Cefiderocol

Matteo Bassetti
Infectious Diseases Clinic
University of Genoa and San Martino-IST University Hospital
Genova, Italy

UNIVERSITÀ DEGLI STUDI DI GENOVA

IRCCS Azienda Ospedaliera Universitaria San Martino – IST
Istituto Nazionale per la Ricerca sul Cancro

Disclosures
(past 2 years)

- Advisor/consultant/speaker bureau
  - Angelini, Biomerieux, Cidara, Ecdc,Gilead, Menarini, Medscape, Mundipharma, MSD, Pfizer, Shionogi

Activity of new agents against Gram-negative pathogens.

Grey shading: variable activity; red shading: non-activity; green shading: activity. KPC: Klebsiella pneumoniae carbapenemases; OXA: OXA-β-lactamases; NDM: New Delhi metallo-β-lactamase.

	Enterobacterales					
	Class A Carbapenemase (*e.g.* KPC)	Class B Carbapenemase (*e.g.* NDM)	Class D Carbapenemase (*e.g.* OXA-48)	*Pseudomonas aeruginosa*	*Acinetobacter baumannii*	*Stenotrophomonas maltophilia*
Ceftobiprole						
Ceftolozane-tazobactam						
Ceftazidime-avibactam						
Cefiderecol						
Meropenem-vaborbactam						
Imipenem-relebactam						
Aztreonam-avibactam						
Plazomicin						
Eravacycline						

Bassetti M et al. Eur Respir Rev. 2022 Dec 31; 31(166): 220119

Università degli Studi di Genova
Dipartimento di Scienze della Salute (DISSAL)
Genoa, Italy

Clinica Malattie Infettive
Ospedale Policlinico San Martino IRCCS
Genoa, Italy

Cefiderocol demonstrated activity against Enterobacterales and non-fermenter GN isolates (EU)

Comparison of susceptibilities to cefiderocol and comparators from collected GN isolates

Pathogen	Antimicrobial	mg/L MIC_{50}	mg/L MIC_{90}	% Susceptible[a]
Enterobacterales (n=3,994)	**Cefiderocol**	**0.12**	**0.50**	**98.9**
	Imipenem/relebactam	0.12	1	98.2
	Meropenem/vaborbactam	<0.06	0.06	99.0
	Ceftazidime/avibactam	0.12	0.5	99.1
	Piperacillin/tazobactam	2.00	64	81.8
	Meropenem	<0.06	0.06	96.9[b]
	Colistin	0.25	>8	83.9[c]
P. aeruginosa (n=1,213)	**Cefiderocol**	**0.12**	**0.50**	**99.4**
	Imipenem/relebactam	0.25	1	95.5
	Ceftazidime/avibactam	2	4	96.4
	Ceftolozane/tazobactam	0.50	2	94.6
	Piperacillin/tazobactam	4	128	76.9[b]
	Meropenem	0.50	8	77.3
	Colistin	1	1	99.7[c]
***A. baumannii calcoacetius* complex** (n=340)	**Cefiderocol**	**0.25**	**1.00**	**94.4**
	Imipenem/relebactam	>8	>8	37.6
	Ceftazidime	>32	>32	N/A
	Piperacillin/tazobactam	>128	>128	N/A
	Meropenem	>32	>32	37.6
	Ciprofloxacin	>4	>4	37.1[b]
	Colistin	0.50	>8	80.9[c]

Shortridge D et al. Microbiol Spectr 2022;10:e0271221

MIC for meropenem-resistant isolates: cefiderocol vs comparators

Attività in vitro di Cefiderocol e comparatori contro isolati italiani di *P. aeruginosa* dello studio SIDERO-WT-2014-2018 resistenti a meropenem (MIC> 8MG/L)

		MIC (mg/L)			
Specie (n)[a]	**Antibiotico**	**Range**	**MIC_{50}**	**MIC_{90}**	**S%**
***Pseudomonas aeruginosa* (39)**	**Cefiderocol**	0,008-2	0,25	2	**100**
	Colistina	Da 0,5 a >8	1	1	**94,9**
	Ceftazidime/ avibactam	Da 4 a >64	8	>64	**53,8**
	Ceftolozane/ tazobactam	Da 0,5 a >64	4	>64	**51,3**

MIC, minima concentrazione inibente; MIC50/90, MIC per il 50% ed il 90% degli isolati testati, rispettivamente; S%, percentuale di suscettibilità

[a]Dove n ≥ 10 isolati

Stracquadanio S, et al. J Glob Antimicrob Resist 2021;25:390–8.

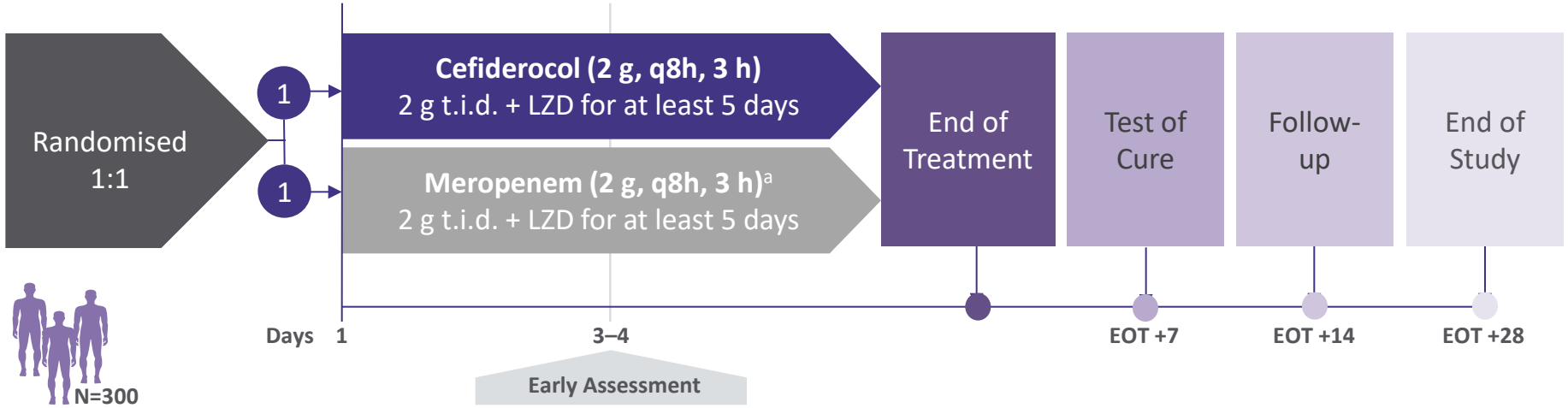
Università degli Studi di Genova
Dipartimento di Scienze della Salute (DISSAL)
Genoa, Italy

Clinica Malattie Infettive
Ospedale Policlinico San Martino IRCCS
Genoa, Italy

Developement of cefiderocol resistance

- Klebsiella pnuemoniae
  - Moon SH et al. Microbiol Spectr. 2023 Jun 15;11(3):e0349622
- P. aeruginosa
  - Brakert L et al. J Glob Antimicrob Resist 2023 Jun 26;S2213-7165(23)00097-8
- A. Baumannii
  - Liu X et al. mSystems. 2023 Jun 22:e0129122
- Burkholderia pseudomallei
  - Hall CM et al. Antimicrob Agents Chemother. 2023 Jun 15;67(6):e001712

APEKS-NP: a double-blind, clinical trial to compare cefiderocol vs high-dose extended-infusion meropenem in nosocomial pneumonia



Objectives

- **Primary endpoint:** Day 14 ACM with a 12.5% non-inferiority margin
- **Secondary endpoint:** clinical and microbiological outcomes at TOC, and Day 14 ACM tested for superiority after non-inferiority was demonstrated

ACM, all-cause mortality; EOT, end of treatment; LZD, linezolid; NP, nosocomial pneumonia; PD, pharmacodynamic; PK, pharmacokinetic; TOC, test of cure.

[a]Prolonged-infusion meropenem regimen (2 g infused over 3 hours, q8h) is preferred to the approved regimen (1 g infused over 30 minutes, q8h) to achieve higher exposure.

