The NICE Cost Comparison Pathway - How Much Evidence is Required to Meet the Criteria?

Aminata Thiam[1], Katie Noon[1], Josh Micallef[2] and Alex Porteous[2]

[1]Bristol-Myers Squibb, Uxbridge, UK; [2]Costello Medical, London, UK

Objective

- To review fast-track cost-comparison appraisals submitted to the National Institute for Health and Care Excellence in order to:
  - Investigate the use and acceptance of evidence provided to support of the fast-track cost-comparison criteria;
  - Evaluate the success of the fast-track cost-comparison appraisal pathway in providing quicker access for patients to the most cost-effective drugs.

Background

- The National Institute for Health and Care Excellence (NICE) proposes a fast-track cost-comparison appraisal pathway (FTA) as an expedited reimbursement route for health technologies associated with similar or greater health benefits, at similar or lower costs, than technologies already recommended for the same indication.[1]
- This FTA pathway aims to grant quicker access for patients to the most cost-effective new treatments, by providing a final determination in 32 weeks, 8 weeks less than for a conventional single technology appraisal (STA).
- However, the FTA pathway has only been utilised in a limited number of appraisals. We explored how the case for an FTA has been previously justified, to investigate how NICE and manufacturers may be able to continue to use this pathway in the future to improve capacity and overcome resource constraints, whilst also providing earlier access to medicines.

Methods

- NICE FTAs from April 2017 (FTA pathway launch) until June 2022 with published committee papers were identified. Details of the evidence provided to justify the cost-comparison criteria and critique received by External Assessment Groups (EAGs) and NICE committees were extracted.
- For each appraisal, a pre-formatted extraction grid was used to capture detailed information regarding the intervention and selected comparators, including the mechanism of action, evidence base available and justification to support the cost-comparison criteria.

Results

- A summary of the key findings is presented in **Figure 1**.
- Eleven FTAs were identified, spanning several therapeutic areas: plaque psoriasis (n=4), ophthalmology (n=4) and arthritis (n=3), covering 8 indications **(Table 1)**. Multiple FTAs had been conducted in moderate to severe plaque psoriasis (n=3) and wet age-related macular degeneration (n=2).
- In 4/11 FTAs, a subset of comparators were selected by the company from the final scope, based on similarities with the intervention in terms of efficacy, market share and positioning within UK clinical practice; these comparators were ultimately considered appropriate by the EAG and NICE. Overall, one or more of the comparators had been previously appraised through either the FTA or the multiple technology appraisal (MTA) process in 7/11 of the FTAs.
- Head-to-head evidence was available between the intervention and at least one comparator in 6 FTAs, while all FTAs presented indirect treatment comparisons (ITCs) **(Figure 1)**.
  - In 3/5 FTAs without head-to-head evidence, the EAG/Committee raised concerns regarding uncertainty in the indirect comparisons informing the case for similar benefits **(Table 2)**. In all cases, the intervention was recommended.
- In 5/11 appraisals, statistically significant improvements in at least one outcome were reported between the intervention and comparators. In the remaining appraisals, no statistically significant differences between treatments were reported.
- 10/11 FTAs provided justification to address the requirement for the selected comparator(s) to hold a significant market share. In 2 of them, the selected comparator was justified on the basis of an expected increase in market share based on what is seen in other countries.
- The mean time from the invitation to submit to publication of guidance was 43 weeks (range: 32–75) across all FTAs identified; 11 weeks longer than the estimated FTA timeline (32 weeks). In 3/11 FTAs, guidance was published within 33 weeks.

Table 1. Summary of FTA identified

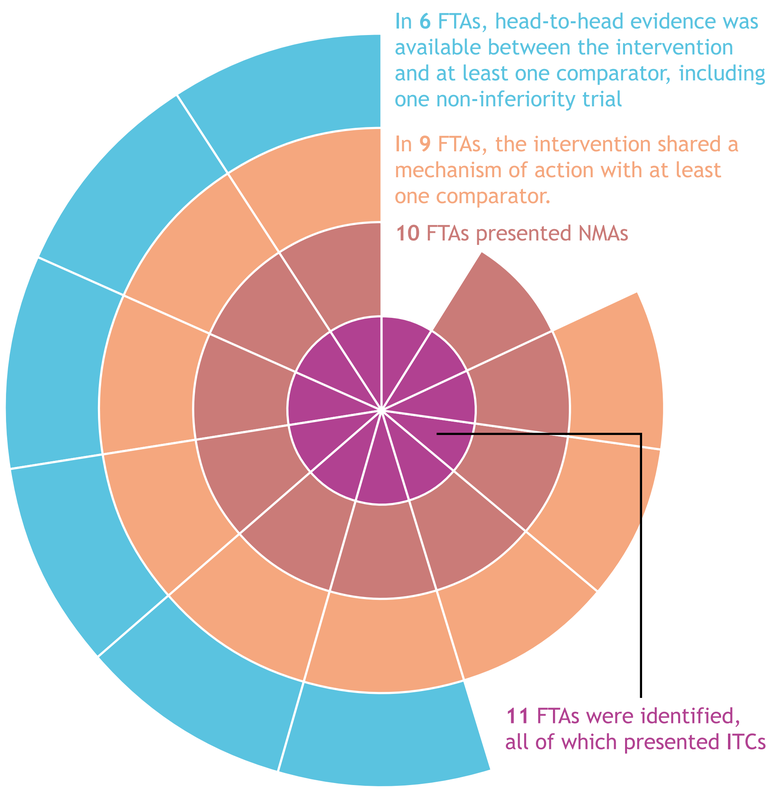
ID	Publication Date	Therapeutic Area	Indication	Intervention	Selected Comparators
TA723	Sep-21	Dermatology	Moderate to severe plaque psoriasis	Bimekizumab	Risankizumab, ixekizumab, brodalumab
TA521	Jun-18	Dermatology	Moderate to severe plaque psoriasis	Guselkumab	Adalimumab, ustekinumab
TA596	Aug-19	Dermatology	Moderate to severe plaque psoriasis	Risankizumab	Guselkumab
TA734	Oct-21	Dermatology	Moderate to severe plaque psoriasis in children and young people	Secukinumab	Etanercept, ustekinumab, adalimumab
TA735	Oct-21	Immunology/Rheumatology	Juvenile idiopathic arthritis	Tofacitinib	Adalimumab, tocilizumab
TA497	Jan-18	Immunology/Rheumatology	Non-radiographic axial spondylarthritis	Golimumab	Adalimumab, etanercept, certolizumab pegol
TA803	Jul-22	Immunology/Rheumatology	Psoriatic arthritis	Risankizumab	Guselkumab
TA486	Nov-17	Ophthalmology	Choroidal neovascularisation	Aflibercept	Ranibizumab
TA799	Jun-22	Ophthalmology	Diabetic macular oedema	Faricimab	Aflibercept, rabinizumab
TA672	Feb-21	Ophthalmology	Wet age-related macular degeneration	Brolucizumab	Aflibercept, rabinizumab
TA800	Jun-22	Ophthalmology	Wet age-related macular degeneration	Faricimab	Aflibercept, rabinizumab

