**Appendix B**

# NATIONAL INSTITUTE FOR HEALTH AND CLINICAL EXCELLENCE

## Proposed Health Technology Appraisal

## Decitabine for the treatment of acute myeloid leukaemia

## Draft scope (Pre-referral)

### Draft remit/appraisal objective

To appraise the clinical and cost effectiveness of decitabine within its licensed indication for the treatment of acute myeloid leukaemia

### Background

Acute myeloid leukaemia (AML) is a bone marrow cancer characterised by the overproduction of early immature myeloid cells. In most types of AML, the leukaemia cells are immature white blood cells. In other less common types, too many immature platelets or immature red blood cells are made. Anaemia, bleeding problems and serious infections are the common symptoms in AML.

The incidence of AML in the UK is about 2000 cases per year. Two thirds of all cases occur in those over 60 years. It is slightly more common in men than in women.

AML typically develops quite quickly and rapidly and worsens in a few weeks unless treated. People of older age tend to have poorer outcomes than younger people, partly because they are less likely to be able to tolerate intensive chemotherapy. Complete remission rates in older people receiving intensive chemotherapy is often less than 60% and the median relapse-free survival is often less than 12 months. The median survival of older people who are not treated with intensive chemotherapy is about 2 to 3 months. Other factors that adversely influence prognosis are co-morbidities, antecedent haematological disorders and the individual's cytogenetic profile. People with AML often have chromosomal abnormalities, and depending on which specific chromosomal abnormality is present, patients can be classified as being at 'good, intermediate or poor risk'. Poor prognostic factors, including cytogenetics associated with intermediate and high risk, are more common in older people, making treatment particularly challenging. Older people with poor prognostic factors do not usually receive intensive chemotherapy.

People for whom intensive chemotherapy is suitable are given standard treatment with cytotoxic agents such as anthracyclines in combination with cytarabine. Those who cannot tolerate or do not wish to receive intensive chemotherapy are given best supportive care or non-intensive (palliative) chemotherapy with agents such as low dose cytarabine, hydroxycarbamide, 6-mercaptopurine or etoposide.

## The technology

Decitabine (Dacogen, Janssen-Cilag and Eisai) is a nucleoside analogue of 2-deoxycytidine. It inhibits DNA methylation, leading to re-expression of tumour suppressor genes. Decitabine does not have a marketing authorisation for AML in the UK. It is being studied in comparison with low dose cytarabine or best supportive care in people aged 65 years or older with newly diagnosed AML and cytogenetics indicative of poor or intermediate risk.

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| **Intervention(s)** | Decitabine |
| **Population(s)** | People with newly diagnosed acute myeloid leukaemia and cytogenetics indicative of poor or intermediate risk. |
| **Comparators** | • non-intensive chemotherapy such as:<br>  ○ low dose cytarabine<br>  ○ hydroxycarbamide<br>  ○ 6-mercaptopurine<br>  ○ etoposide<br>• best supportive care |
| **Outcomes** | The outcome measures to be considered include:<br>• overall survival<br>• progression-free survival<br>• response rates<br>• adverse effects of treatment<br>• 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.<br>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.<br>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. |
| **Related NICE recommendations** | Related Technology Appraisals :<br>Technology Appraisals in preparation, Azacitidine for the treatment of myelodysplastic syndrome, chronic |

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| | myelomonocytic leukaemia and acute myeloid leukaemia. Expected date of publication May 2010<br><br>Proposed Technology Appraisal Clofarabine for treatment of acute myeloid leukaemia. Expected date of publication TBC<br><br>Related cancer service guidance:<br><br>Guidance on cancer services, CSGHO, October 2003, 'Improving outcomes in haematological cancers' |

**Questions for consultation**

Have the most appropriate comparators for the treatment of acute myeloid leukaemia been included in the scope? Are the comparators listed routinely used in clinical practice? Should intensive chemotherapy be included as a comparator?

Should best supportive care be a comparator? How should best supportive care be defined?

Are there any subgroups of patients in whom the technology is expected to be more clinically effective and cost effective or other groups that should be examined separately?

Are there any issues that require special attention in light of the duty to have due regard to the need to eliminate unlawful discrimination and promote equality?

NICE intends to appraise this technology through its Single Technology Appraisal (STA) Process. We welcome comments on the appropriateness of appraising this topic through this process. (Information on the Institute's Technology Appraisal processes is available at http://www.nice.org.uk/aboutnice/howwework/devnicetech/technologyappraisalprocessguides/technology_appraisal_process_guides.jsp)