# CENTER FOR DRUG EVALUATION AND RESEARCH

**APPLICATION NUMBER:** 

125294Orig1s000

**LABELING** 

#### HIGHLIGHTS OF PRESCRIBING INFORMATION

These highlights do not include all the information needed to use tbo-filgrastim safely and effectively. See full prescribing information for tbo-filgrastim.

tbo-filgrastim Injection for subcutaneous use Initial U.S. Approval: 2012

# -----INDICATIONS AND USAGE-----

Tbo-filgrastim is a leukocyte growth factor indicated for the reduction in the duration of severe neutropenia in patients with non-myeloid malignancies receiving myelosuppressive anti-cancer drugs associated with a clinically significant incidence of febrile neutropenia. (1)

#### -----DOSAGE AND ADMINISTRATION-----

- Recommended dose: 5 mcg/kg per day administered as a subcutaneous injection.
- Administer the first dose no earlier than 24 hours following myelosuppressive chemotherapy. Do not administer within 24 hours prior to chemotherapy (2.1)

#### -----DOSAGE FORMS AND STRENGTHS-----

- 300 mcg/0.5 mL in single use prefilled syringe
- 480 mcg/0.8 mL in single use prefilled syringe (3)

-----CONTRAINDICATIONS------

None.

#### -----WARNINGS AND PRECAUTIONS-----

- Splenic Rupture: Discontinue tho-filgrastim if suspected (5.1)
- Acute Respiratory Distress Syndrome (ARDS) Monitor for and manage immediately. Discontinue tbo-filgrastim if suspected (5.2)
- Allergic reactions (angioneurotic edema, dermatitis allergic, drug hypersensitivity, hypersensitivity, rash, pruritic rash and urticaria) (5.3)
- Sickle cell crisis: Severe and sometimes fatal crisis can occur.
   Discontinue tbo-filgrastim if suspected (5.4)

#### -----ADVERSE REACTIONS-----

Most common adverse reaction to tbo-filgrastim is bone pain (6)

To report SUSPECTED ADVERSE REACTIONS, contact TEVA at 1-866-832-8537 or FDA at 1-800-FDA-1088 or www.fda.gov/medwatch.

#### -----USE IN SPECIFIC POPULATIONS-----

- Tbo-filgrastim should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus (8 1)
- It is not known if the filgrastim is excreted in human milk (8.3)
- The safety and effectiveness of tbo-filgrastim have not been established in patients under 18 years of age (8.4)

See 17 for PATIENT COUNSELING INFORMATION and FDA-approved patient labeling.

Revised: [08/2012]

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<sup>\*</sup>Sections or subsections omitted from the full prescribing information are not listed.

# FULL PRESCRIBING INFORMATION

#### 1 INDICATIONS AND USAGE

Tbo-filgrastim is indicated to reduce the duration of severe neutropenia in patients with non-myeloid malignancies receiving myelosuppressive anti-cancer drugs associated with a clinically significant incidence of febrile neutropenia.

#### 2 DOSAGE AND ADMINISTRATION

#### 2.1 Dosage

The recommended dose of tbo-filgrastim is 5 mcg/kg per day administered as a subcutaneous injection. Administer the first dose of tbo-filgrastim no earlier than 24 hours following myelosuppressive chemotherapy. Do not administer tbo-filgrastim within 24 hours prior to chemotherapy [see Warnings and Precautions (5)].

Daily dosing with tho-filgrastim should continue until the expected neutrophil nadir is passed and the neutrophil count has recovered to the normal range. Monitor complete blood count (CBC) prior to chemotherapy and twice per week until recovery.

# 2.2 General Considerations for Administration

Tbo-filgrastim should be administered by a healthcare professional.

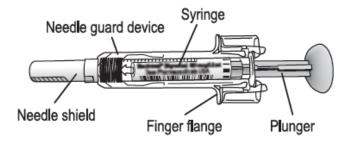
Visually inspect parenteral drug products for particulate matter and discoloration prior to administration. Do not administer the filgrastim if discoloration or particulates are observed.

The prefilled syringe is for single use only. Discard unused portions.

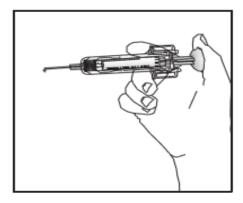
Recommended sites for subcutaneous tbo-filgrastim injections include the abdomen (except for the two inch area around the navel), the front of the middle thighs, the upper outer areas of the buttocks, or the upper back portion of the upper arms. The injection site should be varied daily. Tbo-filgrastim should not be injected into an area that is tender, red, bruised, or hard or that has scars or stretch marks.

# 2.3 Instructions for Use of the Safety Needle Guard Device

Hold the syringe assembly by the open sides of the device and remove the needle shield.

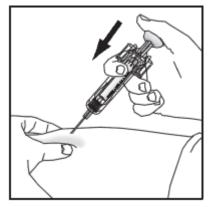


Expel any extra volume depending on dose needed.



Inject tho-filgrastim subcutaneously as recommended [see 2.2 General Considerations for Administration].

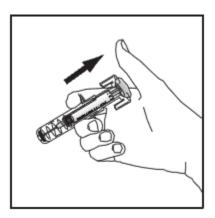
Push the plunger as far as it will go to inject all the medication. Injection of the entire prefilled syringe contents is necessary to activate the needle guard.



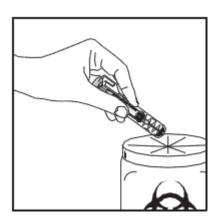
With the plunger still pressed all the way down, remove the needle from the skin.



Slowly let go of the plunger and allow the empty syringe to move up inside the device until the entire needle is guarded.



Discard the syringe assembly in approved containers.



# 3 DOSAGE FORMS AND STRENGTHS

300 mcg/0.5 mL injection in single use prefilled syringe 480 mcg/0.8 mL injection in single use prefilled syringe

# 4 CONTRAINDICATIONS

None.

# 5 WARNINGS AND PRECAUTIONS

# **5.1 Splenic Rupture**

Splenic rupture, including fatal cases, can occur following administration of human granulocyte colony-stimulating factors. In patients who report upper abdominal or shoulder pain after receiving tbo-filgrastim, discontinue tbo-filgrastim and evaluate for an enlarged spleen or splenic rupture.

# 5.2 Acute Respiratory Distress Syndrome (ARDS)

Acute respiratory distress syndrome (ARDS) can occur in patients receiving human granulocyte colony-stimulating factors. Evaluate patients who develop fever and lung infiltrates or respiratory distress after receiving tbo-filgrastim, for ARDS. Discontinue tbo-filgrastim in patients with ARDS.

#### **5.3** Allergic Reactions

Serious allergic reactions including anaphylaxis can occur in patients receiving human granulocyte colony-stimulating factors. Reactions can occur on initial exposure. The administration of antihistamines, steroids, bronchodilators, and/or epinephrine may reduce the severity of the reactions. Permanently discontinue tbo-filgrastim in patients with serious allergic reactions. Do not administer tbo-filgrastim to patients with a history of serious allergic reactions to filgrastim or pegfilgrastim.

#### 5.4 Use in Patients with Sickle Cell Disease

Severe and sometimes fatal sickle cell crises can occur in patients with sickle cell disease receiving human granulocyte colony-stimulating factors. Consider the potential risks and benefits prior to the administration of human granulocyte colony-stimulating factors in patients with sickle cell disease. Discontinue tbo-filgrastim in patients undergoing a sickle cell crisis.

#### 5.5 Potential for Tumor Growth Stimulatory Effects on Malignant Cells

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

#### 6 ADVERSE REACTIONS

The following potential serious adverse reactions are discussed in greater detail in other sections of the labeling:

- Splenic Rupture [see Warnings and Precautions (5.1)]
- Acute Respiratory Distress Syndrome [see Warnings and Precautions (5.2)]
- Serious Allergic Reactions [see Warnings and Precautions (5.3)]
- Use in Patients with Sickle Cell Disorders [see Warnings and Precautions (5.4)]
- Potential for Tumor Growth Stimulatory Effects on Malignant Cells [see Warnings and Precautions (5.5)]

The most common treatment-emergent adverse reaction that occurred at an incidence of at least 1% or greater in patients treated with tbo-filgrastim at the recommended dose and was numerically two times more frequent than in the placebo group was bone pain.

# **6.1 Clinical Trials Experience**

Because clinical trials are conducted under widely varying conditions, adverse reaction rates observed in the clinical trials of a drug cannot be directly compared to rates in the clinical trials of another drug and may not reflect the rates observed in clinical practice.

