

# Treatment and Nursing for Steroid-Refractory Acute Graft-Versus-Host Disease

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**BACKGROUND:** Acute graft-versus-host disease (aGVHD) is a significant complication for patients who receive allogeneic stem cell transplantation. Patients whose aGVHD is refractory to corticosteroids face additional complications.

**OBJECTIVES:** This article provides foundational knowledge on steroid-refractory (SR) aGVHD, current treatment options, and related supportive care.

**METHODS:** Therapies for patients with SR aGVHD are summarized, along with supportive care recommendations and a review of related nursing considerations.

**FINDINGS:** Current treatment and research on SR aGVHD offer opportunities for improved clinical outcomes for these patients. Nursing knowledge of the pathophysiology, treatment, and supportive care for patients with SR aGVHD is integral to the provision of optimal nursing care for a complex population of patients.

## KEYWORDS

graft-versus-host disease; supportive care; steroid-refractory GVHD

## DIGITAL OBJECT IDENTIFIER

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**ALLOGENEIC HEMATOPOIETIC STEM CELL TRANSPLANTATION** (HSCT) offers a potentially curative treatment option for hematologic malignancies, some solid tumor malignancies, and nonmalignant disorders (Yu et al., 2020). Roughly 9,000 allogeneic stem cell transplantations were performed in the United States in 2020 (Health Resources and Services Administration, 2022). Acute graft-versus-host disease (aGVHD) is among the leading causes of transplantation-related mortality (Styczyński et al., 2020). It is an inflammatory disease that can affect the skin, upper and lower gastrointestinal tract, and liver (Schmit-Pokorny & Eisenberg, 2020). The incidence of aGVHD is reported at 40%–60% among transplantation recipients (Malard et al., 2020). Corticosteroids are the first line of treatment, but not all patients respond (Axt et al., 2019). Steroid-refractory (SR) aGVHD is defined as either aGVHD progression within five days, no response after seven days, or death resulting from aGVHD while receiving 2 mg/kg or more of methylprednisolone or dose-equivalent prednisone (Axt et al., 2019). An estimated 50% of patients with aGVHD become refractory to steroids (Malard et al., 2020).

SR aGVHD is a devastating disease, with a one-year mortality rate of no less than 80% (Yu et al., 2021). A retrospective study by Yu et al. (2020) of a large U.S. healthcare database compared healthcare resource utilization and clinical outcomes within the first 100 days after transplantation between patients with SR aGVHD and those without GVHD. Yu et al. (2020) found that patients with SR aGVHD had a median hospital length of stay of 46 days during initial HSCT hospitalization, compared with 24 days for patients without GVHD. In addition, intensive care unit admission rates were 46% versus 22%, the cost for initial hospitalization was \$200,000 versus \$97,000, the readmission rate was 77% versus 28%, and the inpatient mortality rate was nearly 25% versus 6%, for patients with SR aGVHD and patients without GVHD, respectively (Yu et al., 2020). Although several treatments are used to manage SR aGVHD, no standard treatment has yet been established for second-line therapy (Axt et al., 2019).

## SR aGVHD

Nurses are on the front line of identifying aGVHD symptoms (e.g., skin rash, nausea, vomiting, diarrhea), monitoring patients' clinical responses to therapy, and supporting patients and their caregivers through an often prolonged and challenging treatment course. Therefore, to ensure that oncology nurses are knowledgeable regarding nursing care for SR aGVHD, this article provides