Wunderink RG, et al. *Lancet Infect Dis* 2020; published online Oct 12. http://dx.doi.org/10.1016/S1473-3099(20)30731–3

APEKS-NP: all-cause mortality was similar in both treatment groups at all timepoints – cefiderocol non-inferior to high-dose, extended-infusion meropenem[a]

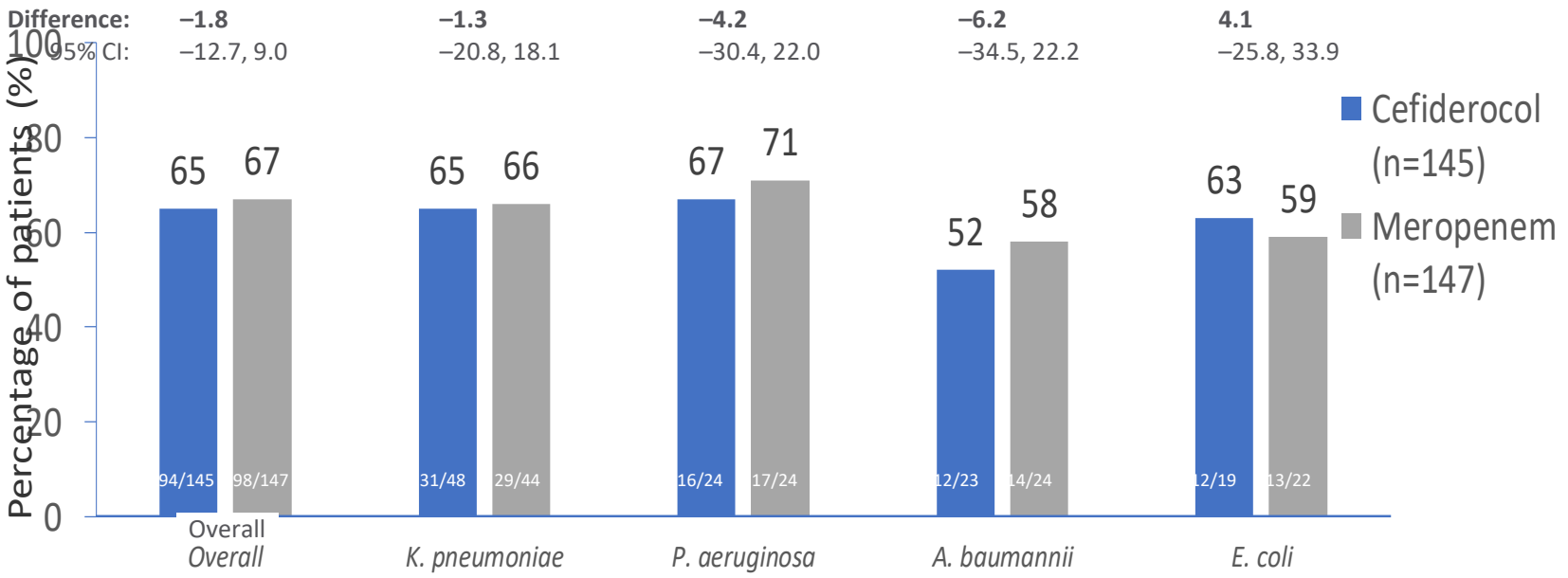
Timepoint	Cefiderocol % (n/N)	Meropenem % (n/N)	Treatment Difference % (95% CI)
Day 14 (Primary endpoint)	12.4 (18/145)	11.6 (17/146)	0.8 (–6.6, 8.2)
Day 28	20.9 (30/143)	20.5 (30/146)	0.4 (–8.9, 9.8)

[a]micro-ITT population

Micro-ITT, microbiological intention to treat population; CI, confidence interval.

Wunderink RG, et al. *Lancet Infect Dis* 2020; published online Oct 12. http://dx.doi.org/10.1016/S1473-3099(20)30731–3

APEKS-NP: clinical cure rates, by key pathogen, were similar in both treatment groups[a]



[a]micro-ITT population

CI, confidence interval; micro-ITT, microbiological intent to treat.

Wunderink RG, et al. *Lancet Infect Dis* 2020; published online Oct 12. http://dx.doi.org/10.1016/S1473-3099(20)30731–3

CREDIBLE-CR: pathogen-focused Phase 3 study

Population

High-risk, severely ill patients; infections include non-fermenter species such as *Acinetobacter* spp.

Patients were enrolled irrespective of infection type, comorbidities, pathogen species, or CR mechanism

Study drug

Cefiderocol (2 g) (n=101) (mostly monotherapy) or **best available therapy (BAT)** (n=49) that could include up to three antibiotics, dosed according to country's label

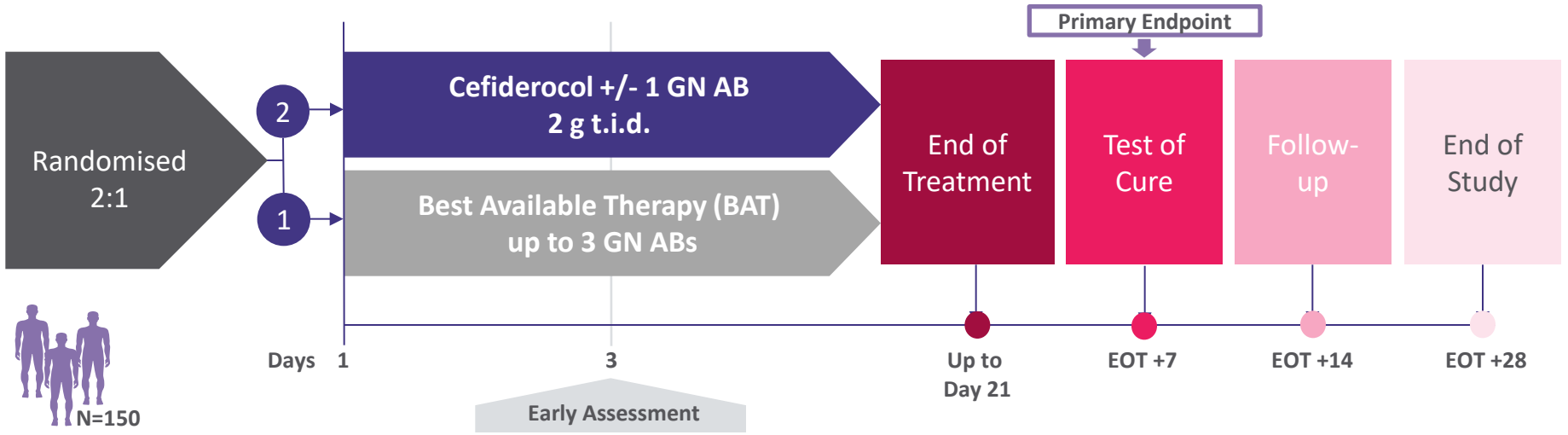
Open-label design

Randomised, pathogen-focused, **open-label, non-inferential, descriptive trial** to assess the efficacy and safety of cefiderocol or BAT.

BAT, best available therapy; CR, carbapenem resistant.

Bassetti M, et al. *Lancet Infect Dis* 2020; published online Oct 12. https://doi.org/10.1016/S1473-3099(20)30796–9

CREDIBLE-CR: a novel, pathogen-focused, open-label study to explore cefiderocol therapy and BAT in CR GN infections



Objectives

- **Primary endpoint at TOC:** HAP/VAP/HCAP and bloodstream infections/sepsis – clinical outcome; cUTI – microbiological outcome
- **Secondary endpoint:** clinical and microbiological outcomes at TOC, EOT and FU, and Day 14 and 28 ACM

ACM, all-cause mortality; AB, antibiotic; BAT, best available therapy; CR, carbapenem resistant; cUTI, complicated urinary tract infection; EOT, end of treatment; FU, follow-up; GN, Gram negative; HAP, hospital-acquired pneumonia; HCAP, healthcare-associated pneumonia; t.i.d., three times daily dosing; TOC, test of cure; VAP, ventilator-associated pneumonia.