Tbo-filgrastim clinical trials safety data are based upon the results of three randomized clinical trials in patients receiving myeloablative chemotherapy for breast cancer (N=348), lung cancer (N=240) and Non-

Hodgkin's lymphoma (N=92). In the breast cancer study, 99% of patients were female, the median age was 50 years, and 86% of patients were Caucasian. In the lung cancer study, 80% of patients were male, the median age was 58 years, and 95% of patients were Caucasian. In the Non-Hodgkin's lymphoma 52% of patients were male, the median age was 55 years, and 88% of patients were Caucasian. In all three studies a placebo (Cycle 1 of the breast cancer study only) or a non-US-approved filgrastim product were used as controls. Both tbo-filgrastim and the non-US-approved filgrastim product were administered at 5 mcg/kg subcutaneously once daily beginning one day after chemotherapy for at least five days and continued to a maximum of 14 days or until an ANC of  $\geq$ 10,000 x10 $^6$ /L after nadir was reached.

Bone pain was the most frequent treatment-emergent adverse reaction that occurred in at least 1% or greater in patients treated with tbo-filgrastim at the recommended dose and was numerically two times more frequent than in the placebo group. The overall incidence of bone pain in Cycle 1 of treatment was 3.4% (3.4% tbo-filgrastim, 1.4% placebo, 7.5% non-US-approved filgrastim product).

#### Leukocytosis

In clinical studies, leukocytosis (WBC counts  $> 100,000 \times 10^6/L$ ) was observed in less than 1% patients with non-myeloid malignancies receiving tbo-filgrastim. No complications attributable to leukocytosis were reported in clinical studies.

#### 6.2 Immunogenicity

As with all therapeutic proteins, there is a potential for immunogenicity. The incidence of antibody development in patients receiving the filgrastim has not been adequately determined.

#### 7 DRUG INTERACTIONS

No formal drug interaction studies between tbo-filgrastim and other drugs have been performed.

Drugs which may potentiate the release of neutrophils, such as lithium, should be used with caution.

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

#### 8 USE IN SPECIFIC POPULATIONS

# 8.1 Pregnancy

#### Pregnancy Category C

There are no adequate and well-controlled studies of tbo-filgrastim in pregnant women. In an embryofetal developmental study, treatment of pregnant rabbits with tbo-filgrastim resulted in adverse embryofetal findings, including increased spontaneous abortion and fetal malformations at a maternally toxic dose. Tbo-filgrastim should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

In the embryofetal developmental study, pregnant rabbits were administered subcutaneous doses of tho-filgrastim during the period of organogenesis at 1, 10 and 100 mcg/kg/day. Increased abortions were evident in rabbits treated with tbo-filgrastim at 100 mcg/kg/day. This dose was maternally toxic as demonstrated by reduced body weight. Other embryofetal findings at this dose level consisted of post-implantation loss, decreased in mean live litter size and fetal weight, and fetal malformations such as malformed hindlimbs and cleft palate. The dose of 100 mcg/kg/day corresponds to a systemic exposure (AUC $_{0.24}$ ) of approximately 50-90 times the exposures observed in patients treated with the clinical tbo-filgrastim dose of 5 mcg/kg/day.

# **8.3 Nursing Mothers**

It is not known whether tbo-filgrastim is secreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when tbo-filgrastim is administered to a nursing woman. Other recombinant G-CSF products are poorly secreted in breast milk and G-CSF is not orally absorbed by neonates.

#### 8.4 Pediatric Use

The safety and effectiveness of tbo-filgrastim in pediatric patients have not been established.

#### 8.5 Geriatric Use

Among 677 cancer patients enrolled in clinical trials of tbo-filgrastim, a total of 111 patients were 65 years of age and older. No overall differences in safety or effectiveness were observed between patients age 65 and older and younger patients.

#### 8.6 Renal Impairment

The safety and efficacy of tbo-filgrastim have not been studied in patients with moderate or severe renal impairment. No dose adjustment is recommended for patients with mild renal impairment [Clinical Pharmacology (12.3)].

#### 8.7 Hepatic Impairment

The safety and efficacy of tbo-filgrastim have not been studied in patients with hepatic impairment.

#### 10 OVERDOSAGE

No case of overdose has been reported.

#### 11 DESCRIPTION

Tbo-filgrastim is a nonglycosylated recombinant methionyl human granulocyte colony-stimulating growth factor (r-metHuG-CSF) manufactured by recombinant DNA technology using the bacterium strain *E coli* K802. It has a molecular weight of approximately 18.8 kDa and is composed of 175 amino acids. The endogenous human G-CSF is glycosylated and does not have the additional methionine amino acid residue in its NH<sub>2</sub> terminal end.

The product is a sterile, clear, colorless, preservative-free solution containing the filgrastim, glacial acetic acid, sorbitol, polysorbate 80, sodium hydroxide, and Water for Injection. The product is available in single-use prefilled syringes that contain either 300 mcg or 480 mcg of the filgrastim at a fill volume of 0.5 mL or 0.8 mL, respectively. See table below for product composition of each single-use prefilled syringe.

	Product Composition	
	300 mcg/0.5 mL Syringe	480 mcg/0.8 mL Syringe
Tbo-filgrastim	300 mcg	480 mcg
Glacial Acetic Acid	0.3 mg	0.48 mg
Sorbitol	25 mg	40 mg
Polysorbate 80	0.0275 mg	0.044 mg
Sodium Hydroxide	q.s. to pH 4.2	q.s. to pH 4.2
Water for Injection	q.s. to 0.5 mL	q.s. to 0.8 mL

#### 12 CLINICAL PHARMACOLOGY

#### 12.1 Mechanism of Action

Tbo-filgrastim is a human granulocyte colony-stimulating factor (G-CSF) produced by recombinant DNA technology. Tbo-filgrastim binds to G-CSF receptors and stimulates proliferation of neutrophils. G-CSF is known to stimulate differentiation commitment and some end-cell functional activation, which increases neutrophil counts and activity.

#### 12.2 Pharmacodynamics

In the clinical trials of patients with cancer, the time to the  $ANC_{max}$  was between 3 to 5 days and returned to baseline by 21 days following completion of chemotherapy. In the healthy volunteer trials, doubling the tbo-filgrastim subcutaneous dose from 5 to 10 mcg/kg resulted in a 16-19% increase in the  $ANC_{max}$  and a 33-36% increase in the area under the effect curve for ANC.

#### 12.3 Pharmacokinetics

In healthy subjects, the absolute bioavailability of 5 mcg/kg subcutaneous the filgrastim was 33%. Increasing the dose of the filgrastim from 5 to 10 mcg/kg in these healthy subjects resulted in an approximately 200% increase in both the maximum concentration ( $C_{max}$ ) and the area under the curve (AUC<sub>0-48h</sub>) of the drug.

In the clinical trials of patients with cancer, the AUC and  $C_{max}$  were greater and more variable compared to healthy volunteers receiving the same dose of tbo-filgrastim subcutaneously. The median time to maximum concentration was between 4 to 6 hours and the median elimination half-life was between 3.2 to 3.8 hours. Accumulation was not observed after repeated dosing.

# **Pharmacokinetics in Specific Populations**

**Age:** Not evaluated.

Gender: No gender-related differences were observed.

**Renal Impairment:** Mild renal impairment (creatinine clearance 60 - 89 mL/min) had no effect on thofilgrastim pharmacokinetics (N=11). The pharmacokinetic profile in patients with moderate and severe renal impairment has not been assessed.

*Hepatic Impairment:* The pharmacokinetic profile in patients with hepatic impairment has not been assessed.

#### 12.4 QT/QTc Prolongation

The potential effects of tbo-filgrastim on the QTc interval were not adequately evaluated in clinical trials.

# 13 NONCLINICAL TOXICOLOGY

#### 13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility

Carcinogenicity and genetic toxicology studies have not been conducted with tbo-filgrastim.

A fertility study was not conducted with tbo-filgrastim. Toxicology studies of up to 26 weeks in rats or monkeys did not reveal findings in male or female reproductive organs that would suggest impairment of fertility.

#### 14 CLINICAL STUDIES

The efficacy of tbo-filgrastim was evaluated in a multinational, multicenter, randomized and controlled study Phase 3 study in 348 chemotherapy-naive patients with high-risk stage II, stage III, or stage IV breast cancer receiving doxorubicin (60 mg/m²) and docetaxel (75 mg/m²) comparing tbo-filgrastim to placebo and a non-US-approved filgrastim product as controls. The median age of the patients was 50 years (range 25 to 75 years) with 99% female and 86% Caucasian.

