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Final

Heavy menstrual bleeding

Health economics

NICE guideline 88

Health economics

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Final

This was developed by National Guideline Alliance, hosted by the Royal College of Obstetricians and Gynaecologists

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Contents

Abbreviations

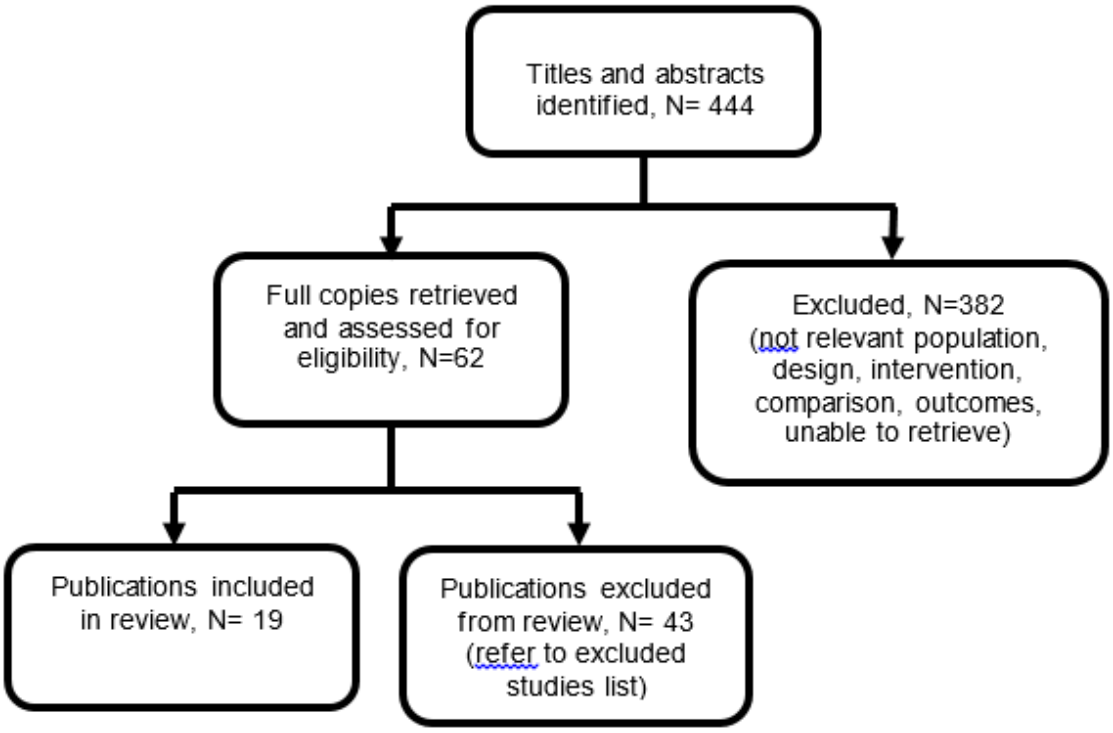
Abbreviation	Definition
BNF	British National Formulary
CI	Confidence interval
COC	Combined oral contraceptive
D&C	Dilatation and curettage
Dx	Diagnosis
EBx	Endometrial biopsy
EQ-5D	EuroQol five dimensions questionnaire
FN	False negative
FP	False positive
HMB	Heavy menstrual bleeding
HRQoL	Health-related quality of life
HTA	Health Technology Appraisal
ICER	Incremental cost-effectiveness ratio
LNG-IUS	Levonorgestrel-releasing intrauterine system
MEA	Microwave endometrial ablation
MPA	Medroxyprogesterone acetate
MRgFUS	Magnetic Resonance-guided Focused Ultrasound Surgery
N/A	Not applicable
NGA	National Guideline Alliance
NHS	National Health Service
NICE	National Institute of Health and Care Excellence
NMA	Network meta-analysis
NMB	Net monetary benefit
NSAIDs	Nonsteroidal anti-inflammatory drugs
OPH	Outpatient hysteroscopy
PSA	Probabilistic sensitivity analysis
QALY	Quality-adjusted life year
RCOG	Royal College of Obstetricians and Gynaecologists
RCT	Randomised controlled trial
Sens	Sensitivity
SF-36	36-Item Short Form Survey
SMF	Submucosal fibroid
Spec	Specificity
TBA	Thermal balloon ablation
TCRF	Transcervical resection of fibroids
TN	True negative
TP	True positive
TVUS	Transvaginal ultrasound scan
TXA	Tranexamic acid
UAE	Uterine artery embolisation

Health Economics

Literature review

A literature search for health economic evidence covering the complete guideline identified 439 articles. After reviewing titles and abstracts, 58 papers were obtained for a full text review. Of these, 43 studies were excluded with the rationale for exclusion given in Appendix I of the evidence review for the management of heavy menstrual bleeding (HMB). At consultation on the draft guideline, stakeholders identified a further 5 studies and 4 of these have been included in the review. Figure 1 below, summarises the process used to identify relevant articles. Full details of the health economic search strategy are given in Appendix A:.

Figure 1: Flow diagram of study selection for economic evaluations



Of the 15 included studies, 1 manuscript addressed the cost-effectiveness of alternative diagnostic strategies for heavy menstrual bleeding and the other 14 studies addressed the cost-effectiveness of management of HMB. A narrative review of the included studies is presented below.

Diagnosis

A UK study by Cooper (2014) utilising NHS Reference Costs from 2009-10 compared 13 strategies in order to determine the most cost-effective strategy for diagnosing heavy menstrual bleeding. Two of the strategies, levonorgestrel-releasing intrauterine system (LNG-IUS) alone and hysterectomy alone, did not involve any prior diagnostic testing. Diagnostic tests evaluated were outpatient hysteroscopy, transvaginal ultrasound scan (TVUS) and endometrial biopsy. The remaining 11 strategies included at least one of these tests, either alone or in combination with one or more of the other diagnostic tests. The

analysis took a National Health Service (NHS) perspective and the setting was a “one-stop” secondary clinical setting which would allow use of all testing modalities at a single visit.

In order to assess the benefits of diagnosis, treatment was included in the analysis but the study only considered single treatment pathways and therefore did not assess the cost-effectiveness of alternative management options. The authors decided that a cost-utility analysis was not practical due to a paucity of health related quality of life (HRQoL) data for HMB. Instead, patient satisfaction was used as the principle measure of effect in the analysis but the authors did make an estimate of the additional quality-adjusted life year (QALY) gain per satisfied patient.

The authors reported that their analysis identified 2 potentially cost-effective strategies for the diagnosis of heavy menstrual bleeding. These strategies were outpatient hysteroscopy alone or outpatient hysteroscopy in combination with endometrial biopsy. Their model found that the incremental cost-effectiveness ratio (ICER) for outpatient hysteroscopy alone compared to empirical treatment with LNG-IUS was £360 per additional woman satisfied at 1 year. They found that outpatient hysteroscopy in combination with endometrial biopsy was marginally more effective than outpatient hysteroscopy alone with the ICER for the combination strategy being £21,000 per additional satisfied patient relative to outpatient hysteroscopy alone. They estimated that this would equate to approximately £26,500 per QALY. The authors also conducted sensitivity analyses and reported that outpatient hysteroscopy remained cost-effective compared to LNG-IUS when varying prevalence, test accuracy and test feasibility (see summary of studies included in the economic evidence review, Table 23 in the evidence review chapter for the management of HMB).

Management

Beinfield (2004) used a Markov model to compare the cost-effectiveness of uterine artery embolization (UAE) with hysterectomy for women with symptomatic uterine fibroids. The analysis was undertaken from a societal perspective with hospital costs based on Medicare reimbursements. The study reported that UAE was a cost-effective alternative to hysterectomy and that UAE dominated hysterectomy in the base case analysis. A shorter recovery time, estimated using the median weekly wage rate, was an important driver of the lower costs of UAE. The authors indicated that their finding was robust to changes in many of the models inputs but that the results were sensitive to changes in the impact of treatment on changes in quality of life.

A more recent study (You 2009) undertook a cost utility analysis that also compared UAE to hysterectomy. In addition myomectomy was included as a treatment comparator. The model took a Hong Kong societal perspective and adopted a time horizon of 5 years which was modelled using a Markov decision analytic approach. The authors reported that hysterectomy was the dominant strategy in their base case analysis. At 5 years hysterectomy was the cheapest strategy because of the re-intervention rates associated with myomectomy and UAE in particular. From a probabilistic sensitivity analysis (PSA) the authors reported that hysterectomy had an 84.1% and 79.1% chance of being less costly than UAE and myomectomy, respectively. Whilst all alternatives produced large QALY gains, the PSA suggested that the hysterectomy group was very likely to experience the greatest QALY gain (a 97.8% chance of greater QALY gain than UAE and a 98.3% chance of a greater QALY gain than myomectomy).

Another paper by the same authors (You 2006) reported on a cost-utility analysis of hysterectomy, endometrial resection and ablation and medical therapy for menorrhagia. Again they used a Markov model to estimate healthcare resource use and QALYs over a period of 5 years in women with menorrhagia. In their base case analysis they reported that hysterectomy generated the greatest QALY gain but at the greatest cost. They estimated the ICER of hysterectomy to be 23,500 USD per QALY. They noted in a sensitivity analysis that

the least costly treatment was sensitive to the need for additional surgery with endometrial resection and ablation.

Clegg (2007) undertook a cost-utility analysis with treatment comparators LNG-IUS, hysterectomy and second generation endometrial ablation techniques. Their analysis took the perspective of the UK's NHS with costs from 2004/05. They used a state transition Markov model to evaluate the progress over 5 years of a hypothetical cohort of women with HMB treated with either microwave endometrial ablation (MEA), thermal balloon ablation (TBA), hysterectomy or LNG-IUS followed by hysterectomy or LNG-IUS followed by ablation. They found that LNG-IUS followed by hysterectomy dominated other strategies. A threshold analysis suggested that the failure rate of LNG-IUS would have to increase to over 80% for ablation techniques to be considered cost-effective at a cost-effectiveness threshold of £30,000 per QALY.

A UK study (Zowall 2008) undertook a cost-utility analysis to compare a treatment strategy for symptomatic uterine fibroids, which started with Magnetic Resonance-guided Focused Ultrasound Surgery (MRgFUS) as compared with current practice comprising UAE, myomectomy and hysterectomy. The setting was stipulated as the NHS in England and Wales and the population was women in whom surgical treatment for uterine fibroids was being considered. A Markov modelling approach was employed and women entered the model aged 39 years and followed up until age 56 years. Results were presented for a hypothetical cohort of 1000 women. In their base case analysis they reported that MRgFUS dominated current practice. The model assumed that the HRQoL following MRgFUS if successful will be the same as for other treatments. A lack of randomised controlled trial (RCT) data comparing MRgFUS with current practice also meant that the model depended on inferred comparisons which the authors acknowledged could be subject to bias and confounding.

A US cost-utility analysis (O'Sullivan 2009) compared MRgFUS, UAE, abdominal myomectomy, hysterectomy and pharmacotherapy in premenopausal women with symptomatic uterine fibroids. The authors reported that a societal perspective was adopted but analysis of non-health care costs was limited to productivity losses. The analysis used a Markov model to estimate the percentage of women who would be symptom free over the remainder of their life with transition to alternative health states, including procedure-related death, occurring at 6-monthly cycles. All women apart from those receiving pharmacotherapy were assumed to have a diagnostic test before the procedure but the result of testing was not factored into the analysis. The model allowed up to 3 rounds of treatment with the assumption that hysterectomy would always be used as third-line treatment. In the base-case analysis myomectomy was found to be dominated by MRgFUS and UAE. Pharmacotherapy was the cheapest option with a cost per patient of $9,207. Hysterectomy was the second cheapest treatment at $19,799 per patient and had an ICER of $21,800 per QALY when compared to pharmacotherapy. MRgFUS was the third cheapest option and had an ICER of $41,400 per QALY relative to hysterectomy. UAE was more expensive than MRgFUS with an ICER of $54,200 per QALY. A PSA was not undertaken to assess uncertainty with the authors reasoning that this would have reinforced their conclusion that hysterectomy, MRgFUS and UAE did not differ markedly in terms of their cost-effectiveness. In their discussion of the study limitations the authors noted that a lack of RCT evidence meant it was difficult to estimate the probability of symptom relief. MRgFUS efficacy data was estimated from unpublished clinical trial data.

Another economic analysis conducted in the USA (Kong 2014) compared MRgFUS, UAE and abdominal hystectomy as first-line treatment alternatives for symptomatic uterine fibroids. In the event of inadequate symptom relief it was assumed that the next least invasive alternative would be used as a second-line treatment. The authors used a Markov model with 6-monthly cycles to estimate lifetime QALYs and costs. Women were assumed to enter the model aged 40 years. If fibroids recurred on first-line treatment, then treatment would be repeated. If inadequate symptom relief resulted from second-line treatment or if

fibroids recurred, then hysterectomy would be used as the third-line treatment. The perspective of the analysis included health care costs and losses to work productivity. In the base-case analysis hysterectomy was the cheapest strategy with a total cost of $1.3,291. The costs for MRgFUS and UAE were $19,796 and $22,164, respectively. MRgFUS had an ICER of $33,110 per QALY relative to hysterectomy. The ICER of UAE relative to MRgFUS was $270,057. Model uncertainty was prinicipally addressed through one-way sensitivity analysis. In commenting on the limitations of the analysis the authors noted the small population size in clinical trials of MRgFUS.

Using a decision-analytic Markov model, a US evaluation (Cain-Nielsen 2014) compared myomectomy, MRgFUS and UAE. The model population was premenopausal women wishing to preserve their uteri. The model considered a time frame of 5 years for the analysis. Transition probabilities were estimated from the published literature or expert opinion where this was not available. The model assumed that treatment failure with MRgFUS or UAE would result in the woman having myomectomy as a second-line treatment. The authors reported that a societal perspective was used for the analysis but only work-productivity losses were included in addition to health care costs. However, results were also presented from a health care only perspective. In the base-case deterministic analysis UAE was dominated, being less effective and more expensive than either MRgFUS or myomectomy. Myomectomy wass more expensive than MRgFUS with an ICER of $46,250 per QALY. The PSA found that myomectomy had a slightly higher probability than MRgFUS of being the most cost-effective strategy above a cost-effectiveness threshold of $30,000 per QALY. It should be noted that uncertainty in treatment effectiveness was assessed in the PSA through the use of uniform probability distributions.

A Canadian Health Technology Assessment (Babashov 2015) undertook an economic analysis to compare Magnetic Resonance-Guided High-Intensity Focused Ultrasound (MRgHIFU), myomectomy, hysterectomy and UAE for the treatment of symptomatic uterine fibroids. The analysis was undertaken from a health care perspective and used a time frame of 11 years – women were assumed to enter the model at an age of 40 years and continue until the menopause. Using a Markov decision-analytic approach with cycles of 6 months, the model estimated long-term costs and outcomes associated with the different treatments. The impact of uncertainty in model inputs was addressed through PSA. Patients in the model allocated to UAE or MRgHIFU were given an additional magnetic resonance imaging test to determine eligibility for the procedure as size or location of fibroids can make these unsuitable alternatives for some women. Women who were deemed ineligible were then assumed to receive the next least invasive treatment option of those remaining. In the base-case deterministic analysis myomectomy was strictly dominated by UAE and MRgHIFU was extendly dominated by hysterectomy and UAE. Hysterectomy was the cheapest treatment at 8,485 CAD. UAE had a cost of 11,320 CAD and an ICER of 46,480 CAD per QALY relative to hysterectomy. The PSA suggested that hysterectomy had the highest probability of being the most cost-effective strategy for a cost-effectiveness threshold of less than 46,000 CAD per QALY. Above that cost-effectiveness threshold, UAE had the highest probability of being the most cost-effective. In a discussion of model limitations the authors reported that utility estimates were based on a single study and differed from those reported in other studies.

A Spanish economic evaluation (Lete 2011) used a Markov modelling approach populated with published evidence and clinical opinion to compare LNG-IUS versus combined oral contraceptives (COCs) and progestogens as first-line treatments for dysfunctional uterine bleeding. In common with many other economic studies in this area their analysis was based on a 5 year time horizon. The study showed that LNG-IUS dominated COCs and progestogens and the authors reported that this finding was robust in response to univariate changes in model inputs. Their PSA suggested that LNG-IUS had more than a 99% chance of dominating COCs and progestogens. The authors noted that the higher costs of LNG-IUS were more than offset by a lower requirement for future surgery as a result of LNG-IUS's greater effectiveness in controlling symptoms.

Miller (2015) in the USA sought to compare surgical techniques for abnormal uterine bleeding. As interventions and comparators in their analysis they included thermal (radio-frequency) endometrial ablation, global endometrial ablation (GEA) and hysterectomy. Model inputs were derived from a mixture of epidemiological and clinical data with economic data sourced from commercial and Medicaid databases. A Markov model was used to calculate clinical and economic outcomes for 3 hypothetical groups of women over timeframes of 1 year, 3 years and 5 years, respectively. This cohort of women consisted of premenopausal women for whom childbearing was completed and who sought a permanent treatment solution to their bleeding. Their analysis suggested that thermal (radio frequency) endometrial ablation dominated GEA over all time horizons when a Medicaid payer perspective was adopted. They also reported that it dominated hysterectomy at 1 year. Although dominance over hysterectomy was not found at 3 and 5 years they reported that thermal (radio frequency) endometrial ablation saved 188,000 USD and 81,000 USD per QALY respectively for those time horizons. The authors claimed that their findings were not particularly sensitive to univariate and probabilistic variation in model inputs.

A Canadian study (Tsoi 2015) compared ulipristal acetate to leuprolide in the treatment of moderate-to-severe symptoms of uterine fibroids in women eligible for surgery. A probabilistic decision analytic approach was used to compare these alternatives over a pre-surgical timeframe of 3 months, reflecting the licensing indication for ulipristal. Outcome branch nodes in the tree were controlled/uncontrolled bleeding with/without hot flushes. Utility states in the model were obtained by direct elicitation from 909 women in Canada. Costs were reported in Canadian dollars and for a 2013 price year. Ulipristal was found to be the dominant treatment in the base case analysis with a cost saving of 92 CAD and a 0.012 QALY gain per patient. Across all cost-effectiveness thresholds, ulipristal had a 100% probability of being the most cost-effective treatment. The authors reported that the results were robust to the changes made to input parameters across a number of sensitivity analyses.

A Finnish economic evaluation (Heliovaara-Peippo 2013) undertaken alongside an economic evaluation of an RCT compared LNG-IUS versus hysterectomy for women with menorrhagia. A total of 221 of the 236 women randomly assigned to treatment were followed up for 10 years. The authors reported that the overall costs in the LNG-IUS group were approximately 1500 USD lower per patient than in the hysterectomy group despite the fact that almost half the women originally assigned to LNG-IUS treatment going on to have hysterectomy. The costs included both direct and indirect costs. The study concluded that patients in both arms of the trial experienced improvements in HRQoL in the first 5 years but that this had returned to the baseline level after 10 years. No significant differences in HRQoL were observed between the 2 groups.

Ganz (2011) evaluated the cost-effectiveness of LNG-IUS, oral agents or surgery in the treatment of idiopathic HMB in the USA. The analysis took the perspective of a US payer and had a time horizon of 5 years. A Markov model approach was used alongside patient-level simulation to track disease progression over time. At entry into the model women were 30 years of age. Women in the model continued on their non-surgical therapy unless menstrual blood loss reached 80 ml or more per cycle, until they became pregnant, discontinued for another reason or died. Those women who were refractory to treatment could change to another nonsurgical treatment, have surgery or discontinue surgery altogether. Initial surgical treatments included endometrial ablation and hysterectomy. It was assumed that women who discontinued treatment would experience HMB symptoms and have costs and outcomes associated with untreated HMB. To populate the model the analysis used recent clinical trial data and systematic reviews of the ability of model treatments to reduce menstrual blood loss. The results of the study suggested that initiating treatment with LNG-IUS dominated other nonsurgical strategies. The authors reported that initiating treatment with surgery was cheaper than hysterectomy but resulted in a lower QALY gain. The ICERs were 50000 USD per QALY and 122000 USD per QALY for hysterectomy and endometrial ablation respectively relative to LNG-IUS.

Blake (2016), as part of the Ontario Health Technology Assessment Series compared LNG-IUS with endometrial ablation, or hysterectomy in women with idiopathic HMB. The analysts adopted a Markov approach and they factored typical waiting times for surgery into their analysis. In the base case analysis, LNG-IUS dominated surgical alternatives and the authors reported that LNG-IUS also dominated the alternatives in every iteration of a PSA. This was also true for a number of one-way sensitivity analyses but the one exception was when the initial wait time for hysterectomy was excluded. The ICER for hysterectomy relative to LNG-IUS in that scenario was approximately 61,000 CAD per QALY.

A UK HTA (Bhattacharya 2011) undertook an economic evaluation of hysterectomy, first and second generation endometrial ablation and LNG-IUS. Clinical opinion and a review of the clinical literature was used to develop a Markov model taking the perspective of a secondary care setting in the NHS. Costs were based on a 2008 price year. The model assumed that women were aged 42 at entry into the model and the analysis had a 10 year time horizon. LNG-IUS was assumed to have a lifespan of 5 yeaLYrs and even if it was successful it would have to be replaced half-way through the model. This report concluded that hysterectomy was the most cost-effective strategy, dominating first generation endometrial ablation and having an ICERs of £1,440 per QALY and £970 per QALY relative to LNG-IUS and hysterectomy and second generation endometrial ablation, respectively. The authors reported that model conclusions were unchanged in response to changes to model input values with the exception of health state utility. They reported a sensitivity analysis with different health state utility assumption leading to second generation endometrial ablation becoming the most cost-effective intervention.

A UK economic evaluation (Gupta 2015) conducted alongside an RCT compared the cost-effectiveness of LNG-IUS against usual medical treatment for menorrhagia in a primary care setting. For their economic evaluation the analysts utilised a Markov model with 2 year follow-up. Costs were based on a price year of 2011. Adopting an NHS perspective they found that LNG-IUS had an ICER of around £1,600 per QALY when compared to usual medical treatment. PSA suggested that LNG-IUS has a higher probability of being cost-effective for cost-effectiveness thresholds of £2000 per QALY and that this value approached 100% for a threshold of £20,000 per QALY.

Calaf (2015) and colleagues sought to evaluate the cost-effectiveness of nonsurgical first line treatments for HMB taking the perspective of the National Health Service in Spain. Treatments included in their analysis were LNG-IUS with the estradiol valerate/dienogest multiphase oral contraceptive, COCs and progestins. The study population was made up of fertile women wishing to retain their fertility. Their analysis was undertaken using a Markov model with a timeframe of 5 years. Model inputs were informed by published clinical literature and expert opinion. They concluded that LNG-IUS was dominant when compared with other treatments in the analysis.

Original model: cost-effectiveness of combined diagnosis/treatment strategies for heavy menstrual bleeding

Introduction

Although HMB almost always has a benign cause, it is often accompanied by significant morbidity, distress and can place limitations on daily activities. There are a number of different underlying pathologies leading to HMB and accurate diagnosis of the underlying cause is important in order to tailor treatment to achieve improvement in HRQoL. However, there are different diagnostic modalities and treatment alternatives and therefore it is important to consider whether any gains in HRQoL justify the opportunity cost given competing claims on scarce health service resources.

As described above there are a number of studies which contribute to the health economic evidence in this area. However, it was thought important to develop a new health economic analysis for this guideline to incorporate the evidence from the network meta-analysis analysis (NMA) undertaken as part of this guideline update. The model addresses all areas of the guideline that were part of the update. It combines diagnosis and treatment as the cost-effectiveness of diagnosis depends on the benefits derived from treatment and because there are opportunity costs in identifying the appropriate treatment with HMB.

The number of diagnostic and treatment strategies means that there are a huge number of diagnosis/treatment strategies that could potentially be compared. To include all potential strategies in a single analysis has computational implications and therefore a degree of pragmatism was employed based on treatment strategies that were clinically reasonable and relevant to current practice. The model is constructed in such a way that it is possible to compare the cost-effectiveness of alternative treatment options for a given diagnostic strategy or to compare different diagnostic strategies for a given management strategy.

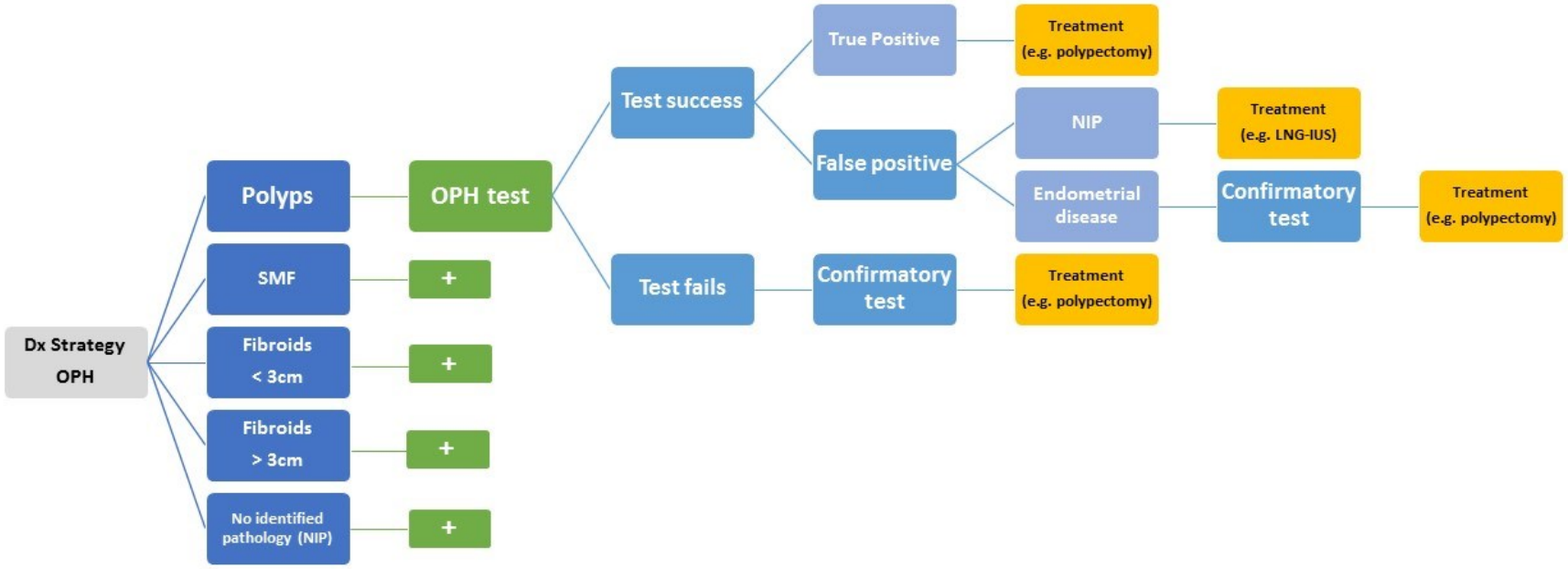
Methods

A cost-utility analysis was undertaken using a Markov model developed in Microsoft Excel® to assess the cost-effectiveness of alternative diagnostic and management strategies for HMB. To reflect uncertainty in model input parameters, PSA was undertaken using Monte Carlo simulation. Mean costs and QALYs were calculated across all simulations and, as a summary measure of cost-effectiveness, a mean net monetary benefit (NMB) was calculated based on a cost-effectiveness threshold of £20,000 per QALY.

Model structure

The decision analytic framework follows the approach used in a previous health economic evaluation (Cooper 2014) and the structure for one of the diagnostic strategies is illustrated in Figure 2. Following the UK HTA (Cooper 2014) a failed test was defined as a test which did not provide a diagnosis.

Figure 2: An example decision tree to illustrate model structure for the diagnosis of underlying pathology in women with heavy menstrual bleeding



Dx: diagnosis; HMB: heavy menstrual bleeding; LNG-IUS: levonorgestrel-releasing intrauterine system; NIP: no identified pathology; OPH: outpatient hysteroscopy; SMF: submucosal fibroids

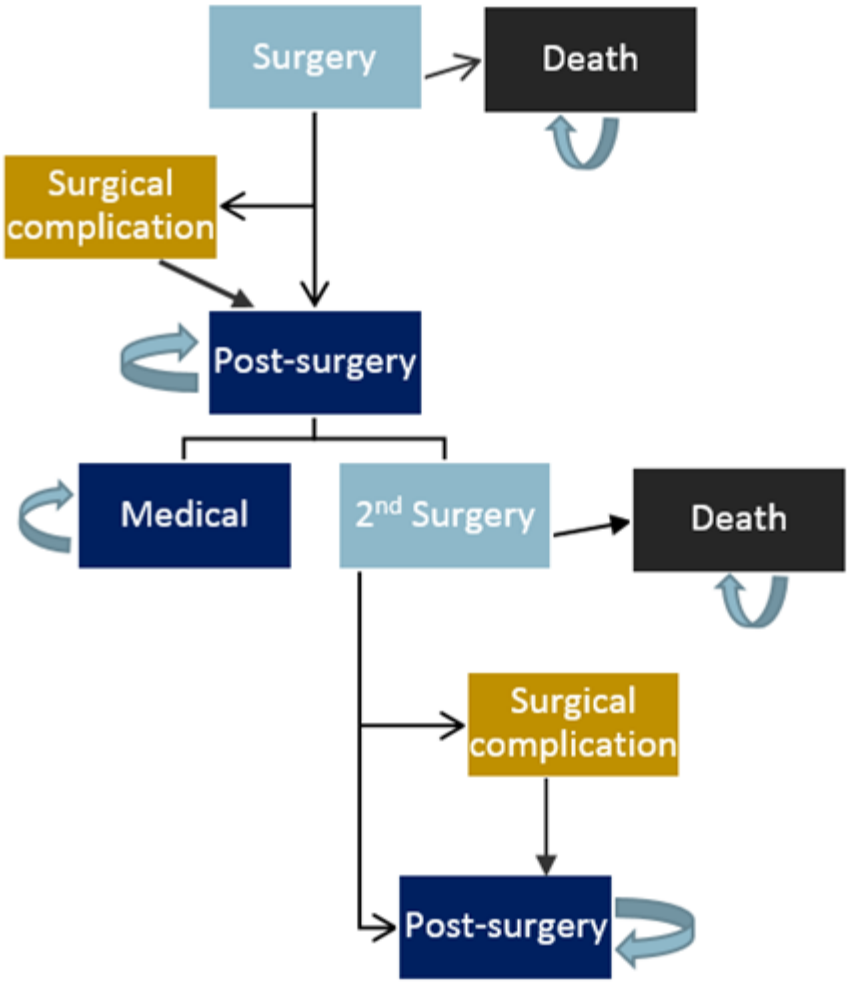
Diagnosis is used to determine the underlying pathology for HMB and that pathology is then the basis for subsequent first- and second-line treatment. Management of HMB is assessed using a Markov (state transition) modelling approach. The timeframe of the model is 5 years reflecting the follow-up period of studies included in the NMA for long term health related quality of life. The model timeframe is divided into 65 cycles of 4 weeks each to reflect the duration of the menstrual cycle. At the end of the cycle, probabilities are assigned to determine either transition to a different health state or remaining in the present health state. The Markov structure for surgical and medical management is depicted in Figure 3 and Figure 4, respectively. LNG-IUS is considered as a surgical intervention in term of the transition to different health states.

The health states in the model are as follows:

- surgery
- post-surgery
- medical
- death.

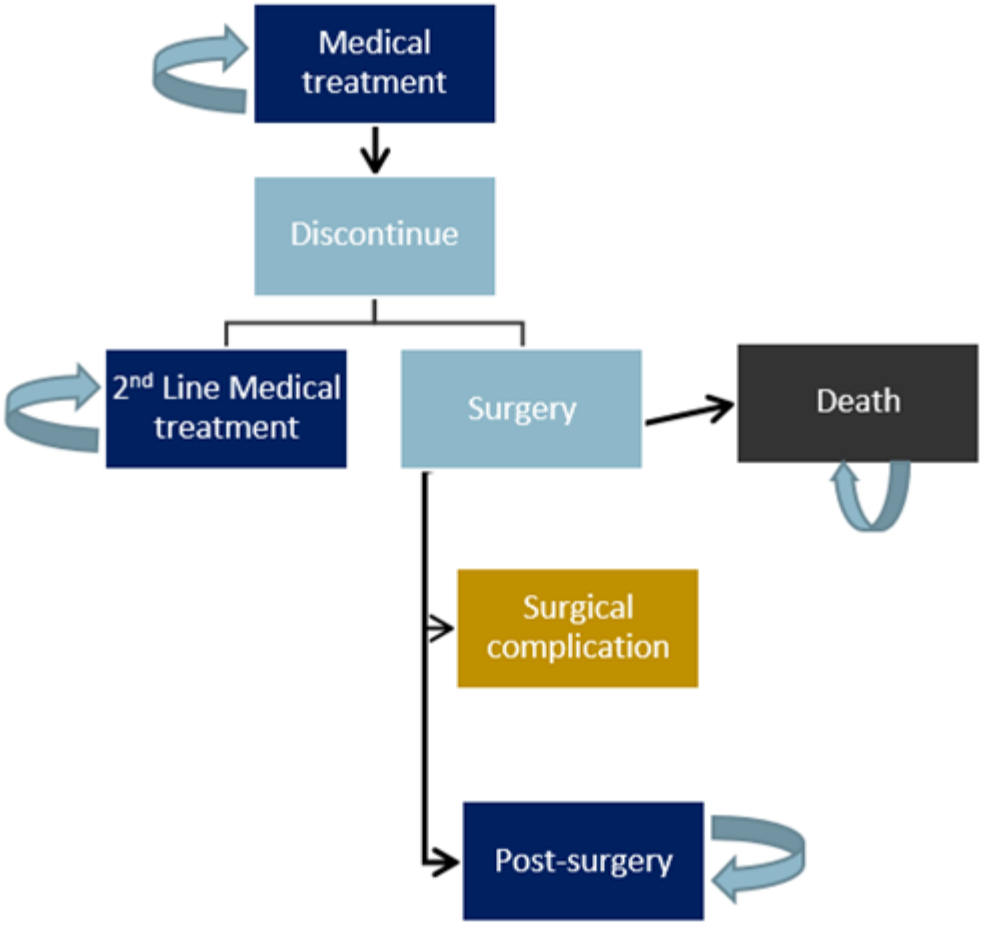
A woman can only be in the “surgery” state in the cycle that the surgery occurs with procedure and complication costs being accrued in that state. As a result of the procedure there is a small risk of death, an absorbing state, or of a surgical complication. All women surviving surgery transition to the post-surgery state and remain there unless treatment is unsuccessful in which case they would transition to a second-line intervention. It is assumed that there is no discontinuation or treatment failure for a second-line intervention and so the post-surgery and medical health states are absorbing.

Figure 3: Markov structure for first-line surgical treatment



For first-line medical treatment, women remain in that state unless treatment is discontinued. They accrue the costs associated with this treatment for each cycle that they remain in this state. If the woman's first-line medical treatment is discontinued then she would transition to a second-line intervention.

Figure 4: Markov structure for first-line medical treatment



Setting and population

The population was women at their initial presentation with HMB in a NHS primary care setting. It was assumed that the women were aged 42 years at their entry point into the model. This age was the same as used in a previous UK economic evaluation (Bhattacharya 2011) and reflects the higher prevalence of HMB in parous women aged over 40 years. Furthermore, most women aged 42 years will have completed their families, meaning that the desire for current or future fertility is much less of a consideration in this age group. In the base case analysis it is assumed that women have no strong wish to conserve their uterus for fertility preservation or any other reason. This means that women are eligible for all potential treatment options within the model. It was additionally assumed that the model population had a very low risk of endometrial disease.

In addition the model assessed cost-effectiveness for women at a different stage of diagnostic and management work-up for HMB by varying the prevalence of the underlying pathologies.

Underlying pathology and prevalence

The model followed the approach in a recent UK study in assuming that HMB had a single underlying pathology (Cooper 2014). Whilst this is clearly a simplifying assumption it is thought to be reflective of most HMB cases (NICE 2007). The pathologies that were considered as causes of HMB were:

i. endometrial polyps
ii. submucosal fibroids (SMFs)
iii. fibroids less than 3 cm in diameter
iv. fibroids 3 cm or more in diameter
v. no identified pathology (NIP).

Adenomyosis was grouped together with NIP as similar treatment would be appropriate and to reflect classification in included studies. Endometrial disease was not included as the committee identified a group of women who would be at higher risk of endometrial disease and in whom a different diagnostic work-up would be warranted. It was thought that the risk of endometrial disease was so low in the model population that it could reasonably be excluded.

