**04353**

# Rezafungin and caspofungin treatment response in candidaemia/invasive candidiasis by baseline *Candida* species: Analysis of pooled Phase 2 and Phase 3 results

*06. Fungal infection & disease*

6d. Antifungal drugs & treatment (incl. clinical trials)

**Likely attendance**

Onsite

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## Background

Rezafungin is a next-generation echinocandin antifungal offering prolonged half-life and high front-loaded plasma exposures (1–3). The current analysis examined mycological response data by *Candida* species and *in vitro* susceptibility at baseline from the rezafungin STRIVE (Phase 2: NCT02734862) and ReSTORE (Phase 3: NCT03667690) trials (4,5).

## Methods

STRIVE and ReSTORE were double-blind, randomised, controlled trials. Adults with candidaemia and/or invasive candidiasis, diagnosed by systemic manifestations of active infection and mycological confirmation, received intravenous rezafungin once-weekly (QWk) (Week 1: 400 mg; Weeks 2-4: 200 mg) or caspofungin once daily (QD; Day 1: 70 mg; Days 2-28: 50 mg) for ≥14 days (≤4 weeks). This analysis used pooled STRIVE and ReSTORE data to examine mycological response rates at Days 5 and 14 by *Candida* species and *in vitro* susceptibility at baseline according to the European Committee for Antimicrobial Susceptibility Testing (EUCAST) broth microdilution minimum inhibitory concentration (MIC) values.

## Results

The analysis included 294 subjects; 139 patients treated with rezafungin and 155 receiving caspofungin. Treatment groups were balanced regarding patient characteristics and *Candida* species at baseline (Table 1). The majority of subjects had candidemia (73.1%). The most common species identified at baseline were *C. albicans* (43.2%), *C. glabrata* (24.8%), *C. tropicalis* (16.7%) and *C. parapsilosis* complex (13.9%). Respective mycological eradication rates at Day 5 for *C. albicans*, *C. glabrata*, *C. tropicalis* and *C. parapsilosis* complex were 70.7%, 76.3%, 81.5% and 78.6% with rezafungin and 66.7%, 60.0%, 54.5% and 66.7% with caspofungin (Table 2). Mycological response with rezafungin and caspofungin according to *Candida* species at Days 5 and 14 did not appear to be affected by baseline MIC values (Table 3).

## Conclusions

Pooled analysis of STRIVE and ReSTORE trial data revealed comparable mycological response rates with rezafungin and caspofungin at Days 5 and 14 against most *Candida* species. Outcome response with rezafungin and caspofungin was generally unaffected by EUCAST MIC values.

Table 1

**Table 1. Baseline demographics and characteristics (mITT population)**

| | Rezafungin (400/200 mg) (N=139) | Caspofungin (70/50 mg) (N=155) | Total (N=294) |
|---|---|---|---|
| Age, mean ± SD, years (range) | 59.8 ± 15.7 (19, 91) | 60.8 ± 15.0 (20, 93) | |
| Age <65 years, n (%) | 82 (59.0) | 92 (59.4) | 174 (59.2) |
| Age ≥65 years, n (%) | 57 (41.0) | 63 (40.6) | 120 (40.8) |
| Female, n (%) | 49 (35.3) | 65 (41.9) | 114 (38.8) |
| Diagnosis, n (%) | | | |
| Candidaemia | 100 (71.9) | 115 (74.2) | 215 (73.1) |
| Invasive candidiasis | 39 (28.1) | 40 (25.8) | 79 (26.9) |
| *Candida* species diagnosed at baseline, n (%) | | | |
| *Candida albicans* | 58 (41.7) | 69 (44.5) | 127 (43.2) |
| *Candida dubliniensis* | 3 (2.2) | 2 (1.3) | 5 (1.7) |
| *Candida glabrata* | 38 (27.3) | 35 (22.6) | 73 (24.8) |
| *Candida guilliermondii* | 2 (1.4) | 0 | 2 (0.7) |
| *Candida kefyr* | 0 | 1 (0.6) | 1 (0.3) |
| *Candida krusei* | 5 (3.6) | 3 (1.9) | 8 (2.7) |
| *Candida lusitaniae* | 1 (0.7) | 1 (0.6) | 2 (0.7) |
| *Candida metapsilosis* | 3 (2.2) | 0 | 3 (1.0) |
| *Candida nivariensis* | 0 | 1 (0.6) | 1 (0.3) |
| *Candida parapsilosis* complex | 14 (10.1) | 27 (17.4) | 41 (13.9) |
| *Candida tropicalis* | 27 (19.4) | 22 (14.2) | 49 (16.7) |

