

For appropriate patients receiving myelosuppressive chemotherapy

Febrile neutropenia (FN) has the potential to disrupt your patient's treatment strategy¹

Neulasta® Onpro® can help ensure that it stays on track

94%*

Next-day Neulasta® **REDUCED THE INCIDENCE OF FN BY 94%** when used every cycle^{2,†}

*Neulasta® 1% vs placebo 17%, $P < 0.001$.

Onpro® is designed to deliver Neulasta® approximately 27 hours after the device is applied to the patient's skin.^{3,§}

Peer Perspective

More than

9 out of 10

HCPs agreed that Onpro® helped maintain their patients' treatment plan during COVID-19^{4,‡}

‡See page 5 for Study Design and Limitations.

Indication

Neulasta® is indicated to decrease the incidence of infection, as manifested by febrile neutropenia, in patients with nonmyeloid malignancies receiving myelosuppressive anti-cancer drugs associated with a clinically significant incidence of febrile neutropenia.

Neulasta® is not indicated for the mobilization of peripheral blood progenitor cells for hematopoietic stem cell transplantation.

Important Safety Information

Contraindication

- Neulasta® is contraindicated in patients with a history of serious allergic reactions to pegfilgrastim or filgrastim
- Reactions have included anaphylaxis

Please see additional Important Safety Information throughout this piece and **Neulasta® full Prescribing Information.**

†Pivotal Trial Study Design and Results²

Phase 3, multicenter, multinational, double-blind, placebo-controlled trial of patients with breast cancer (Neulasta® [n = 463] or placebo [n = 465]) receiving 100 mg/m² docetaxel Q3W for up to 4 cycles. Patients were randomized to receive a single subcutaneous injection of Neulasta® (6 mg) or placebo on day 2 of each chemotherapy cycle. The key endpoint was the percentage of patients who developed FN (Neulasta® 1% vs placebo 17%, $P < 0.001$). Also, secondary endpoints were lower for Neulasta®-treated patients as compared to placebo-treated patients (the incidence of hospitalization [1% vs 14%] and IV anti-infective use [2% vs 10%]).

FN = temperature $\geq 38.2^{\circ}\text{C}$ and absolute neutrophil count $< 0.5 \times 10^9/\text{L}$.

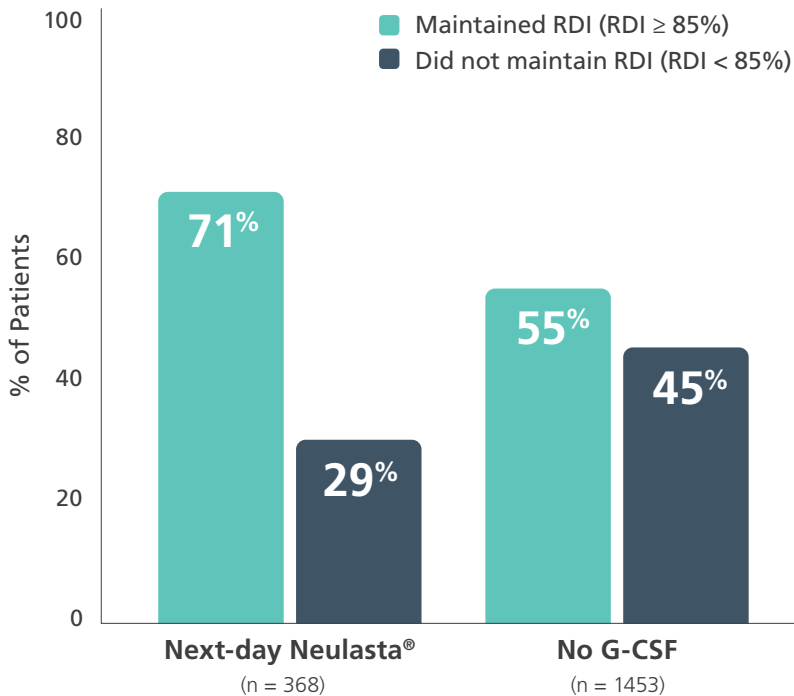
IV = intravenous; Q3W = once every 3 weeks.

