A Review of Cost Comparisons Submitted to NICE Since the Introduction of the Proportional Approach to Technology Appraisal

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Introduction

- In February 2022, the National Institute for Health and Care Excellence (NICE) launched a new proportionate approach to technology appraisals (PATT) that recognised that not all technology appraisals (TAs) need the full TA process.[1]
- As part of the PATT, NICE introduced a streamlined approach to cost comparisons, replacing the fast-track appraisals process, and shortening timelines by 45%, to 23 weeks.[1]
- Evaluations that are suitable for cost comparison are identified by NICE during the scoping stage; input from patient experts, clinicians, and the company are proportional to what is needed to support a recommendation; and recommendations are made by a subset of the committee outside of a formal meeting.[1]

Objective

The aim of this study was to investigate trends in the use of cost comparisons since introduction of the PATT.

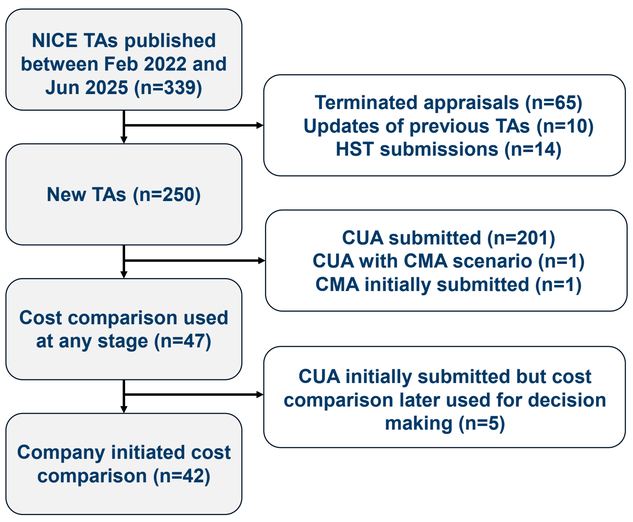
Methods

- NICE guidance was searched for TAs that were published from February 2022 through June 2025.
- Terminated appraisals, highly specialised technology (HST) submissions, and updates of TAs published in previous years were initially excluded.
- The document history was searched for use of cost comparisons at any stage in the development process.
- TAs were selected for inclusion if a cost comparison was submitted in the initial manufacturer's submission.

Results

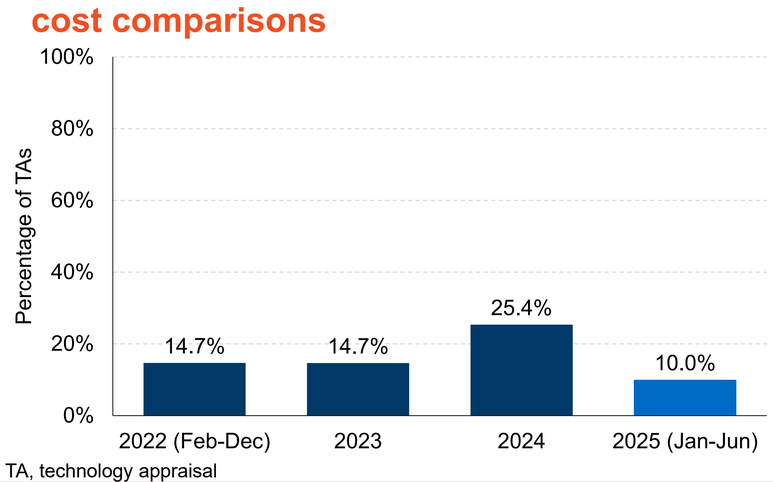
- Cost comparisons were included in 42 (17%) of the 250 new TA submissions that were identified. This figure rose to 47 (19%) when including TAs where a cost comparison was used at any stage in the decision making (**Figure 1**).
- The proportion of TAs that were submitted with a cost comparison was consistent in 2022 and 2023 at 14.7%, and rose sharply to 25.4% in 2024. In the first-half of 2025, the figure was 10.0% (**Figure 2**).

Figure 1. Summary of cost comparison searches



CMA, cost-minimisation analysis; CUA, cost-utility analysis; HST, highly specialised technology; NICE, National Institute for Health and Care Excellence; TA, technology appraisal

