7.6)	Ref		
Patients with lower dose of ceftazidime-avibactam (renal impairment)	459 (100)			
Yes	81 (17.6)	0.84	0.42, 1.66	0.6085
No	378 (82.4)	Ref		
Patient's infection by multi-resistant pathogen	362 (78.9)			
Yes	277 (60.3)	1.43	0.71, 2.88	0.3132
No	85 (18.5)	Ref		
Bacteria identified	459 (100)			
Escherichia coli				
Yes	47 (10.2)	1.29	0.49, 3.41	0.6023
No	412 (89.8)	Ref		
Klebsiella pneumoniae				
Yes	281 (61.2)	0.90	0.51, 1.58	0.7187
No	178 (38.8)	Ref		
Klebsiella spp.				
Yes	51 (11.1)	1.87	0.65, 5.39	0.2470
No	408 (88.9)	Ref		
Enterobacter cloacae				
Yes	34 (7.4)	2.53	0.59, 10.84	0.2115
No	425 (92.6)	Ref		
Enterobacter spp.				
Yes	7 (1.5)	0.37	0.07, 1.94	0.2387
No	452 (98.5)	Ref		
Pseudomonas aeruginosa				

	n (%)	Odds ratio	95% CI	p-value
Yes	61 (13.3)	0.73	0.35, 1.54	0.4101
No	398 (86.7)	Ref		
Pseudomonas spp.				
Yes	9 (2.0)	1.21	0.15, 9.83	0.8603
No	450 (98.0)	Ref		
Other Gram-negative bacteria				
Yes	59 (12.9)	0.42	0.21, 0.82	0.0111
No	400 (87.1)	Ref		
Patients with Gram-negative bacteria by beta-lactamase Ambler's types	348 (100)			
KPC				
Yes	105 (30.2)	0.81	0.41, 1.62	0.5556
No	243 (69.8)	Ref		
MBL				
Yes	46 (13.2)	2.06	0.61, 6.98	0.2442
No	302 (86.8)	Ref		
OXA-48				
Yes	54 (15.5)	1.80	0.61, 5.27	0.2841
No	294 (84.5)	Ref		
ESBL				
Yes	36 (10.3)	1.53	0.45, 5.22	0.5008
No	312 (89.7)	Ref		
Other [5]				
Yes	19 (5.5)	0.70	0.19, 2.50	0.5792
No	329 (94.5)	Ref		
>1 beta-lactamase identified				
Yes	17 (4.9)	0.41	0.13, 1.32	0.1348
No	331 (95.1)	Ref		
Antibiotics used for Gram-negative bacteria before the start of ceftazidime-avibactam	459 (100)			
Yes (ceftazidime-avibactam as second line)	350 (76.3)	1.20	0.65, 2.22	0.5691
No (ceftazidime-avibactam as first line)	109 (23.7)	Ref		
Colistin use	459 (100)			
Concomitant to ceftazidime-avibactam	47 (10.2)	0.38	0.19, 0.79	0.0092
Subsequent to ceftazidime-avibactam	12 (2.6)	0.66	0.14, 3.08	0.5927
Both concomitant and subsequent use	3 (0.7)	-	- , -	0.9906
No usage	397 (86.5)	Ref		

BSI: Bloodstream infection; BMI: body mass index; CI: Confidence interval; cIAI: Complicated Intra-Abdominal Infection; cUTI: Complicated Urinary Tract Infection; DCCI: Deyo-Charlson Comorbidity Index, ESBL: Extended spectrum beta-lactamase; HAP: Hospital-Acquired Pneumonia; ICU: Intensive care Unit; KPC: Klebsiella pneumoniae carbapenemase; LOS: length of stay; MBL: Metallo-beta-lactamase; OXA-48: Oxacillinase 48; VAP: Ventilator-Associated Pneumonia

[1] Within 90 days prior to date of admission for index hospitalization.

[2] Within 30 days prior to initiation of ceftazidime-avibactam.

[3] Includes patients with BSI/sepsis.

[4] Excluding hospital-acquired infections.

[5] Other includes Ampicillinase C, CTX-M, Cephalosporinases, Penicillinases, Serine beta-lactamase, CARBA-R.

This analysis was conducted on patients with clinical success or failure at the initial hospitalization (excluding patients with indeterminate clinical outcome). It examined the association of several variables with clinical success.