Tbo-filgrastim, placebo, and the non-US-approved filgrastim product were administered at 5 mcg/kg subcutaneously once daily beginning one day after chemotherapy for at least five days and continued to a maximum of 14 days or until an ANC of  $\geq 10,000 \times 10^6$ /L after nadir was reached.

Tbo-filgrastim was superior to placebo in duration of severe neutropenia (DSN) with a statistically significant reduction in DSN (1.1 days vs. 3.8 days, p < 0.0001).

#### 16 HOW SUPPLIED/STORAGE AND HANDLING

Tbo-filgrastim solution for injection is supplied as a single-use, preservative-free, prefilled syringe of Type I glass which has a permanently attached stainless steel needle. Syringes may be supplied with or without an UltraSafe Passive<sup>®</sup> Needle Guard.

The active substance is tbo-filgrastim.

Tbo-filgrastim 300 mcg/0.5 mL: Each prefilled syringe contains 300 mcg of tbo-filgrastim in 0.5 mL solution with a blue plunger in:

- Packs of 1 without a safety needle guard: NDC 63459-910-17
- Packs of 5 without a safety needle guard: NDC 63459-910-36
- Packs of 10 without a safety needle guard: NDC 63459-910-46
- Packs of 1 with a safety needle guard in trays: NDC 63459-910-23
- Packs of 5 with a safety needle guard in trays: NDC 63459-910-25
- Packs of 10 with a safety needle guard in trays: NDC 63459-910-27
- Packs of 1 with a safety needle guard in blisters: NDC 63459-910-11
- Packs of 5 with a safety needle guard in blisters: NDC 63459-910-35
- Packs of 10 with a safety needle guard in blisters: NDC 63459-910-15

Tbo-filgrastim 480 mcg/0.8 mL: Each prefilled syringe contains 480 mcg of tbo-filgrastim in 0.8 mL solution with a clear plunger in:

- Packs of 1 without a safety needle guard: NDC 63459-912-17
- Packs of 5 without a safety needle guard: NDC 63459-912-36
- Packs of 10 without a safety needle guard: NDC 63459-912-46
- Packs of 1 with a safety needle guard in trays: NDC 63459-912-23
- Packs of 5 with a safety needle guard in trays: NDC 63459-912-25
- Packs of 10 with a safety needle guard in trays: NDC 63459-912-27
- Packs of 1 with a safety needle guard in blisters: NDC 63459-912-11
- Packs of 5 with a safety needle guard in blisters: NDC 63459-912-35
- Packs of 10 with a safety needle guard in blisters: NDC 63459-912-15

Tbo-filgrastim syringes should be stored in a refrigerator at  $36^{\circ}$  to  $46^{\circ}$  F ( $2^{\circ}$  to  $8^{\circ}$  C). Protect from light. Within its shelf life, the product may be removed from  $36^{\circ}$  to  $46^{\circ}$  F ( $2^{\circ}$  to  $8^{\circ}$  C) storage for a single period of up to 5 days between  $73^{\circ}$  to  $81^{\circ}$  F ( $23^{\circ}$  to  $27^{\circ}$  C). If not used within 5 days, the product may be returned to  $36^{\circ}$  to  $46^{\circ}$  F ( $2^{\circ}$  to  $8^{\circ}$  C) up to the expiration date.

Avoid shaking. The solution should be visually inspected prior to use. Only clear solutions without particles should be used. Exposure to 23° to 30° F (-1° to -5 °C) for up to 72 hours and temperatures as low as 5° to -13° F (-15 to -25° C) for up to 24 hours do not adversely affect the stability of tbo-filgrastim.

Single use syringe – discard unused portion. Any unused product or waste material should be disposed of in accordance with local requirements.

#### 17 PATIENT COUNSELING INFORMATION

Advise patients of the following risks and potential risks with leukocyte growth factors such as tbo-filgrastim:

- Bone pain is common. Analgesics such as acetaminophen or NSAIDS may be necessary.
- Rupture or enlargement of the spleen may occur, which may be signaled by abdominal pain, left upper quadrant pain, or left shoulder pain. Advise patients to report onset of pain in these areas to their doctor immediately.
- Dyspnea with or without fever, progressing to Acute Respiratory Distress Syndrome may occur. Advise patients to report dyspnea immediately to their doctor.
- Serious allergic reactions, including anaphylaxis, rash, and urticaria: Patients should report such reactions immediately.
- In patients with sickle cell disease, sickle cell crisis and death has occurred. Discuss the potential risks and benefits for patients with sickle cell disease prior to the administration of human granulocyte colony-stimulating factors.
- Tbo-filgrastim is used in circumstances where the risk of infection is increased. Patients should be alert for signs of infection such as fever, redness or swelling and should report these findings to their doctor immediately.
- Inform patients not to become pregnant while receiving the filgrastim. If pregnancy occurs, advise patients of the possibility of fetal harm.

#### **See FDA-Approved Patient Labeling (Patient Information)**

Manufactured by: Sicor Biotech UAB Vilnius, Lithuania U.S. License No. 1803

Distributed by:

Teva Pharmaceuticals USA, North Wales, PA 19454

Product of Israel

Revision 08/2012

# Patient Information tbo-filgrastim Injection for subcutaneous use

Read this Patient Information before you start receiving the filgrastim and before each treatment course. There may be new information. This information does not take the place of you talking with your doctor about your medical condition or treatment.

# What is tbo-filgrastim?

Tbo-filgrastim is a prescription medicine:

- used in people with certain types of cancer (non-myeloid malignancies), who are receiving chemotherapy that affects the bone marrow
- given to help decrease the length of time that the number of certain white blood cells (neutrophils) are very low (severe neutropenia).
   Neutrophils are white blood cells that are important in fighting bacterial infections

It is not known if the filgrastim is safe and effective in children under 18 years of age.

# What should I tell my doctor before I receive tho-filgrastim? Before you take tho-filgrastim, tell your doctor if you:

- have sickle cell anemia or other blood problem
- plan to have bone scans or tests
- are allergic to filgrastim (Neupogen) or pegfilgrastim (Neulasta)
- have any other medical conditions
- are pregnant or plan to become pregnant. It is not known if tbofilgrastim will harm your unborn baby.
- are breastfeeding or plan to breastfeed. It is not known if tbofilgrastim passes into your breast milk.

**Tell your doctor about all the medicines you take,** including prescription and non-prescription medicines, vitamins, and herbal supplements.

Know the medicines you take. Keep a list of them to show your doctor and pharmacist when you get a new medicine.

# How will I receive tho-filgrastim?

- Tbo-filgrastim is given by an injection under your skin (subcutaneous) by a doctor or nurse.
- Your first dose of tbo-filgrastim is given at least 24 hours after you receive your chemotherapy.

- Tbo-filgrastim injections are usually given 1 time each day until your white blood cell count returns to normal.
- Your doctor will test your blood before your chemotherapy and during your tbo-filgrastim treatment until your white blood cell count returns to normal.
- Keep all of your appointments for your tbo-filgrastim injections and blood tests.

# What are the possible side effects of tbo-filgrastim?

Tbo-filgrastim can cause serious side effects, including:

- Spleen rupture, which can cause death. Call your doctor right away if you have pain in your left upper stomach area or left shoulder area while taking tbo-filgrastim. This pain could mean your spleen is enlarged or ruptured.
- A serious lung problem called Acute Respiratory Distress Syndrome (ARDS). Get medical help right away if you have any of these symptoms of Acute Respiratory Distress Syndrome (ARDS):
  - fever
  - shortness of breath
  - trouble breathing
- Serious Allergic Reactions. If you have a serious allergic reaction during a tbo-filgrastim injection, your doctor will treat your allergic reaction and stop giving you the injections. Tell your doctor right away if you have any of these symptoms during or after your injection:
  - a rash over the whole body
  - shortness of breath
  - trouble breathing (wheezing)
  - dizziness

- swelling around the mouth or eyes
- fast heart rate
- sweating
- Severe Sickle Cell Crisis in people with a sickle cell disease. If you have sickle cell disease, talk to your doctor about the risks of taking tbo-filgrastim.

The most common side effect of tbo-filgrastim is bone pain.

Tell your doctor about any side effect that bother you or that do not go away.

These are not all the possible side effects of tho-filgrastim. For a complete list, ask your doctor or pharmacist.

Call your doctor for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1988.

# General Information about tbo-filgrastim

Medicines are sometimes prescribed for purposes other than those listed in Patient Information leaflets. This Patient Information leaflet summarizes the most important information about tbo-filgrastim. If you would like more information, talk with your doctor. You can ask your doctor or pharmacist for information about tbo-filgrastim that is written for health professionals.