All analyses were conducted using the mITT population comprising all STRIVE/ReSTORE subjects with a mycological diagnosis of candidaemia and/or invasive candidiasis within 96 hours of randomisation who received ≥1 dose of study drug.
Abbreviations: mITT, modified intention to treat; SD, standard deviation.

Table 2

**Table 2. Mycological response at Day 5 and Day 14 with rezafungin (QWk 400 mg/200 mg) and caspofungin (QD 70 mg/50 mg) treatment according to baseline *Candida* species (mITT population)**

| | Mycological response on Day 5 | | | | Mycological response on Day 14 | | | |
|---|---|---|---|---|---|---|---|---|
| | Rezafungin (400/200 mg) (N=139) | | Caspofungin (70/50 mg) (N=155) | | Rezafungin (400/200 mg) (N=139) | | Caspofungin (70/50 mg) (N=155) | |
| *Candida* species | n/N1 | % | n/N1 | % | n/N1 | % | n/N1 | % |
| *Candida albicans* | 41/58 | 70.7 | 46/69 | 66.7 | 39/58 | 67.2 | 46/69 | 66.7 |
| *Candida dubliniensis* | 3/3 | 100.0 | 2/2 | 100.0 | 3/3 | 100.0 | 2/2 | 100.0 |
| *Candida glabrata* | 29/38 | 76.3 | 21/35 | 60.0 | 32/38 | 84.2 | 22/35 | 62.9 |
| *Candida guilliermondii* | 1/2 | 50.0 | 0 | 0 | 1/2 | 50.0 | 0 | 0 |
| *Candida kefyr* | 0 | 0 | 1/1 | 100.0 | 0 | 0 | 1/1 | 100.0 |
| *Candida krusei* | 2/5 | 40.0 | 2/3 | 66.7 | 2/5 | 40.0 | 3/3 | 100.0 |
| *Candida lusitaniae* | 1/1 | 100.0 | 1/1 | 100.0 | 1/1 | 100.0 | 1/1 | 100.0 |
| *Candida metapsilosis* | 3/3 | 100.0 | 0 | 0 | 3/3 | 100.0 | 0 | 0 |
| *Candida nivariensis* | 0 | 0 | 1/1 | 100.0 | 0 | 0 | 1/1 | 100.0 |
| *Candida parapsilosis* complex | 11/14 | 78.6 | 18/27 | 66.7 | 11/14 | 78.6 | 19/27 | 70.4 |
| *Candida tropicalis* | 22/27 | 81.5 | 12/22 | 54.5 | 20/27 | 74.1 | 14/22 | 63.6 |

n = number of subjects with *Candida* species demonstrating mycological eradication
N1= total number of subjects with the corresponding spp. at baseline
All analyses were conducted using the mITT population comprising all STRIVE/ReSTORE subjects with a mycological diagnosis of candidaemia and/or invasive candidiasis within 96 hours of randomisation who received ≥1 dose of study drug.
Abbreviations: mITT, modified intention to treat.

