

Potential Cost Savings When Switching From Filgrastim to Pegfilgrastim

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Origin of Study	USA
Type of Study	RETROSPECTIVE REVIEW OF PHYSICIAN PRESCRIBING PRACTICES
Objectives	Evaluate the economic impact of switching from filgrastim to pegfilgrastim in patients with cancer receiving myelosuppressive therapy
Study Design	<p>A retrospective study of filgrastim utilization by cancer patients receiving myelosuppressive therapy was performed at the Long Beach, California, VA Medical Center from January 2001 to May 2003.</p> <p>The dosage of filgrastim was calculated as 5 µg/kg and rounded to the nearest whole vial of 480 µg. Patients who received filgrastim 300 µg/vial were excluded.</p>
Patients	<p>The cohort population studied consisted of 43 male patients between 30 and 85 years of age (median, 65 years).</p> <p>These patients had various cancer diagnoses, with 28% diagnosed with non-Hodgkin's lymphoma and 26% diagnosed with lung cancer.</p>
Observations	<p>A total of 116 courses of filgrastim treatment, each consisting of 3–10 days of filgrastim use, were reviewed.</p> <p>The majority of courses were 7 days (66.4%) or 10 days in duration (19.8%). The cost savings for filgrastim versus pegfilgrastim is evident for patients requiring the 480 µg/vial of filgrastim for 10 days' use. At this dosage, there is a \$79 advantage to switch from filgrastim to pegfilgrastim.</p>
Conclusions	<p>Based on physician prescribing patterns for this drug, approximately 20% of patients would be candidates to be switched to pegfilgrastim without incurring additional drug cost.</p> <p>The actual drug cost savings would be approximately \$900 annually. The indirect cost savings would be fewer injections per course of treatment, patients who are unable or unwilling to self-administer pegfilgrastim would have only one clinic visit to receive the drug, and nursing staff time would be reduced.</p>
Discussion	<p>In this review of physician prescribing patterns, Kaneshiro and colleagues found a \$79 advantage of pegfilgrastim (Neulasta) over filgrastim (Neupogen) at the filgrastim 480 µg/vial dose, administered for 10 days, resulting in an annual savings in drug costs of approximately \$900. Based on these findings, about 20% of patients could be switched to pegfilgrastim without an increase in drug costs.</p> <p>Filgrastim is frequently prescribed for cancer patients on myelosuppressive chemotherapy regimens. This colony-stimulating factor is given to decrease the incidence of febrile neutropenia in patients with nonmyeloid malignancies undergoing treatment with myelosuppressive anticancer drugs. However, filgrastim treatment requires daily injections, which patients may find to be inconvenient and burdensome. As Kaneshiro et al report, most patients require 7 or 10 daily injections for each cycle of chemotherapy.</p>

Discussion

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Treatment with pegfilgrastim represents another option for these patients. This agent, like filgrastim, is also indicated for decreasing the incidence of febrile neutropenia but, unlike filgrastim, is administered as a single fixed dose every chemotherapy cycle. However, relatively little is known about the economic impact of prescribing filgrastim versus pegfilgrastim.

Kaneshiro and colleagues sought to evaluate the economic impact of switching from filgrastim to pegfilgrastim. This retrospective analysis included a cohort population treated at a Veterans Administration Medical Center between January 2001 and May 2003. The study population included 43 male patients (median age 65 years, range 30–85) with various cancer diagnoses, mainly non-Hodgkin's lymphoma (28%) and lung cancer (26%).

Investigators reviewed 116 courses of filgrastim treatment. Filgrastim doses were calculated as 5 µg/kg, rounded to the nearest whole vial (480 µg). Treatment courses included 3–10 days; about 66% of the courses were 7 days in length and another 20% were 10 days.

Other filgrastim-versus-pegfilgrastim cost analyses have been conducted. Heckinger and co-workers performed a cost-minimization analysis of filgrastim versus pegfilgrastim in breast cancer patients (stage II–IV) receiving chemotherapy. This analysis took into account direct and indirect costs to the patient and caregiver. Over 4 cycles of chemotherapy, the cost savings with pegfilgrastim was \$1,164 from a third-party perspective and \$1,822 from a societal perspective.

Now, results of the retrospective analysis from Kaneshiro and colleagues suggest that a sizable proportion of patients could be switched to pegfilgrastim without an increase in actual drug cost. In addition, a switching strategy would produce indirect cost savings; for example, less nursing staff time would be required, since fewer doses would have to be administered.

Key Points

- Pegfilgrastim has a drug cost advantage over filgrastim when administered for 10 days at the 480 µg/vial dose.
- About 20% of patients could be switched to pegfilgrastim without an increase in drug costs.
- Switching to pegfilgrastim may result in additional indirect cost savings.

References

Heckinger E, Lee J, Calhoun E, Bennett CL. Cost minimization analysis of filgrastim (C-CSF) versus pegfilgrastim (peg-G-CSF) for stage II-IV breast cancer patients receiving chemotherapy: assessments based on third-party and societal perspectives. Paper presented at the 39th Annual Meeting of the American Society of Clinical Oncology; May 31–June 3, 2003; Chicago, Ill. Abstract 2116.

Kaneshiro CA, Chretien SD, Iyer PR. Potential cost savings when switching from filgrastim to pegfilgrastim. Poster presented at the 38th Midyear Clinical Meeting of the American Society of Health-System Pharmacists; December 7–11, 2003; New Orleans, La. Abstract P-357.