

QAngio XA 3D/Quantitative Flow Ratio (QFR) and CAAS vFFR imaging software for assessing coronary obstructions

Addendum to the EAG Report

Produced by Centre for Reviews and Dissemination (CRD) and Centre for Health Economics (CHE)

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Additional analyses using updated QAngio QFR price information

This addendum reports the results of additional analyses performed by the EAG to examine the impact of the new price information for QAngio QFR proposed by the sponsor (Medis Medical Imaging) in response to the Diagnostics Consultation Document (DCD).

The company proposed two new changes: 1) updated costs for the use of vouchers for QFR analyses; and 2) a new price model for QAngio QFR based on annual licenses covering three different levels of throughput. The company’s new proposed prices are summarised in Table 1, alongside the prices in their original submission (and presented in the EAG report) and the percentage reduction in price when comparing the prices. The EAG assumes that the newly submitted prices do not include VAT, as per the prices included in the original submission, but this is not stated in the comments to the DCD.

Table 1 QAngio QFR prices – in the original submission and as submitted in October 2020

Vouchers	Prices in the original submission*		Prices submitted October 2020			Price reduction
	Voucher price	Installation, training & certification	Vouchers	Voucher price	Installation, training & certification	
10	£4,314.75	£3,020.33	10	£3,833	£2,000	20%
50	£21,573.75	£3,020.33	50	£17,259	£2,000	22%
100	£42,284.55	included	100	£34,518	£2,000	14%
			Annual licenses	License price	Installation, training & certification	Price reduction**
			Low volume centre (100-500 QFR)	£43,147.50	included	49%
			Mid volume centre (500-1000 QFR)	£64,721.25	included	NA
			High volume centre (1000-2000 QFR)	£86,295.00	included	NA
*These prices were originally reported in euro, and are converted to pound sterling at an exchange rate of 0.86295 (see Section 6.5.8.1, EAG report); **Compared to the original price of the voucher combination required to cover the base-case patient throughput of 200 patients per annum (2 x 100 QFR); NA., not applicable						

Under the ERG base-case throughput assumption of 200 patients per annum, the cost per patient of testing with QAngio QFR (including the fees charged by the company and the staff training costs) reduces from £430.61 for the original voucher price to £362.94 (-16%) for the new voucher price. Under an annual license for a low volume centre (100 to 500 QFR analyses), the testing cost per patient reduces further to £223.50, i.e., a reduction of 48% compared to the cost based on the original voucher price.

The EAG updated the base-case analysis with the new prices proposed for 1) two vouchers of 100 QFR analyses, and 2) an annual license for a low volume centre (100 to 500 QFR analyses). The updated deterministic results are presented in Table 2. The EAG also reports results of the full incremental cost-effectiveness analyses for the original and updated EAG base-case scenario in Table 3 to aid interpretation.

Table 2 Cost-effectiveness results for updated EAG base case scenario

Strategy	Identification	Total QALYs	Total costs	NHB*	INHB*	NHB rank
Analysis applying voucher price (October 2020)						
1	ICA alone	11.061	£4,697	10.826	-	5
2	ICA + FFR	11.096	£4,825	10.855	0.029	1
3	ICA + QFR	11.087	£4,744	10.850	0.024	2
4	ICA + QFR + confirmatory FFR (grey zone)	11.093	£4,952	10.846	0.019	3
5	ICA + vFFR	11.098	£5,118	10.842	0.016	4
Analysis applying annual license price (October 2020)						
1	ICA alone	11.061	£4,697	10.826	-	5
2	ICA + FFR	11.096	£4,825	10.855	0.029	2
3	ICA + QFR	11.087	£4,605	10.857	0.031	1
4	ICA + QFR + confirmatory FFR (grey zone)	11.093	£4,812	10.853	0.026	3
5	ICA + vFFR	11.098	£5,118	10.842	0.016	4

*At cost-effectiveness threshold of £20,000 per QALY. Incremental NHB is relative to ICA alone.

QALYs, quality-adjusted life years; NHB, net health benefit; INHB, incremental net health benefit.

When QAngio QFR costs are based on the new annual license price (100-500 QFR analyses), the reduction in total cost for strategy 3 (ICA + QFR) compared to the EAG original base-case results (£4,825) is sufficient to offset the higher QALY gains from strategy 2 (ICA + FFR) at a cost-effectiveness threshold of £20,000 per additional QALY. For this scenario, strategy 3 is the least

costly alternative and no longer (extendedly) dominated by strategy 2 (see Table 3). The incremental cost-effectiveness ratio (ICER) of strategy 2 vs. strategy 3 is £24,724 per QALY (see Table 3). The original EAG base-case scenario cost-effectiveness results for strategy 4 are not sensitive to the two alternative updated prices of QAngio QFR explored in the analysis.

Table 3 Full incremental cost-effectiveness analysis - results for original and updated EAG base case scenario

Strategy	Identification	Total QALYs	Total costs	ICER
EAG base-case scenario (original QAngio QFR prices)				
1	ICA alone	11.061	£4,697	-
3	ICA + QFR	11.087	£4,812	Extendedly dominated by strategy 2
2	ICA + FFR	11.096	£4,825	£3,645/QALY
4	ICA + QFR + confirmatory FFR (grey zone)	11.093	£5,019	Dominated by strategy 2
5	ICA + vFFR	11.098	£5,118	£143,476/QALY
EAG updated base-case scenario applying new voucher price for QAngio QFR (October 2020)				
1	ICA alone	11.061	£4,697	-
3	ICA + QFR	11.087	£4,744	£1,809/QALY
2	ICA + FFR	11.096	£4,825	£9,030/QALY
4	ICA + QFR + confirmatory FFR (grey zone)	11.093	£4,952	Dominated by strategy 2
5	ICA + vFFR	11.098	£5,118	£143,476/QALY
EAG updated base-case scenario applying a new annual license price (October 2020)				
3	ICA + QFR	11.087	£4,605	-
1	ICA alone	11.061	£4,697	Dominated by strategy 3
4	ICA + QFR + confirmatory FFR (grey zone)	11.093	£4,812	Extendedly dominated by strategy 2
2	ICA + FFR	11.096	£4,825	£24,724/QALY
5	ICA + vFFR	11.098	£5,118	£143,476/QALY

ICER, incremental cost-effectiveness ratio; QALYs, quality-adjusted life years;