



# Colony Stimulating Factors Medical Drug Criteria Program Summary

For BCBS KS, the following preferred agents are **not** subject to prior authorization: Nivestym, Zarxio, Fulphila, Ziextenzo

## POLICY REVIEW CYCLE

**Effective Date**  
6/5/2023

**Date of Origin**

## FDA APPROVED INDICATIONS AND DOSAGE

Agent(s)	FDA Indication(s)	Notes	Ref#
Fulphila®  (pegfilgrastim-jmdb)  Injection for subcutaneous use	<ul style="list-style-type: none"> <li>Decrease the incidence of infection, as manifested by febrile neutropenia, in patients with non-myeloid malignancies receiving myelosuppressive anti-cancer drugs associated with a clinically significant incidence of febrile neutropenia</li> </ul> <p>Limitations of Use:</p> <p>Fulphila is not indicated for the mobilization of peripheral blood progenitor cells for hematopoietic stem cell transplantation</p>		5
Fylnetra®  (pegfilgrastim-pbbk)  Injection for subcutaneous use	<ul style="list-style-type: none"> <li>Decrease the incidence of infection, as manifested by febrile neutropenia, in patients with non-myeloid malignancies receiving myelosuppressive anti-cancer drugs associated with a clinically significant incidence of febrile neutropenia</li> </ul> <p>Limitations of Use:</p> <p>Fylnetra is not indicated for the mobilization of peripheral blood progenitor cells for hematopoietic stem cell transplantation</p>		14
Granix®  (tbo-filgrastim)  Injection for subcutaneous use	<ul style="list-style-type: none"> <li>Adult and pediatric patients 1 month and older 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</li> </ul>		3
Neulasta®  (pegfilgrastim)  Injection for subcutaneous use	<ul style="list-style-type: none"> <li>Decrease the incidence of infection, as manifested by febrile neutropenia, in patients with non-myeloid malignancies receiving myelosuppressive anti-cancer drugs associated with a clinically significant incidence of febrile neutropenia</li> </ul> <p>Limitation of Use:</p> <p>Neulasta is not indicated for the mobilization of peripheral blood progenitor cells for hematopoietic stem cell transplantation</p>		2

Agent(s)	FDA Indication(s)	Notes	Ref#
	<ul style="list-style-type: none"> <li>Increase survival in patients acutely exposed to myelosuppressive doses of radiation (Hematopoietic Subsyndrome of Acute Radiation Syndrome)</li> </ul>		
<p>Neupogen® (filgrastim)</p> <p>Injection for subcutaneous or intravenous use</p>	<ul style="list-style-type: none"> <li>Decrease the incidence of infection, as manifested by febrile neutropenia, in patients with nonmyeloid malignancies receiving myelosuppressive anti-cancer drugs associated with a significant incidence of severe neutropenia with fever</li> <li>Reduce the time to neutrophil recovery and the duration of fever, following induction or consolidation chemotherapy treatment of patients with acute myeloid leukemia (AML)</li> <li>Reduce the duration of neutropenia and neutropenia-related clinical sequelae (e.g., febrile neutropenia) in patients with nonmyeloid malignancies undergoing myeloablative chemotherapy followed by bone marrow transplantation</li> <li>Mobilization of hematopoietic progenitor cells into the peripheral blood for collection by leukapheresis</li> <li>Reduce the incidence and duration of sequelae of neutropenia (e.g., fever, infections, oropharyngeal ulcers) in symptomatic patients with congenital neutropenia, cyclic neutropenia, or idiopathic neutropenia</li> <li>Increase survival in patients acutely exposed to myelosuppressive doses of radiation (hematopoietic syndrome of acute radiation syndrome)</li> </ul>		1
<p>Nivestym™ (filgrastim-aafi)</p> <p>Injection for subcutaneous or intravenous use</p>	<ul style="list-style-type: none"> <li>Decrease the incidence of infection, as manifested by febrile neutropenia, in patients with nonmyeloid malignancies receiving myelosuppressive anti-cancer drugs associated with a significant incidence of severe neutropenia with fever</li> <li>Reduce the time to neutrophil recovery and the duration of fever, following induction or consolidation chemotherapy treatment of patients with acute myeloid leukemia (AML)</li> <li>Reduce the duration of neutropenia and neutropenia-related clinical sequelae, e.g., febrile neutropenia, in patients with nonmyeloid malignancies undergoing myeloablative chemotherapy followed by bone marrow transplantation (BMT)</li> <li>Mobilize autologous hematopoietic progenitor cells into the peripheral blood for collection by leukapheresis</li> <li>Reduce the incidence and duration of sequelae of severe neutropenia (e.g., fever, infections, oropharyngeal ulcers) in symptomatic patients with congenital neutropenia, cyclic neutropenia, or idiopathic neutropenia</li> </ul>		6
<p>Nyvepria™ (pegfilgrastim-apgf)</p> <p>Injection for subcutaneous use</p>	<ul style="list-style-type: none"> <li>Decrease the incidence of infection, as manifested by febrile neutropenia, in patients with non-myeloid malignancies receiving myelosuppressive anti-cancer drugs associated with a clinically significant incidence of febrile neutropenia</li> </ul> <p>Limitations of Use:</p> <p>Nyvepria is not indicated for the mobilization of peripheral blood progenitor cells for hematopoietic stem cell transplantation</p>		12
<p>Releuko®</p>	<ul style="list-style-type: none"> <li>Decrease the incidence of infection, as manifested by febrile neutropenia, in patients with nonmyeloid malignancies</li> </ul>		13

