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## Introduction

During cancer treatment, the appearance of fever with neutropenia is the first manifestation of potentially life-threatening bacterial infection. The current standart of patient management involves the empirical intravenous administration of combination of antibacterials or a single broad spectrum agent.

The recent articles [Freifeld A et al. N Engl J Med, 1999; 341: 305-11 and Kern WV et al. N Engl J Med, 1999; 341: 312-18] have shown that oral administration of antibacterials could be an acceptable alternative to intravenous treatment for patients with febrile neutropenia and low-risk of complications (neutrophil count less than 500/mm<sup>3</sup> but more than 100/mm<sup>3</sup>, duration of neutropenia 7-10 days). It should be noted, that more patients in the oral regimen groups than in the intravenous regimens groups reported diarrhea or other gastrointestinal symptoms.

## Objective

To compare the cost of oral and intravenous regimens of therapy for low-risk febrile patients with neutropenia.

## Regimens

1. Amoxicillin-Clavulanate (625 mg, per os, t.i.d) plus Ciprofloxacin (750 mg, per os, b.i.d.);
2. Ceftriaxone (2 g, iv, o.d.) plus Amikacin (20 mg per kg, iv infusion, o.d.);
3. Ceftazidime (2 g, iv, t.i.d.).

Duration of all regimens - 10 days.

## Materials and methods

Data sources: 1. Russian Farmaceutical bulletin, # 90, 1999; 2. Price list of Smolensk Regional Hospital for 1999.

The cost was calculated by summing up the acquisition cost of drugs and the cost of both the materials used and the time spent by the staff to administer the therapy.

We took into assessment all the generics that were available in Russia in September 1999. They are: *Augmentin* (SmithKline Beecham), *Amoksiklav* (Lek), *Ciprobay* (Bayer), *Ciprinol* (KRKA), *Rocephin* (Roche), *Longaceph* (ICN Galenika), *Lendacin* (Lek), Amikacin (ICN Galenika), Amikacin (Sintez, Russia), *Amikin* (Bristol-Myers Squibb), *Fortum* (Glaxo Wellcome).

## Results

The cost of Ceftriaxone/Amikacin intravenous regimen makes up from 175.5 USD [*Lendacin*/Amikacin (Sintez)] to 690.3 USD [*Rocephin*/Amikacin (ICN Galenika)]. The cost of Ceftazidime intravenous regimen is 579 USD [*Fortum*]. The cost of Amoxicillin-Clavulanate/Ciprofloxacin oral regimen ranges from 37.6 USD [*Amoksiklav*/*Ciprinol*] to 108.3 USD [*Augmentin*/*Ciprobay*]. (fig. 1)

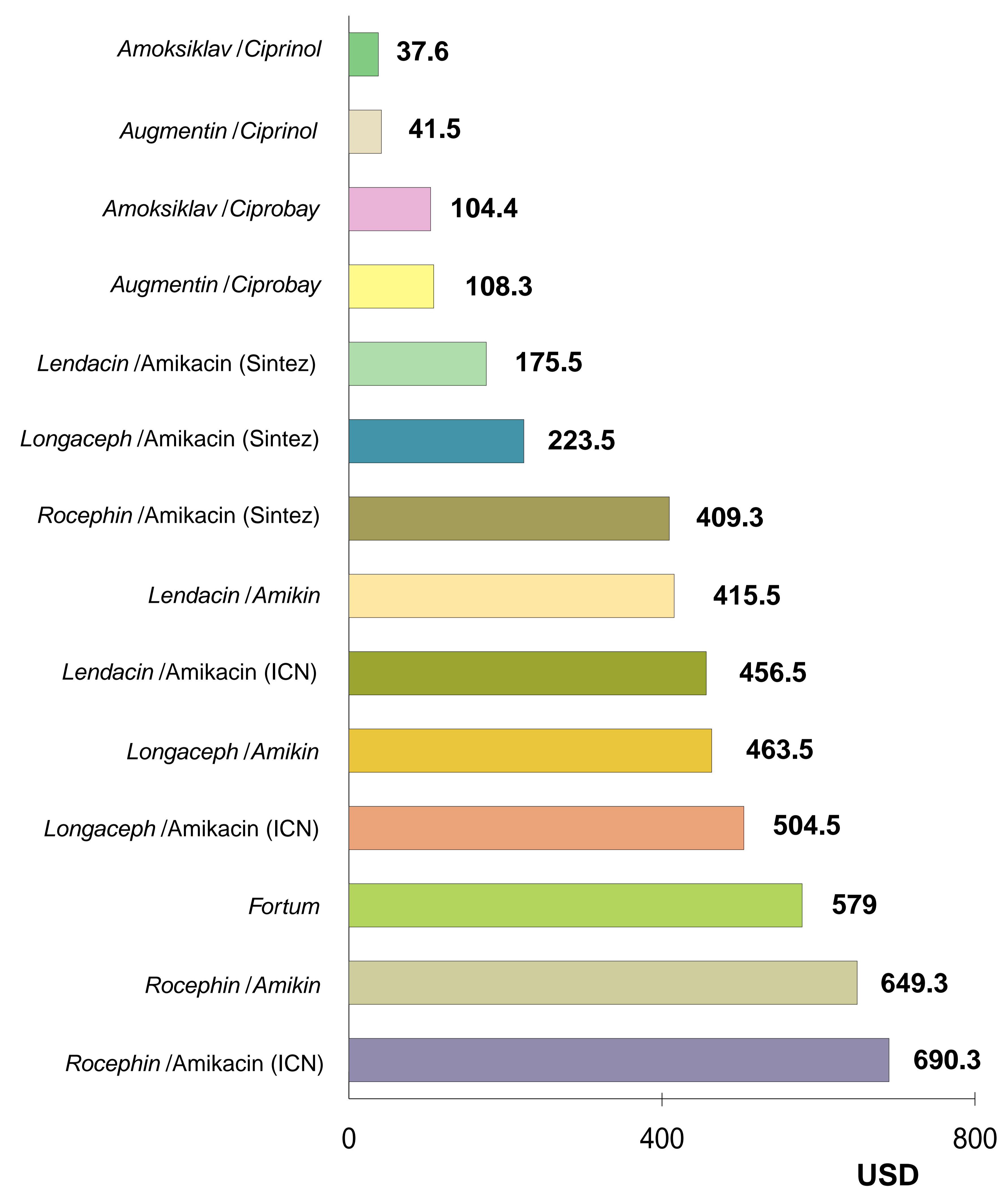


Fig. 1. Cost of antibacterial regimens for treatment of febrile neutropenia

## Conclusions

The cheapest antibacterial therapeutic regimen for low-risk febrile patients with neutropenia in Russia is Amoxicillin-Clavulanate/Ciprofloxacin with the following generics: *Amoksiklav*/*Ciprinol*.