

# Pegfilgrast

Pegfilgrastim INN

pre-filled syringe contains 0.6 mL solution containing Pegfilgrastim INN 6 mg.

stimulating factor that acts on hematopoietic cells by binding to specific cell stimulating proliferation, differentiation, commitment and end cell functional

filgrastim were studied in 379 patients with cancer. The pharmacokinetics of and clearance decreased with increases in dose. Neutrophil receptor binding of the clearance of Pegfilgrastim, and serum clearance is directly related to the addition to numbers of neutrophils, body weight appeared to be a factor. Patients experienced higher systemic exposure to Pegfilgrastim after receiving a weight. A large variability in the pharmacokinetics of Pegfilgrastim was observed. Half-life of Pegfilgrastim ranged from 15 to 80 hours after subcutaneous injection.

ifferences were observed in the pharmacokinetics of Pegfilgrastim, and no differences in pharmacokinetics of geriatric patients ( $\geq 65$  years of age) compared with younger patients. The pharmacokinetics of Pegfilgrastim were studied in pediatric patients with cancer and had no effect on the pharmacokinetics of Pegfilgrastim. The pharmacokinetic of Pegfilgrastim in patients with renal insufficiency has not been assessed.

may decrease the incidence of infection, as manifested by febrile neutropenia, in patients with malignancies receiving myelosuppressive anti-cancer drugs associated with a history of febrile neutropenia.

is indicated for the mobilization of peripheral blood progenitor cells for hematopoietic

## ADMINISTRATION

The recommended dose of Pegfilgrastim is a single subcutaneous injection of 6 mg administered once daily in adults. Do not administer Pegfilgrastim between 14 days before and 24 hours after cyclophosphamide chemotherapy.

Do not use drug products for particulate matter and discoloration prior to administration, unless the manufacturer's permit. Do not administer Pegfilgrastim if discoloration or particulates are present.

The single-use pre-filled syringe contains dry natural rubber (latex); persons with latex allergy should not administer this product.

Do not administer Pegfilgrastim to patients with a history of serious allergic reactions to Pegfilgrastim or Filgrastim.

There are no studies with varying degrees of renal dysfunction, including end stage renal disease, to evaluate the effect on the pharmacokinetics of Pegfilgrastim. Therefore, Pegfilgrastim dose adjustment in patients with renal dysfunction is not necessary.

In clinical trials, there is a potential for immunogenicity. Binding antibodies to Pegfilgrastim were detected in approximately 6% (51/849) of patients with metastatic cancer. Pegfilgrastim-treated subjects who were negative at baseline developed antibodies to Pegfilgrastim following treatment. None of these 4 patients had evidence of allergic reactions detected using a cell-based bioassay.

Assay performance is highly dependent on the sensitivity and specificity of the assay and antibody positivity in an assay may be influenced by several factors, including sample handling, timing of sample collection, concomitant medications and other reasons, comparison of the incidence of antibodies to Pegfilgrastim with the incidence of antibodies to other products may be misleading.

Adverse reactions, including anaphylaxis, can occur following the administration of Pegfilgrastim. Evaluate for allergic reactions in patients who report left upper abdominal or shoulder pain after administration.

## Acute Respiratory Distress Syndrome

Acute Respiratory Distress Syndrome (ARDS) can occur in patients receiving Pegfilgrastim. Evaluate for hypoxemia and lung infiltrates or respiratory distress after receiving Pegfilgrastim for cancer. Discontinue Pegfilgrastim in patients with ARDS.

Allergic reactions, including anaphylaxis, can occur in patients receiving Pegfilgrastim. The incidence of allergic reactions, including anaphylaxis, is higher in patients who receive Pegfilgrastim after discontinuation of initial anti-allergic treatment. Permanently discontinuing Pegfilgrastim in patients with allergic reactions is not necessary.

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## Use in Patients With Sickle Cell Disorders

Severe sickle cell crises can occur in patients with sickle cell disorders receiving Pegfilgrastim. Severe sickle cell crises can occur in patients with sickle cell disorders receiving Filgrastim, the parent compound of Pegfilgrastim.

