

Cefiderocol treatment for patients infected by *Stenotrophomonas maltophilia*, *Burkholderia cepacia* complex and *Achromobacter* spp: Subgroup analysis from the PERSEUS study

Summary of: Torre-Cisneros J, et al. *Eur J Clin Microbiol Infect Dis*. 2025;44(6):1367-1374.

STUDY DESIGN

Subgroup analysis of a retrospective, multicenter, observational, chart-review study



Overall PERSEUS population:
Adults (≥18 years) with life-threatening Gram-negative infection (excl. *Acinetobacter* spp.) who received cefiderocol (≥72 hrs) via the Early Access Program (EAP) in Spain
(N=261)

Rare pathogens subgroup

20 <i>S. maltophilia</i> infections	8 <i>Burkholderia cepacia</i> complex infections
5 <i>Achromobacter</i> spp. infections	1 Other non-fermenting Gram-negative bacteria



Study period:
2018-2022



Primary endpoints:

- Clinical cure, defined as cessation of cefiderocol treatment due to resolution of clinical signs and symptoms of infection (up through Day 28)
- All-cause mortality at Day 28 from the start of cefiderocol treatment

BASELINE CHARACTERISTICS: RARE PATHOGENS SUBGROUP

Critically ill population



76%
were in the ICU



62%
were on mechanical ventilation



59%
were immunosuppressed



75 TO 98
days median hospital length of stay

Baseline characteristics by species

	<i>S. maltophilia</i> (n=20)	<i>B. cepacia</i> complex (n=8)	<i>Achromobacter</i> spp. (n=5)
ICU, n (%)	15 (75.0)	7 (87.5)	3 (60.0)
Mechanical ventilation, n (%)	11 (55.0)	6 (75.0)	3 (60.0)
Septic shock, n (%)	6 (30.0)	1 (12.5)	1 (20.0)
Immunosuppressed, n (%)	11 (55.0)	5 (62.5)	3 (60.0)
Transplant recipient, n (%)	9 (45.0)	5 (62.5)	2 (40.0)
Prior colonization with same pathogen, n/N' (%)	9/19 (47.4)	5/8 (62.5)	2/5 (40.0)

Selected sites of infection^a

	<i>S. maltophilia</i> (n=20)	<i>B. cepacia</i> complex (n=8)	<i>Achromobacter</i> spp. (n=5)	Other non-fermenting Gram-negative bacteria (n=1)
Respiratory, n (%)	11 (55.0)	7 (87.5)	2 (40.0)	1 (100)
Urinary, n (%)	1 (5.0)	0 (0)	2 (40.0)	0 (0)
Other ^b , n (%)	8 (40.0)	1 (12.5)	1 (20.0)	0 (0)

• Most patients did not have secondary bacteremia or polymicrobial infection

^aSee publication for a complete list of infection sites.

^bOther includes bloodstream infection, intra-abdominal infection, and mediastinitis.

Antibiotic treatment

76% received prior antibiotic treatment

18% received cefiderocol as first-line therapy

Patients received cefiderocol for a median of **8-10 DAYS**

53% received combination therapy

Antibiotic resistance



100%
meropenem resistant



100%
ceftolozane/tazobactam resistant

High level of resistance to other options for the treatment of *S. maltophilia*:



92%
(11/12)
ceftazidime/avibactam resistant



60%
(6/10)
levofloxacin resistant



45.8%
(11/24)
TMP-SMX resistant

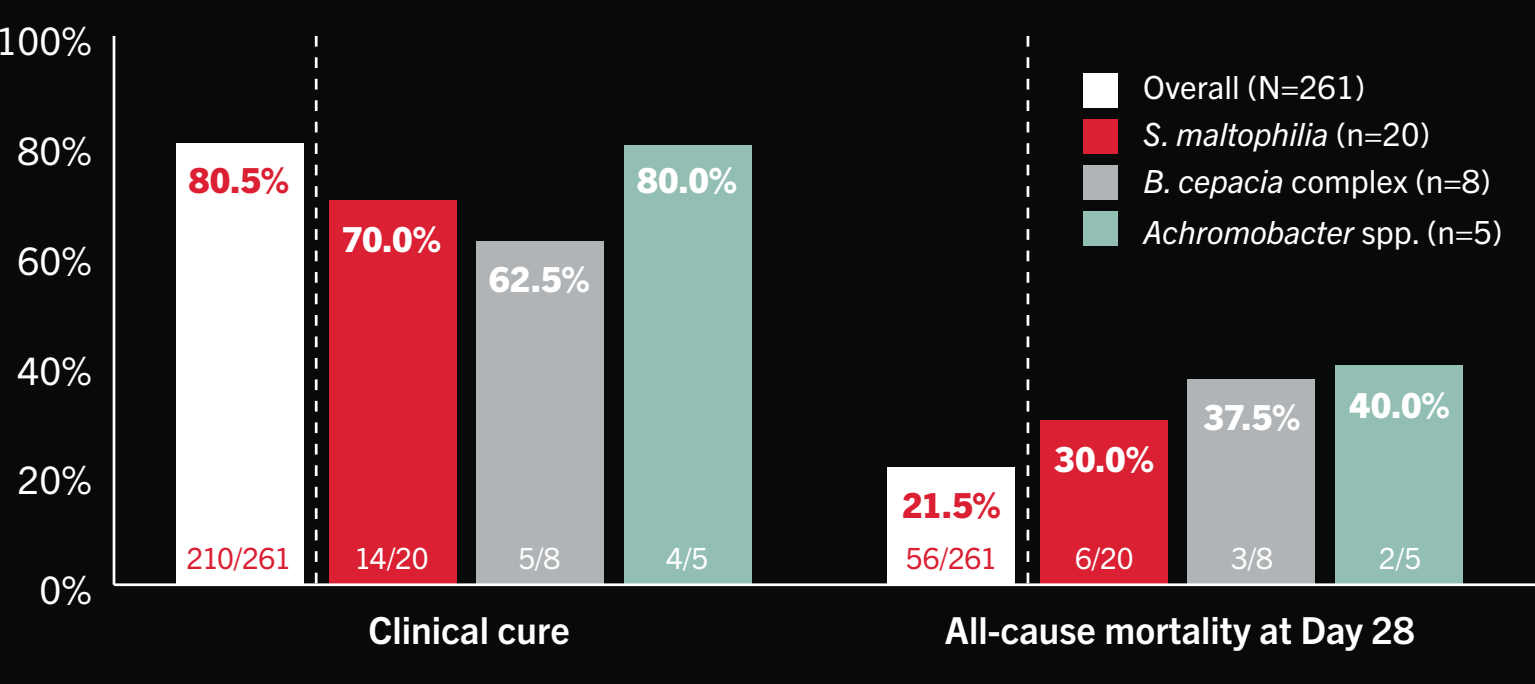


12.5%
(1/8)
minocycline resistant

CLINICAL OUTCOMES

Outcomes by species

• Clinical cure and all-cause mortality rates are calculated across all sites of infection



CONCLUSIONS

This subgroup analysis of the PERSEUS real-world evidence study focused on rare, non-fermenting Gram-negative pathogens

Adverse drug reactions associated with cefiderocol were reported infrequently (2.2%) in the overall PERSEUS population

The data corroborate cefiderocol as an appropriate option for *S. maltophilia*, *B. cepacia* complex, and *Achromobacter* spp. when choices are limited

STUDY LIMITATIONS

- Real-world evidence is intended to complement data from randomized clinical trials. Observational retrospective analyses are not intended for direct comparison with clinical trials
- Small subgroup analysis of a non-comparative, retrospective, observational study design; results should be considered as descriptive
- Cefiderocol use through the EAP in Spain may not precisely reflect its use in routine clinical practice in the United States
- Susceptibility information was based on reports in the medical charts without confirmation by a central laboratory
- Cefiderocol susceptibility testing was not routinely available in clinical microbiology laboratories at the time in Spain

EAP=Early Access Program; N'=number of patients with available information; TMP-SMX=trimethoprim-sulfamethoxazole.

As described in the cefiderocol prescribing information, at least 90% of *Achromobacter* spp., *Burkholderia cepacia* complex, *Citrobacter freundii* complex, *Citrobacter koseri*, *Klebsiella aerogenes*, *Klebsiella oxytoca*, *Morganella morganii*, *Proteus vulgaris*, *Providencia rettgeri*, and *Stenotrophomonas maltophilia* exhibit an in vitro minimum inhibitory concentration less than or equal to the susceptible breakpoint for cefiderocol against isolates of similar genus or organism group. However, the efficacy of cefiderocol in treating clinical infections caused by these bacteria has not been established in adequate and well-controlled clinical trials.