The prevalence of true pathology within the model was derived from a previous UK study (Cooper 2014) but adjusted proportionately to reflect that endometrial disease was not being considered as an underlying pathology. So in that study, the prevalence of endometrial disease (all hyperplasia and cancer) was 5% and therefore the prevalence of the remaining uterine pathologies was increased by a factor of 1.05.[a] The UK Health Technology Assessment (HTA) (Cooper 2014) considered polyps/SMFs as a single disease entity and prevalence was reported accordingly. Based on the opinion of the guideline committee it was assumed that the polyps and SMFs would each account for 50% of the combined prevalence.

The prevalences used in the model are reported in Table 1. For PSA, prevalence values were sampled using a Dirichlet distribution using the same methods as employed by a previous study (Cooper 2014). As the prevalence estimates were derived from alternative sources probabilistic sampling assumed an effective sample size of 100 using the prevalence values reported in Table 1. For example it was assumed that SMF accounted for 20 in the sample of 100. For PSA sampling a count for each underlying pathology was sampled using a cumulative gamma function and the sampled prevalence of any underlying pathology was calculated as its sample count ÷ sum of the sample count for all pathologies.

Table 1: Prevalence of uterine pathologies

Disease	Prevalence	Source
Polyps[a]	0.20	Emanuel 1995
SMFs[b]	0.20	Emanuel 1995
Fibroids < 3 cm[c]	0.20	Cooper 2014
Fibroids ≥ 3 cm[c]	0.06	Cooper 2014
NIP[c]	0.34	Cooper 2014

(a) Adjusted from the value reported in Cooper 2014 to reflect a population without endometrial disease and distinct from SMFs
(b) Adjusted from the value reported in Cooper 2014 to reflect a population without endometrial disease and distinct from polyps
(c) Adjusted from the value reported in Cooper 2014 to reflect a population without endometrial disease
HTA: Health Technology Assessment; NIP: no identified pathology; SMFs: submucosal fibroids

a 1 ÷ 0.95

Diagnostic tests/strategies

The model assessed 5 alternative diagnostic strategies, as listed below:

i. LNG-IUS alone
ii. hysterectomy alone
iii. outpatient hysteroscopy
iv. TVUS
v. endometrial biopsy.

Two of the strategies involved treatment without a diagnostic test for the pathology responsible for the woman's HMB. LNG-IUS is often administered in current practice without diagnostic investigation and reflects previous NICE guidance (NICE 2007). These 2 strategies were also included in a recently published UK HTA (Cooper 2014).

Furthermore, LNG-IUS may be considered a reasonable first-line treatment for HMB after diagnostic investigation and therefore treatment without investigation could plausibly reduce the costs of unnecessary investigation.

Whilst it would not be current practice to offer hysterectomy without diagnostic investigation such an option could potentially be the preferred option of a minority of women who do not wish to conserve their uterus.

Treatments

The following surgical and pharmacological interventions were included as treatment options within the model:

i. LNG-IUS
ii. tranexamic acid (TXA)
iii. COCs
iv. hysterectomy
v. first generation ablation techniques
vi. second generation ablation techniques
vii. transcervical resection of fibroids (TCRF)
viii. nonsteroidal anti-inflammatory drugs (NSAIDs)
ix. medroxyprogesterone acetate (MPA)
x. polypectomy.

The choice of treatments largely reflected those that were included within the NMA undertaken for this guideline. The exceptions were polypectomy and TCRF, which were included as they are potentially important first-line treatment options if diagnosis indicates polyps or SMFs. The model considered both first-line treatment and second-line treatment in those in whom first-line treatment was unsuccessful or discontinued.

Combined diagnostic treatment strategies

The guideline committee defined a number of clinically reasonable first and second-line treatment options for each uterine pathology. Hysterectomy and LNG-IUS were included as first-line treatment options for all uterine pathologies to reflect the comparators which allowed treatment to be instigated without a prior diagnostic test.

Thus for any given treatment pathology there was a range of treatment combinations. So for example, if LNG-IUS, hysterectomy and polypectomy were chosen as potential first-line treatments for polyps and hysterectomy was chosen as the single second-line treatment then the complete set of treatment alternatives for that pathology would be as shown in Table 2.

Table 2: Illustrative list of combination treatment strategies for polyps[a]

1st line	2nd line
LNG-IUS	Hysterectomy
Hysterectomy	N/A
Polypectomy	Hysterectomy

(a) The model analysis can consider treatments other than those listed
LNG-IUS: levonorgestrel-releasing intrauterine system; N/A: not applicable

Any single treatment strategy for a given uterine pathology can be compared against all possible treatment strategies for the other uterine pathologies as part of an overall treatment strategy. Where n denotes the number of treatment strategies for a given pathology, then the total number of treatment strategies is calculated as follows.

$$\text{Total treatment strategies} = n_1 \times n_2 \times n_3 \times n_4 \times n_5$$

These treatment strategies can then be applied for each of the 3 diagnostic tests although only a subset of these treatment strategies (restricted by first-line treatment) are relevant for the diagnostic strategy where treatment is initiated without a prior diagnostic test (LNG-IUS alone or hysterectomy alone). Indeed in the case of hysterectomy alone only one treatment combination is possible as second-line treatment for HMB is not feasible after hysterectomy.

Diagnostic accuracy and test success

For imaging tests (outpatient hysteroscopy and TVUS) the test sensitivity and specificity inputs were derived from the systematic reviews undertaken for this guideline. Test accuracy inputs for endometrial biopsy were derived from those reported in a recently published UK study (Cooper 2014). Test success rates were also taken from this study. In the event that the test fails, it is assumed that the woman would receive a confirmatory diagnostic test which would correctly identify the underlying pathology. Whilst the model population does not include women with endometrial disease it was nevertheless included as a possible false diagnosis. Deterministic values of diagnostic accuracy and test success model inputs are reported in Table 3. The 2x2 tables underpinning this data and used for sampling purposes in the PSA are shown in **Error! Reference source not found.**, **Error! Reference source not und.**, **Error! Reference source not found.**, **Error! Reference source not found.**, **Error! Reference source not found.** and **Error! Reference source not found.**. Where there were zero values in any cells of a 2x2 table, 0.5 was added to all cells.

In line with a previous evaluation, it was assumed that 80% of fibroids 3 cm or more in diameter would be detected by bimanual examination in primary care. These are all assumed to be treated by hysterectomy irrespective of the treatment strategy being evaluated for fibroids 3 cm or more in diameter that are detected by a diagnostic test.

Notional sensitivity and specificity values for all underlying pathologies were attributed to both the hysterectomy alone and LNG-IUS alone strategies as both of these were considered as alternatives to strategies involving diagnostic testing.

Therefore hysterectomy was classified as having a sensitivity and specificity of 100% as the guideline committee considered that hysterectomy could be considered as a curative treatment for all underlying pathologies.

Ordinarily the specificity of a test is a measure of the accuracy of a test in correctly identifying those without disease. However, in this model all women have HMB by virtue of their presentation with symptoms of HMB in primary care; in this case the false positive rate (1-specificity) defines women who have an incorrect diagnosis of their underlying pathology. So that with any given underlying pathology, the test will identify a proportion correctly as determined by the test sensitivity for that pathology. However, the remainder will receive a (false positive) diagnosis for a different underlying pathology. We have followed the method adopted in a recently published UK study (Cooper 2014) to assign erroneous diagnoses to

the various pathologies. This involved the false positive rates for alternative diagnoses summing to 1. If one of the false diagnoses was no identified pathology, the false positive rates for the other misdiagnosed pathologies were derived directly from their test specificity and a false positive rate for no identified pathology was derived that would complete the sum. If no identified pathology was not considered a possible false diagnosis, the false positive rates for the various pathologies were weighted and then recalibrated based on their weight in order to achieve a summation of 1 across all possible false diagnoses.

Thus, in more detail, the false positive rate was calculated from specificity data. However, adjustment was often necessary as there are a number of alternative false diagnoses. For women not having their underlying pathology correctly identified by the test, the probability of having one of the possible incorrect pathologies diagnosed must sum to 1. In order to achieve this, if one of the false positive diagnoses identified was "no identified pathology" then the following approach was used:

- The false positive rate (FPR) for the other incorrect pathologies was used with the false positive rate for "no identified pathology" calculated to account for the remainder (i.e. 1 – sum of the FPR of the other incorrect diagnoses)

If "no identified pathology" was not a possible incorrect diagnosis then the following approach was adopted:

- In order to make the false positive rate of the possible incorrect diagnoses sum to 1, each actual false positive rate was weighted by dividing each false positive rate by the sum of all of them. For example if there were 2 possible incorrect diagnoses with false positive rates of 0.2 and 0.4 respectively, the weighted false positive rate would be adjusted to 0.2 ÷ 0.6 = **0.33** and 0.4 ÷ 0.6 = **0.67**

The calculations and assumptions involved are illustrated below. For ease of exposition the calculations use the point estimates in Table 3 but in the PSAs those inputs would be drawn by sampling from a probability distribution for each simulation.

Pathology polyps/submucosal fibroids; test outpatient hysteroscopy

False diagnoses are assumed to be endometrial disease and no identified pathology:

- false positive rate for endometrial disease is 0.08 (Table 3, 1-0.92)[b]
- false positive rate for no identified pathology 0.92 (remainder after accounting for endometrial disease).

Pathology polyps/submucosal fibroids; test TVUS

False diagnoses are assumed to be fibroids less than 3 cm in diameter, endometrial disease and no identified pathology:

- false positive rate for fibroids less than 3 cm in diameter is 0.03 (Table 3, 1-0.97)
- false positive rate for endometrial disease is 0.15 (Table 3, 1-0.85)
- false positive rate for no identified pathology is 0.82 (remainder after accounting for fibroids less than 3 cm in diameter and endometrial disease).

Pathology polyps/submucosal fibroids; test endometrial biopsy

False diagnoses are assumed to be endometrial disease and no identified pathology:

- false positive rate for endometrial disease is 0.05 (Table 3, 1-0.95)
- false positive rate for no identified pathology 0.95 (remainder after accounting for endometrial disease).

b Note the examples are illustrated with a deterministic value for the false positive rate. However, the actual value used in any simulation will be based on a sampled value of the false positive rate.

Pathology fibroids less than 3 cm in diameter; test outpatient hysteroscopy

False diagnoses are assumed to polyps/SMFs and endometrial disease:

- false positive rate for polyps/SMFs is 0.035 (Table 3, where prevalence of polyps is the same as SMFs, the pooled specificity is 0.965)
- false positive rate for endometrial disease is 0.08 (Table 3, 1-0.92)
- as these false positive rates do not sum to 1, weights were attached to obtain a revised false positive rate
  - weighted false positive rate for polys/SMFs is 0.035 ÷ (0.035 + 0.08) = 0.304
  - weighted false positive rate for endometrial disease is 0.08 ÷ (0.035 + 0.08) = 0.696.

Pathology fibroids less than 3 cm in diameter; test transvaginal ultrasound

False diagnoses are assumed to be polyps/SMFs, endometrial disease and no identified pathology:

- false positive rate for polyps/SMFs is 0.03 (Table 3, where prevalence of polyps is same as SMFs, the pooled specificity is 0.97)
- false positive rate for endometrial disease is 0.15 (Table 3, 1-0.85)
- false positive rate for no identified pathology is 0.82 (remainder after accounting for endometrial disease and polyps/SMFs).

Pathology fibroids less than 3 cm in diameter; test endometrial biopsy

False diagnoses are assumed to be polyps/SMFs and endometrial disease:

- false positive rate for polyps/SMFs is 0.50 (Table 3, where prevalence of polyps is the same as SMFs, the pooled specificity is 0.50)
- false positive rate for endometrial disease is 0.05 (Table 3, 1-0.95)
- as these false positive rates do not sum to 1, weights were attached to obtain a revised false positive rate:
  - weighted false positive rate for polyps/SMFs is 0.50 ÷ (0.50 + 0.05) = 0.909
  - weighted false positive rate for endometrial disease is 0.05 ÷ (0.50 + 0.05) = 0.091.

Pathology fibroids 3 cm or more in diameter; test outpatient hysteroscopy

False diagnoses assumptions and calculations are as for fibroids less than 3 cm in diameter with outpatient hysteroscopy.

Pathology fibroids 3 cm or more in diameter; test transvaginal ultrasound

False diagnoses are assumed to be fibroids less than 3 cm in diameter and polyps/SMFs:

- false positive rate for fibroids less than 3 cm in diameter is 0.03 (Table 3, 1-0.97)
- false positive rate for polyps/SMFs is 0.03 (Table 3, where prevalence of polyps is the same as SMFs, the pooled specificity is 0.97)
- as these false positive rates did not sum to 1, weights were attached to obtain a revised false positive rate
  - weighted false positive rate for fibroids less than 3 cm in diameter is 0.03 ÷ (0.03+0.03) = 0.50
  - weighted false positive rate for polyps/SMFs is 0.03 ÷ (0.03+0.03) = 0.50.

Pathology fibroids 3 cm or more in diameter; Test endometrial biopsy

False diagnoses assumptions and calculations are as for pathology fibroids less than 3 cm in diameter with endometrial biopsy.

No identified pathology; test outpatient hysteroscopy

False diagnoses assumptions and calculations are as for fibroids less than 3 cm in diameter with outpatient hysteroscopy.

No identified pathology; test transvaginal ultrasound

False diagnoses are fibroids less than 3 cm in diameter, polyps/SMFs and endometrial disease:

- false positive rate for polyps/SMFs is 0.03 (Table 3, 1-0.97)
- false positive rate for fibroids less than 3 cm in diameter is 0.03 (Table 3, 1-0.97)
- false positive rate for endometrial disease is 0.15 (Table 3, 1-0.85)
- as these false positive rates do not sum to 1, weights were attached to obtain a revised false positive rate
    - weighted false positive rate polyps/SMFs is 0.03 ÷ (0.03+0.03+0.15) = 0.143
    - weighted false positive rate fibroids less than 3 cm in diameter is 0.03 ÷ (0.03+0.03+0.15) = 0.143
    - weighted false positive rate endometrial disease is 0.015 ÷ (0.03+0.03+0.15) = 0.714.

No identified pathology; test endometrial biopsy

All false diagnoses are assumed to be polyps/SMFs.

Table 3: Diagnostic accuracy and test success

	Polyps		SMFs		Fibroids <3 cm		Fibroids ≥3 cm		NIP		Endometrial disease	
Test	**Sens**	**Spec**	**Sens**	**Spec**	**Sens**	**Spec**	**Sens**	**Spec**	**Sens**	**Spec**	**Spec**	**Success**
TVUS	0.58 [a]	0.94 [a]	0.70 [b]	0.994 [b]	0.75 [c]	0.95 [c]	0.75 [c]	0.95 [c]	0.95 [d]	0.77 [d]	0.85 [e]	0.99 [f]
EBx	0.42 [g]	0.997 [h]	0.17 [i]	0.998 [i]	0.00 [j]	1.00 [k]	0.00 [j]	1.00 [k]	0.95 [l]	0.97 [l]	0.95 [m]	0.91 [n]
OPH	0.88 [o]	0.93 [o]	0.90 [p]	0.994 [p]	0.00 [j]	1.00 [k]	0.00 [j]	1.00 [k]	0.98 [q]	0.93 [q]	0.92 [r]	0.97 [s]

(a) Meta-analysis of 9 studies undertaken as part of the systematic review for this guideline
(b) Based on Soguktas (2012). A total of 4 studies were included in the review undertaken for this guideline but it was not possible to combine them in a meta-analysis and this study was considered the most appropriate as it was both the most recent and also because there was no serious risk of bias.
(c) Meta-analysis of 8 studies undertaken as part of the systematic review for this guideline.
(d) Based on Abe (2008). A total of 3 studies were included in the review undertaken for this guideline but it was not possible to combine them in a meta-analysis and the study was considered the most appropriate due to a larger sample size and no serious risk of bias
(e) Based on Soguktas (2012). A total of 3 studies were included in the review undertaken for this guideline but it was not possible to combine them in a meta-analysis and this study was considered the most appropriate as it was both the most recent and also because there was no serious risk of bias.
(f) Based on Smith-Bindman (2004) but followed Cooper (2014) in assuming that 100% reported was unrealistic.
(g) Based on Goldschmit (1993).
(h) Based on Angioni (2008)
(i) Based on Angioni (2008).
(j) It is assumed that test is not able to detect this pathology.
(k) It is assumed the test is not able to detect this pathology and therefore it is assumed that the tests will not incorrectly identify patients without this pathology.
(l) Based on Goldschmidt (1993) and analysis in Cooper (2014).
(m) Based on false positive rate reported for complex hyperplasia in Cooper (2014).
(n) Based on Clark (2002).
(o) Based on Fakhar & Mahmud (2010). A total of 4 studies were included in the review but it was not possible to combine them in a meta-analysis and this study was considered the most appropriate based on sample size.
(p) Based on Soguktas (2012). Another study was included in the review but it was not possible to combine them in a meta-analysis and this study was considered the most appropriate as it was the most recent.
(q) Based on Soguktas (2012).
(r) Based on Fakhar & Mahmud (2010). A total of 3 studies were included in the review but it was not possible to combine them in a meta-analysis and this study was considered the most appropriate based on sample size.
(s) Based on van Dongen (2007).
EBx: endometrial biopsy; NIP: no identified pathology; OPH: outpatient hysteroscopy; sens: sensitivity; SMFs: submucosal fibroids; spec: specificity

Figure 5: 2x2 data for diagnostic tests to detect polyps

	Polyps			
	TP	FP	FN	TN
TVS	121	45	87	702
EBx	2.5	0.5	3.5	171.5
OPH	21	14	3	185

EBx: endometrial biopsy; FN: false negative; FP: false positive; OPH: outpatient hysteroscopy; TN true negative; TP: true positive; TVUS: transvaginal ultrasound scan

Figure 6: 2x2 data for diagnostic tests to detect submucosal fibroids

	SMF			
	TP	FP	FN	TN
TVS	3.5	0.5	1.5	85.5
EBx	1.5	0.5	7.5	311.5
OPH	4.5	0.5	0.5	85.5

EBx: endometrial biopsy; FN: false negative; FP: false positive; OPH: outpatient hysteroscopy; TN true negative; TP: true positive; TVUS: transvaginal ultrasound scan

Figure 7: 2x2 data for diagnostic tests to detect fibroids less than 3 cm in diameter

	Fibroids < 3cm			
	TP	FP	FN	TN
TVS	105	34	35	696
EBx				
OPH				

EBx: endometrial biopsy; FN: false negative; FP: false positive; OPH: outpatient hysteroscopy; TN true negative; TP: true positive; TVUS: transvaginal ultrasound scan

Figure 8: 2x2 data for diagnostic tests to detect fibroids 3 cm or more in diameter

	Fibroids > 3cm			
	TP	FP	FN	TN
TVS	105	34	35	696
EBx				
OPH				

EBx: endometrial biopsy; FN: false negative; FP: false positive; OPH: outpatient hysteroscopy; TN true negative; TP: true positive; TVUS: transvaginal ultrasound scan

Figure 9: 2x2 data for diagnostic tests to detect no identified pathology

	NIP			
	TP	FP	FN	TN
TVS	139	15	8	51
EBx	102	2	5	67
OPH	46	3	1	39

EBx: endometrial biopsy; FN: false negative; FP: false positive; OPH: outpatient hysteroscopy; TN true negative; TP: true positive; TVUS: transvaginal ultrasound scan

Figure 10: 2x2 data for diagnostic tests to detect endometrial disease

	Endometrial disease			
	TP	FP	FN	TN
TVS	5	12	2	70
EBx	82	38	44	641
OPH	20	16	12	175

EBx: endometrial biopsy; FN: false negative; FP: false positive; OPH: outpatient hysteroscopy; TN true negative; TP: true positive; TVUS: transvaginal ultrasound scan

For the purposes of PSA the diagnostic odds ratio (DOR) was calculated for each 2x2 table to be used as a fixed quantity within the model. The false positive rate was then sampled using a beta distribution with the true negatives as the α parameter and the false positives as the β parameter. Test sensitivity was then calculated from the DOR and the sampled specificity.

Sensitivity = (DOR x [1-specificity] ÷ specificity) ÷ (1+[DOR x (1-specificity)]÷ specificity])

Test success rates were also sampled using a beta distribution with successful tests as the α parameter and failed tests as the β parameter. The parameter values for sampling test success rates for each of the three tests are indicated in Figure 11.

Figure 11: Test success parameters

	Success	Fail
TVUS	198	2
EBx	728	72
OPH	67.9	2.1

EBx: endometrial biopsy; OPH: outpatient hysteroscopy; TVUS: transvaginal ultrasound scan

Source: Cooper 2014

State transition probabilities

As noted previously the model consists of 4 health states (surgery, post-surgery, medical and death). Patients in the surgery state will nearly always transition to the post-surgery state in the next cycle, although the very small risk of surgical death is also accounted for. If a patient

is in the medical or post-surgery state and on their first-line treatment, they may move to a state signifying a second-line treatment if they discontinue medical treatment or if surgery is considered to have "failed" in some respects.

These transition probabilities to a second-line treatment are derived from the NMA on discontinuation due to adverse events that was undertaken for this guideline. For the purposes of transition to a second treatment, discontinuation due to any cause would perhaps have been a better outcome but the data for such an NMA was limited. We have assumed that the relative treatment effects with respect to discontinuation due to any cause would be the same as for discontinuation due to adverse events, with the latter being a subset of the former. Then by having a baseline risk of discontinuation more reflective of discontinuation due to any cause, a more realistic probability of moving to a second-line treatment can be estimated.

In the study the relative treatment effect was given as a log-odds ratio relative to placebo. Whilst, it is possible to undertake a sensitivity analysis which utilises the placebo risk of discontinuation due to adverse events as the baseline risk, for the reasons outlined above this is likely to underestimate the probability of a patient proceeding to a second-line treatment. Therefore, in the base case analysis we used data from a UK study (Middleton 2010) suggesting that 28% of women had discontinued use of LNG-IUS at 2 years as our baseline risk of discontinuation.

In each model the baseline risk was sampled using a beta distribution with the parameters indicated in Table 4 below.

Table 4: Baseline discontinuation rate

Intervention	Alpha (discontinue)	Beta (continue)	Source
LNG-IUS[a]	29	76	Middleton 2010
Placebo	5	144	NMA

(a) Base case analysis
LNG-IUS: levonorgestrel-releasing intrauterine system; NMA: network meta-analysis

For this base case analysis log odds ratios were calculated relative to LNG-IUS. The following equations were used to derive the discontinuation (transition) probability from the log odds ratios.

Logit = Ln (baseline risk ÷ (1 – baseline risk)

Log odds = Logit + Log odds ratio

Discontinuation probability = Exp (Log odds) ÷ (1+Exp (Log odds))

It was assumed that all transitions to a second treatment would occur within 18 months (19 cycles) based on the weighted mean duration of 17.2 months of studies included in the NMA. A further simplifying assumption was made that the rate of discontinuation would be constant across each cycle. It would be expected, especially for pharmacological therapy, that most discontinuation would occur fairly soon after therapy reflecting the onset of adverse events or dissatisfaction with treatment efficacy.

Discontinuation rate per cycle = (1 - ((1 – Discontinuation probability) ^ (1/cycles)))

Not all treatments included in the model featured in the NMA. Treatments that were included in both the model and the discontinuation NMA were:

- LNG-IUS
- TXA
- COCs
- NSAIDs
- MPA.

Transition or discontinuation is not relevant to hysterectomy which can be considered as the definitive curative treatment for HMB. For polypectomy the transition probability was estimated from a recently published UK study which compared inpatient and outpatient polypectomy, with the outpatient procedure used as the basis of the treatment failure estimate (Cooper 2015). It was assumed that TCRF would have the same transition probability as polypectomy. A North American study was used to estimate the probability of women having endometrial ablation as a first-line treatment proceeding to a second-line treatment (Shavell 2012). It was assumed that first and second generation endometrial techniques would have the same transition probability to a second-line treatment. For these treatments included in the NMA log-odds ratios were sampled from WinBugs CODA output in such a way as to retain any correlation between them.

For treatments not included in the NMA the transition to second-line treatment probabilites were sampled using a beta distribution with the parameters indicated in Table 5.

Table 5: Treatment failure (probabilities) for interventions not included in the NMA

Intervention	Alpha (treatment fail)	Beta (treatment succeeds)	Source
Polypectomy/TCRF	62	166	Cooper 2015
Endometrial ablation	157	1012	Shavell 2012

NMA: network meta-analysis; TCRF: transcervical resection of fibroids

Surgical complications and mortality

As illustrated in Table 6 and Table 9, there are risks associated with surgical interventions which has implications for costs and HRQoL. To estimate the probability of these events we used the values reported in a previous UK economic evaluation (Bhattacharya 2011) which were based on estimates in the published literature (Hurskainen 2004; Maresh 2002; Overton 1997; Parkin 2000). The model inputs for surgical complications and mortality are shown in Table 6.

Table 6: Surgical complications and mortality

Variable	Probability	Source
LNG-IUS insertion fail rate	0.0168	Hurskainen 2004
1st generation EA complications	0.0445	Overton 1997
1st generation EA severe postoperative complications	0.0292	Overton 1997
1st generation EA mortality	0.0002	Overton 1997
2nd generation EA operative complications	0.0028	Parkin 2000
2nd generation EA severe postoperative complications	0.0007	Parkin 2000
2nd generation EA mortality	0.0000	Parkin 2000
Hysterectomy operative complications	0.0358	Maresh 2002
Hysterectomy severe postoperative complications	0.0102	Maresh 2002
Hysterectomy mortality	0.0003	Maresh 2002
Polypectomy complications	0.0080	The Encyclopedia of Surgery[a]
Polypectomy severe postoperative complications	0.0000	Guideline committee
Polypectomy mortality	0.000024	The Encyclopedia of Surgery[a]
TCRF complications	0.0080	The Encyclopedia of Surgery[a]
TCRF severe postoperative complications	0.0000	Guideline committee
TCRF mortality	0.000024	The Encyclopedia of Surgery[a]

(a) http://www.surgeryencyclopedia.com/ accessed 7 June 2017
EA: endometrial ablation; LNG-IUS: levonorgestrel-releasing intrauterine system; TCRF: transcervical resection of fibroids

Treatment gain

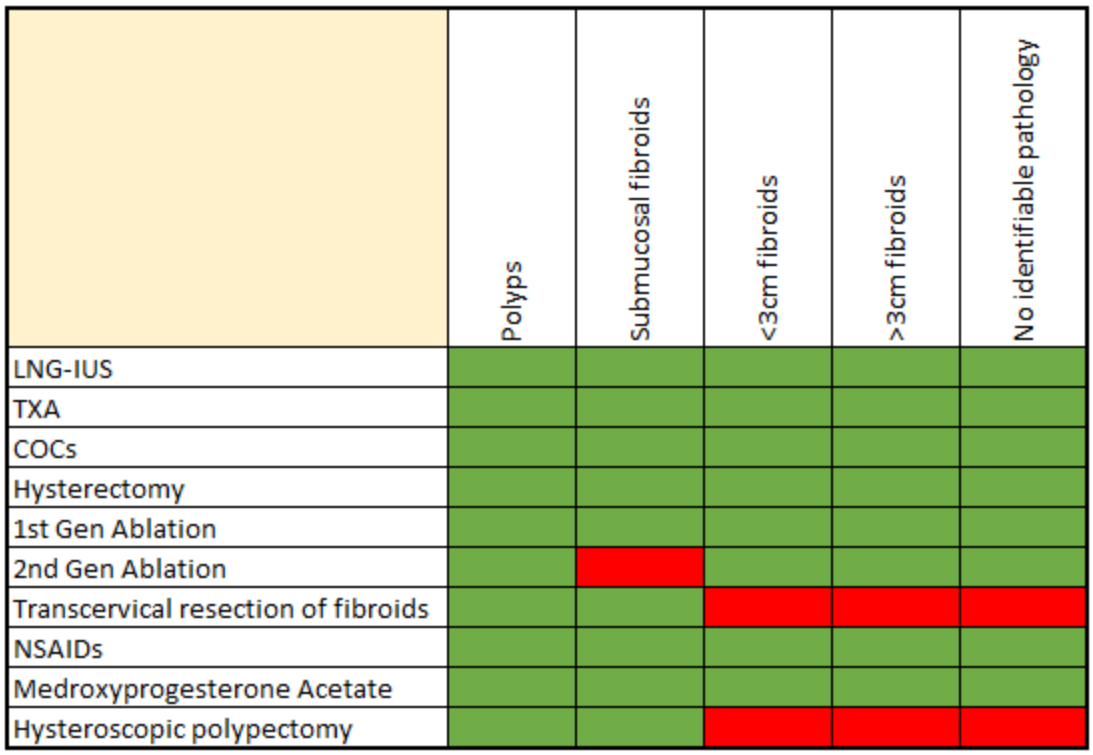
Diagnosis of the underlying pathology is considered important in order to direct women with HMB to the most appropriate treatment. However, the consequences of a false diagnosis is not straightforward as many treatments could be considered appropriate for a number of underlying pathologies. Therefore, women who receive an incorrect diagnosis and so receive a different treatment may still benefit from the treatment.

Furthermore, the NMA on HRQoL using EuroQol five dimensions questionnaire (EQ-5D) is based on treatment received and not the underlying pathology. However, where treatment is inappropriate or less optimal for certain pathologies then it would be expected that it would have a lower impact on HRQoL than in women for whom that treatment is appropriate.

Therefore, the guideline committee was asked to dichotomise the treatments into effective or not for a given pathology. If a treatment is deemed “effective” for a particular pathology the woman with that pathology would accrue the health state utility gain associated with that treatment when receiving that treatment. This would be the case even if treatment was based on her test results being wrongly classified as a false positive for a different underlying pathology.

The grid reflecting the guideline committee’s initial classification of treatment effectiveness is shown in Figure 12. This classification was used in the base case analysis. The green shaded cells indicate an effective treatment for a given pathology and the red cells an ineffective one.

Figure 12: Base case analysis classification of effective treatments by pathology



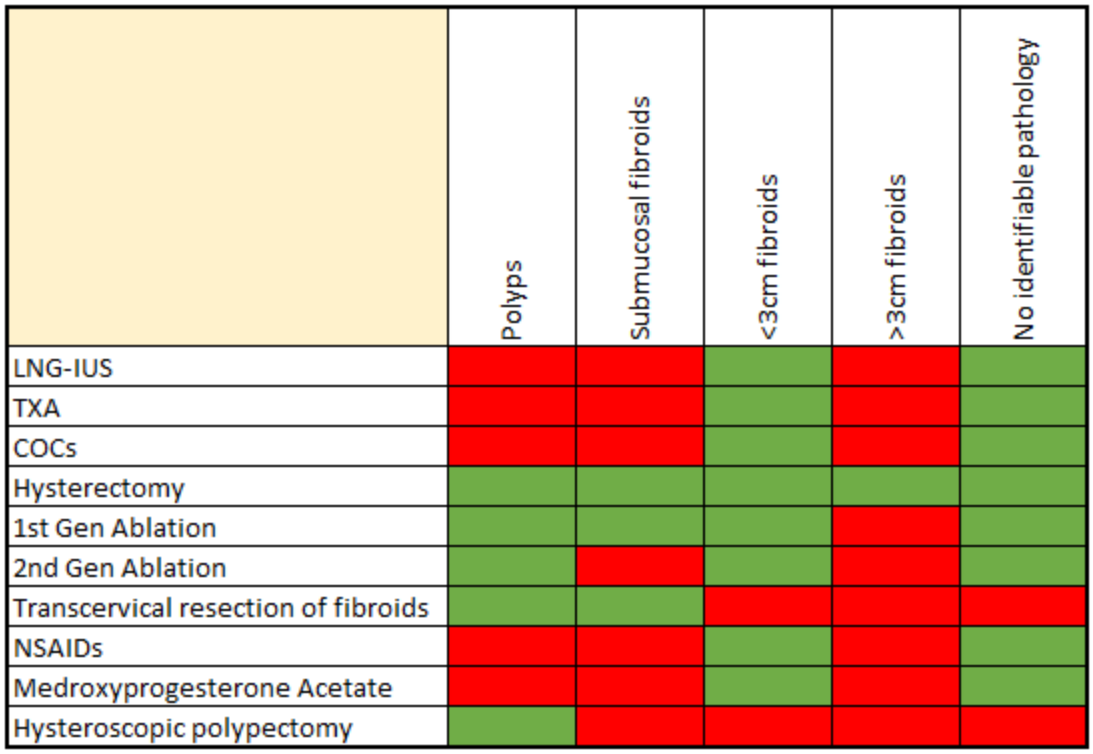
	Polyps	Submucosal fibroids	<3cm fibroids	>3cm fibroids	No identifiable pathology
LNG-IUS					
TXA					
COCs					
Hysterectomy					
1st Gen Ablation					
2nd Gen Ablation					
Transcervical resection of fibroids					
NSAIDs					
Medroxyprogesterone Acetate					
Hysteroscopic polypectomy					

Source: Guideline committee opinion
1st Gen Ablation: first generation endometrial ablation; 2nd Gen Ablation: second generation endometrial ablation; COCs: combined oral contraceptives; LNG-IUS: levonorgestrel-releasing intrauterine system; NSAIDs: nonsteroidal anti-inflammatory drugs; TXA: tranexamic acid

However, the committee recognised that such a dichotomisation is likely to represent a considerable simplification of the clinical reality. In practice, whilst they thought that most of the treatments listed above would provide some benefit for most or all pathologies they nevertheless considered that there are treatments which may provide limited or lesser benefit in women with some pathologies.

Therefore, it was deemed important to undertake a sensitivity analysis using more conservative assumptions about treatment effectiveness for the differing underlying pathologies. The committee's classification of treatment effectiveness by pathology based on more conservative assumptions is indicated in Figure 13.

Figure 13: Classification of treatment effectiveness by pathology for sensitivity analysis (conservative assumption)



Source: Guideline committee opinion
1st Gen Ablation: first generation endometrial ablation; 2nd Gen Ablation: second generation endometrial ablation; COCs: combined oral contraceptives; LNG-IUS: levonorgestrel-releasing intrauterine system; NSAIDs: nonsteroidal anti-inflammatory drugs; TXA: tranexamic acid

Quality adjusted Life years

The estimation of QALYs utilise 2 NMAs of EQ-5D that were undertaken for this guideline. The treatments that were included in these NMAs were:

- hysterectomy
- first generation endometrial ablation
- second generation endometrial ablation
- usual medical treatment (mefenamic acid, tranexamic acid, norethisterone, combined oestrogen-progestogen or progestogen-only oral contraceptive pill, or medroxyprogesterone acetate).

One NMA assessed short term changes in health state utility (less than 1 year) and the other changes in health state utility over a longer timeframe (1 to 5 years). The NMA results for short and longer term changes in health state utility are shown in Table 7 and Table 8 respectively. Further details of the NMA is given in the evidence review chapter for management of heavy menstrual bleeding.

Table 7: Matrix of results for the NMA of HRQoL after short-term follow-up

LNG-IUS	**0 (-0.06, 0.06)**		**0.04 (-0.07, 0.16)**	**0 (-0.05, 0.05)**
0.01 (-0.04, 0.06)	**Hysterectomy**		-0.04 (-0.13, 0.06)	
0.02 (-0.07, 0.11)	0.01 (-0.08, 0.1)	**Second generation ablation**	-0.02 (-0.07, 0.03)	
0 (-0.08, 0.08)	-0.01 (-0.09, 0.07)	-0.02 (-0.07, 0.03)	**First generation ablation**	
0 (-0.05, 0.05)	-0.01 (-0.08, 0.06)	-0.02 (-0.13, 0.09)	0 (-0.1, 0.09)	**Usual medical treatment**

HRQoL: health-related quality of life; LNG-IUS: levonorgestrel-releasing intrauterine system; NMA: network meta-analysis; usual medical treatment: tranexamic acid, mefenamic acid, norethisterone, combined oral contraceptive, or progesterone-only pill

Mean differences and 95% credible intervals (CrI) from the NMA (bottom left diagonal) and conventional meta-analyses (top right diagonal) treatment effects between the column-defined and row-defined treatments. Mean differences greater than 0 favour the row-defined treatment. Numbers in bold, dark grey-shaded cells denote results where the 95% CrI credible intervals do not include 0.

