NEOFIL™ 300mcg Injection
(Filgrastim)

DESCRIPTION:
NEOFIL™ is a man-made form of granulocyte-colony stimulating factor (G-CSF), which is made using the bacteria Escherichia coli. G-CSF is a substance produced by the body. It stimulates the growth of neutrophils, a type of white blood cell important in the body's fight against infection

COMPOSITION:
NEOFIL™ 300mcg Injection:
Each 1.0ml vial contains:
Filgrastim (r-Met-HU-G-CSF).....300mcg

CLINICAL PHARMACOLOGY:
Pharmacodynamics:
Mechanism of action: Pharmacotherapeutic group: Cytokines

Human G-CSF is a glycoprotein which regulates the production and release of functional neutrophils from the bone marrow. Recombinant methionyl human granulocyte-colony stimulating factor (r-Met-HU-G-CSF) i.e. filgrastim causes marked increases in peripheral blood neutrophil counts within twenty four hours, with minor increases in monocytes. In some SCN (severe chronic neutropenia) patients filgrastim can also induce a minor increase in the number of circulating eosinophils and basophils relative to baseline; some of these patients may present with eosinophilia or basophilia already prior to treatment. Elevations of neutrophil counts are dose-dependent at recommended doses. Neutrophils produced in response to filgrastim show normal or enhanced function as demonstrated by tests of chemotactic and phagocytic function. Following termination of filgrastim therapy, circulating neutrophil counts decrease by 50% within 1 to 2 days, and to normal levels within 1 to 7 days

Pharmacokinetics:
Clearance of filgrastim has been shown to follow first-order pharmacokinetics after both subcutaneous and intravenous administration. The serum elimination half life of filgrastim is approximately 3.5 hours, with a clearance rate of approximately 0.6ml/min/kg. Continuous infusion with filgrastim over a period of up to 28 days, in patients recovering from autologous bone-marrow transplantation, resulted in no evidence of drug accumulation and comparable elimination half lives.There is a positive linear correlation between the dose and the serum concentration of filgrastim, whether administered intravenously or subcutaneously. Following subcutaneous administration of recommended doses, serum concentrations were maintained above 10ng/ml for 8 to 16 hours. The volume of distribution in blood is approximately 150ml/kg

INDICATIONS AND USAGE:
Filgrastim is indicated for the reduction in the duration of neutropenia and the incidence of febrile neutropenia in patients treated with established cytotoxic chemotherapy for malignancy (with the exception of chronic myeloid leukaemia and myelodysplastic syndromes) and for the reduction in the duration of neutropenia in patients undergoing myeloablative therapy followed by bone marrow transplantation considered to be at increased risk of prolonged severe neutropenia

The safety and efficacy of filgrastim are similar in adults and children receiving cytotoxic chemotherapy

Filgrastim is indicated for the mobilisation of peripheral blood progenitor cells (PBPCs)

In patients, children or adults, with severe congenital, cyclic, or idiopathic neutropenia with an ANC of $< 0.5 \times 10^9$/L, and a history of severe or recurrent infections, long term administration of filgrastim is indicated to increase neutrophil counts and to reduce the incidence and duration of infection related events

Filgrastim is indicated for the treatment of persistent neutropenia (ANC less than or equal to 1.0×10^9/L) in patients with advanced HIV infection, in order to reduce the risk of bacterial infections when other options to manage neutropenia are inappropriate

METHOD OF ADMINISTRATION:
Filgrastim therapy should only be given in collaboration with an oncology centre which has experience in G-CSF treatment and haematology and has the necessary diagnostic facilities. The mobilisation and apheresis procedures should be performed in collaboration with an oncology haematology centre with acceptable experience in this field and where the monitoring of haematopoietic progenitor cells can be correctly performed

Established cytotoxic chemotherapy:
Dose: The recommended dose of filgrastim is 0.5 MU (5µg)/kg/day. The first dose of filgrastim should be administered at least 24 hours after cytotoxic chemotherapy