§Incomplete doses have been reported with Neulasta® Onpro® due to device not performing as intended. This may increase risk of neutropenia, FN, and/or infection.

 **Neulasta®** **Onpro®**
(pegfilgrastim) injection **kit**

Next-day Neulasta® helped significantly more patients to maintain their chemotherapy dosing and schedule

PERCENT WHO MAINTAINED RELATIVE DOSE INTENSITY (RDI)⁵

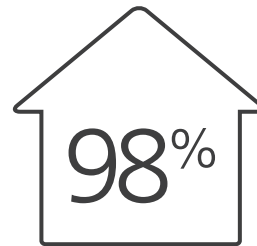


Dose intensity is defined as the delivered dose of chemotherapy per unit of time. Relative dose intensity (RDI) is expressed as a percentage, calculated as the delivered dose intensity divided by the standard dose intensity. A higher RDI is indicative of fewer dose reductions and delays. Patients with RDI ≥ 85% were considered to have maintained their dose. The 85% cut point is commonly reported in the literature.¹

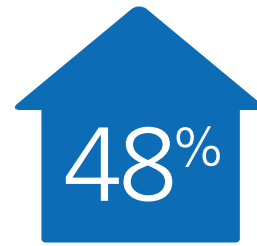
It was not possible to determine from the data whether patients received Onpro® or the prefilled syringe. However, of the 379 patients from these healthcare systems who received Neulasta® in the first cycle, 97% (n = 368) received it on the day following chemotherapy, as recommended in the Neulasta® Prescribing Information. The Neulasta® group in this analysis was limited to next-day patients.

G-CSF = granulocyte colony-stimulating factor.

Next-day Neulasta® reduces risk of FN and helped significantly more patients maintain RDI.^{2,5}



Odds Ratio = 1.98



Odds Ratio = 1.48, p = 0.006[†]

Unadjusted for clinical and demographic characteristics, 98% more likely to maintain RDI over the course of chemotherapy vs no G-CSF^{5,*†}

$$\left. \begin{array}{l} \text{Next-day Neulasta}^\circledast: 0.709 / 0.291 = 2.44 \\ \text{No G-CSF}: 0.552 / 0.448 = 1.23 \end{array} \right\} 2.44 / 1.23 = 1.98$$

Note: The odds ratio is the relationship of the next-day Neulasta® group's odds to the No G-CSF group's odds of maintaining RDI.

Adjusted for clinical and demographic characteristics, **48% MORE LIKELY TO MAINTAIN RDI** over the course of chemotherapy vs no G-CSF^{5,*†}

Study Design: Retrospective cohort study conducted at Geisinger Health System (Danville, PA), Henry Ford Health System (Detroit, MI), Kaiser Permanente Northwest (Portland, OR), and Reliant Medical Group (Worcester, MA), January 2009-December 2017 (for all sites except Geisinger, 2009-2014). Analysis included patients with breast cancer, colorectal cancer, lung cancer, or non-Hodgkin's lymphoma, receiving chemotherapy regimens with high or intermediate risk of FN. Multivariable regression models were employed to estimate the relationship between the use of Neulasta® and RDI.

*RDI ≥ 85%.

[†]Course-level analysis. All cycles included. The analysis categorized patients as next-day Neulasta® users vs non-users of G-CSF based on the first cycle of chemotherapy only. However, for patients who received next-day Neulasta® in cycle 1, subsequent Neulasta® use was: 87% in cycle 2, 86% in cycle 3, and 78% in cycle 4. For patients who did not receive any G-CSF in cycle 1, no G-CSF use was 81% in cycle 2, 79% in cycle 3, and 79% in cycle 4.

[‡]Adjusted odds ratio controlling for clinical and demographic characteristics, including but not limited to age, metastasis (yes/no), and FN risk of chemotherapy regimen.

Important Safety Information

Splenic Rupture

- Splenic rupture, including fatal cases, can occur following the administration of Neulasta®
- Evaluate for an enlarged or ruptured spleen in patients who report left upper abdominal or shoulder pain

Please see additional Important Safety Information throughout this piece and [Neulasta® full Prescribing Information](#).

