

# Colony Stimulating Factors: Granix® (tbo-filgrastim) (Subcutaneous/Intravenous)

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## I. Length of Authorization

Coverage will be provided for four months and may be renewed.

## II. Dosing Limits

### A. Quantity Limit (max daily dose) [Pharmacy Benefit]:

- Granix 300 mcg: 4 syringes per 1 day
- Granix 480 mcg: 3 syringes per 1 day

### B. Max Units (per dose and over time) [Medical Benefit]:

*BMT or PBSC:*

- 1200 billable units per day

*All Other indications:*

- 600 billable units per day

## III. Initial Approval Criteria

Zarxio is the preferred short-acting granulocyte colony-stimulating factor product.

- Patients must have failed, or have a contraindication, or intolerance to Zarxio prior to consideration of any other short-acting G-CSF product.

Coverage for Granix® (tbo-filgrastim) is provided in the following conditions:

### Prophylactic use in patients with non-myeloid malignancy †

- Patient is undergoing myelosuppressive chemotherapy with an expected incidence of febrile neutropenia of 20% or greater §; **OR**
- Patient is undergoing myelosuppressive chemotherapy with an expected incidence of febrile neutropenia of 10% or greater § **AND** one or more of the following co-morbidities:
  - Elderly patients (age 65 or older) receiving full dose intensity chemotherapy
  - History of recurrent febrile neutropenia from chemotherapy
  - Extensive prior exposure to chemotherapy
  - Previous exposure of pelvis, or other areas of large amounts of bone marrow, to radiation

- Pre-existing neutropenia ( $ANC \leq 1000/mm^3$ ) or bone marrow involvement with tumor
- Patient has a condition that can potentially increase the risk of serious infection (i.e. HIV/AIDS)
- Infection/open wounds
- Recent surgery
- Poor performance status
- Poor renal function (creatinine clearance  $<50$ )
- Liver dysfunction (elevated bilirubin  $>2.0$ )
- Chronic immunosuppression in the post-transplant setting including organ transplant

**Treatment of chemotherapy-induced febrile neutropenia ‡**

- Used for the treatment of chemotherapy induced febrile neutropenia; **AND**
  - Patient has been on prophylactic therapy with filgrastim; **OR**
  - Patient has not received prophylactic therapy with a granulocyte colony stimulating factor; **AND**
    - Patient has one or more of the following risk factors for developing infection-related complications:
      - Sepsis Syndrome
      - Age  $> 65$
      - Absolute neutrophil count [ANC]  $<100/mcL$
      - Duration of neutropenia expected to be greater than 10 days
      - Pneumonia or other clinically documented infections
      - Invasive fungal infection
      - Hospitalization at the time of fever
      - Prior episode of febrile neutropenia

**Patient who experienced a neutropenic complication from a prior cycle of the same chemotherapy ‡**

**Bone Marrow Transplantation (BMT) failure or Engraftment Delay ‡**

**Peripheral Blood Stem Cell (PBSC) mobilization and transplant ‡**

**Myelodysplastic Syndromes (MDS) ‡**

- Endogenous serum erythropoietin level of  $\leq 500$  mUnits/mL; **AND**
- Patient is receiving concurrent therapy with Erythropoiesis Stimulating Agents (ESAs)

† FDA-labeled indication(s); ‡ Compendia Recommended Indication(s)

§ Expected incidence of febrile neutropenia percentages for myelosuppressive chemotherapy regimens can be found in the NCCN Myeloid Growth Factors Clinical Practice Guideline at NCCN.org.

**IV. Renewal Criteria**

Same as initial prior authorization policy criteria.

**V. Dosage/Administration**

Indication	Dose
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Prevention and treatment of febrile neutropenia in patients receiving myelosuppressive chemotherapy	5 mcg/kg daily for up to 14 days <i>*Administer no earlier than 24 hours following myelosuppressive chemotherapy. Do not administer within 24 hours prior to chemotherapy.</i>
PBPC/BMT	10 mcg/kg daily for up to 14 days
Other indications	5 mcg/kg daily for up to 14 days

## VI. Billing Code/Availability Information

### Jcode:

- J1447 - Injection, tbo-filgrastim, 1 microgram (1 microgram=1 billable unit)

### NDC:

- Granix 300 mcg prefilled syringe: 63459-0910-xx
- Granix 480 mcg prefilled syringe: 63459-0912-xx

