

# Laparoscopic live donor simple nephrectomy

Interventional procedures guidance

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[nice.org.uk/guidance/ipg57](https://www.nice.org.uk/guidance/ipg57)

## Your responsibility

This guidance represents the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, healthcare professionals are expected to take this guidance fully into account. However, the guidance does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.

Commissioners and/or providers have a responsibility to implement the guidance, in their local context, in light of their duties to have due regard to the need to eliminate unlawful discrimination, advance equality of opportunity, and foster good relations. Nothing in this guidance should be interpreted in a way that would be inconsistent with compliance with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

## 1 Guidance

- 1.1 Current evidence on the safety and efficacy of laparoscopic live donor simple nephrectomy appears adequate to support the use of this procedure, provided that the normal arrangements are in place for consent, audit and clinical governance.

## 2 The procedure

### 2.1 *Indications*

2.1.1 Kidneys from live donors are considered more likely to be successful in treating endstage renal disease than those from cadaver donors.

2.1.2 The standard technique for retrieving kidneys from live donors is by open surgery. The aim of laparoscopic nephrectomy is to reduce donor morbidity and make the process more appealing to potential donors. It can be performed via a transperitoneal or retroperitoneal approach. The transperitoneal approach is preferred because it allows more laparoscopic working space, it makes it easier to remove the kidney and the incision is less painful.

### 2.2 *Outline of the procedure*

2.2.1 The procedure involves the insertion of laparoscopic instruments through the abdominal wall via small incisions, insufflation of carbon dioxide and removal of a kidney.

### 2.3 *Efficacy*

2.3.1 One systematic review and several non-randomised comparative studies were identified. The systematic review found no statistically significant difference between the laparoscopic and open procedures for graft function, graft survival and recipient survival, although there was a lack of long-term follow-up data. One study found recipient acute rejection in the first month to be 30% (33/110) for the laparoscopic procedure and 31% (15/48) for the open procedure. Donor hospital stay was generally shorter for the laparoscopic procedure; means ranged from 1.3 to 3.2 days for the laparoscopic procedure and 4.1 to 4.4 days for the open procedure. Laparoscopic donors generally returned to work earlier than donors undergoing the open procedure; means ranged from 2.1 to 3.9 weeks for the laparoscopic procedure and 4.1 to 7.4 weeks for the open procedure. For more details, refer to the sources of evidence (see below).

2.3.2 The Specialist Advisors did not raise any concerns regarding the efficacy of this procedure.

## 2.4 Safety

- 2.4.1 The risks of laparoscopic live donor simple nephrectomy appeared similar to those of open live donor nephrectomy. In a systematic review, donor complication rates were reported to be between 0% (0/20) and 35% (23/65) for open procedures, and between 5% (1/19) and 20% (6/30) for laparoscopic procedures; some studies did not report their open nephrectomy results for comparison. Recipient complications also appeared to be similar for both open and laparoscopic procedures, but these were reported even less often than the donor complications. In a systematic review, recipient ureteric complication rates were reported to be 3–6% for open procedures and 3–10% for laparoscopic procedures. For more details, refer to the sources of evidence (see below).
- 2.4.2 The Specialist Advisors considered the main safety concerns to be bleeding, injury to nearby organs and conversion to open surgery.

Andrew Dillon  
Chief Executive  
May 2004

## 3 Further information

### *Information for the public*

The Institute has produced [information describing its guidance on this procedure for patients, carers and those with a wider interest in healthcare](#). It explains the nature of the procedure and the decision made, and has been written with patient consent in mind.

### *Sources of evidence*

The evidence considered by the Interventional Procedures Advisory Committee is described in the following document.

['Interventional procedure overview of laparoscopic live donor simple nephrectomy'](#), November 2002.

## 4 About this guidance

NICE interventional procedure guidance makes recommendations on the safety and efficacy of the procedure. It does not cover whether or not the NHS should fund a procedure. Funding decisions are taken by local NHS bodies after considering the clinical effectiveness of the procedure and whether it represents value for money for the NHS. It is for healthcare professionals and people using the NHS in England, Wales, Scotland and Northern Ireland, and is endorsed by Healthcare Improvement Scotland for implementation by NHSScotland.

This guidance was developed using the NICE [interventional procedure guidance](#) process.

It has been incorporated into the [NICE pathway on chronic kidney disease](#), along with other related guidance and products.

We have produced a [summary of this guidance for patients and carers](#). Information about the evidence it is based on is also [available](#).

### Changes since publication

28 January 2012: minor maintenance.

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Implementation of this guidance is the responsibility of local commissioners and/or providers. Commissioners and providers are reminded that it is their responsibility to implement the guidance, in their local context, in light of their duties to avoid unlawful discrimination and to have regard to promoting equality of opportunity. Nothing in this guidance should be interpreted in a way which would be inconsistent with compliance with those duties.

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## *Endorsing organisation*

This guidance has been endorsed by Healthcare Improvement Scotland.