Table S6. List of primary investigators, and Ethics Committees approvals

Country	Center ID	PI name	Center address	Ethics Committee address	Date of approval
Argentina [1]	1054	Caeiro, Juan Pablo	Hospital Privado Centro Medico de Cordoba S.A, Av. Naciones Unidas 346, X5016 Cordoba	Comité Institucional de Etica de Investigacion en Salud (CIES) Av Naciones Unidas 346, X5016 Cordoba	08/Oct/2020
Argentina [1]	1071	Ezcurra, Cecilia	Hospital Aleman, Av. Pueyrredón 1640, Ciudad Autónoma de Buenos Aires C1118AAT	Comité de Ética Independiente del Hospital Alemán (CEIHA) Av. Pueyrredón 1640 - Ciudad Autónoma de Buenos Aires C1118AAT	17/Dec/2020
Argentina [1]	1060	Giorgio, Patricia	Hospital Britanico de Buenos Aires, Perdriel 74, CP 1280AEB, Ciudad Autónoma de Buenos Aires	Comité de Revision Institucional Hospital Britanico CRIHB, Perdriel 74 - CP 1280AEB - Ciudad Autónoma de Buenos Aires	08/Jun/2020
Argentina [1]	1061	Herrera, Fabian	CEMIC Galvan 4102, C1431FWO Ciudad Autónoma de Buenos Aires	CEMIC Centro de Educación Médica e Investigaciones Clínicas "Norberto Quirno" Avenida E. GaIván 4102, CI431FWO, Ciudad Autónoma de Buenos Aires	15/Apr/2020
Argentina [1]	1047	Nannini, Esteban	Sanatorio Britanico S.A., Paraguay 40, Rosario, S2000 Santa Fe	Comité de Etica Sanatorio Britanico SA, Paraguay 40, S2000, Santa Fe	18/Feb/2020
Argentina [1]	1046	Sanchez, Marisa	Hospital Italiano, Juan D. Perón 4190 Ciudad Autonoma Buenos Aires, C1181ACH	CEPI, Juan D Perón 4190, 4192 Capital Federal, C1199ABB	19/Mar/2020
Austria [2]	1017	Burgmann, Heinz	AKH - Medizinische Universität Wien, Univ. Klinik für Innere Medizin I Waehringer Guertel 18 – 20, 1090 Wien	Ethikkommission der Medizinischen Universität Wien Borschkegasse 8b/E06, 1090 Wien	10/Feb/2020
Brazil [1]	1052	Albuquerque, Natalia	Hospital Felício Rocho, Avenida do Contorno, 9530, Barro Preto, Belo Horizonte, Minas Gerais, 30110-934	Local: CEP do Hospital Felicio Rocho, Rua Uberaba, n° 500, 5° andar, Núcleo de Ciências da Saúde Felício Rocho, Barro Preto, Belo Horizonte, Minas Gerais, 30.180-082	13/Dec/2019
Brazil [1]	1049	Rea-Neto, Alvaro	CEPETI - Centro de Estudos e Pesquisa em Emergências Médicas e Terapia Intensiva Rua Monte Castelo, 366 Curitiba, Paraná 82530-200	Local: CEP do Instituto de Neurologia de Curitiba (INC), Rua Jeremias Maciel Perretto, 300 - Campo Comprido, Curitiba - PR, 81210-310	29/Oct/2020