## VII. References

1. Granix [package insert]. North Wales, PA; Teva Pharmaceuticals USA, Inc.; June 2017. Accessed March 2018.
2. Referenced with permission from the NCCN Drugs & Biologics Compendium (NCCN Compendium®) Myeloid Growth Factors. Version 1.2018. National Comprehensive Cancer Network, 2017. The NCCN Compendium® is a derivative work of the NCCN Guidelines®. NATIONAL COMPREHENSIVE CANCER NETWORK®, NCCN®, and NCCN GUIDELINES® are trademarks owned by the National Comprehensive Cancer Network, Inc.” To view the most recent and complete version of the Compendium, go online to NCCN.org. Accessed March 2018.
3. Referenced with permission from the NCCN Drugs & Biologics Compendium (NCCN Compendium®) tbo-filgrastim. National Comprehensive Cancer Network, 2018. The NCCN Compendium® is a derivative work of the NCCN Guidelines®. NATIONAL COMPREHENSIVE CANCER NETWORK®, NCCN®, and NCCN GUIDELINES® are trademarks owned by the National Comprehensive Cancer Network, Inc.” To view the most recent and complete version of the Compendium, go online to NCCN.org. Accessed March 2018.
4. Elayan MM, Horowitz JG, Magraner JM, Shaughnessy PJ, Bachier C. Tbo-Filgrastim versus Filgrastim during Mobilization and Neutrophil Engraftment for Autologous Stem Cell Transplantation. Biol Blood Marrow Transplant. 2015 Nov; 21(11):1921-5. doi: 10.1016/j.bbmt.2015.05.024.
5. Trifilio S, Zhou Z, Galvin J, Fong JL, Monreal J, Mehta J. Filgrastim versus TBO-filgrastim to reduce the duration of neutropenia after autologous hematopoietic stem cell transplantation: TBO, or not TBO, that is the question. Clin Transplant. 2015 Oct 22. doi: 10.1111/ctr.12637.
6. Kelaidi C Beyne-Rauzy O, Braun T, et al. High Response rate and improved exercise capacity and quality of life with a new regimen of darbepoetin alfa with or without filgrastim in lower-risk myelodysplastic syndromes: a phase II study by the GFM. Ann Hematol 2013; 92:621-631.

7. Wisconsin Physicians Service Insurance Corporation. Local Coverage Determination (LCD): Human Granulocyte/Macrophage Colony Stimulating Factors (L34699). Centers for Medicare & Medicaid Services, Inc. Updated on 1/23/2018 with effective date 02/1/2018. Accessed March 2018.
8. First Coast Service Options, Inc. Local Coverage Determination (LCD): G-CSF (Neupogen®, Granix™, Zarxio™) (L34002). Centers for Medicare & Medicaid Services, Inc. Updated on 6/10/2016 with effective date 7/5/2016. Accessed March 2018.
9. National Government Services, Inc. Local Coverage Article: Filgrastim, Pegfilgrastim, Tbofilgrastim (e.g., Neupogen®, Neulasta™, Granix™, Zarxio™) - Related to LCD L33394 (A52408). Centers for Medicare & Medicaid Services, Inc. Updated on 9/23/2016 with effective date 10/1/2016. Accessed March 2018.
10. Palmetto GBA. Local Coverage Determination (LCD): White Cell Colony Stimulating Factors (L37176). Centers for Medicare & Medicaid Services, Inc. Updated on 12/7/2017 with effective date 2/26/2018. Accessed March 2018.

## Appendix 1 – Covered Diagnosis Codes

ICD-10	ICD-10 Description
C93.10	Chronic myelomonocytic leukemia, not having achieved remission
D46.0	Refractory anemia without ring sideroblasts, so stated
D46.1	Refractory anemia with ring sideroblasts
D46.20	Refractory anemia with excess of blasts, unspecified
D46.21	Refractory anemia with excess of blasts 1
D46.4	Refractory anemia, unspecified
D46.9	Myelodysplastic syndrome, unspecified
D46.A	Refractory cytopenia with multilineage dysplasia
D46.B	Refractory cytopenia with multilineage dysplasia and ring sideroblasts
D46.Z	Other myelodysplastic syndromes
D70.1	Agranulocytosis secondary to cancer chemotherapy
T45.1X5A	Adverse effect of antineoplastic and immunosuppressive drugs initial encounter
T45.1X5D	Adverse effect of antineoplastic and immunosuppressive drugs subsequent encounter
T45.1X5S	Adverse effect of antineoplastic and immunosuppressive drugs sequela
Z41.8	Encounter for other procedures for purposes other than remedying health state
Z48.290	Encounter for aftercare following bone marrow transplant
Z51.11	Encounter for antineoplastic chemotherapy
Z51.12	Encounter for antineoplastic immunotherapy
Z51.89	Encounter for other specified aftercare
Z52.001	Unspecified donor, stem cells
Z52.011	Autologous donor, stem cells
Z52.091	Other blood donor stem cells
Z94.81	Bone marrow transplant status

