NATIONAL INSTITUTE FOR HEALTH AND CLINICAL EXCELLENCE

Single Technology Appraisal

Topotecan for the treatment of recurrent and stage IVB carcinoma of the cervix

Final scope

Remit/appraisal objective

To appraise the clinical and cost effectiveness of topotecan within its licensed indications for the treatment of recurrent and stage IVB carcinoma of the cervix.

Background

Cancer of the cervix is commonly in the form of squamous cell carcinoma which develops from the outer surface cells of the cervix. Infection with the human papilloma virus (HPV) has been linked to the development of squamous cell carcinoma. Virus types 16 and 18 of HPV are associated with a high risk and can lead to abnormal changes in the cells of the cervix, which are known as cervical intraepithelial neoplasia, and if they are left untreated over many years they may develop into cancer. Another form of cervical cancer is adenocarcinoma; this develops from the glandular cells that line the cervical canal, and its causes are unknown.

In stage IVB carcinoma of the cervix, the cancer has spread beyond the pelvis and pelvic lymph nodes to other places in the body, such as the abdomen, liver, intestinal tract, or lungs.

In 2004 in the UK, there were 2,726 new cases of cervical cancer diagnosed. The age-standardised (European) annual incidence rate of cervical cancer within the UK was 8 per 100,000 females. There are over 1000 deaths from cervical cancer in England and Wales a year. Age-standardised mortality rates for cervical cancer show the highest number of deaths occur in women over 75. The majority of people presenting with cervical cancer are initially treated with surgery and/or radiotherapy. Up to 30% of newly diagnosed cases of cervical cancer have stage III/IV disease.

Currently, the main prevention of cervical cancer is through regular cervical smear testing and treatment of any pre-cancerous lesions. The HPV vaccine, currently recommended by the Department of Health for girls at 11-12 years of age, has a protective effect on cervical cancer. If cervical cancer does develop it can be treated with surgery, radiotherapy, chemotherapy or a combination of these treatments. Surgery and radiotherapy are the main treatments for cancer of the cervix in its early stages. In recurrent and stage IVB cervical cancer, chemotherapy will be used as palliative care when curative surgery and/or radiotherapy are unsuitable.

The technology

Topotecan (Hycamtin, GlaxoSmithKline) inhibits the nuclear enzyme topoisomerase-I which is involved in DNA replication.

Topotecan has a marketing authorisation in combination with cisplatin for the treatment of patients with carcinoma of the cervix recurrent after radiotherapy and for patients with stage IVB disease. The marketing authorisation states that patients with prior exposure to cisplatin require a sustained treatment-free interval to justify treatment with this combination.

Intervention	Topotecan in combination with cisplatin
Population	Patients with carcinoma of the cervix recurrent after radiotherapy and for patients with stage IVB disease.
Standard comparators	• Platinum-based single and combination chemotherapy regimens
Outcomes	The outcome measures to be considered include: • overall survival • progression free survival • response rates • adverse effects of treatment • health-related quality of life
Economic analysis	The reference case stipulates that the cost effectiveness of treatments should be expressed in terms of incremental cost per quality-adjusted life year. The reference case stipulates that the time horizon for estimating clinical and cost effectiveness should be sufficiently long to reflect any differences in costs or outcomes between the technologies being compared. Costs will be considered from an NHS and Personal Social Services perspective.

Other considerations	Guidance will only be issued in accordance with the marketing authorisation. If the evidence allows, the appraisal should consider subgroups of people with recurrent disease and stage IVB disease. If the evidence allows, the appraisal should consider subgroups of people depending on their prior exposure to platinum-based chemotherapies and duration of response to prior therapy.
Related NICE recommendations	None.