

Laparoscopic renal denervation for loin pain haematuria syndrome

HealthTech guidance
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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, and specifically any special arrangements relating to the introduction of new interventional procedures. 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.

All problems (adverse events) related to a medicine or medical device used for treatment or in a procedure should be reported to the Medicines and Healthcare products Regulatory Agency using the [Yellow Card Scheme](#).

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. Providers should ensure that governance structures are in place to review, authorise and monitor the introduction of new devices and procedures.

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](#).

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This guidance replaces IPG709.

1 Recommendations

- 1.1 Evidence on the safety and efficacy of laparoscopic renal denervation for loin pain haematuria syndrome is inadequate in quality and quantity. Therefore, this procedure should only be used in the context of research. Find out what only in research means on the NICE guidance page.
- 1.2 Further research should report details of patient selection, technique used and long-term follow-up outcomes.

2 The condition, current treatments and procedure

The condition

2.1 Loin pain haematuria syndrome (LPHS) causes severe, recurrent flank pain and haematuria (either macroscopic or microscopic). The cause of LPHS is unknown and diagnosis is only made after excluding all other possible renal causes of flank pain and haematuria.

Current treatments

2.2 Initial treatment of LPHS involves prescription of analgesics, up to and including opioids. Other treatments include transcutaneous electrical nerve stimulation, regional nerve blocks and radiofrequency ablation. If these are unsuccessful, surgical intervention can be tried, including open surgical renal denervation, capsulotomy (often done in conjunction with open surgical renal denervation), nephrectomy, and renal autotransplantation.

The procedure

2.3 Laparoscopic renal denervation is a minimally invasive procedure to interrupt the sensorial and sympathetic innervation of the kidney to control pain. The procedure is done under general anaesthesia, using a retroperitoneal approach. Lymphatic and nervous tissue is stripped off the renal artery and vein with subsequent division of all perihilar nervous tissue, with or without mobilisation of the kidney. Laparoscopic renal denervation does not include capsulotomy, which may be included in open surgical renal denervation.

2.4 The laparoscopic technique aims to reduce the anaesthetic time and produce a quicker recovery time than open surgery.

3 Committee considerations

The evidence

- 3.1 NICE did a rapid review of the published literature on the efficacy and safety of this procedure. This comprised a comprehensive literature search and detailed review of the evidence from 3 sources, which was discussed by the committee. The evidence included 3 case series. It is presented in the summary of key evidence section in the overview. Other relevant literature is in the appendix of the overview.
- 3.2 The professional experts and the committee considered the key efficacy outcomes to be pain reduction, reduction in analgesia, and improved quality of life.
- 3.3 The professional experts and the committee considered the key safety outcomes to be pain, bleeding, infection, and inadvertent kidney damage.
- 3.4 Patient commentary was sought but none was received.

Committee comments

- 3.5 There are other methods of denervating the kidney, some of which are less invasive.
- 3.6 The pathophysiology of loin pain haematuria syndrome and the method of action of renal denervation for the treatment of this condition are unclear.

Update information

Minor changes since publication

January 2026: Interventional procedures guidance 709 has been migrated to HealthTech guidance 596. The recommendations and accompanying content remain unchanged.

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Endorsing organisation

This guidance has been endorsed by Healthcare Improvement Scotland.