Agent(s)	FDA Indication(s)	Notes	Ref#
(filgrastim-ayow)  Injection for subcutaneous use	<p>receiving myelosuppressive anti-cancer drugs associated with a significant incidence of severe neutropenia with fever</p> <ul style="list-style-type: none"> <li>Reduce the time to neutrophil recovery and the duration of fever, following induction or consolidation chemotherapy treatment of patients with acute myeloid leukemia (AML)</li> <li>Reduce the duration of neutropenia and neutropenia-related clinical sequelae, e.g., febrile neutropenia, in patients with nonmyeloid malignancies undergoing myeloablative chemotherapy followed by bone marrow transplantation (BMT)</li> <li>Reduce the incidence and duration of sequelae of severe neutropenia (e.g., fever, infections, oropharyngeal ulcers) in symptomatic patients with congenital neutropenia, cyclic neutropenia, or idiopathic neutropenia</li> </ul>		
Rolvedon™  (eflapegrastim-xnst)  Injection for subcutaneous use	<ul style="list-style-type: none"> <li>Decrease the incidence of infection, as manifested by febrile neutropenia, in adult patients with non-myeloid malignancies receiving myelosuppressive anti-cancer drugs associated with clinically significant incidence of febrile neutropenia</li> </ul> <p>Limitations of Use:</p> <ul style="list-style-type: none"> <li>Rolvedon is not indicated for the mobilization of peripheral blood progenitor cells for hematopoietic stem cell transplantation</li> </ul>		15
Stimufend®  (pegfilgrastim-fpgk)  Injection for subcutaneous use	<ul style="list-style-type: none"> <li>Decrease the incidence of infection, as manifested by febrile neutropenia in patients with non-myeloid malignancies receiving myelosuppressive anti-cancer drugs associated with a clinically significant incidence of febrile neutropenia</li> </ul> <p>Limitations of Use</p> <p>Stimufend is not indicated for the mobilization of peripheral blood progenitor cells for hematopoietic stem cell transplantation</p>		16
Udenyca®  (pegfilgrastim-cbqv)  Injection for subcutaneous use	<ul style="list-style-type: none"> <li>Decrease the incidence of infection, as manifested by febrile neutropenia, in patients with non-myeloid malignancies receiving myelosuppressive anti-cancer drugs associated with a clinically significant incidence of febrile neutropenia</li> </ul> <p>Limitations of Use:</p> <p>Udenyca is not indicated for the mobilization of peripheral blood progenitor cells for hematopoietic stem cell transplantation</p>		10
Zarxio®  (filgrastim-sndz)  Injection for subcutaneous or intravenous use	<ul style="list-style-type: none"> <li>Decrease the incidence of infection, as manifested by febrile neutropenia, in patients with nonmyeloid malignancies receiving myelosuppressive anticancer drugs associated with a significant incidence of severe neutropenia with fever</li> <li>Reduce the time to neutrophil recovery and the duration of fever, following induction or consolidation chemotherapy treatment of patients with acute myeloid leukemia (AML)</li> <li>Reduce the duration of neutropenia and neutropenia-related clinical sequelae, e.g., febrile neutropenia, in patients with</li> </ul>		4

Agent(s)	FDA Indication(s)	Notes	Ref#
	<p>nonmyeloid malignancies undergoing myeloablative chemotherapy followed by bone marrow transplantation (BMT)</p> <ul style="list-style-type: none"> <li>• Mobilize autologous hematopoietic progenitor cells into the peripheral blood for collection by leukapheresis</li> <li>• Reduce the incidence and duration of sequelae of severe neutropenia (e.g., fever, infections, oropharyngeal ulcers) in symptomatic patients with congenital neutropenia, cyclic neutropenia, or idiopathic neutropenia</li> </ul>		
<p>Ziextenzo™  (pegfilgrastim -bmez)  Injection for subcutaneous use</p>	<ul style="list-style-type: none"> <li>• Decrease the incidence of infection, as manifested by febrile neutropenia, in patients with non-myeloid malignancies receiving myelosuppressive anti-cancer drugs associated with a clinically significant incidence of febrile neutropenia</li> </ul>		11

