Cytomegalovirus (CMV) is a double-stranded DNA virus that causes persistent and latent infections in humans. While CMV normally remains latent in infected healthy individuals, in immunocompromised patients, such as allogeneic hematopoietic cell transplant (HCT) recipients, virus reactivation can lead to potentially life-threatening infections, characterized by pneumonia, gastrointestinal (GI) disease, hepatitis, and (to a lesser extent) dermatitis. Randomized clinical trials of ganciclovir (Cytovene, GCV) prophylaxis have shown a significant reduction in early CMV disease, but no survival benefit due to the increased occurrence of invasive fungal and bacterial infections and late onset CMV disease. In contrast, PTC with GCV showed both a reduction in disease and a survival benefit, although still associated with an increased risk of bacterial and fungal infections, as well as anemia and thrombocytopenia requiring transfusion. The second-line anti-CMV drugs, foscarnet (Foscavir, FOS) and cidofovir (Vistide), are also associated with significant toxicities. Therefore, there are detrimental patient outcomes, medical resource utilization, and financial costs associated with the treatment and management of PRT-related toxicities. The availability of new anti-CMV compounds that are safe and effective to replace current anti-CMV PRT in vulnerable patients remains a priority.