

TRANSFORMing kidney transplantation: 2-year outcomes of an everolimus-facilitated reduced CNI regimen

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Video Abstract

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Abstract

Kidney transplant patients currently require life-long treatment with immunosuppressive drugs to prevent their body from rejecting the transplanted organ. Immunosuppression can have side effects such as an increased risk of infections or developing comorbidities such as new onset diabetes or certain malignancies. Other side effects are related to the drugs' toxicity, such as kidney damage, ultimately leading to a return to dialysis or need for re-transplant. A clinical trial, TRANSFORM, was carried out to test a new immunosuppressive regimen consisting of everolimus plus low-dose CNI, versus the current standard-of-care regimen: mycophenolic acid plus the standard, higher dose of CNI. The two-year results of this trial showed that the combination of everolimus plus low CNI had a similar ability to prevent kidney rejection or severe kidney impairment as the current standard-of-care regimen. Additionally, kidney function in patients taking everolimus plus low CNI was similar to that in patients on the current standard of care over the two years. Patients treated with everolimus plus low C-N-I also experienced a lower incidence of viral infections. Further benefits might have been seen with the everolimus plus low CNI regimen; however, difficulties keeping the CNI levels within target ranges (too high in the low CNI group, too low in the standard-of-care group) might have disguised some of these effects. The number of patients experiencing side effects was very similar between the two treatments, though the types of side effect varied. For example, patients on everolimus plus low CNI were more likely to have protein in their urine or mouth ulcers compared with those on the standard-of-care regimen. Meanwhile, patients on standard-of-care treatment were more likely to experience reduced leukocyte levels, which could account for the higher incidence of viral infections observed. Overall, the TRANSFORM trial results at two years support everolimus plus low CNI as an effective and safe treatment option for kidney transplant patients, with some additional benefits compared with the current standard of care, in particular a reduced risk of viral infections.