The roles of recombinant cytokines and neutrophil transfusions in the primary treatment of mucormycosis are not clear, although it is intuitive that earlier recovery of neutrophil counts should improve survival rates. Limited data from uncontrolled case series support the use of hyperbaric oxygen in centers with the appropriate technical expertise and facilities; its efficacy remains undefined. As mentioned previously, one study in mice with DKA found that administration of sodium bicarbonate improved survival from mucormycosis; however, because insulin was not administered to the mice, it is unclear whether the therapeutic effect is clinically relevant.

In general, antifungal therapy for mucormycosis should be continued until resolution of clinical signs and symptoms of infection and resolution of underlying immunosuppression. However, after several weeks of daily therapy in a patient who is clinically improving, it is reasonable to consider switching to thrice-weekly lipid polyene doses—with ultimate weaning down to twice-weekly doses—for maintenance therapy. For patients with mucormycosis who are receiving immunosuppressive medications, secondary antifungal prophylaxis is typically continued for as long as the immunosuppressive regimen is administered. Stepdown to azoles for chronic suppression is a reasonable alternative to continuing polyene therapy in this setting, with reinitiation of polyenes during periods of deep neutropenia.

One common source of error in the long-term management of mucormycosis is follow-up radiology. Analysis of data from the DEFEAT Mucor study indicated that early radiographic progression (within the first 2 weeks) did not predict long-term survival. Changing the therapeutic plan based on early radiographic changes can result in therapeutic errors. For example, it is common for CNS Mucorales to cavitate in the brain parenchyma over time. This does not necessarily reflect therapeutic failure, but rather may reflect increased immune reactivity to the fungus, particularly in patients recovering from neutropenia or with removal of immune suppression. Thus, it may not be advisable to obtain serial radiographic studies in the short term, and if such studies are obtained, caution should be used in reacting to their results. Greater