Daily dosing with filgrastim should continue until the expected neutrophil nadir is passed and the neutrophil count has recovered to the normal range. Following established chemotherapy for solid tumours, lymphomas, and lymphoid leukaemia, it is expected that the duration of treatment required to fulfil these criteria will be up to 14 days. Following induction and consolidation treatment for acute myeloid leukaemia the duration of treatment may be substantially longer (up to 38 days) depending on the type, dose and schedule of cytotoxic chemotherapy used

In patients receiving cytotoxic chemotherapy, a transient increase in neutrophil counts is typically seen 1 to 2 days after initiation of filgrastim therapy. However, for a sustained therapeutic response, filgrastim therapy should not be discontinued before the expected nadir has passed and the neutrophil count has recovered to the normal range

Premature discontinuation of filgrastim therapy, prior to the time of the expected neutrophil nadir, is not recommended

Method of administration: Filgrastim may be given as a daily subcutaneous injection or as a daily intravenous infusion diluted in 5% glucose solution given over 30 minutes. The subcutaneous route is preferred in most cases. The choice of route should depend on the individual clinical circumstance

In patients treated with myeloablative therapy followed by bone marrow transplantation

Dose: The recommended starting dose of filgrastim is 1.0 MU (10µg)/kg/day. The first dose of filgrastim should be administered at least 24 hours following cytotoxic chemotherapy and at least 24 hours after bone marrow infusion. Once the neutrophil nadir has been passed, the daily dose of filgrastim should be titrated against the neutrophil response as follows:

Neutrophil Count	Filgrastim Dose Adjustment
$> 1.0 \times 10^9$/L for 3 consecutive days	Reduce to 0.5 MU (5µg)/kg/day
Then, if ANC remain $> 1.0 \times 10^9$/L for 3 more consecutive days	Discontinue filgrastim
If the ANC decreases to $< 1.0 \times 10^9$/L during the treatment period the dose of filgrastim should be re-escalated accroding to the above steps	

*ANC = absolute neutrophil count

Method of administration: Filgrastim may be given as a 30 minutes or 24 hours intravenous infusion or given by continuous 24 hours subcutaneous infusion. Filgrastim should be diluted in 20ml of 5% glucose solution

For the mobilisation of PBPCs in patients undergoing myelosuppressive or myeloablative therapy followed by autologous PBPC transplantation
Dose: The recommended dose of filgrastim for PBPC mobilisation when used alone is 1.0 MU (10µg)/kg/day for 5 to 7 consecutive days. Timing of leukapheresis: one or two leukapheresis on days 5 and 6 are often sufficient. In other circumstances, additional leukapheresis may be necessary. Filgrastim dosing should be maintained until the last leukapheresis

The recommended dose of filgrastim for PBPC mobilisation after myelosuppressive chemotherapy is 0.5 MU (5µg)/kg/day from the first day after completion of chemotherapy until the expected neutrophil nadir is passed and the neutrophil count has recovered to the normal range. Leukapheresis should be performed during the period when the ANC rises from $< 0.5 \times 10^9$/L to $> 5.0 \times 10^9$/L. For patients who have not had extensive chemotherapy, one leukapheresis is often sufficient. In other circumstances, additional leukapheresis are recommended

Method of administration
Filgrastim for PBPC mobilisation when used alone:
Filgrastim may be given as a 24 hours subcutaneous continuous infusion or subcutaneous injection. For infusions filgrastim should be diluted in 20ml of 5% glucose solution

Filgrastim for PBPC mobilisation after myelosuppressive chemotherapy:
Filgrastim should be given by subcutaneous injection

For the mobilisation of PBPCs in normal donors prior to allogeneic PBPC transplantation
Dose: For PBPC mobilisation in normal donors, filgrastim should be administered at 1.0 MU (10µg)/kg/day for 4 to 5 consecutive days. Leukapheresis should be started at day 5 and continued until day 6 if needed in order to collect 4×10^6 CD34+ cells/kg recipient bodyweight

