

CANCIDAS® (caspofungin acetate)

Product Information

Indications:

CANCIDAS® was discovered within Merck's worldwide organization after more than 15 years of research. In Canada, it is indicated as:

- a first-line treatment of *invasive candidiasis*;
- a first-line treatment of *esophageal candidiasis*;
- treatment of *invasive aspergillosis* in patients who do not respond to or who cannot tolerate the other antifungal therapies, amphotericin B, lipid formulations of amphotericin B and/or itraconazole.

Mechanism of Action:

Caspofungin is the first of a new class of antifungal drugs called *echinocandins*, which have a unique mechanism of action. This new class inhibits the synthesis of β (1,3)-D-glucan, an essential component of the cell wall of many filamentous fungi; β (1,3)-D-glucan is not present in human cells.

Efficacy:

For Invasive Candidiasis:

A total of 239 adults with proven invasive candidiasis—80 per cent of whom had candidemia—were enrolled in a double-blind, randomized study. Patients received either intravenous caspofungin (a 70 mg loading dose followed by 50 mg daily dose) or intravenous amphotericin B (a once daily dose of 0.6 to 1.0 mg/kg of body weight). Favourable response rates were seen with caspofungin after:

- at least one day of intravenous therapy (224 out of 239 patients) 73.4 per cent for caspofungin compared to 61.7 per cent for amphotericin B;¹
- five or more days of intravenous therapy (185 out of 239 patients) 80.7 per cent for caspofungin compared to 64.9 per cent for amphotericin B.¹

For Esophageal Candidiasis:

A double-blind, randomized phase III study showed that, five to seven days following treatment, the proportion of patients demonstrating a favourable overall response with caspofungin (n=81) 50 mg once a day was comparable to that seen with fluconazole (n=94) 200 mg once daily taken intravenously (81.5 per cent versus 85.1 per cent respectively).²

For invasive aspergillosis:

In an open-label, non-comparative study conducted in 69 patients with invasive aspergillosis who were administered caspofungin (a 70 mg loading dose followed by 50 mg daily dose), the following favourable response rates were seen:³

- 41 per cent after at least one dose;
- 50 per cent after more than seven days of therapy;
- 36 per cent for patients refractory to previous therapies;
- 70 per cent for patients who were intolerant to previous therapies.

Tolerability:

For Invasive Candidiasis:

Patients treated with caspofungin had a significantly lower incidence of drug-related clinical adverse experiences compared to amphotericin B (28.9 per cent versus 58.4 per cent respectively);¹

When treated with caspofungin a significantly lower proportion of patients encountered infusion-related adverse experience compared to amphotericin B (20.2 per cent versus 48.8 per cent respectively).¹

Caspofungin is less toxic than amphotericin B.¹

For Esophageal Candidiasis:

Clinical data has shown that caspofungin is less toxic than amphotericin B and was generally as well tolerated as fluconazole given to patients intravenously.²

For invasive aspergillosis:

In an open-label, non-comparative study conducted in 69 patients with invasive aspergillosis caspofungin demonstrated a low incidence of drug-related clinical adverse experiences.³

Dosage/Administration:

For Invasive Candidiasis:

A single 70 mg loading dose should be administered on day one followed by 50 mg daily thereafter. Caspofungin is administered intravenously by slow intravenous infusion over approximately one hour.

For Esophageal Candidiasis:

50 mg daily should be administered by slow intravenous infusion over approximately one hour. A 70 mg loading dose has not been studied with this indication.

For invasive aspergillosis:

A single 70 mg loading dose should be administered on day one followed by 50 mg daily thereafter. Caspofungin is administered intravenously by slow intravenous infusion over approximately one hour.

Cost: A standard daily 50 mg dose of CANCIDAS® costs \$440; the 70 mg loading dose costs \$567.

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References:

1. Mora-Duarte J et al. *N Engl J Med*, 2002, Vol. 347(25):2020-9
2. Villanueva A et al. A randomized double-blind, multi-center study of caspofungin versus fluconazole for the treatment of esophageal candidiasis. *Am J Med* 2002;113:294-9
3. CANCIDAS® Canadian Product Monograph

- 30 -

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