Pegfilgrastim PFS provides significantly less protection against FN than Neulasta® Onpro®



In a Real-World Study with nearly 11,000 patients

Delivering pegfilgrastim via PFS resulted in a significantly higher risk of FN vs Onpro®^{6,†}

Patients receiving Neulasta® via PFS experienced a 31% increased incidence of FN vs Neulasta® Onpro®⁶

- Across all cycles of chemotherapy, the incidence of FN associated with prefilled syringe (PFS) was 1.7% (n = 455) vs 1.3% (n = 126) for Neulasta® Onpro®⁶

Peer Perspective

9 out of 10

HCPs say they would use Onpro® over a G-CSF PFS post-COVID-19^{4,‡}

‡See page 5 for Study Design and Limitations.

G-CSF = granulocyte colony-stimulating factor

†FN was defined as:⁶

- Inpatient: Diagnosis of neutropenia AND (fever OR inpatient diagnosis of infection)
- Outpatient: Diagnosis of neutropenia AND (fever OR diagnosis of infection AND prescribed antimicrobials)

FN = temperature $\geq 38.2^{\circ}\text{C}$ and absolute neutrophil count $< 0.5 \times 10^9/\text{L}$.

PFS = prefilled syringe; FN = febrile neutropenia.

Important Safety Information

Acute Respiratory Distress Syndrome (ARDS)

- ARDS has occurred in patients receiving Neulasta®
- Evaluate patients who develop a fever and lung infiltrates or respiratory distress after receiving Neulasta®
- Discontinue Neulasta® in patients with ARDS

Please see additional Important Safety Information throughout this piece and Neulasta® full Prescribing Information.

Real-World Study Design⁶

A retrospective study designed to compare the incidence of FN associated with Neulasta® Onpro® vs Neulasta® PFS among patients receiving myelosuppressive chemotherapy. The study included 35,856 cycles of chemotherapy in which Neulasta® was administered (9395 Neulasta® Onpro® and 26,461 PFS administrations).

- Patients were followed for 6 to 12 months following the start of the first chemotherapy cycle. The study period was 1/1/16-9/30/18
- Data Source: MarketScan® Commercial Claims and Encounters/Medicare Supplemental and Coordination of Benefits Databases

Real-World Study Limitations⁶

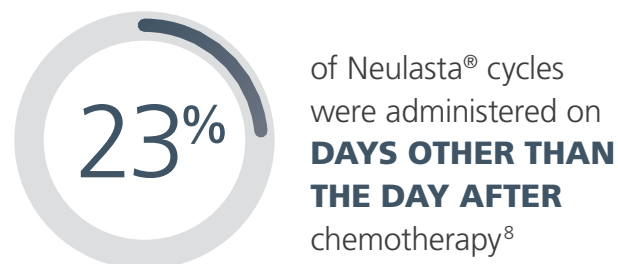
- Retrospective analysis that did not control for additional variables that may influence the incidence of FN
- Database was not sufficient to understand root causes for observed lower rate of FN for patients receiving Onpro®

Please refer to first page for information on the impact of Neulasta® in reducing FN from the pivotal phase 3 trial.

Only Neulasta® Onpro® is designed to automatically dose at the right time to reduce the risk of FN*

*Incomplete doses have been reported with Neulasta® Onpro® due to the device not performing as intended. This may increase risk of neutropenia, febrile neutropenia, and/or infection.

NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) state that pegfilgrastim should be administered the day after chemotherapy (category 1 recommendation)⁷

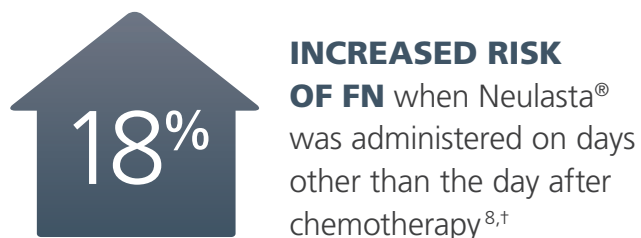


The study included over 200,000 Neulasta® cycles from 2 patient databases. Over 90% of patients were ≤ 65 years of age. The vast majority of cycles (93%) were accompanied by the use of the Neulasta® prefilled syringe.⁸