Table 3

**Table 3. Mycological response at Day 5 and Day 14 with rezafungin (QWk 400 mg/200 mg) and caspofungin (QD 70 mg/50 mg) by minimum inhibitory concentration at baseline (mITT population)**

| | Day 5 mycological response | | Day 14 mycological response | |
|---|---|---|---|---|
| *Candida* species MIC value (µg/mL) | Rezafungin (400/200 mg) (N=139), n/N1 (%) | Caspofungin (70/50 mg) (N=155) n/N1 (%) | Rezafungin (400/200 mg) (N=139) n/N1 (%) | Caspofungin (70/50 mg) (N=155) n/N1 (%) |
| *Candida albicans* | | | | |
| 0.008 | 4/7 (57.1) | 4/6 (66.7) | 5/7 (71.4) | 3/6 (50.0) |
| 0.015 | 13/20 (65.0) | 6/9 (66.7) | 11/20 (55.0) | 5/9 (55.6) |
| 0.03 | 7/11 (63.6) | 20/34 (58.8) | 8/11 (72.7) | 24/34 (70.6) |
| 0.06 | 10/12 (83.3) | 15/18 (83.3) | 8/12 (66.7) | 14/18 (77.8) |
| 0.12 | 7/8 (87.5) | 1/2 (50.0) | 7/8 (87.5) | 0/2 (0) |
| *Candida glabrata* | | | | |
| 0.03 | 8/10 (80.0) | 3/6 (50.0) | 9/10 (90.0) | 3/6 (50.0) |
| 0.06 | 16/17 (94.1) | 18/27 (66.7) | 15/17 (88.2) | 18/27 (66.7) |
| 0.12 | 5/10 (50.0) | 0/2 (0) | 7/10 (70.0) | 1/2 (50.0) |
| 0.5 | 0/1 (0) | 0 | 1/1 (100.0) | 0 |
| *Candida parapsilosis* complex | | | | |
| 0.25 | 0 | 8/11 (72.7) | 0 | 7/11 (63.6) |
| 0.5 | 0/1 (0) | 10/17 (58.8) | 1/1 (100.0) | 12/17 (70.6) |
| 1 | 7/8 (87.5) | 0 | 6/8 (75.0) | 0 |
| 2 | 4/4 (100.0) | 0 | 4/4 (100.0) | 0 |
| *Candida tropicalis* | | | | |
| 0.015 | 3/3 (100.0) | 0/1 (0) | 3/3 (100.0) | 0/1 (0) |
| 0.03 | 9/11 (81.8) | 3/8 (37.5) | 8/11 (72.7) | 4/8 (50.0) |
| 0.06 | 7/10 (70.0) | 8/11 (72.7) | 6/10 (60.0) | 8/11 (72.7) |
| 0.12 | 3/3 (100.0) | 1/2 (50.0) | 3/3 (100.0) | 2/2 (100.0) |

n = number of subjects with *Candida* species demonstrating mycological eradication. N1= total number of subjects with the corresponding species at baseline.
All analyses were conducted using the mITT population comprising all STRIVE/ReSTORE subjects with a mycological diagnosis of candidaemia and/or invasive candidiasis within 96 hours of randomisation who received ≥1 dose of study drug.
Abbreviations: MIC, minimum inhibitory concentration; mITT, modified intention to treat.

**Keyword 1**
Clinical trials
**Keyword 2**
Fungi and clinical mycology
**Keyword 3**
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**References, word count: 30 words**

1.Sandison T, et al. Antimicrob Agents Chemother.2017;61:e01627–16; 2.Krishnan BR, et al. J Antibiot.2017;70:130–135; 3.Lakota EA, et al. Antimicrob Agents Chemother.2017;61:e00758-17; 4.Thompson GR, et al. Clin Infect Dis.2020:ciaa1380; 5.Thompson GR, et al. Lancet.2022:S0140-6736(22)02324-8.
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*Conflicts of interest*

**Do you have any conflicts of interest to declare?**
Yes
Honoraria or consultation fees
Personal grants/research supports
Institutional grants/research supports
I hold stock or stock options in companies in the medical field