ACTIVATE MULTILINEAGE DEFENSE AGAINST INFECTION

LEUKINE® (sargramostim) is the **first and only FDA-approved GM-CSF** that reduces the risk of infection-related outcomes after allogeneic and autologous BMT and improves survival after delayed or failed engraftment.¹

Visit LEUKINE.com/tct to take a brief survey, and a donation will be made to the Blood & Marrow Transplant Information Network (BMT InfoNet) upon completion.

**Important Safety Information**

**Contraindications**
- LEUKINE is contraindicated in patients with known hypersensitivity to human granulocyte-macrophage colony stimulating factor such as sargramostim (GM-CSF), yeast-derived products, or any component of LEUKINE.

**Warnings and Precautions**
- Serious hypersensitivity reactions, including anaphylactic reactions, have been reported with LEUKINE. If any serious allergic or anaphylactic reaction occurs, immediately discontinue LEUKINE therapy and institute medical management. Permanently discontinue LEUKINE in patients with serious allergic reactions.
- LEUKINE can cause infusion-related reactions, including respiratory distress, hypoxia, flushing, hypotension, syncope and/or tachycardia. Observe closely during infusion, particularly in patients with preexisting lung disease, as dose adjustment or discontinuation may be required.
- Do not administer LEUKINE simultaneously with or within 24 hours preceding cytotoxic chemotherapy or radiotherapy or within 24 hours following chemotherapy.

Please see continued Important Safety Information on subsequent pages and accompanying full Prescribing Information for LEUKINE.

BMT=bone marrow transplantation; GM-CSF=granulocyte-macrophage colony-stimulating factor.
Infection remains a leading cause of non-relapse mortality after hematopoietic stem cell transplant (HCT)\textsuperscript{2,3}

Despite routine use of prophylactic antimicrobials, infection accounts for 15\%-30\% of deaths in the first 100 days post-HCT.\textsuperscript{4}

Bacterial causes account for
\begin{itemize}
\item 15\%-50\% of infection-related mortality following HCT\textsuperscript{2,4}
\end{itemize}

Studies have shown that
\begin{itemize}
\item 60\%-80\% of patients who develop fungal infection die following HCT\textsuperscript{2,3,5}
\end{itemize}

Fungal infection is associated with poor outcomes for patients, including lower overall survival, higher treatment costs, and longer hospital stays\textsuperscript{6,7}
There are various risk factors associated with an increased risk of infection for patients undergoing HCT\(^6\).

Keeping these in mind may help identify your higher-risk patients. Risk factors for infection include\(^4,6,8\):

- Older age
- Prolonged neutropenia
- Persistent lymphopenia
- History of prior infection
- Donor type and/or allogeneic graft source
- Graft-vs-host disease
- Post-transplant immunosuppressants
- Geography-specific epidemiology

*This list is not comprehensive of all risk factors for infection.

Delayed engraftment following transplant is also shown to negatively impact a patient’s risk of infection and long-term prognosis\(^9\).
Multiple benefits with multilineage defense

LEUKINE® (sargramostim) significantly improved the incidence and duration of infection vs placebo following transplant.

LEUKINE is indicated for the acceleration of myeloid reconstitution following allogeneic and autologous bone marrow transplantation in adult and pediatric patients. LEUKINE is not indicated to prevent or treat infection.

SIGNIFICANTLY REDUCED INCIDENCE OF INFECTION AFTER ALLOGENEIC BMT (N=109)¹

- The incidence of bacteremia with LEUKINE was 17% (n=9/53) vs 34% (n=19/56) with placebo (P<0.05)¹

SIGNIFICANTLY SHORTER DURATION OF INFECTION AND ANTIBACTERIAL THERAPY AFTER AUTOLOGOUS BMT (N=104)¹

- LEUKINE reduced the duration of infection by 75% vs placebo (1 day vs 4 days, respectively; P<0.05)
- 4-DAY REDUCTION of antibacterial therapy with LEUKINE vs placebo (21 days vs 25 days, respectively; P<0.05)

Important Safety Information (continued)

