NICE National Institute for Health and Care Excellence

NICE guidance

Minimally invasive radical hysterectomy for early stage cervical cancer

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.

Contents

1 Recommendations 4

2 The condition, current treatments and procedure 5

The condition 5

Current treatments 5

The procedure 5

3 Committee considerations 7

The evidence 7

Committee comments 7

Update information 9

This guidance replaces IPG686 and IPG338.

1 Recommendations

1.1 Evidence on minimally invasive radical hysterectomy for early stage cervical cancer shows that there are no short-term safety concerns.

- The evidence on efficacy for tumours 2 cm or larger shows that minimally invasive radical hysterectomy has shorter disease-free and overall survival compared with open hysterectomy surgery. Therefore, this procedure should not be used for tumours 2 cm or above.
- The evidence on efficacy for tumours smaller than 2 cm is inconclusive for disease-free and overall survival compared with open hysterectomy surgery. Therefore, for tumours smaller than 2 cm this procedure should only be used in the context of research.

  Find out what 'do not use' and 'only in research' mean on the NICE guidance page.

1.2 Further research, preferably in the form of randomised controlled trials, should describe details of patient selection, tumour histology and size and surgical technique and report overall survival, disease-free survival, tumour recurrence and patient-reported outcome measures.

2 The condition, current treatments and procedure

The condition

2.1 Cervical cancer is the second most common cancer in women under 35 years in the UK. The most common symptoms are abnormal vaginal bleeding or discharge, and discomfort during intercourse.

2.2 The International Federation of Gynecology and Obstetrics system is used to stage cervical cancer from 1 to 4. Early stage cervical cancer includes stage 1 (cancer confined to the cervix) to stage 2a (tumour has spread down into the top of the vagina).

Current treatments

2.3 Radical hysterectomy is the most common surgical treatment for cervical cancer. It is conventionally done through an incision in the abdomen or through the vagina. It includes removing the uterus and supporting ligaments, cervix, upper vagina, the pelvic lymph nodes and sometimes the para-aortic lymph nodes.

2.4 Radiotherapy may be used, with or without surgery, and is usually combined with chemotherapy.

The procedure

2.5 Minimally invasive radical hysterectomy for early stage cervical cancer is done using general anaesthesia. A uterine manipulator is often inserted through the vagina and attached to the uterus and cervix. The abdomen is insufflated with carbon dioxide, and several small incisions are made to provide access for the laparoscope and surgical instruments. A robot may be used to assist with the

procedure. A hysterectomy is done by dividing the round ligaments, accessing the broad ligaments, dividing the uterine vessels and mobilising the uterus. If the ovaries are to be left in position, the utero-ovarian ligaments are transected. The pelvic lymph nodes and sometimes the para-aortic lymph nodes are removed through 1 of the abdominal incisions or through the vagina. The upper vagina, cervix and uterus are removed through the vagina.

2.6 The technique is distinct from laparoscopically assisted vaginal hysterectomy, which may include laparoscopic division of the infundibulopelvic ligaments and the uterine vessels before a vaginal hysterectomy is done.

2.7 A nerve-sparing radical hysterectomy is a modified technique that preserves pelvic nerves to prevent bladder dysfunction.

2.8 The aim is to remove all the cancer. The suggested benefits of the laparoscopic approach are shorter length of stay in hospital, shorter recovery period and minimal abdominal scarring.

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 26 sources, which was discussed by the committee. The evidence included 1 randomised controlled trial (reported in 3 publications), 13 non-randomised comparative studies, 1 cohort study, 2 systematic reviews and 7 case reports. Data from the National Cancer Registration and Analysis Service were also reviewed by the committee. The evidence is presented in table 2 of 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: overall survival, disease-free survival, tumour recurrence, quality of life, and need for postoperative chemotherapy or radiotherapy.

3.3 The professional experts and the committee considered the key safety outcomes to be: mortality, unintentional damage to adjacent structures such as the bowel or ureter, and tumour seeding.

3.4 A submission from a patient organisation was discussed by the committee.

Committee comments

3.5 This guidance does not cover simple laparoscopic hysterectomy for stage 1a1 disease.

3.6 The committee was advised that there could be seeding of malignant cells from the cervix during the procedure related to using a manipulator to position the cervix, and that this needs further investigation.

3.7 The committee felt that research into variations in the technique designed to reduce the risk of tumour seeding or other potential causes of long-term tumour recurrence may be appropriate.

3.8 The committee was advised that there may be some patients for whom the risks of an open procedure are such that, after careful consideration by a multidisciplinary team and with appropriate patient consent, minimally invasive radical hysterectomy could be offered.

Update information

Minor changes since publication

January 2026: Interventional procedures guidance 686 has been migrated to HealthTech guidance 565. The recommendations and accompanying content remain unchanged.

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Endorsing organisation

This guidance has been endorsed by Healthcare Improvement Scotland.