

# LIVERPOOL REVIEWS AND IMPLEMENTATION GROUP (LRiG)

Clopidogrel and modified-release  
dipyridamole for the prevention of  
occlusive vascular events (review of  
Technology Appraisal No. 90)

## ADDENDUM 3

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DOES NOT CONTAIN IN CONFIDENCE DATA



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LIVERPOOL  
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GROUP

## ADDENDUM 3: REVISED PROBABILISTIC RESULTS

### Introduction

Addendum 2 described additional analyses undertaken with the Assessment Group’s model to test the stability of cost-effectiveness results to the sample size of patients generated in the model. The results obtained proved to be stable and consistent, except in the case of the ‘IS only’ patient population when clopidogrel was assumed to be priced at the current NHS Drug Tariff price for generic clopidogrel. In this case it proved necessary to extend the model sample size to 10,000 patients to obtain reliable results. The effect of this modification was to alter the most cost-effective treatment strategy from MRD+ASA first-line / clopidogrel second-line / ASA third-line to clopidogrel first-line / MRD+ASA second-line / ASA third-line, based on deterministic use of the model.

This Addendum provides additional results describing the outcome of the probabilistic sensitivity analysis carried out on the ‘IS only’ population using the extended sample of 10,000 patients and generic clopidogrel pricing. Due to the excessive computational time involved, these results relate only to the scenario in which TA90 guidance is not applied in the model.

### Probabilistic results showing effect of parameter uncertainty

In Table A3-1 the calculations identifying scenarios lying on the cost-effectiveness frontier are shown, leading to the final preferred scenario in which clopidogrel is used as first-line treatment, followed respectively by MRD+ASA and ASA, with a stepwise ICER of just over £10,000 per QALY gained.

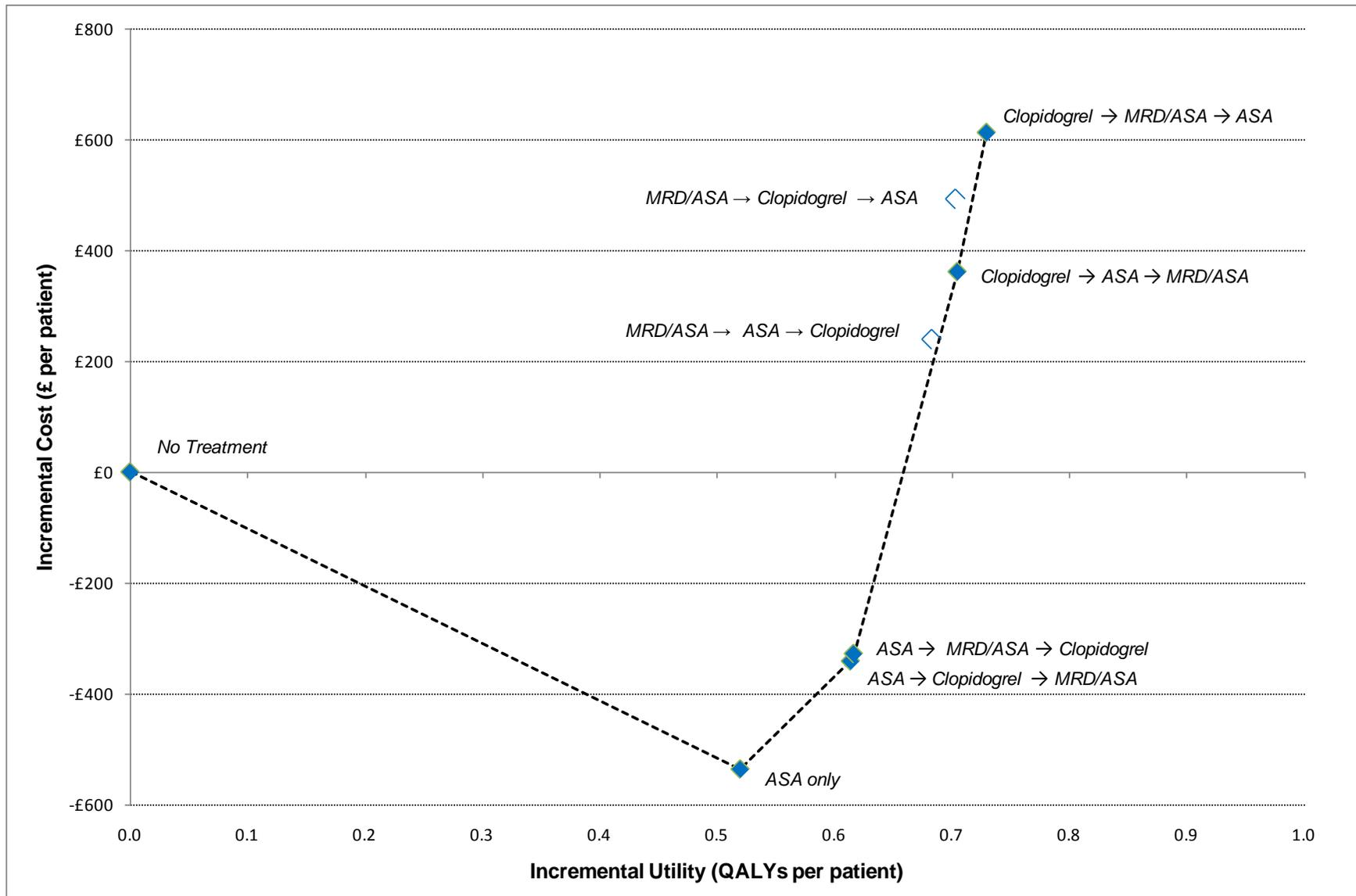
**Table A3-1 Probabilistic results from AG model for treatment of the ‘IS only’ population**