See package insert for FDA prescribing information: <https://dailymed.nlm.nih.gov/dailymed/index.cfm>

## CLINICAL RATIONALE

<p>Hematopoietic growth factors</p>	<p>Hematopoietic growth factors are defined by their ability to promote proliferation and differentiation of hematopoietic progenitors into mature blood cells. Colony-stimulating factors are hematopoietic growth factors responsible for the regulation of growth and differentiation of cells in the myeloid and erythroid lineages. Myeloid growth factors (MGFs), which includes granulocyte colony-stimulating factor (G-CSF) and granulocyte macrophage colony-stimulating factor (GM-CSF), are primarily used to reduce the incidence of neutropenia in patients with solid tumors receiving myelosuppressive chemotherapy.(7)</p> <p>For patients with neutropenia, the risk of serious infection increases as the absolute neutrophil count (ANC) falls to the clinically significant range of less than 500/mcL or an anticipated decline to less than or equal to 500/mcL in the next 48 hours. Febrile neutropenia (FN) is defined as clinically significant neutropenia AND a fever of greater than or equal to 101 degrees Fahrenheit (greater than or equal to 38.3 degrees Celsius) orally or greater than or equal to 100.4 degrees Fahrenheit (greater than or equal to 38.0 degrees Celsius) over 1 hour, is a major dose limiting toxicity of chemotherapy that often requires prolonged hospitalization and broad-spectrum antibiotic use. Occurrences of severe neutropenia or FN can prompt chemotherapy dose reductions and/or treatment delays for subsequent chemotherapy cycles and compromise clinical outcome.(7)</p> <p>The National Comprehensive Cancer Network (NCCN) Supportive Care: Hematopoietic Growth Factors: Management of Neutropenia guidelines are based on the risk of febrile neutropenia associated with chemotherapy. When considering prophylactic use of MGFs, patients should be placed into one of following three risk categories based on disease type, chemotherapy regimen (high-dose, dose-dense, or standard-dose therapy), patient risk factors, and treatment intent (curative vs palliative): overall high-risk group (greater than 20% risk of FN), intermediate-risk group (10-20% risk), or low-risk group (less than 10% risk). Patients at high risk for febrile neutropenia AND those with intermediate risk along with at least 1 additional risk factor should be treated with G-CSF.(7)</p>
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Risk for developing FN should be assessed prior to the first chemotherapy cycle and before each subsequent cycle. If a patient had FN or a dose-limiting neutropenic event (a nadir or a day-of-treatment count impacting the planned dose of chemotherapy) in a previous treatment cycle, with the same dose and schedule planned for the current cycle, this patient is now in the high-risk group. If the patient experiences such an episode despite receiving MGF, the recommendation is a dose reduction or change in treatment regimen unless there is an impact on patient survival. When choosing among MGFs for prophylactic treatment of FN, filgrastim (or any of the biosimilars to filgrastim), tbo-filgrastim, and pegfilgrastim (or any of the biosimilars to pegfilgrastim) are considered NCCN Category 1 recommendations. Sargramostim is no longer recommended in patients with solid tumors receiving myelosuppressive chemotherapy. There is insufficient data to support the dose and schedule for weekly regimens of pegfilgrastim (or the biosimilars to pegfilgrastim); therefore, use of peg-filgrastim or its biosimilars in patients receiving weekly chemotherapy cannot be recommended.(7)

Filgrastim, pegfilgrastim, and sargramostim are FDA-approved for the treatment of patients presenting with acute exposure to myelosuppressive doses of radiation. NCCN endorses the use of any of the biosimilars to filgrastim or pegfilgrastim as well as tbo-filgrastim in this setting as well.(7)

MGFs are commonly administered in both the autologous and allogenic hematopoietic cell transplant (HCT) settings, either for mobilization of hematopoietic progenitor cells or as supportive care after transplantation. Mobilization of peripheral blood progenitor cells by G-CSF-containing regimens has largely replaced bone marrow collection for HCT due to ease of collection, avoidance of general anesthesia, and more rapid recovery of blood counts. Most data on mobilization of hematopoietic progenitor cells in the autologous setting are focused on filgrastim. While some studies suggest that single-dose pegfilgrastim may have similar efficacy, there are limited high-quality data supporting the use of pegfilgrastim in this setting. Therefore, pegfilgrastim and its biosimilars are not recommended by NCCN for mobilization at this time.(7)

Consensus is lacking on the use of MGFs in the post-transplant setting. Filgrastim administration after high-dose chemotherapy and autologous HCT has been shown to expedite neutrophil recovery in prospective randomized trials. Data are conflicting on G-CSF use as a supportive care measure for allogeneic transplant recipients, with some studies associating G-CSF with worse clinical outcomes. However, G-CSF has been used routinely to facilitate the recovery of blood counts after umbilical cord blood transplant, because there is a significant delay in the rate and kinetics of neutrophil and platelet engraftment after cord blood transplant as compared to marrow or mobilized PBPC grafts.(7)

