In randomized studies involving severely ill patients, functional outcomes are often unobserved due to missed clinic visits, premature withdrawal or death. It is well known that if these unobserved functional outcomes are not handled properly, biased treatment comparisons can be produced. In this paper, we propose a procedure for comparing treatments that is based on a composite endpoint that combines information on both the functional outcome and survival. We further propose a missing data imputation scheme and sensitivity analysis strategy to handle the unobserved functional outcomes not due to death. Illustrations of the proposed method are given by analyzing data from a recent non-small cell lung cancer clinical trial and a recent trial of sedation interruption among mechanically ventilated patients. This is joint work with Chenguang Wang, Elizabeth Colantouni, Timothy Girard and Ying Yan.