Country	Center ID	PI name	Center address	Ethics Committee address	Date of approval
Brazil [1]	1051	Vargas Schwarzbold, Alexandre	Hospital da Universidade Federal de Santa Maria CEP/UFSM, HUSM-UFSM Av. Roraima, n° 1000, Predio 22, Camobi Santa Maria, Rio Grande do Sul 97105-90	Local: CEP do no Hospital Universitário de Santa Maria, Av. Roraima, 1000 - prédio da Reitoria - 7º andar - sala 763 – Camobi, Santa Maria, RS, 97.105-970	09/June/2020
Brazil [1]	1048	Starling, Carlos	Hospital Vera Cruz Avenida do Contorno, 9495. andar 3 Belo Horizonte, Minas Gerais 30140-030	Local: CEP do Hospital Vera Cruz, Rua Timbiras, 3156, 6º andar sala 603 - Barro Preto, Belo Horizonte, MG, 30.140-062	23/July/2020
Brazil [1]	1053	Zavascki, Alexandre	Hospital Moinho de Vento, 910 Ramiro Barcelos Porto Alegre, Rio Grande do Sul 90035-004	Local: CEP do Hospital Moinhos de Vento, Rua Tiradentes, 198 – Subsolo – Floresta, Porto Alegre, RS, 90.560-030	29/July/2020
Brazil [1]	All			Central: CONEP - Comissão Nacional de Ética em Pesquisa, SRNTV 701, Via W 5 Norte Edifício PO 700, 3º andar- Asa Norte 0719-049 Brasilia	16/May/2020
Colombia [1]	1056	Betancur Martinez, Julian	Promotora Medica Las Americas SA, Diagonal 75 B No 2 A 80 – 140, Medellin 050025	Comité de Ética en Investigación, Diagonal 75B 2 A-80/120 Piso 2, oficina 208, Medellín	19/Mar/2020
Colombia [1]	1057	Marin, Jorge	Caja de Compensacion Familiar de Caldas / Confa Cl.57a # 9c-18 Manizales NA	Comité de Ética Independiente Corporación CoEtika, Cra 30 N° 93 – 25 Avenida Alberto Mendoza Consultorio 410, Manizales-Caldas	29/Jan/2020
Colombia [1]	1058	Trompa, Ivan	IPS Universitaria Carrera 75 no 45e38 Medellin 2644	Comité de Ética e Investigación de la “IPS Universitaria” Calle 69 #51C-24, Medellin	29/Jan/2020
Colombia [1]	1059	Villegas, Maria Virginia	Centro Medico Imbanaco Cra. 38 BIS No. 5B2 - 04 Cali 6489000	Comité de Ética en Investigacion Centro Medico Imbanaco - CEICMI Carrera 38Bis # 5B4-29 Piso 2. Cali, Valle del Cauca	20/Feb/2020
France [3]	1072	Bleibtreu, Alexandre	Groupe Hospitalier Pitié-Salpêtrière, 47-83 Bd de l'Hôpital, 75013 Paris	Not required by local regulation	
France [3]	1021	Gaborit, Benjamin	CHU Nantes - Hôtel Dieu, 1 Pl. Alexis-Ricordeau, 44000 Nantes	Not required by local regulation	
France [3]	1042	Lasocki, Sigismond	CHU Angers - Hôpital Hôtel Dieu, Hôpital Hôtel Dieu, 4 rue Larrey, 49933 Angers	Not required by local regulation	

Country	Center ID	PI name	Center address	Ethics Committee address	Date of approval
France [3]	1022	Montravers, Philippe	Hôpital Bichat - Claude Bernard, 46 Rue Henri Huchard, 75018 Paris	Not required by local regulation	
France [3]	1018	Senneville, Eric	Centre Hospitalier de Tourcoing, 155 Rue du Président Coty, 59200 Tourcoing	Not required by local regulation	
Germany [2]	1040	Pletz, Matthias	Universitaetsklinikum Jena, Parent Kochstrasse 2, 07747 Jena, Thueringen	Ethik-Kommission der Friedrich-Schiller Universität Jena, Bachstrasse 18, 07740 Thueringen	14/Oct/2019
Germany [2]	1045	Rohde, Gernot	Klinikum der Johann Wolfgang GoetheUniversitaet, Pneumologie und Allergologie, Theodor-Stern-Kai 7, 60590 Frankfurt am Main, Hessen	Ethik-Kommission des Fachbereichs Medizin der J.W. Goethe-Universität, Haus 1, Theodor-Stern-Kai 7, 60590 Frankfurt	27/Dec/2019
Greece [2]	1031	Gogos, Charalambos	University Hospital of Patras, 265 04 Rio, Patras	Scientific Committee of University General Hospital of Patras, 26504 Rio, Patras	27/Aug/2020
Greece [2]	1030	Kourbeti, Irene	General Hospital of Athens Laiko, 17, Agiou Thoma street, 11527 Athens	Scientific Committee of General Hospital of Athens "Laiko", 17 Agiou Thoma street, 11527 Athens	12/Dec/2019
Italy [4]	1010	Bassetti, Matteo	IRCCS Ospedale Policlinico San Martino, Divisione di Ematologia e Trapianti, Largo Rosanna Benzi, 10, 16132 Genova	Comitato Etico San Martino, Ospedale Policlinico San Martino, IRCCS, Largo Rosanna Benzi, 10 16132 Genova	07/Oct/2019
Italy [4]	1006	De Rosa, Francesco	Azienda Ospedaliero-Universitaria Città della Salute e della Scienza di Torino, Malattie Infettive, Corso Bramante 88-90, 10126 Torino	Comitato Etico - Azienda Ospedaliero-Universitaria, Città della Salute e della Scienza di Torino, Corso Bramante, 88, 10126 Torino	12/Nov/2019
Italy [4]	1035	Menichetti, Francesco	Azienda Ospedaliero Universitaria Pisana, U.O. Malattie infettive, Via Roma 67, 56126 Pisa	Comitato Etico Area Vasta Nord Ovest, Azienda Ospedaliero – Universitaria Pisana, via Roma 67, 56126 Pisa	08/Oct/2020
Italy [4]	1007	Tumbarello, Mario	Fondazione Policlinico Universitario Agostino Gemelli IRCCS, UOC Malattie Infettive 2 Largo Agostino Gemelli 8, 00168 Roma	Comitato Etico - Fondazione Policlinico Universitario Agostino Gemelli IRCCS, Università Cattolica del Sacro Cuore, Largo Agostino Gemelli 8, 00168 Roma	20/Dec/2018
Italy [4]	1009	Viale, Pierluigi	Azienda Ospedaliera Universitaria Policlinico Sant'Orsola Malpighi IRCCS, Infectious Diseases Unit, Via Massarenti 11, 40138 Bologna	Comitato Etico Indipendente di Area Vasta Emilia Centro (CE-AVEC), via Albertoni 15, 40138 Bologna	23/Jan/2019