Bassetti M, et al. *Lancet Infect Dis* 2020; published online Oct 12. https://doi.org/10.1016/S1473-3099(20)30796–9

CREDIBLE-CR: baseline CR Gram-negative pathogens – *A. baumannii* the most commonly identified resistant pathogen[a,b]

	Cefiderocol (n=80) n (%)	BAT (n=38) n (%)
CR *A. baumannii*	37 (46)	17 (45)
CR *K. pneumoniae*	27 (34)	12 (32)
CR *P. aeruginosa*	12 (15)	10 (26)
S. maltophilia	5 (6)	0

[a]CR micro-ITT population

[b]Data reflects isolated resistant pathogens; patients may have had mixed infections and infections with >1 CR pathogen

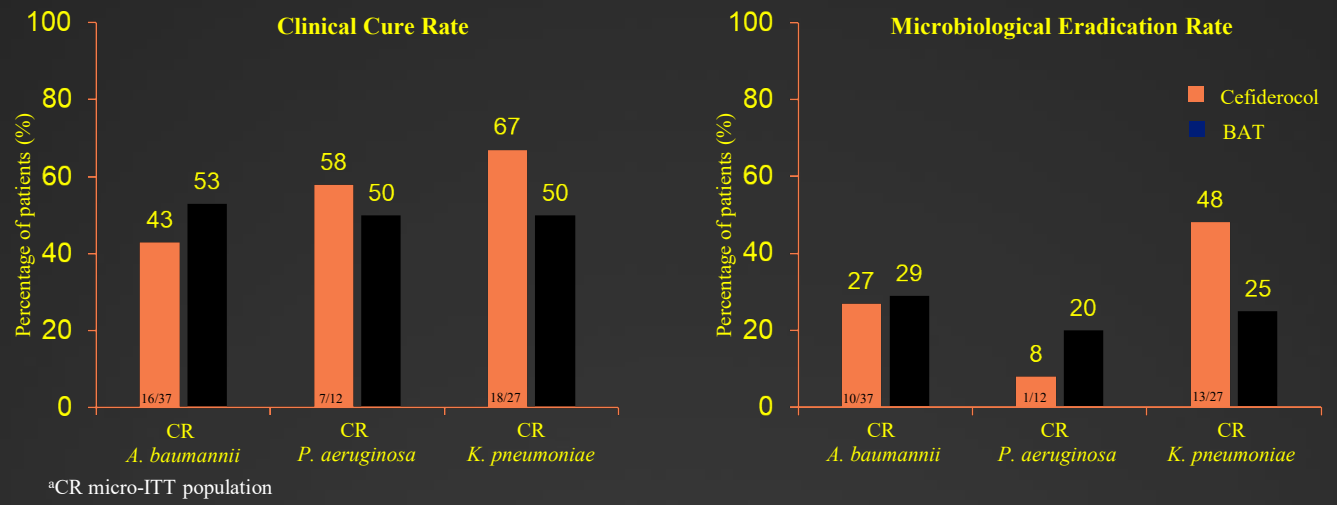
BAT, best available therapy; CR, carbapenem resistant; CR Micro-ITT, carbapenem-resistant microbiological intention-to-treat population.

Bassetti M, et al. *Lancet Infect Dis* 2020; published online Oct 12. https://doi.org/10.1016/S1473-3099(20)30796–9

Università degli Studi di Genova
Dipartimento di Scienze della Salute (DISSAL)
Genoa, Italy

Clinica Malattie Infettive
Ospedale Policlinico San Martino IRCCS
Genoa, Italy

CREDIBLE-CR: similar rates at TOC by baseline pathogen, but higher for cefiderocol in Enterobacterales infection[a]



[a]CR micro-ITT population

BAT, best available therapy; CR, carbapenem resistant; CR Micro-ITT, carbapenem-resistant microbiological intention-to-treat population; TOC, test of cure.

Bassetti M, et al. *Lancet Infect Dis* 2020; published online Oct 12. https://doi.org/10.1016/S1473-3099(20)30796–9

CREDIBLE-CR: all-cause mortality, Day 28 and End of Study[a]

Timing of death	Cefiderocol (n=101) n (%)	BAT (n=49) n (%)
Up to Day 28	25 (25)	9 (18)
Late: Day 29 to end of study	9 (9)	0 (0)
Overall mortality: end of study	34 (34)	9 (18)

[a]Safety population

BAT, best available therapy.

Bassetti M, et al. *Lancet Infect Dis* 2020; Published online October 12, 2020 https://doi.org/10.1016/S1473-3099(20)30796–9

Università degli Studi di Genova
Dipartimento di Scienze della Salute (DISSAL)
Genoa, Italy

Clinica Malattie Infettive
Ospedale Policlinico San Martino IRCCS
Genoa, Italy

Mortality in CREDIBLE-CR was associated with *A. baumannii* infection, but characteristics of shock and infection severity may also contribute

The underlying reasons for the mortality imbalance in CREDIBLE may never be known, but mortality appears to be associated with *A. baumannii*

Patients infected with *A. baumannii* and treated with cefiderocol had a higher unadjusted mortality rates than patients without *A. baumannii* or treated with BAT; numbers were small

Characteristics of *A. baumannii* patients treated with cefiderocol

- Older (>65 years)
- More severely ill (APACHE II ≥16)
- Progressed to shock
- Resident in the ICU

But patient numbers were small

APACHE, Acute Physiology and Chronic Health Evaluation; BAT, BAT, best available therapy; ICU, intensive care unit.

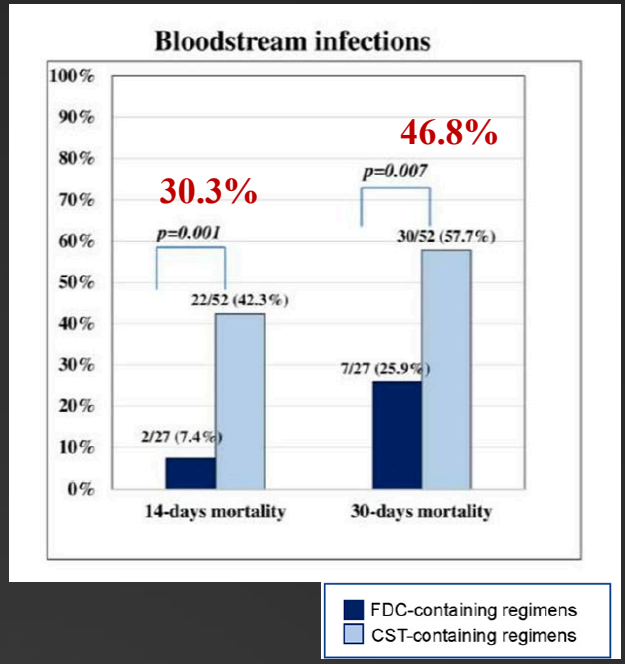
Bassetti M, et al. *Lancet Infect Dis* 2020; published online Oct 12. https://doi.org/10.1016/S1473-3099(20)30796–9

Università degli Studi di Genova
Dipartimento di Scienze della Salute (DISSAL)
Genoa, Italy

Clinica Malattie Infettive
Ospedale Policlinico San Martino IRCCS
Genoa, Italy

Cefiderocol- Compared to Colistin-Based Regimens for the Treatment of Severe Infections Caused by Carbapenem-Resistant *Acinetobacter baumannii*

- **Study population**
  - 124 patients with *A. baumannii* infections
  - 47 (37.9%) FDC vs 77 (62.1%) CST-containing regimens
- **Risk factors for 30-day mortality**
  - Septic shock
  - SOFA score
  - Age were
  - Cefiderocol therapy (HR 0.44)
- **AEs:** 21.1% COL Vs 2.1%, FDC p<0.01.



Falcone M et al AAC. 2022

Characteristics and outcome of study patients according to clinical failure or resolution upon first-line CRAB active therapy.