While filgrastim biosimilars have been accepted as equivalent options to filgrastim for FN prophylaxis, there is discussion among medical professionals regarding their equivalency in hematopoietic cell mobilization. Therefore, while it is reasonable to substitute with filgrastim biosimilars the clinician should be aware of any complications presented in the literature or in their patients. NCCN recommends single-agent filgrastim as preferred with a 2A recommendation and the biosimilars to filgrastim along with tbo-filgrastim as 2B recommendations. The world marrow donor association (WMDA) does recommend the use of filgrastim biosimilars for the mobilization of peripheral blood progenitor cells in healthy donors in the allogenic HCT setting.(7)

	<p>American Society of Clinical Oncologist (ASCO) guidelines on the use of white blood cell growth factors recommend the use of CSF for primary prophylaxis when the risk of FN is greater than or equal to 20% and no other equally effective and safe regimen that does not require CSFs is available. Similar to NCCN guidelines, high risk determination is based on several factors including age, medical history, disease characteristics, and myelotoxicity of the chemotherapy regimen. ASCO also recommends immediate administration of CSFs when there are lethal doses of total-body radiotherapy given (with the exception of doses high enough to lead to certain death as a result of organ injury). Use for secondary prophylaxis is recommended when a patient had a neutropenic complication from a prior cycle of chemotherapy and a reduced dose and/or treatment delay will compromise disease-free/overall survival or treatment outcome. CSFs are also supported for use after chemotherapy to mobilize peripheral-blood progenitor cells, after autologous or allogeneic stem-cell transplantation to reduce the duration of severe neutropenia, and can be considered in diffuse aggressive lymphoma in those age greater than or equal to 65 years who are treated with curative chemotherapy especially when the patient has comorbidities. The choice of agent (pegfilgrastim, filgrastim, tbo-filgrastim, and filgrastim-sndz [and other biosimilars, as they become available]) depends on convenience, cost, and clinical situation.(8)</p>
<p>COMPENDIA SUPPORTED INDICATIONS - Myelodysplastic syndrome (MDS)</p>	<p>MDS represent myeloid clonal hemopathies with relatively heterogenous spectrums of presentation. The major clinical problems in these disorders are morbidities caused by patients' cytopenias and the potential for MDS to evolve into acute myeloid leukemia (AML).(9) NCCN guidelines note that CSF products are not recommended for routine infection prophylaxis, but should be considered for use in recurrent or resistant infections in neutropenic patients. NCCN compendia supports filgrastim, filgrastim-sndz, and tbo-filgrastim in MDS.(10) The American Society of Clinical Oncology (ASCO) recommendations for the use of white blood cell growth factors note that CSFs can increase the absolute neutrophil count in neutropenic patients with MDS. However, data supporting the routine use of long-term continuous use of CSFs is lacking. Intermittent administration of CSFs may be considered in a subset of patients with severe neutropenia and recurrent infection.(8)</p>
<p>COMPENDIA SUPPORTED INDICATIONS - Therapeutic Use of CSFs in Neutropenia</p>	<p>Compared to prophylactic use, there is less evidence supporting the therapeutic use of MGFs for febrile neutropenia as an adjunct to antibiotics. It has been found that there is no difference in mortality outcomes; however, there is evidence to support shorter hospitalization stays, faster neutrophil recovery, shorter duration of grade 4 neutropenia, and antibiotic therapy with treatment. The National Comprehensive Cancer Network (NCCN) guidelines recommend patients who have FN and who are already receiving prophylactic G-CSFs continue with the same G-CSF. Those who received prophylactic pegfilgrastim or its biosimilars should not be treated with additional MGF. NCCN recommends those who have FN and are not on prophylactic CSF that an evaluation for risk factors for infection-related complications or poor clinical outcome be completed. NCCN lists the following as factors for consideration: age greater than 65 years, sepsis syndrome, ANC less than 100 neutrophils/mcL, anticipated prolonged (greater than 10 days) neutropenia, pneumonia, invasive fungal infections or other clinically documented infections, hospitalization, and a prior episode of FN. If risk factors are present, then MGFs should be considered. Filgrastim (or its biosimilars), tbo-filgrastim, or sargramostim may be administered in the therapeutic setting. Pegfilgrastim and its biosimilars have only been studied for prophylactic use and are not recommended for therapeutic use at this time.(7) ASCO guidelines suggest CSFs be considered in patients with fever and neutropenia who are at high risk for infection-associated complication or who have prognostic factors predictive of poor clinical outcomes.(8)</p>
<p>Safety(1-7,11-16)</p>	<ul style="list-style-type: none"> <li>• <b>Fulphila (pegfilgrastim-jmdb)</b> is contraindicated in:</li> </ul>