Table 8: Matrix of results for the NMA of HRQoL after long-term follow-up

LNG-IUS	**-0.03 (-0.08, 0.02)**			**0.02 (-0.03, 0.06)**
-0.03 (-0.08, 0.02)	**Hysterectomy**	**-0.1 (-0.19, -0.01)**		
-0.13 (-0.23, -0.02)	-0.1 (-0.2, -0.01)	Second generation ablation	-0.01 (-0.07, 0.05)	
-0.14 (-0.26, -0.02)	-0.11 (-0.23, 0)	-0.01 (-0.07, 0.05)	First generation ablation	
0.02 (-0.03, 0.06)	0.04 (-0.02, 0.11)	0.15 (0.03, 0.26)	0.16 (0.03, 0.29)	Usual medical treatment

HRQoL: health-related quality of life; LNG-IUS: levonorgestrel-releasing intrauterine system; NMA: network meta-analysis; usual medical treatment: tranexamic acid, mefenamic acid, norethisterone, combined oral contraceptive, or progesterone-only pill

Mean differences and 95% credible intervals from the NMA (bottom left diagonal) and conventional meta-analyses (top right diagonal) treatment effects between the column-defined and row-defined treatments. Mean differences greater than 0 favour the row-defined treatment. Numbers in bold, dark grey-shaded cells denote results where the 95% CrI credible intervals do not include 0.

Results in the CODA output were reported as mean differences from LNG-IUS. Therefore, to obtain absolute gains and losses in health state utility values it was necessary to establish a baseline health state utility gain for HMB treated with LNG-IUS.

The baseline health state utility gain for LNG-IUS was based on values reported in a UK HTA (Bhattacharya 2011) using values reported in other literature (Hurskainen 2004; Sculpher 1998) and listed in Table 9.

Table 9: Published utility values

State	Health state utility (95% CI)	Source
Menorrhagia	0.50	Sculpher 1998
"Well" after LNG-IUS	0.84 (0.73 to 0.93)	Hurskainen 2004

CI: confidence interval; LNG-IUS: levonorgestrel-releasing intrauterine system

The difference between the health state utility between "well" post LNG-IUS and menorrhagia was estimated as the mean health state utility gain with LNG-IUS treatment. It was found that a normal distribution could provide a reasonable fit for the confidence intervals (CIs) specified in Table 9 and in each Monte Carlo simulation the baseline health state utility gain from LNG-IUS was sampled using the parameters specified in Table 10.

Table 10: Baseline parameters for treatment gain using LNG-IUS

Comparator treatment	Mean health state utility gain	Standard error	Distribution
LNG-IUS	0.35	0.061	Normal

LNG-IUS: levonorgestrel-releasing intrauterine system

For the first year of the model health state utility values were estimated using WinBugs CODA output from the short term EQ-5D NMA. After, the first year the longer term EQ-5D NMA was used to derive the health state utility associated with a particular treatment. QALYs were calculated by multiplying health state utility by the duration in that particular state. In line with the NICE reference case, QALYs accrued beyond the first year were discounted at a rate of 3.5% per annum (NICE 2014). It is assumed that no health state utility gain results if a woman is in receipt of a treatment classified as not effective for her underlying pathology (see Figure 12 and Figure 13).

In addition the model assigned a QALY loss to surgical mortality and complications. In the event of a death from surgery, the woman's remaining life expectancy was estimated using female data in UK life tables (ONS 2016), with the relevant information summarised in Table 11. It was then assumed that, based on UK population norms (Kind 1999), that there would be a discounted health state utility loss of 0.82 per annum for the remaining life expectancy. The health state utility loss from operative complications was estimated as the difference between the health state utility "well" post hysterectomy and the health state utility for severe complications post hysterectomy reported in a UK report (Bhattacharya 2011), based on previously published studies (Clegg 2007; Hurskainen 2004). In the model it was assumed that the health state utility loss experienced as the result of surgical complication would be experienced for the duration of 1 cycle. The model inputs relating to calculations for the QALY loss associated with surgical complication and death are given in Table 12. These inputs are handled deterministically in the model as measures of data dispersion were not reported.

Table 11: Remaining life expectancy by woman's age

Current age	Remaining life expectancy
42 years	42 years
43 years	41 years

Current age	Remaining life expectancy
44 years	40 years
45 years	39 years
46 years	38 years

Source: ONS 2016

Table 12: Model inputs used to calculate health state utility due to surgical complications and death

Variable	Value	Source
Population health state utility	0.82	Kind 1999
Health state utility loss from operative complication	0.35	Clegg 2007 and Hurskainen 2004

Costs

Costs are based on a 2015-16 price year, although drug costs are based on the most recently published tariff. Costs are calculated from an NHS and personal social services (PSS) perspective in accordance with NICE methods. Costs not occurring in the first year are discounted at a rate of 3.5% per annum. The model's cost inputs are listed in Table 13. Drug treatment costs are given per cycle.

Table 13: Model cost inputs

Variable	Cost	Standard error	Source
Consultation			
General practitioner visit	£36	-	Personal Social Services Research Unit 2016
First visit gynaecology appointment	£147	£3.50	NHS Reference Costs 2015-16 Service code 502, Currency code WF01B, Non-Admitted Face to Face Attendance, First (Department of Health 2016)
Follow-up gynaecology appointment	£125	£2.53	NHS Reference Costs 2015-16 Service code 502, Currency code WF01A, Non-Admitted Face to Face Attendance, Follow-Up (Department of Health 2016)
Diagnostic tests			
Diagnostic hysteroscopy	£194	£5.48	NHS Reference Costs 2015-16 Outpatient procedure, Service code 502, MA31Z (Department of Health 2016)
Diagnostic hysteroscopy with implantation of intrauterine device (LNG-IUS)	£223	£8.47	NHS Reference Costs 2015-16 Outpatient procedure, Service code 502, MA34Z (Department of Health 2016)
Transvaginal ultrasound	£147	£5.48	NHS Reference Costs 2015-16 Outpatient procedure, Service code 502, MA36Z (Department of Health 2016)
Transvaginal ultrasound with biopsy	£222	£12.19	NHS Reference Costs 2015-16 Outpatient procedure, Service code 502, MA37Z (Department of Health 2016)
Endometrial biopsy	£75	£8.20	NHS Reference Costs 2015-16 Calculated[a] (Department of Health 2016)

Variable	Cost	Standard error	Source
Confirmatory test	£44	£7.71	NHS Reference Costs 2015-16 Calculated[b] (Department of Health 2016)
Treatment			
LNG-IUS	£172	£4.22	NHS Reference Costs 2015-16 Outpatient procedure, Service code 502, MA35Z (Department of Health 2016)
LNG-IUS with diagnostic hysteroscopy	£223	-	NHS Reference Costs 2015-16 Outpatient procedure, Service code 502, MA34Z (Department of Health 2016)
TXA	£1.77	-	NHS Drugs Tariff (May 2017)[c] (NHS Business Services Authority 2017)
COC	£0.60	-	BNF (April 2017)[d] (BNF 2017)
NSAIDs	£0.60	-	NHS Drugs Tariff (May 2017)[e] (NHS Business Services Authority 2017)
MPA	£2.47	-	BNF (April 2017)[f] (BNF 2017)
Hysterectomy	£3,202	£71.67	NHS Reference Costs 2015-16 Elective procedure, MA08B (Department of Health 2016)
1st generation endometrial ablation	£1,207	£24.27	NHS Reference Costs 2015-16 MA12Z[g] (Department of Health 2016)
2nd generation endometrial ablation	£1,207	£24.27	NHS Reference Costs 2015-16 MA12Z[g] (Department of Health 2016)
Transcervical resection of fibroids	£1,207	£24.27	NHS Reference Costs 2015-16 MA12Z [g] (Department of Health 2016)
Hysteroscopic polypectomy	£1,207	£24.27	NHS Reference Costs 2015-16 MA12Z [g] (Department of Health 2016)
Complications			
1st generation EA operative complications	£917	£64	NHS Reference Costs 2015-16, Non-elective short stay, WH07D (Department of Health 2016)
2nd generation EA operative complications	£917	£64	NHS Reference Costs 2015-16 Non-elective short stay, WH07D (Department of Health 2016)
Polypectomy operative complications	£917	£64	NHS Reference Costs 2015-16, Non-elective short stay, WH07D (Department of Health 2016)
TCRF operative complications	£917	£64	NHS Reference Costs 2015-16 Non-elective short stay, WH07D (Department of Health 2016)
Hysterectomy operative complications	£3,084	£102	NHS Reference Costs 2015-16 Non-elective long stay, WH07D (Department of Health 2016)
1st generation EA severe postoperative complications	£1,195	£101	NHS Reference Costs 2015-16 Non-elective short stay, WH07C (Department of Health 2016)

Variable	Cost	Standard error	Source
2nd generation EA severe postoperative complications	£1,195	£101	NHS Reference Costs 2015-16 Non-elective short stay, WH07C (Department of Health 2016)
Polypectomy severe operative complications	£1,195	£101	NHS Reference Costs 2015-16 Non-elective short stay, WH07C (Department of Health 2016)
TCRF severe operative complications	£1,195	£101	NHS Reference Costs 2015-16 Non-elective short stay, WH07C (Department of Health 2016)
Hysterectomy severe postoperative complications	£5,214	£288	NHS Reference Costs 2015-16 Non-elective long stay, WH07C (Department of Health 2016)

(a) Difference in cost between transvaginal ultrasound with biopsy and transvaginal ultrasound.
(b) Calculated as Cooper (2014); the cost for a confirmatory test was a composite value calculated as 91% of the cost of EBx plus 9% of the cost of dilatation and curettage (D&C). The cost of D&C was estimated using outpatient procedure of Minor, Laparoscopic or Endoscopic, Upper Genital Tract Procedures; Service code 502, MA10Z
(c) 60 500mg tablets; £4.42; 1mg 3x daily for 4 days
(d) Levest 150/30 tablets - 3 cycle pack (63 tablets) £1.80
(e) 28 x 250mg Naproxen tablets; £0.93 18 tablets over cycle
(f) 10x10mg MPA tablets £2.47; 10mg once a day for 10 days
(g) Weighted average of elective/day case with weights based on finished consultant episodes.
BNF: British National Formulary; COC: combined oral contraceptive; D&C: dilatation and curettage; EA: endometrial ablation; LNG-IUS: levonorgestrel-releasing intrauterine system; MPA: medroxyprogesterone acetate; NHS: National Health Service; NSAIDs: nonsteroidal anti-inflammatory drugs; TCRF: transcervical resection of fibroids; TXA: tranexamic acid

The entry point into the model is presentation in primary care with HMB. It is assumed that first-line pharmaceutical treatment (with the exception of LNG-IUS[c]) can be initiated at this presentation without the requirement for a further consultation. No costs are attached to this initial presentation in primary care as it is common to all strategies. For the strategies where treatment is determined by a diagnostic test, a cost for the diagnostic test is incurred unless 'see and treat' is possible in which case the diagnostic cost is subsumed within the treatment cost. Where the diagnostic test fails then a confirmatory diagnostic test is undertaken which is assumed to be 100% accurate. A confirmatory test is also undertaken in the event of a false positive for endometrial hyperplasia. Again this is assumed to be 100% accurate.

First-line LNG-IUS treatment without any formal diagnostic work up would incur the costs of a general practitioner (GP) consultation in addition to the cost of the procedure. For all first-line surgical procedures (including LNG-IUS when used following a diagnostic test) the costs include the costs of a first visit gynaecology appointment. It is assumed that some women will require reinsertion of the coil (see Table 6) and reinsertion of the coil incurs the cost of a GP appointment and the procedure cost. Where LNG-IUS or polypectomy are undertaken as part of the outpatient hysteroscopy diagnostic strategy then the treatment cost includes the diagnostic element. For LNG-IUS the cost for diagnostic hysteroscopy with biopsy and implantation of intrauterine device is used. For polypectomy the cost of diagnostic hysteroscopy is deducted from the procedure cost.

c For the purposes of the model LNG-IUS is considered as a surgical technique as drug administration requires the insertion of a medical device

For all second-line treatments it is assumed that there would be an additional GP appointment preceding it. For second-line surgical treatment the cost of a follow up gynaecology appointment is included in addition to the costs of the surgery. The costs of any surgical complications are also included; these are assumed to occur at the same rate (see Table 6) regardless of whether the surgery is first- or second-line.

Results

A total of 12 analyses are presented below. Some of the analyses are intended to illustrate how the cost-effectiveness could vary in different populations reflecting that decision points occur at different stages of the diagnostic and management work-up. Other analyses assessed how sensitive the results were to changes in parameter values or assumptions over which there was considerable uncertainty. The 12 analyses presented are a mixture of sensitivity/scenario analyses. The rationale for each analysis was as follows:

1. Analysis 1 compared a number of diagnostic and management strategies including the option of empiric LNG-IUS treatment. This analysis is relevant in particular to the decision made at initial presentation in a primary care setting.
2. Analysis 2 was similar to analysis 1 but assessed the extent to which the results of analysis 1 depended on the assumptions made about the effectiveness of certain treatments for some underlying pathologies.
3. Analysis 3 replicated analysis 1 but additionally included empiric hysterectomy, a strategy included in a recently published UK HTA (Cooper 2014)
4. Analysis 4 compared alternative first-line treatment alternatives for the different underlying pathologies. Due to long model run time, the "diagnostic" strategies were limited to OPH and empiric hysterectomy.
5. Analysis 5 focused solely on diagnostic alternatives in a primary care setting with empiric treatment alternatives not included. This analysis assumed a given first-line and second-line treatment for each of the underlying pathologies.
6. Analysis 6 was similar to analysis 5 but assessed the extent to which the results of analysis 5 depended on assumptions made about the effectiveness of certain treatments for some underlying pathology.
7. Analysis 7 was similar to analysis 5 but the disease prevalence was varied. This was included to evaluate the cost-effectiveness in a population of women who were refractory to empiric treatment and had been referred to secondary care and are suspected, based on history or exam, to have pathology that can be detected by hysteroscopy.
8. Analysis 8 addressed a primary care setting but considering other empiric pharmacological treatment in addition to LNG-IUS.
9. Analysis 9 was similar to analysis 8 but assessed the extent to which the results of analysis 1 depended on the assumptions made about the effectiveness of certain treatments for some underlying pathologies.
10. Analysis 10 was a sensitivity analysis to assess how sensitive the results were to a change in the assumption about baseline discontintinuation rates. This analysis was based on a woman's initial presentation in a primary care setting.
11. Analysis 11 was similar to analysis 10 but assessed the extent to which the results of analysis 10 depended on the assumptions made about the effectiveness of certain treatments for some underlying pathologies.
12. Analysis 12 compared surgical treatment alternatives focusing on those pathologies where surgery is most likely to be considered. The diagnostic strategy is not varied in this analysis.

In the tables of results the strategies are sorted in descending order of cost-effectiveness as measured by mean net monetary benefit (NMB).

Analysis 1

Base case analysis with respect to treatment gain.

Simulations = 1000

Diagnostic strategies:

1. LNG-IUS alone
2. OPH
3. TVUS
4. EBx.

First- and second-line treatment alternatives evaluated for each pathology are shown in Table 14. A total of 98 diagnostic/treatment strategies were included in this analysis.

Table 14: Treatment alternatives evaluated for each pathology in analysis 1

Polyps		SMFs		Fibroids < 3 cm		Fibroids ≥ 3 cm		NIP	
1st line	2nd line	1st line	2nd line	1st line	2nd line	1st line	2nd line	1st line	2nd line
LNG-IUS	Hyst	LNG-IUS	Hyst	LNG-IUS	Hyst	LNG-IUS	Hyst	LNG-IUS	Hyst
Polypectomy		TCRF		2nd gen		Hyst			2nd gen

2nd gen: second generation endometrial ablation; hyst: hysterectomy; NIP: no identified pathology; SMFs: submucosal fibroids; TCRF: transcervical resection of fibroids

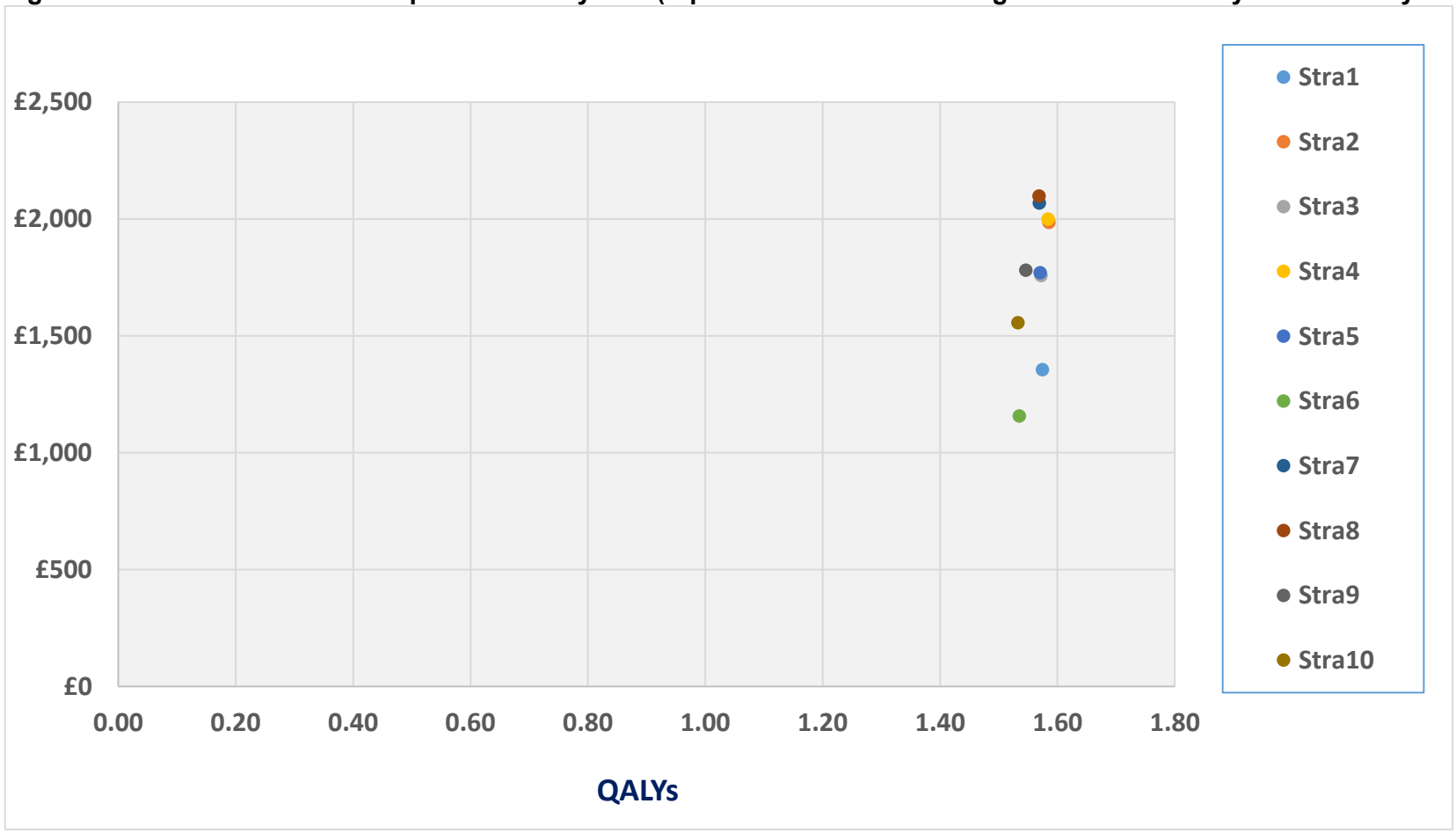
In this analysis it was assumed that most treatments are effective irrespective of the underlying pathology. The results suggested that under this assumption empiric treatment with LNG-IUS was cost-effective. PSA suggested that empiric treatment with LNG-IUS has a very high probability of being cost-effective if LNG-IUS is assumed to be an effective treatment across all underlying pathology. The results for the top 10 most cost-effective strategies by mean NMB are summarised in Table 15 and Figure 14 below. The full results are given in the Health economic results Appendix B:

Table 15: Analysis 1 – top 10 most cost-effective strategies (as measured by net monetary benefit)

Dx	Polys		SMFs		Fibroids < 3 cm		Fibroids ≥ 3 cm		NIP		Mean cost	Mean QALY	Mean NMB	Pr (CE)
LNG-IUS (1)	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,356	1.574	£30,131	0.968
TVUS (2)	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,985	1.585	£29,723	0.001
OPH (3)	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,758	1.572	£29,684	0.000
TVUS (4)	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,999	1.584	£29,678	0.000
OPH (5)	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,771	1.570	£29,639	0.029
LNG-IUS (6)	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd	£1,157	1.535	£29,542	0.000
EBx (7)	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,069	1.569	£29,316	0.000
EBx (8)	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,098	1.569	£29,277	0.000
TVUS (9)	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd	£1,781	1.546	£29,142	0.000
OPH (10)	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd	£1,557	1.533	£29,098	0.000

2nd: second generation endometrial ablation; Dx: diagnosis; EBx: endometrial biopsy; HMB: heavy menstrual bleeding; hyst: hysterectomy; LNG: levonorgestrel-releasing intrauterine system; NIP: no identified pathology; NMB: net monetary benefit; OPH: outpatient hysteroscopy; Pr (CE): probability of being cost-effective; QALY: quality-adjusted life year; SMFs: submucosal fibroids; TVUS: transvaginal ultrasound scan

Figure 14: Cost-effectiveness plane for analysis 1 (top 10 cost-effective strategies as measured by net monetary benefit)



NMB: net monetary benefit; QALYs: quality-adjusted life years; stra: strategy

Analysis 2

Analysis with conservative assumptions with respect to treatment gain – as analysis 1 in other respects.

Simulations = 1000

Diagnostic strategies:

1. LNG-IUS alone
2. OPH
3. TVUS
4. EBx.

First- and second-line treatment alternatives evaluated for each pathology are shown in Table 16. A total of 98 diagnostic/treatment strategies were included in this analysis.

Table 16: Treatment alternatives evaluated for each pathology in analysis 2

Polyps		SMFs		Fibroids < 3 cm		Fibroids ≥ 3 cm		NIP	
1st line	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**
LNG-IUS	Hyst	LNG-IUS	Hyst	LNG-IUS	Hyst	LNG-IUS	Hyst	LNG-IUS	Hyst
Polypectomy		TCRF		2nd gen		Hyst			2nd gen

2nd gen: second generation endometrial ablation; hyst: hysterectomy; LNG-IUS: levonorgestrel-releasing intrauterine system; NIP: no identified pathology; SMFs: submucosal fibroids; TCRF: transcervical endometrial resection of fibroids

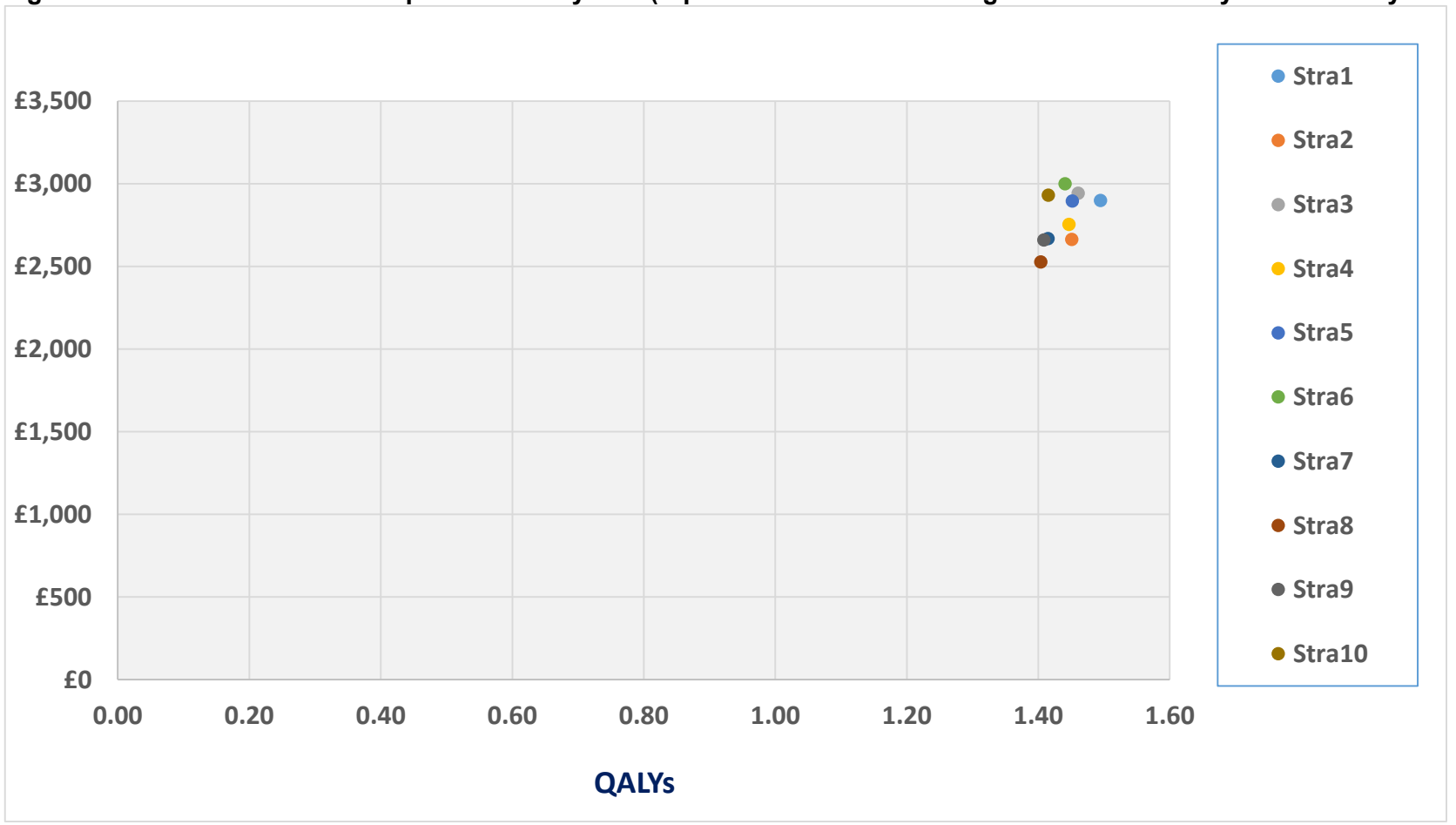
In this analysis conservative assumptions, based on expert clinical opinion, were made with respect to the effectiveness of treatments according to the underlying pathology. The results suggested that TVUS was the most cost-effective diagnostic test with hysterectomy as the first-line treatment for fibroids 3 cm or more in diameter and as the second-line treatment for all other underlying pathology. The results for the top 10 most cost-effective strategies by mean NMB are summarised in Table 17 and Figure 15 below. The full results are given in the Health economic results Appendix B:.

Table 17: Analysis 2 – top 10 most cost-effective strategies (as measured by net monetary benefit)

Dx	Polys		SMF [a]		Fibroids < 3 cm		Fibroids ≥ 3 cm		NIP [b]		Mean cost	Mean QALY	Mean NMB	Pr (CE)
TVUS (1)	Polyp	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,899	1.495	£26,991	0.943
TVUS (2)	Polyp	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd	£2,663	1.451	£26,354	0.039
EBx (3)	Polyp	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,943	1.461	£26,271	0.001
OPH (4)	Polyp	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,753	1.447	£26,184	0.007
TVUS (5)	Polyp	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,895	1.452	£26,143	0.000
TVUS (6)	Polyp	Hyst	TCRF	Hyst	2nd	Hyst	Hyst		LNG	Hyst	£2,999	1.441	£25,813	0.002
EBx (7)	Polyp	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd	£2,668	1.415	£25,631	0.000
OPH (8)	Polyp	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd	£2,526	1.404	£25,547	0.000
TVUS (9)	Polyp	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd	£2,660	1.408	£25,506	0.000
EBx (10)	Polyp	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,931	1.415	£25,376	0.000

2nd: second generation endometrial ablation; Dx: diagnosis; EBx: endometrial biopsy; hyst: hysterectomy; LNG: levonorgestrel-releasing intrauterine system; NIP: no identified pathology; NMB: net monetary benefit; OPH: outpatient hysteroscopy; Pr (CE): probability of being cost-effective; QALY: quality-adjusted life year; SMFs: submucosal fibroids; TVUS: transvaginal ultrasound scan

Figure 15: Cost-effectiveness plane for analysis 2 (top 10 cost-effective strategies as measured by net monetary benefit)



NMB: net monetary benefit; QALYs: quality-adjusted life years; stra: strategy

Analysis 3

Base case analysis with respect to treatment gain.

Simulations = 500

Diagnostic strategies:

1. LNG-IUS alone
2. hysterectomy alone
3. OPH
4. TVUS
5. EBx.

First- and second-line treatment alternatives evaluated for each pathology are shown in Table 18. A total of 489 diagnostic/treatment strategies were included in this analysis.

Table 18: Treatment alternatives evaluated for each pathology in analysis 3

Polyps		SMFs		Fibroids < 3 cm		Fibroids ≥ 3 cm		NIP	
1st line	2nd line	1st line	2nd line	1st line	2nd line	1st line	2nd line	1st line	2nd line
LNG-IUS	Hyst	LNG-IUS	Hyst	LNG-IUS	Hyst	LNG-IUS	Hyst	LNG-IUS	Hyst
Polypectomy		TCRF		2nd gen		Hyst		Hyst	2nd gen
Hyst		Hyst		Hyst					

2nd gen: second generation endometrial ablation; hyst: hysterectomy; LNG-IUS: levonorgestrel-releasing intrauterine system; NIP: no identified pathology; SMFs: submucosal fibroids; TCRF: transcervical resection of fibroids

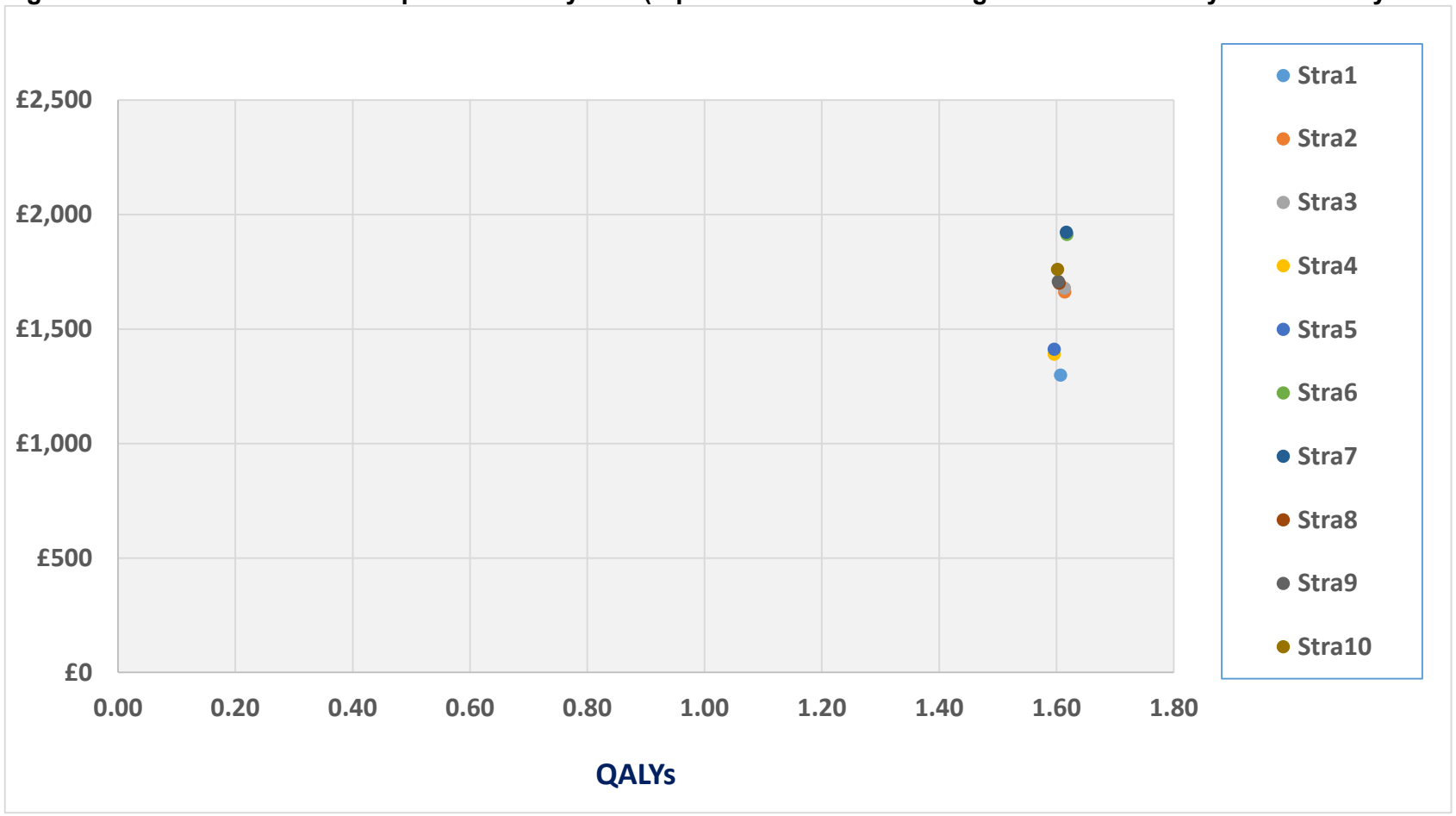
In this analysis it was assumed that most treatments are effective irrespective of the underlying pathology. Empiric hysterectomy as an alternative to diagnosis was included in this analysis but was not found to be cost-effective. Empiric treatment with LNG-IUS was found to have a 71.2% probability of being the most cost-effective strategy. The results for the top 10 most cost-effective strategies by mean NMB are summarised in Table 19 and Figure 16 below. The full results are given in the Health Economic results Appendix B:.

Table 19: Analysis 3 – top 10 most cost-effective strategies (as measured by net monetary benefit)

Dx	Polys		SMFs		Fibroids < 3 cm		Fibroids ≥ 3 cm		NIP		Mean cost	Mean QALY	Mean NMB	Pr (CE)
LNG-IUS alone	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,298	1.607	£30,845	0.712
TVUS	Hyst		LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,662	1.614	£30,620	0.096
TVUS	Hyst		LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,678	1.614	£30,601	0.000
EBx	Hyst		LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,390	1.597	£30,541	0.026
EBx	Hyst		LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,412	1.596	£30,517	0.000
TVUS	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,913	1.618	£30,448	0.000
TVUS	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,923	1.617	£30,417	0.000
OPH	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,701	1.605	£30,398	0.000
OPH	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,707	1.604	£30,365	0.000
OPH	Hyst		LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,761	1.602	£30,282	0.000

Dx: diagnosis; EBx: endometrial biopsy; hyst: hysterectomy; LNG: levonorgestrel-releasing intrauterine system; NIP: no identified pathology; NMB: net monetary benefit; OPH: outpatient hysteroscopy; Pr (CE): probability of being cost-effective; QALY: quality-adjusted life year; SMFs: submucosal fibroids; TVUS: transvaginal ultrasound scan

Figure 16: Cost-effectiveness plane for analysis 3 (top 10 cost-effective strategies as measured by net monetary benefit)



NMB: net monetary benefit; QALYs: quality-adjusted life years; stra: strategy

Analysis 4

Analysis with conservative assumptions with respect to treatment gain.

Simulations = 250

Diagnostic strategies:

1. hysterectomy alone
2. OPH.

First- and second-line treatment alternatives evaluated for each pathology are shown in Table 20. A total of 167 diagnostic/treatment strategies were included in this analysis.