Figure 2. Proportion of TAs that included cost comparisons

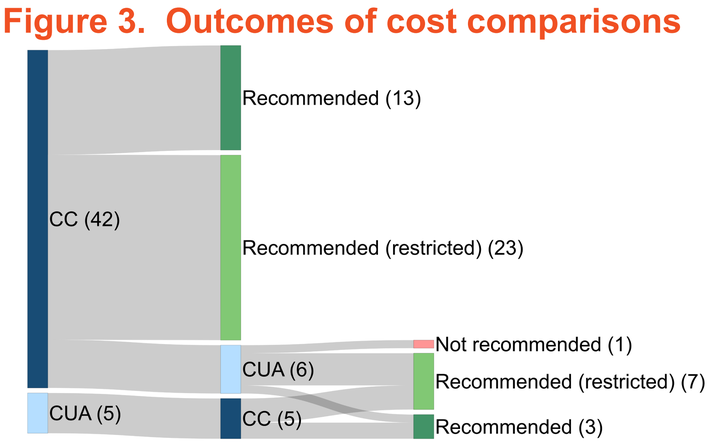


TA, technology appraisal

Results

- A cost comparison was accepted, and the new technology received a positive recommendation in 86% (n=36/42) of identified TAs; 23 were approved in a narrower population than the marketing authorisation.
- Of the 6 TAs where a cost comparison was not accepted, 5 were recommended after a cost-utility analysis (CUA) (4 restricted) and 1 was not recommended. Uncertainty or lack of evidence of equivalence was key reason cost comparisons were not accepted (n=5/6; **Table**).
- An additional 5 TAs were identified where the company initially submitted a CUA but were later required to submit a cost comparison to achieve a positive recommendation (**Figure 3**).

Figure 3. Outcomes of cost comparisons



CC, cost comparison; CUA, cost-utility analysis

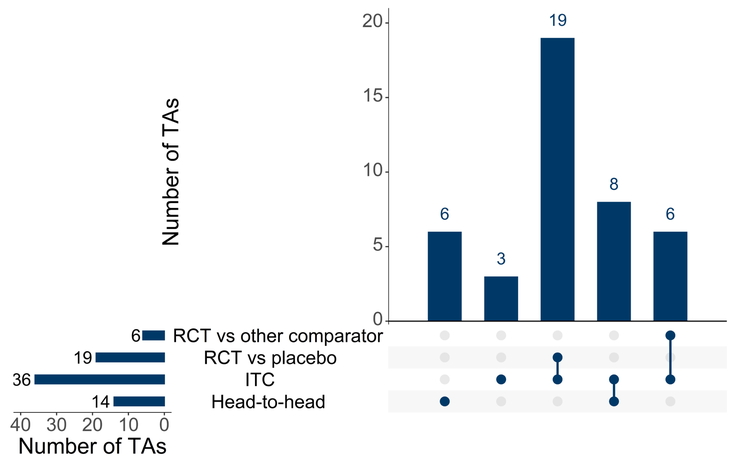
Table. A summary of the TAs where the initial modelling approach was not accepted

TA	Title	Reason for alternative approach	Outcome
Company submitted cost comparison and CUA was required			
1046	Zolbetuximab with chemotherapy for untreated claudin-18.2-positive HER2-negative unresectable advanced gastric or gastro-oesophageal junction adenocarcinoma	Company submitted CC in scenario for patients with PD-L1 mutations. Rejected by NICE committee due to **lack of evidence that treatment had similar or greater effectiveness**. Later ICER estimates were in south-west quadrant of cost-effectiveness plane.	✗
996	Linzagolix for moderate to severe symptoms of uterine fibroids	TA covered 3 populations; 2 were supported by a CC. NICE committee requested CUAs due to **lack of evidence of similar health benefits**.	✓
973	Atogepant for migraine	Company submission dossier included a CUA; however, EAG report discusses a CC process at an earlier stage. *No further detail of CC identified.*	✓
849	Cabozantinib for previously treated advanced hepatocellular carcinoma	CC failed scrutiny stage due to **uncertainties about similar health effects** to comparator; ERG critiqued the assumption of equivalent PFS, OS, adverse events, resource use, and relative dose intensity. A CUA was recommended.	✓
821	Avalglucosidase alfa for Pompe disease	ERG considered **phase 2 trial evidence too limited to justify assumption of clinical equivalence** to alglucosidase alfa. ERG scenario analysis suggested possible survival benefit for avalglucosidase alfa, impacting cost effectiveness.	✓
773	Empagliflozin for chronic heart failure with reduced ejection fraction	NICE committee considered that a CC against dapagliflozin was reasonable; ERG disagreed because **assumption of equal effectiveness was based on only 2 trials** and ignored uncertainty. ERG recommended using results from Bucher ITC in cost-utility analysis. CUA conducted, showing a marginal QALY difference. Committee satisfied that effectiveness was similar and costs were identical.	✓
Company submitted CUA and cost comparison was required			
1071	Atezolizumab for adjuvant treatment of resected non-small-cell lung cancer	CUA vs BSC presented in the company submission dossier; CC vs pembrolizumab mentioned in Final Draft Guidance. During clarification questions, EAG stated that **pembrolizumab was the most relevant comparator** and ran a scenario CC.	✓
1050	Fenfluramine for seizures associated with Lennox–Gastaut syndrome in people 2 years and over	Cost comparison approach used at 3rd committee meeting due to **high level of uncertainty in cost-effectiveness analysis** noted by NICE committee.	✓
1009	Latanoprost–netarsudil for previously treated primary open-angle glaucoma or ocular hypertension	NICE committee considered lifetime **CUA was unsuitable for capturing disease progression**. EAG considered a CC approach with 12-month time horizon reduced uncertainty with extrapolating effectiveness and assuming no significant differences in clinical efficacy allowed focus on short-term costs, which drove cost-effectiveness.	✓
929	Empagliflozin for chronic heart failure with preserved or mildly reduced ejection fraction	Not recommended following CUA due to **uncertainties in survival modelling and whether model outcomes align with clinical trial**. ICER >£20K per QALY gained with committee's preferred assumptions. CC submitted after appeal.	✓
888	Risankizumab previously treated moderately to severely active Crohn's disease	CUA not suitable for decision making because it **did not reflect current treatment pathway**. Due to minimal QALY gain, NICE committee suggested a CC.	✓