For more information, call 1-800-896-5855.

# What are the ingredients in tho-filgrastim?

Active ingredient: tbo-filgrastim

Inactive ingredient: glacial acetic acid, sorbitol, polysorbate 80, sodium

hydroxide, and Water for Injection.

The Patient Information has been approved by the U.S. Food and Drug Administration.

Manufactured by: Sicor Biotech UAB Vilnius, Lithuania U.S. License No. 1803

Distributed by:

Teva Pharmaceuticals USA, North Wales, PA 19454

Product of Israel

Issued: August, 2012

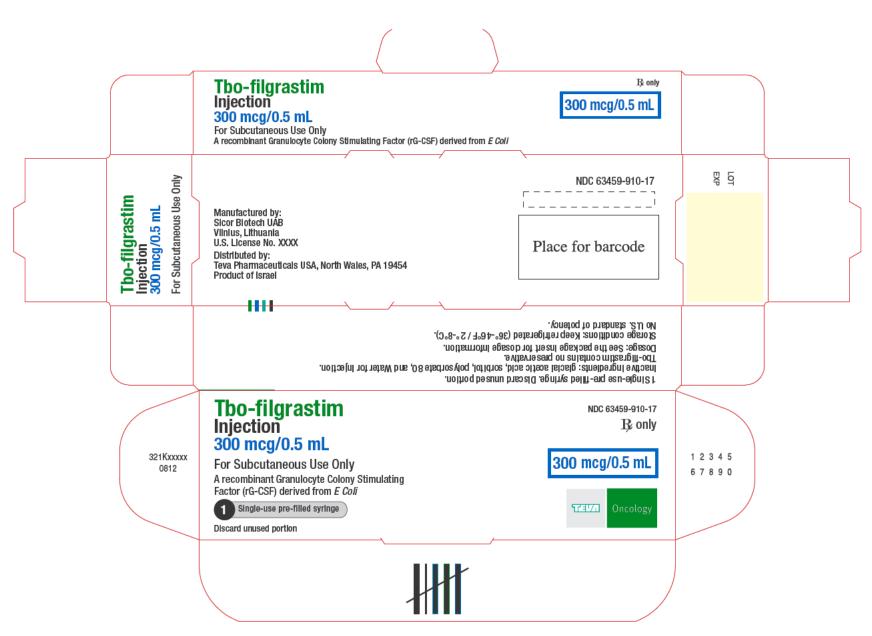
#### Neutroval 300 mcg/0.5 ml / 1 syringe / USA Tbo-filgrastim Single-use pre-filled syringe NDC 63459-910-11 with a safety needle guard Injection EXP MM/YY Discard unused portion Peel back 300 mcg/0.5 mL $m B\!\!\!/$ only 300 mcg/0.5 mL For Subcutaneous Use Only Manufactured by: Sicor Biotech UAB T Vilnius, Lithuania U.S. License No. XXXX A recombinant Granulocyte Colony Stimulating Factor (rG-CSF) derived from E Coli Inactive ingredients: glacial acetic acid, sorbitol, polysorbate 80, and Water for injection $\$ torage conditions: Keep refrigerated (36°-46° F/2°-8°C) 0 NDC 63459-910-11 Single-use pre-filled syringe Tbo-filgrastim with a safety needle guard Injection Discard unused portion LOT XXXXXXX Pee 300 mcg/0.5 mL B₂ only 300 mcg/0.5 ml For Subcutaneous Use Only Manufactured by: Sicor Biotech UAB A recombinant Granulocyte Colony Stimulating Factor (rG-CSF) derived from E Coll Inactive Ingredients: glacial acetic acid, sorbitol, polysorbate 80, and Water for Injection Storage conditions: Keep refrigerated (36°-46°F/2°-8°C) Vilnius, Lithuania U.S. License No. XXXX 0 NDC 63459-910-11 Tbo-filgrastim Single-use pre-filled syringe with a safety needle guard Injection Discard unused portion LOT XXXXXXX Peel back 300 mcg/0.5 mL 300 mcg/0.5 ml MM/YYY For Subcutaneous Use Only Manufactured by: Sicor Biotech UAB A recombinant Granulocyte Colony Stimulating Factor (rG-CSF) derived from E Coll Inactive Ingredients: glacial acetic acid, sorbitol, polysorbate 80, and Water for Injection Storage conditions: Keep refrigerated (36°-46°F/2°-8°C) Vilnius, Lithuania U.S. License No. XXXX 0Tbo-filgrastim Single-use pre-filled syringe NDC 63459-910-11 with a safety needle guard Injection EXP MM/YYY Discard unused portion Ped back 300 mcg/0.5 mL MM/YYY 300 mcg/0.5 mL R₂ only For Subcutaneous Use Only Manufactured by: Sicor Biotech UAB Vilnius, Lithuania U.S. License No. XXXX A recombinant Granulocyte Colony Stimulating Factor (rG-CSF) derived from E Coli Inactive Ingredients: glacial acetic acid, sorbitol, polysorbate 80, and Water for Injection Storage conditions: Keep refrigerated (36°-46°F/2°-8°C)