†Retrospective analysis based on IMS PharMetrics Plus™ and Truven Health Analytics MarketScan® Commercial and Medicare Supplemental claims data, covering over 30 million persons annually. The data included all patients ≥ 18 years who, between July 1, 2010, and September 30, 2015, initiated ≥ 1 course of myelosuppressive chemotherapy for a primary solid tumor or NHL. Patients who received a chemotherapy regimen with a risk of FN and pegfilgrastim prophylaxis in ≥ 1 cycles were selected for inclusion in the study. FN inpatient care was identified based on an inpatient admission with a diagnosis (principal or secondary) of neutropenia, fever, or infection using ICD-9 and ICD-10 codes. FN outpatient care was based on an outpatient encounter with a diagnosis of neutropenia, fever or infection, and—on the same date—code for IV administration of antimicrobial therapy.⁸

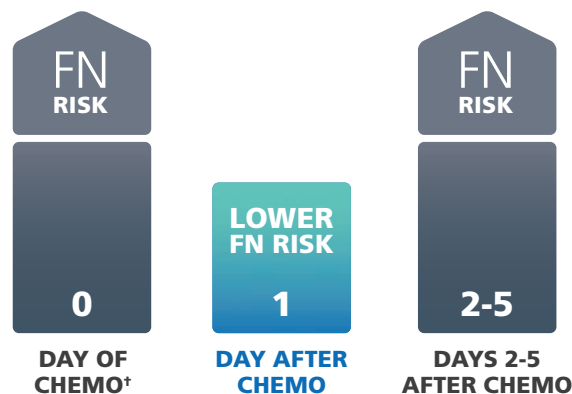
‡Do not administer Neulasta® the same day as chemotherapy.³

FN = febrile neutropenia; GEE = generalized estimating equations; ICD-9 = International Classification of Diseases, 9th Revision; ICD-10 = International Classification of Diseases, 10th Revision; NCCN® = National Comprehensive Cancer Network; NHL = non-Hodgkin's lymphoma.



Neulasta® Onpro® is designed to deliver 27 hours after application in accordance with labeling.³

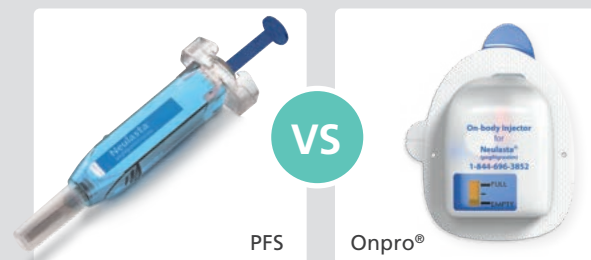
Do not administer Neulasta® between 14 days before and 24 hours after administration of chemotherapy.^{3,‡}



FN rate for the day after chemotherapy vs all other days of Neulasta® administration was 2.53% and 3.04%, respectively.⁸

18% is the increase in relative risk comparing days other than the day after chemotherapy to the day after chemotherapy. Relative risk was estimated using GEE to account for correlation among repeated measures for the same subject, and adjusted using backward selection of patient, cancer, and treatment characteristics.⁸

Adherence to G-CSF therapy was higher with Neulasta® Onpro® than with prefilled syringe⁹



- Adherence is defined as proportion of patients receiving treatment according to Clinical Practice Guidelines¹⁰
- In this analysis, Adherence was based on a comparative analysis of Neulasta® doses administered by PFS vs Neulasta® Onpro® that was conducted using data from OSCER on 389,000 oncology patients who were seen in 2016. Percentage of dose administered was calculated by taking the sum of patients' chemotherapy cycles with Neulasta® and dividing by the sum of their total chemotherapy cycles. Both arms were assumed to have received the treatment as prescribed⁹

OSCER = Oncology Services Comprehensive Electronic Records.

Important Safety Information Serious Allergic Reactions

- Serious allergic reactions, including anaphylaxis can occur in patients receiving Neulasta®
- Majority of events occurred upon initial exposure and can recur within days after discontinuation of initial anti-allergic treatment
- Permanently discontinue Neulasta® in patients with serious allergic reactions

Please see additional Important Safety Information throughout this piece and Neulasta® full Prescribing Information.

