NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Proposed Health Technology Appraisal

Fremanezumab for preventing migraine

Draft scope (pre-referral)

Draft remit/appraisal objective

To appraise the clinical and cost effectiveness of fremanezumab within its marketing authorisation for preventing migraine.

Background

Migraine is primarily a headache disorder manifesting as recurring attacks usually lasting for 4–72 hours involving throbbing head pain of moderate to severe intensity. It is often accompanied by nausea, sometimes vomiting, sensitivity to light, sensitivity to sound, and/or other sensory stimuli. Migraine can have significant impacts on quality of life and ability to carry out normal activities. Some people can have warning symptoms called an aura, before the start of a headache. Factors that can trigger attacks in people susceptible to migraines include stress, change in sleep pattern, overtiredness, menstruation, consumption of caffeine or alcohol, climatic conditions and use of visual display units.

Migraine is on a continuum, and it is possible for people to move between episodic and chronic migraine:

- Episodic migraine is defined as the occurrence of headaches on less than 15 days per month.

- Chronic migraine is defined by the International Headache Society as the occurrence of headaches on 15 days or more per month for at least 3 months where the attacks fulfil criteria for pain and associated symptoms of migraine without aura on at least 8 days per month for at least 3 months, where there is no medication overuse, and where the headaches are not attributable to another causative disorder. A person must previously have had at least 5 attacks fulfilling the International Headache Society's criteria for migraine with or without aura.

It is estimated that there are 190,000 migraine attacks experienced every day in England.[1] Prevalence has been reported to be 5–25% in women and 2–10% in men.[1]

There are 3 broad approaches to managing migraine: lifestyle and trigger management, acute treatments and preventive (prophylactic) treatments. Preventive treatment of migraines can take many forms including nutritional supplements, lifestyle alterations such as increased exercise and avoidance of migraine triggers, and prophylactic migraine medications. It can also include medications, which are generally considered for people who have at

least 2 attacks a month, whose attacks are increasing in frequency, whose attacks cause significant disability despite abortive treatment, or who cannot take abortive treatment for migraine attacks. NICE clinical guideline 150 recommends offering topiramate or propranolol, and considering amitriptyline, for preventing migraine according to the person's preference, comorbidities and risk of adverse events.

NICE technology appraisal guidance 260 recommends botulinum toxin type A for the prophylaxis of headaches in adults with chronic migraine that has not responded to at least 3 prior pharmacological prophylaxis therapies and whose condition is appropriately managed for medication overuse.

The technology

Fremanezumab (brand name unknown, Teva Pharmaceuticals) is a fully human monoclonal antibody that inhibits the action of calcitonin gene-related peptide (CGRP) which is believed to transmit signals that can cause severe pain. Fremanezumab is administered by subcutaneous injection.

Fremanezumab does not currently have a marketing authorisation in the UK for preventing chronic and episodic migraine. It is being studied in clinical trials, compared with placebo, in adults with chronic or episodic migraine.

Intervention(s)	Fremanezumab
Population(s)	Adults with chronic or episodic migraine
Comparators	Established clinical management for migraine prevention without fremanezumab, including: • Oral preventive treatments (such as topiramate, propranolol, amitriptyline) • Botulinum toxin type A • Erenumab (subject to ongoing NICE appraisal) • Best supportive care
Outcomes	The outcome measures to be considered include: • frequency of headache days per month • frequency of migraine days per month • severity of headaches and migraines • number of cumulative hours of headache or migraine on headache or migraine days • reduction in acute pharmacological medication • 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. If the technology is likely to provide similar or greater health benefits at similar or lower cost than technologies recommended in published NICE technology appraisal guidance for the same indication, a cost-comparison may be carried out. 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	If the evidence allows, the following subgroups will be considered: • people with chronic or episodic migraine • subgroups defined by the number of previous prophylactic treatments • subgroups defined by the frequency of episodic migraine. 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: Botulinum toxin type A for the prevention of headaches in adults with chronic migraine (2012). NICE technology appraisal 260. On static list. Appraisals in development: Erenumab for preventing migraine [ID1188]. Publication date to be confirmed. Related Guidelines: Headaches in over 12s: diagnosis and management (2012). NICE guideline CG150. Review date 2018. Related Interventional Procedures: Transcutaneous stimulation of the cervical branch of the vagus nerve for cluster headache and migraine (2016)

	NICE interventional procedures guidance 552. Implantation of a sphenopalatine ganglion stimulation device for chronic cluster headache (2015) NICE interventional procedures guidance 527. Transcranial magnetic stimulation for treating and preventing migraine (2014) NICE interventional procedures guidance 477. Occipital nerve stimulation for intractable chronic migraine (2013) NICE interventional procedures guidance 452. Percutaneous closure of patent foramen ovale for recurrent migraine (2010) NICE interventional procedures guidance 370. Related Quality Standards: Headaches in over 12s (2013). NICE quality standard 42. Related NICE Pathways: Headaches (2017) NICE Pathway.
Related National Policy	NHS England (2015) Occipital Nerve Stimulation for Adults with Intractable Chronic Migraines and Medically Refractory Chronic Cluster Headaches Clinical Commissioning Policy Reference D08/P/c NHS England (2013) Specialised services for pain management (Adult). Reference D08/S/a. Department of Health, NHS Outcomes Framework 2016-2017 (published 2016): Domain 2.

Questions for consultation

How is fremanezumab expected to be used in clinical practice?

- Would it be used upfront as an alternative to oral preventive treatments or when there is an inadequate response to oral preventive treatments?

Have all relevant comparators for fremanezumab been included in the scope?

- Which treatments are considered to be established clinical practice in the NHS for preventing chronic and episodic migraine?

Are the outcomes listed appropriate?

Are the subgroups suggested in 'other considerations appropriate? Are there any other subgroups of people in whom fremanezumab is expected to be

more clinically effective and cost effective or other groups that should be examined separately?

Where do you consider fremanezumab will fit into the existing NICE pathway, Headaches?

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 fremanezumab 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 fremanezumab 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 fremanezumab 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).

NICE has published an addendum to its guide to the methods of technology appraisal (available at https://www.nice.org.uk/Media/Default/About/what-we-do/NICE-guidance/NICE-technology-appraisals/methods-guide-addendum-cost-comparison.pdf), which states the methods to be used where a cost comparison case is made.

- Would it be appropriate to use the cost comparison methodology for this topic?
- Is the new technology likely to be similar in its clinical efficacy and resource use to any of the comparators?
- Is the primary outcome that was measured in the trial or used to drive the model for the comparator(s) still clinically relevant?
- Is there any substantial new evidence for the comparator technologies that has not been considered? Are there any important ongoing trials reporting in the next year?

References

1. Steiner TJ et al. The prevalence and disability burden of adult migraine in England and their relationships to age, gender and ethnicity. Cephalalgia. 2003;23(7):519-527.