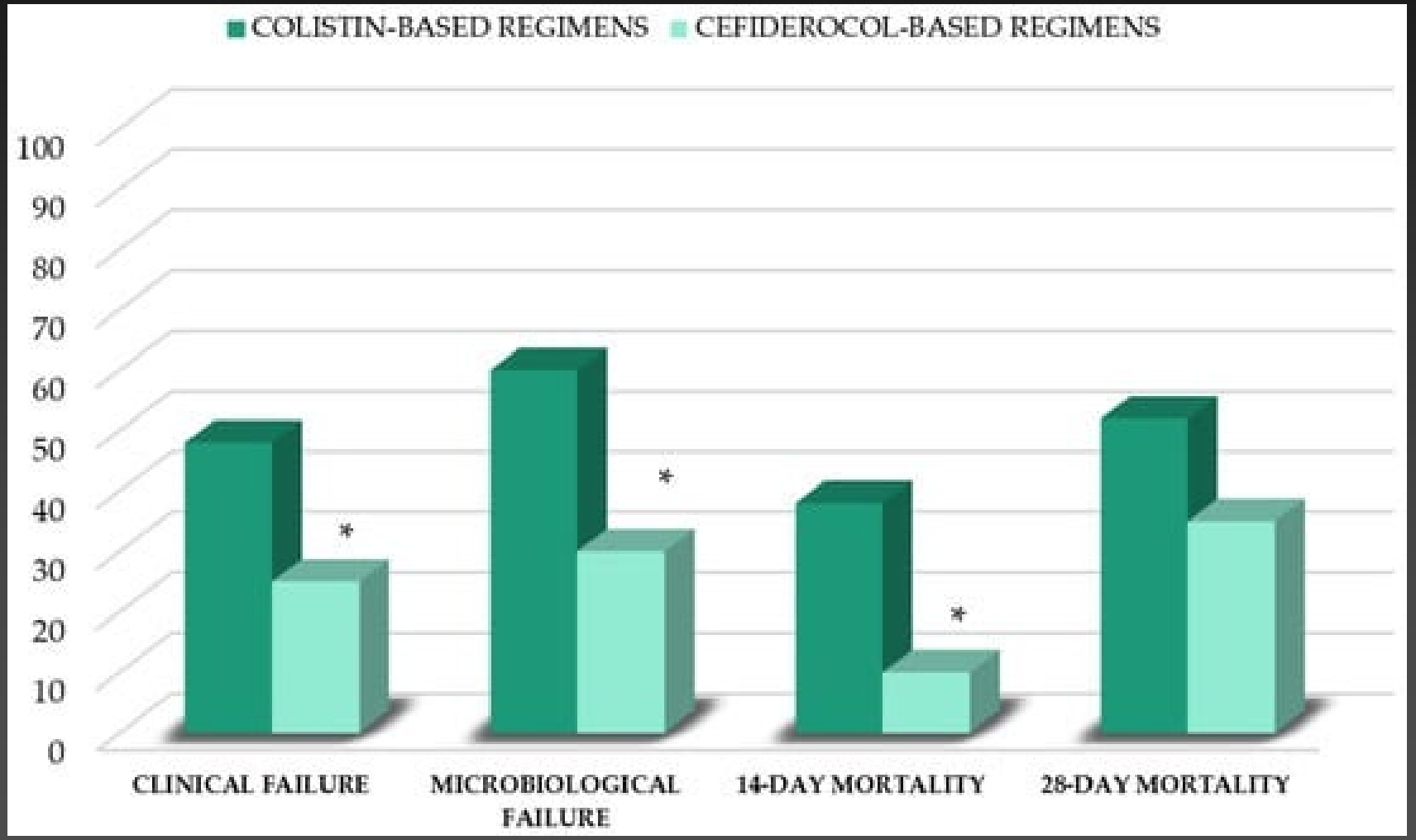
	Clinical Resolution (n = 56)	Clinical Failure (n = 34)
Age (years)	62 (52–69)	71 (64–78) *
Male sex	38 (68)	16 (47)
Surgical admission	30 (54)	18 (53)
Immunodepression	12 (21)	15 (44) *
Charlson comorbidity index	4 (2–6)	8 (6–8) *
Main comorbidities		
Diabetes mellitus	8 (14)	17 (50) *
Cardiovascular disease	13 (23)	18 (53) *
Chronic respiratory disease	6 (11)	15 (44) *
Chronic kidney disease	6 (18)	4 (7)
Chronic liver disease	3 (9)	2 (4)
Solid cancer	5 (15)	6 (11)
Active hematologic malignancies	5 (15)	2 (4)
Solid organ transplantation	6 (18)	3 (5)
Obesity (BMI > 30 kg/m^2)	4 (12)	5 (9)
APACHE II score upon ICU admission	23 (20–25)	22 (20–25)
VAP onset from ICU admission (days)	9 (7–11)	8 (6–11)
SOFA score at VAP onset	10 (9–11) *	9 (7–11)
Oxygenation at VAP onset		
PaO_2 to FiO_2 ratio >200	4 (12)	9 (16)
PaO_2 to FiO_2 ratio >100 and <200	26 (76)	41 (73)
PaO_2 to FiO_2 ratio <100	4 (12)	6 (11)
Infection severity at VAP onset		
Uncomplicated infection	2 (6) *	1 (3)
Sepsis	10 (29)	10 (34)
Septic shock	22 (65)	15 (45)
Bacteraemic VAP	14 (41.2)	5 (26.8)
Augmented renal clearance	5 (15)	6 (18)
CRRT	8 (14)	8 (24)
vv-ECMO	3 (5)	1 (3)
Known respiratory CRAB colonization	34 (61)	18 (53)
Fast molecular diagnostics at VAP onset	17 (30.3)	3 (8.8) *
Timely (≤24 h) targeted therapy	50 (89)	22 (65) *
Cefiderocol-based regimens	30 (54)	10 (29) *
Cefiderocol–inhaled colistin	10 (17.8)	9 (26.5)
Cefiderocol–fosfomycin–inhaled colistin	20 (35.7)	1 (3) *
Colistin-based regimens	26 (46)	24 (71) *
Colistin–tigecycline–inhaled colistin	11 (20)	16 (47) *
Colistin–ampicillin/sulbactam–inhaled colistin	8 (14)	7 (21)
Colistin–meropenem–inhaled colistin	7 (13)	1 (3)
14-day mortality	0 (0)	14 (41) *
28-day mortality	12 (21)	24 (71) *
ICU length of stay (days)	24 (21–28)	21 (17–25) *

Data are presented as No. (%) of included patients or as median (interquartile range), unless otherwise indicated. * $p < 0.05$ vs. clinical resolution group. APACHE: Acute Physiologic Assessment and Chronic Health Evaluation; BMI: Body Mass Index; CRAB: carbapenem-resistant *Acinetobacter baumannii*; CRRT: Continuous Renal Replacement Therapy; SOFA: Sequential Organ Failure Assessment; VAP: Ventilator Associated Pneumonia; vv-ECMO: veno-venous Extra-Corporeal Membrane Oxygenation.

Dalfino L et al. *Antibiotics* (Basel) 2023 Jun 14;12(6):1048

Outcomes of patients stratified by first-line therapy

* p < 0.05 vs. colistin group.



Dalfino L et al. *Antibiotics* (Basel) 2023 Jun 14;12(6):1048

investigating predictors of clinical failure with first-line antimicrobial therapy.
py; SOFA: sequential organ failure assessment; VAP: ventilator-associated pneumonia.