Table 20: Treatment alternatives evaluated for each pathology in analysis 4

Polyps		SMFs		Fibroids < 3 cm		Fibroids ≥ 3 cm		NIP	
1st line	2nd line	1st line	2nd line	1st line	2nd line	1st line	2nd line	1st line	2nd line
LNG-IUS	Hyst	LNG-IUS	Hyst	LNG-IUS	Hyst	LNG-IUS	Hyst	LNG-IUS	Hyst
Polypectomy		TCRF		2nd gen		Hyst		Hyst	2nd gen
Hyst		Hyst		Hyst					

2nd gen: second generation endometrial ablation; hyst: hysterectomy; LNG-IUS: levonorgestrel-releasing intrauterine system; NIP: no identified pathology; SMFs: submucosal fibroids; TCRF: transcervical resection of fibroids

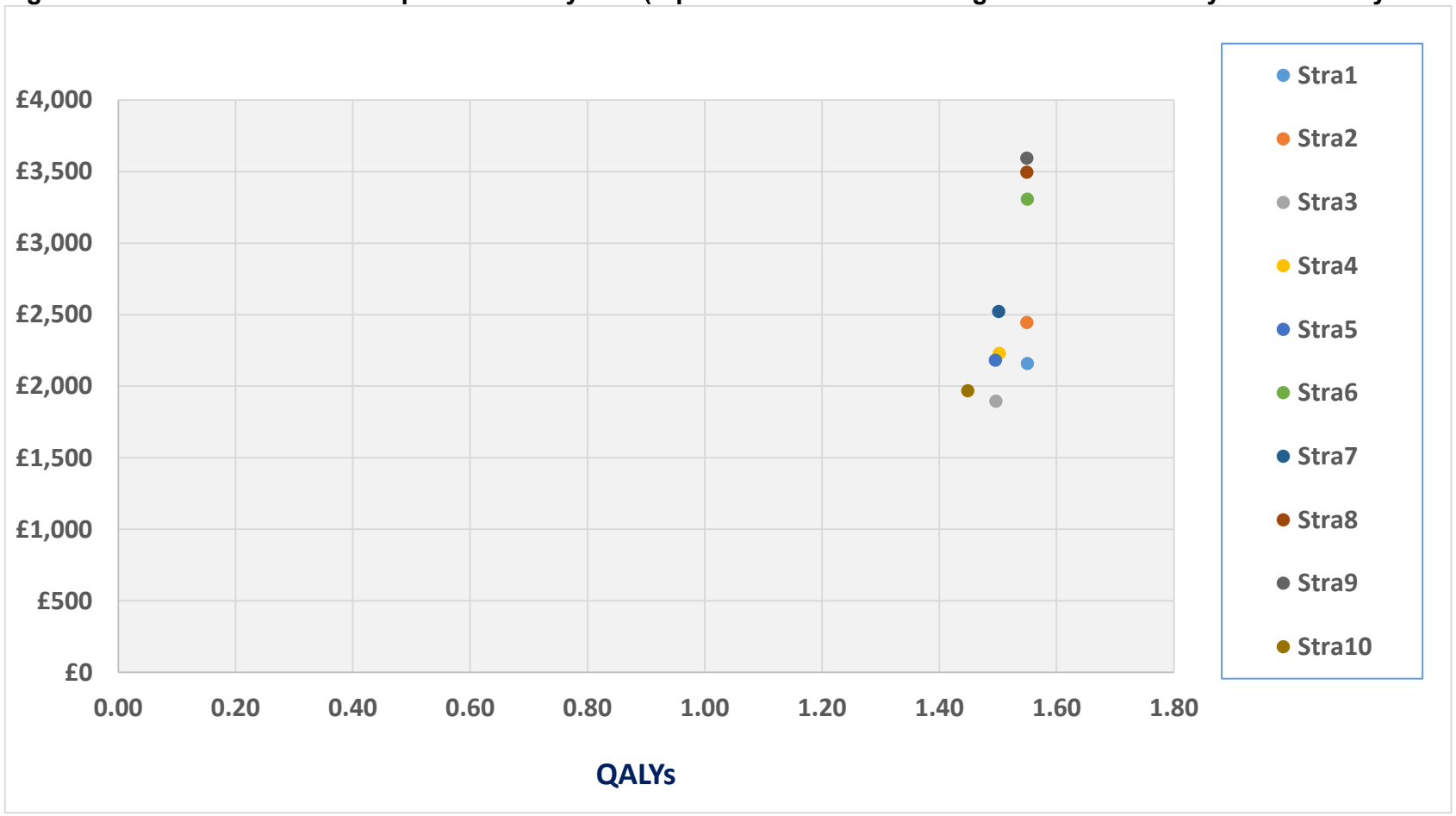
In this analysis conservative assumptions, based on expert clinical opinion, were made with respect to the effectiveness of treatments according to the underlying pathology. Empiric treatment with hysterectomy was compared with strategies where the results of OPH were used to determine treatment. Empiric treatment with hysterectomy was not found to be cost-effective and PSA suggested that, taking into account model input uncertainty, it only had a 4% probability of being the most cost-effective strategy. The results for the top 10 most cost-effective strategies by mean NMB are summarised in Table 21 and Figure 17 below. The full results are given in Health economic results Appendix B:.

Table 21: Analysis 4 – top 10 most cost-effective strategies (as measured by net monetary benefit)

Dx	Polys		SMFs		Fibroids < 3 cm		Fibroids ≥ 3 cm		NIP		Mean cost	Mean QALY	Mean NMB	Pr (CE)
OPH (1)	Hyst		Hyst		LNG	Hyst	Hyst		LNG	Hyst	£2,158	1.54980	£28,838	0.916
OPH (2)	Hyst		Hyst		Hyst		Hyst		LNG	Hyst	£2,445	1.54896	£28,534	0.004
OPH (3)	Hyst		Hyst		LNG	Hyst	Hyst		LNG	2nd	£1,895	1.49620	£28,029	0.036
OPH (4)	Hyst		Hyst		2nd	Hyst	Hyst		LNG	Hyst	£2,230	1.50179	£27,806	0.000
OPH (5)	Hyst		Hyst		Hyst		Hyst		LNG	2nd	£2,182	1.49537	£27,725	0.000
OPH (6)	Hyst		Hyst		LNG	Hyst	Hyst		Hyst		£3,306	1.54998	£27,693	0.000
OPH (7)	Polypectomy	Hyst	Hyst		LNG	Hyst	Hyst		LNG	Hyst	£2,523	1.50128	£27,503	0.000
Hyst alone (8)	Hyst		Hyst		Hyst		Hyst		Hyst		£3,495	1.54915	£27,488	0.040
OPH (9)	Hyst		Hyst		Hyst		Hyst		Hyst		£3,594	1.54915	£27,389	0.000
OPH (10)	Hyst		Hyst		2nd	Hyst	Hyst		LNG	2nd	£1,967	1.44820	£26,997	0.004

2nd: second generation endometrial ablation; dx: diagnosis; hyst: hysterectomy; LNG: levonorgestrel-releasing intrauterine system; NIP: no identified pathology; NMB: net monetary benefit; OPH: outpatient hysteroscopy; Pr (CE): probability of being cost-effective; QALY: quality-adjusted life year; SMFs: submucosal fibroids

Figure 17: Cost-effectiveness plane for analysis 4 (top 10 cost-effective strategies as measured by net monetary benefit)



NMB: net monetary benefit; QALYs: quality-adjusted life years; stra: strategy

Analysis 5

Base case analysis with respect to treatment gain. In this analysis treatment alternatives are kept constant allowing a comparison of the cost-effectiveness of the different diagnostic tests for a given treatment strategy.

Simulations = 10000

Diagnostic strategies:

1. OPH
2. TVUS
3. EBx.

First- and second-line treatment alternatives evaluated for each pathology are shown in Table 22. A total of 3 diagnostic/treatment strategies were included in this analysis.

Table 22: Treatment alternatives evaluated for each pathology in analysis 5

Polyps		SMFs		Fibroids < 3 cm		Fibroids ≥ 3 cm		NIP	
1st line	2nd line	1st line	2nd line	1st line	2nd line	1st line	2nd line	1st line	2nd line
Polypectomy	Hyst	TCRF	Hyst	LNG-IUS	Hyst	Hyst		LNG-IUS	Hyst

Hyst: hysterectomy; LNG-IUS: levonorgestrel-releasing intrauterine system; NIP: no identified pathology; SMFs: submucosal fibroids; TCR: transcervical resection of fibroids

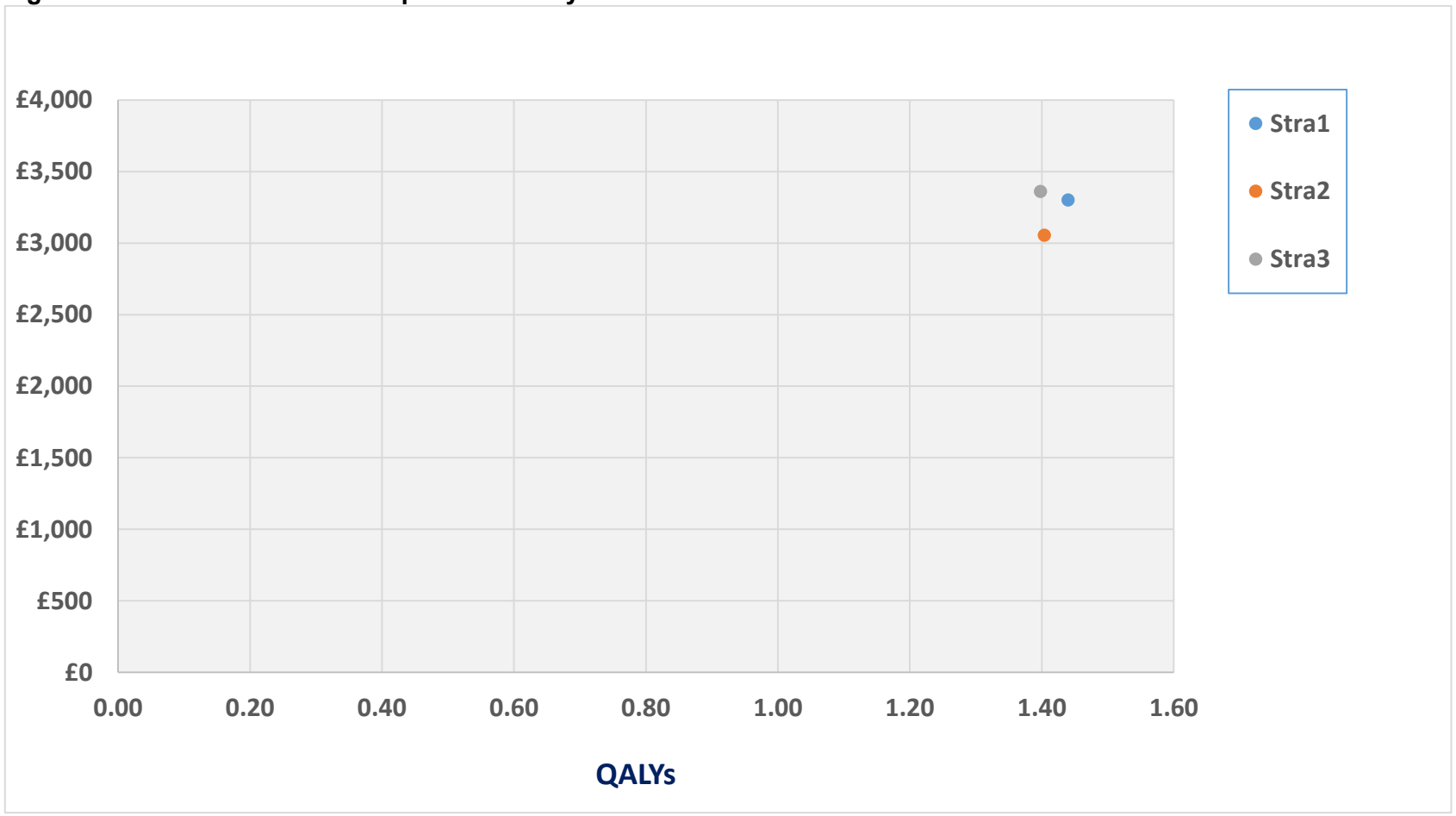
In this analysis it was assumed that most treatments are effective irrespective of the underlying pathology. Holding the treatment alternatives for different pathologies constant, TVUS was found to be the most cost-effective diagnostic test with a 94.6% probablility. The mean NMB was £25,492 for TVUS and £25,026 for OPH. EBx was dominated by both OPH and TVUS. The results are summarised in Table 23 and Figure 18 below.

Table 23: Analysis 5 results

Dx	Polys		SMFs		Fibroids < 3 cm		Fibroids ≥ 3 cm		NIP		Mean cost	Mean QALY	Mean NMB	Pr (CE)
TVUS (1)	Polypectomy	Hyst	TCRF	Hyst	2nd	Hyst	Hyst		LNG	Hyst	£3,301	1.43969	£25,492	0.946
OPH (2)	Polypectomy	Hyst	TCRF	Hyst	2nd	Hyst	Hyst		LNG	Hyst	£3,054	1.40401	£25,026	0.054
EBx (3)	Polypectomy	Hyst	TCRF	Hyst	2nd	Hyst	Hyst		LNG	Hyst	£3,360	1.39791	£24,598	0.000

2nd: second generation endometrial ablation; dx: diagnosis; hyst: hysterectomy; EBx: endometrial biopsy; LNG: levonorgestrel-releasing intrauterine system; NIP: no identified pathology; OPH: outpatient hysteroscopy; Pr (CE): probability of being cost-effective; QALY: quality-adjusted life year; SMFs: submucosal fibroids; TVUS: transvaginal ultrasound scan

Figure 18: Cost-effectiveness plane for analysis 5



QALYs: quality-adjusted life years; stra: strategy

Analysis 6

Analysis with conservative assumptions with respect to treatment gain – as analysis 5 in other respects.

Simulations = 10000

Diagnostic strategies:

1. OPH
2. TVUS
3. EBx.

First- and second-line treatment alternatives evaluated for each pathology are shown in Table 24. A total of 3 diagnostic/treatment strategies were included in this analysis.

Table 24: Treatment alternatives evaluated for each pathology in analysis 6

Polyps		SMFs		Fibroids < 3 cm		Fibroids ≥ 3 cm		NIP	
1st line	2nd line	1st line	2nd line	1st line	2nd line	1st line	2nd line	1st line	2nd line
Polypectomy	Hyst	TCRF	Hyst	LNG-IUS	Hyst	Hyst		LNG-IUS	Hyst

Hyst: hysterectomy; LNG-IUS: levonorgestrel-releasing intrauterine system; NIP: no identified pathology; SMFs: submucosal fibroids; TCRF: transcervical resection of fibroids

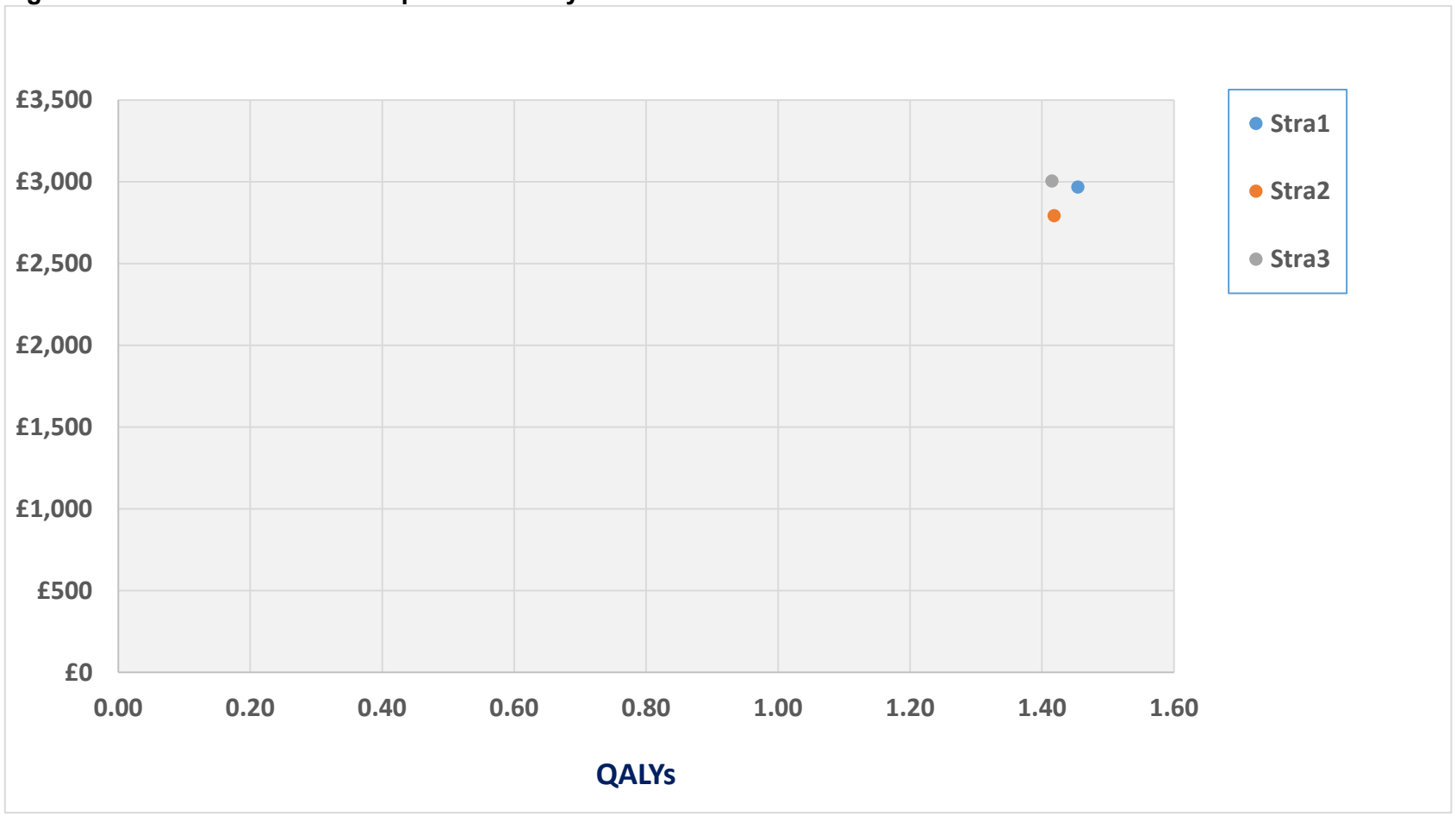
In this analysis conservative assumptions were made with respect to treatment gain and underlying pathology. Treatment strategies were held constant. TVUS was found to be the most cost-effective diagnostic test with a 98.3% probablility with EBx dominated by both OPH and TVUS. The results are summarised in Table 25 and Figure 19 below.

Table 25: Analysis 6 results

Dx	Polys		SMFs		Fibroids < 3 cm		Fibroids ≥ 3 cm		NIP		Mean cost	Mean QALY	Mean NMB	Pr (CE)
TVUS (1)	Polypectomy	Hyst	TCRF	Hyst	2nd	Hyst	Hyst		LNG	Hyst	£2,968	1.45435	£26,119	0.983
OPH (2)	Polypectomy	Hyst	TCRF	Hyst	2nd	Hyst	Hyst		LNG	Hyst	£2,793	1.41818	£25,570	0.017
EBx (3)	Polypectomy	Hyst	TCRF	Hyst	2nd	Hyst	Hyst		LNG	Hyst	£3,004	1.41484	£25,293	0.000

2nd: second generation endometrial ablation; dx: diagnosis; hyst: hysterectomy; EBx: endometrial biopsy; LNG: levonorgestrel-releasing intrauterine system; NIP: no identified pathology; OPH: outpatient hysteroscopy; Pr (CE): probability of being cost-effective; QALY: quality-adjusted life year; SMFs: submucosal fibroids; TVUS: transvaginal ultrasound scan

Figure 19: Cost-effectiveness plane for analysis 6



QALYs: quality-adjusted life years; stra: strategy

Analysis 7

Base case analysis with respect to treatment gain. The prevalence of fibroids less than 3 cm in diameter is assumed to be 5% in this analysis compared to 20% in the base case. As analysis 5 in other respects.

Simulations = 1000

Diagnostic strategies:

1. OPH
2. TVUS
3. EBx.

First- and second-line treatment alternatives evaluated for each pathology are shown in Table 26. A total of 3 diagnostic/treatment strategies were included in this analysis.

Table 26: Treatment alternatives evaluated for each pathology in analysis 6

Polyps		SMFs		Fibroids < 3 cm		Fibroids ≥ 3 cm		NIP	
1st line	2nd line	1st line	2nd line	1st line	2nd line	1st line	2nd line	1st line	2nd line
Polypectomy	Hyst	TCRF	Hyst	LNG-IUS	Hyst	Hyst		LNG-IUS	Hyst

Hyst: hysterectomy; LNG-IUS: levonorgestrel-releasing intrauterine system; NIP: no identified pathology; SMFs: submucosal fibroids; TCRF: transcervical resection of fibroids

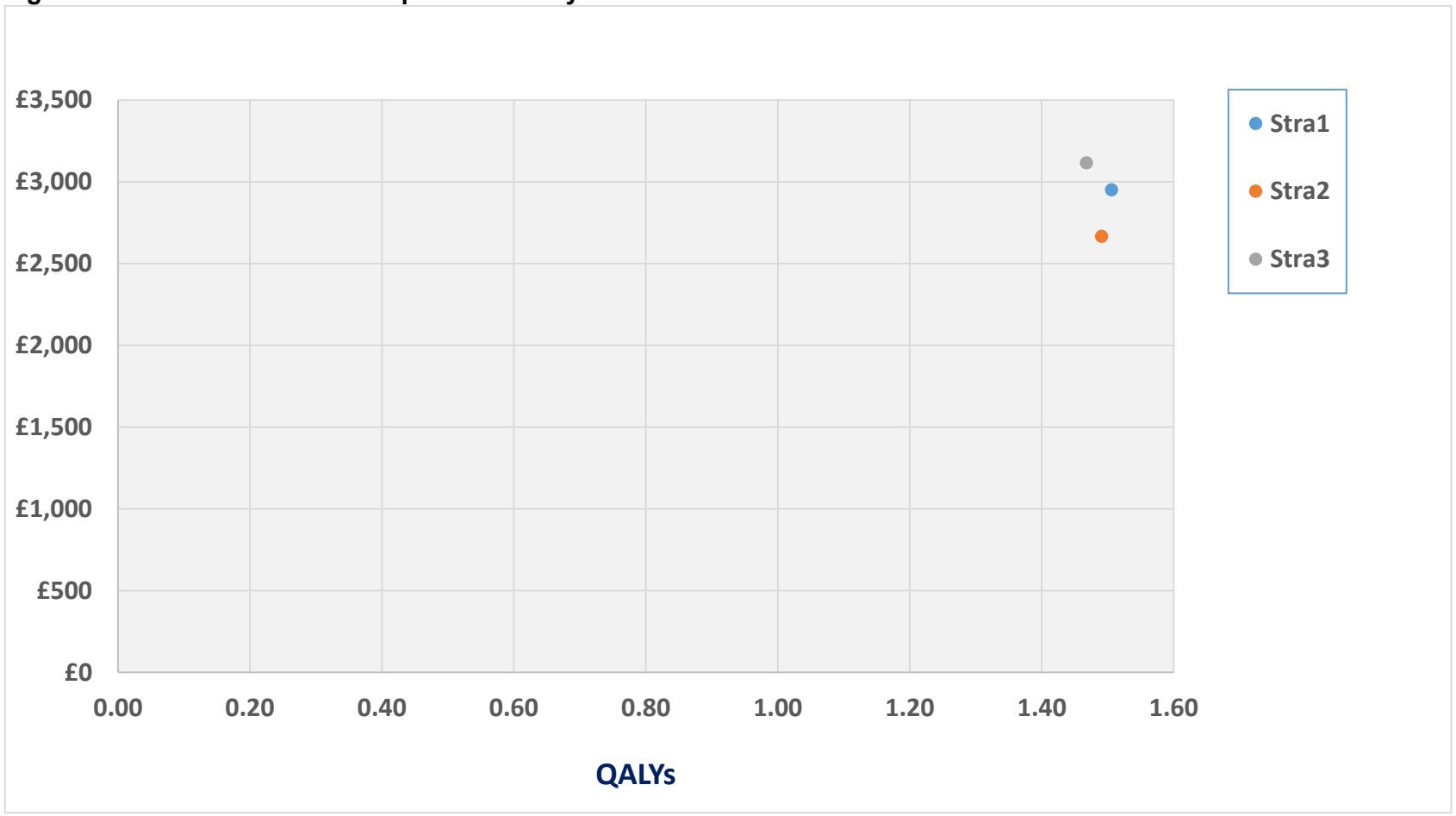
In this analysis it was assumed that most treatments are effective irrespective of the underlying pathology and that the prevalence of fibroids of less than 3 cm was 5%. In this analysis, with treatment alternatives held constant, TVUS and OPH had a very similar mean NMB with OPH having a 52.9% probability of being the most cost-effective strategy. EBx was dominated by both OPH and TVUS. The results are summarised in Table 27 and Figure 20 below.

Table 27: Analysis 7 results

Dx	Polys		SMFs		Fibroids < 3 cm		Fibroids ≥ 3 cm		NIP		Mean cost	Mean QALY	Mean NMB	Pr (CE)
TVUS (1)	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,952	1.50617	£27,172	0.471
OPH (2)	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,666	1.49118	£27,158	0.529
EBx (3)	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£3,115	1.46814	£26,248	0.000

2nd: second generation endometrial ablation; dx: diagnosis; hyst: hysterectomy; EBx: endometrial biopsy; LNG: levonorgestrel-releasing intrauterine system; NIP: no identified pathology; OPH: outpatient hysteroscopy; Pr (CE): probability of being cost-effective; QALY: quality-adjusted life year; SMFs: submucosal fibroids; TVUS: transvaginal ultrasound scan

Figure 20: Cost-effectiveness plane for analysis 7



QALYs: quality-adjusted life years; stra: strategy

Analysis 8

Base case analysis with respect to treatment gain.

Simulations = 250

Diagnostic strategies:

1. LNG-IUS
2. TVUS.

First- and second-line treatment alternatives evaluated for each pathology are shown in Table 28. A total of 109 diagnostic/treatment strategies were included in this analysis.

Table 28: Treatment alternatives evaluated for each pathology in analysis 8

Polyps		SMFs		Fibroids < 3 cm		Fibroids ≥ 3 cm		NIP	
1st line	2nd line	1st line	2nd line	1st line	2nd line	1st line	2nd line	1st line	2nd line
Polypectomy	Hyst	TCRF	Hyst	LNG-IUS	Hyst	Hyst	Hyst	LNG-IUS	Hyst
LNG-IUS		LNG-IUS		TXA		LNG-IUS		TXA	
TXA		TXA				TXA			

Hyst: hysterectomy; LNG-IUS: levonorgestrel-releasing intrauterine system; NIP: no identified pathology; SMFs: submucosal fibroids; TCRF: transcervical resection of fibroids; TXA: tranexamic acid

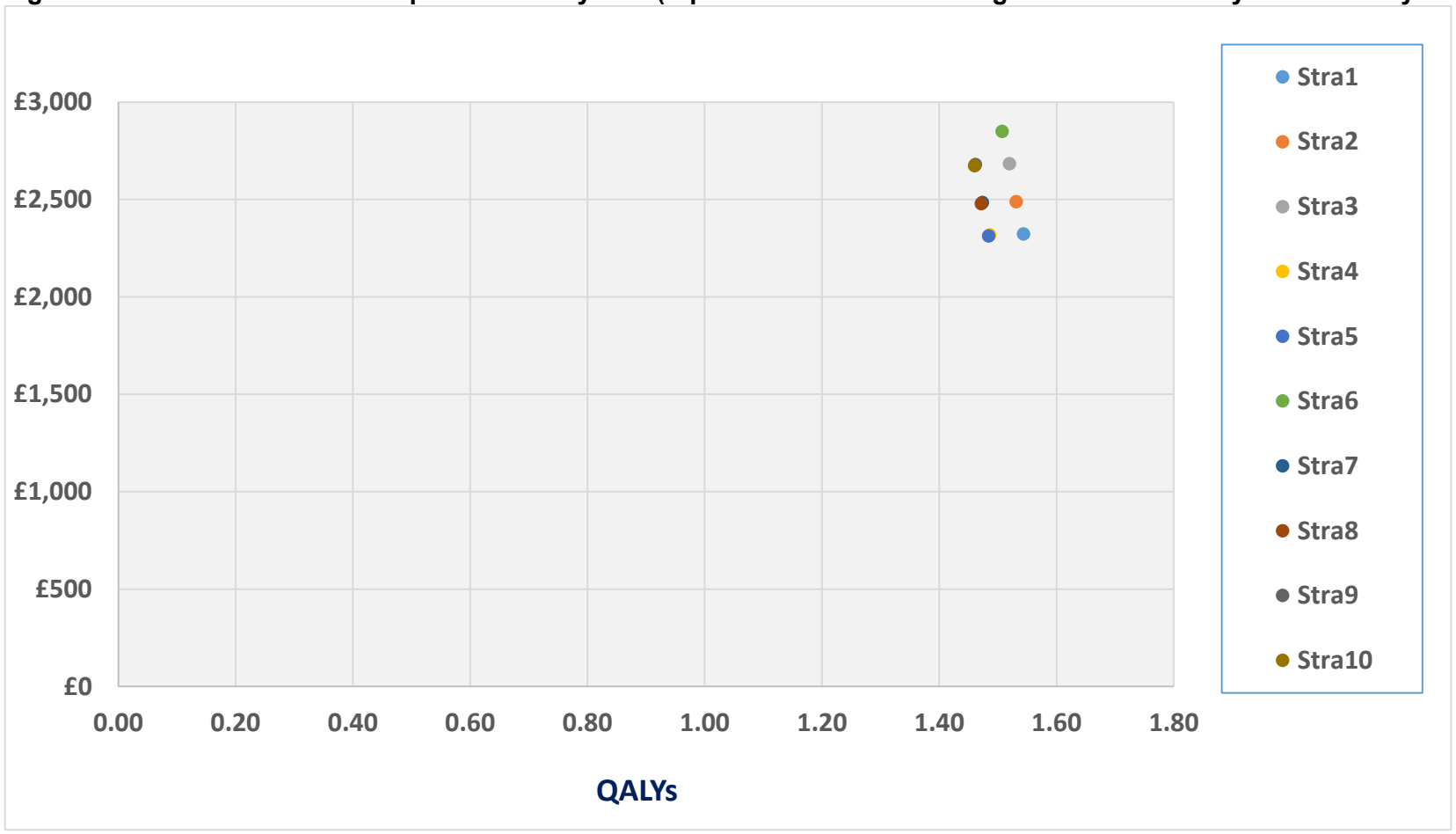
In this analysis it was assumed that most treatments are effective irrespective of the underlying pathology and TXA was included as a treatment alternative for all uterine pathology. The analysis compared empiric treatment with LNG-IUS or diagnosis with TVUS to direct treatment. A strategy of TVUS followed by TXA as a first-line treatment was found to have an 82% probability of being the most cost-effective. The results are summarised in Table 31 and Figure 21 below.

Table 29: Analysis 8 – top 10 most cost-effective strategies (as measured by net monetary benefit)

Dx	Polys		SMFs		Fibroids < 3 cm		Fibroids ≥ 3 cm		NIP		Mean cost	Mean QALY	Mean NMB	Pr (CE)
TVUS (1)	TXA	Hyst	TXA	Hyst	TXA	Hyst	TXA	Hyst	TXA	Hyst	£985	1.66343	£32,284	0.820
TVUS (2)	TXA	Hyst	TXA	Hyst	TXA	Hyst	LNG	Hyst	TXA	Hyst	£995	1.66261	£32,257	0.000
TVUS (3)	TXA	Hyst	TXA	Hyst	TXA	Hyst	Hyst		TXA	Hyst	£1,018	1.66181	£32,219	0.004
TVUS (4)	TXA	Hyst	TXA	Hyst	LNG	Hyst	TXA	Hyst	TXA	Hyst	£1,090	1.65511	£32,012	0.000
TVUS (5)	TXA	Hyst	TXA	Hyst	LNG	Hyst	LNG	Hyst	TXA	Hyst	£1,100	1.65429	£31,986	0.000
TVUS (6)	TXA	Hyst	LNG	Hyst	TXA	Hyst	TXA	Hyst	TXA	Hyst	£1,065	1.65132	£31,962	0.040
TVUS (7)	TXA	Hyst	TXA	Hyst	LNG	Hyst	Hyst		TXA	Hyst	£1,123	1.65350	£31,947	0.000
TVUS (8)	TXA	Hyst	LNG	Hyst	TXA	Hyst	LNG	Hyst	TXA	Hyst	£1,075	1.65050	£31,935	0.000
TVUS (9)	TXA	Hyst	LNG	Hyst	TXA	Hyst	Hyst		TXA	Hyst	£1,098	1.64971	£31,896	0.000
TVUS (10)	TXA	Hyst	LNG	Hyst	LNG	Hyst	TXA	Hyst	TXA	Hyst	£1,170	1.64300	£31,690	0.000

Dx: diagnosis; hyst: hysterectomy; LNG: levonorgestrel-releasing intrauterine system; NIP: no identified pathology; NMB: net monetary benefit; Pr (CE): probability of being cost-effective; QALY: quality-adjusted life year; SMFs: submucosal fibroids; TVUS: transvaginal ultrasound scan; TXA: tranexamic acid

Figure 21: Cost-effectiveness plane for analysis 8 (top 10 cost-effective strategies as measured by net monetary benefit)



NMB: net monetary benefit; QALYs: quality-adjusted life years; stra: strategy

Analysis 9

Analysis with conservative assumptions with respect to treatment gain – as analysis 8 in other respects.

Simulations = 250

Diagnostic strategies:

1. LNG-IUS
2. TVUS.

First- and second-line treatment alternatives evaluated for each pathology are shown in Table 30. A total of 109 diagnostic/treatment strategies were included in this analysis.

Table 30: Treatment alternatives evaluated for each pathology in analysis 9

Polyps		SMFs		Fibroids < 3 cm		Fibroids ≥ 3 cm		NIP	
1st line	2nd line	1st line	2nd line	1st line	2nd line	1st line	2nd line	1st line	2nd line
Polypectomy	Hyst	TCRF	Hyst	LNG-IUS	Hyst	Hyst	Hyst	LNG-IUS	Hyst
LNG-IUS		LNG-IUS		TXA		LNG-IUS		TXA	
TXA		TXA				TXA			

Hyst: hysterectomy; LNG-IUS: levonorgestrel-releasing intrauterine system; NIP: no identified pathology; SMFs: submucosal fibroids; TCRF: transcervical resection of fibroids; TXA: tranexamic acid

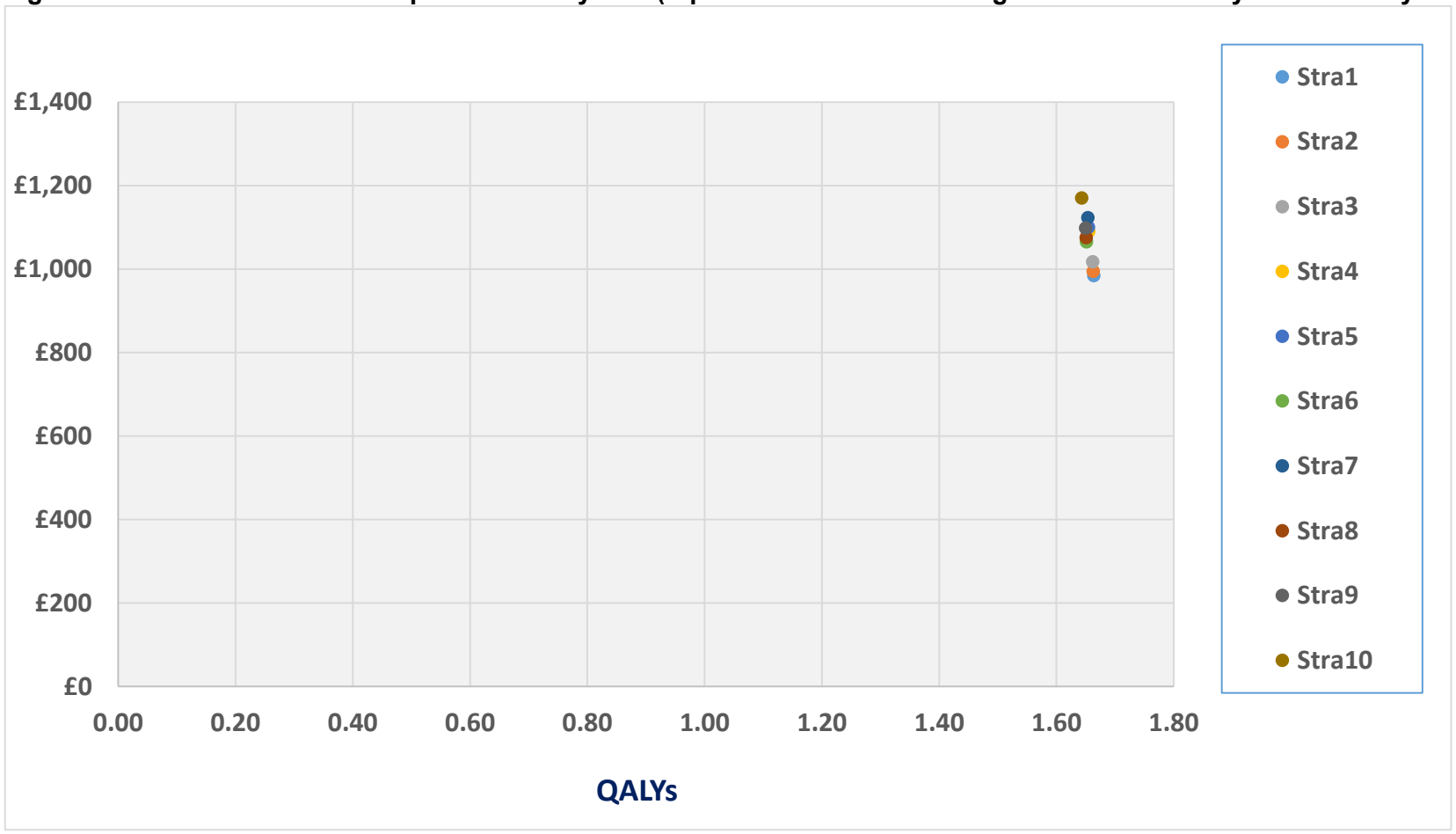
In this analysis conservative asssumptions were made with respect to treatment gain and the underlying pathology and TXA was included as a treatment alternative for all uterine pathology. The analysis compared empiric treatment with LNG-IUS or diagnosis with TVUS to direct treatment. The most cost-effective strategy was TVUS with TXA as a first-line treatment for uterine pathologies where it was assumed to be an effective treatment. The results are summarised in Table 31 and Figure 22 below.