Country	Center ID	PI name	Center address	Ethics Committee address	Date of approval
Russia	All			Central: Independent Interdisciplinary Committee for Ethical Examination of Clinical Studies, 51, Leningradskiy Prospect, Moscow 125468	31/Oct/2018
Russia	1015	Basin, Efim	Regional Clinical Hospital #1, 1 May 167, Krasnodar 350000	Local Ethics Committee at the State Budgetary Institution of Healthcare 'Scientific and Research Institute – Territorial Clinical Hospital No. 1 named after S. V. Ochapovskiy' of the Ministry of Healthcare of the Krasnodar Territory, 167, 1 Maya St., Krasnodar, 350086	29/Nov/2018
Russia	1014	Ivanov, Vladimir	FSBI North-West Federal Medical Research Center n.a. V.A. Almazov of MoH RF, 2, Akkuratova str., Saint-Petersburg 197341	Local Ethics Committee at Federal State Budgetary Institution V.A. Almazov National Medical Research Center of the Ministry of Health of the Russian Federation 2 Akkuratova Street, Saint Petersburg, 197341	19/Nov/2018
Russia	1012	Klyasova, Galina	FSBI "Hematological Research Center", MoH of RF, Novo-Zykovskiy pr-d 4a, Moscow 125167	Local Ethics Committee at the Federal State Budgetary Institution 'National Medical Research Centre of Haematology' of the Ministry of Healthcare of the Russian Federation, 4 Novy Zykovskiy Drive, Moscow, 125167	20/Dec/2018
Russia	1016	Veselov, Alexey	FSBI "State Scientific Centre of Coloproctology" of the MoH of RF, 2, Salyama Adilya str., Moscow 125679	Local Ethics Committee at the Federal State Budgetary Institution 'National Medical Research Centre of Coloproctology named after A. N. Ryzhikh' of the Ministry of Healthcare of the Russian Federation 2 Salyama Adilya Str., Moscow 123423	29/Nov/2018
Russia	1011	Yakovlev, Sergey	SBIH of Moscow City Clinical Hospital # 7, 4 Kolomensky proezd, Moscow 115446	Ethics Committee of State Budgetary Healthcare Institution S.S. Yudin City Clinical Hospital of the Moscow Health Department, 4 Kolomenskiy Passage, Moscow	04/Mar/2019