Method of administration: Filgrastim should be given by subcutaneous injection

In patients with severe chronic neutropenia (SCN)
Dose:
Congenital neutropenia: The recommended starting dose is 1.2 MU (12µg)/kg/day, as a single dose or in divided doses
Idiopathic or cyclic neutropenia: The recommended starting dose is 0.5 MU (5µg)/kg/day as a single dose or in divided doses

Dose adjustment: Filgrastim should be administered daily by subcutaneous injection until the neutrophil count has reached and can be maintained at more than 1.5×10^9/L. When the response has been obtained the minimal effective dose to maintain this level should be established. Long-term daily administration is required to maintain an adequate neutrophil count. After one to two weeks of therapy, the initial dose may be doubled or halved

depending upon the patient's response. Subsequently the dose may be individually adjusted every 1 to 2 weeks to maintain the average neutrophil count between 1.5 x 10^9/L and 10 x 10^9/L. A faster schedule of dose escalation may be considered in patients presenting with severe infections. The long-term safety of filgrastim administration above 24µg/kg/day in patients with SCN has not been established

Method of administration:
Congenital, idiopathic or cyclic neutropenia:
Filgrastim should be given by subcutaneous injection

In patients with HIV infection
Dose:
For reversal of neutropenia: The recommended starting dose of filgrastim is 0.1 MU (1µg)/kg/day, with titration up to a maximum of 0.4 MU (4µg)/kg/day until a normal neutrophil count is reached and can be maintained (ANC > 2.0 x 10^9/L)

For maintaining normal neutrophil counts: When reversal of neutropenia has been achieved, the minimal effective dose to maintain a normal neutrophil count should be established. Initial dose adjustment to alternate day dosing with 30 MU (300µg)/day is recommended. Further dose adjustment may be necessary, as determined by the patient's ANC, to maintain the neutrophil count at > 2.0 x 10^9/L. Long term administration may be required to maintain the ANC > 2.0 x 10^9/L

Method of administration:
Reversal of neutropenia or maintaining normal neutrophil counts:
Filgrastim should be given by subcutaneous injection

ADVERSE EFFECTS:
Summary of the safety profile
Graft versus Host Disease (GvHD) has also been reported

In PBPC mobilisation in normal donors the most commonly reported undesirable effect was musculoskeletal pain. Leukocytosis was observed in donors and thrombocytopenia following filgrastim and leukapheresis was also observed in donors. Splenomegaly and splenic rupture were also reported. Some cases of splenic rupture were fatal

In SCN patients the most frequent undesirable effects attributable to filgrastim were bone pain, general musculoskeletal pain and splenomegaly. Myelodysplastic syndromes (MDS) or leukaemia have developed in patients with congenital neutropenia treated with filgrastim

Capillary leak syndrome, which can be life threatening if treatment is delayed, has been reported uncommonly (•1/1000 to < 1/100) in cancer patients undergoing chemotherapy and healthy donors undergoing peripheral blood progenitor cell mobilization following administration of granulocyte colony stimulating factors

In patients with HIV, the only undesirable effects that were consistently considered to be related to filgrastim administration were musculoskeletal pain, bone pain and myalgia

Description of selected adverse reactions
There have been reports of GvHD and fatalities in patients receiving G-CSF after allogeneic bone marrow transplantation

Cases of capillary leak syndrome have been reported with granulocyte-colony stimulating factor use. These have generally occurred in patients with advanced malignant diseases, sepsis, taking multiple chemotherapy medications or undergoing apheresis

Cancer patients: Filgrastim did not increase the incidence of undesirable effects associated with cytotoxic chemotherapy. Undesirable effects reported with equal frequency in patients treated with filgrastim/chemotherapy and placebo/chemotherapy included nausea and vomiting, alopecia, diarrhoea, fatigue, anorexia (decreased appetite), mucosal inflammation, headache, cough, rash, chest pain, asthenia, pharyngolaryngeal pain (oropharyngeal pain) and constipation

Cutaneous vasculitis has been reported in patients treated with filgrastim. The mechanism of vasculitis in patients receiving filgrastim is unknown

