NATIONAL INSTITUTE FOR CLINICAL EXCELLENCE

Proposed Health Technology Appraisal

Gemcitabine for the treatment of locally advanced or metastatic breast cancer

Draft scope

Draft remit / appraisal objective:
To appraise the clinical and cost effectiveness of: gemcitabine for advanced or metastatic breast cancer.

Background:
Breast cancer is the most common cancer found in women. Statistics suggests that the incidence of breast cancer in females in the UK in 2000 was 40,500. Furthermore, it accounts for approximately 30 per cent of all newly diagnosed cases of cancer in women each year. It is also the second most common cause of cancer related deaths in women. In 2002, 12,838 women died in the UK from breast cancer; a rate of 30 per 100,000 women.

Locally advanced and metastatic breast cancers are defined by clinical staging based on the tumour, node and metastasis staging system. Stage III denotes locally advanced disease, and stage IV indicates metastatic breast cancer.

Locally advanced cancers are defined as being larger than five centimetres and may be attached to surrounding structures, such as the muscle or skin. The lymph glands are usually also affected, but there should be no signs that the cancer has spread beyond the breast or the lymph glands.

Metastatic cancers can be of any size, but the lymph glands are usually affected and the cancer must have spread to other parts of the body.

Between 16–20% of women initially presenting with breast cancer have locally advanced disease with distant metastases. Approximately 50% of women diagnosed with early or localised breast cancer will eventually relapse and develop metastatic breast cancer. The survival rate for patients with untreated metastatic breast cancer is approximately 12 months; this increases to 18–24 months with treatment.

The role of current treatments is to palliate symptoms, prolong survival and maintain a good quality of life with minimal adverse events. The key decisions involving choice of treatment are multifactoral and are based on previous treatment/therapy, oestrogen receptor status and the extent of the disease. First-line chemotherapy treatment usually consists of the use of anthracycline-containing regimes. However, when disease progression occurs despite previous treatment, other treatment options are available.

The technology:

Gemcitabine belongs to a class of drugs known as antimetabolites. Antimetabolites are incorporated into new nuclear material or combine irreversibly with vital cellular enzymes, preventing normal cellular division.

Gemcitabine is used intravenously; it is given alone for palliative treatment or with cisplatin as a first-line treatment for locally advanced or metastatic non-small cell lung cancer. It is also used in the treatment of locally advanced or metastatic pancreatic cancer. Combined with cisplatin, gemcitabine is also licensed for the treatment of advanced bladder cancer.

Currently, gemcitabine has not received licensing approval for its use in the treatment of patients with breast cancer in the United Kingdom or the United States. However, it has been approved for use combined with paclitaxel for the treatment of patients with metastatic breast cancer in Germany and Finland. It has also been registered in The Philippines and South Korea for the treatment of breast cancer.

Intervention(s)	Gemcitabine in combination with paclitaxel
Population(s)	People diagnosed with locally advanced or metastatic breast cancer who have been previously treated with anthracycline-based therapies.
Current standard comparators	• Any other agent licensed for the second-line treatment of breast cancer • Supportive care

Outcomes	Outcome measures to be considered include: • survival • disease-free survival • disease-related symptoms • health-related quality of life • adverse effects of treatment.
Economic analysis	The time horizon for the economic evaluation should reflect the life expectancy of patients with locally advanced / metastatic breast cancer. The reference case stipulates that the cost effectiveness of treatments should be expressed in terms of incremental cost per quality-adjusted life year. Costs will be considered from a NHS and Personal Social Services perspective.
Other considerations	The draft scope for this appraisal reflects the anticipated marketing authorisation. Guidance will only be issued in accordance with the marketing authorisation.
Related NICE recommendations:	Related technology appraisals: NICE Appraisal Guidance No.30 – The use of taxanes for the treatment of breast cancer, September 2001. NICE Appraisal Guidance No.34 – The use of trastuzumab for the treatment of advanced breast cancer, March 2002. NICE Appraisal Guidance No.54 – The use of vinorelbine for the treatment of advanced breast cancer, December 2002. NICE Appraisal Guidance No.62 – The use of capecitabine for the treatment of locally advanced or metastatic breast cancer, May 2003. Related guidelines: National Institute for Clinical Excellence (2002) Guidance on cancer services. Improving outcomes in breast cancer. *Manual update*. London: National Institute for Clinical Excellence.