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Abstract

Previous researchers have modelled the decision to accept a donor organ for transplantation as a Markov decision problem, the solution to which is often a control-limit optimal policy: accept any organ whose match quality exceeds some health-dependent threshold; otherwise, wait for another. When competing transplant centers vie for the same organs, the decision rule changes relative to no competition. Also, whether competing centers are similar affects the decision rules of all competitors. Using center-specific graft and patient survival-rate data for cadaveric adult livers in the United States, we have investigated these predictions empirically.