Choose Neulasta® Onpro®, the protection preferred by HCPs, to help overcome next-day G-CSF delivery challenges

7 out of 10 HCPs believe some of their patients would have missed their G-CSF dose if Onpro® had not been available^{4,*}



Struggle to get transportation

No caregiver and can't get back to the healthcare facility†



Exposure to viruses

Immunosuppressed patients may want to stay away from those with a viral infection¹¹



Scheduling conflicts

Family or work conflicts



Requests Neulasta® Onpro®

Specific requests from patients who don't want to come back the next day



Holiday

Chemo a day before holiday closings



Weather conditions

Such as a blizzard, could make driving hazardous



Friday chemo

And the clinic is closed on Saturday



Multiple consecutive days of chemo

Chemo two days in a row and the patient doesn't want to come back a third day every cycle



Non-compliant

Missed prefilled syringe appointment last cycle and/or didn't receive injection next day



Live far away

Total time spent includes more than just driving time

Neulasta® Onpro® may be appropriate for all of your patients who:³

- are adults
- are comfortable following the Patient Instructions for Use
- do not have allergies to acrylics

†For patients with Onpro® applied on the abdomen. The back of the arm may only be used if there is a caregiver available to monitor the status of the on-body injector for Neulasta®.

G-CSF = granulocyte colony-stimulating factor; PFS = prefilled syringe.

Important Safety Information

Allergies to Acrylics

- On-body injector (OBI) for Neulasta® uses acrylic adhesives
- Patients who are allergic to acrylic adhesives may have a significant reaction

Please see additional Important Safety Information throughout this piece and [Neulasta® full Prescribing Information](#).

Peer Perspective

9 out of 10

HCPs believe patients will feel better protected with Onpro® over a G-CSF PFS post-COVID-19^{4,*}

*Study Design and Limitations⁴

- From an online survey conducted during July 2020 on G-CSF use and the impact of COVID-19 on treatment plans (n = 200 HCPs; 100 oncologists and 100 oncology nurses)
- HCPs were recruited into the study from a market research panel. Participants were screened and met minimum requirements for treating cancer patients with chemotherapy (≥ 50 patients/month for oncologists; ≥ 30 patients/month for oncology nurses), use of long acting G-CSFs (≥ 10 long-acting G-CSF patients/month) and used Onpro® (≥ 1 Onpro® patient/month) within the previous month
- Participants could not have worked in an outpatient oncology clinic owned by Kaiser Permanente or the Veterans' Administration, or be a consultant or employee of a pharma/biotech company/healthcare company/government agency/advertising agency
- The results of this study represent the opinions of the HCP participants recruited to participate, not actual treatment behaviors among oncology HCPs

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Use in Patients With Sickle Cell Disorders

- In patients with sickle cell trait or disease, severe and sometimes fatal sickle cell crises can occur in patients receiving Neulasta®
- Discontinue Neulasta® if sickle cell crisis occurs

Glomerulonephritis

- Has occurred in patients receiving Neulasta®
- Diagnoses based on azotemia, hematuria, proteinuria, and renal biopsy
- Generally events resolved after dose reduction or discontinuation of Neulasta®
- If suspected, evaluate for cause and if cause is likely, consider dose-reduction or interruption of Neulasta®

Leukocytosis

- Increased white blood cell counts of $100 \times 10^9/L$ have been observed
- Monitoring CBCs during Neulasta® therapy is recommended

Capillary Leak Syndrome (CLS)

- CLS has been reported after G-CSF administration, including Neulasta®
- Characterized by hypotension, hypoalbuminemia, edema, and hemoconcentration
- Episodes vary in frequency, severity, and may be life-threatening if treatment is delayed
- Patients with symptoms should be closely monitored and receive standard symptomatic treatment, which may include intensive care

Potential for Tumor Growth Stimulatory Effects on Malignant Cells

- G-CSF receptor has been found on tumor cell lines
- The possibility that pegfilgrastim acts as a growth factor for any tumor type, including myeloid malignancies and myelodysplasia, diseases for which Neulasta® is not approved, cannot be excluded