CLOP price	TA90 status	Strategy			Costs	Utility	Step 1	Step 2	Step 3	Step 4	Step 5
		Tx 1	Tx 2	Tx 3	Total	QALYs	ICER	ICER	ICER	ICER	ICER
Generic	Not used	None	None	None	£34,825	7.068					
		ASA	None	None	£34,289	7.588	<b>-£1,033</b>				
		ASA	Clop	M+A	£34,484	7.682	-£557	<b>£2,077</b>			
		ASA	M+A	Clop	£34,497	7.684	-£532	£2,162	<b>£5,227</b>		
		Clop	ASA	M+A	£35,187	7.773	£513	£4,858	£7,729	<b>£7,803</b>	
		Clop	M+A	ASA	£35,438	7.798	£840	£5,481	£8,240	£8,309	<b>£10,107</b>
		M+A	Clop	ASA	£35,318	7.771	£701	£5,610	£9,314	£9,436	Dom
		M+A	ASA	Clop	£35,064	7.751	£3500	£4,578	£8,402	£8,526	Dom

IC, IQ= incremental cost & QALYs; ICER= incremental cost-effectiveness ratio; M+A= MRD+ASA; Dom=dominated; ICER in **bold** = strategy on cost-effectiveness frontier. Dominated 1-step and 2-step strategies have been omitted.

Figure A3-1 indicates that the MRD+ASA first-line scenarios lie very close to the frontier, but are consistently slightly less effective than the corresponding clopidogrel first-line scenarios.

The cost-effectiveness acceptability curves (Figure A3-2) indicate that only three scenarios appear to warrant consideration as ‘most cost-effective’: ‘ASA only’ for willingness to pay (WTP) threshold of less than £2,300/QALY, ASA -> clopidogrel -> MRD+ASA if WTP is less than £8,300/QALY, and clopidogrel -> MRD+ASA -> ASA for WTP greater than £8,300/QALY. This last scenario demonstrates a probability of being most cost-effective of 68% (WTP = £20,000/QALY) or 73% (WTP = £30,000/QALY)



