

# Immunosuppressive therapy for kidney transplantation in adults: a systematic review and economic model

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## Plain English summary

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## Plain English summary

**K**idney transplantation is the preferred treatment for people with end-stage kidney disease. Without immune-suppressing medications, the transplanted kidney would be rejected or lost. To prevent rejection and loss, a combination of medications to dampen the immune system is used. The objective of this assessment was to update a previous review aimed at evaluating the clinical benefits and cost-effectiveness of these medications, using a systematic approach. Relevant studies were searched for within major databases, trial registries, systematic reviews and references of included studies. All included studies were assessed for their quality, and data from each study were extracted into a standardised template. The review included 68 new trials and 21 trials from the previous review. These trials evaluated nine drugs in a variety of combinations. Results were variable, and statistical methods to combine study data were applied. Very few studies reported all results beyond 1 year, and the quality of trials was variable and difficult to assess because not all key information was reported. Owing to the volume of studies, there was a large amount of information on adverse events and complications, with some indication that there was more new-onset diabetes mellitus and more cytomegalovirus (member of the herpes virus family) infections with some medications than others. A statistical model was developed to compare the cost-effectiveness of 16 different combinations of medications, indicating that only one combination (basiliximab followed by immediate-release tacrolimus and mycophenolate mofetil) would be cost-effective.



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