Key: ✓ Recommended ✓ Recommended (restricted) ✗ Not recommended
BSC, best supportive care; CC, cost comparison; CUA, cost-utility analysis; EAG, External Assessment Group; ERG, Evidence Review Group; HER-2, human epidermal growth factor receptor 2; ICER, incremental cost-effectiveness ratio; ITC, indirect treatment comparison; NICE, National Institute of Health and Care Excellence; OS, overall survival; PD-L1, programmed death-ligand 1; PFS, progression-free survival; QALY, quality-adjusted life year; TA, technology appraisal

- Head-to-head data against a comparator was included in only 33% (n=14/42) of submissions, 8 of which were accompanied by an indirect treatment comparison (ITC) (**Figure 4**).
- An ITC was required in 86% (n=36/42) to support evidence of clinical equivalence. An ITC was carried out using single-arm data in 3 TAs. In 25 TAs an ITC was conducted using data from placebo-controlled trials or randomised controlled trials against comparators not included in the TA (**Figure 4**).

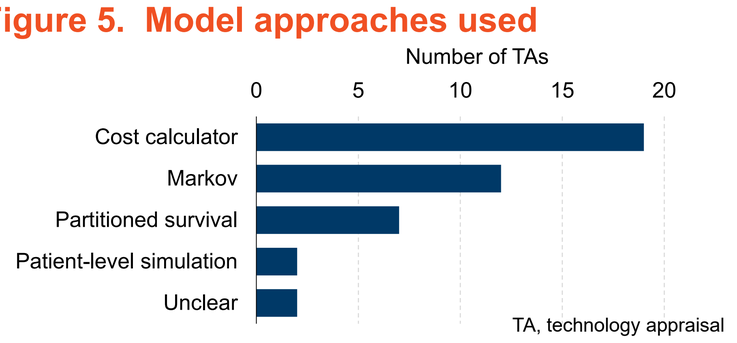
Figure 4. Clinical evidence supporting TAs



ITC, indirect treatment comparison; RCT, randomised controlled trial; TA, technology appraisal

- A simple costing approach was used in 48% (n=19/40; 2 unclear) of cost comparisons.
- The remaining submissions modelled disease progression to estimate costs using a cohort model (Markov or partitioned survival), or patient-level simulation (**Figure 5**).

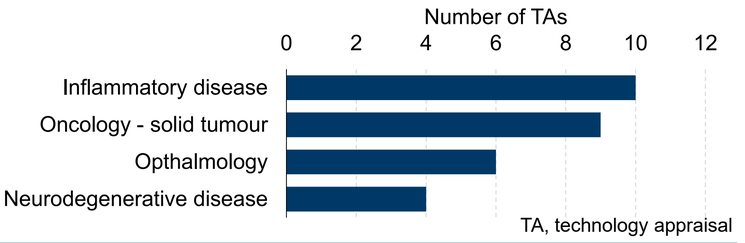
Figure 5. Model approaches used



TA, technology appraisal

- Inflammatory disease was the most common disease area. This included ulcerative colitis, psoriatic arthritis, and axial spondyloarthritis where several treatments with similar efficacy are available.
- This was followed by solid tumours where there are numerous treatment options with the same or similar mechanism of action (**Figure 6**).

Figure 6. Most common disease areas



TA, technology appraisal

Limitations

- Complete information on the cost comparison was sometimes missing, particularly if a CUA was required or a cost comparison was submitted at a later stage.

Conclusions

- **Cost comparisons have become a common route for successful reimbursement (1 in 6)**
- **ITCs were most frequently used to support clinical equivalency**
- **Cost comparisons were common in disease areas with multiple similar treatment options or where indications are treated with the same drug class**

References

1. NICE. Proportionate approach to technology appraisals: final report 2022–23. April 2023

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