Cases of Sweet's syndrome (acute febrile dermatosis) have been reported

Pulmonary adverse effects including interstitial lung disease, pulmonary oedema, and lung infiltration have been reported in some cases with an outcome of respiratory failure or acute respiratory distress syndrome (ARDS), which may be fatal

Cases of splenomegaly and splenic rupture have been reported uncommonly following administration of filgrastim. Some cases of splenic rupture were fatal

Hypersensitivity type reactions including anaphylaxis, rash, urticaria, angioedema, dyspnoea and hypotension occurring on initial or subsequent treatment have been reported. In some cases, symptoms have recurred with rechallenge, suggesting a causal relationship. Filgrastim should be permanently discontinued in patients who experience a serious allergic reaction

Isolated cases of sickle cell crises have been reported in patients with sickle cell trait or sickle cell disease. Pseudogout has been reported in patients with cancer treated with filgrastim

PBPC mobilisation in normal donors: Common but generally asymptomatic cases of splenomegaly and uncommon cases of splenic rupture have been reported in healthy donors and patients following administration of filgrastim. Some cases of splenic rupture were fatal

Pulmonary adverse events (haemoptysis, pulmonary haemorrhage, lung infiltration, dyspnoea and hypoxia) have been reported

Exacerbation of arthritic symptoms has been uncommonly observed

Leukocytosis (WBC > 50 x 10^9/L) was observed in 41% of donors and transient thrombocytopenia (platelets < 100 x10^9/L) following filgrastim and leukapheresis was observed in 35% of donors

In SCN patients: Undesirable effects seen include splenomegaly, which may be progressive in a minority of cases, splenic rupture and thrombocytopenia

Undesirable effects possibly related to filgrastim therapy and typically occurring in < 2% of SCN patients were injection site reaction, headache, hepatomegaly, arthralgia, alopecia, osteoporosis, and rash

During long-term use cutaneous vasculitis has been reported in 2% of SCN patients

In patients with HIV: Splenomegaly was reported to be related to filgrastim therapy in < 3% of patients. In all cases this was mild or moderate on physical examination and the clinical course was benign; no patients had a diagnosis of hyperplenism (splenomegaly) and no patients underwent splenectomy. As splenomegaly is a common finding in patients with HIV infection and is present to varying degrees in most patients with AIDS, the relationship to filgrastim treatment is unclear

CONTRAINDICATIONS:
Hypersensitivity to the active substance or to any of the excipients

WARNINGS AND PRECAUTIONS:
Filgrastim should not be used to increase the dose of cytotoxic chemotherapy beyond established dosage regimens

Filgrastim should not be administered to patients with severe congenital neutropenia who develop leukaemia or have evidence of leukaemic evolution

Hypersensitivity, including anaphylactic reactions, occurring on initial or subsequent treatment have been reported in patients treated with filgrastim. Permanently discontinue filgrastim in patients with clinically significant hypersensitivity. Do not administer filgrastim to patients with a history of hypersensitivity to filgrastim or pegfilgrastim

As with all therapeutic proteins, there is a potential for immunogenicity. Rates of generation of antibodies against filgrastim is generally low. Binding antibodies do occur as expected with all biologics; however, they have not been associated with neutralising activity at present

Malignant cell growth: Granulocyte-colony stimulating factor can promote growth of myeloid cells in vitro and similar effects may be seen on some nonmyeloid cells in vitro

The safety and efficacy of filgrastim administration in patients with myelodysplastic syndrome, or chronic myelogenous leukaemia have not been established

Filgrastim is not indicated for use in these conditions. Particular care should be taken to distinguish the diagnosis of blast transformation of chronic myeloid leukaemia from acute myeloid leukaemia

In view of limited safety and efficacy data in patients with secondary AML (acute myeloid leukemia), filgrastim should be administered with caution

Other special precautions: Monitoring of bone density may be indicated in patients with underlying osteoporotic bone diseases who undergo continuous therapy with filgrastim for more than 6 months

