

## **Abstract**

### **Simultaneous liver-kidney transplantation: why and when?**

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Simultaneous liver and kidney transplantation (SLKT) is a life-saving procedure for patients with end-stage liver disease and chronic kidney disease or long-term acute kidney injury. In some countries, combined liver and kidney transplantation accounts for 10% of all liver transplants. The increasing number of combined liver and kidney transplants offers the opportunity to study a large group of patients in depth to identify factors (donor- and recipient-related) that are associated with better outcomes. The immunological benefits of multi-organ transplantation, including liver transplantation, are becoming increasingly evident. Transplant centres are advised to reserve SLKTs for liver transplant candidates with advanced CKD or at least three months of dialysis treatment and to allow lower thresholds for immunologically sensitized patients. However, SLKT is still associated with significant surgical and social challenges. Follow-up after SLKT is difficult and the risk of complications and hospitalisation is increased. Innovations in pharmacology and genetic engineering have reduced the need for SLKT in cases diagnosed early, in the absence of portal hypertension or kidney replacement therapy. However, these advances are not universally available. It is therefore necessary to develop a decision algorithms that take into account the region-specific system of organ allocation and the prevailing medical environment.