- Patients with a history of serious allergic reactions to human granulocyte colony-stimulating factors such as pegfilgrastim or filgrastim products
- **Fylnetra (pegfilgrastim-pbbk)** is contraindicated in:
  - Patients with a history of serious allergic reactions to human granulocyte colony-stimulating factors such as pegfilgrastim products or filgrastim products
- **Granix (tbo-filgrastim)** is contraindicated in:
  - Patients with a history of serious allergic reactions to filgrastim or pegfilgrastim products
- **Neulasta (pegfilgrastim)** is contraindicated in:
  - Patients with a history of serious allergic reactions to human granulocyte colony-stimulating factors such as filgrastim or pegfilgrastim
- **Neupogen (filgrastim)** is contraindicated in:
  - Patients with a history of serious allergic reactions to human granulocyte colony-stimulating factors such as filgrastim or pegfilgrastim
- **Nivestym (filgrastim-aafi)** is contraindicated in:
  - Patients with a history of serious allergic reactions to human granulocyte colony-stimulating factors such as filgrastim products or pegfilgrastim products
- **Nyvepria (pegfilgrastim-apgf)** is contraindicated in:
  - Patients with a history of serious allergic reactions to human granulocyte colony-stimulating factors such as pegfilgrastim products or filgrastim products
- **Releuko (filgrastim-ayow)** is contraindicated in:
  - Patients with a history of serious allergic reactions to human granulocyte colony-stimulating factors such as pegfilgrastim products or filgrastim products
- **Rolvedon (eflapegrastim-xnst)** is contraindicated in:
  - Patients with a history of serious allergic reactions to human granulocyte colony-stimulating factors such as eflapegrastim, pegfilgrastim, or filgrastim products
- **Stimufend (pegfilgrastim-fpgk)** is contraindicated in:
  - Patients with a history of serious allergic reactions to human granulocyte colony stimulating factors such as pegfilgrastim products or filgrastim products
- **Udenyca (pegfilgrastim-cbqv)** is contraindicated in:
  - Patients with a history of serious allergic reactions to human granulocyte colony-stimulating factors such as filgrastim products or pegfilgrastim products
- **Zarxio (filgrastim-sndz)** is contraindicated in:

	<ul style="list-style-type: none"> <li>○ Patient with a history of serious allergic reactions to human granulocyte colony-stimulating factors such as filgrastim or pegfilgrastim products</li> </ul> <ul style="list-style-type: none"> <li>● <b>Ziextenzo (pegfilgrastim-bmez)</b> is contraindicated in: <ul style="list-style-type: none"> <li>○ Patients with a history of serious allergic reactions to human granulocyte colony-stimulating factors such as pegfilgrastim products or filgrastim products</li> </ul> </li> </ul>
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## REFERENCES

Number	Reference
1	Neupogen prescribing information. Amgen Inc. February 2021.
2	Neulasta prescribing information. Amgen Inc. February 2021.
3	Granix prescribing information. Teva Pharmaceuticals. March 2019.
4	Zarxio prescribing information. Sandoz Inc. March 2021.
5	Fulphila prescribing information. Mylan. March 2021.
6	Nivestym prescribing information. Pfizer Labs. April 2021.
7	National Comprehensive Cancer Network. NCCN Clinical Practice Guidelines in Oncology. Hematopoietic Growth Factors. Version 4.2021.
8	Smith TJ, Bohlke K, Lyman GH, et al. American Society of Clinical Oncologists. Recommendations for the Use of WBC Growth Factors: American Society of Clinical Oncology Clinical Practice Guideline Update. Journal of Clinical Oncology 33, no 28 (October 1 2015) 3199-3212.
9	National Comprehensive Cancer Network. NCCN Clinical Practice Guidelines in Oncology. Myelodysplastic syndromes. Version 2.2022.
10	Udenyca prescribing information. Coherus BioSciences Inc. June 2021.
11	Ziextenzo prescribing information. Sandoz Inc. March 2021.
12	Nyvepria prescribing information. Pfizer Oncology. April 2021.
13	Releuko prescribing information. Amneal Biosciences, LLC. February 2022.
14	Fylnetra prescribing information. Amneal Pharmaceuticals, LLC. September 2022.
15	Rolvedon prescribing information. Spectrum Pharmaceuticals, Inc. September 2022.
16	Stimufend prescribing information. Fresenius Kabi USA, LLC. September 2022.



