# Oral Vancomycin for Clostridium difficile Prophylaxis in Allogenic Hematopoietic Cell Transplant

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**Purpose:** Neutropenia and antibiotic use put patients at risk for *Clostridium difficile* infection (CDI) following allogenic hematopoietic cell transplant (alloHCT). CDI following alloHCT has been associated with acute graft versus host disease (GVHD), a significant cause of morbidity and mortality in this population. We sought to evaluate if prophylactic oral vancomycin reduces the incidence of CDI in alloHCT recipients. One study of 145 alloHCT patients at the University of Pennsylvania looked at the benefit of prophylaxis on CDI. They found favorable results with oral vancomycin, but due to study size at a single institution, further research is required to show reproducibility.

**Methods:** We conducted a single center retrospective chart review to compare the effectiveness of oral vancomycin prophylaxis versus no prophylaxis in alloHCT recipients at the University of Kansas Health System (TUKHS). Vancomycin for CDI prophylaxis was implemented in March of 2018 at TUKHS. Review of 100 consecutive alloHCT patients before and after this implementation was used to compare outcomes. Patients received oral vancomycin 125 mg twice daily starting on the day of inpatient admission for alloHCT and continued until discharge. The primary outcome is the incidence of CDI in patients with oral vancomycin prophylaxis compared to those who did not receive prophylaxis during hospital admission for alloHCT. The secondary endpoints include the incidence of acute grade 2-4 GVHD, and event free survival for each arm.

**Results:** 11% of patients developed CDI in the control group vs. 2% of patients in the intervention group (p=0.018). Oral vancomycin was not associated with a higher risk of acute GVHD grade 2-4 (36% vs. 38%; P= 0.77) at day 100 post-transplant. No difference was seen in Event Free Survival.

**Conclusions:** Oral vancomycin is effective at preventing CDI in patients that underwent an alloHCT without negatively affecting post-transplant outcomes.