ICD-10	ICD-10 Description
Z94.84	Stem cells transplant status

## Appendix 2 – Centers for Medicare and Medicaid Services (CMS)

Medicare coverage for outpatient (Part B) drugs is outlined in the Medicare Benefit Policy Manual (Pub. 100-2), Chapter 15, §50 Drugs and Biologicals. In addition, National Coverage Determination (NCD) and Local Coverage Determinations (LCDs) may exist and compliance with these policies is required where applicable. They can be found at: <http://www.cms.gov/medicare-coverage-database/search/advanced-search.aspx>. Additional indications may be covered at the discretion of the health plan.

Medicare Part B Covered Diagnosis Codes (applicable to existing NCD/LCD):

<b>Jurisdiction(s):</b> 5,8	<b>NCD/LCD Document (s):</b> L34699
<a href="https://www.cms.gov/medicare-coverage-database/search/lcd-date-search.aspx?DocID=L34699&amp;bc=gAAAAAAAAAAAA">https://www.cms.gov/medicare-coverage-database/search/lcd-date-search.aspx?DocID=L34699&amp;bc=gAAAAAAAAAAAA</a>	
<b>Jurisdiction(s):</b> N	<b>NCD/LCD Document (s):</b> L34002
<a href="https://www.cms.gov/medicare-coverage-database/search/document-id-search-results.aspx?DocID=L34002&amp;bc=gAAAAAAAAAAAA&amp;">https://www.cms.gov/medicare-coverage-database/search/document-id-search-results.aspx?DocID=L34002&amp;bc=gAAAAAAAAAAAA&amp;</a>	
<b>Jurisdiction(s):</b> 6, K	<b>NCD/LCD Document (s):</b> A52408
<a href="https://www.cms.gov/medicare-coverage-database/search/document-id-search-results.aspx?DocID=A52408&amp;bc=gAAAAAAAAAAAA&amp;">https://www.cms.gov/medicare-coverage-database/search/document-id-search-results.aspx?DocID=A52408&amp;bc=gAAAAAAAAAAAA&amp;</a>	
<b>Jurisdiction(s):</b> J, M	<b>NCD/LCD Document (s):</b> L37176
<a href="https://www.cms.gov/medicare-coverage-database/search/lcd-date-search.aspx?DocID=L37176&amp;bc=gAAAAAAAAAAAA">https://www.cms.gov/medicare-coverage-database/search/lcd-date-search.aspx?DocID=L37176&amp;bc=gAAAAAAAAAAAA</a>	

### Medicare Part B Administrative Contractor (MAC) Jurisdictions

Jurisdiction	Applicable State/US Territory	Contractor
E (1)	CA, HI, NV, AS, GU, CNMI	Noridian Healthcare Solutions, LLC
F (2 & 3)	AK, WA, OR, ID, ND, SD, MT, WY, UT, AZ	Noridian Healthcare Solutions, LLC
5	KS, NE, IA, MO	Wisconsin Physicians Service Insurance Corp (WPS)
6	MN, WI, IL	National Government Services, Inc. (NGS)
H (4 & 7)	LA, AR, MS, TX, OK, CO, NM	Novitas Solutions, Inc.
8	MI, IN	Wisconsin Physicians Service Insurance Corp (WPS)
N (9)	FL, PR, VI	First Coast Service Options, Inc.
J (10)	TN, GA, AL	Palmetto GBA, LLC
M (11)	NC, SC, WV, VA (excluding below)	Palmetto GBA, LLC

**Medicare Part B Administrative Contractor (MAC) Jurisdictions**

<b>Jurisdiction</b>	<b>Applicable State/US Territory</b>	<b>Contractor</b>
L (12)	DE, MD, PA, NJ, DC (includes Arlington & Fairfax counties and the city of Alexandria in VA)	Novitas Solutions, Inc.
K (13 & 14)	NY, CT, MA, RI, VT, ME, NH	National Government Services, Inc. (NGS)
15	KY, OH	CGS Administrators, LLC