Pulmonary adverse effects, in particular interstitial lung disease, have been reported after G-CSF administration. Patients with a recent history of lung infiltrates or pneumonia may be at higher risk. The onset of pulmonary signs, such as cough, fever and dyspnoea in association with radiological signs of pulmonary infiltrates and deterioration in pulmonary function may be preliminary signs of acute respiratory distress syndrome (ARDS). Filgrastim should be discontinued and appropriate treatment given

Capillary leak syndrome has been reported after granulocyte-colony stimulating factor administration, and is characterised by hypotension, hypoalbuminaemia, oedema and hemoconcentration. Patients who develop symptoms of capillary leak syndrome should be closely monitored and receive standard symptomatic treatment, which may include a need for intensive care

Glomerulonephritis has been reported in patients receiving filgrastim and pegfilgrastim. Generally, events of glomerulonephritis resolved after dose reduction or withdrawal of filgrastim and pegfilgrastim. Urinalysis monitoring is recommended

Special precautions in cancer patients: Cases of splenomegaly and splenic rupture have been reported uncommonly following administration of filgrastim. Some cases of splenic rupture were fatal. Individuals receiving filgrastim who report left upper abdominal and/ or shoulder tip pain should be evaluated for an enlarged spleen or splenic rupture

Leukocytosis: White blood cell counts of 100 x 10^9/L or greater have been observed in less than 5% of patients receiving filgrastim at doses above 0.3 MU/kg/day (3µg/kg/day). No undesirable effects directly attributable to this degree of leukocytosis have been reported. However, in view of the potential risks associated with severe leukocytosis, a white blood cell count should be performed at regular intervals during filgrastim therapy. If leukocyte counts exceed 50 x 10^9/L after the expected nadir, filgrastim should be discontinued immediately. However, during the period of administration of filgrastim for PBPC mobilisation, filgrastim should be discontinued or its dosage should be reduced if the leukocyte counts rise to > 70 x 10^9/L

Risks associated with increased doses of chemotherapy
Special caution should be used when treating patients with high dose chemotherapy, because improved tumour outcome has not been demonstrated and intensified doses of chemotherapeutic agents may lead to increased toxicities including cardiac, pulmonary, neurologic, and dermatologic effects

Treatment with filgrastim alone does not preclude thrombocytopenia and anaemia due to myelo suppressive chemotherapy. Because of the potential of receiving higher doses of chemotherapy (e.g. full doses on the prescribed schedule) the patient may be at greater risk of thrombocytopenia and anaemia. Regular monitoring of platelet count and haematocrit is recommended. Special care should be taken when administering single or combination chemotherapeutic agents which are known to cause severe thrombocytopenia

The use of filgrastim mobilised PBPCs has been shown to reduce the depth and duration of thrombocytopenia following myelosuppressive or myeloablative chemotherapy

Other special precautions: Filgrastim acts primarily on neutrophil precursors to exert its effect in elevating neutrophil counts. Therefore in patients with reduced precursors neutrophil response may be diminished (such as those treated with extensive radiotherapy or chemotherapy, or those with bone marrow infiltration by tumour)

Vascular disorders, including veno occlusive disease and fluid volume disturbances, have been reported occasionally in patients undergoing high dose chemotherapy followed by transplantation. There have been reports of GvHD and fatalities in patients receiving G-CSF after allogeneic bone marrow transplantation

Increased haematopoietic activity of the bone marrow in response to growth factor therapy has been associated with transient abnormal bone scans. This should be considered when interpreting bone imaging results

Special precautions in patients undergoing PBPC mobilization

Mobilisation: There are no prospectively randomised comparisons of the two recommended mobilisation methods (filgrastim alone, or in combination with myelosuppressive chemotherapy) within the same patient population. The degree of variation between individual patients and between laboratory assays of CD34+ cells mean that direct comparison between different studies is difficult. It is therefore difficult to recommend an optimum method. The choice of mobilization method should be considered in relation to the overall objectives of treatment for an individual patient