132

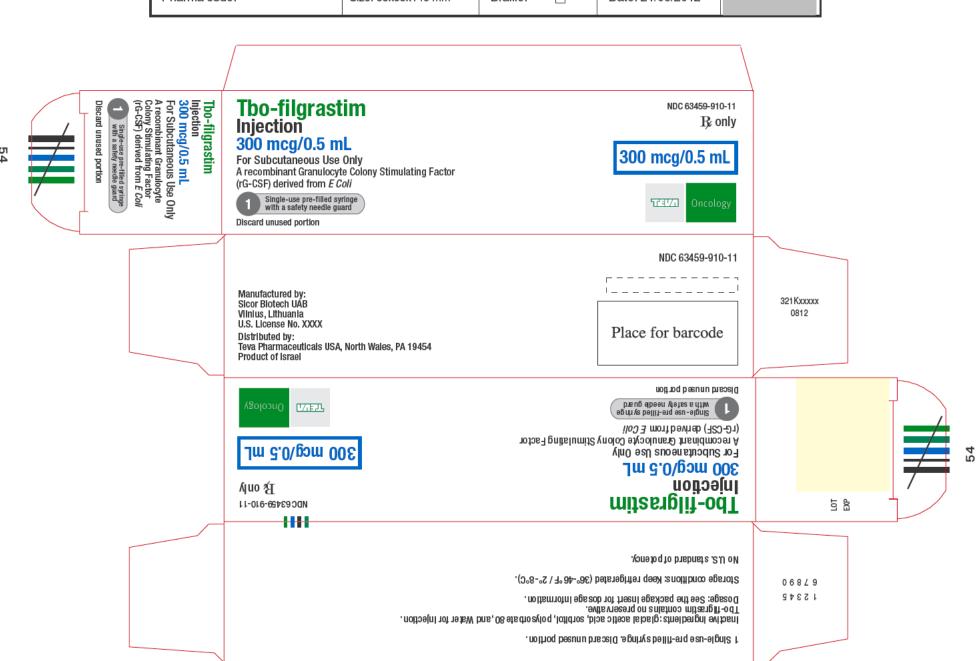
143 FASCIA MATERIALE DI COPERTURA

LIDDING MATERIAL WIDTH







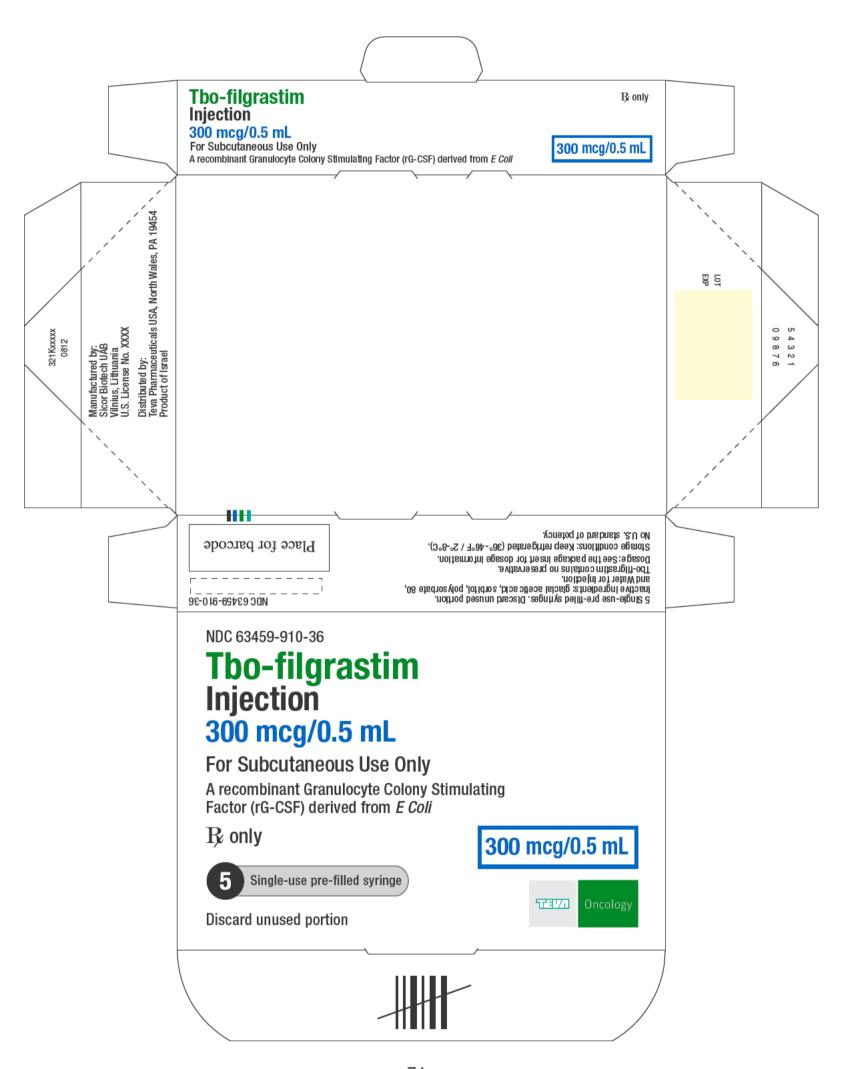


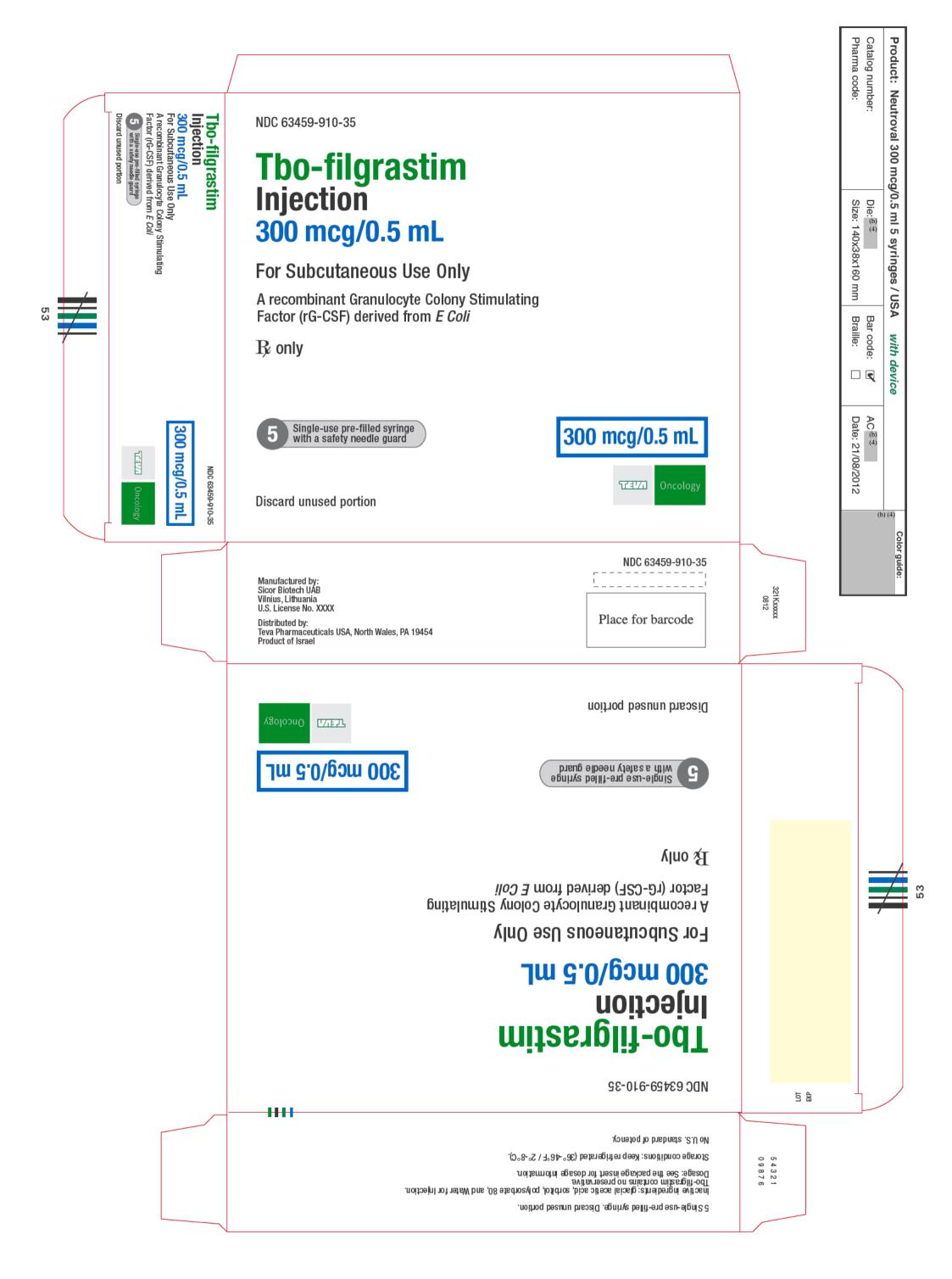
# Neutroval 300 mcg/0.5 ml / 5 syringes / USA

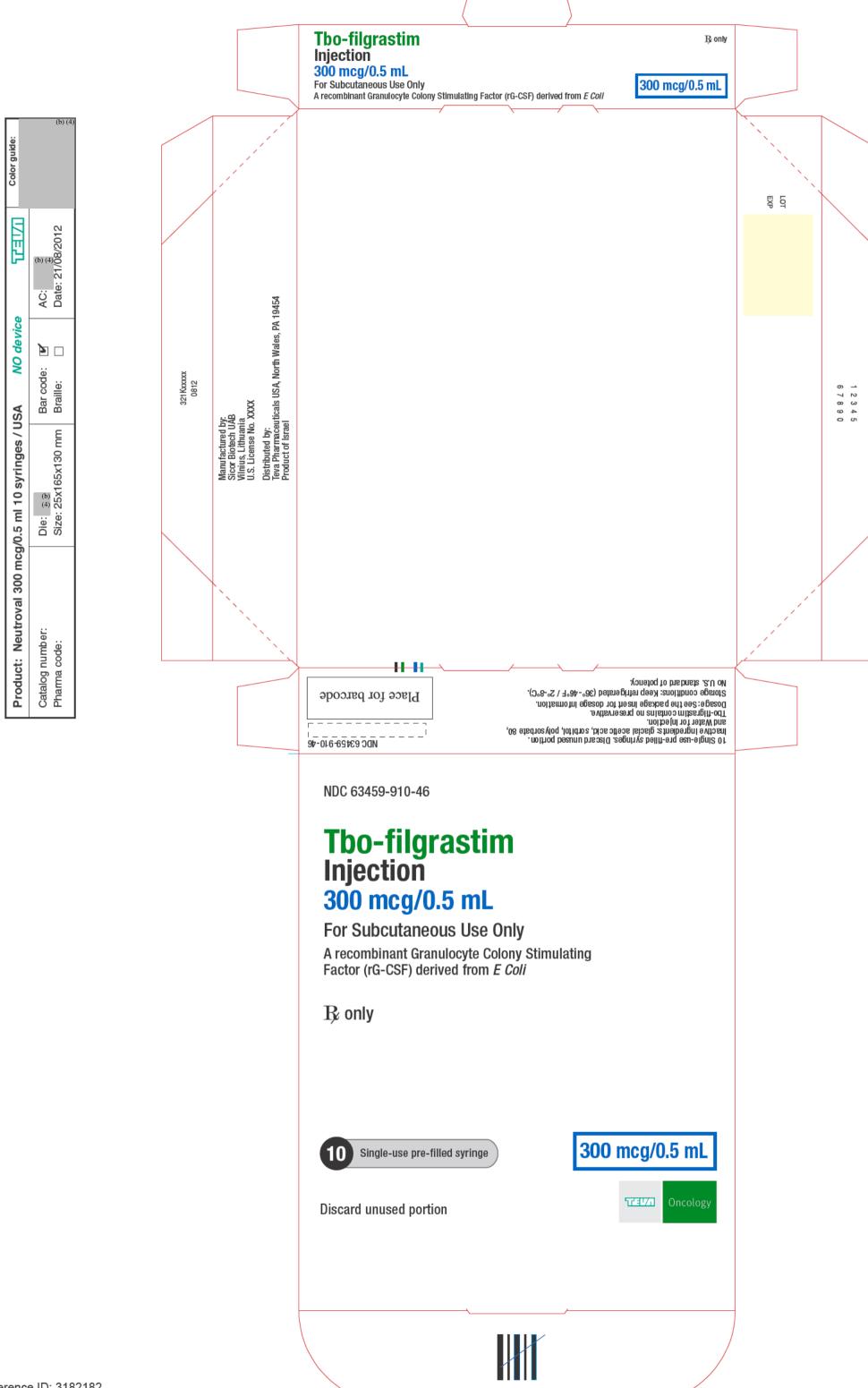
(b) (4)

