NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Health Technology Appraisal

ERC1671 for treating progressed or recurrent glioblastoma

Draft scope

Draft remit/appraisal objective

To appraise the clinical and cost effectiveness of ERC1671 within its marketing authorisation for treating glioblastoma in adults with disease that has progressed or recurred following treatment with radiotherapy and temozolomide.

Background

Gliomas are the most common type of primary brain tumour. They develop from the glial cells that support the nerve cells of the brain and spinal cord. Gliomas are graded according to their likely growth rate, from grade 1 (slowest growing) to grade 4 (fastest growing). Grade 1 or 2 tumours are considered 'low-grade' and usually classed as benign or non-cancerous, although they may transform into malignant tumours. Grade 3 and 4 tumours, known as 'high-grade', are malignant and have a worse prognosis. Glioblastoma, a grade 4 glioma is the most aggressive type of brain tumour. The types of glioma are further identified by the cells they develop from (astrocytoma, ependymoma and oligodendroglioma) and increasingly, by molecular genetics such as isocitrate dehydrogenase (IDH) mutation status and 1p/19q codeletions.

Symptoms of glioblastoma depend on the size, location, and degree of infiltration of the tumour. They include headache, nausea, vomiting, seizure, visual disturbance, speech and language problems and changes in cognitive or functional ability. Scales of performance status, such as the World Health Organisation (WHO) performance status, can be used to categorise functional ability with glioblastoma.

In 2015, about 2,500 people were diagnosed with glioblastoma in England.[1] The average age of diagnosis is 55 years.[2] Between 2010 and 2011, 40% of adults with brain cancer in England and Wales survived for 1 year or more and 19% survived for 5 years or more.[3]

Glioblastoma is usually treated by surgical resection if possible, which may achieve either complete or partial resection of the tumour, although complete resection is rare. Treatment decisions take into account Karnofsky performance status, time from last treatment and tumour molecular markers, for example, MGMT methylation.

For people with newly diagnosed glioblastoma, following surgery or if surgery is not possible, NICE's guideline for brain tumours (primary) and brain metastasis in adults recommends radiotherapy with temozolomide, temozolomide alone, radiotherapy alone, hypofractionated radiotherapy or best supportive care alone.

For people with recurrent glioblastoma, NICE's guideline for brain tumours (primary) and brain metastasis in adults recommends that the following treatment options are considered:

- temozolomide in line with NICE technology appraisal guidance 23

- procarbazine, lomustine and vincristine (PCV) or single agent lomustine as an alternative to temozolomide
- further surgery and radiotherapy for people with focally recurrent high-grade glioma
- best supportive care.

The technology

ERC1671 (Gliovac, Epitopoietic Research Corporation) is a vaccine that contains a combination of autologous tumour cells and allogeneic tumour cells (generated from the glioma tumour tissues of three different donor cancer patients), and the lysates of all of these cells. It works by stimulating the patient's immune system to recognise and reject cancer cells, which may lead to their destruction. ERC1671 is delivered by intradermal injection.

ERC1671 does not currently have a marketing authorisation in the UK for patients with progressed or recurrent glioblastoma. It has been studied in a clinical trial in combination with granulocyte-macrophage colony-stimulating factor (GM-CSF), cyclophosphamide and bevacizumab in adults with recurrent glioblastoma who have not previously received treatment with bevacizumab.

Intervention(s)	ERC1671
Population(s)	Adults with glioblastoma that has progressed or recurred following treatment with radiotherapy and temozolomide
Comparators	• procarbazine, lomustine and vincristine (PCV) • lomustine • temozolomide • best supportive care
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. Where the wording of the therapeutic indication does not include specific treatment combinations, guidance will be issued only in the context of the evidence that has underpinned the marketing authorisation granted by the regulator
Related NICE recommendations and NICE Pathways	Related Technology Appraisals: None Related Guidelines: Brain tumours (primary) and brain metastases in adults (2018). NICE guideline 99. Review date to be confirmed Related Interventional Procedures: Photodynamic therapy for brain tumours (2009). NICE interventional procedures guidance 290 Related NICE Pathways: Brain cancer: glioma NICE pathway
Related National Policy	The NHS Long Term Plan, 2019. NHS Long Term Plan NHS England (2018/2019) NHS manual for prescribed specialist services (2018/2019). Chapter 105: Specialist cancer services (adults) Department of Health and Social Care, NHS Outcomes Framework 2016-2017: Domains 1, 4 and 5. https://www.gov.uk/government/publications/nhs-outcomes-framework-2016-to-2017

Questions for consultation

Would ERC1671 be delivered alone or in combination with GM-CSF, cyclophosphamide and bevacizumab as in the clinical trial?

Have all relevant comparators for ERC1671 been included in the scope? Which treatments are considered to be established clinical practice in the NHS for glioblastoma in patients with disease that has progressed or recurred following treatment with radiotherapy and temozolomide? Should further radiotherapy or surgery be considered relevant comparators for ERC1671?

How should best supportive care be defined?

Are the outcomes listed appropriate?

Are there any subgroups of people in whom ERC1671 is expected to be more clinically effective and cost effective or other groups that should be examined separately?

Where do you consider ERC1671 will fit into the existing NICE pathway, Brain cancer: glioma?

NICE is committed to promoting equality of opportunity, eliminating unlawful discrimination and fostering good relations between people with particular protected characteristics and others. Please let us know if you think that the proposed remit and scope may need changing in order to meet these aims. In particular, please tell us if the proposed remit and scope:

- could exclude from full consideration any people protected by the equality legislation who fall within the patient population for which ERC1671 will be licensed;

- could lead to recommendations that have a different impact on people protected by the equality legislation than on the wider population, e.g. by making it more difficult in practice for a specific group to access the technology;

- could have any adverse impact on people with a particular disability or disabilities.

Please tell us what evidence should be obtained to enable the Committee to identify and consider such impacts.

Do you consider ERC1671 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 ERC1671 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.

To help NICE prioritise topics for additional adoption support, do you consider that there will be any barriers to adoption of this technology into practice? If yes, please describe briefly.

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/article/pmg19/chapter/1-Introduction).

References

1. Cancer Research UK Brain, other CNS and intracranial tumours incidence statistics. Accessed July 2019.

2. Patient UK. Gliomas and glioblastoma multiforme. Accessed July 2019.

3. Cancer Research UK Brain, other CNS and intracranial tumours survival statistics. Accessed July 2019.