Bone marrow transplantation (BMT) is used to treat various conditions, ranging from immune disorders to many types of cancer. The critical complexity of patients and the environment in which BMT nurses work can lead to stress, burnout, and, ultimately, poor retention. This study aimed to investigate nurses’ perceptions of work-related stress and burnout as well as current support systems for nurses. The study included 30 BMT staff nurses from a large pediatric medical center in the midwestern United States. Critical illness or acuity of patients was reported as the most stressful factor; long work hours was the least stressful factor. Most nurses perceived moderate to high levels of emotional exhaustion, and 33% reported moderate levels of depersonalization. Fifty percent perceived high levels of personal accomplishment, despite the critical illness or acuity of their patients, demanding patient families, rotating shifts, short staffing, and caring for dying patients. Most nurses felt that support systems were in place and that staff was accessible, but most respondents were undecided about the helpfulness of the support systems. Results suggest that support systems may significantly affect work satisfaction and feelings of accomplishment for BMT nurses.