NATIONAL INSTITUTE FOR HEALTH AND CLINICAL EXCELLENCE

Proposed Health Technology Appraisal

Abiraterone for the treatment of metastatic, castration-resistant prostate cancer

Draft scope (Pre-referral)

Draft remit/appraisal objective

To appraise the clinical and cost effectiveness of abiraterone within its licensed indication for the treatment of metastatic, castration-resistant prostate cancer following previous cytotoxic chemotherapy.

Background

Prostate cancer is a disease in which tumours develop in the prostate, a gland in the male reproductive system. It is the most common cancer in men in the UK, making up approximately 25% of the diagnoses of malignant cancer in men. In England and Wales, there were over 32,000 men newly diagnosed with prostate cancer in 2007, and over 9,000 deaths due to prostate cancer in 2007. The incidence of prostate cancer increases with age. The majority of men have histological evidence of prostatic cancer by age 80 but are more likely to die of unrelated causes. The cause of prostate cancer is thought to be multi-factorial, involving both environmental and genetic factors

Prostate cancer growth is stimulated by androgens (male sex hormones, such as testosterone). NICE clinical guideline 58 ('Prostate cancer') states that the primary curative therapy for prostate cancer is the total removal of the prostate, known as prostatectomy. However, once the cancer has become metastatic (that is, once the cancer has spread to other parts of the body), it is unlikely that it will be able to be cured, though the progression of the cancer can be slowed with treatment. Stopping the body making testosterone can slow the growth of the cancer, or even shrink it. Men with prostate cancer may therefore receive hormonal therapy to reduce androgen levels. Standard hormonal treatments for metastatic disease are orchidectomy (surgical removal of the testes, also known as 'surgical castration') or use of a gonadotrophin-releasing hormone analogue such as goserelin, leuprorelin or triptorelin (also known as 'medical castration').

Around 80% of men with metastatic prostate cancer initially respond to hormonal therapy. However, the disease will eventually become refractory to standard hormonal therapy and therefore alternative treatment strategies are required.

NICE Technology Appraisal No. 101 recommends docetaxel as a treatment option for men with hormone-refractory prostate cancer who have a Karnofsky

performance-status score of 60% or more. For men with metastatic hormone-refractory prostate cancer that has progressed during or after a docetaxel-based treatment, patients may receive a combination of palliative treatments. Management options include mitoxantrone with or without steroids such as prednisolone.

The technology

Abiraterone (Brand name unknown, Janssen-Cilag) is an androgen biosynthesis inhibitor. Abiraterone blocks cytochrome P17 (an enzyme thought to play a role in the production of testosterone), thereby stopping the testes and other tissues in the body from making testosterone. It is administered orally.

Abiraterone does not have a UK marketing authorisation. It has been studied in clinical trials in combination with prednisone/prednisolone compared with placebo in men who had previously received cytotoxic chemotherapy (paclitaxel and/or docetaxel) and/or medical or surgical castration and whose disease has progressed.

Intervention(s)	Abiraterone in combination with prednisolone
Population(s)	Men with metastatic, castration-resistant prostate cancer whose disease has progressed following treatment with cytotoxic chemotherapy
Comparators	• Mitoxantrone in combination with prednisolone • Best supportive care (this may include radiotherapy, corticosteroids, oxygen, antibiotics and analgesics)
Outcomes	The outcome measures to be considered include: • Overall survival • Progression-free survival • Response rate • Prostate specific antigen (PSA) response • 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 evidence allows, consideration will be given to subgroups defined by • baseline ECOG status • extent of prior taxane exposure • time since taxane treatment
Related NICE recommendations	Related Technology Appraisals: Technology Appraisal No. 101, Jun 2006, 'Docetaxel for the treatment of hormone refractory prostate cancer', Review date June 2013. Technology Appraisal in Preparation, 'Dutasteride for reducing the risk of developing prostate cancer in men who are considered to be at increased risk of developing the disease', Earliest anticipated date of publication TBC. Technology in Preparation, 'Cabazitaxel for the second line treatment of hormone refractory, metastatic prostate cancer', Earliest anticipated date of publication TBC. Suspended Technology Appraisal, 'Atrasentan for hormone refractory prostate cancer', Earliest anticipated date of publication TBC. Proposed Technology Appraisal, 'Denosumab for bone loss in breast and prostate cancer', Publication TBC. Related Guidelines: Cancer Service Guidance Urological Cancer, Sep 2002, Improving outcomes in urogenital cancers', Anticipated review date TBC, Clinical Guideline No. 58, Feb 2008, 'Prostate cancer: diagnosis and treatment', Anticipated review date Feb 2011. Related Interventional Procedures: Interventional Procedure Guidance No. 258, Apr 2008, 'Intraoperative red blood cell salvage during radical

	prostatectomy or radical cystectomy'. Interventional Procedure Guidance No. 193, Nov 2006, 'Laparoscopic radical prostatectomy'. Interventional Procedure Guidance No. 174, May 2006, 'High dose rate brachytherapy in combination with external-beam radiotherapy for localised prostate cancer'. Interventional Procedure Guidance No. 145, Nov 2005, 'Crytotherapy as a primary treatment for prostate cancer'. Interventional Procedure Guidance No. 132, Jul 2005, 'Low dose rate brachytherapy for localised prostate cancer'. Interventional Procedure Guidance No. 119, May 2005, 'Crytotherapy for recurrent prostate cancer'. Interventional Procedure Guidance No. 118, Mar 2005, 'High-intensity focused ultrasound for prostate cancer'.

Questions for consultation

Has the population been appropriately defined?

Have the most appropriate comparators for abiraterone for the treatment of metastatic, castration-resistant prostate cancer been included in the scope?

Are the comparators listed routinely used in clinical practice? How should 'best supportive care' be defined?

Are the subgroups suggested in 'other considerations appropriate? Are there any other subgroups of people 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?

Do you consider the technology to be innovative in its potential to make a significant and substantial impact on health-related benefits and how it might improve the way that current need is met (is this a 'step-change' in the management of the condition)?

Do you consider that the use of the technology can result in any potential significant and substantial health-related benefits that are unlikely to be included in the QALY calculation?

Please identify the nature of the data which you understand to be available to enable the Appraisal Committee to take account of these benefits

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)