Table 2. Concerns raised regarding uncertainty in indirect comparisons for FTAs without head-to-head evidence

ID	Appraisal Title	Details of the Indirect Comparison	EAG Concerns Raised	Committee Concerns Raised
TA486	Aflibercept for treating choroidal neovascularisation	• Network meta-analysis including data from 3 randomised controlled trials to compare aflibercept with ranibizumab	N/A	• One of the included trials was relatively old and included neither aflibercept nor ranibizumab, serving only as a link in the network • The indirect comparison based on small patient numbers
TA735	Tofacitinib for treating juvenile idiopathic arthritis	• Bucher indirect treatment comparisons between tofacitinib and adalimumab or tocilizumab	• There was clinical heterogeneity between the few included trials, and confidence intervals were wide for all comparisons • Similarly uncertain results in a previous appraisal were considered adequate to demonstrate similar efficacy	N/A
TA803	Risankizumab for previously treated active psoriatic arthritis	• A series of network meta-analyses comparing risankizumab with guselkumab • The NMAs included 10 trials with a wide range of treatments • A supportive anchored MAIC adjusting for differences in trial populations was also conducted. A Bucher ITC was also conducted before matching	• The lack of head-to-head trials as a limitation, as well as a lack of data for certain outcomes • Concerns about the generalisability of the treatment effect and safety of risankizumab in a broader population to the specific subgroup relevant to this appraisal • The credible intervals were wide indicating large uncertainty, and that the lack of significant differences does not imply clinical equivalence	• The committee recalled that when appraising guselkumab it had accepted the assumption that efficacy in the broader population was generalisable to the subgroup of relevance • The committee noted the uncertainty due to wide credible intervals, but agreed that effectiveness of risankizumab and guselkumab is likely to be comparable

EAG: External Assessment Group; MAIC: matching-adjusted indirect comparison; NMA: network meta-analysis; TA: technology appraisal.

Figure 1. Summary of FTA identified



FTA: fast-track appraisal; ITC: indirect treatment comparison; NMA: network meta-analysis.

Conclusion

- FTA uptake is currently limited to a few therapeutic and disease areas, typically in cases where the intervention shared a mechanism of action with at least one comparator.
  - These interventions are often used in other therapeutic areas, such as rheumatoid arthritis and ulcerative colitis, which may benefit from future FTA approaches.
- Head-to-head trials and NMAs were most frequently presented together to demonstrate similar or greater efficacy for the intervention, but the case for similar benefits was considered more uncertain when relying solely on indirect evidence.
- Lessons from previous FTAs may be valuable to inform how NICE can expand its capacity and utilise this pathway through the new NICE PATT (Proportional Approach to Technology Appraisals).

References

1. National Institute for Health and Care Excellence (NICE). Technology appraisal process. Available at: https://www.nice.org.uk/about/what-we-do/our-programmes/nice-guidance/nice-technology-appraisal-guidance/process. [Last accessed: 14th September 2022].

Acknowledgements

This study was funded by Bristol Myers Squibb. The authors thank Shiying He and Noa Chapman, Costello Medical, for their editorial assistance, and Fay Angel and Eve Gibbons, Costello Medical for the graphic design assistance in the preparation of this poster.

Conflicts of Interest

Aminata Thiam and Katie Noon are employees and shareholders of Bristol Myers Squibb.

Josh Micallef and Alex Porteous are employees of Costello Medical Ltd., a company which received funding from Bristol Myers Squibb to conduct this study.

Presented at ISPOR Europe 2022; November 6-9, 2022; Vienna, Austria, and virtual

Email: Aminata.Thiam@bms.com