## POLICY AGENT SUMMARY – MEDICAL PRIOR AUTHORIZATION

HCPC Codes	Target Brand Agent Name(s)	Target Generic Agent Name(s)	Strength	Targeted MSC	Available MSC	Final Age Limit	Preferred Status
Q5130	Fynetra	pegfilgrastim-pbbk soln prefilled syringe	6 MG/0.6ML	M ; N ; O ; Y	N		2. Non-Preferred
J1447	Granix	tbo-filgrastim soln prefilled syringe ; tbo-filgrastim subcutaneous inj	300 MCG/0.5ML ; 300 MCG/ML ; 480 MCG/0.8ML ; 480 MCG/1.6ML	M ; N ; O ; Y	N		2. Non-Preferred
J2506	Neulasta ; Neulasta onpro kit	pegfilgrastim soln prefilled syringe ; pegfilgrastim soln prefilled syringe kit	6 MG/0.6ML	M ; N ; O ; Y	N		2. Non-Preferred
J1442	Neupogen	filgrastim inj ; filgrastim soln prefilled syringe	300 MCG/0.5ML ; 300 MCG/ML ; 480 MCG/0.8ML ; 480 MCG/1.6ML	M ; N ; O ; Y	N		2. Non-Preferred
Q5122	Nyvepria	pegfilgrastim-apgf soln prefilled syringe	6 MG/0.6ML	M ; N ; O ; Y	N		2. Non-Preferred
Q5125	Releuko	filgrastim-ayow inj soln ; filgrastim-ayow soln prefilled syringe	300 MCG/0.5ML ; 300 MCG/ML ; 480 MCG/0.8ML ; 480 MCG/1.6ML	M ; N ; O ; Y	N		2. Non-Preferred
Q5125	Releuko	filgrastim-ayow inj soln ; filgrastim-ayow soln prefilled syringe	300 MCG/0.5ML ; 300 MCG/ML ; 480 MCG/0.8ML ; 480 MCG/1.6ML	M ; N ; O ; Y	N		2. Non-Preferred
J1449	Rolvedon	eflapegrastim-xnst soln prefilled syringe	13.2 MG/0.6ML	M ; N ; O ; Y	N		2. Non-Preferred
Q5127	Stimufend	pegfilgrastim-fpgk soln prefilled syringe	6 MG/0.6ML	M ; N ; O ; Y	N		2. Non-Preferred
Q5111	Udenyca	pegfilgrastim-cbqv soln auto-injector ; pegfilgrastim-cbqv soln prefilled syringe	6 MG/0.6ML	M ; N ; O ; Y	N		2. Non-Preferred

## CLIENT SUMMARY – PRIOR AUTHORIZATION

Target Brand Agent Name(s)	Target Generic Agent Name(s)	Strength	Client Formulary
Fynetra	pegfilgrastim-pbbk soln prefilled syringe	6 MG/0.6ML	Commercial ; HIM ; ResultsRx
Granix	tbo-filgrastim soln prefilled syringe ; tbo-filgrastim subcutaneous inj	300 MCG/0.5ML ; 300 MCG/ML ; 480 MCG/0.8ML ; 480 MCG/1.6ML	Commercial ; HIM ; ResultsRx
Neulasta ; Neulasta onpro kit	pegfilgrastim soln prefilled syringe ; pegfilgrastim soln prefilled syringe kit	6 MG/0.6ML	Commercial ; HIM ; ResultsRx
Neupogen	filgrastim inj ; filgrastim soln prefilled syringe	300 MCG/0.5ML ; 300 MCG/ML ; 480 MCG/0.8ML ; 480 MCG/1.6ML	Commercial ; HIM ; ResultsRx
Nyvepria	pegfilgrastim-apgf soln prefilled syringe	6 MG/0.6ML	Commercial ; HIM ; ResultsRx

Target Brand Agent Name(s)	Target Generic Agent Name(s)	Strength	Client Formulary
Releuko	filgrastim-ayow inj soln ; filgrastim-ayow soln prefilled syringe	300 MCG/0.5ML ; 300 MCG/ML ; 480 MCG/0.8ML ; 480 MCG/1.6ML	Commercial ; HIM ; ResultsRx
Releuko	filgrastim-ayow inj soln ; filgrastim-ayow soln prefilled syringe	300 MCG/0.5ML ; 300 MCG/ML ; 480 MCG/0.8ML ; 480 MCG/1.6ML	Commercial ; HIM ; ResultsRx
Rolvedon	eflapegrastim-xnst soln prefilled syringe	13.2 MG/0.6ML	Commercial ; HIM ; ResultsRx
Stimufend	pegfilgrastim-fpgk soln prefilled syringe	6 MG/0.6ML	Commercial ; HIM ; ResultsRx
Udenyca	pegfilgrastim-cbqv soln auto-injector ; pegfilgrastim-cbqv soln prefilled syringe	6 MG/0.6ML	Commercial ; HIM ; ResultsRx