Table 31: Analysis 9 – top 10 most cost-effective strategies (as measured by net monetary benefit)

Dx	Polys		SMFs		Fibroids < 3 cm		Fibroids ≥ 3 cm		NIP		Mean cost	Mean QALY	Mean NMB	Pr (CE)
TVUS (1)	Polypectomy	Hyst	TCRF	Hyst	TXA	Hyst	Hyst		TXA	Hyst	£2,323	1.54357	£28,548	0.904
TVUS (2)	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		TXA	Hyst	£2,488	1.53119	£28,136	0.008
TVUS (3)	Polypectomy	Hyst	TCRF	Hyst	TXA	Hyst	Hyst		LNG	Hyst	£2,684	1.51947	£27,706	0.000
TVUS (4)	Polypectomy	Hyst	TCRF	Hyst	TXA	Hyst	LNG	Hyst	TXA	Hyst	£2,319	1.48582	£27,397	0.000
TVUS (5)	Polypectomy	Hyst	TCRF	Hyst	TXA	Hyst	TXA	Hyst	TXA	Hyst	£2,313	1.48410	£27,369	0.000
TVUS (6)	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,849	1.50709	£27,293	0.084
TVUS (7)	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	TXA	Hyst	£2,484	1.47344	£26,985	0.000
TVUS (8)	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	TXA	Hyst	TXA	Hyst	£2,478	1.47173	£26,956	0.000
TVUS (9)	Polypectomy	Hyst	TCRF	Hyst	TXA	Hyst	LNG	Hyst	LNG	Hyst	£2,680	1.46172	£26,555	0.000
TVUS (10)	Polypectomy	Hyst	TCRF	Hyst	TXA	Hyst	TXA	Hyst	LNG	Hyst	£2,674	1.46000	£26,526	0.000

Dx: diagnosis; hyst: hysterectomy; LNG: levonorgestrel-releasing intrauterine system; NIP: no identified pathology; NMB: net monetary benefit; Pr (CE): probability of being cost-effective; QALY: quality-adjusted life year; SMFs: submucosal fibroids; TVUS: transvaginal ultrasound scan; TXA: tranexamic acid

Figure 22: Cost-effectiveness plane for analysis 9 (top 10 cost-effective strategies as measured by net monetary benefit)



NMB: net monetary benefit; QALYs: quality-adjusted life years; stra: strategy

Analysis 10

Base case analysis with respect to treatment gain. Additionally, this analyses uses a baseline discontinuation rate based on placebo in the studies included in the NMA rather than that derived from published discontinuation rates for LNG-IUS.

Simulations = 200

Diagnostic strategies:

1. LNG-IUS alone
2. OPH
3. TVUS
4. EBx.

First- and second-line treatment alternatives evaluated for each pathology are shown in Table 32. A total of 98 diagnostic/treatment strategies were included in this analysis.

Table 32: Treatment alternatives evaluated for each pathology in analysis 10

Polyps		SMFs		Fibroids < 3 cm		Fibroids ≥ 3 cm		NIP	
1st line	2nd line	1st line	2nd line	1st line	2nd line	1st line	2nd line	1st line	2nd line
LNG-IUS	Hyst	LNG-IUS	Hyst	LNG-IUS	Hyst	LNG-IUS	Hyst	LNG-IUS	Hyst
Polypectomy		TCRF		2nd gen		Hyst			2nd gen

2nd gen: second generation endometrial ablation; hyst: hysterectomy; NIP: no identified pathology; SMFs: submucosal fibroids; TCRF: transcervical resection of fibroids

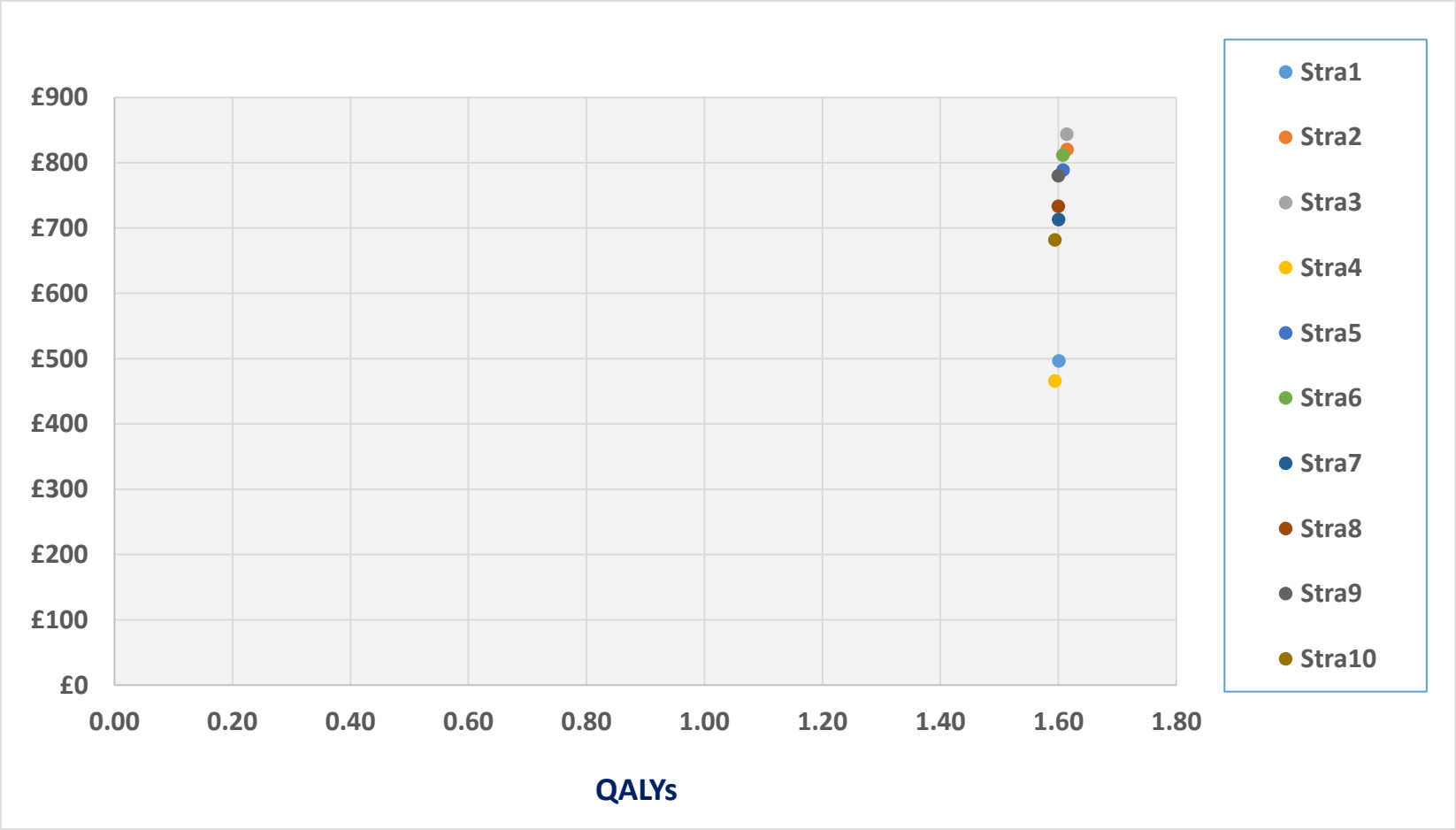
In this analysis it was assumed that most treatments are effective irrespective of the underlying pathology with baseline discontinuation rates derived from the placebo arm of the NMA. The analysis found that empiric treatment with LNG-IUS had a 67% probability of being the most cost-effective. The results for the top 10 most cost-effectiven strategies by mean NMB are summarised in Table 33 and Figure 23 below. The full results are given in the Health economic results Appendix B:.

Table 33: Analysis 10 – top 10 most cost-effective strategies (as measured by net monetary benefit)

Dx	Polys		SMFs		Fibroids < 3 cm		Fibroids ≥ 3 cm		NIP		Mean cost	Mean QALY	Mean NMB	Pr (CE)
LNG-IUS (1)	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£497	1.60078	£31,519	0.670
TVS (2)	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£820	1.61469	£31,474	0.305
TVS (3)	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£843	1.61428	£31,442	0.010
LNG-IUS (4)	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd	£466	1.59431	£31,420	0.010
TVS (5)	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd	£789	1.60823	£31,376	0.000
TVS (6)	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	2nd	£812	1.60782	£31,345	0.000
OPH (7)	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£713	1.60041	£31,295	0.000
OPH (8)	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£733	1.59996	£31,266	0.000
EBx (9)	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£780	1.59999	£31,220	0.000
OPH (10)	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd	£682	1.59394	£31,197	0.000

2nd: second generation endometrial ablation; Dx: diagnosis; EBx: endometrial biopsy; hyst: hysterectomy; LNG: levonorgestrel-releasing intrauterine system; NIP: no identified pathology; NMB: net monetary benefit; OPH: outpatient hysteroscopy; Pr (CE): probability of being cost-effective; QALY: quality-adjusted life year; SMFs: submucosal fibroids; TVUS: transvaginal ultrasound scan

Figure 23: Cost-effectiveness plane for analysis 10 (top 10 cost-effective strategies as measured by net monetary benefit)



NMB: net monetary benefit; QALYs: quality-adjusted life years; stra: strategy

Analysis 11

Analysis with conservative assumptions with respect to treatment gain – as analysis 10 in other respects.

Diagnostic strategies:

1. LNG-IUS alone
2. OPH
3. TVUS
4. EBx.

First- and second-line treatment alternatives evaluated for each pathology are shown in Table 34. A total of 98 diagnostic/treatment strategies were included in this analysis.

Table 34: Treatment alternatives evaluated for each pathology in analysis 11

Polyps		SMFs		Fibroids < 3 cm		Fibroids ≥ 3 cm		NIP	
1st line	2nd line	1st line	2nd line	1st line	2nd line	1st line	2nd line	1st line	2nd line
LNG-IUS	Hyst	LNG-IUS	Hyst	LNG-IUS	Hyst	LNG-IUS	Hyst	LNG-IUS	Hyst
Polypectomy		TCRF		2nd gen		Hyst			2nd gen

2nd gen: second generation endometrial ablation; hyst: hysterectomy; NIP: no identified pathology; SMFs: submucosal fibroids; TCRF: transcervical resection of fibroids

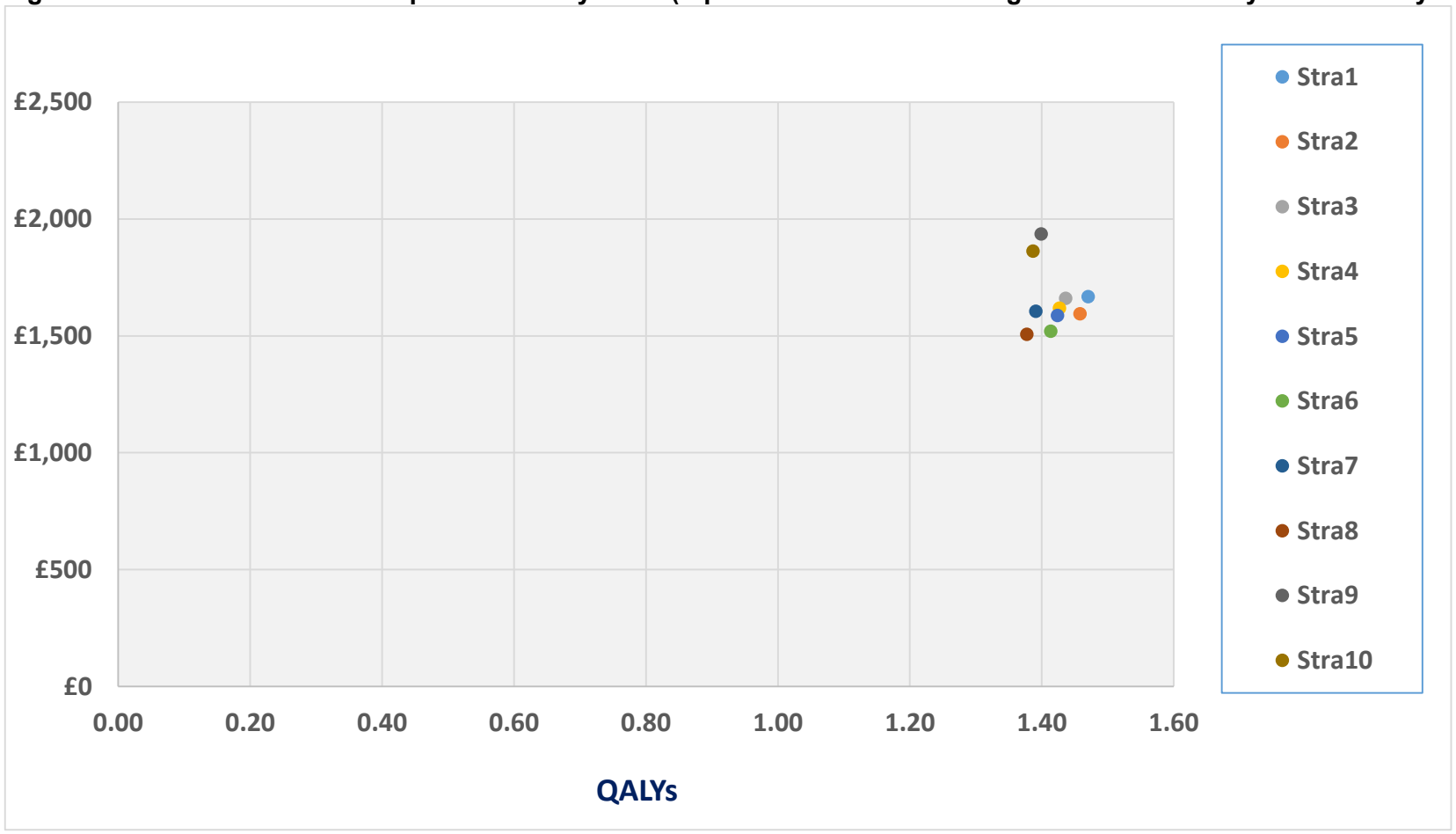
In this analysis conservative asssumptions were made with respect to treatment gain and the underlying pathology. Baseline discontinuation rates derived from the placebo arm of the NMA. The results suggested that TVUS was the most cost-effective diagnostic test with hysterectomy as the first-line treatment for fibroids 3 cm or more in diameter and as the second-line treatment for all other underlying pathology. The results for the top 10 most cost-effective strategies by mean NMB are summarised in Table 35 and Figure 24 below. The full results are given in the Health economic results Appendix B:.

Table 35: Analysis 11 – top 10 most cost-effective strategies (as measured by net monetary benefit)

Dx	Polys		SMFs		Fibroids < 3 cm		Fibroids ≥ 3 cm		NIP		Mean cost	Mean QALY	Mean NMB	Pr (CE)
TVS (1)	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,668	1.47010	£27,734	0.920
TVS (2)	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd	£1,595	1.45799	£27,565	0.075
TVS (3)	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LN	Hyst	£1,661	1.43594	£27,058	0.000
EBx (4)	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,618	1.42695	£26,921	0.000
TVS (5)	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd	£1,587	1.42383	£26,889	0.000
EBx (6)	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd	£1,520	1.41347	£26,749	0.000
EBx (7)	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,605	1.39089	£26,213	0.000
EBx (8)	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd	£1,507	1.37741	£26,041	0.000
TVS (9)	Polypectomy	Hyst	TCRF	Hyst	2nd	Hyst	Hyst		LNG	Hyst	£1,936	1.39880	£26,040	0.000
TVS (10)	Polypectomy	Hyst	TCRF	Hyst	2nd	Hyst	Hyst		LNG	2nd	£1,862	1.38669	£25,872	0.000

2nd: second generation endometrial ablation; Dx: diagnosis; EBx: endometrial biopsy; hyst: hysterectomy; LNG: levonorgestrel-releasing intrauterine system; NIP: no identified pathology; NMB: net monetary benefit; OPH: outpatient hysteroscopy; Pr (CE): probability of being cost-effective; QALY: quality-adjusted life year; SMFs: submucosal fibroids; TVUS: transvaginal ultrasound scan

Figure 24: Cost-effectiveness plane for analysis 11 (top 10 cost-effective strategies as measured by net monetary benefit)



NMB: net monetary benefit; QALYs: quality-adjusted life years; stra: strategy

Analysis 12

Analysis with conservative assumptions with respect to treatment gain. This analysis compares alternative surgical strategies for fibroids less than 3 cm whilst holding the diagnostic strategy and treatment strategies for other uterine pathologies constant.

Simulations = 10000

Diagnostic strategies:

1. TVUS.

First- and second-line treatment alternatives evaluated for each pathology are shown in Table 36. A total of 3 diagnostic/treatment strategies were included in this analysis.

Table 36: Treatment alternatives evaluated for each pathology in analysis 12

Polyps		SMFs		Fibroids < 3 cm		Fibroids ≥ 3 cm		NIP	
1st line	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**
Polypectomy	Hyst	TCRF	Hyst	1st Gen	Hyst	Hyst		LNG-IUS	Hyst
				2nd Gen					
				Hyst					

2nd gen: second generation endometrial ablation; 1st gen: first generation endometrial ablation; Hyst: hysterectomy; LNG-IUS: levonorgestrel-releasing intrauterine system; NIP: no identified pathology; SMFs: submucosal fibroids; TCRF: transcervical resection of fibroids

In this analysis conservative asssumptions were made with respect to treatment gain and the underlying pathology. TVUS was used as the sole diagnostic test but alternative surgical first-line treatments were considered for fibroids less than 3 cm in diameter. This analysis suggested that hysterectomy was more cost-effective than first-generation endometrial ablation and second-generation endometrial ablation.

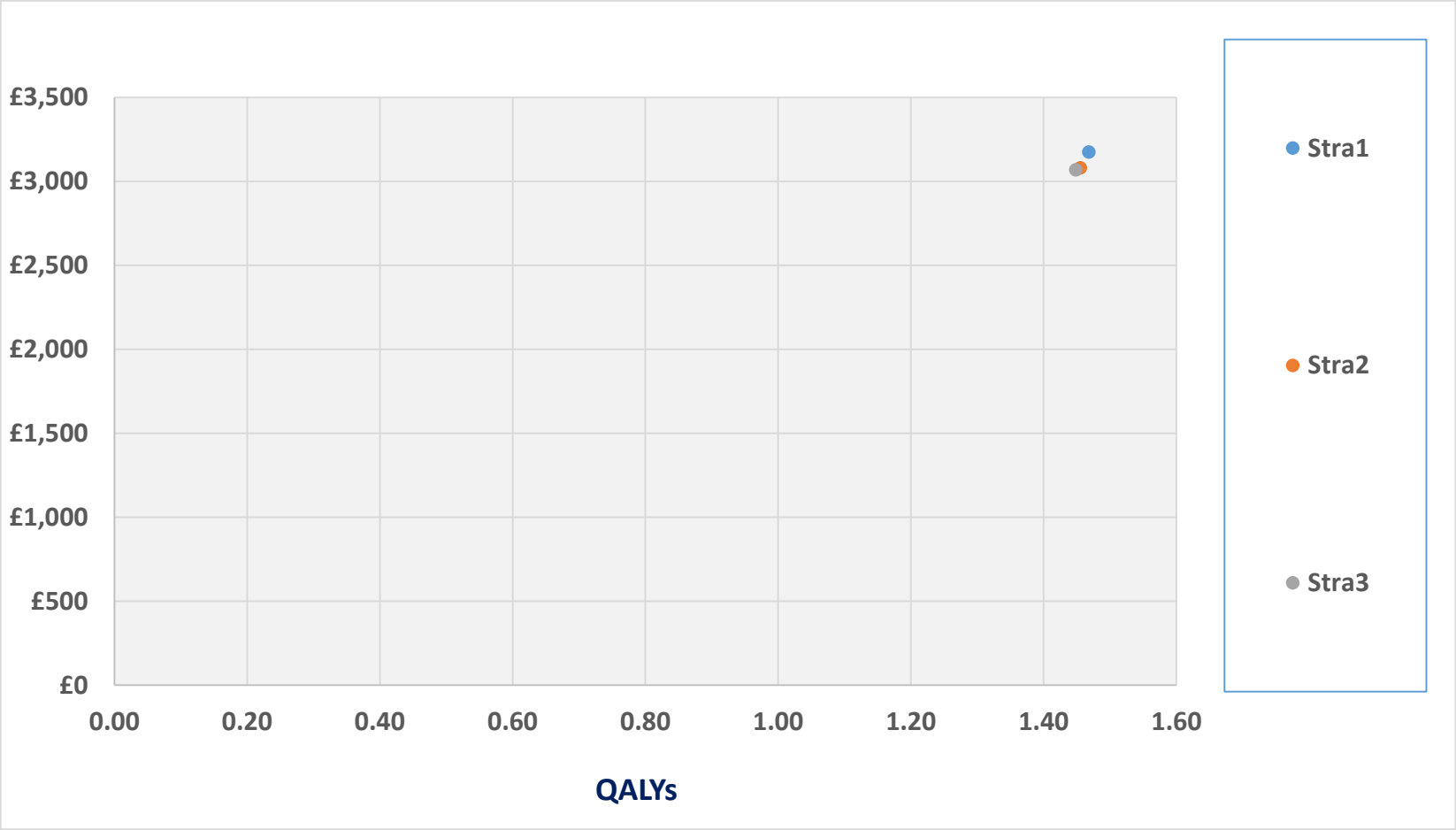
The results are summarised in Table 37 and Figure 25 below.

Table 37: Analysis 12 results

Dx	Polys		SMFs		Fibroids < 3 cm		Fibroids ≥ 3 cm		NIP		Mean cost	Mean QALY	Mean NMB	Pr (CE)
TVUS (1)	Polypectomy	Hyst	TCRF	Hyst	Hyst		Hyst		LNG	Hyst	£3,174	1.46816	£26,189	0.603
TVUS (2)	Polypectomy	Hyst	TCRF	Hyst	1st	Hyst	Hyst		LNG	Hyst	£3,080	1.45550	£26,030	0.318
TVUS (3)	Polypectomy	Hyst	TCRF	Hyst	2nd	Hyst	Hyst		LNG	Hyst	£3,069	1.44854	£25,902	0.079

1st: first generation endometrial ablation; 2nd: second generation endometrial ablation; dx: diagnosis; hyst: hysterectomy; LNG: levonorgestrel-releasing intrauterine system; NIP: no identifiable pathology; Pr (CE): probability of being cost-effective; QALY: quality-adjusted life year; SMFs: submucosal fibroids; TVUS: transvaginal ultrasound scan

Figure 25: Cost-effectiveness plane for analysis 12



QALYs: quality-adjusted life years; stra: strategy

Discussion

Analysis 1 considered 4 diagnostic strategies and a small number of treatment alternatives reflective of current practice. In this analysis it was assumed that most treatments are effective for most underlying pathologies (see Figure 12). This analysis suggests that a strategy of offering LNG-IUS without prior investigation would be most cost-effective and that it has a 96.8% probability of being the most cost-effective strategy (see Table 15 and Figure 14). A key driver of this result was the avoidance of the costs of diagnostic investigation which is achieved without any appreciable reduction in QALYs when compared to strategies involving diagnostic investigation. For all pathologies it is assumed that LNG-IUS will be an effective treatment and there are no false positive cases who would be directed to an inappropriate treatment. Furthermore, the most cost-effectiveness LNG-IUS alone strategy has hysterectomy as a second-line treatment for all pathologies, which again would be an effective treatment for all women.

Analysis 2 replicated the strategies included in analysis 1. However, in this case more conservative assumptions were made about what would represent effective treatments for a given pathology (see Figure 13). The most cost-effective strategy was TVUS with hysterectomy as the first-line treatment for fibroids 3 cm or more in diameter and the second-line treatment for all other underlying pathologies (see Table 17 and Figure 15). This most cost-effective TVUS strategy had a 94.3% probability of being the most cost-effective strategy with a NMB of £26,991 at a cost-effectiveness threshold of £20,000 per QALY. As with analysis 1 the differences in NMB between the top 10 strategies were relatively small but in analysis 2 there was a lot less variation in the mean cost between the top 10 most cost-effective strategies. In this analysis cost was relatively less important in driving cost-effectiveness with the cheapest strategies among the least cost-effective options. This is because with the more conservative assumptions about treatment effectiveness accurate diagnosis to direct women to the appropriate treatment becomes relatively a lot more important as a false positive diagnosis will often result in a treatment which does not provide any benefit.

Analysis 3 was the same as analysis 1 but with the additional strategy of hysterectomy without any prior diagnostic test. This analysis assumed that most treatments were effective for most pathologies and, as for analysis 1, LNG-IUS without diagnostic investigation with hysterectomy as the second-line treatment, was the most cost-effective strategy with a NMB of £30,845 and a 71.2% probability of being cost-effective.

In analysis 4 conservative assumptions were made with respect to treatment gain. Treatment options for pathology were as for analysis 3. However, for ease of exposition, the diagnostic strategies were limited to a comparison of hysterectomy without diagnostic investigation and outpatient hysteroscopy as the key purpose of the analysis was to assess whether hysterectomy alone could be considered cost-effective in a more favourable scenario for that strategy where fewer treatments were considered across the range of underlying pathologies. Whilst hysterectomy without diagnosis was among the top 10 cost-effective strategies it was not the most cost-effective strategy (see Table 21 and Figure 17). Thus whilst hysterectomy without diagnosis generated a large QALY it was considerably more expensive than strategies involving a diagnostic test, and for some pathologies it was more cost-effective for LNG-IUS to be offered as first-line treatment.

The purpose of analysis 5 was to compare the 3 diagnostic tests for a given first- and second-line treatment strategy. In this analysis the base case assumptions about treatment

effectiveness were made, which lessens the implications of false positive diagnoses compared to when more conservative assumptions are made with respect to treatment gain. The results suggested that EBx was dominated by both TVUS and outpatient hysteroscopy, with EBx the most costly and the least effective strategy (see Table 23 and Figure 18). Outpatient hysteroscopy was cheaper than TVUS despite it being a more expensive test. A key reason for this is that savings arise from the "see-and-treat" opportunity afforded by outpatient hysteroscopy. Nevertheless, TVUS was the most cost-effective strategy with a NMB of £25,492 and a 94.6% probability of being the most cost-effective strategy. By comparison outpatient hysteroscopy had a 5.4% probability of being cost-effective. TVUS is cost-effective by virtue of the increased QALY gain compared to outpatient hysteroscopy which arises because it can detect fibroids (less/equal or more than 3 cm in diameter, see Table 3).

Analysis 6 is as per analysis 5 but with conservative assumptions with respect to treatment gain. In this case the assumption about treatment gain has little impact on the relative cost-effectiveness of the 3 diagnostic tests as shown in Table 25 and Figure 19. EBx remains dominated by outpatient hysteroscopy and TVUS and TVUS is the most cost-effective strategy with a mean NMB of £26,119 and a 98.3% probability of being cost-effective.

Small fibroids of less than 3 cm in diameter are extremely common in the asymptomatic population and would often be considered as a variant of normal. However, this model assumes that 20% of underlying pathology in the model population can be attributed to these small fibroids (see Table 1). This estimate was based on the UK HTA (Cooper 2014) derived from Birmingham Women's Hospital data. Whilst, the prevalence of underlying pathology has been assessed probabilistically in the model, the sampling method is unlikely to have fully captured uncertainty with respect to this model input. Furthermore, the guideline made recommendations for different stages of the diagnostic and management work-up. Empiric pharmacological treatment was thought to be effective for fibroids of less than 3 cm in diameter (see Figure 12 and Figure 13) and therefore in a population of women with HMB refractory to empirical pharmacological treatment the prevalence of fibroids less than 3 cm in diameter is likely to be much reduced. Therefore, in analysis 7, a sensitivity analysis was undertaken where the mean prevalence of fibroids less than 3 cm in diameter was assumed to be much lower at 5%, with the prevalence of other underlying pathologies increased pro rata. In other respects the analysis mirrored the approach in analysis 5. The impact of reducing the prevalence of fibroids less than 3 cm in diameter is shown in Table 27 and Figure 20 and as expected the relative cost-effectiveness of outpatient hysteroscopy is increased relative to TVUS and EBx. Indeed at this prevalence of fibroids less than 3 cm in diameter, TVUS and outpatient hysteroscopy can be considered to all intents and purposes of equivalent in terms of their cost-effectiveness. TVUS has a mean NMB of £27,172 and outpatient hysteroscopy has a mean NMB of £27,158, just £14 less and well within the bounds of sampling variation. Outpatient hysteroscopy was the most cost-effective diagnostic test in 52.9% of the Monte Carlo simulations with TVUS the most cost-effective in the remainder.

Analysis 8 and analysis 9 included TXA as a first-line option[d] for all uterine pathologies. This suggested that TXA would be a cost-effective first line strategy for HMB under base case assumptions about treatment gain with respect to underlying pathology. This is driven by it being a low cost treatment and generating a high QALY gain, although as discussed later the population in whom the QALY estimates are based may differ systematically from the population in studies used to derive QALY estimates for surgical treatment. Unexpectedly,

d TXA appeared to be the most cost-effective pharmacological treatment (excluding LNG-IUS) in analyses not presented here

analysis 9, with conservative assumptions about treatment gain, only finds TXA to be cost-effective where it is deemed an effective treatment.[e]

Analysis 10 and analysis 11 used a discontinuation rate based on the placebo arms of studies included in the NMA. This results in a much lower discontinuation rate for LNG-IUS. In analysis 10, which is as analysis 1 apart from discontinuation, this reinforces the cost-effectiveness of empiric LNG-IUS under base case assumptions. Lower discontinuation means less need for a second-line treatment with concomitantly lower overall strategy costs. However, lower discontinuation rates are insufficient to make empiric LNG-IUS cost-effective under more conservative assumptions about its effectiveness across all underlying pathology.

Analysis 12 was undertaken in order to compare the cost-effectiveness of surgical interventions included in the model. Under conservative assumptions about treatment gain, first generation endometrial ablation, second generation endometrial ablation and hysterectomy are all assumed to be effective treatments for fibroids less than 3 cm in diameter. Therefore, all these surgical treatments were evaluated as potential first-line treatments for this pathology in this analysis with treatments for other pathology and diagnosis held constant. Despite being the most expensive strategy, hysterectomy was found to be the most cost-effective with a NMB of £26,189 and a 60% probability of being the most cost-effective first line surgery for fibroids less than 3 cm in diameter when compared to first and second generation endometrial ablation techniques. First generation endometrial ablation techniques had a NMB of £26,030 and a 32% probability of being the most cost-effective strategy whilst the corresponding measures for second generation endometrial ablation was a NMB of £25,902 and a 8% probability of being cost-effective.

Important strengths of the model were that it incorporated the results from 3 NMAs and it evaluated a wide range of clinically relevant diagnostic and treatment strategies. However, notwithstanding its strengths, there were important limitations which means that considerable caution should be exercised when interpreting the results.

There was clinical heterogeneity in the trials with respect to the proportions of patients with different pathologies and the analyses presented indicate that the results of the cost-effectiveness analysis are sensitive to the prevalence of underlying pathologies. In the NMA heterogeneity was assessed and where problematic, steps were taken to mitigate this, for example for some outcomes women with “small” fibroids were analysed separately from women with no fibroids or 2nd generation endometrial ablation was split into individual techniques which improved model fit and explained some of the heterogeneity. Limitations relating to the uncertainty around patient mix however has to be considered in the context of recommendations made at different stages in the patient diagnostic/management workup where women may later be triaged according to suspected pathology based on history and exam and will often also have been found to be refractory to empirical treatment.

For some diagnostic accuracy data it was necessary to utilise cross-study comparisons of diagnostic efficacy with considerable statistical heterogeneity. This can make cost-effectiveness results susceptible to random between-study differences. However, there were studies comparing hysteroscopy with ultrasound that included the reference standard. Whilst the health economic model only incorporated this data to a limited extent, the estimates of diagnostic accuracy of TVUS and outpatient hysteroscopy in these studies is broadly in agreement with that used in the health economic analysis.

The clinical premise is that diagnostic accuracy is important in order to offer women with HMB the most appropriate treatment dependent on their underlying pathology. However, this is complicated because different pathologies have different appropriate treatments in

e TXA is first line treatment for fibroids greater than or equal to 3 cm only because neither first-line treatment was assumed to be effective in this analysis

common and therefore it does not follow that a false positive diagnosis will derive no treatment gain from treatment. Indeed dependent on their false diagnosis the woman may still receive optimal treatment and even if the treatment is “incorrect” or sub-optimal some treatment benefit may still be derived. However, the NMA data on quality of life is only based on treatment received and does not take into account treatment pathology. Ideally a model of this type would be populated by treatment HRQoL stratified according to the underlying pathology.

The model addressed this issue by running analyses using different assumptions about treatment effectiveness. With base case assumptions it was assumed that most treatments would provide benefit for most of the underlying pathologies (see Figure 12) in which case the implications of inaccurate diagnoses are reduced. Whilst these base case assumptions were based on committee opinion, there were clearly some of these treatments that the committee thought would work less well with certain underlying pathology. Therefore, the analysis was also run using more conservative assumptions about what treatments would be effective for the different pathologies causing HMB (see Figure 13). As shown by analysis 1 and analysis 2, for example, these alternative assumptions produce vastly different results. These analyses with respect to effective treatment dichotomised treatment in those that would be effective for a given underlying pathology and those that would not be effective. In practice, it is likely for those treatments that were assumed to work for a given pathology, under base case assumptions about treatment effectiveness but not under conservative assumptions, would work to some extent but sub-optimally. Ultimately, cost-effectiveness would depend on the extent to which these treatment were sub-optimal for a certain pathology.

In a similar vein discontinuation of treatments or treatment failure in the model depends only on the treatment although in practice it would be expected that discontinuation or treatment failure would be more common when the treatment was sub-optimal for the underlying pathology. For this reason the model may underestimate the cost-effectiveness of more accurate diagnostic tests as false diagnoses are likely to result in higher reintervention rates than occurs in the model.

Another limitation was that HRQoL data was not available for all treatments included in the model. The committee agreed that it would be reasonable to assume that polypectomy and TCRF would produce similar HRQoL responses as second generation endometrial ablation but such a simplifying assumption is based on clinical opinion rather than evidence. Other treatments such as myomectomy and UAE were not included within the model at all as there were no studies which allowed them to be incorporated in the NMA and because they were also not considered to be commonplace first-line surgical procedures.

There are concerns that the NMA EQ-5D data on usual medical treatments may reflect a different patient population than for the surgical and LNG-IUS patient population. In particular it is thought that the trial data for usual medical treatments will be in women who are treatment naive whereas the surgical NMA data will have been obtained in women who are refractory to pharmacological therapy. Therefore it is not meaningful to compare the cost-effectiveness of usual medical treatment (COCs, TXA, NSAIDs and MPA) with surgical alternatives, although the relative cost-effectiveness of alternative pharmacological treatments could be compared.