Country	Center ID	PI name	Center address	Ethics Committee address	Date of approval
Russia	1013	Zolotukhin, Konstantin	SBIH Republican Clinical Hospital n.a. G. G. Kuvatov, 132 Dostoevskogo street, Ufa 450005	Local Ethics Committee at the State Budgetary Institution of Healthcare 'Republican Clinical Hospital named after G.G. Kuvatov', 132, Dostoevskogo street, Ufa, 450005	28/Dec/2018
Spain [2]	1005	Carratala Fernandez, Jordi	Hospital Universitari de Bellvitge, Servicio de Cardiologia Feixa Llarga s/n, 08907 Barcelona	Local: Hospital Universitari de Bellvitge, Feixa Llarga s/n 08907 L'Hospitalet de Llobregat Regional: RA Catalunya : Dirección General de Ordenación Profesional y Regulación Sanitaria Departamento de Salud Travessera de les Corts 131-159, Pavelló Ave Maria, 08028 Barcelona	07/May/2019 17/Sep/2019
Spain [2]	1001	Castón, Juan José	Hospital Universitario Reina Sofia, General medicine Dept, Avda. Menendez Pidal s/n, 14004 Córdoba	Local: Comité de etica de la Investigacion de Cordoba, Hospital Universitario Reina Sofía Edificio Consultas Externas, Planta - 1 Avda. Menéndez Pidal, s/n 14004 – Córdoba Regional: CEIC Autonomico de Andalucia, Avda. de la Innovación, s/n. Edificio Arena 1. Apdo. Correos 17.111. 41080 Seville	19/May/2020 29/Mar/2019
Spain [2]	1002	Pérez-Rodriguez, Maria Teresa	Complexo Hospitalario Universitario de Vigo,Carretera Clara Campoamor, 341, Babio, Beade Vigo, Pontevedra 36312	CEIC de Galicia, subdireccion General de Farmacià y Productos Sanitarios, Conselleria de Sanidale, C/ San Lazaro, s/n, 15707 Santiago de Compostela	28/Mar/2019
Spain [2]	1032	Pintado, Vincente	Hospital Universitario Ramon y Cajal, Infectious Diseases Dept, Ctra. de Colmenar Viejo km. 9,1; 28034 Madrid	CEIC Hospital Universitario Ramon y Cajal, ctra. De Colmenar Viejo, km 9.1, 28034 Madrid CEIC Regional de la Comunidad de Madrid : Área de Investigación Clínica y EPAS Servicio de Control Farmacéutico y Productos Sanitarios Consejería de Sanidad Calle Espronceda 24, 4ª planta, 28003 Madrid	04/Mar/2019 11/July/2019

Country	Center ID	PI name	Center address	Ethics Committee address	Date of approval
Spain [2]	1003	Soriano Viladomiu, Alejandro	Hospital Clinic de Barcelona, Servicio de Enfermedades Infecciosas, Villarroel, 170, 08036 Barcelona	CEI Hospital Clínic de Barcelona C/ Rosselló, 138-baixos, despatx nº 12 08036 Barcelona RA Catalunya : Dirección General de Ordenación Profesional y Regulación Sanitaria Departamento de Salud Travessera de les Corts 131-159, Pavelló Ave Maria, 08028 Barcelona	12/Feb/2019 17/Sep/2019
UK [5]	1036	Felton, Timothy	Wythenshawe Hospital, Respiratory and Allergy Clinical Research Facility, Charles Blackley Ward Manchester, Greater Manchester M23 9LT	Central: London – South East Research Ethics Committee, Barlow House, 3rd Floor 4 Minshull Street, Manchester M1 3DZ	26/Nov/2018
UK [5]	1025	Moore, Luke	Chelsea and Westminster Hospital, 369 Fulham Road, London, Greater London SW10 9NH		
UK [5]	1038	Partridge, David	Sheffield Teaching Hospital NHS Foundation Trust, Herries Road, Sheffield, South Yorkshire S5 7AU		
UK [5]	1026	Verma, Anita	Kings College Hospital NHS Foundation Trust, 161 Denmark Hill, London, Greater London SE5 8EF		

[1] A waiver of informed consent was approved for patients deceased or not contactable in Argentina, Brazil and Columbia.
[2] Consent for deceased patients (next of kin's) not applicable by local regulation.
[3] Informed consent not applicable by local regulation for retrospective studies based on secondary data (MR-004).
[4] Consent for deceased patients (next of kin's) and not contactable patients not applicable by local regulation for retrospective studies.
[5] Waiver of informed consent approved for all patients on 12 October 2020.