Prior exposure to cytotoxic agents
Patients who have undergone very extensive prior myelosuppressive therapy may not show sufficient mobilisation of PBPC to achieve the recommended minimum yield (• 2.0 x 10^6 CD34+ cells/kg) or acceleration of platelet recovery, to the same degree

Some cytotoxic agents exhibit particular toxicities to the haematopoietic progenitor pool, and may adversely affect progenitor mobilisation. Agents such as melphalan, carmustine (BCNU), and carboplatin, when administered over prolonged periods prior to attempts at progenitor mobilisation may reduce progenitor yield. However , the administration of melphalan, carboplatin or BCNU together with filgrastim, has been shown to be effective for progenitor mobilisation. When a PBPC transplantation is envisaged it is advisable to plan the stem cell mobilisation procedure early in the treatment course of the patient. Particular attention should be paid to the number of progenitors mobilised in such patients before the administration of high dose chemotherapy. If yields are inadequate, as measured by the criteria above, alternative forms of treatment, not requiring progenitor support should be considered

Special precautions in SCN patients
Blood cell counts: Thrombocytopenia has been reported commonly in patients receiving filgrastim. Platelet counts should be monitored closely, especially during the first few weeks of filgrastim therapy. Consideration should be given to intermittent cessation or decreasing the dose of filgrastim in patients who develop thrombocytopenia, i.e., platelets consistently <100,000/mm^3
Other blood cell changes occur, including anaemia and transient increases in myeloid progenitors, which require close monitoring of cell counts

Transformation to leukaemia or myelodysplastic syndrome
Special care should be taken in the diagnosis of SCNs to distinguish them from other haematopoietic disorders such as aplastic anaemia, myelodysplasia, and myeloid leukaemia. Complete blood cell counts with differential and platelet counts, and an evaluation of bone marrow morphology and karyotype should be performed prior to treatment

Other special precautions: Causes of transient neutropenia, such as viral infections should be excluded

Cases of splenomegaly have been reported very commonly and cases of splenic rupture have been reported commonly following administration of filgrastim. Individuals receiving filgrastim who report left upper abdominal and/ or shoulder tip pain should be evaluated for an enlarged spleen or splenic rupture

Splenomegaly is a direct effect of treatment with filgrastim. Thirtyone percent (31%) of patients were documented as having palpable splenomegaly. Increases in volume, measured radiographically, occurred early during filgrastim therapy and tended to plateau. Dose reductions were noted to slow or stop the progression of splenic enlargement, and in 3% of patients a splenectomy was required. Spleen size should be evaluated regularly. Abdominal palpation should be sufficient to detect abnormal increases in splenic volume

Haematuria was common and proteinuria occurred in a small number of patients. Regular urinalysis should be performed to monitor these events

The safety and efficacy in neonates and patients with autoimmune neutropenia have not been established

Special precautions in patients with HIV infection
Cases of splenomegaly have been reported commonly following administration of filgrastim. Individuals receiving filgrastim who report left upper abdominal and/or shoulder tip pain should therefore be evaluated for an enlarged spleen or splenic rupture

Blood cell counts: Absolute neutrophil count (ANC) should be monitored closely, especially during the first few weeks of filgrastim therapy. Some patients may respond very rapidly and with a considerable increase in neutrophil count to the initial dose of filgrastim. It is recommended that the ANC is measured daily for the first 23 days of filgrastim administration. Thereafter, it is recommended that the ANC is measured at least twice per week for the first two weeks and subsequently once per week or once every other week during maintenance therapy. During intermittent dosing with 30 MU (300µg)/day of filgrastim, there can be wide fluctuations in the patient's ANC over time. In order to determine a patients trough or nadir ANC, it is recommended that blood samples are taken for ANC measurement immediately prior to any scheduled dosing with filgrastim

Risk associated with increased doses of myelosuppressive medications
Treatment with filgrastim alone does not preclude thrombocytopenia and anaemia due to myelosuppressive medications. As a result of the potential to receive higher doses or a greater number of these medications with filgrastim therapy, the patient may be at higher risk of developing thrombocytopenia and anaemia. Regular monitoring of blood counts is recommended