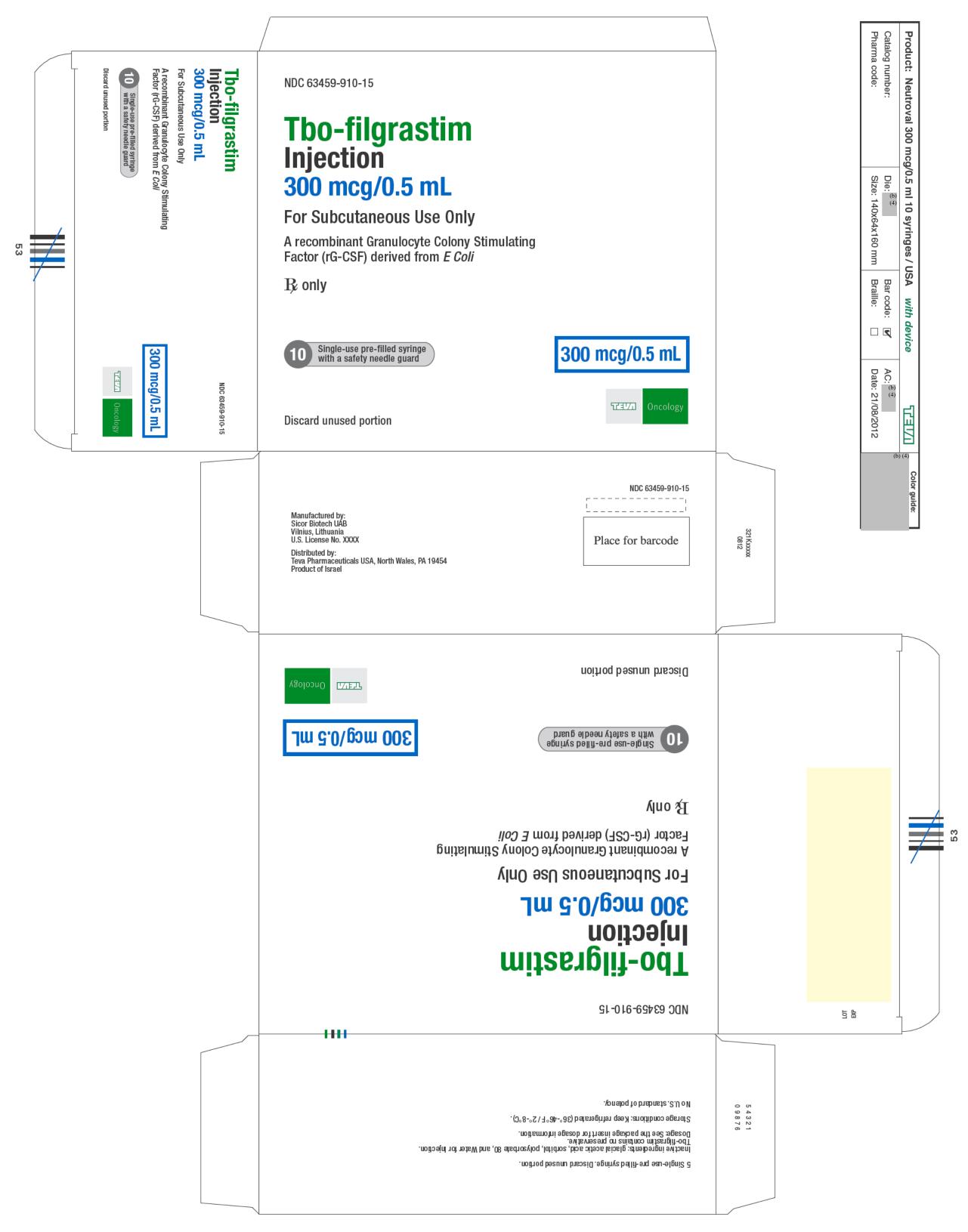


Product: Neutroval 300 mcg/0.5 ml 5 syringes / USA NO device		723771	Color guide: (b) (4)	
Catalog number: Pharma code:	Die: (b) (4) Size: 25x90x130 mm	Bar code: <b>☑</b> Braille: □	AC: (b) (4) Date: 21/08/2012	

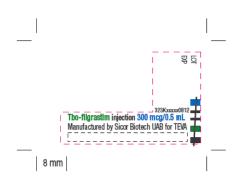








Product: Neutroval 300 mcg/0.5 ml / USA		TETT	Color gulda: (b) (4)
Catalog number: Pharma code:	Size: 29x45 mm	AC (b) (4) Date: 20/08/2012	



White color under text

#### Neutroval 480 mcg/0.8 ml / 1 syringe / USA Single-use pre-filled syringe with a safety needle guard Position for printing I The text will be pri with the det NDC 63459-912-11 Tbo-filgrastim Injection Discard unused portion 목달 Peel MM/YYYY 480 mcg/0.8 mL R₂ only 480 mcq/0.8 mL 34 back For Subcutaneous Use Only Manufactured by: Sicor Biotech UAB A recombinant Granulocyte Colony Stimulating Factor (rG-CSF) derived from E Coll Inactive Ingredients: glacial acetic acid, sorbitol, polysorbate 80, and Water for Injection Vilnius, Lithuania Storage conditions: Keep refrigerated (36°-46°F/2°-8°C) U.S. License No. XXXX 0Single-use pre-filled syringe with a safety needle guard NDC 63459-912-11 Tbo-filgrastim Injection Discard unused portion Peel 480 mcg/0.8 mL B₂ only WWYYYY XXXXX 480 mcg/0.8 mL 34 back For Subcutaneous Use Only A recombinant Granulocyte Colony Stimulating Factor (rG-CSF) derived from E Coli Manufactured by: Sicor Biotech UAB Vilnius, Lithuania Inactive Ingredients: glacial acetic acid, sorbitol, polysorbate 80, and Water for Injection Storage conditions: Keep refrigerated (36°-46°F/2°-8°C) U.S. License No. XXXX 0 Tbo-filgrastim Single-use pre-filled syringe NDC 63459-912-11 with a safety needle guard Injection Discard unused portion \$ 5i Peel P MMYYYYY 480 mcg/0.8 mL R only 480 mcg/0.8 mL back For Subcutaneous Use Only Manufactured by: Sicor Biotech UAB Vilnius, Lithuania A recombinant Granulocyte Colony Stimulating Factor (rG-CSF) derived from E Coli Inactive ingredients: glacial acetic acid, sorbitol, polysorbate 80, and Water for Injection Storage conditions: Keep refrigerated (36°-46°F/2°-8°C) U.S. License No. XXXX 0 Single-use pre-filled syringe with a safety needle guard Tbo-filgrastim NDC 63459-912-11 Injection EXP MM/YYYY Discard unused portion Peel back ₽ only 480 mcg/0.8 mL 480 mcg/0.8 mL For Subcutaneous Use Only 4 Manufactured by: Sicor Biotech UAB Vilnius, Lithuania -U.S. License No. XXXX A recombinant Granulocyte Colony Stimulating Factor (rG-CSF) derived from E Coli Inactive ingredients: glacial acetic acid, sorbitol, polysorbate 80, and Water for Injection Storage conditions: Keep refrigerated (36°-46°F/2°-8°C) Tbo-filgrastim Single-use pre-filled syringe NDC 63459-912-11 with a safety needle guard Discard unused portion Injection EXP MM/YYYY P 08 480 mcg/0.8 mL R₂ only 480 mcg/0.8 ml For Subcutaneous Use Only Manufactured by: Sicor Biotech UAB Vilnius, Lithuania U.S. License No. XXXX A recombinant Granulocyte Colony Stimulating Factor (rG-CSF) derived from E Coli inactive ingredients: glacial acetic acid, sorbitol, polysorbate 80, and Water for injection Storage conditions: Keep refrigerated (36°-46°F/2°-8°C) 132 5.

