The cost-effectiveness of an AI stroke imaging tool (B360S) - Dynamic Report

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2025 Analysis: 2023 Values

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1 Introduction

This report presents a cost-effectiveness analysis of a Brainomix 360 Stroke (B360S) AI software decision-support tool in England NHS hospitals.

For more detailed information on the model structure please refer to the associated publication: [TO BE ADDED ONCE ACCEPTED]

2 Notes

- Displays precomputed results from previously run analyses; no models are re-run in the compilation of this report.
- Use **Knit → Knit with Parameters...** to choose Level and (if needed) Hospital/ISDN from drop-downs.

3 Selection

Level: National
Scope: National

4 Results

4.1 Process / Procedure numbers

In Table 1 below, unit costs represent the direct cost of performing the procedures, whilst long term costs and QALYs are the per-procedure impacts modelled over time, based on changing distributions of patients on mRS scores. Values are rounded to the nearest value, and as such multiplying these may be different to the values computed with raw values and presented in Table 2. In Table 2, the cost of implementing the intervention is also included in total intervention costs.

Table 1: Process / Procedure numbers – Part 1

procedure	intervention (numbers)	standard (numbers)	unit cost (£)	long-term cost (£)	long-term quality of life (QALYs)
IVT	9,150	8,684	2,113	-4,118	1
MT	2,593	1,621	9,140	-18,606	1
IVT + MT	1,686	1,373	11,252	-18,606	1
NCCT + CTA	60,406	60,406	156	0	0
NCCT + CTA + CTP	20,736	20,736	243	0	0
NCCT + CTA + CTP + MRI	423	423	418	0	0

Table 2: Process / Procedure numbers – Part 2

procedure	total intervention costs (£)	total standard costs (£)	total intervention QALYs	total standard QALYs
IVT	-18,346,000	-17,411,420	5,259	4,991
MT	-24,540,925	-15,341,039	2,617	1,636
IVT + MT	-12,400,738	-10,099,439	1,702	1,387
NCCT + CTA	9,423,348	9,423,348	0	0
NCCT + CTA + CTP	5,038,812	5,038,812	0	0
NCCT + CTA + CTP + MRI	176,890	176,890	0	0

4.2 Total Costs and QALYs

Table 3: Total costs and QALYs

total intervention costs (£)	total standard costs (£)	total intervention QALYs	total standard QALYs
-37,301,513	-28,212,848	9,578	8,014

4.3 Incremental results

Note that net monetary benefit (NMB) is calculated as :

$$NMB = (\text{Incremental QALYs} \times \text{Willingness-to-pay}) - \text{Incremental Costs}$$

We use a willingness-to-pay threshold of £20,000 per QALY gained, as recommended by NICE.

Table 4: Incremental results (intervention vs standard)

inc.cost	Incremental QALYs	Net Monetary Benefit (£)
-9,088,665	1,565	40,387,809