Warnings and Precautions (continued)
- Edema, capillary leak syndrome, pleural and/or pericardial effusion have been reported in patients after LEUKINE administration. LEUKINE should be used with caution and monitored in patients with preexisting fluid retention, pulmonary infiltrates, or congestive heart failure.
- Supraventricular arrhythmia has been reported in uncontrolled studies during LEUKINE administration, particularly in patients with a previous history of cardiac arrhythmia. Use LEUKINE with caution in patients with preexisting cardiac disease.
- If ANC > 20,000 cells/mm³ or if WBC counts > 50,000/mm³, LEUKINE administration should be interrupted or the dose reduced by half. Twice weekly monitoring of CBC with differential should be performed.
- LEUKINE therapy should be discontinued if disease progression is detected during treatment.
- Treatment with LEUKINE may induce neutralizing anti-drug antibodies. Use LEUKINE for the shortest duration required.
LEUKINE improved survival vs historical controls in patients experiencing delayed or failed engraftment.¹

**Important Safety Information (continued)**

**Warnings and Precautions (continued)**

- Liquid solutions containing benzyl alcohol (including LEUKINE Injection) or LEUKINE for Injection reconstituted with Bacteriostatic Water for Injection, USP (0.9% benzyl alcohol) should not be administered to neonates and low birth weight infants.

- Concomitant use of drugs that can potentiate the myeloproliferative effects of LEUKINE should be avoided.

**Adverse Reactions**

Adverse events occurring in >10% of patients receiving LEUKINE in controlled clinical trials and reported in a higher frequency than placebo are:

- In Autologous bone marrow transplantation (BMT) patients—asthenia, malaise, diarrhea, rash, peripheral edema, urinary tract disorder

- In Allogeneic BMT patients—abdominal pain, chills, chest pain, diarrhea, nausea, vomiting, hematemesis, dysphagia, GI hemorrhage, pruritus, bone pain, arthralgia, eye hemorrhage, hypertension, tachycardia, bilirubinemia, hyperglycemia, increased creatinine, hypomagnesemia, edema, pharyngitis, epistaxis, dyspnea, insomnia, anxiety, high glucose, low albumin

- In AML patients—fever, weight loss, nausea, vomiting, anorexia, skin reactions, metabolic laboratory abnormalities, edema

Please see continued Important Safety Information on subsequent pages and accompanying full Prescribing Information for LEUKINE.
How do you treat patients with an increased risk of infection or delayed engraftment after transplant?

Visit LEUKINE.com/tct to take a brief survey, and a donation will be made to BMT InfoNet upon completion.

You will also have the opportunity to request a Clinical Science Specialist visit for more information about multilineage defense with LEUKINE® (sargramostim).

Important Safety Information (continued)
Indications and Usage

LEUKINE is a leukocyte growth factor indicated for the following uses:

- LEUKINE is indicated to shorten time to neutrophil recovery and to reduce the incidence of severe, life-threatening, or fatal infections following induction chemotherapy in adult patients 55 years and older with acute myeloid leukemia (AML).

- LEUKINE is indicated in adult patients with cancer undergoing autologous hematopoietic stem cell transplantation for the mobilization of hematopoietic progenitor cells into peripheral blood for collection by leukapheresis.

- LEUKINE is indicated for the acceleration of myeloid reconstitution following autologous peripheral blood progenitor cell (PBPC) or bone marrow transplantation in adult and pediatric patients 2 years of age and older with non–Hodgkin’s lymphoma (NHL), acute lymphoblastic leukemia (ALL) and Hodgkin’s lymphoma (HL).

- LEUKINE is indicated for the acceleration of myeloid reconstitution in adult and pediatric patients 2 years of age and older undergoing allogeneic bone marrow transplantation from HLA-matched related donors.

- LEUKINE is indicated for the treatment of adult and pediatric patients 2 years and older who have undergone allogeneic or autologous bone marrow transplantation in whom neutrophil recovery is delayed or failed.

References:

Please see accompanying full Prescribing Information for LEUKINE.