Whilst the EQ-5D is the preferred measure of HRQoL in the NICE reference case it has been argued that generic quality of life instruments are not without problems in the context of HMB. In particular it is suggested that the intermittent nature of symptoms makes it difficult

for women to complete generic quality of life assessments for HMB (Garratt 1992; Jenkinson 1996; Ruta 1999) and poor correlation between patient specific and generic measures have been reported (Matteson 2015). In the model, it is assumed that the health state utility is constant across the 4 week Markov cycle. However, in practice it may be that the utility decrement due to HMB symptoms is experienced for a much shorter period of time. In which case the QALY gain from treatment would be over-stated which could potentially bias the model against cheaper strategies.

As indicated by analysis 7, the model results could be quite sensitive to the prevalence of the underlying pathologies causing HMB. In the model the prevalence estimates came from different sources and the effective sample size of 100 assumed for the Dirichlet distribution does not necessarily reflect the uncertainty underpinning the prevalence estimates of uterine pathologies.

The PSA addressed uncertainty with respect to diagnostic test accuracy in terms of sampling variation however large between-study differences suggest that the uncertainty is greater than due to sampling variation alone.

The model assumes an absence of endometrial disease in the population assessed and that there is only a single underlying pathology in women with HMB. Whilst the committee agreed these were reasonable simplifying assumptions this would not always be the case. Whilst these simplifying assumptions might be considered a limitation they are unlikely to have a major role in driving the model results.

Conclusions

As noted there are important limitations in the model and caution should be exercised in reaching very definitive conclusions about cost-effectiveness. Nevertheless, there are numbers of observations that can be made with respect to the results.

First, the results do provide some support for providing empiric LNG-IUS as a first-line treatment to a woman presenting with HMB in primary care. If LNG-IUS is assumed to be an effective treatment across the different uterine pathologies then the analyses suggest this can be the most cost-effective strategy.

Second, although there is not always a large difference between the mean NMB when comparing TVUS, outpatient hysteroscopy and endometrial biopsy none of the analyses produced a result in which endometrial biopsy was the most cost-effective strategy; in those analyses where the treatment alternative was kept fixed, endometrial biopsy was dominated by both outpatient hysteroscopy and TVUS.

The comparison of the relative cost-effectiveness of outpatient hysteroscopy and TVUS is more complicated. In general the analyses seemed to suggest that TVUS was a more costly strategy than outpatient hysteroscopy despite being the cheaper diagnostic test. This is because outpatient hysteroscopy facilitates a “see and treat” approach, lowering the combined cost of diagnosis and treatment. Where a comparison was made, analyses often found TVUS to be more cost-effective than outpatient hysteroscopy despite generally being more costly but this needs to be interpreted in the clinical context of the analysis been undertaken. Many analyses represent an evaluation of cost-effectiveness at the initial presentation of the woman with HMB in primary care. As outpatient hysteroscopy is not able to detect intramural or subserosal fibroids its overall diagnostic accuracy may be limited where the prevalence of such fibroids is sufficiently high (as reflected in the model

assumptions, fibroids 3 cm or more in diameter would usually be detected by bimanual examination in primary care).

However, empiric pharmacological treatment is considered to be effective for intramural and subserosal fibroids less than 3cm in diameter (see Figure 12 and Figure 13) whereas women with a different underlying pathology, where outpatient hysteroscopy has superior diagnostic accuracy, are more likely to be refractory to such pharmacological treatment. Therefore, the prevalence of intramural and subserosal fibroids less than 3cm in diameter is likely to be much reduced when considering investigation in a population of women refractory to pharmacological treatment and referred to secondary care. Sensitivity analysis indicated that results were sensitive to prevalence of fibroids less than 3 cm in diameter as the underlying pathology in women presenting with HMB. The analysis in the model does not explicitly include history or examination but as that can alter the pre-test probability of the underlying pathologies for women presenting with HMB then it is likely that outpatient hysteroscopy would be the most cost-effective diagnostic test strategy for women with a history suggesting polyps or SMFs, and that TVUS would be the most cost-effective test where intramural and subserosal fibroids were suspected.

In terms of the cost-effectiveness of various treatment alternatives, other than empiric LNG-IUS, then it is important to be cautious in drawing conclusions from the model. When pharmacological treatments were compared against each other as first-line treatments, TXA came out as the most cost-effective. The most cost-effective treatment is likely to vary according to the underlying pathology and as outlined above the model limitations make it difficult to assess this as it depends on the extent to which a sub-optimal treatment may nevertheless be of benefit to the woman. In general it could be argued that uncertainty about the most cost-effectiven treatment supports woman's choice of surgical treatment especially if refractory to an initial treatment with LNG-IUS. Hysterectomy is the most expensive treatment but as analysis 1 indicates it may still be considered more cost-effective than second generation endometrial ablation as a second-line treatment for no identified pathology. Analysis 12 also suggests that hysterectomy can be considered as a cost-effective surgical treatment for fibroids less than 3 cm in diameter.

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Appendices

Appendix A: Search strategy

Database: MEDLINE Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present (last searched 06/12/2016)

ID	Searches	Results
#1	exp Economics/	555381
#2	Value of life/	5694
#3	exp "Costs and Cost Analysis"/	212065
#4	exp Economics, Hospital/	22578
#5	exp Economics, Medical/	14191
#6	Economics, Nursing/	3986
#7	Economics, Pharmaceutical/	2772
#8	exp "Fees and Charges"/	29188
#9	exp Budgets/	13261
#10	budget*.ti,ab.	24166
#11	cost*.ti.	102186
#12	(economic* or pharmaco?economic*).ti.	40946
#13	(price* or pricing*).ti,ab.	31948
#14	(cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.	125899
#15	(financ* or fee or fees).ti,ab.	102110
#16	(value adj2 (money or monetary)).ti,ab.	1827
#17	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16	763576
#18	exp Menorrhagia/	4087
#19	Menorrhagia.ti,ab.	2987
#20	hypermenorrhoea.ti,ab.	34
#21	(menstrua* adj5 (excessive or heavy or abnormal or disorder)).ti,ab.	1684
#22	iron deficient anaemia.ti,ab.	48
#23	HMB.ti,ab.	2329
#24	menometrorrhag*.ti,ab.	337
#25	metromenorrhag*.tw.	11
#26	(menstru* adj3 (bleed* or blood loss)).ti,ab.	2827
#27	(heavy adj (period* or menses)).ti,ab.	129
#28	(dysfunction* adj3 (uterine or uterus) adj3 (bleed* or blood*)).ti,ab.	854

ID	Searches	Results
#29	or/18-27	10498
#30	17 and 29	258
#31	limit 30 to (english language and yr="2007 -Current")	105

Database: Embase 1980 to 2016 (last searched 06/12/2016)

ID	Searches	Results
#1	health economics/	34244
#2	exp economic evaluation/	257973
#3	exp health care cost/	247469
#4	exp fee/	37899
#5	budget/	23849
#6	funding/	30402
#7	budget*.ti,ab.	29695
#8	cost*.ti.	126980
#9	(economic* or pharmaco?economic*).ti.	49705
#10	(price* or pricing*).ti,ab.	42850
#11	(cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.	168015
#12	(financ* or fee or fees).ti,ab.	123076
#13	(value adj2 (money or monetary)).ti,ab.	2494
#14	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13	758393
#15	exp menorrhagia/	8268
#16	Menorrhagia.ti,ab.	4538
#17	hypermenorrhoea.ti,ab.	50
#18	(menstrua* adj5 (excessive or heavy or abnormal or disorder)).ti,ab.	2424
#19	iron deficient anaemia.ti,ab.	78
#20	HMB.ti,ab.	3203
#21	menometrorrhag*.ti,ab.	415
#22	metromenorrhag*.tw.	15
#23	(menstru* adj3 (bleed* or blood loss)).ti,ab.	3602
#24	(heavy adj (period* or menses)).ti,ab.	203
#25	(dysfunction* adj3 (uterine or uterus) adj3 (bleed* or blood*)).ti,ab.	1096
#26	exp metrorrhagia/	3916
#27	or/15-26	18526
#28	14 and 27	654
#29	limit 28 to (english language and yr="2007 -Current")	398

Database: Cochrane Library – Wiley (last searched 06/12/2016)

ID	Search	Results
#1	MeSH descriptor: [Value of Life] explode all trees	146
#2	MeSH descriptor: [Costs and Cost Analysis] explode all trees	25309
#3	MeSH descriptor: [Quality-Adjusted Life Years] explode all trees	4209
#4	health economic* or cost* or (quality near life)	124127
#5	MeSH descriptor: [Economics] explode all trees	27398
#6	MeSH descriptor: [Economics, Hospital] explode all trees	1779
#7	MeSH descriptor: [Economics, Medical] explode all trees	105
#8	MeSH descriptor: [Economics, Nursing] explode all trees	20
#9	MeSH descriptor: [Economics, Pharmaceutical] explode all trees	244
#10	MeSH descriptor: [Fees and Charges] explode all trees	507
#11	MeSH descriptor: [Budgets] explode all trees	72
#12	budget* or economic* or pharmaco?economic* or price* or pricing or financ* or fee or fees or (value near mone*) or (value near life)	50969
#13	cost* near (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)	41748
#14	#1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9 or #10 or #11 or #12 or #13	133714
#15	MeSH descriptor: [Menorrhagia] explode all trees	355
#16	Menorrhag* or hypermenorrh* or HMB or iron deficient anaemia or menometrorrhag* or metromenorrhag*	1104
#17	menstru* near (excessive or heavy or abnormal or disorder)	557
#18	menstru* near (bleed* or blood loss)	693
#19	heavy near (period* or menses)	98
#20	dysfunction* near (uterine or uterus) near (bleed* or blood*)	171
#21	#15 or #16 or #17 or #18 or #19 or #20	1869
#22	#14 and #21	622

Appendix B: Full health economic results

Table 38: Full health economic results

Full health economic results														
Analysis 1														
	Polyps		**SMF**		**<3cm**		**>3cm**		**NiP**					
Dx Strategy	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**Mean cost**	**Mean QALY**	**Mean NMB**	**Pr (CE)**
LNG-IUS alone	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,356	1.574	£30,131	0.968
TVS	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,985	1.585	£29,723	0.001
OPH	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,758	1.572	£29,684	0.000
TVS	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,999	1.584	£29,678	0.000
OPH	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,771	1.570	£29,639	0.000
LNG-IUS alone	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,157	1.535	£29,542	0.029
EBx	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,069	1.569	£29,316	0.000
EBx	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,098	1.569	£29,277	0.000
TVS	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,781	1.546	£29,142	0.000
OPH	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,557	1.533	£29,098	0.000
TVS	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,795	1.545	£29,097	0.000
OPH	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,569	1.531	£29,053	0.000
EBx	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,847	1.530	£28,757	0.000
EBx	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,876	1.530	£28,719	0.000
OPH	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£1,830	1.523	£28,634	0.000
OPH	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£1,843	1.522	£28,588	0.000
TVS	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,085	1.531	£28,530	0.000
TVS	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£2,099	1.529	£28,485	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,377	1.536	£28,335	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,674	1.547	£28,263	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,382	1.532	£28,260	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,681	1.544	£28,192	0.000
TVS	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,290	1.524	£28,185	0.000
TVS	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,304	1.522	£28,140	0.000
OPH	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,629	1.484	£28,048	0.000
OPH	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,642	1.482	£28,002	0.000
TVS	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,880	1.491	£27,949	0.000
EBx	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,160	1.504	£27,920	0.000
TVS	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,894	1.490	£27,904	0.000
EBx	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£2,189	1.504	£27,881	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£2,173	1.496	£27,745	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,841	1.528	£27,714	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£2,462	1.507	£27,672	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,869	1.527	£27,672	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£2,178	1.492	£27,670	0.000
TVS	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£2,085	1.484	£27,604	0.000

Full health economic results														
TVS	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£2,469	1.504	£27,601	0.000
TVS	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£2,099	1.483	£27,559	0.000
EBx	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,938	1.465	£27,361	0.000
EBx	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,967	1.465	£27,323	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,449	1.487	£27,284	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£2,454	1.483	£27,210	0.000
EBx	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,230	1.469	£27,140	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,979	1.505	£27,120	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£2,591	1.486	£27,119	0.000
EBx	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,260	1.468	£27,102	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,774	1.493	£27,091	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£2,620	1.485	£27,077	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,986	1.502	£27,048	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£2,780	1.490	£27,019	0.000
OPH	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,198	1.461	£27,014	0.000
TVS	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,389	1.469	£26,992	0.000
OPH	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,211	1.459	£26,968	0.000
TVS	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£2,403	1.468	£26,947	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£2,245	1.447	£26,694	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£2,250	1.443	£26,620	0.000
EBx	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£2,008	1.429	£26,582	0.000
EBx	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£2,037	1.429	£26,543	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£2,766	1.465	£26,529	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£2,561	1.453	£26,500	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£2,773	1.462	£26,457	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£2,568	1.450	£26,429	0.000
OPH	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,997	1.421	£26,428	0.000
TVS	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£2,184	1.430	£26,411	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£3,002	1.470	£26,400	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,817	1.461	£26,394	0.000
OPH	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£2,010	1.420	£26,382	0.000
TVS	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£2,198	1.428	£26,366	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£3,030	1.469	£26,358	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,823	1.457	£26,319	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,932	1.462	£26,318	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£2,960	1.462	£26,276	0.000
OPH	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,271	1.412	£25,963	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£3,078	1.451	£25,947	0.001
OPH	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£2,283	1.410	£25,918	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£3,085	1.448	£25,876	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£2,753	1.428	£25,805	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£2,613	1.421	£25,804	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£2,781	1.427	£25,763	0.000
EBx	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,321	1.403	£25,744	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£2,618	1.417	£25,729	0.000

Full health economic results														
EBx	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£2,682	1.420	£25,723	0.000
EBx	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£2,350	1.403	£25,706	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£2,711	1.420	£25,681	0.000
OPH	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£2,069	1.372	£25,377	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£2,866	1.411	£25,357	0.001
OPH	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,890	1.412	£25,343	0.000
OPH	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£2,082	1.371	£25,332	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£2,873	1.408	£25,285	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£2,895	1.408	£25,268	0.000
EBx	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£2,099	1.364	£25,186	0.000
EBx	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£2,128	1.364	£25,147	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£3,093	1.405	£25,004	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£3,121	1.404	£24,962	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£2,685	1.372	£24,753	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£2,690	1.368	£24,678	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£2,844	1.363	£24,409	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£2,872	1.362	£24,367	0.000
Analysis 2														
	Polyps		**SMF**		**<3cm**		**>3cm**		**NiP**					
Dx Strategy	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**Mean cost**	**Mean QALY**	**Mean NMB**	**Pr (CE)**
TVS	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,899	1.494	£26,991	0.943
TVS	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£2,663	1.451	£26,354	0.039
EBx	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,943	1.461	£26,271	0.001
OPH	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,753	1.447	£26,184	0.007
TVS	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,895	1.452	£26,143	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£2,999	1.441	£25,813	0.002
EBx	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£2,668	1.415	£25,631	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£2,526	1.404	£25,547	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£2,660	1.408	£25,506	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,931	1.415	£25,376	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,752	1.405	£25,348	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£2,764	1.397	£25,176	0.008
OPH	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£2,824	1.400	£25,171	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,996	1.398	£24,965	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£3,038	1.395	£24,863	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£2,656	1.370	£24,737	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£2,526	1.362	£24,711	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£2,598	1.357	£24,534	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,824	1.358	£24,335	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£2,761	1.354	£24,328	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£2,763	1.349	£24,223	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,795	1.350	£24,210	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£3,025	1.350	£23,969	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,633	1.327	£23,904	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,356	1.310	£23,839	0.000

Full health economic results														
OPH	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£2,597	1.315	£23,698	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£2,520	1.305	£23,570	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£2,750	1.304	£23,329	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,782	1.305	£23,316	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£2,397	1.283	£23,267	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£2,129	1.267	£23,203	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,630	1.284	£23,056	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,355	1.268	£23,003	0.000
TVS	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,174	1.253	£22,878	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£2,427	1.263	£22,826	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£2,889	1.285	£22,803	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£2,734	1.273	£22,726	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£2,507	1.259	£22,676	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£2,394	1.241	£22,419	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£2,128	1.225	£22,366	0.000
TVS	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,947	1.210	£22,252	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£2,200	1.219	£22,190	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£2,614	1.239	£22,163	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£2,498	1.229	£22,089	0.000
TVS	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,168	1.209	£22,019	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,426	1.221	£21,990	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,877	1.239	£21,908	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,731	1.230	£21,878	0.000
EBx	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,150	1.198	£21,806	0.000
TVS	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£2,275	1.198	£21,686	0.000
OPH	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,076	1.177	£21,468	0.000
TVS	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,941	1.167	£21,392	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£2,200	1.178	£21,353	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£2,602	1.194	£21,269	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£2,495	1.187	£21,241	0.000
EBx	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,905	1.155	£21,203	0.000
TVS	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£2,048	1.155	£21,060	0.000
EBx	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,137	1.152	£20,910	0.000
OPH	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,853	1.134	£20,836	0.000
TVS	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,268	1.155	£20,826	0.000
OPH	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,071	1.134	£20,618	0.000
OPH	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£2,147	1.130	£20,455	0.000
EBx	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£2,245	1.132	£20,398	0.000
EBx	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,892	1.110	£20,307	0.000
TVS	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£2,041	1.112	£20,200	0.000
OPH	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,849	1.092	£19,986	0.000
OPH	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,924	1.087	£19,823	0.000
EBx	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£2,000	1.090	£19,795	0.000
OPH	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,143	1.087	£19,605	0.000
EBx	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,232	1.087	£19,502	0.000

Full health economic results														
OPH	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,679	1.056	£19,436	0.000
TVS	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,908	1.058	£19,260	0.000
EBx	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,002	1.056	£19,110	0.000
LNG-IUS alone	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,267	1.015	£19,039	0.000
OPH	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,920	1.045	£18,973	0.000
EBx	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,986	1.044	£18,900	0.000
OPH	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,456	1.013	£18,804	0.000
TVS	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,681	1.016	£18,634	0.000
OPH	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,674	1.013	£18,586	0.000
EBx	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,757	1.013	£18,507	0.000
OPH	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£1,750	1.009	£18,423	0.000
LNG-IUS alone	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,048	0.973	£18,403	0.000
TVS	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,902	1.015	£18,400	0.000
EBx	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,989	1.010	£18,214	0.000
TVS	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£2,009	1.004	£18,068	0.000
OPH	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,451	0.970	£17,954	0.000
OPH	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,527	0.966	£17,791	0.000
TVS	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,675	0.972	£17,774	0.000
EBx	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£2,096	0.990	£17,702	0.000
EBx	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,744	0.968	£17,611	0.000
OPH	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£1,746	0.966	£17,573	0.000
TVS	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,782	0.961	£17,441	0.000
TVS	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,003	0.961	£17,208	0.000
EBx	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,851	0.948	£17,099	0.000
OPH	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,523	0.923	£16,941	0.000
EBx	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,083	0.944	£16,806	0.000
TVS	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,776	0.918	£16,581	0.000
EBx	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,838	0.902	£16,203	0.000
Analysis 3														
	Polyps		**SMF**		**<3cm**		**>3cm**		**NiP**					
Dx Strategy	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**Mean cost**	**Mean QALY**	**Mean NMB**	Pr (CE)
LNG-IUS alone	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,298	1.607	£30,845	0.712
TVS	Hyst		LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,662	1.614	£30,620	0.096
TVS	Hyst		LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,678	1.614	£30,601	0.000
EBx	Hyst		LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,390	1.597	£30,541	0.026
EBx	Hyst		LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,412	1.596	£30,517	0.000
TVS	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,913	1.618	£30,448	0.000
TVS	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,923	1.617	£30,417	0.000
OPH	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,701	1.605	£30,398	0.000
OPH	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,707	1.604	£30,365	0.000
OPH	Hyst		LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,761	1.602	£30,282	0.000
OPH	Hyst		LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,776	1.602	£30,265	0.000
TVS	Hyst		Hyst		LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,894	1.606	£30,232	0.074
LNG-IUS alone	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,081	1.565	£30,216	0.024
TVS	Hyst		Hyst		LNG	Hyst	Hyst		LNG	Hyst	£1,911	1.606	£30,213	0.010

Full health economic results														
TVS	Hyst		LNG	Hyst	Hyst		LNG	Hyst	LNG	Hyst	£2,057	1.613	£30,202	0.000
TVS	Hyst		LNG	Hyst	Hyst		Hyst		LNG	Hyst	£2,074	1.613	£30,183	0.000
EBx	Hyst		Hyst		LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,600	1.586	£30,115	0.018
EBx	Hyst		LNG	Hyst	Hyst		LNG	Hyst	LNG	Hyst	£1,781	1.594	£30,102	0.000
EBx	Hyst		Hyst		LNG	Hyst	Hyst		LNG	Hyst	£1,622	1.586	£30,091	0.000
EBx	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,970	1.603	£30,080	0.000
EBx	Hyst		LNG	Hyst	Hyst		Hyst		LNG	Hyst	£1,802	1.594	£30,078	0.000
EBx	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,991	1.602	£30,054	0.000
TVS	Hyst		LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,449	1.573	£30,004	0.000
TVS	Hyst		LNG	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,466	1.573	£29,985	0.000
OPH	Hyst		LNG	Hyst	Hyst		LNG	Hyst	LNG	Hyst	£2,037	1.600	£29,973	0.000
OPH	Hyst		LNG	Hyst	Hyst		Hyst		LNG	Hyst	£2,052	1.600	£29,956	0.000
EBx	Hyst		LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,189	1.557	£29,956	0.002
EBx	Hyst		LNG	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,210	1.557	£29,932	0.000
TVS	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	LNG	Hyst	£2,205	1.603	£29,849	0.000
TVS	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,688	1.576	£29,828	0.000
TVS	LNG	Hyst	LNG	Hyst	Hyst		Hyst		LNG	Hyst	£2,215	1.602	£29,818	0.000
TVS	Hyst		Hyst		Hyst		LNG	Hyst	LNG	Hyst	£2,290	1.605	£29,815	0.000
OPH	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	LNG	Hyst	£1,816	1.581	£29,802	0.000
TVS	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,698	1.575	£29,798	0.000
TVS	Hyst		Hyst		Hyst		Hyst		LNG	Hyst	£2,306	1.605	£29,796	0.002
OPH	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,480	1.563	£29,773	0.000
OPH	LNG	Hyst	LNG	Hyst	Hyst		Hyst		LNG	Hyst	£1,822	1.580	£29,769	0.000
TVS	LNG	Hyst	Hyst		LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,947	1.585	£29,744	0.000
OPH	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,486	1.561	£29,741	0.000
TVS	LNG	Hyst	Hyst		LNG	Hyst	Hyst		LNG	Hyst	£1,957	1.584	£29,713	0.000
EBx	Hyst		Hyst		Hyst		LNG	Hyst	LNG	Hyst	£1,990	1.583	£29,676	0.000
OPH	LNG	Hyst	Hyst		LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,102	1.589	£29,672	0.000
OPH	Hyst		Hyst		LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,254	1.596	£29,666	0.000
OPH	Hyst		LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,546	1.560	£29,659	0.000
EBx	Hyst		Hyst		Hyst		Hyst		LNG	Hyst	£2,012	1.583	£29,652	0.024
OPH	Hyst		Hyst		LNG	Hyst	Hyst		LNG	Hyst	£2,269	1.596	£29,649	0.000
OPH	Hyst		LNG	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,561	1.560	£29,642	0.000
OPH	LNG	Hyst	Hyst		LNG	Hyst	Hyst		LNG	Hyst	£2,108	1.587	£29,640	0.000
TVS	Hyst		Hyst		LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,682	1.565	£29,616	0.000
EBx	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	LNG	Hyst	£2,341	1.597	£29,606	0.000
TVS	Hyst		Hyst		LNG	Hyst	Hyst		LNG	2nd Gen	£1,699	1.565	£29,597	0.000
TVS	Hyst		LNG	Hyst	Hyst		LNG	Hyst	LNG	2nd Gen	£1,844	1.572	£29,587	0.000
EBx	LNG	Hyst	LNG	Hyst	Hyst		Hyst		LNG	Hyst	£2,361	1.597	£29,580	0.000
TVS	Hyst		LNG	Hyst	Hyst		Hyst		LNG	2nd Gen	£1,861	1.571	£29,568	0.000
EBx	Hyst		Hyst		LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,398	1.546	£29,530	0.002
EBx	Hyst		LNG	Hyst	Hyst		LNG	Hyst	LNG	2nd Gen	£1,579	1.555	£29,516	0.000
EBx	Hyst		Hyst		LNG	Hyst	Hyst		LNG	2nd Gen	£1,420	1.546	£29,506	0.000
EBx	Hyst		LNG	Hyst	Hyst		Hyst		LNG	2nd Gen	£1,600	1.555	£29,492	0.000
EBx	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,728	1.561	£29,483	0.000

Full health economic results														
EBx	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,749	1.560	£29,457	0.000
OPH	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£1,771	1.560	£29,432	0.000
TVS	Hyst		LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£1,764	1.559	£29,412	0.000
OPH	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£1,777	1.559	£29,399	0.000
TVS	Hyst		LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£1,781	1.559	£29,393	0.000
OPH	Hyst		Hyst		Hyst		LNG	Hyst	LNG	Hyst	£2,530	1.594	£29,357	0.000
OPH	Hyst		LNG	Hyst	Hyst		LNG	Hyst	LNG	2nd Gen	£1,822	1.559	£29,350	0.000
OPH	Hyst		Hyst		Hyst		Hyst		LNG	Hyst	£2,545	1.594	£29,340	0.000
OPH	Hyst		LNG	Hyst	Hyst		Hyst		LNG	2nd Gen	£1,837	1.558	£29,333	0.000
TVS	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,130	1.573	£29,321	0.000
OPH	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		£2,748	1.603	£29,317	0.000
OPH	Hyst		LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£1,831	1.557	£29,316	0.000
OPH	Hyst		LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£1,846	1.557	£29,299	0.000
TVS	Hyst		LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		£3,043	1.617	£29,297	0.000
TVS	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,140	1.572	£29,290	0.000
OPH	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		Hyst		£2,754	1.602	£29,284	0.000
TVS	Hyst		LNG	Hyst	LNG	Hyst	Hyst		Hyst		£3,060	1.617	£29,278	0.000
TVS	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,016	1.564	£29,255	0.000
TVS	Hyst		TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,879	1.557	£29,253	0.000
TVS	Hyst		TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,895	1.556	£29,235	0.000
TVS	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	LNG	2nd Gen	£1,980	1.560	£29,229	0.000
TVS	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£2,026	1.563	£29,224	0.000
OPH	Hyst		LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		£2,817	1.602	£29,218	0.000
OPH	Hyst		LNG	Hyst	LNG	Hyst	Hyst		Hyst		£2,833	1.602	£29,201	0.000
TVS	Hyst		Hyst		Hyst		LNG	Hyst	LNG	2nd Gen	£2,077	1.564	£29,199	0.000
TVS	LNG	Hyst	LNG	Hyst	Hyst		Hyst		LNG	2nd Gen	£1,990	1.559	£29,199	0.000
EBx	LNG	Hyst	Hyst		LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,874	1.553	£29,184	0.000
TVS	Hyst		Hyst		Hyst		Hyst		LNG	2nd Gen	£2,094	1.564	£29,180	0.000
OPH	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	LNG	2nd Gen	£1,595	1.539	£29,177	0.000
EBx	Hyst		LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		£2,973	1.607	£29,173	0.000
EBx	Hyst		LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£1,486	1.532	£29,159	0.000
EBx	LNG	Hyst	Hyst		LNG	Hyst	Hyst		LNG	Hyst	£1,894	1.553	£29,158	0.000
EBx	Hyst		LNG	Hyst	LNG	Hyst	Hyst		Hyst		£2,994	1.607	£29,149	0.000
TVS	LNG	Hyst	Hyst		Hyst		LNG	Hyst	LNG	Hyst	£2,239	1.569	£29,145	0.000
OPH	LNG	Hyst	LNG	Hyst	Hyst		Hyst		LNG	2nd Gen	£1,601	1.537	£29,145	0.000
EBx	Hyst		LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£1,507	1.532	£29,135	0.000
TVS	LNG	Hyst	Hyst		LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,722	1.542	£29,125	0.000
TVS	LNG	Hyst	Hyst		Hyst		Hyst		LNG	Hyst	£2,249	1.568	£29,115	0.000
TVS	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		£3,274	1.619	£29,108	0.000
TVS	LNG	Hyst	Hyst		LNG	Hyst	Hyst		LNG	2nd Gen	£1,732	1.541	£29,094	0.000
EBx	Hyst		Hyst		Hyst		LNG	Hyst	LNG	2nd Gen	£1,789	1.544	£29,090	0.000
TVS	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		Hyst		£3,284	1.618	£29,077	0.000
OPH	LNG	Hyst	Hyst		Hyst		LNG	Hyst	LNG	Hyst	£2,217	1.565	£29,077	0.000
EBx	Hyst		Hyst		Hyst		Hyst		LNG	2nd Gen	£1,810	1.544	£29,066	0.000
OPH	LNG	Hyst	Hyst		LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,881	1.546	£29,048	0.000

Full health economic results														
OPH	LNG	Hyst	Hyst		Hyst		Hyst		LNG	Hyst	£2,223	1.563	£29,044	0.000
OPH	Hyst		Hyst		LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£2,039	1.554	£29,043	0.000
OPH	Hyst		Hyst		LNG	Hyst	Hyst		LNG	2nd Gen	£2,054	1.554	£29,026	0.000
TVS	Hyst		Hyst		2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£1,997	1.551	£29,024	0.002
OPH	LNG	Hyst	Hyst		LNG	Hyst	Hyst		LNG	2nd Gen	£1,887	1.545	£29,015	0.000
EBx	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	LNG	2nd Gen	£2,099	1.555	£29,009	0.000
TVS	Hyst		Hyst		2nd Gen	Hyst	Hyst		LNG	Hyst	£2,014	1.551	£29,006	0.000
EBx	LNG	Hyst	LNG	Hyst	Hyst		Hyst		LNG	2nd Gen	£2,119	1.555	£28,983	0.000
TVS	Hyst		Hyst		LNG	Hyst	LNG	Hyst	Hyst		£3,276	1.609	£28,910	0.000
OPH	Hyst		LNG	Hyst	Hyst		LNG	Hyst	Hyst		£3,094	1.600	£28,909	0.000
OPH	Hyst		LNG	Hyst	Hyst		Hyst		Hyst		£3,109	1.600	£28,892	0.000
TVS	Hyst		Hyst		LNG	Hyst	Hyst		Hyst		£3,293	1.609	£28,891	0.000
TVS	Hyst		LNG	Hyst	Hyst		LNG	Hyst	Hyst		£3,438	1.616	£28,880	0.000
TVS	Hyst		LNG	Hyst	Hyst		Hyst		Hyst		£3,455	1.616	£28,861	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,414	1.563	£28,847	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,656	1.575	£28,841	0.000
TVS	Hyst		TCRF	Hyst	Hyst		LNG	Hyst	LNG	Hyst	£2,274	1.556	£28,836	0.000
TVS	Hyst		TCRF	Hyst	Hyst		Hyst		LNG	Hyst	£2,291	1.555	£28,817	0.000
OPH	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,550	1.518	£28,807	0.000
TVS	Hyst		LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,552	1.517	£28,796	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,662	1.573	£28,791	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,414	1.560	£28,789	0.000
TVS	Hyst		LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,568	1.517	£28,777	0.000
OPH	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,557	1.517	£28,774	0.000
EBx	Hyst		Hyst		LNG	Hyst	LNG	Hyst	Hyst		£3,183	1.596	£28,747	0.000
OPH	Hyst		Hyst		Hyst		LNG	Hyst	LNG	2nd Gen	£2,315	1.552	£28,734	0.000
EBx	Hyst		LNG	Hyst	Hyst		LNG	Hyst	Hyst		£3,363	1.605	£28,734	0.000
EBx	Hyst		Hyst		2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£1,696	1.521	£28,733	0.000
EBx	Hyst		Hyst		LNG	Hyst	Hyst		Hyst		£3,204	1.596	£28,723	0.000
TVS	LNG	Hyst	TCRF	Hyst	Hyst		LNG	Hyst	LNG	Hyst	£2,422	1.557	£28,722	0.000
OPH	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	Hyst		£2,863	1.579	£28,721	0.000
OPH	Hyst		Hyst		Hyst		Hyst		LNG	2nd Gen	£2,330	1.552	£28,717	0.000
EBx	LNG	Hyst	Hyst		Hyst		LNG	Hyst	LNG	Hyst	£2,244	1.548	£28,710	0.000
EBx	Hyst		LNG	Hyst	Hyst		Hyst		Hyst		£3,385	1.605	£28,709	0.000
EBx	Hyst		Hyst		2nd Gen	Hyst	Hyst		LNG	Hyst	£1,717	1.521	£28,709	0.000
OPH	LNG	Hyst	Hyst		2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,172	1.544	£28,706	0.000
TVS	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,905	1.530	£28,702	0.000
OPH	Hyst		Hyst		2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,324	1.551	£28,700	0.000
EBx	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,066	1.538	£28,698	0.000
OPH	Hyst		LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,616	1.515	£28,693	0.000
TVS	LNG	Hyst	TCRF	Hyst	Hyst		Hyst		LNG	Hyst	£2,432	1.556	£28,692	0.000
OPH	LNG	Hyst	LNG	Hyst	Hyst		Hyst		Hyst		£2,869	1.578	£28,688	0.000
EBx	LNG	Hyst	Hyst		Hyst		Hyst		LNG	Hyst	£2,265	1.547	£28,684	0.000
OPH	Hyst		Hyst		2nd Gen	Hyst	Hyst		LNG	Hyst	£2,340	1.551	£28,683	0.000
OPH	Hyst		LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,631	1.515	£28,676	0.000

Full health economic results														
OPH	LNG	Hyst	Hyst		2nd Gen	Hyst	Hyst		LNG	Hyst	£2,179	1.543	£28,674	0.000
EBx	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£2,086	1.538	£28,672	0.000
TVS	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,915	1.529	£28,671	0.000
TVS	Hyst		TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,666	1.515	£28,638	0.000
TVS	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,791	1.521	£28,635	0.000
TVS	Hyst		TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,683	1.515	£28,619	0.000
TVS	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,801	1.520	£28,605	0.000
OPH	Hyst		Hyst		LNG	Hyst	LNG	Hyst	Hyst		£3,311	1.596	£28,602	0.000
OPH	LNG	Hyst	Hyst		LNG	Hyst	LNG	Hyst	Hyst		£3,149	1.587	£28,591	0.000
EBx	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		£3,485	1.604	£28,590	0.000
EBx	LNG	Hyst	Hyst		LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,632	1.511	£28,587	0.000
OPH	Hyst		Hyst		LNG	Hyst	Hyst		Hyst		£3,326	1.596	£28,585	0.000
EBx	Hyst		LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,284	1.493	£28,574	0.000
EBx	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		Hyst		£3,505	1.603	£28,564	0.000
EBx	LNG	Hyst	Hyst		LNG	Hyst	Hyst		LNG	2nd Gen	£1,652	1.511	£28,561	0.000
OPH	LNG	Hyst	Hyst		LNG	Hyst	Hyst		Hyst		£3,155	1.586	£28,558	0.000
TVS	LNG	Hyst	Hyst		2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,050	1.530	£28,551	0.000
EBx	Hyst		LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,306	1.493	£28,550	0.000
TVS	LNG	Hyst	Hyst		Hyst		LNG	Hyst	LNG	2nd Gen	£2,014	1.527	£28,526	0.000
TVS	LNG	Hyst	Hyst		2nd Gen	Hyst	Hyst		LNG	Hyst	£2,060	1.529	£28,521	0.000
TVS	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	Hyst		£3,565	1.604	£28,509	0.000
TVS	LNG	Hyst	Hyst		Hyst		Hyst		LNG	2nd Gen	£2,024	1.526	£28,495	0.000
TVS	Hyst		Hyst		Hyst		LNG	Hyst	Hyst		£3,671	1.608	£28,492	0.000
TVS	LNG	Hyst	LNG	Hyst	Hyst		Hyst		Hyst		£3,575	1.603	£28,478	0.000
TVS	Hyst		Hyst		Hyst		Hyst		Hyst		£3,688	1.608	£28,473	0.008
OPH	LNG	Hyst	Hyst		Hyst		LNG	Hyst	LNG	2nd Gen	£1,996	1.522	£28,452	0.000
OPH	LNG	Hyst	Hyst		Hyst		Hyst		LNG	2nd Gen	£2,003	1.521	£28,419	0.000
TVS	Hyst		Hyst		2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,785	1.510	£28,409	0.000
TVS	LNG	Hyst	Hyst		LNG	Hyst	LNG	Hyst	Hyst		£3,308	1.586	£28,404	0.000
TVS	Hyst		Hyst		2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,801	1.510	£28,390	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,747	1.557	£28,387	0.000
TVS	LNG	Hyst	Hyst		LNG	Hyst	Hyst		Hyst		£3,318	1.585	£28,373	0.000
Hysterectomy alone	Hyst		Hyst		Hyst		Hyst		Hyst		£3,507	1.594	£28,371	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,766	1.556	£28,358	0.000
OPH	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	Hyst		£2,818	1.558	£28,350	0.000
OPH	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		Hyst		£2,824	1.557	£28,318	0.000
EBx	Hyst		Hyst		Hyst		LNG	Hyst	Hyst		£3,573	1.594	£28,308	0.000
OPH	Hyst		Hyst		Hyst		LNG	Hyst	Hyst		£3,587	1.594	£28,293	0.000
EBx	Hyst		Hyst		Hyst		Hyst		Hyst		£3,594	1.594	£28,284	0.000
EBx	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,108	1.519	£28,280	0.000
OPH	Hyst		Hyst		Hyst		Hyst		Hyst		£3,602	1.594	£28,276	0.000
EBx	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,128	1.519	£28,254	0.000
OPH	Hyst		LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	Hyst		£2,888	1.557	£28,252	0.000
OPH	Hyst		LNG	Hyst	2nd Gen	Hyst	Hyst		Hyst		£2,903	1.557	£28,235	0.000
TVS	Hyst		TCRF	Hyst	Hyst		LNG	Hyst	LNG	2nd Gen	£2,061	1.514	£28,220	0.000