## Potential for Tumor Growth Stimulatory Effects on Malignant Cells

The granulocyte-colony stimulating factor (G-CSF) receptor through which Pegfilgrastim and Filgrastim act has been found on tumor cell lines. The possibility that Pegfilgrastim acts as a growth factor for any type of tumor, including myeloid malignancies and myelodysplasia, diseases for which Pegfilgrastim is approved, cannot be excluded.

## USE IN PREGNANCY AND LACTATION

Pregnancy Category C

There are no adequate and well-controlled studies in pregnant women. Pegfilgrastim was embryotoxic and increased pregnancy loss in pregnant rabbits that received cumulative doses approximately 4 times the recommended human dose (based on body surface area). Signs of maternal toxicity occurred at doses approximately 4 times the recommended human dose. Pegfilgrastim should be used during pregnancy only if the potential benefit to the mother outweighs the potential risk to the fetus.

In animal reproduction studies, when pregnant rabbits received Pegfilgrastim at cumulative doses approximately 4 times the recommended human dose (based on body surface area), in addition to embryolethality and spontaneous abortions occurred. Signs of maternal toxicity (reductions in body weight gain/food consumption) and decreased fetal weights occurred at maternal doses approximately equal to the recommended human dose (based on body surface area). There were no structural anomalies observed in rabbit offspring at any dose tested. No evidence of reproductive/developmental toxicity occurred in the offspring of pregnant rats that received cumulative doses of Pegfilgrastim approximately 10 times the recommended human dose (based on body surface area).

## Nursing Mothers

It is not known whether Pegfilgrastim is secreted in human milk. Other recombinant G-CSF products are poorly secreted in breast milk and G-CSF is not orally absorbed by neonates. Caution should be exercised when administered to a nursing woman.

## USE IN CHILDREN

Safety and effectiveness of Pegfilgrastim in pediatric patients have not been established.

## USE IN GERIATRIC PATIENTS

Of the 932 patients with cancer who received Pegfilgrastim in clinical studies, 139 (15%) were age 65 and over, and 18 (2%) were age 75 and over. No overall differences in safety or effectiveness were observed between patients age 65 and older and younger patients.

## DRUG INTERACTION

No formal drug interaction studies between Pegfilgrastim and other drugs have been performed. Increased hematopoietic activity of the bone marrow in response to growth factor therapy may result in transiently positive bone-imaging changes. Consider these findings when interpreting bone-imaging results. This medicinal product must not be mixed with other medicinal product, particularly with calcium chloride solutions.

## OVERDOSE

The maximum amount of Pegfilgrastim that can be safely administered in single or multiple doses has not been determined. Single subcutaneous doses of 300 mcg/kg have been administered to 8 healthy volunteers and 3 patients with non-small cell lung cancer without serious adverse effects. These patients experienced a mean maximum absolute neutrophil count (ANC) of  $55 \times 10^9/L$ , with a corresponding maximum WBC of  $67 \times 10^9/L$ . The absolute maximum ANC observed was  $96 \times 10^9/L$  and the corresponding absolute maximum WBC observed of  $120 \times 10^9/L$ . The duration of leukocytosis was from 6 to 13 days. The effectiveness of leukapheresis in the management of symptomatic individuals with Pegfilgrastim-induced leukocytosis has not been studied.

## STORAGE

Store the pre-filled syringe in original carton at  $2^\circ$  to  $8^\circ$  C, away from light. Do not freeze. Before use, Pegfilgrastim may be exposed to room temperature (not above  $30^\circ$  C) for a maximum of 72 hours. Product left at room temperature for more than 72 hours should be discarded. Pegfilgrastim should be vigorously shaken. Excessive shaking may aggregate Pegfilgrastim, rendering it biologically inactive. Do not use if out of the reach of children.

## PACKAGING

Pegfilgrastim Injection: Each commercial box contains one auto guarded pre-filled syringe with one pad & one first aid bandage.

Manufactured By

 **BEACON**<sup>®</sup>  
Pharmaceuticals Limited  
Bhaluka, Mymensingh, Bangladesh