COST-EFFECTIVENESS OF LENOGRASTIM ON NEUTROPENIA DURATION IN ADULTS RECEIVING CHEMOTHERAPY FOR LEUKEMIA

Introduction
Neutropenia is defined as a situation in which the absolute neutrophil count (ANC) falls below a certain threshold. This condition is often associated with chemotherapy and increases the risk of infections. Lenograstim (G-CSF), a recombinant form of human granulocyte colony-stimulating factor (G-CSF), is used in the treatment of neutropenia in adult patients receiving chemotherapy for leukemia. A decrease in the neutrophil count results in impaired treatment. Development of neutropenia may require chemotherapy dose reduction or discontinuation of treatment. The analysis was performed according to the PICO formula: Population: adults receiving chemotherapy for leukemia Intervention: prophylactic G-CSF use Comparator: no treatment Outcome: duration of neutropenia

Methodology of the analysis
The methods section of the analysis was in the systematic review. Data concerning time to ANC recovery, the number of days with fever, length of hospitalization, and costs were considered in the conducted systematic review. These included trials, in which products containing G-CSF were used.

Modeling of the course of treatment
The course of treatment was described based on the following phases: 1. Hospitalization due to infection 2. Hospitalization due to no infection

Conclusions
In a time horizon of one chemotherapy cycle, the total cost difference between lenograstim and pegfilgrastim was -500 PLN (CI95% [-600; -400]). If lenograstim dosage were 0.64 MIU/kg body weight, estimated cost difference between lenograstim and pegfilgrastim would be 1,600 PLN (CI95% [1,300; 1,900]) and compared to pegfilgrastim as for leukemia.

Acknowledgments
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References

Abstract
The objective of the analysis was to compare the costs of lenograstim (G-CSF) treatment in adults receiving chemotherapy for leukemia with no treatment. The analysis was performed according to the PICO formula: Population: adults receiving chemotherapy for leukemia Intervention: prophylactic G-CSF use Comparator: no treatment Outcome: duration of neutropenia

Results
The analysis was performed according to the PICO formula: Population: adults receiving chemotherapy for leukemia Intervention: prophylactic G-CSF use Comparator: no treatment Outcome: duration of neutropenia

Cost analysis
Costs of oncological and haematological hospitalization were obtained from the current NHF catalogue (June 2009). The price of 1 MIU of lenograstim and pegfilgrastim was modeled based on the reference costs list. Data concerning time to ANC recovery, the number of days with fever, length of hospitalization, and costs were considered in the conducted systematic review. These included trials, in which products containing G-CSF were used. In a time horizon of one chemotherapy cycle, the total cost difference between lenograstim and pegfilgrastim was -500 PLN (CI95% [-600; -400]). If lenograstim dosage were 0.64 MIU/kg body weight, estimated cost difference between lenograstim and pegfilgrastim would be 1,600 PLN (CI95% [1,300; 1,900]) and compared to pegfilgrastim as for leukemia.

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