Full health economic results														
OPH	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£2,189	1.520	£28,217	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£2,423	1.532	£28,210	0.000
TVS	Hyst		TCRF	Hyst	Hyst		Hyst		LNG	2nd Gen	£2,078	1.514	£28,201	0.000
EBx	Hyst		TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,528	1.486	£28,184	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£2,428	1.529	£28,160	0.000
EBx	Hyst		TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,549	1.485	£28,160	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£2,189	1.517	£28,159	0.000
EBx	Hyst		Hyst		2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,494	1.482	£28,148	0.000
TVS	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,233	1.518	£28,128	0.000
EBx	Hyst		Hyst		2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,515	1.482	£28,124	0.000
EBx	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	Hyst		£3,855	1.599	£28,116	0.000
EBx	LNG	Hyst	Hyst		Hyst		LNG	Hyst	LNG	2nd Gen	£2,002	1.506	£28,113	0.000
TVS	LNG	Hyst	TCRF	Hyst	Hyst		LNG	Hyst	LNG	2nd Gen	£2,197	1.515	£28,103	0.000
EBx	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,824	1.496	£28,101	0.000
TVS	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£2,243	1.517	£28,097	0.000
EBx	LNG	Hyst	LNG	Hyst	Hyst		Hyst		Hyst		£3,876	1.598	£28,090	0.000
TVS	Hyst		LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	Hyst		£3,146	1.562	£28,089	0.000
EBx	LNG	Hyst	Hyst		Hyst		Hyst		LNG	2nd Gen	£2,023	1.505	£28,087	0.000
OPH	LNG	Hyst	Hyst		2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,951	1.502	£28,081	0.000
OPH	Hyst		Hyst		2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£2,109	1.509	£28,077	0.000
EBx	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,844	1.496	£28,075	0.000
TVS	LNG	Hyst	TCRF	Hyst	Hyst		Hyst		LNG	2nd Gen	£2,207	1.514	£28,072	0.000
TVS	Hyst		LNG	Hyst	2nd Gen	Hyst	Hyst		Hyst		£3,162	1.562	£28,071	0.000
OPH	Hyst		Hyst		2nd Gen	Hyst	Hyst		LNG	2nd Gen	£2,124	1.509	£28,060	0.000
OPH	LNG	Hyst	Hyst		2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,958	1.500	£28,049	0.000
TVS	Hyst		TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£1,981	1.501	£28,046	0.000
TVS	Hyst		TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£1,998	1.501	£28,027	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,874	1.544	£28,014	0.000
OPH	LNG	Hyst	Hyst		Hyst		LNG	Hyst	Hyst		£3,264	1.563	£27,995	0.000
TVS	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	Hyst		£3,491	1.574	£27,981	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,879	1.542	£27,964	0.000
OPH	LNG	Hyst	Hyst		Hyst		Hyst		Hyst		£3,270	1.562	£27,962	0.000
TVS	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		Hyst		£3,501	1.573	£27,950	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	Hyst		LNG	Hyst	LNG	Hyst	£2,873	1.541	£27,949	0.000
TVS	LNG	Hyst	Hyst		2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,825	1.488	£27,932	0.000
TVS	Hyst		TCRF	Hyst	LNG	Hyst	LNG	Hyst	Hyst		£3,260	1.560	£27,931	0.000
OPH	Polypectomy	Hyst	Hyst		LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,747	1.533	£27,923	0.000
TVS	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	Hyst		£3,376	1.565	£27,915	0.000
TVS	Hyst		TCRF	Hyst	LNG	Hyst	Hyst		Hyst		£3,277	1.559	£27,912	0.000
TVS	LNG	Hyst	Hyst		2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,835	1.487	£27,901	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	Hyst		Hyst		LNG	Hyst	£2,878	1.539	£27,899	0.000
TVS	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		Hyst		£3,386	1.564	£27,884	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,484	1.518	£27,881	0.000
OPH	Polypectomy	Hyst	Hyst		LNG	Hyst	Hyst		LNG	Hyst	£2,747	1.531	£27,865	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	Hyst		LNG	Hyst	LNG	Hyst	£3,103	1.548	£27,857	0.000

Full health economic results														
EBx	Polypectomy	Hyst	LNG	Hyst	Hyst		Hyst		LNG	Hyst	£3,122	1.548	£27,828	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£2,484	1.515	£27,823	0.000
OPH	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,046	1.493	£27,815	0.000
EBx	LNG	Hyst	TCRF	Hyst	Hyst		LNG	Hyst	LNG	Hyst	£2,478	1.514	£27,806	0.000
TVS	LNG	Hyst	Hyst		Hyst		LNG	Hyst	Hyst		£3,599	1.570	£27,805	0.000
EBx	LNG	Hyst	Hyst		2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£1,969	1.489	£27,802	0.000
EBx	Hyst		LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	Hyst		£3,069	1.543	£27,791	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	Hyst		LNG	Hyst	LNG	Hyst	£2,412	1.510	£27,790	0.000
OPH	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,052	1.492	£27,783	0.000
EBx	LNG	Hyst	TCRF	Hyst	Hyst		Hyst		LNG	Hyst	£2,499	1.514	£27,780	0.000
EBx	LNG	Hyst	Hyst		2nd Gen	Hyst	Hyst		LNG	Hyst	£1,990	1.488	£27,777	0.000
TVS	LNG	Hyst	Hyst		Hyst		Hyst		Hyst		£3,609	1.569	£27,774	0.000
EBx	Hyst		LNG	Hyst	2nd Gen	Hyst	Hyst		Hyst		£3,090	1.543	£27,767	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£2,476	1.512	£27,754	0.000
EBx	Hyst		TCRF	Hyst	Hyst		LNG	Hyst	LNG	Hyst	£1,918	1.483	£27,745	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		£3,454	1.560	£27,737	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	Hyst		Hyst		LNG	Hyst	£2,412	1.507	£27,733	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£2,495	1.511	£27,725	0.000
EBx	Hyst		TCRF	Hyst	Hyst		Hyst		LNG	Hyst	£1,939	1.483	£27,721	0.000
TVS	Hyst		Hyst		2nd Gen	Hyst	LNG	Hyst	Hyst		£3,379	1.554	£27,702	0.000
EBx	LNG	Hyst	Hyst		LNG	Hyst	LNG	Hyst	Hyst		£3,389	1.554	£27,695	0.000
TVS	Hyst		Hyst		2nd Gen	Hyst	Hyst		Hyst		£3,395	1.554	£27,683	0.000
EBx	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,866	1.477	£27,683	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		Hyst		£3,453	1.557	£27,679	0.000
EBx	LNG	Hyst	Hyst		LNG	Hyst	Hyst		Hyst		£3,409	1.554	£27,669	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,759	1.521	£27,666	0.000
EBx	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,886	1.477	£27,657	0.000
OPH	Hyst		Hyst		2nd Gen	Hyst	LNG	Hyst	Hyst		£3,381	1.551	£27,636	0.000
OPH	LNG	Hyst	Hyst		2nd Gen	Hyst	LNG	Hyst	Hyst		£3,219	1.542	£27,625	0.000
OPH	Hyst		Hyst		2nd Gen	Hyst	Hyst		Hyst		£3,396	1.551	£27,619	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£2,764	1.519	£27,616	0.000
TVS	Polypectomy	Hyst	Hyst		LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,546	1.508	£27,614	0.000
EBx	Hyst		TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,326	1.446	£27,599	0.000
OPH	LNG	Hyst	Hyst		2nd Gen	Hyst	Hyst		Hyst		£3,225	1.541	£27,592	0.000
EBx	Hyst		TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,347	1.446	£27,575	0.000
TVS	Polypectomy	Hyst	Hyst		LNG	Hyst	Hyst		LNG	Hyst	£2,551	1.506	£27,564	0.000
TVS	Hyst		TCRF	Hyst	Hyst		LNG	Hyst	Hyst		£3,655	1.558	£27,514	0.000
TVS	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£2,008	1.476	£27,509	0.000
TVS	Hyst		TCRF	Hyst	Hyst		Hyst		Hyst		£3,672	1.558	£27,495	0.000
TVS	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£2,018	1.475	£27,478	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		£4,002	1.573	£27,465	0.000
TVS	Hyst		TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,769	1.460	£27,430	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		Hyst		£4,007	1.571	£27,415	0.000
TVS	Hyst		TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,786	1.460	£27,411	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£2,640	1.501	£27,383	0.000

Full health economic results														
TVS	LNG	Hyst	TCRF	Hyst	Hyst		LNG	Hyst	Hyst		£3,782	1.558	£27,382	0.000
EBx	Hyst		Hyst		2nd Gen	Hyst	LNG	Hyst	Hyst		£3,278	1.532	£27,365	0.000
TVS	LNG	Hyst	TCRF	Hyst	Hyst		Hyst		Hyst		£3,792	1.557	£27,351	0.000
EBx	Hyst		Hyst		2nd Gen	Hyst	Hyst		Hyst		£3,300	1.532	£27,341	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£2,645	1.499	£27,333	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	Hyst		LNG	Hyst	LNG	2nd Gen	£2,639	1.498	£27,319	0.000
OPH	Polypectomy	Hyst	Hyst		LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£2,522	1.491	£27,293	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,884	1.509	£27,288	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	Hyst		Hyst		LNG	2nd Gen	£2,644	1.496	£27,269	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,903	1.508	£27,258	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£2,259	1.475	£27,251	0.000
OPH	Polypectomy	Hyst	Hyst		LNG	Hyst	Hyst		LNG	2nd Gen	£2,522	1.488	£27,235	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	Hyst		LNG	Hyst	LNG	2nd Gen	£2,832	1.503	£27,225	0.000
EBx	LNG	Hyst	Hyst		Hyst		LNG	Hyst	Hyst		£3,759	1.549	£27,221	0.000
OPH	LNG	Hyst	TCRF	Hyst	Hyst		LNG	Hyst	LNG	Hyst	£2,161	1.469	£27,219	0.000
TVS	LNG	Hyst	Hyst		2nd Gen	Hyst	LNG	Hyst	Hyst		£3,410	1.531	£27,211	0.000
EBx	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	Hyst		£3,581	1.539	£27,209	0.000
EBx	LNG	Hyst	TCRF	Hyst	Hyst		LNG	Hyst	LNG	2nd Gen	£2,236	1.472	£27,209	0.000
EBx	LNG	Hyst	Hyst		2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,727	1.447	£27,205	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	Hyst		Hyst		LNG	2nd Gen	£2,852	1.502	£27,196	0.000
EBx	LNG	Hyst	Hyst		Hyst		Hyst		Hyst		£3,779	1.549	£27,195	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£2,259	1.473	£27,193	0.000
OPH	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,825	1.451	£27,191	0.000
OPH	LNG	Hyst	TCRF	Hyst	Hyst		Hyst		LNG	Hyst	£2,167	1.468	£27,187	0.000
EBx	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		Hyst		£3,601	1.539	£27,183	0.000
EBx	LNG	Hyst	TCRF	Hyst	Hyst		Hyst		LNG	2nd Gen	£2,256	1.472	£27,183	0.000
TVS	LNG	Hyst	Hyst		2nd Gen	Hyst	Hyst		Hyst		£3,420	1.530	£27,180	0.000
EBx	LNG	Hyst	Hyst		2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,748	1.446	£27,179	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	Hyst		LNG	Hyst	LNG	2nd Gen	£2,187	1.467	£27,160	0.000
EBx	Hyst		TCRF	Hyst	Hyst		LNG	Hyst	LNG	2nd Gen	£1,716	1.444	£27,159	0.000
OPH	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,831	1.449	£27,158	0.000
EBx	Hyst		TCRF	Hyst	Hyst		Hyst		LNG	2nd Gen	£1,738	1.444	£27,135	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	Hyst		LNG	Hyst	LNG	Hyst	£3,090	1.511	£27,122	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	Hyst		Hyst		LNG	2nd Gen	£2,187	1.464	£27,102	0.000
OPH	Hyst		TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,106	1.459	£27,077	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	Hyst		Hyst		LNG	Hyst	£3,095	1.508	£27,072	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,759	1.491	£27,061	0.000
OPH	Hyst		TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,121	1.459	£27,060	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£2,525	1.478	£27,036	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,842	1.492	£27,005	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,759	1.488	£27,003	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£2,530	1.476	£26,986	0.000
TVS	Polypectomy	Hyst	Hyst		LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£2,312	1.465	£26,984	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£2,862	1.492	£26,976	0.000
OPH	Polypectomy	Hyst	Hyst		2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,817	1.489	£26,957	0.000

Full health economic results														
TVS	Polypectomy	Hyst	Hyst		LNG	Hyst	Hyst		LNG	2nd Gen	£2,317	1.463	£26,934	0.000
OPH	Polypectomy	Hyst	Hyst		2nd Gen	Hyst	Hyst		LNG	Hyst	£2,817	1.486	£26,899	0.000
EBx	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,203	1.455	£26,898	0.000
EBx	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£2,224	1.455	£26,872	0.000
OPH	Polypectomy	Hyst	Hyst		Hyst		LNG	Hyst	LNG	Hyst	£2,745	1.481	£26,867	0.000
OPH	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,116	1.448	£26,849	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,976	1.491	£26,839	0.000
OPH	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£2,122	1.447	£26,817	0.000
EBx	Hyst		TCRF	Hyst	LNG	Hyst	LNG	Hyst	Hyst		£3,110	1.496	£26,816	0.000
OPH	Polypectomy	Hyst	Hyst		LNG	Hyst	LNG	Hyst	Hyst		£3,787	1.530	£26,813	0.000
OPH	Polypectomy	Hyst	Hyst		Hyst		Hyst		LNG	Hyst	£2,745	1.478	£26,809	0.000
EBx	Hyst		TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£1,623	1.421	£26,802	0.000
EBx	Hyst		TCRF	Hyst	LNG	Hyst	Hyst		Hyst		£3,132	1.496	£26,792	0.000
EBx	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	Hyst		£3,622	1.521	£26,791	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£2,981	1.489	£26,789	0.000
TVS	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	Hyst		£3,594	1.519	£26,788	0.000
EBx	Hyst		TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£1,645	1.421	£26,778	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	Hyst		£3,524	1.515	£26,771	0.000
OPH	Hyst		TCRF	Hyst	Hyst		LNG	Hyst	LNG	Hyst	£2,382	1.457	£26,768	0.000
EBx	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		Hyst		£3,643	1.520	£26,765	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	Hyst		LNG	Hyst	LNG	Hyst	£3,240	1.500	£26,758	0.000
TVS	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		Hyst		£3,604	1.518	£26,757	0.000
OPH	Polypectomy	Hyst	Hyst		LNG	Hyst	Hyst		Hyst		£3,787	1.527	£26,755	0.000
OPH	Hyst		TCRF	Hyst	Hyst		Hyst		LNG	Hyst	£2,397	1.457	£26,751	0.000
OPH	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	Hyst		£3,093	1.491	£26,734	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	Hyst		Hyst		LNG	Hyst	£3,260	1.499	£26,729	0.000
TVS	Hyst		TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	Hyst		£3,363	1.504	£26,723	0.000
TVS	Polypectomy	Hyst	Hyst		Hyst		LNG	Hyst	LNG	Hyst	£2,762	1.474	£26,723	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		Hyst		£3,524	1.512	£26,713	0.000
EBx	Polypectomy	Hyst	Hyst		LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,427	1.457	£26,707	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		£4,212	1.546	£26,705	0.000
TVS	Hyst		TCRF	Hyst	2nd Gen	Hyst	Hyst		Hyst		£3,379	1.504	£26,704	0.000
OPH	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		Hyst		£3,099	1.490	£26,701	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	Hyst		LNG	Hyst	Hyst		£3,452	1.507	£26,681	0.000
EBx	Polypectomy	Hyst	Hyst		LNG	Hyst	Hyst		LNG	Hyst	£2,446	1.456	£26,677	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		Hyst		£4,232	1.545	£26,676	0.000
TVS	Polypectomy	Hyst	Hyst		Hyst		Hyst		LNG	Hyst	£2,767	1.472	£26,673	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£2,613	1.463	£26,655	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	Hyst		£4,219	1.543	£26,637	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£2,633	1.463	£26,626	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	Hyst		Hyst		Hyst		£3,451	1.504	£26,623	0.000
OPH	LNG	Hyst	TCRF	Hyst	Hyst		LNG	Hyst	LNG	2nd Gen	£1,940	1.427	£26,595	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		Hyst		£4,224	1.541	£26,587	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	Hyst		LNG	Hyst	Hyst		£4,218	1.540	£26,573	0.000
OPH	LNG	Hyst	TCRF	Hyst	Hyst		Hyst		LNG	2nd Gen	£1,946	1.425	£26,562	0.000

Full health economic results														
TVS	Polypectomy	Hyst	LNG	Hyst	Hyst		Hyst		Hyst		£4,223	1.537	£26,523	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	Hyst		LNG	Hyst	LNG	2nd Gen	£2,856	1.467	£26,492	0.000
OPH	Hyst		TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,891	1.417	£26,454	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	Hyst		Hyst		LNG	2nd Gen	£2,861	1.465	£26,442	0.000
TVS	Polypectomy	Hyst	Hyst		2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,648	1.454	£26,440	0.000
OPH	Hyst		TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,906	1.417	£26,437	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£2,534	1.448	£26,431	0.000
TVS	Polypectomy	Hyst	Hyst		2nd Gen	Hyst	Hyst		LNG	Hyst	£2,653	1.452	£26,390	0.000
EBx	Hyst		TCRF	Hyst	Hyst		LNG	Hyst	Hyst		£3,501	1.494	£26,377	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£2,533	1.445	£26,373	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£2,571	1.447	£26,373	0.000
EBx	Hyst		TCRF	Hyst	Hyst		Hyst		Hyst		£3,522	1.494	£26,353	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£2,591	1.447	£26,344	0.000
OPH	Polypectomy	Hyst	Hyst		2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£2,592	1.446	£26,326	0.000
EBx	LNG	Hyst	TCRF	Hyst	Hyst		LNG	Hyst	Hyst		£3,993	1.515	£26,317	0.000
EBx	LNG	Hyst	Hyst		2nd Gen	Hyst	LNG	Hyst	Hyst		£3,484	1.490	£26,313	0.000
EBx	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,961	1.413	£26,301	0.000
EBx	LNG	Hyst	TCRF	Hyst	Hyst		Hyst		Hyst		£4,013	1.515	£26,291	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	Hyst		£4,104	1.520	£26,290	0.000
EBx	LNG	Hyst	Hyst		2nd Gen	Hyst	Hyst		Hyst		£3,504	1.490	£26,287	0.000
EBx	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,982	1.413	£26,275	0.000
OPH	Polypectomy	Hyst	Hyst		2nd Gen	Hyst	Hyst		LNG	2nd Gen	£2,592	1.443	£26,269	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		Hyst		£4,109	1.517	£26,240	0.000
TVS	Polypectomy	Hyst	Hyst		LNG	Hyst	LNG	Hyst	Hyst		£3,891	1.506	£26,238	0.000
OPH	Polypectomy	Hyst	Hyst		Hyst		LNG	Hyst	LNG	2nd Gen	£2,520	1.438	£26,236	0.000
OPH	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,895	1.406	£26,224	0.000
EBx	Hyst		TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,421	1.382	£26,217	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£2,742	1.448	£26,208	0.000
EBx	Hyst		TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,443	1.382	£26,193	0.000
OPH	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,901	1.405	£26,192	0.000
TVS	Polypectomy	Hyst	Hyst		LNG	Hyst	Hyst		Hyst		£3,896	1.504	£26,188	0.000
OPH	Polypectomy	Hyst	Hyst		Hyst		Hyst		LNG	2nd Gen	£2,520	1.435	£26,179	0.000
EBx	Polypectomy	Hyst	Hyst		Hyst		LNG	Hyst	LNG	Hyst	£2,783	1.448	£26,177	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	Hyst		LNG	Hyst	Hyst		£4,569	1.537	£26,175	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£2,747	1.445	£26,158	0.000
EBx	Polypectomy	Hyst	Hyst		Hyst		Hyst		LNG	Hyst	£2,803	1.448	£26,148	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	Hyst		Hyst		Hyst		£4,588	1.537	£26,146	0.000
OPH	Hyst		TCRF	Hyst	Hyst		LNG	Hyst	LNG	2nd Gen	£2,167	1.416	£26,145	0.000
OPH	LNG	Hyst	TCRF	Hyst	Hyst		LNG	Hyst	Hyst		£3,208	1.467	£26,138	0.000
OPH	Hyst		TCRF	Hyst	Hyst		Hyst		LNG	2nd Gen	£2,182	1.415	£26,128	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	Hyst		LNG	Hyst	LNG	2nd Gen	£2,969	1.455	£26,125	0.000
OPH	Hyst		TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,176	1.414	£26,111	0.000
OPH	LNG	Hyst	TCRF	Hyst	Hyst		Hyst		Hyst		£3,214	1.466	£26,105	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	Hyst		Hyst		LNG	2nd Gen	£2,989	1.454	£26,096	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,829	1.446	£26,095	0.000

Full health economic results														
OPH	Hyst		TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£2,191	1.414	£26,094	0.000
TVS	Polypectomy	Hyst	Hyst		Hyst		LNG	Hyst	LNG	2nd Gen	£2,528	1.431	£26,092	0.000
EBx	Polypectomy	Hyst	Hyst		LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£2,156	1.412	£26,074	0.000
EBx	Polypectomy	Hyst	Hyst		LNG	Hyst	Hyst		LNG	2nd Gen	£2,176	1.411	£26,045	0.000
TVS	Polypectomy	Hyst	Hyst		Hyst		Hyst		LNG	2nd Gen	£2,533	1.429	£26,042	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£2,829	1.443	£26,037	0.000
OPH	Hyst		TCRF	Hyst	LNG	Hyst	LNG	Hyst	Hyst		£3,162	1.459	£26,013	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	Hyst		LNG	Hyst	LNG	Hyst	£2,757	1.438	£26,005	0.000
OPH	Hyst		TCRF	Hyst	LNG	Hyst	Hyst		Hyst		£3,177	1.459	£25,996	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	Hyst		£3,798	1.488	£25,952	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	Hyst		Hyst		LNG	Hyst	£2,757	1.435	£25,947	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,979	1.444	£25,906	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		Hyst		£3,798	1.485	£25,894	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£2,999	1.444	£25,877	0.000
OPH	Polypectomy	Hyst	Hyst		2nd Gen	Hyst	LNG	Hyst	Hyst		£3,857	1.485	£25,847	0.000
TVS	Polypectomy	Hyst	Hyst		2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£2,414	1.411	£25,809	0.000
OPH	Polypectomy	Hyst	Hyst		2nd Gen	Hyst	Hyst		Hyst		£3,857	1.482	£25,789	0.000
OPH	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	Hyst		£3,163	1.447	£25,768	0.000
TVS	Polypectomy	Hyst	Hyst		2nd Gen	Hyst	Hyst		LNG	2nd Gen	£2,420	1.409	£25,759	0.000
OPH	Polypectomy	Hyst	Hyst		Hyst		LNG	Hyst	Hyst		£3,785	1.477	£25,757	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	Hyst		LNG	Hyst	Hyst		£4,435	1.509	£25,746	0.000
OPH	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		Hyst		£3,169	1.445	£25,735	0.000
OPH	Hyst		TCRF	Hyst	Hyst		LNG	Hyst	Hyst		£3,438	1.457	£25,704	0.000
OPH	Polypectomy	Hyst	Hyst		Hyst		Hyst		Hyst		£3,785	1.474	£25,699	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	Hyst		Hyst		Hyst		£4,440	1.507	£25,696	0.000
OPH	Hyst		TCRF	Hyst	Hyst		Hyst		Hyst		£3,454	1.457	£25,687	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	Hyst		£4,350	1.498	£25,605	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		Hyst		£4,369	1.497	£25,576	0.000
EBx	Polypectomy	Hyst	Hyst		Hyst		LNG	Hyst	LNG	2nd Gen	£2,512	1.403	£25,544	0.000
EBx	Polypectomy	Hyst	Hyst		Hyst		Hyst		LNG	2nd Gen	£2,532	1.402	£25,515	0.000
OPH	Hyst		TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,961	1.372	£25,488	0.000
OPH	Hyst		TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,976	1.372	£25,471	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£2,604	1.403	£25,465	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	Hyst		£4,321	1.489	£25,463	0.000
EBx	Hyst		TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	Hyst		£3,206	1.432	£25,434	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		Hyst		£4,327	1.487	£25,413	0.000
EBx	Hyst		TCRF	Hyst	2nd Gen	Hyst	Hyst		Hyst		£3,227	1.432	£25,410	0.000
EBx	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	Hyst		£3,718	1.456	£25,409	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£2,604	1.401	£25,407	0.000
EBx	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		Hyst		£3,738	1.456	£25,383	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	Hyst		LNG	Hyst	LNG	2nd Gen	£2,532	1.395	£25,375	0.000
TVS	Polypectomy	Hyst	Hyst		Hyst		LNG	Hyst	Hyst		£4,107	1.473	£25,347	0.000
EBx	Polypectomy	Hyst	Hyst		2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,522	1.392	£25,325	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	Hyst		£4,308	1.482	£25,323	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	Hyst		Hyst		LNG	2nd Gen	£2,531	1.392	£25,317	0.000

Full health economic results														
TVS	Polypectomy	Hyst	Hyst		Hyst		Hyst		Hyst		£4,112	1.470	£25,297	0.000
EBx	Polypectomy	Hyst	Hyst		2nd Gen	Hyst	Hyst		LNG	Hyst	£2,542	1.392	£25,296	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		Hyst		£4,328	1.481	£25,294	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£2,709	1.399	£25,273	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£2,728	1.399	£25,244	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	Hyst		LNG	Hyst	Hyst		£4,706	1.489	£25,076	0.000
TVS	Polypectomy	Hyst	Hyst		2nd Gen	Hyst	LNG	Hyst	Hyst		£3,994	1.453	£25,064	0.000
OPH	Hyst		TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	Hyst		£3,233	1.414	£25,047	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	Hyst		Hyst		Hyst		£4,726	1.489	£25,047	0.000
OPH	Hyst		TCRF	Hyst	2nd Gen	Hyst	Hyst		Hyst		£3,248	1.414	£25,030	0.000
EBx	Polypectomy	Hyst	Hyst		LNG	Hyst	LNG	Hyst	Hyst		£3,893	1.446	£25,025	0.000
TVS	Polypectomy	Hyst	Hyst		2nd Gen	Hyst	Hyst		Hyst		£3,999	1.451	£25,014	0.000
EBx	Polypectomy	Hyst	Hyst		LNG	Hyst	Hyst		Hyst		£3,912	1.445	£24,996	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	Hyst		£3,869	1.443	£24,986	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		Hyst		£3,868	1.440	£24,928	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	Hyst		LNG	Hyst	Hyst		£3,796	1.435	£24,896	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	Hyst		Hyst		Hyst		£3,796	1.432	£24,838	0.000
EBx	Polypectomy	Hyst	Hyst		2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£2,252	1.347	£24,692	0.000
EBx	Polypectomy	Hyst	Hyst		2nd Gen	Hyst	Hyst		LNG	2nd Gen	£2,271	1.347	£24,663	0.000
EBx	Polypectomy	Hyst	Hyst		Hyst		LNG	Hyst	Hyst		£4,249	1.437	£24,495	0.000
EBx	Polypectomy	Hyst	Hyst		Hyst		Hyst		Hyst		£4,269	1.437	£24,466	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	Hyst		£4,445	1.433	£24,224	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		Hyst		£4,465	1.433	£24,195	0.000
EBx	Polypectomy	Hyst	Hyst		2nd Gen	Hyst	LNG	Hyst	Hyst		£3,989	1.382	£23,643	0.000
EBx	Polypectomy	Hyst	Hyst		2nd Gen	Hyst	Hyst		Hyst		£4,008	1.381	£23,614	0.000
Analysis 4														
	Polyps		**SMF**		**<3cm**		**>3cm**		**NiP**					
Dx Strategy	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**Mean cost**	**Mean QALY**	**Mean NMB**	**Pr (CE)**
OPH	Hyst		Hyst		LNG	Hyst	Hyst		LNG	Hyst	£2,158	1.550	£28,838	0.916
OPH	Hyst		Hyst		Hyst		Hyst		LNG	Hyst	£2,445	1.549	£28,534	0.004
OPH	Hyst		Hyst		LNG	Hyst	Hyst		LNG	2nd Gen	£1,895	1.496	£28,029	0.036
OPH	Hyst		Hyst		2nd Gen	Hyst	Hyst		LNG	Hyst	£2,230	1.502	£27,806	0.000
OPH	Hyst		Hyst		Hyst		Hyst		LNG	2nd Gen	£2,182	1.495	£27,725	0.000
OPH	Hyst		Hyst		LNG	Hyst	Hyst		Hyst		£3,306	1.550	£27,693	0.000
OPH	Polypectomy	Hyst	Hyst		LNG	Hyst	Hyst		LNG	Hyst	£2,523	1.501	£27,503	0.000
Hysterectomy alone	Hyst		Hyst		Hyst		Hyst		Hyst		£3,495	1.549	£27,488	0.040
OPH	Hyst		Hyst		Hyst		Hyst		Hyst		£3,594	1.549	£27,389	0.000
OPH	Hyst		Hyst		2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,967	1.448	£26,997	0.004
OPH	Polypectomy	Hyst	Hyst		LNG	Hyst	Hyst		LNG	2nd Gen	£2,250	1.447	£26,685	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,516	1.459	£26,671	0.000
OPH	Hyst		Hyst		2nd Gen	Hyst	Hyst		Hyst		£3,379	1.502	£26,661	0.000
OPH	Polypectomy	Hyst	Hyst		Hyst		Hyst		LNG	Hyst	£2,560	1.456	£26,551	0.000
OPH	Polypectomy	Hyst	Hyst		2nd Gen	Hyst	Hyst		LNG	Hyst	£2,595	1.453	£26,470	0.000
OPH	Hyst		TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,017	1.424	£26,455	0.000
OPH	Polypectomy	Hyst	Hyst		LNG	Hyst	Hyst		Hyst		£3,654	1.498	£26,313	0.000

Full health economic results														
OPH	Hyst		Hyst		LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,127	1.415	£26,183	0.000
OPH	Hyst		TCRF	Hyst	Hyst		Hyst		LNG	Hyst	£2,304	1.423	£26,151	0.000
OPH	Hyst		Hyst		Hyst		LNG	Hyst	LNG	Hyst	£2,414	1.415	£25,879	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£2,243	1.405	£25,853	0.000
OPH	Polypectomy	Hyst	Hyst		Hyst		Hyst		LNG	2nd Gen	£2,287	1.401	£25,733	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	Hyst		Hyst		LNG	Hyst	£2,553	1.414	£25,718	0.000
OPH	Polypectomy	Hyst	Hyst		2nd Gen	Hyst	Hyst		LNG	2nd Gen	£2,322	1.399	£25,652	0.000
OPH	Hyst		TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,754	1.370	£25,646	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£2,588	1.411	£25,638	0.000
OPH	Hyst		LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,703	1.367	£25,636	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		Hyst		£3,647	1.456	£25,481	0.000
OPH	Hyst		TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£2,090	1.376	£25,422	0.000
OPH	LNG	Hyst	Hyst		LNG	Hyst	Hyst		LNG	Hyst	£2,128	1.377	£25,415	0.000
OPH	Hyst		Hyst		LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,864	1.362	£25,374	0.000
OPH	Polypectomy	Hyst	Hyst		Hyst		Hyst		Hyst		£3,692	1.453	£25,361	0.000
OPH	Hyst		TCRF	Hyst	Hyst		Hyst		LNG	2nd Gen	£2,042	1.369	£25,342	0.000
OPH	Hyst		LNG	Hyst	Hyst		Hyst		LNG	Hyst	£1,990	1.366	£25,332	0.000
OPH	Hyst		TCRF	Hyst	LNG	Hyst	Hyst		Hyst		£3,166	1.424	£25,310	0.000
OPH	Polypectomy	Hyst	Hyst		2nd Gen	Hyst	Hyst		Hyst		£3,727	1.450	£25,280	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,202	1.369	£25,180	0.000
OPH	Hyst		Hyst		2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,199	1.367	£25,150	0.000
OPH	Hyst		Hyst		Hyst		LNG	Hyst	LNG	2nd Gen	£2,151	1.361	£25,070	0.000
OPH	Hyst		Hyst		LNG	Hyst	LNG	Hyst	Hyst		£3,275	1.416	£25,038	0.000
OPH	Hyst		TCRF	Hyst	Hyst		Hyst		Hyst		£3,453	1.423	£25,006	0.000
OPH	Polypectomy	Hyst	Hyst		LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,519	1.372	£24,917	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	Hyst		Hyst		LNG	2nd Gen	£2,280	1.359	£24,901	0.000
OPH	LNG	Hyst	Hyst		Hyst		Hyst		LNG	Hyst	£2,270	1.357	£24,863	0.000
OPH	Hyst		LNG	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,440	1.313	£24,827	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£2,315	1.357	£24,820	0.000
OPH	Hyst		Hyst		Hyst		LNG	Hyst	Hyst		£3,563	1.415	£24,734	0.000
OPH	Hyst		TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,827	1.322	£24,613	0.000
OPH	LNG	Hyst	Hyst		LNG	Hyst	Hyst		LNG	2nd Gen	£1,859	1.323	£24,604	0.000
OPH	Hyst		LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£1,775	1.319	£24,603	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	Hyst		Hyst		Hyst		£3,685	1.411	£24,529	0.000
OPH	Hyst		LNG	Hyst	Hyst		Hyst		LNG	2nd Gen	£1,727	1.312	£24,522	0.000
OPH	Hyst		LNG	Hyst	LNG	Hyst	Hyst		Hyst		£2,851	1.367	£24,491	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		Hyst		£3,720	1.408	£24,448	0.000
OPH	LNG	Hyst	Hyst		2nd Gen	Hyst	Hyst		LNG	Hyst	£2,200	1.329	£24,383	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,929	1.315	£24,362	0.000
OPH	Hyst		Hyst		2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,937	1.314	£24,341	0.000
OPH	Hyst		TCRF	Hyst	2nd Gen	Hyst	Hyst		Hyst		£3,238	1.376	£24,277	0.000
OPH	LNG	Hyst	Hyst		LNG	Hyst	Hyst		Hyst		£3,266	1.376	£24,253	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	Hyst		Hyst		LNG	Hyst	£2,239	1.323	£24,228	0.000
OPH	Hyst		LNG	Hyst	Hyst		Hyst		Hyst		£3,139	1.366	£24,187	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£2,274	1.321	£24,148	0.000

