

Appendix

Definition of Terms

Quality-adjusted life year (QALY): measure of clinical effectiveness based on utilities.

Health-care willingness to pay (WTP): measurement of perceived value for an improvement in health.

Successful nonoperative treatment was defined as a change in utility equal to the final utility achieved by the surgical correction (e.g., “good hip”).

Strategies were considered “dominated” if they were both costlier and less effective than alternative strategies. Strategies were considered “undominated” if they were either costlier and more effective or less costly and less effective than alternative strategies.

Sensitive variables: If changing a variable’s value changes the most cost-effective strategy, then the model is deemed “sensitive” to that variable; if not, it is considered “robust.”

Utilities equations:

$$U_{\text{until definitive diagnosis}} = \sum U_{\text{nondefinitive states}} \times t_{\text{nondefinitive states}}$$

$$U_{\text{after definitive diagnosis}} = U_{\text{good hip}} \times t_{\text{remaining in time horizon}}$$

$$U_{\text{final state}} = U_{\text{until definitive diagnosis}} + U_{\text{after definitive diagnosis}}$$

TABLE E-1 Threshold Values*

Variable	Midpoint Value	Model Estimate	Threshold Value	Preferred Strategy	Dominated Strategy	Range
Costs						
Diagnostic hip arthroscopy cost	\$11,305.00		≤\$61,308.63	Injection + H&P	H&P alone	\$0-\$100,000
H&P visit cost	\$100.00		No threshold	N/A	N/A	\$0-\$100,000
Hip injection cost	\$251.00		≤\$910.63	Injection + H&P	H&P alone	\$0-\$100,000
MRA cost	\$1,529.00		≤\$228.19	MRA + H&P	Injection + H&P	\$0-\$100,000
MRI cost	\$702.00		No threshold	N/A	N/A	\$0-\$100,000
Nonoperative rehabilitation	\$2,880.00		No threshold	N/A	N/A	\$0-\$100,000
Postoperative rehabilitation	\$5,400.00		≤\$11,171.1	Injection + H&P	H&P alone	\$0-\$100,000
Pretreatment visit	\$154.00		No threshold	N/A	N/A	\$0-\$100,000
Therapeutic hip arthroscopy	\$14,306.00		No threshold	N/A	N/A	\$0-\$100,000
Diagnostic test characteristics						
Injection sensitivity		0.92	≤0.85	H&P alone	Injection + H&P	0-1
Injection specificity		0.81	≤0.49	H&P alone	Injection + H&P	0-1
MRA sensitivity		0.87	No threshold	N/A	N/A	0-1
MRA specificity		0.64	No threshold	N/A	N/A	0-1
MRI sensitivity		0.66	≤0.96	Injection + H&P	MRI + H&P	0-1
MRI specificity		0.79	No threshold	N/A	N/A	0-1
Physical examination sensitivity		0.75	≤0.82	Injection + H&P	H&P alone	0-1
Physical examination specificity		0.92	≤0.33	H&P alone	Injection + H&P	0-1
Prevalence of FAI		0.55	≤0.25	H&P alone	Injection + H&P	0-1
Treatment characteristics						
Diagnostic delay (months)	22		No threshold	N/A	N/A	0-48
Probability of recovering with labral tear	0.57		≤0.76	Injection + H&P	H&P alone	0-1
Probability of recovering without tear	0.806		No threshold	N/A	N/A	0-1
Time spent recovering from arthroscopy (months)	1		No threshold	N/A	N/A	0-12

*H&P = history and physical examination, N/A = not applicable, MRA = magnetic resonance arthrography, MRI = magnetic resonance imaging, and FAI = femoroacetabular impingement.