Supplementary Materials

Ceftaroline Fosamil for Treatment of Pediatric Complicated Skin and Soft Tissue Infections and Community-Acquired Pneumonia

Susanna Esposito¹, Timothy J. Carrothers², Todd Riccobene², Gregory G. Stone³, Michal Kantecki⁴

¹Pediatric Clinic, Pietro Barilla Children’s Hospital, University of Parma, Parma, Italy; ²AbbVie, Madison, NJ, USA; ³Pfizer, Groton, CT, USA; ⁴Pfizer, Paris, France

Corresponding author: Professor Susanna Esposito, Pediatric Clinic, Pietro Barilla Children’s Hospital, University of Parma Building 15, Via Gramsci 14, 43126 Parma, Italy

Tel: +39 0521 903524; E-mail: susannamariaroberta.esposito@unipr.it

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### Supplementary Table S1. Antibiotics with activity against Gram-positive organisms and approval for use in children

| Drug                  | Europe          | United States                                      |
|-----------------------|-----------------|---------------------------------------------------|
| Ceftaroline fosamil [1, 2] | All ages        | All ages (ABSSSI only for patients <2 months old) |
| Clindamycin [3, 4]    | All ages         | All ages                                           |
| Daptomycin [5, 6]     | Age ≥1 year      | Age ≥1 year                                        |
| Levofloxacin [7, 8]   | Adult only       | Adult only                                         |
| Linezolid [9, 10]     | Adult only       | All ages                                           |
| Teicoplanin [11]      | All ages         | Not available                                      |
| Tigecycline [12, 13]  | ≥8 years of age  | Adult only                                         |
| Vancomycin [14, 15]   | All ages         | All ages                                          |
| Dalbavancin [16, 17]  | Adult only       | Adult only                                         |
| Tedizolid [18, 19]    | Adult only       | Adult only                                         |
| Oritavancin [20, 21]  | Adult only       | Adult only                                         |

ABSSSI = acute bacterial skin and skin structure infections; MRSA = methicillin-resistant *Staphylococcus aureus*

*a*Not recommended if MRSA is suspected/confirmed.
### Supplementary Table S2. Ceftaroline fosamil approved pediatric and adult dose regimens

| Age and renal function group | Ceftaroline fosamil dose (infusion duration) and administration frequency |
|-----------------------------|--------------------------------------------------------------------------|
|                             | Normal/mild impairment (CrCl >50 mL/min) | Moderate impairment (>30 to ≤50 mL/min) | Severe impairment (≥15 to ≤30 mL/min) | ESRD, including hemodialysis (<15 mL/min) |
| **Standard dose**<sup>a,b</sup> | | | | |
| cSSTI/ABSSSI (S. aureus with an MIC ≤1 mg/L to ceftaroline) | | | | |
| Adults | 600 mg (5–60 min) q12h | 400 mg (5–60 min) q12h | 300 mg (5–60 min) q12h<sup>c</sup> | 200 mg (5–60 min) q12h<sup>c</sup> |
| Adolescents 12 to <18 years old, with bodyweight ≥33 kg | 600 mg (5–60 min) q12h or 400 mg q8h (5–60 min) | 400 mg (5–60 min) q12h<sup>c</sup> | 300 mg (5–60 min) q12h<sup>c</sup> | 200 mg (5–60 min) q12h<sup>c</sup> |
| Adolescents 12 to <18 years old, with bodyweight <33 kg; and children ≥2 to <12 years old | 12 mg/kg to a maximum of 400 mg (5–60 min) q8h | 8 mg/kg to a maximum of 400 mg (5–60 min) q8h<sup>c</sup> | 6 mg/kg to a maximum of 400 mg (5–60 min) q8h<sup>c</sup> | – |
| Infants ≥2 months to <2 years old | 8 mg/kg to a maximum of 300 mg (5–60 min) q8h | – | – | – |
| Neonates from birth to <2 months old<sup>d</sup> | 6 mg/kg to a maximum of 200 mg (30–60 min)<sup>e</sup> q8h | – | – | – |
| **High dose**<sup>b,c</sup> | | | | |
| cSSTI confirmed or suspected to be caused by S. aureus with an MIC = 2 or 4 mg/L to ceftaroline<sup>f</sup> | 600 mg (120 min) q8h | 400 mg (120 min) q8h | 300 mg (120 min) q8h | 200 mg (120 min) q8h |
| Children and adolescents ≥2 to <18 years old | 12 mg/kg to a maximum of 600 mg (120 min) q8h | 10 mg/kg to a maximum of 400 mg (120 min) q8h | 8 mg/kg to a maximum of 400 mg (120 min) q8h | – |
| Infants ≥2 months to <2 years old | 10 mg/kg to a maximum of 400 mg (120 min) q8h | – | – | – |

<sup>a</sup>For patients with supranormal renal clearance receiving the standard dose, an infusion time of 60 min may be preferable.

<sup>b</sup>Infusion times of less than 60 min, neonatal and high dose recommendations are based on PK and PD analyses only.

<sup>c</sup>Not approved in the US.

<sup>d</sup>For patients with supranormal renal clearance receiving the standard dose, an infusion time of 60 min may be preferable.

<sup>e</sup>Infusion times of less than 60 min, neonatal and high dose recommendations are based on PK and PD analyses only.

<sup>f</sup>Not approved in the US.
Only approved for neonates with ABSSSI in the US (gestational age 34 weeks and older and postnatal age 12 days and older).

60 min infusion recommended for neonates in Europe (30–60 min infusion approved in the US only).

For treatment of *S. aureus* for which the ceftaroline MIC is ≤1 mg/L, the standard dose is recommended.

ABSSSI acute bacterial skin and skin structure infection; CABP community-acquired bacterial pneumonia; CAP community-acquired pneumonia; cSSTI complicated skin and soft tissue infection; ESRD end-stage renal disease; IV intravenous; MIC minimum inhibitory concentration; CrCL creatinine clearance calculated using the Cockcroft–Gault formula [22] for adults and Schwartz bedside formula (in mL/min/1.73 m$^2$) [23] for pediatric patients; q8h every 8 h; q12h every 12 h.
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