Infections and malignancies causing myelosuppression: Neutropenia may be due to bone marrow infiltrating opportunistic infections such as Mycobacterium avium complex or malignancies such as lymphoma. In patients with known bone marrow infiltrating infections or malignancy, consider appropriate therapy for treatment of the underlying condition, in addition to administration of filgrastim for treatment of neutropenia. The effects of filgrastim on neutropenia due to bone marrow infiltrating infection or malignancy have not been well established

Special precautions in sickle cell trait and sickle cell disease: Sickle cell crises, in some cases fatal, have been reported with the use of filgrastim in patients with sickle cell trait or sickle cell disease. Physicians should use caution when prescribing filgrastim in patients with sickle cell trait or sickle cell disease

SPECIAL POPULATIONS:
Geriatric Use: No overall differences in safety or effectiveness were observed between subjects over 65 years of age compared to younger adult (>18 years of age) subjects receiving cytotoxic chemotherapy and clinical experience has not identified differences in the responses between elderly and younger adult patients. There is insufficient data to evaluate filgrastim use in geriatric subjects for other approved filgrastim indications

Paediatric SCN patients: Cases of decreased bone density and osteoporosis have been reported in paediatric patients with severe chronic neutropenia receiving chronic treatment with filgrastim

Pregnancy: Filgrastim is not recommended during pregnancy

Breastfeeding: It is unknown whether filgrastim/metabolites are excreted in human milk. A risk to the newborns/infants cannot be excluded. A decision must be made whether to discontinue breastfeeding or to discontinue/abstain from filgrastim therapy taking into account the benefit of breast feeding for the child and the benefit of therapy for the woman

Interaction with other medicinal products and other forms of interaction
The safety and efficacy of filgrastim given on the same day as myelosuppressive cytotoxic chemotherapy have not been definitively established. In view of the sensitivity of rapidly dividing myeloid cells to myelosuppressive cytotoxic chemotherapy, the use of filgrastim is not recommended in the period from 24 hours before to 24 hours after chemotherapy

Since lithium promotes the release of neutrophils, lithium is likely to potentiate the effect of filgrastim. Although this interaction has not been formally investigated, there is no evidence that such an interaction is harmful

OVERDOSAGE:
The effects of filgrastim overdosage have not been established. Discontinuation of filgrastim therapy usually results in a 50% decrease in circulating neutrophils within 1 to 2 days, with a return to normal levels in 1 to 7 days

INCOMPATIBILITIES:
Filgrastim should not be diluted with saline solutions

Diluted filgrastim may be adsorbed to glass and plastic materials

This medicinal product must not be mixed with other products

STABILITY:
See expiry on the pack

AVAILABILITY:
NEOFIL™ 300mcg injection is available in a pack of 1's

INSTRUCTIONS:
Do not shake the vial
Vial is single dose and should be used only one time
Keep out of reach of children
Avoid exposure to heat, light and freezing. Store at 2 to 8°C
Improper storage may deteriorate the medicine

Caution: Injection should not be used if vial is leaking, solution is discolored, cloudy or it contains undissolved particle(s)

نیوفِل™ ۳۰۰ مائیکروگرام انجکشن

(فلگرا سٹم)

وائل کو ہلانے سے گریز کریں اور صرف ایک دفعہ استعمال کریں

خوراک اور طریقہ استعمال: ڈاکٹر کی ہدایت کے مطابق استعمال کریں

بچوں کی پہنچ سے دور رکھیں

دوا کو دھوپ، گرمی اور منجمد ہونے سے محفوظ ۲ سے ۸ ڈگری سینٹی گریڈ پر رکھیں ورنہ دوا خراب ہو جائیگی

احتیاط: وائل کے لیک ہونے، محلول کا رنگ تبدیل ہونے، دُھندلا ہونے یا
اس میں کوئی غیر حل پذیر شے نظر آنے کی صورت میں ہرگز استعمال نہ کریں

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