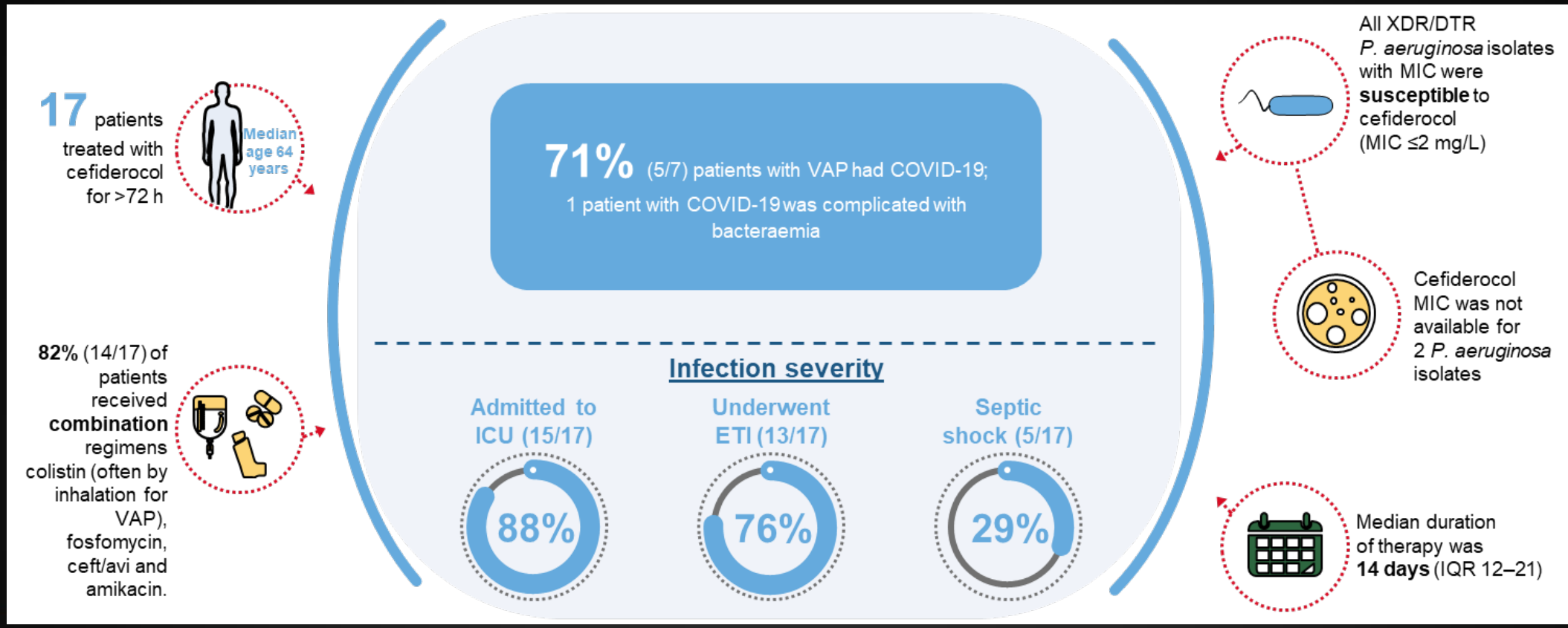
Cox proportional hazard model for investigating predictors of clinical failure with first-line antimicrobial therapy.

	Univariable Analysis			Multivariable Analysis		
	aHR	95% CI	*p*-Value	aHR	95% CI	*p*-Value
Immunodepression	1.97	0.98–3.83	0.06	1.56	0.76–3.19	0.23
Charlson comorbidity index	1.28	1.12–1.47	<0.0001	1.21	1.04–1.42	0.01
SOFA score	1.15	1.02–1.30	0.02	1.07	0.92–1.25	0.35
Septic shock	1.91	0.93–3.87	0.07	1.52	0.69–3.33	0.29
Bacteremic VAP	1.46	0.74–2.90	0.28	/		
Augmented renal clearance	1.07	0.41–2.76	0.41	/		
CRRT	1.10	0.50–2.47	0.81	/		
Timely targeted therapy	0.44	0.22–0.90	0.02	0.40	0.19–0.84	0.01
Cefiderocol-based first-line regimens	0.37	0.17–0.79	0.01	0.38	0.17–0.85	0.02

Dalfino L et al. *Antibiotics* (Basel) 2023 Jun 14;12(6):1048

Cefiderocol in patients with XDR/DTR *P. aeruginosa* infection: a prospective, observational study

Prospective observational study including 17 pts (median age 64 yrs) with XDR and DTR *P.aeruginosa* infections, unresponsive to BAT w/o any other available treatment options.



Università degli Studi di Genova
Dipartimento di Scienze della Salute (DISSAL)
Genoa, Italy

Meschiari M. et al. JAC Antimicrob Resist 2021;3:dlab188

Clinica Malattie Infettive
Ospedale Policlinico San Martino IRCCS
Genoa, Italy

Open Access Full Text Article

ORIGINAL RESEARCH

Effectiveness and Safety of Cefiderocol in Clinical Practice for Treatment of Patients with Gram-Negative Bacterial Infections: US Interim Results of the PROVE Study

Cornelius J Clancy[1], Oliver A Cornely[2–4], Stephen W Marcella[5], Sean T Nguyen[6], Laurence Gozalo[7], Bin Cai[8]

Clancy CJ et al. Infect Drug Resist. 2024 Oct 15:17:4427-4443

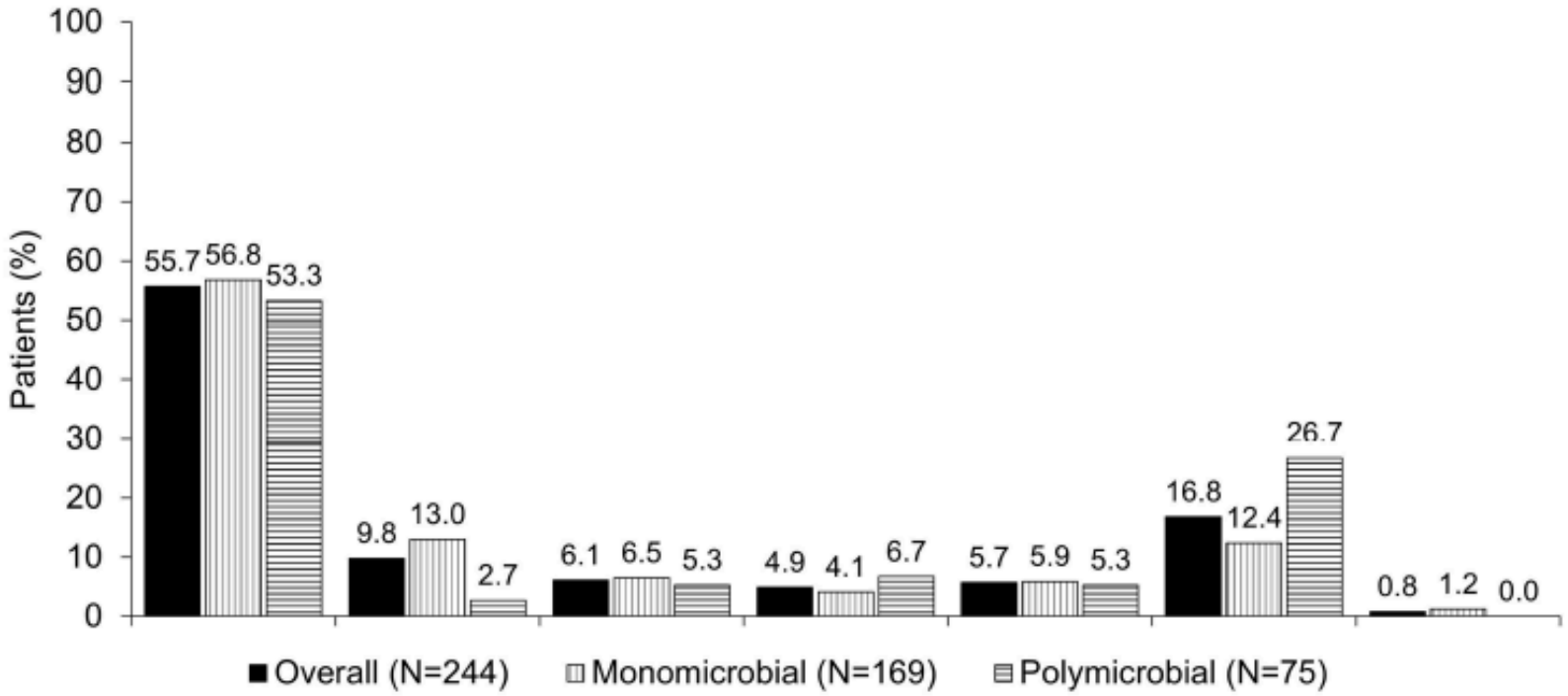


Figure 1 Distribution of primary infection site overall, and in monomicrobial and polymicrobial infections.
Abbreviations: BSI, bloodstream infection; B&J, bone and joint infection; IAI, intra-abdominal infection; RTI, respiratory tract infection; SSSI, skin and skin structure infection; UTI, urinary tract infection.