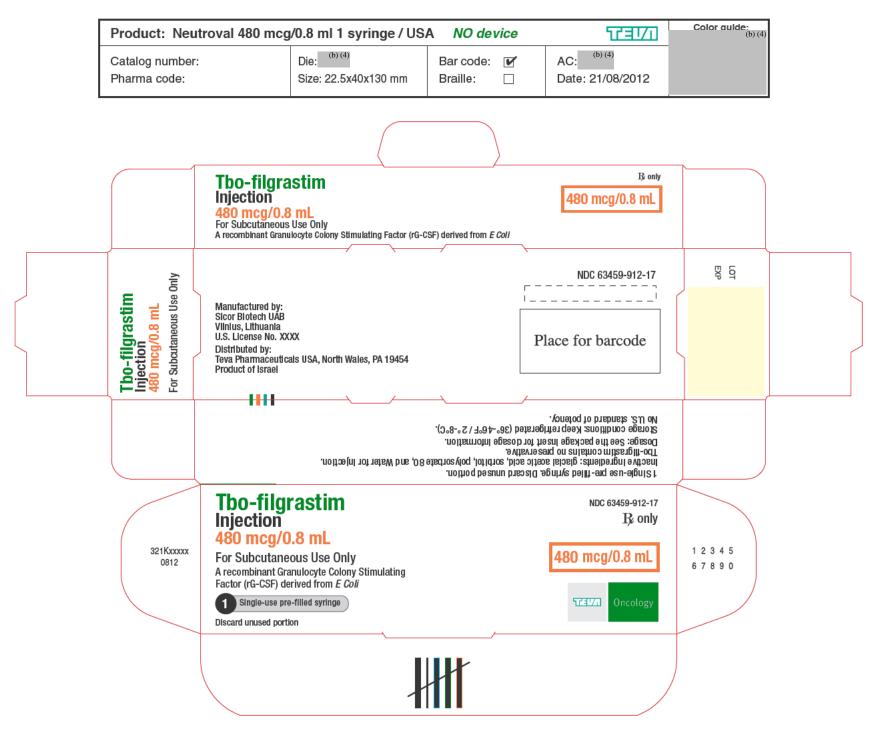
143 FASCIA MATERIALE DI COPERTURA

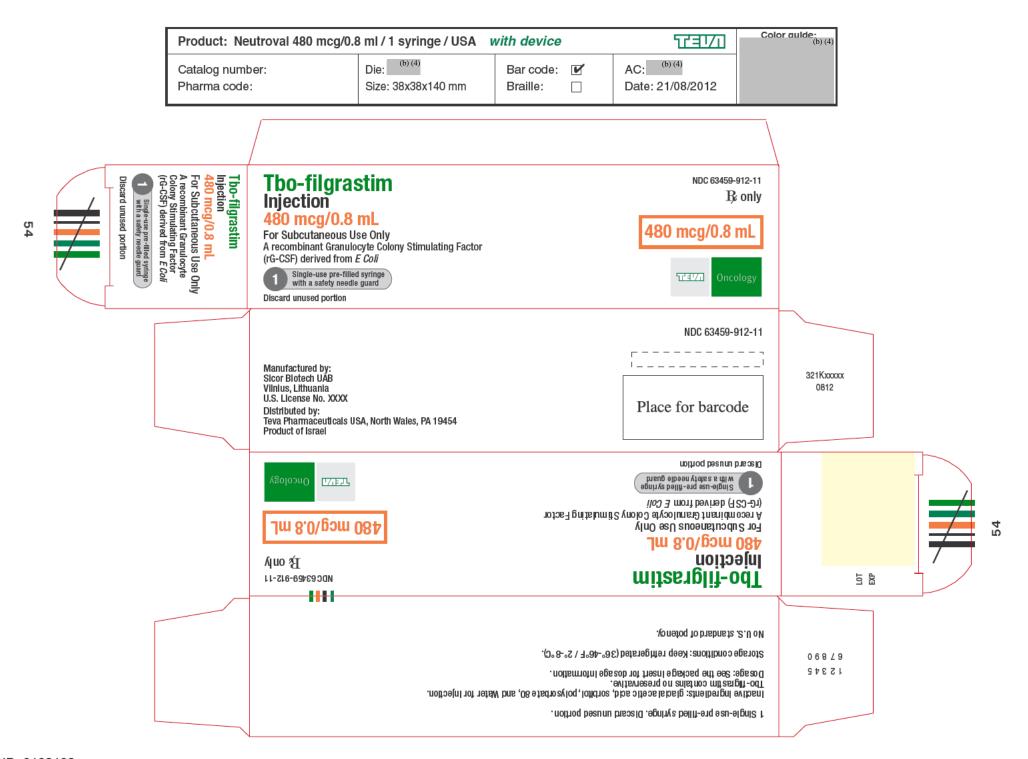
LIDDING MATERIAL WIDTH

160

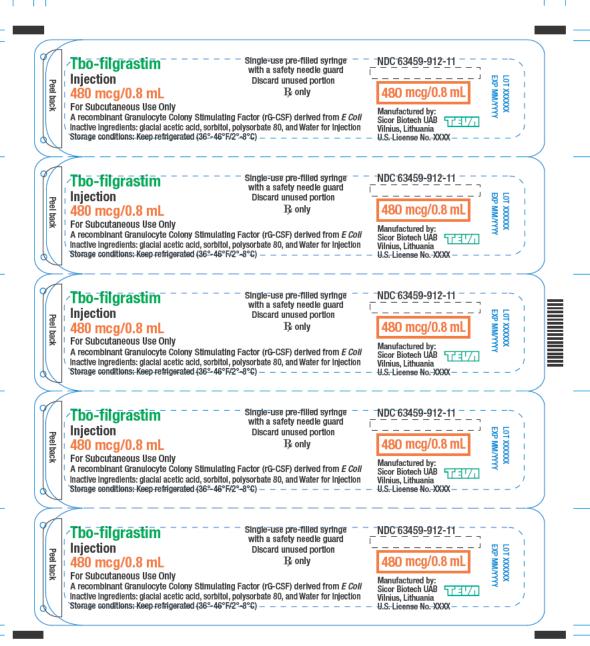
PASSO/PITCH



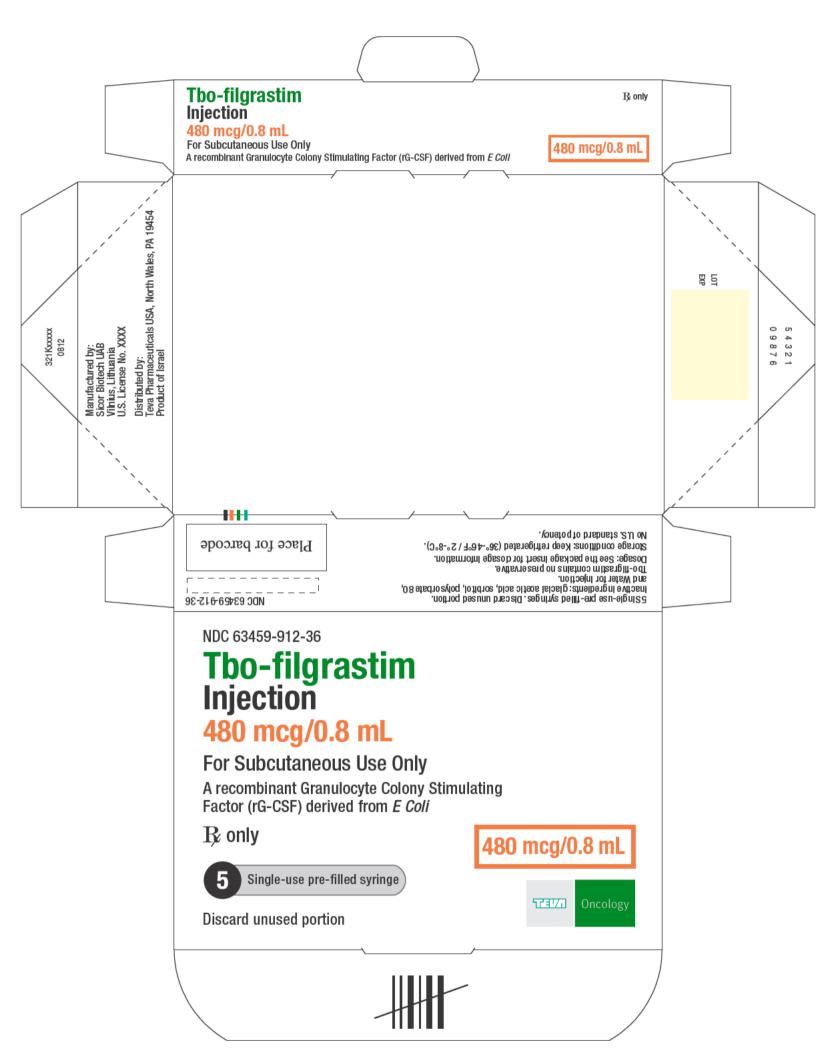


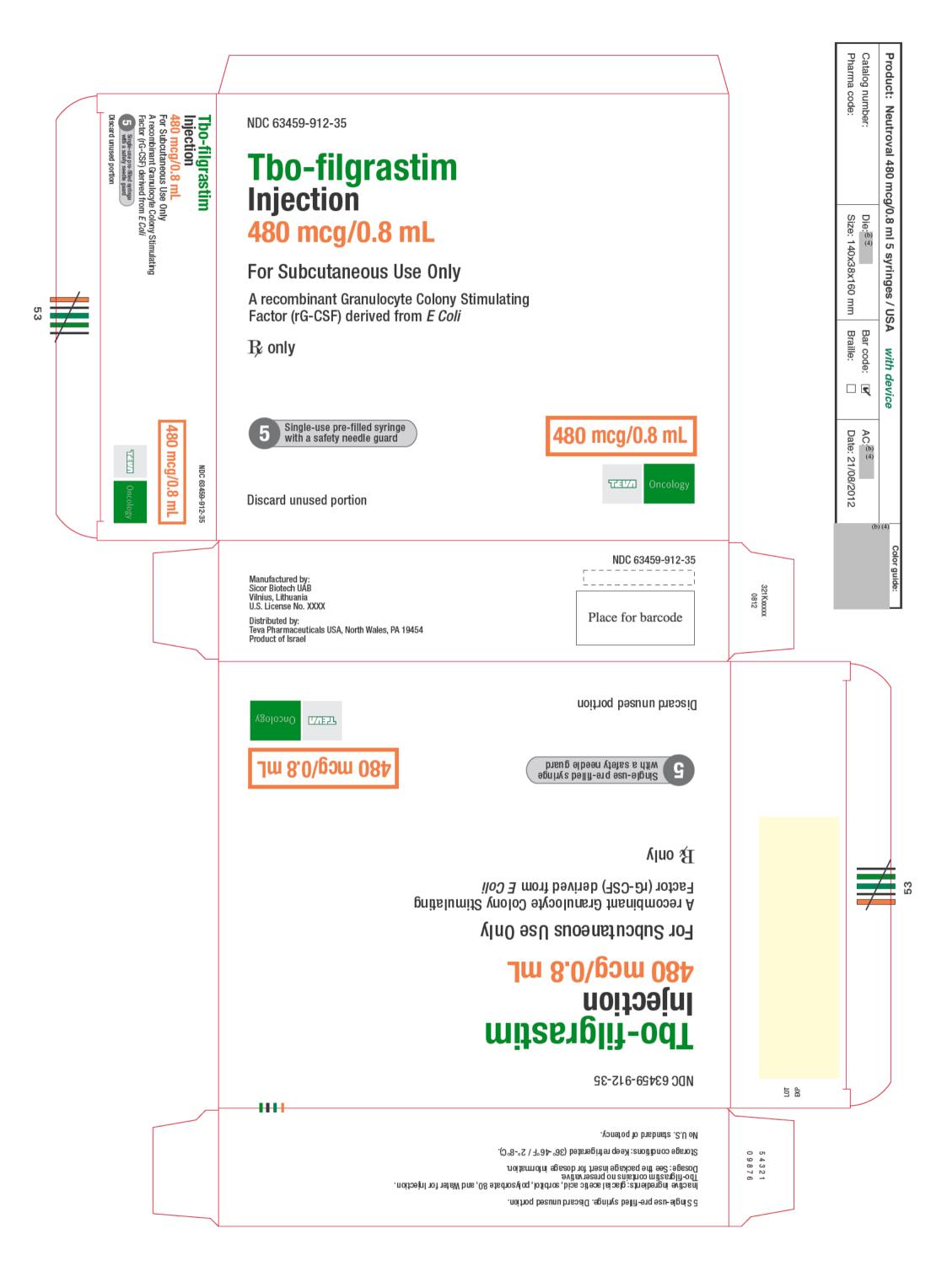


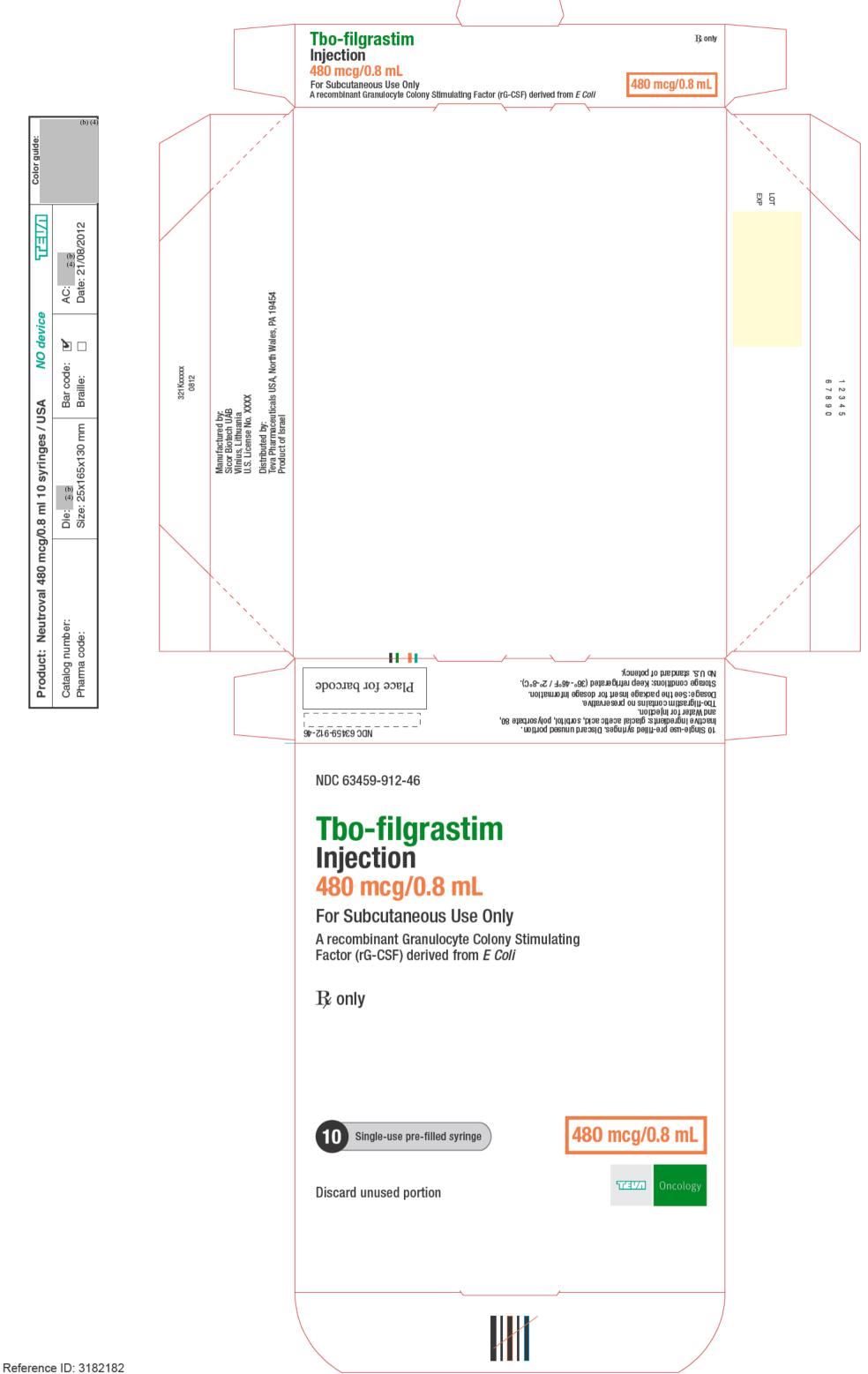
(b) (4



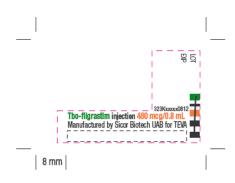
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White color under text

This is a representation of an electronic record that was signed electronically and this page is the manifestation of the electronic signature.
/s/
RICHARD PAZDUR 08/29/2012