## PRIOR AUTHORIZATION CLINICAL CRITERIA FOR APPROVAL

Module	Clinical Criteria for Approval																						
	<p><b>PRIOR AUTHORIZATION CRITERIA FOR APPROVAL</b></p> <table border="1"> <thead> <tr> <th>Preferred Short-Acting Colony Stimulating Factor (CSF) Agent(s)</th> <th>Non-Preferred Short-Acting CSF Agent(s)</th> </tr> </thead> <tbody> <tr> <td>Nivestym (filgrastim-aafi)</td> <td>Granix (tbo-filgrastim)</td> </tr> <tr> <td>Zarxio (filgrastim-sndz)</td> <td>Neupogen (filgrastim)</td> </tr> <tr> <td></td> <td>Releuko (filgrastim-ayow)</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Preferred Long-Acting CSF Agent(s)</th> <th>Non-Preferred Long-Acting CSF Agent(s)</th> </tr> </thead> <tbody> <tr> <td></td> <td>Fylnetra (pegfilgrastim-pbbk)</td> </tr> <tr> <td></td> <td>Neulasta (pegfilgrastim)</td> </tr> <tr> <td>Fulphila (pegfilgrastim-jmdb)</td> <td>Nyvepria (pegfilgrastim-apgf)</td> </tr> <tr> <td>Ziextenzo (pegfilgrastim-bmez)</td> <td>Rolvedon (eflapegrastim-xnst)</td> </tr> <tr> <td></td> <td>Stimufend (pegfilgrastim-fpgk)</td> </tr> <tr> <td></td> <td>Udenyca (pegfilgrastim-cbqv)</td> </tr> </tbody> </table> <p><b>Evaluation</b></p> <p><b>Target Agent(s)</b> will be approved when ALL of the following are met:</p> <ol style="list-style-type: none"> <li>ONE of the following:</li> </ol>	Preferred Short-Acting Colony Stimulating Factor (CSF) Agent(s)	Non-Preferred Short-Acting CSF Agent(s)	Nivestym (filgrastim-aafi)	Granix (tbo-filgrastim)	Zarxio (filgrastim-sndz)	Neupogen (filgrastim)		Releuko (filgrastim-ayow)	Preferred Long-Acting CSF Agent(s)	Non-Preferred Long-Acting CSF Agent(s)		Fylnetra (pegfilgrastim-pbbk)		Neulasta (pegfilgrastim)	Fulphila (pegfilgrastim-jmdb)	Nyvepria (pegfilgrastim-apgf)	Ziextenzo (pegfilgrastim-bmez)	Rolvedon (eflapegrastim-xnst)		Stimufend (pegfilgrastim-fpgk)		Udenyca (pegfilgrastim-cbqv)
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	<ul style="list-style-type: none"> <li>A. The patient will be using Zynteglo (betibeglogene autotemcel) AND will use the requested agent to mobilize hematopoietic stem cells (HSTs) to the peripheral blood <b>OR</b></li> <li>B. The patient will be using Skysona (elivaldogene autotemcel) AND will use the requested agent to mobilize hematopoietic stem cells (HSTs) to the peripheral blood <b>OR</b></li> <li>C. The requested agent is a short-acting colony stimulating factor (CSF) agent [e.g., Granix (tbo-filgrastim), Neupogen (filgrastim), or Releuko (filgrastim-ayow)] AND BOTH of the following: <ul style="list-style-type: none"> <li>1. ONE of the following: <ul style="list-style-type: none"> <li>A. The patient has undergone an allogeneic or autologous hematopoietic stem cell transplant <b>OR</b></li> <li>B. The patient has acute myeloid leukemia (AML) AND is receiving or has had induction or consolidation chemotherapy <b>OR</b></li> <li>C. The patient has a non-myeloid malignancy AND is undergoing myeloablative chemotherapy followed by autologous or allogeneic bone marrow transplantation (BMT) <b>OR</b></li> <li>D. The patient was acutely exposed to myelosuppressive doses of radiation [hematopoietic syndrome of acute radiation syndrome (H-ARS)] AND the requested agent will be used to increase survival <b>OR</b></li> <li>E. The requested agent is being used for mobilization of autologous hematopoietic progenitor cells into the peripheral blood for collection by leukapheresis <b>OR</b></li> <li>F. The requested agent is being used for therapeutic use for febrile neutropenia (FN) AND the patient has at least one risk factor for infection-related complications or poor clinical outcome [e.g., greater than 65 years of age, sepsis syndrome, ANC less than 100 neutrophils/mcL, anticipated prolonged (greater than 10 days) neutropenia, pneumonia, invasive fungal infections or clinically documented infections, hospitalization, or prior episode of FN)] <b>OR</b></li> <li>G. The requested agent will be used as primary prophylaxis for the prevention of febrile neutropenia (FN) in patients receiving a chemotherapy regimen who have an overall risk of greater than 20% <b>OR</b></li> <li>H. The requested agent will be used as primary prophylaxis for prevention of FN in patients receiving a chemotherapy regimen who have an overall risk of 10 to 20% AND the prescriber has assessed the patient risk factors and determined that the patient has greater than 1 risk factor [e.g., prior chemotherapy or radiation therapy, persistent neutropenia, bone marrow involvement by tumor, recent surgery and/or open wounds, liver dysfunction (bilirubin greater than 2.0 mg/dL), renal dysfunction (creatinine clearance less than 50 mL/min), age greater than 65 years receiving full chemotherapy dose intensity, poor performance status, HIV infection) <b>OR</b></li> <li>I. The requested agent will be used as secondary prophylaxis in patients who had a neutropenic episode or dose-limiting neutropenic event from a prior chemotherapy cycle AND a reduced dose or change in treatment regimen may compromise disease or overall survival or treatment outcomes <b>OR</b></li> <li>J. The patient has a diagnosis of myelodysplastic syndrome AND ONE of the following: <ul style="list-style-type: none"> <li>1. The patient has an ANC less than or equal to 500/mm<sup>3</sup> AND a history of recurrent or resistant bacterial infections <b>OR</b></li> <li>2. The requested agent will be used for enhancement of erythropoietic activity for the treatment of refractory anemia AND ALL of the following:</li> </ul> </li> </ul> </li> </ul> </li> </ul>