Università de
Dipartimento
Genoa, Italy

ettive
CCS
Italy

Open Access Full Text Article

ORIGINAL RESEARCH

Effectiveness and Safety of Cefiderocol in Clinical Practice for Treatment of Patients with Gram-Negative Bacterial Infections: US Interim Results of the PROVE Study

Cornelius J Clancy[1], Oliver A Cornely[2–4], Stephen W Marcella[5], Sean T Nguyen[6], Laurence Gozalo[7], Bin Cai[8]

- Interim analysis including 244 patients
- Clinical cure 64.8% (158/244) → *P. aeruginosa* (64.6%) and *A. baumannii* (60.5%)
- Clinical response 74.2% (181/244) → *P. aeruginosa* (74.4%) and *A. baumannii* (74.4%)
- 30-day in-hospital all-cause mortality 18.4% (45/244) → *P. aeruginosa* (25.6%) and *A. baumannii* (18.6%)

Clancy CJ et al. Infect Drug Resist. 2024 Oct 15:17:4427-4443

Università degli Studi di Genova
Dipartimento di Scienze della Salute (DISSAL)
Genoa, Italy

Clinica Malattie Infettive
Ospedale Policlinico San Martino IRCCS
Genoa, Italy

Centri MULTI-SITA attivi (30 and growing!)

1) IRCCS Ospedale Policlinico San Martino, Genova
2) Azienda Ospedaliero-Universitaria Careggi, Firenze
3) ASST Grande Ospedale Metropolitano Niguarda, Milano
4) Fondazione Policlinico Universitario A. Gemelli IRCCS, Roma
5) Azienda Ospedaliera di Perugia, Perugia
6) E.O. Ospedali Galliera, Genova
7) Policlinico Paolo Giaccone, Palermo
8) Ospedale San Raffaele, Milano
9) Ospedale di Portogruaro, Portogruaro
10) AOU Policlinico Riuniti di Foggia, Foggia
11) AO S. Croce e Carle, Cuneo
12) Città della Salute e della Scienza, Torino
13) Policlinico Sant'Orsola, Bologna
14) Azienda Ospedaliera SS. Antonio e Biagio e Cesare Arrigo, Alessandria
15) IRCCS Ca' Granda Ospedale Maggiore Policlinico, Milano
16) Azienda Ospedale-Università di Padova
17) AOU Mater Domini, Catanzaro
18) IRCCS ISMETT Palermo
19) AOU Sassari
20) Ospedale San Paolo, Savona
21) Fondazione IRCCS Policlinico San Matteo, Pavia
22) Ospedale di Ferrara
23) ARNAS Garibaldi, Catania
24) Azienda Ospedaliero-Universitaria Senese
25) Ospedale dell'Angelo, Mestre
26) Ospedale di Sanremo
27) ASST Fatebenefratelli Sacco, Milano
28) Presidio Ospedaliero Universitario Santa Maria della Misericordia, Udine
29) Ospedale Nuovo di Legnano - ASST Ovest Milanese
30) Azienda Sanitaria Universitaria Giuliano Isontina, Trieste

CEFI-SITA

- Design: Observational, multicenter, prospective study in Italian hospitals
- Objectives: to describe how cefiderocol is used in clinical practice (e.g., empirical vs. targeted, mono vs. combo) and to identify unsupervised phenotypes of patients associated with different types of prescription
- Study period: up to 31 December 2025
- Activated centers: Currently, 23 centers have started enrollment. Other centers are being activated
- Current status: More than 500 patients have been enrolled. Descriptive results of the first 200 patients recently published

Università degli Studi di Genova
Dipartimento di Scienze della Salute (DISSAL)
Genoa, Italy

Clinica Malattie Infettive
Ospedale Policlinico San Martino IRCCS
Genoa, Italy

Infect Dis Ther (2024) 13:1929–1948
https://doi.org/10.1007/s40121-024-01016-y

ORIGINAL RESEARCH

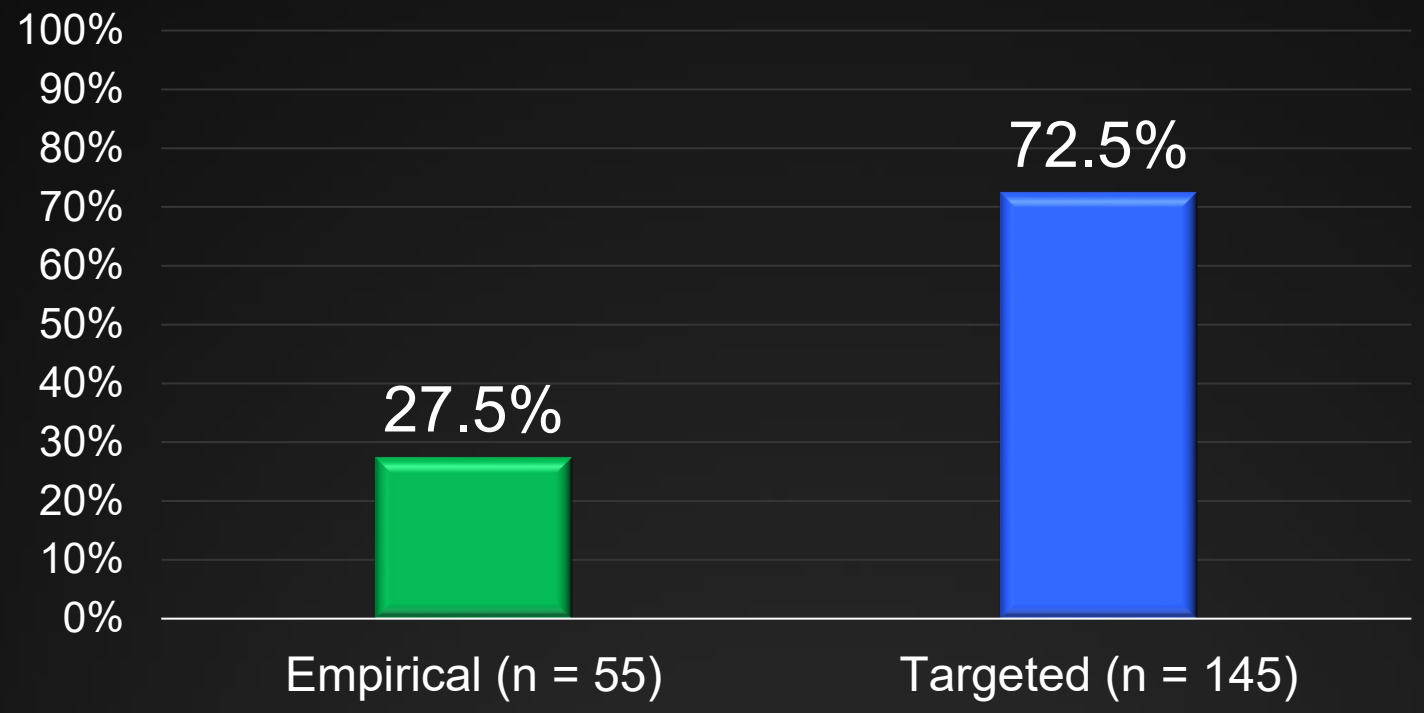
Use of Cefiderocol in Adult Patients: Descriptive Analysis from a Prospective, Multicenter, Cohort Study

