**Table 1.** Characteristics of included population pharmacokinetics studies.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Study**  **(Publication year)** | **Country**  **(Type of study)** | **Number of subjects**  **(Male/Female)** | **Basic entry standard** | **Number of observations** | **Sampling Schedule** | **Age(years)**  **Mean±SD Median [Range]** | **Weight(kg)**  **Mean±SD Median [Range]** | **Daily Dose Mean±SD**  **Median [Range]** | **Bioassay [LOQ]** |
| Würthwein et al. (2011) | Germany (prospective, phase II randomized) | 19 (11/8) | Adults allo-HSCT recipients, immunocompromized | 239 | Day 1 and Day 4: immediately before administration; 0.5 to 1.5 h, 1.5 to 3 h, 3 to 5 h, 5 to 11 h, and 22 to 23 h after administration;  Thereafter: random time points twice weekly until the end of treatment | 43.4 [20.1-57.6] | 71.2 [56.0-99.2] | 70 mg on day 1, followed by 50 mg QD, IV infusion over 60min | HPLC [0.15 mg/L] |
| Würthwein et al. (2013) | Germany (prospective，phase II dose escalation) | 46 (21/25) | Adults with invasive Aspergillosis, immunocompro-mized | 468 | day 1 (immediately prior to dosing and 2 h [peak level], 3 h, 5 to 7 h, and 24 h [trough level] after the start of infusion);  peak and trough time points on days 4, 7, 14, 28h | 61 [18–74] | 76 [43–104] | 70 mg, QD  100 mg, QD  150 mg, QD  200 mg, QD,  IV infusion over 120min | LC-MS/MS [0.084 mg/L] |
| Pérez-Pitarch et al. (2018) | Spain  (prospective) | 12 (6/6) | Critically ill adults on CVVHD | 105 | Day 3 and later: predose, 0.5, 1, 1.5, 2, 2.5, 3, 5, 7, 9, 24 h after the start of infusion | 73 [56–78] | 75 [60–88] | NR | HPLC [NR] |
| Yang et al. (2019) | France (prospective) | 48 (28/20) | Children in ICU | 159 | NR | 6.07±2.74  5.09 [2.05-11.77] | 22.78±8.71  21.00 [11.80-47.50] | 70 mg/m2 (loading dose on day 1); 50 mg/m2 (maintenance dose, QD)  49.69±7.18 mg [35.96-80.99] | HPLC/MS [0.25 mg/L] |
| Wang  et al. (2020) | China  (prospective) | ECMO group  12 (9/3) | Adults on ECMO after LT | 271 | predose, 0.5, 1, 2, 4, 8, 12, 24h after the start of the infusion | 65 [60-67] | 64 [59-69.3] | 50mg QD | UPLC-MS/MS [0.39mg/L] |
| Control group  7 (5/2) | Adult patients never on ECMO after LT | 59 [56-62] | 65 [53-65] |
| Bailly  et al. (2020) | France  (prospective) | 13 (10/3) | Adult Patients in ICU with proven or suspected invasive candidiasis | NR | 0, 2, 3, 5, 7, 24h postinfusion | 53 [34-55] | 76.5 [60-85] | 50mg QD with a 140 mg loading dose; IV infusion over 60 minutes | LC-MS/MS [0.5mg/L] |
| Niu et al. (2020) | China  (prospective) | 48 (31/17) | Children with allo-HSCT | 139 | an opportunistic sampling strategy | 6.58±3.7 [0.61-14] | 21.7±10.3 [7.5-54] | loading dose of  70 mg/m2 followed by 50 mg/m2 | HPLC [0.6mg/L] |
| Borsuk-De Moor  et al. (2021) | Poland  (prospective) | 30 (16/14) | ICU patients | 180 | 0.5, 2, 4, 8, 12, 24h | 53 [28-76] | 74 [40-150] | 70mg intravenously on the first day and at 50mg i.v on the consecutive days | HPLC [0.18μg/mL] |
| Li et al. (2021) | China (prospective) | 42(31/11) | ICU patients with IFIs | 140 | 1,3,6, 24h on Day 4 | 56.82±16.39[20-88] | 59.18±11.40 [41-84.5] | a 70mg loading dose and a 50 mg maintenance dose | LC-MS/MS [0.2μg/mL] |
| Gastine et al. (2022) | Germany (retrospective) | 48 (26/22) | Children aged 3-17 | NR | Day1, Day4 and Day9 | 6 [0-16] | 21.5 [9.4-79.5] | CAS I :1mg/kg | NR |
| CAS II : 50mg/m2 |
| CAS III : 70mg/m2 |
| CAS IV :prediatric patients 3-23 months receiving 50 mg/m2 |
| Wu et al. (2022) | China  (prospective) | HTx group  27(22/5) | 27 HTx | 414 | predose, 1, 2, 6, 10, 16, 24h | HTx group  50 [20-73] | HTx group  59.5 [43.5-76] | 1-h IV infusion at a dose of 50mg every 24h after a loading dose of 70mg | LC-MS/MS [0.4 mg/L] |
| non-HTx group  31(21/10) | 31 non-HTx | Control group  58 [22-78] | Control group  62.0 [48.0-100.0] |
| Pressiat et al. (2022) | France  (prospective) | 20(9/11) | Adult LT recipients admitted to the liver ICU | 395 plasma and 50 PF values | predose, 1, 2, 4, 8, 12, 24h  D1, D3, D8 | 45 [40.7-50] | 72 [62-81] | A loading dose of 70mg and then 50mg per day (or 70mg per day if the recipient＞80kg), IV infusion over 1h | HPLC  [0.5mg/L] |
| Yang et al. (2022) | China  (retrospective) | 299(207/92) | Patients who have been diagnosed with confirmed or probable candidiasis | 242 plasma Cmin samples, and 679 plasma samples | Cmin samples at interval windows of 22-24h post-dose, other samples at interval windows of 0-12h and 12-24h post-dose | 44 [18-99] | 62.3 [30-100] | Most patients received the standard dosage regimen of 70/50 mg. Patients with hepatic  insufficiency (Child-Pugh B) received a reduced dosage  regimen of 70/35 mg and patients with body weight (WT) >  75 kg received an increased dosage regimen of 70/70 mg | LC-MS  [NR] |

allo-HSCT: allogeneic hematopoietic stem cell transplantation; ECMO: Extracorporeal membrane oxygenation; HTx: Heart transplantation; IFIs: invasive fungal infections; LT: Liver transplantation; PF: peritoneal fluid; NR: not reported