Potential Device Failures

- Missed or partial doses have been reported in patients receiving pegfilgrastim via the on-body injector (OBI) due to the device not performing as intended
- In the event of a missed or partial dose, patients may be at increased risk of events such as neutropenia, febrile neutropenia and/or infection than if the dose had been correctly delivered
- Instruct patients to notify their healthcare professional immediately in order to determine the need for a replacement dose if they suspect that the device may not have performed as intended

Aortitis

- Aortitis has been reported in patients receiving Neulasta®. It may occur as early as the first week after start of therapy
- Manifestations may include generalized signs and symptoms such as fever, abdominal pain, malaise, back pain, and increased inflammatory markers (e.g., c-reactive protein and white blood cell count)
- Consider aortitis in patients who develop these signs and symptoms without known etiology. Discontinue Neulasta® if aortitis is suspected

Nuclear Imaging

- 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

Most common adverse reactions

- Bone pain
- Pain in extremity

Please see [Neulasta® full Prescribing Information](#).

Special Instructions for the On-body Injector (OBI) for Neulasta®

A healthcare provider must fill the on-body injector (OBI) with Neulasta® using the co-packaged prefilled syringe and then apply the OBI to the patient's skin (abdomen or back of arm). The back of the arm may only be used if there is a caregiver available to monitor the status of the OBI. Approximately 27 hours after the OBI is applied to the patient's skin, Neulasta® will be delivered over approximately 45 minutes. A healthcare provider may initiate administration with the OBI on the same day as the administration of cytotoxic chemotherapy, as long as the OBI delivers Neulasta® no less than 24 hours after the administration of cytotoxic chemotherapy.

The prefilled syringe co-packaged in the Neulasta® Onpro® kit contains additional solution to compensate for liquid loss during delivery through the OBI. If this syringe is used for manual subcutaneous injection, the patient will receive an overdose. If the prefilled syringe for manual use is used with the OBI, the patient may receive less than the recommended dose.

Do not use the OBI to deliver any other drug product except the Neulasta® prefilled syringe co-packaged with the OBI. Use of the OBI has not been studied in pediatric patients.

The OBI should be applied to intact, non-irritated skin on the arm or abdomen.

A missed dose could occur due to an OBI failure or leakage. Instruct patients using the OBI to notify their healthcare professional immediately in order to determine the need for a replacement dose of pegfilgrastim if they suspect that the device may not have performed as intended. If the patient misses a dose, a new dose should be administered by single prefilled syringe for manual use as soon as possible after detection.

Review the Patient Information and Patient Instructions for Use with the patient and provide the instructions to the patient.

Refer to the Healthcare Provider Instructions for Use for the OBI for full administration information.

For any OBI problems, call Amgen at 1-800-772-6436 or 1-844-MYNEULASTA (1-844-696-3852).

References: 1. Lyman GH. *J Natl Compr Canc Netw*. 2009;7:2612-2615. 2. Vogel CL, et al. *J Clin Oncol*. 2005;23(6):1178-1184. 3. Neulasta® (pegfilgrastim) Prescribing Information, Amgen. 4. Data on file, Amgen; [1]; 2020. 5. Data on file, Amgen; [2]; 2020. 6. Data on file, Amgen; [3]; 2020. 7. Referenced with permission from the NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) for Hematopoietic Growth Factors V.2.2020. © National Comprehensive Cancer Network, Inc. 2020. All rights reserved. Accessed June 28, 2020. To view the most recent and complete version of the guideline, go online to NCCN.org. NCCN makes no warranties of any kind whatsoever regarding their content, use or application and disclaims any responsibility for their application or use in any way. 8. Data on file, Amgen; 2018. 9. Data on file, Amgen; [1]; 2017. 10. Ament SMC, et al. *BMJ Open*. 2015;5:e008073. doi:10.1136/bmjopen-2015-008073 11. American Cancer Society. Preventing Infections in People With Cancer. <https://www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/infections/preventing-infections-in-people-with-cancer>. Accessed November 9, 2018.