Daniele Roberto Giacobbe · Laura Labate · Chiara Russo Artimagnella · Cristina Marelli · Alessio Signori · Vincenzo Di Pilato · Chiara Aldieri · Alessandra Bandera · Federica Briano · Bruno Cacopardo · Alessandra Calabresi · Federico Capra Marzani · Anna Carretta · Annamaria Cattelan · Luca Ceccarelli · Giovanni Cenderello · Silvia Corcione · Andrea Cortegiani · Rosario Cultrera · Francesco Giuseppe De Rosa · Valerio Del Bono · Filippo Del Puente · Chiara Fanelli · Fiorenza Fava · Daniela Francisci · Nicholas Geremia · Lucia Graziani · Andrea Lombardi · Angela Raffaella Losito · Ivana Maida · Andrea Marino · Maria Mazzitelli · Marco Merli · Roberta Monardo · Alessandra Mularoni · Chiara Oltolini · Carlo Pallotto · Emanuele Pontali · Francesca Raffaelli · Matteo Rinaldi · Marco Ripa · Teresa Antonia Santantonio · Francesco Saverio Serino · Michele Spinicci · Carlo Torti · Enrico Maria Trecarichi · Mario Tumbarello · Malgorzata Mikulska · Mauro Giacomini · Anna Marchese · Antonio Vena · Matteo Bassetti · CEFI-SITA investigators

Università degli Studi di Genova
Dipartimento di Scienze della Salute (DISSAL)
Genoa, Italy

Clinica Malattie Infettive
Ospedale Policlinico San Martino IRCCS
Genoa, Italy

CEFI-SITA - preliminary results

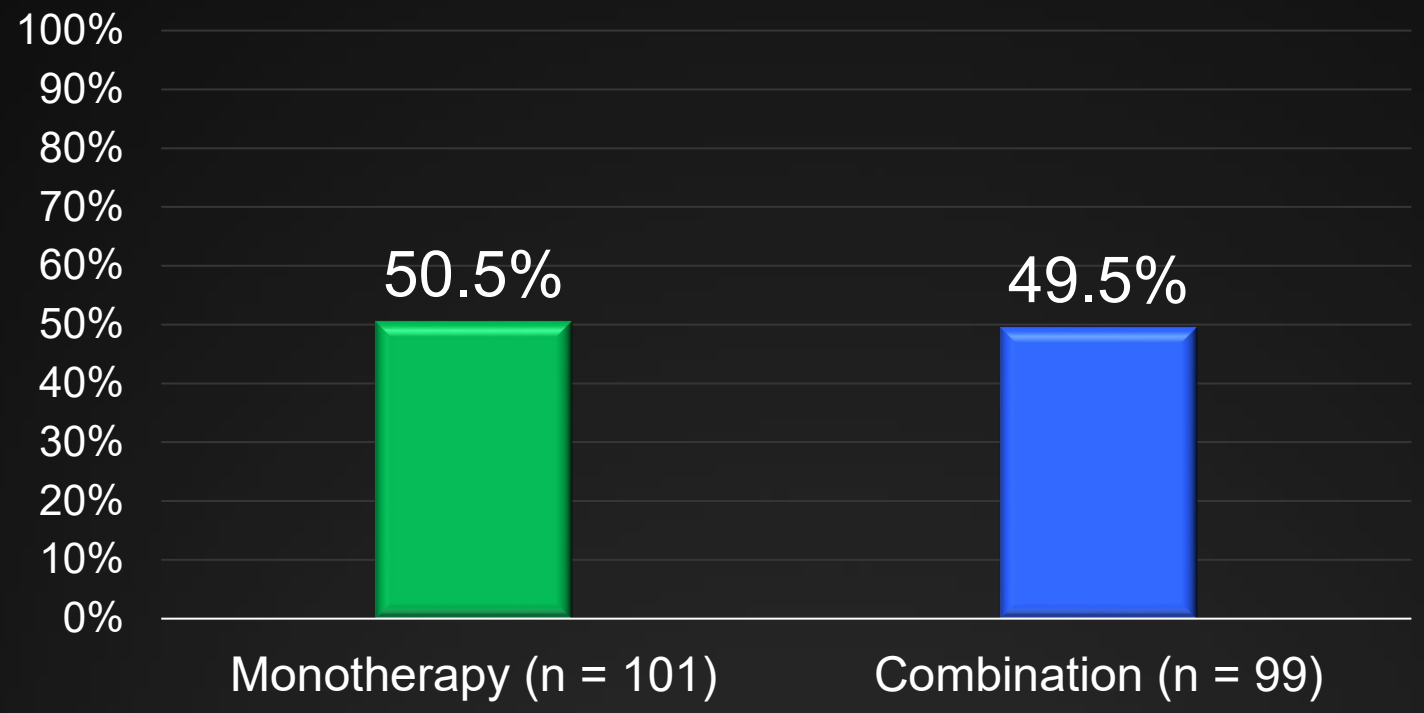


Giacobbe DR et al. Infect Dis Ther 2024; 13:1929-1948

Università degli Studi di Genova
Dipartimento di Scienze della Salute (DISSAL)
Genoa, Italy

Clinica Malattie Infettive
Ospedale Policlinico San Martino IRCCS
Genoa, Italy

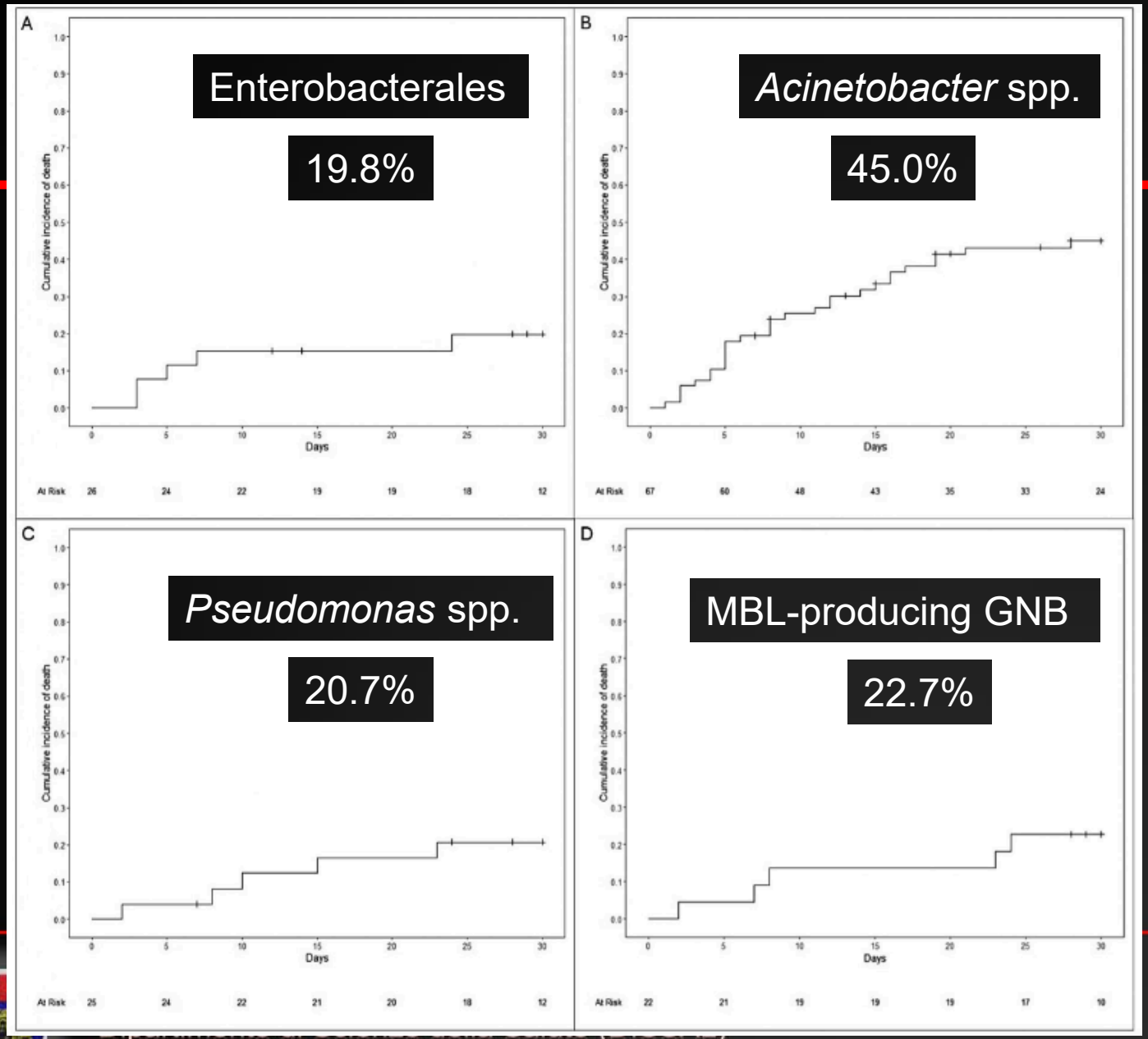
CEFI-SITA - preliminary results



Giacobbe DR et al. Infect Dis Ther 2024; 13:1929-1948

Università degli Studi di Genova
Dipartimento di Scienze della Salute (DISSAL)
Genoa, Italy