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	<p>A. The requested agent will be used concurrently with an erythropoietin stimulating agent (e.g., Epogen, Procrit) <b>AND</b></p> <p>B. The patient has a serum erythropoietin level less than or equal to 500 mU/mL <b>AND</b></p> <p>C. The patient currently has adequate iron stores (i.e., greater than or equal to 20% transferrin saturation or serum ferritin greater than or equal to 100 ng/ml) <b>OR</b></p> <p>K. The patient has a diagnosis of severe chronic neutropenia (i.e., congenital neutropenia, cyclic neutropenia, or idiopathic neutropenia) <b>AND ALL</b> of the following:</p> <ol style="list-style-type: none"> <li>1. The requested agent is NOT Leukine (sargramostim) <b>AND</b></li> <li>2. The patient has at least one symptom (e.g., fever, infections, oropharyngeal ulcers) <b>AND</b></li> <li>3. Diagnostic labs have been evaluated (e.g., CBC with differential, platelet counts, and bone marrow morphology and karyotype) <b>OR</b></li> </ol> <p>L. The patient has another FDA labeled indication for the requested agent <b>OR</b></p> <p>M. The patient has another indication that is supported in compendia for the requested agent <b>AND</b></p> <p>2. <b>ONE</b> of the following:</p> <ol style="list-style-type: none"> <li>A. The requested agent is a preferred short-acting CSF agent (listed below) <b>OR</b></li> <li>B. The patient has tried and had an inadequate response to TWO preferred short-acting CSF agents (medical records required) <b>OR</b></li> <li>C. The patient has an intolerance or hypersensitivity to TWO preferred short-acting CSF agents that is NOT expected to occur with the requested agent (medical records required) <b>OR</b></li> <li>D. The patient has an FDA labeled contraindication to ALL preferred short-acting CSF agents that is NOT expected to occur with the requested agent (medical records required) <b>OR</b></li> </ol> <table border="1" data-bbox="235 1176 950 1318" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th data-bbox="235 1176 950 1213"><b>Preferred Short-Acting CSF Agent(s)</b></th> </tr> </thead> <tbody> <tr> <td data-bbox="235 1213 950 1251">Nivestym (filgrastim-aafi)</td> </tr> <tr> <td data-bbox="235 1251 950 1318">Zarxio (filgrastim-sndz)</td> </tr> </tbody> </table> <p>D. The requested agent is a long-acting colony stimulating factor (CSF) agent [e.g., Fylnetra (pegfilgrastim-pbbk), Neulasta (pegfilgrastim), Nyvepria (pegfilgrastim-apgf), Rolvedon (eflapegrastim-xnst), Stimufend (pegfilgrastim-fpgk), or Udenyca (pegfilgrastim-cbqv)] <b>AND BOTH</b> of the following:</p> <ol style="list-style-type: none"> <li>1. <b>ONE</b> of the following: <ol style="list-style-type: none"> <li>A. The requested agent will be used for secondary prophylaxis in patients who had a neutropenic episode or dose-limiting neutropenic event from a prior chemotherapy cycle <b>AND BOTH</b> of the following: <ol style="list-style-type: none"> <li>1. A reduced dose or change in treatment regimen may compromise disease or overall survival or treatment outcomes <b>AND</b></li> <li>2. The patient's chemotherapy is NOT being used on a weekly basis <b>OR</b></li> </ol> </li> <li>B. The requested agent will be used for primary prophylaxis for the prevention of febrile neutropenia (FN) in patients receiving a chemotherapy regimen who have an overall risk of greater than 20% <b>AND</b> the patient's chemotherapy is NOT being used on a weekly basis <b>OR</b></li> <li>C. The requested agent will be used for primary prophylaxis for prevention of FN in patients receiving a chemotherapy regimen</li> </ol> </li> </ol>	<b>Preferred Short-Acting CSF Agent(s)</b>	Nivestym (filgrastim-aafi)	Zarxio (filgrastim-sndz)
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