

# A Visual Case-Oriented Analysis of Stress-Related Symptoms in Caregivers of Allogeneic Bone Marrow Transplantation Recipients

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**OBJECTIVES:** To describe trends in caregiver stress and stress-related symptoms (anxiety, depression, fatigue, and sleep disturbance) across 12 weeks post-transplantation.

**SAMPLE & SETTING:** 11 caregivers were recruited from a National Cancer Institute–designated comprehensive cancer center's bone marrow transplantation (BMT) outpatient clinic in the southeastern United States.

**METHODS & VARIABLES:** A visual case-oriented analysis was conducted on data from 11 caregivers' weekly self-reported data to identify trends after allogeneic BMT.

**RESULTS:** The authors identified three primary trends as follows: U-shaped (highest symptoms at start of transplantation and end of study;  $n = 3$ ), negatively sloped (highest symptoms at beginning of transplantation and decreasing over time;  $n = 2$ ), and V-shaped pre-discharge (highest symptoms at start of transplantation and right before discharge home;  $n = 4$ ). Two caregivers did not have postdischarge data because of patient death prior to study completion.

**IMPLICATIONS FOR NURSING:** Caregivers may benefit from additional support to manage their stress-related symptoms at the start of transplantation and just before discharge.

**KEYWORDS** cancer; caregivers; positive emotion; stress; symptom

**ONF, 49(6), 541–551.**

**DOI** 10.1188/22.ONF.541-551

Family and friend caregivers are increasingly relied on to care for patients receiving an allogeneic bone marrow transplantation (BMT) during the peritransplantation period (just before transplantation and 12 weeks after transplantation). Caregiving during the peritransplantation period is often accompanied by caregiving-related stress and downstream effects on caregivers' health (e.g., high risk of anxiety, depression, fatigue, and cardiovascular disease) (Schulz & Beach, 1999; Stenberg et al., 2010; Trevino et al., 2017). Patients undergoing BMT are being discharged earlier to ambulatory and home care, with clinical care responsibilities shifting to caregivers and likely increasing the burdens that caregivers experience (Applebaum et al., 2016). In more recent care models, BMT recipients have been discharged to the responsibility of their caregivers as early as a few days after transplantation. Caregivers' experiences with transition from inpatient to outpatient and home care when their stress levels are likely heightened have not been well described (Applebaum et al., 2016; Kisch et al., 2021).

## Background

Caregivers are crucial in the care of recipients of allogeneic BMT, and their ability to provide care is directly affected by the caregivers' own health. Because caregivers are so essential, BMT programs require patients to identify at least one primary caregiver before initiating transplantation (Applebaum et al., 2016; Foster et al., 2005). The caregiver must be committed to providing care 24 hours a day, seven days a week during the peritransplantation period (Applebaum et al., 2016; Foster et al., 2005). Patients