African American (AFA) patients are an underserved race group in bone marrow transplant due to their diverse HLA, limited number of potential unrelated donors (URD) and low URD availability rates. Newly entered AFA patients who had Be The Match Registry searches of intermediate difficulty were enrolled in this blind randomized study to determine if proactive URD contact and HLA typing would (1) increase patient transplant rates (2) increase selection of an URD over a cord blood unit (CBU). We examined incoming patients from Feb to Oct of 2013 to identify and enroll a subset of AFA searches who had ≤10 potential 8/8 URD with HapLogic allele matching prediction of ≥31% or zero 8/8 with ≤10 7/8 URD with matching prediction of ≥76%. Searches were randomized 1:1 into two arms; 182 to intervention and 178 to no intervention. In the intervention arm, HLA specialists reviewed 182 patient searches and selected 2473 URD for contact to confirm availability with 591 available URD HLA typed (up to 20 URD/patient). Patient searches were excluded from the study if they had “unproductive” URD search results (i.e. no URD with at least a 2% chance of being 7/8) or had “very productive” URD search results (i.e. ≥11 URD with ≥31% prediction of being an 8/8 or zero potential 8/8 URD with ≥10 URD with ≥75% prediction of being a 7/8). URD were high-resolution typed at HLA-A, B, C, DRB1 and DQB1, and the transplant center was notified when an available 7/8 or better matched URD was identified for consideration. Patient cases were followed for URD or CBU transplant endpoints up to 1 year post initial search submission.

Descriptive statistics for the two randomized arms were similar in patient age, disease (malignant vs non-malignant), and URD search productivity. 217 matched and available URD notifications were sent to transplant centers on behalf of 115 patients. Although not achieving statistical significance, intervention patients progressed to transplant 20% of the time vs. 15% in the non-intervention group at 1 year (Figure 1) and transplanted more often with an URD over a CBU, 63% vs. 48%, respectively. At 1 year, the intervention group progressed to URD transplant in 12% of cases compared to 7% in the non-intervention group (Figure 2) and CBU transplant in 7% of intervention cases vs. 8% in the non-intervention group.