**Figure A3-1 Cost-effectiveness plane for IS only population (generic clopidogrel price, TA90 guidance not applied)**

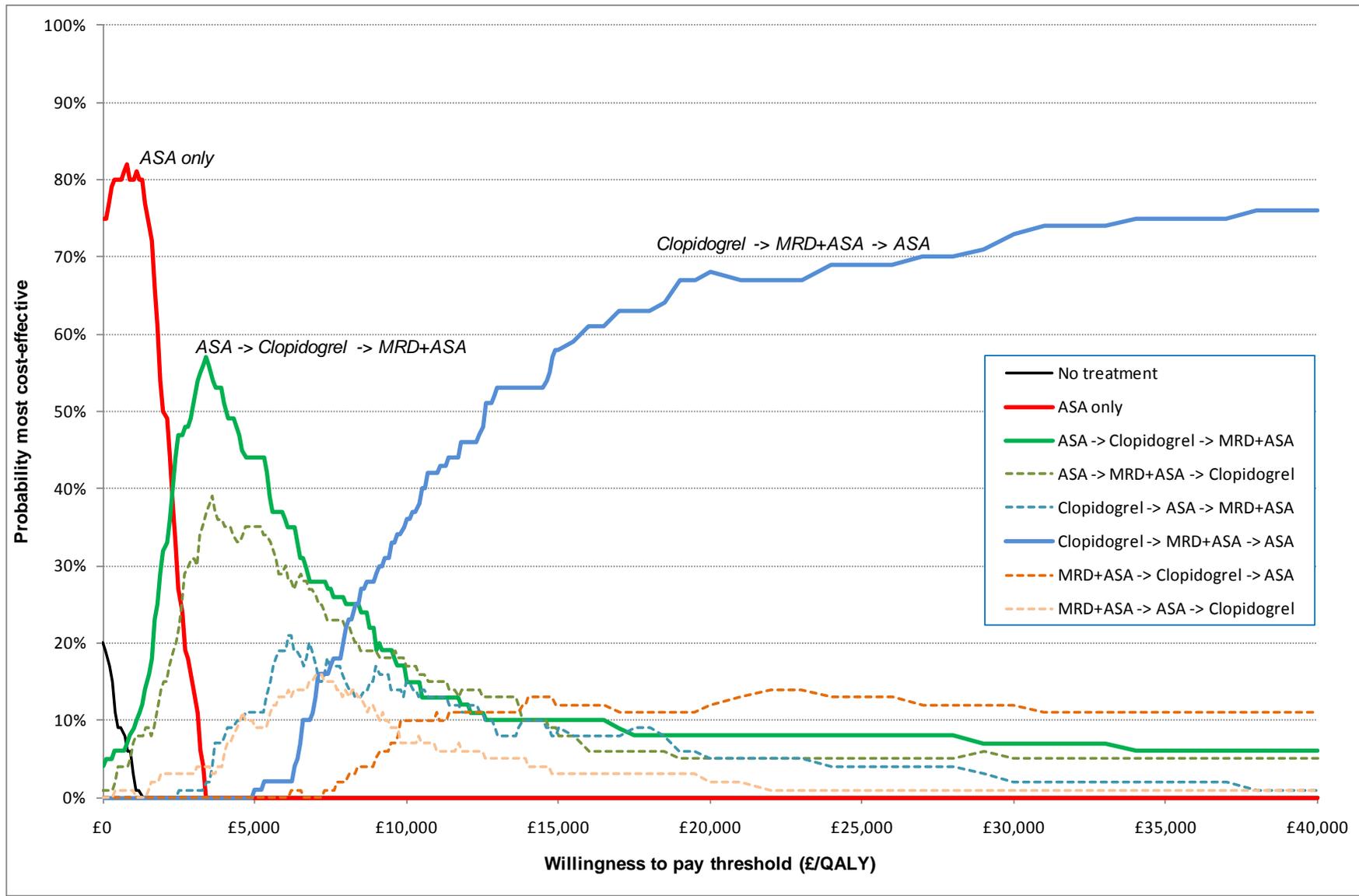
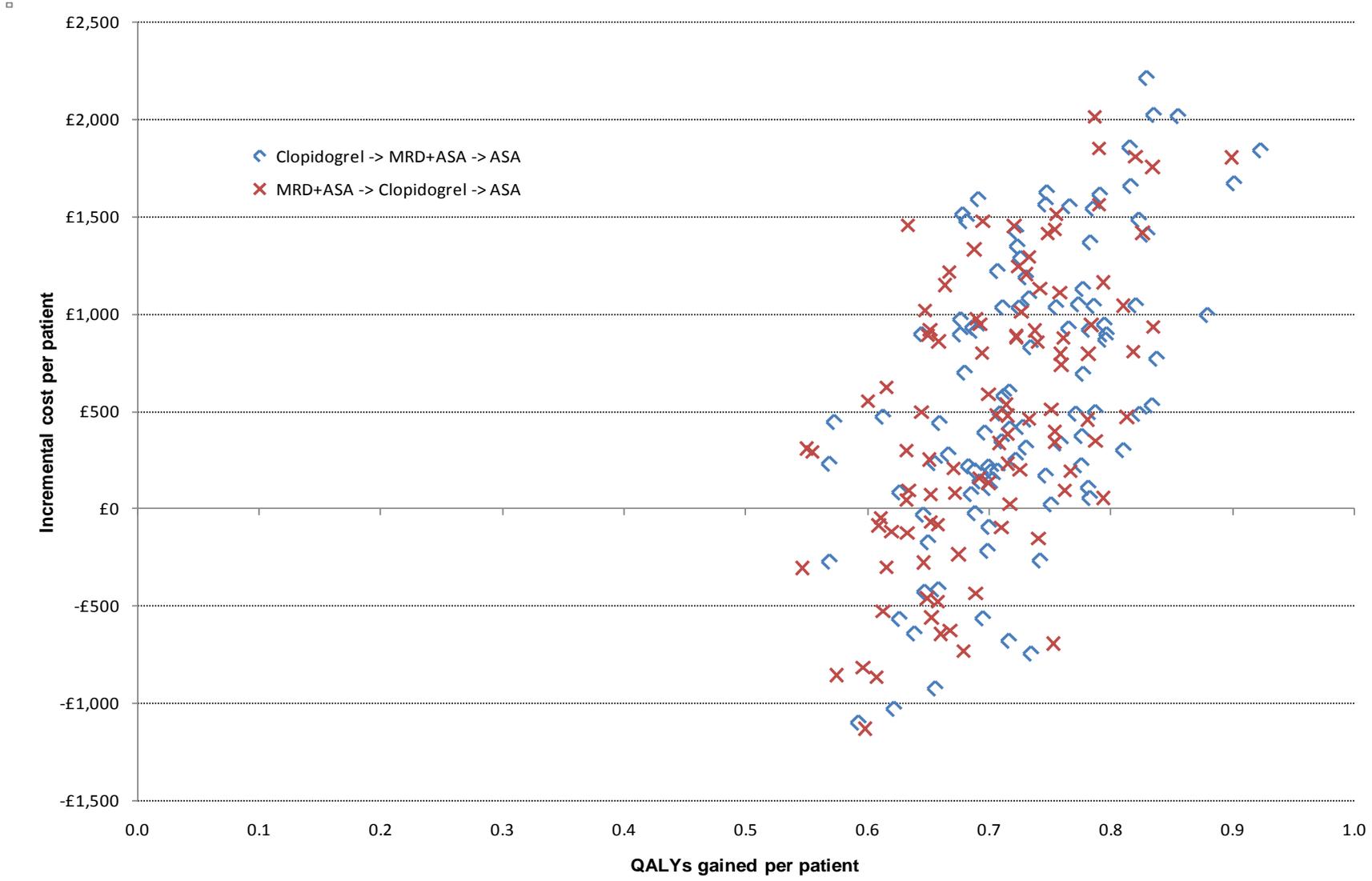


Figure A3-2 Cost-effectiveness acceptability curves for IS only population (generic clopidogrel price, TA90 guidance not applied)



**Figure A3-3 PSA scatterplot for IS only population (generic clopidogrel price, TA90 guidance not applied) – comparing two first-line therapies**

The degree of difference between the PSA results for the clopidogrel and MRD+ASA scenarios can be gauged from the scatterplot shown in Figure A3-3. Although there is a consistent indication of greater effectiveness for use of generic clopidogrel as first-line therapy, the differences in both costs and effectiveness are small.

### ***Summary of probabilistic analysis***

The PSA findings confirm the revised deterministic results reported in Addendum 2 indicating that when a larger patient sample is used to achieve stability, the use of generic clopidogrel leads to first-line clopidogrel being more cost-effective than first-line MRD+ASA for the 'IS only' population.