Infection is among the leading causes of morbidity and mortality in patients undergoing bone marrow transplantation. Although all infections create difficulties, the most troublesome to those patients are fungal infections. Therapies used to prevent rejection and graft-versus-host disease, as well as an increase in poorly matched or unrelated donors, are believed to contribute to the increase of fungal infections. Mucormycosis, also known as zygomycosis, is an opportunistic fungal infection that is seen rarely in the clinical setting but can be found in patients who are severely neutropenic or immunosuppressed. Oncology nurses caring for bone marrow and peripheral blood stem cell transplantation recipients must know the warning signs of this deadly infection. Early detection and aggressive treatment are patients’ best chances of survival.