Clinica Malattie Infettive
Ospedale Policlinico San Martino IRCCS
Genoa, Italy



Mortality in infections treated with targeted cefiderocol

Giacobbe DR et al. Infect Dis Ther 2024; 13:1929-1948

Genoa, Italy

Clinica Malattie Infettive
Ospedale Policlinico San Martino IRCCS
Genoa, Italy

MBL's

- Enterobacterales
  - Ceftazidime/avibactam plus aztreonam
  - Aztreonam/avibactam
  - Cefiderocol
- Pseudomonas
  - Cefiderocol

Empirical treatment of severe infection targeting mainly P.aeruginosa

Clinical criteria for sepsis or septic shock? YES

- **Underlying comorbidities** (neutropenia, severe immunosuppression, structural lung disease, solid tumour)
- **Previous colonization by MDR/XDR *P. aeruginosa* strain**
- **Previous therapy (within 3 months) with an antipseudomonal β-lactam**
- **Hospital setting with a prevalence >15-20% of MDR *P. aeruginosa***

YES **(at any)** ⟷ **NO (to all)**

BACKBONE DRUG

Cefiderocol > imipenem//relebactam> Ceftolozane-tazobactam > c eftazidime-avibactam

SECOND ANTI-PSEUDOMONAL AGENT

Aminoglycoside/ colistin/ fosfomycin> fluoroquinolones

BACKBONE DRUG

Piperacillin/tazobactam/ carbapenem (mainly meropenem)/ ceftazidime/ cefepime

MDR, Multidrug-resistant; XDR, Extremely drug resistant

Università degli Studi di Genova
Dipartimento di Scienze della Salute (DISSAL)
Genoa, Italy

Bassetti M et al. *Curr Opin Infect Dis.* 2018;**31**(6):578-586.

Clinica Malattie Infettive
Ospedale Policlinico San Martino IRCCS
Genoa, Italy

Cefiderocol for *Acinetobacter baumannii*

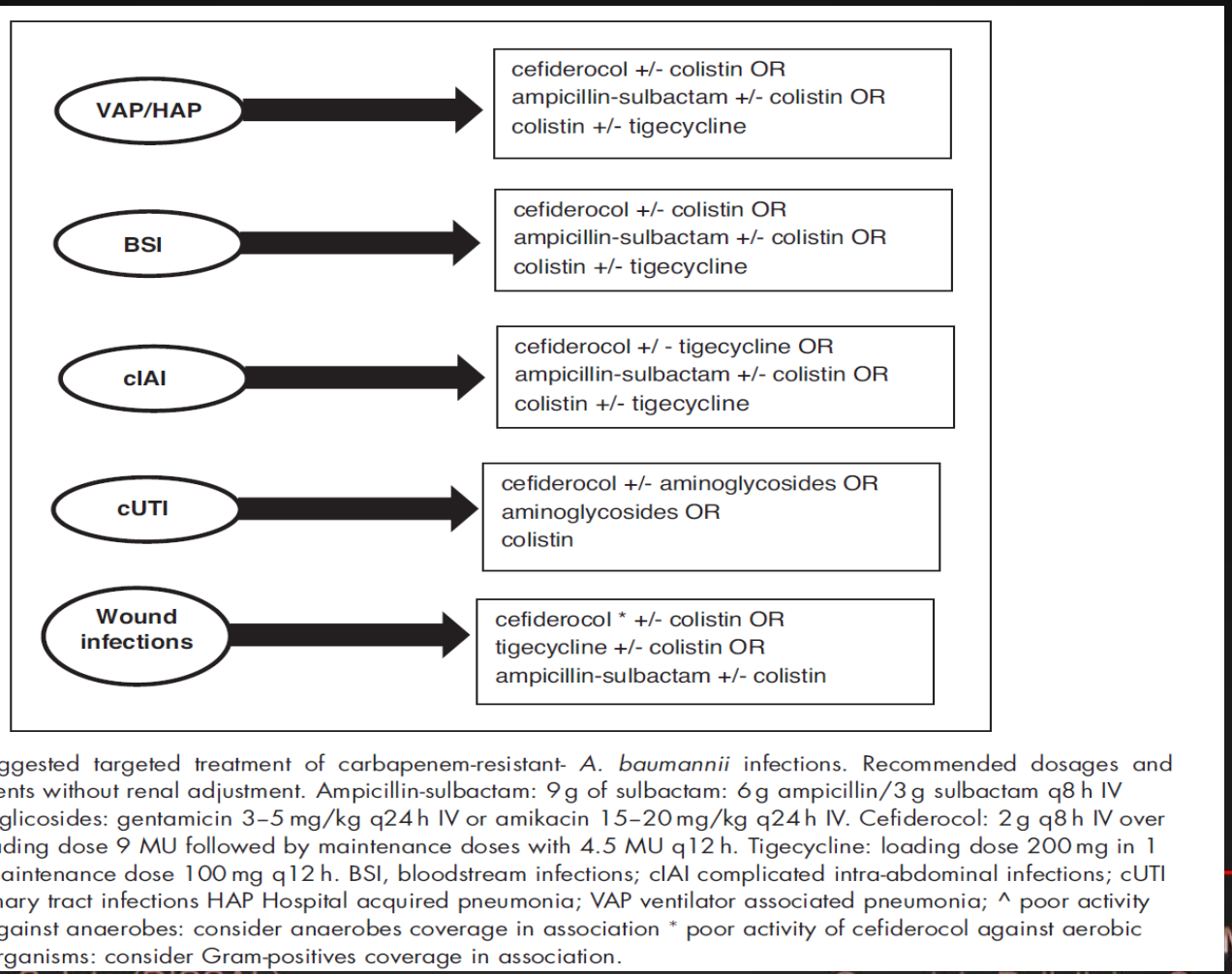


FIGURE 1. Suggested targeted treatment of carbapenem-resistant- *A. baumannii* infections. Recommended dosages and infusion for patients without renal adjustment. Ampicillin-sulbactam: 9 g of sulbactam: 6 g ampicillin/3 g sulbactam q8 h IV over 4 h. Aminoglicosides: gentamicin 3–5 mg/kg q24 h IV or amikacin 15–20 mg/kg q24 h IV. Cefiderocol: 2 g q8 h IV over 3 h. Colistin: loading dose 9 MU followed by maintenance doses with 4.5 MU q12 h. Tigecycline: loading dose 200 mg in 1 h followed by maintenance dose 100 mg q12 h. BSI, bloodstream infections; cIAI complicated intra-abdominal infections; cUTI complicated urinary tract infections HAP Hospital acquired pneumonia; VAP ventilator associated pneumonia; ^ poor activity of cefiderocol against anaerobes: consider anaerobes coverage in association * poor activity of cefiderocol against aerobic Gram-positive organisms: consider Gram-positives coverage in association.

Bassetti M et al. Curr Opin Infect Dis. 2022 Dec 1;35(6):545-551.