Full health economic results														
OPH	Polypectomy	Hyst	Hyst		LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£2,246	1.317	£24,099	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,512	1.330	£24,085	0.000
OPH	LNG	Hyst	Hyst		Hyst		Hyst		LNG	2nd Gen	£2,001	1.303	£24,051	0.000
OPH	Hyst		Hyst		2nd Gen	Hyst	LNG	Hyst	Hyst		£3,348	1.368	£24,005	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		Hyst		£3,333	1.366	£23,990	0.000
OPH	Polypectomy	Hyst	Hyst		Hyst		LNG	Hyst	LNG	Hyst	£2,556	1.326	£23,965	0.000
OPH	Polypectomy	Hyst	Hyst		2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,591	1.324	£23,884	0.000
OPH	Hyst		TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,986	1.289	£23,799	0.000
OPH	Hyst		LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,513	1.265	£23,794	0.000
OPH	Polypectomy	Hyst	Hyst		LNG	Hyst	LNG	Hyst	Hyst		£3,650	1.369	£23,727	0.000
OPH	LNG	Hyst	Hyst		Hyst		Hyst		Hyst		£3,409	1.355	£23,701	0.000
OPH	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,065	1.288	£23,694	0.000
OPH	LNG	Hyst	Hyst		2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,932	1.275	£23,571	0.000
OPH	Hyst		TCRF	Hyst	Hyst		LNG	Hyst	LNG	Hyst	£2,274	1.288	£23,495	0.000
OPH	Hyst		LNG	Hyst	2nd Gen	Hyst	Hyst		Hyst		£2,924	1.319	£23,458	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	Hyst		Hyst		LNG	2nd Gen	£1,966	1.269	£23,410	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£2,001	1.267	£23,330	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£2,239	1.275	£23,267	0.000
OPH	LNG	Hyst	Hyst		2nd Gen	Hyst	Hyst		Hyst		£3,339	1.328	£23,221	0.000
OPH	Polypectomy	Hyst	Hyst		Hyst		LNG	Hyst	LNG	2nd Gen	£2,283	1.272	£23,147	0.000
OPH	LNG	Hyst	TCRF	Hyst	Hyst		Hyst		LNG	Hyst	£2,207	1.267	£23,142	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	Hyst		LNG	Hyst	LNG	Hyst	£2,549	1.284	£23,133	0.000
OPH	Polypectomy	Hyst	Hyst		2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£2,318	1.269	£23,067	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,584	1.282	£23,053	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	Hyst		Hyst		Hyst		£3,370	1.320	£23,038	0.000
OPH	Hyst		TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,723	1.236	£22,990	0.000
OPH	Hyst		LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,672	1.233	£22,980	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		Hyst		£3,405	1.318	£22,958	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	Hyst		£3,643	1.327	£22,895	0.000
OPH	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,796	1.234	£22,883	0.000
OPH	LNG	Hyst	Hyst		LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,113	1.245	£22,787	0.000
OPH	Polypectomy	Hyst	Hyst		Hyst		LNG	Hyst	Hyst		£3,688	1.323	£22,775	0.000
OPH	Hyst		TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,059	1.241	£22,767	0.000
OPH	Polypectomy	Hyst	Hyst		2nd Gen	Hyst	LNG	Hyst	Hyst		£3,723	1.321	£22,695	0.000
OPH	Hyst		TCRF	Hyst	Hyst		LNG	Hyst	LNG	2nd Gen	£2,011	1.235	£22,686	0.000
OPH	Hyst		LNG	Hyst	Hyst		LNG	Hyst	LNG	Hyst	£1,959	1.232	£22,676	0.000
OPH	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£2,137	1.240	£22,662	0.000
OPH	Hyst		TCRF	Hyst	LNG	Hyst	LNG	Hyst	Hyst		£3,135	1.289	£22,654	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,197	1.240	£22,594	0.000
OPH	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,750	1.216	£22,579	0.000
OPH	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		Hyst		£3,203	1.287	£22,532	0.000
OPH	Hyst		TCRF	Hyst	Hyst		LNG	Hyst	Hyst		£3,422	1.289	£22,350	0.000
OPH	LNG	Hyst	TCRF	Hyst	Hyst		Hyst		LNG	2nd Gen	£1,938	1.213	£22,330	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	Hyst		LNG	Hyst	LNG	2nd Gen	£2,276	1.230	£22,315	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£2,311	1.227	£22,235	0.000

Full health economic results														
OPH	LNG	Hyst	Hyst		Hyst		LNG	Hyst	LNG	Hyst	£2,255	1.224	£22,234	0.000
OPH	Hyst		LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,409	1.179	£22,171	0.000
OPH	LNG	Hyst	LNG	Hyst	Hyst		Hyst		LNG	Hyst	£1,892	1.196	£22,026	0.000
OPH	LNG	Hyst	TCRF	Hyst	Hyst		Hyst		Hyst		£3,345	1.266	£21,980	0.000
OPH	LNG	Hyst	Hyst		LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,844	1.191	£21,975	0.000
OPH	Hyst		TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,796	1.188	£21,958	0.000
OPH	Hyst		LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£1,744	1.185	£21,948	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	Hyst		LNG	Hyst	Hyst		£3,681	1.281	£21,943	0.000
OPH	Hyst		LNG	Hyst	Hyst		LNG	Hyst	LNG	2nd Gen	£1,696	1.178	£21,867	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	Hyst		£3,716	1.279	£21,863	0.000
OPH	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,869	1.186	£21,850	0.000
OPH	Hyst		LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		£2,821	1.233	£21,835	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,925	1.185	£21,777	0.000
OPH	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,482	1.162	£21,767	0.000
OPH	LNG	Hyst	Hyst		2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,185	1.197	£21,754	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	Hyst		LNG	Hyst	LNG	Hyst	£2,235	1.194	£21,642	0.000
OPH	LNG	Hyst	Hyst		LNG	Hyst	LNG	Hyst	Hyst		£3,251	1.244	£21,625	0.000
OPH	Hyst		TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	Hyst		£3,207	1.241	£21,622	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,270	1.192	£21,562	0.000
OPH	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£1,823	1.168	£21,546	0.000
OPH	Hyst		LNG	Hyst	Hyst		LNG	Hyst	Hyst		£3,108	1.232	£21,531	0.000
OPH	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		Hyst		£3,276	1.239	£21,500	0.000
OPH	LNG	Hyst	Hyst		Hyst		LNG	Hyst	LNG	2nd Gen	£1,986	1.170	£21,423	0.000
OPH	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		Hyst		£2,889	1.215	£21,417	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		£3,329	1.237	£21,405	0.000
OPH	LNG	Hyst	LNG	Hyst	Hyst		Hyst		LNG	2nd Gen	£1,624	1.142	£21,215	0.000
OPH	Hyst		LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,482	1.131	£21,138	0.000
OPH	LNG	Hyst	Hyst		Hyst		LNG	Hyst	Hyst		£3,393	1.223	£21,072	0.000
OPH	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,050	1.156	£21,066	0.000
OPH	LNG	Hyst	Hyst		2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,916	1.143	£20,942	0.000
OPH	LNG	Hyst	LNG	Hyst	Hyst		Hyst		Hyst		£3,031	1.195	£20,864	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	Hyst		LNG	Hyst	LNG	2nd Gen	£1,962	1.139	£20,824	0.000
OPH	Hyst		LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	Hyst		£2,893	1.185	£20,803	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,997	1.137	£20,744	0.000
OPH	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,554	1.114	£20,734	0.000
OPH	LNG	Hyst	Hyst		2nd Gen	Hyst	LNG	Hyst	Hyst		£3,324	1.196	£20,592	0.000
OPH	LNG	Hyst	TCRF	Hyst	Hyst		LNG	Hyst	LNG	Hyst	£2,192	1.135	£20,513	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	Hyst		LNG	Hyst	Hyst		£3,366	1.191	£20,452	0.000
OPH	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		Hyst		£2,962	1.167	£20,384	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	Hyst		£3,401	1.189	£20,372	0.000
LNG-IUS alone	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,396	1.086	£20,321	0.000
OPH	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,781	1.102	£20,254	0.000
OPH	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,122	1.108	£20,033	0.000
OPH	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,735	1.084	£19,950	0.000
OPH	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	Hyst		£3,188	1.155	£19,904	0.000

Full health economic results														
OPH	LNG	Hyst	TCRF	Hyst	Hyst		LNG	Hyst	LNG	2nd Gen	£1,923	1.081	£19,702	0.000
LNG-IUS alone	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,131	1.032	£19,505	0.000
OPH	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	LNG	Hyst	£1,877	1.064	£19,397	0.000
OPH	LNG	Hyst	TCRF	Hyst	Hyst		LNG	Hyst	Hyst		£3,330	1.134	£19,351	0.000
OPH	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,853	1.054	£19,221	0.000
OPH	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,466	1.030	£19,138	0.000
OPH	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£1,808	1.036	£18,917	0.000
OPH	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	Hyst		£3,261	1.107	£18,871	0.000
OPH	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		£2,874	1.083	£18,788	0.000
OPH	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	LNG	2nd Gen	£1,608	1.010	£18,586	0.000
OPH	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	Hyst		£3,016	1.063	£18,236	0.000
OPH	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,539	0.982	£18,106	0.000
OPH	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	Hyst		£2,946	1.035	£17,755	0.000
Analysis 5														
	Polyps		**SMF**		**<3cm**		**>3cm**		**NiP**					
Dx Strategy	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**Mean cost**	**Mean QALY**	**Mean NMB**	**Pr (CE)**
TVS	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£3,301	1.440	£25,492	0.946
OPH	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£3,054	1.404	£25,026	0.054
EBx	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£3,360	1.398	£24,598	0.000
Analysis 6														
	Polyps		**SMF**		**<3cm**		**>3cm**		**NiP**					
Dx Strategy	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**Mean cost**	**Mean QALY**	**Mean NMB**	**Pr (CE)**
TVS	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£2,968	1.454	£26,119	0.983
OPH	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£2,793	1.418	£25,570	0.017
EBx	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£3,004	1.415	£25,293	0.000
Analysis 7														
	Polyps		**SMF**		**<3cm**		**>3cm**		**NiP**					
Dx Strategy	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**Mean cost**	**Mean QALY**	**Mean NMB**	**Pr (CE)**
TVS	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,952	1.506	£27,172	0.471
OPH	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,666	1.491	£27,158	0.529
EBx	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£3,115	1.468	£26,248	0.000
Analysis 8														
	Polyps		**SMF**		**<3cm**		**>3cm**		**NiP**					
Dx Strategy	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**Mean cost**	**Mean QALY**	**Mean NMB**	**Pr (CE)**
TVS	TXA	Hyst	TXA	Hyst	TXA	Hyst	TXA	Hyst	TXA	Hyst	£985	1.663	£32,284	0.820
TVS	TXA	Hyst	TXA	Hyst	TXA	Hyst	LNG	Hyst	TXA	Hyst	£995	1.663	£32,257	0.000
TVS	TXA	Hyst	TXA	Hyst	TXA	Hyst	Hyst		TXA	Hyst	£1,018	1.662	£32,219	0.004
TVS	TXA	Hyst	TXA	Hyst	LNG	Hyst	TXA	Hyst	TXA	Hyst	£1,090	1.655	£32,012	0.000
TVS	TXA	Hyst	TXA	Hyst	LNG	Hyst	LNG	Hyst	TXA	Hyst	£1,100	1.654	£31,986	0.000
TVS	TXA	Hyst	LNG	Hyst	TXA	Hyst	TXA	Hyst	TXA	Hyst	£1,065	1.651	£31,962	0.040
TVS	TXA	Hyst	TXA	Hyst	LNG	Hyst	Hyst		TXA	Hyst	£1,123	1.653	£31,947	0.000
TVS	TXA	Hyst	LNG	Hyst	TXA	Hyst	LNG	Hyst	TXA	Hyst	£1,075	1.651	£31,935	0.000

Full health economic results														
TVS	TXA	Hyst	LNG	Hyst	TXA	Hyst	Hyst		TXA	Hyst	£1,098	1.650	£31,896	0.000
TVS	TXA	Hyst	LNG	Hyst	LNG	Hyst	TXA	Hyst	TXA	Hyst	£1,170	1.643	£31,690	0.000
TVS	TXA	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	TXA	Hyst	£1,180	1.642	£31,663	0.004
TVS	TXA	Hyst	LNG	Hyst	LNG	Hyst	Hyst		TXA	Hyst	£1,203	1.641	£31,624	0.000
TVS	TXA	Hyst	TXA	Hyst	TXA	Hyst	TXA	Hyst	LNG	Hyst	£1,316	1.639	£31,474	0.000
TVS	TXA	Hyst	TXA	Hyst	TXA	Hyst	LNG	Hyst	LNG	Hyst	£1,326	1.639	£31,448	0.000
TVS	LNG	Hyst	TXA	Hyst	TXA	Hyst	TXA	Hyst	TXA	Hyst	£1,445	1.643	£31,412	0.008
TVS	TXA	Hyst	TXA	Hyst	TXA	Hyst	Hyst		LNG	Hyst	£1,349	1.638	£31,409	0.000
TVS	LNG	Hyst	TXA	Hyst	TXA	Hyst	LNG	Hyst	TXA	Hyst	£1,455	1.642	£31,385	0.000
TVS	LNG	Hyst	TXA	Hyst	TXA	Hyst	Hyst		TXA	Hyst	£1,472	1.640	£31,334	0.000
TVS	TXA	Hyst	TXA	Hyst	LNG	Hyst	TXA	Hyst	LNG	Hyst	£1,421	1.631	£31,203	0.000
TVS	TXA	Hyst	TXA	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,431	1.630	£31,176	0.000
TVS	TXA	Hyst	LNG	Hyst	TXA	Hyst	TXA	Hyst	LNG	Hyst	£1,396	1.627	£31,152	0.000
TVS	LNG	Hyst	TXA	Hyst	LNG	Hyst	TXA	Hyst	TXA	Hyst	£1,550	1.635	£31,142	0.000
TVS	TXA	Hyst	TXA	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,454	1.630	£31,137	0.000
TVS	TXA	Hyst	LNG	Hyst	TXA	Hyst	LNG	Hyst	LNG	Hyst	£1,406	1.627	£31,126	0.000
TVS	LNG	Hyst	TXA	Hyst	LNG	Hyst	LNG	Hyst	TXA	Hyst	£1,560	1.634	£31,116	0.000
TVS	LNG	Hyst	LNG	Hyst	TXA	Hyst	TXA	Hyst	TXA	Hyst	£1,526	1.632	£31,111	0.000
TVS	TXA	Hyst	LNG	Hyst	TXA	Hyst	Hyst		LNG	Hyst	£1,429	1.626	£31,087	0.000
TVS	LNG	Hyst	LNG	Hyst	TXA	Hyst	LNG	Hyst	TXA	Hyst	£1,536	1.631	£31,085	0.000
TVS	LNG	Hyst	TXA	Hyst	LNG	Hyst	Hyst		TXA	Hyst	£1,577	1.632	£31,064	0.000
TVS	LNG	Hyst	LNG	Hyst	TXA	Hyst	Hyst		TXA	Hyst	£1,552	1.629	£31,034	0.000
TVS	TXA	Hyst	LNG	Hyst	LNG	Hyst	TXA	Hyst	LNG	Hyst	£1,501	1.619	£30,880	0.000
TVS	TXA	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,511	1.618	£30,854	0.008
TVS	LNG	Hyst	LNG	Hyst	LNG	Hyst	TXA	Hyst	TXA	Hyst	£1,631	1.624	£30,842	0.000
TVS	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	TXA	Hyst	£1,641	1.623	£30,815	0.000
TVS	TXA	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,534	1.617	£30,815	0.000
TVS	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		TXA	Hyst	£1,657	1.621	£30,764	0.000
TVS	LNG	Hyst	TXA	Hyst	TXA	Hyst	TXA	Hyst	LNG	Hyst	£1,777	1.619	£30,610	0.000
TVS	TXA	Hyst	TCRF	Hyst	TXA	Hyst	TXA	Hyst	TXA	Hyst	£1,302	1.595	£30,602	0.000
TVS	LNG	Hyst	TXA	Hyst	TXA	Hyst	LNG	Hyst	LNG	Hyst	£1,787	1.619	£30,583	0.000
TVS	TXA	Hyst	TCRF	Hyst	TXA	Hyst	LNG	Hyst	TXA	Hyst	£1,312	1.594	£30,576	0.000
TVS	TXA	Hyst	TCRF	Hyst	TXA	Hyst	Hyst		TXA	Hyst	£1,335	1.594	£30,537	0.000
TVS	LNG	Hyst	TXA	Hyst	TXA	Hyst	Hyst		LNG	Hyst	£1,803	1.617	£30,532	0.000
LNG-IUS alone	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,368	1.588	£30,392	0.116
TVS	LNG	Hyst	TXA	Hyst	LNG	Hyst	TXA	Hyst	LNG	Hyst	£1,882	1.611	£30,340	0.000
TVS	TXA	Hyst	TCRF	Hyst	LNG	Hyst	TXA	Hyst	TXA	Hyst	£1,408	1.587	£30,330	0.000
TVS	LNG	Hyst	TXA	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,892	1.610	£30,314	0.000
TVS	LNG	Hyst	LNG	Hyst	TXA	Hyst	TXA	Hyst	LNG	Hyst	£1,857	1.608	£30,309	0.000
TVS	TXA	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	TXA	Hyst	£1,418	1.586	£30,304	0.000
TVS	LNG	Hyst	LNG	Hyst	TXA	Hyst	LNG	Hyst	LNG	Hyst	£1,867	1.607	£30,283	0.000
TVS	TXA	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		TXA	Hyst	£1,441	1.585	£30,265	0.000
TVS	LNG	Hyst	TXA	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,908	1.609	£30,262	0.000
TVS	LNG	Hyst	LNG	Hyst	TXA	Hyst	Hyst		LNG	Hyst	£1,883	1.606	£30,231	0.000
TVS	LNG	Hyst	LNG	Hyst	LNG	Hyst	TXA	Hyst	LNG	Hyst	£1,962	1.600	£30,040	0.000

Full health economic results														
TVS	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,972	1.599	£30,013	0.000
TVS	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,988	1.598	£29,962	0.000
TVS	LNG	Hyst	TCRF	Hyst	TXA	Hyst	TXA	Hyst	TXA	Hyst	£1,763	1.583	£29,903	0.000
TVS	LNG	Hyst	TCRF	Hyst	TXA	Hyst	LNG	Hyst	TXA	Hyst	£1,773	1.583	£29,877	0.000
TVS	LNG	Hyst	TCRF	Hyst	TXA	Hyst	Hyst		TXA	Hyst	£1,789	1.581	£29,826	0.000
TVS	TXA	Hyst	TCRF	Hyst	TXA	Hyst	TXA	Hyst	LNG	Hyst	£1,633	1.571	£29,792	0.000
TVS	TXA	Hyst	TCRF	Hyst	TXA	Hyst	LNG	Hyst	LNG	Hyst	£1,643	1.570	£29,766	0.000
TVS	TXA	Hyst	TCRF	Hyst	TXA	Hyst	Hyst		LNG	Hyst	£1,666	1.570	£29,727	0.000
TVS	Polypectomy	Hyst	TXA	Hyst	TXA	Hyst	TXA	Hyst	TXA	Hyst	£2,192	1.596	£29,725	0.000
TVS	Polypectomy	Hyst	TXA	Hyst	TXA	Hyst	LNG	Hyst	TXA	Hyst	£2,201	1.595	£29,699	0.000
TVS	LNG	Hyst	TCRF	Hyst	LNG	Hyst	TXA	Hyst	TXA	Hyst	£1,868	1.575	£29,634	0.000
TVS	Polypectomy	Hyst	TXA	Hyst	TXA	Hyst	Hyst		TXA	Hyst	£2,209	1.591	£29,616	0.000
TVS	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	TXA	Hyst	£1,878	1.574	£29,607	0.000
TVS	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		TXA	Hyst	£1,894	1.573	£29,556	0.000
TVS	TXA	Hyst	TCRF	Hyst	LNG	Hyst	TXA	Hyst	LNG	Hyst	£1,739	1.563	£29,521	0.000
TVS	TXA	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,749	1.562	£29,494	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	TXA	Hyst	TXA	Hyst	TXA	Hyst	£2,272	1.587	£29,466	0.000
TVS	Polypectomy	Hyst	TXA	Hyst	LNG	Hyst	TXA	Hyst	TXA	Hyst	£2,296	1.588	£29,459	0.000
TVS	TXA	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,772	1.561	£29,455	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	TXA	Hyst	LNG	Hyst	TXA	Hyst	£2,282	1.586	£29,440	0.000
TVS	Polypectomy	Hyst	TXA	Hyst	LNG	Hyst	LNG	Hyst	TXA	Hyst	£2,306	1.587	£29,433	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	TXA	Hyst	Hyst		TXA	Hyst	£2,290	1.582	£29,357	0.000
TVS	Polypectomy	Hyst	TXA	Hyst	LNG	Hyst	Hyst		TXA	Hyst	£2,314	1.583	£29,350	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	TXA	Hyst	TXA	Hyst	£2,376	1.579	£29,200	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	TXA	Hyst	£2,386	1.578	£29,174	0.000
TVS	LNG	Hyst	TCRF	Hyst	TXA	Hyst	TXA	Hyst	LNG	Hyst	£2,095	1.560	£29,101	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		TXA	Hyst	£2,394	1.574	£29,091	0.000
TVS	LNG	Hyst	TCRF	Hyst	TXA	Hyst	LNG	Hyst	LNG	Hyst	£2,105	1.559	£29,075	0.000
TVS	LNG	Hyst	TCRF	Hyst	TXA	Hyst	Hyst		LNG	Hyst	£2,121	1.557	£29,023	0.000
TVS	Polypectomy	Hyst	TXA	Hyst	TXA	Hyst	TXA	Hyst	LNG	Hyst	£2,524	1.573	£28,937	0.000
TVS	Polypectomy	Hyst	TXA	Hyst	TXA	Hyst	LNG	Hyst	LNG	Hyst	£2,534	1.572	£28,910	0.000
TVS	LNG	Hyst	TCRF	Hyst	LNG	Hyst	TXA	Hyst	LNG	Hyst	£2,200	1.552	£28,832	0.000
TVS	Polypectomy	Hyst	TXA	Hyst	TXA	Hyst	Hyst		LNG	Hyst	£2,542	1.568	£28,827	0.000
TVS	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,210	1.551	£28,805	0.000
TVS	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,226	1.549	£28,754	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	TXA	Hyst	TXA	Hyst	LNG	Hyst	£2,604	1.564	£28,678	0.000
TVS	Polypectomy	Hyst	TXA	Hyst	LNG	Hyst	TXA	Hyst	LNG	Hyst	£2,628	1.565	£28,671	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	TXA	Hyst	LNG	Hyst	LNG	Hyst	£2,614	1.563	£28,651	0.000
TVS	Polypectomy	Hyst	TXA	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,638	1.564	£28,645	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	TXA	Hyst	TXA	Hyst	TXA	Hyst	£2,510	1.554	£28,572	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	TXA	Hyst	Hyst		LNG	Hyst	£2,622	1.560	£28,568	0.000
TVS	Polypectomy	Hyst	TXA	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,646	1.560	£28,562	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	TXA	Hyst	LNG	Hyst	TXA	Hyst	£2,520	1.553	£28,546	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	TXA	Hyst	Hyst		TXA	Hyst	£2,528	1.550	£28,463	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	TXA	Hyst	LNG	Hyst	£2,708	1.556	£28,412	0.000

Full health economic results														
TVS	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,718	1.555	£28,386	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	TXA	Hyst	TXA	Hyst	£2,614	1.546	£28,307	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,726	1.551	£28,303	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	TXA	Hyst	£2,624	1.545	£28,281	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		TXA	Hyst	£2,632	1.541	£28,198	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	TXA	Hyst	TXA	Hyst	LNG	Hyst	£2,842	1.531	£27,784	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	TXA	Hyst	LNG	Hyst	LNG	Hyst	£2,852	1.530	£27,758	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	TXA	Hyst	Hyst		LNG	Hyst	£2,860	1.527	£27,675	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	TXA	Hyst	LNG	Hyst	£2,946	1.523	£27,519	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,956	1.522	£27,492	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,964	1.519	£27,409	0.000
Analysis 9														
	Polyps		**SMF**		**<3cm**		**>3cm**		**NiP**					
Dx Strategy	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**Mean cost**	**Mean QALY**	**Mean NMB**	**Pr (CE)**
TVS	Polypectomy	Hyst	TCRF	Hyst	TXA	Hyst	Hyst		TXA	Hyst	£2,323	1.544	£28,548	0.904
TVS	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		TXA	Hyst	£2,488	1.531	£28,136	0.008
TVS	Polypectomy	Hyst	TCRF	Hyst	TXA	Hyst	Hyst		LNG	Hyst	£2,684	1.519	£27,706	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	TXA	Hyst	LNG	Hyst	TXA	Hyst	£2,319	1.486	£27,397	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	TXA	Hyst	TXA	Hyst	TXA	Hyst	£2,313	1.484	£27,369	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,849	1.507	£27,293	0.084
TVS	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	TXA	Hyst	£2,484	1.473	£26,985	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	TXA	Hyst	TXA	Hyst	£2,478	1.472	£26,956	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	TXA	Hyst	LNG	Hyst	LNG	Hyst	£2,680	1.462	£26,555	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	TXA	Hyst	TXA	Hyst	LNG	Hyst	£2,674	1.460	£26,526	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,845	1.449	£26,142	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	TXA	Hyst	LNG	Hyst	£2,839	1.448	£26,113	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	TXA	Hyst	Hyst		TXA	Hyst	£2,090	1.394	£25,784	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		TXA	Hyst	£2,255	1.381	£25,372	0.000
TVS	Polypectomy	Hyst	TXA	Hyst	TXA	Hyst	Hyst		TXA	Hyst	£2,005	1.367	£25,327	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	TXA	Hyst	Hyst		LNG	Hyst	£2,450	1.370	£24,942	0.000
TVS	Polypectomy	Hyst	TXA	Hyst	LNG	Hyst	Hyst		TXA	Hyst	£2,170	1.354	£24,915	0.000
TVS	LNG	Hyst	TCRF	Hyst	TXA	Hyst	Hyst		TXA	Hyst	£1,634	1.324	£24,852	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	TXA	Hyst	LNG	Hyst	TXA	Hyst	£2,086	1.336	£24,633	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	TXA	Hyst	TXA	Hyst	TXA	Hyst	£2,080	1.334	£24,605	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,616	1.357	£24,529	0.000
TVS	Polypectomy	Hyst	TXA	Hyst	TXA	Hyst	Hyst		LNG	Hyst	£2,366	1.343	£24,485	0.000
TVS	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		TXA	Hyst	£1,800	1.312	£24,436	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	TXA	Hyst	£2,251	1.324	£24,221	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	TXA	Hyst	TXA	Hyst	£2,245	1.322	£24,192	0.000
TVS	TXA	Hyst	TCRF	Hyst	TXA	Hyst	Hyst		TXA	Hyst	£1,134	1.266	£24,189	0.000
TVS	Polypectomy	Hyst	TXA	Hyst	TXA	Hyst	LNG	Hyst	TXA	Hyst	£2,001	1.309	£24,176	0.000
TVS	Polypectomy	Hyst	TXA	Hyst	TXA	Hyst	TXA	Hyst	TXA	Hyst	£1,995	1.307	£24,148	0.000
TVS	Polypectomy	Hyst	TXA	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,531	1.330	£24,072	0.000
TVS	LNG	Hyst	TCRF	Hyst	TXA	Hyst	Hyst		LNG	Hyst	£1,993	1.299	£23,988	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	TXA	Hyst	LNG	Hyst	LNG	Hyst	£2,446	1.312	£23,791	0.000

Full health economic results														
TVS	TXA	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		TXA	Hyst	£1,302	1.254	£23,771	0.000
TVS	Polypectomy	Hyst	TXA	Hyst	LNG	Hyst	LNG	Hyst	TXA	Hyst	£2,166	1.296	£23,764	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	TXA	Hyst	TXA	Hyst	LNG	Hyst	£2,441	1.310	£23,762	0.000
TVS	Polypectomy	Hyst	TXA	Hyst	LNG	Hyst	TXA	Hyst	TXA	Hyst	£2,160	1.295	£23,735	0.000
TVS	LNG	Hyst	TCRF	Hyst	TXA	Hyst	LNG	Hyst	TXA	Hyst	£1,625	1.266	£23,685	0.000
TVS	LNG	Hyst	TCRF	Hyst	TXA	Hyst	TXA	Hyst	TXA	Hyst	£1,620	1.264	£23,656	0.000
TVS	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£2,160	1.287	£23,571	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,611	1.299	£23,378	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	TXA	Hyst	LNG	Hyst	£2,606	1.298	£23,350	0.000
TVS	Polypectomy	Hyst	TXA	Hyst	TXA	Hyst	LNG	Hyst	LNG	Hyst	£2,361	1.285	£23,334	0.000
TVS	TXA	Hyst	TCRF	Hyst	TXA	Hyst	Hyst		LNG	Hyst	£1,493	1.240	£23,313	0.000
TVS	Polypectomy	Hyst	TXA	Hyst	TXA	Hyst	TXA	Hyst	LNG	Hyst	£2,356	1.283	£23,305	0.000
TVS	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	TXA	Hyst	£1,792	1.253	£23,269	0.000
TVS	LNG	Hyst	TCRF	Hyst	LNG	Hyst	TXA	Hyst	TXA	Hyst	£1,786	1.251	£23,240	0.000
TVS	TXA	Hyst	TCRF	Hyst	TXA	Hyst	LNG	Hyst	TXA	Hyst	£1,122	1.207	£23,015	0.000
TVS	TXA	Hyst	TCRF	Hyst	TXA	Hyst	TXA	Hyst	TXA	Hyst	£1,116	1.205	£22,987	0.000
TVS	Polypectomy	Hyst	TXA	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,526	1.272	£22,921	0.000
TVS	TXA	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,660	1.228	£22,895	0.000
TVS	Polypectomy	Hyst	TXA	Hyst	LNG	Hyst	TXA	Hyst	LNG	Hyst	£2,521	1.271	£22,892	0.000
TVS	LNG	Hyst	TCRF	Hyst	TXA	Hyst	LNG	Hyst	LNG	Hyst	£1,985	1.240	£22,821	0.000
TVS	LNG	Hyst	TCRF	Hyst	TXA	Hyst	TXA	Hyst	LNG	Hyst	£1,979	1.239	£22,792	0.000
TVS	TXA	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	TXA	Hyst	£1,289	1.194	£22,597	0.000
TVS	TXA	Hyst	TCRF	Hyst	LNG	Hyst	TXA	Hyst	TXA	Hyst	£1,284	1.193	£22,569	0.000
TVS	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£2,151	1.228	£22,404	0.000
TVS	LNG	Hyst	TCRF	Hyst	LNG	Hyst	TXA	Hyst	LNG	Hyst	£2,145	1.226	£22,376	0.000
TVS	TXA	Hyst	TCRF	Hyst	TXA	Hyst	LNG	Hyst	LNG	Hyst	£1,480	1.181	£22,139	0.000
TVS	TXA	Hyst	TCRF	Hyst	TXA	Hyst	TXA	Hyst	LNG	Hyst	£1,475	1.179	£22,110	0.000
TVS	TXA	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,648	1.168	£21,721	0.000
TVS	TXA	Hyst	TCRF	Hyst	LNG	Hyst	TXA	Hyst	LNG	Hyst	£1,642	1.167	£21,692	0.000
TVS	LNG	Hyst	LNG	Hyst	TXA	Hyst	Hyst		TXA	Hyst	£1,401	1.149	£21,575	0.000
TVS	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		TXA	Hyst	£1,567	1.136	£21,159	0.000
TVS	LNG	Hyst	TXA	Hyst	TXA	Hyst	Hyst		TXA	Hyst	£1,316	1.122	£21,120	0.000
TVS	LNG	Hyst	LNG	Hyst	TXA	Hyst	Hyst		LNG	Hyst	£1,760	1.123	£20,710	0.000
TVS	LNG	Hyst	TXA	Hyst	LNG	Hyst	Hyst		TXA	Hyst	£1,482	1.109	£20,704	0.000
TVS	TXA	Hyst	LNG	Hyst	TXA	Hyst	Hyst		TXA	Hyst	£901	1.077	£20,634	0.004
TVS	LNG	Hyst	LNG	Hyst	TXA	Hyst	LNG	Hyst	TXA	Hyst	£1,392	1.090	£20,408	0.000
TVS	LNG	Hyst	LNG	Hyst	TXA	Hyst	TXA	Hyst	TXA	Hyst	£1,386	1.088	£20,379	0.000
TVS	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,926	1.111	£20,294	0.000
TVS	LNG	Hyst	TXA	Hyst	TXA	Hyst	Hyst		LNG	Hyst	£1,675	1.097	£20,255	0.000
TVS	TXA	Hyst	LNG	Hyst	LNG	Hyst	Hyst		TXA	Hyst	£1,068	1.064	£20,216	0.000
TVS	TXA	Hyst	TXA	Hyst	TXA	Hyst	Hyst		TXA	Hyst	£817	1.050	£20,180	0.000
TVS	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	TXA	Hyst	£1,559	1.078	£19,992	0.000
TVS	LNG	Hyst	LNG	Hyst	LNG	Hyst	TXA	Hyst	TXA	Hyst	£1,553	1.076	£19,963	0.000
TVS	LNG	Hyst	TXA	Hyst	TXA	Hyst	LNG	Hyst	TXA	Hyst	£1,307	1.063	£19,953	0.000
TVS	LNG	Hyst	TXA	Hyst	TXA	Hyst	TXA	Hyst	TXA	Hyst	£1,302	1.061	£19,924	0.000

Full health economic results														
TVS	LNG	Hyst	TXA	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,842	1.084	£19,839	0.000
TVS	TXA	Hyst	TXA	Hyst	LNG	Hyst	Hyst		TXA	Hyst	£984	1.037	£19,762	0.000
LNG-IUS alone	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,292	1.053	£19,760	0.000
TVS	TXA	Hyst	LNG	Hyst	TXA	Hyst	Hyst		LNG	Hyst	£1,259	1.051	£19,757	0.000
TVS	LNG	Hyst	LNG	Hyst	TXA	Hyst	LNG	Hyst	LNG	Hyst	£1,751	1.065	£19,543	0.000
TVS	LNG	Hyst	TXA	Hyst	LNG	Hyst	LNG	Hyst	TXA	Hyst	£1,474	1.051	£19,537	0.000
TVS	LNG	Hyst	LNG	Hyst	TXA	Hyst	TXA	Hyst	LNG	Hyst	£1,746	1.063	£19,515	0.000
TVS	LNG	Hyst	TXA	Hyst	LNG	Hyst	TXA	Hyst	TXA	Hyst	£1,468	1.049	£19,508	0.000
TVS	TXA	Hyst	LNG	Hyst	TXA	Hyst	LNG	Hyst	TXA	Hyst	£889	1.017	£19,460	0.000
TVS	TXA	Hyst	LNG	Hyst	TXA	Hyst	TXA	Hyst	TXA	Hyst	£883	1.016	£19,431	0.000
TVS	TXA	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,427	1.038	£19,339	0.000
TVS	TXA	Hyst	TXA	Hyst	TXA	Hyst	Hyst		LNG	Hyst	£1,175	1.024	£19,304	0.000
TVS	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,918	1.052	£19,127	0.000
TVS	LNG	Hyst	LNG	Hyst	LNG	Hyst	TXA	Hyst	LNG	Hyst	£1,912	1.051	£19,099	0.000
TVS	LNG	Hyst	TXA	Hyst	TXA	Hyst	LNG	Hyst	LNG	Hyst	£1,667	1.038	£19,088	0.000
TVS	LNG	Hyst	TXA	Hyst	TXA	Hyst	TXA	Hyst	LNG	Hyst	£1,661	1.036	£19,060	0.000
TVS	TXA	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	TXA	Hyst	£1,056	1.005	£19,041	0.000
TVS	TXA	Hyst	LNG	Hyst	LNG	Hyst	TXA	Hyst	TXA	Hyst	£1,050	1.003	£19,013	0.000
TVS	TXA	Hyst	TXA	Hyst	TXA	Hyst	LNG	Hyst	TXA	Hyst	£804	0.991	£19,006	0.000
TVS	TXA	Hyst	TXA	Hyst	TXA	Hyst	TXA	Hyst	TXA	Hyst	£798	0.989	£18,977	0.000
TVS	TXA	Hyst	TXA	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,342	1.011	£18,886	0.000
TVS	LNG	Hyst	TXA	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,833	1.025	£18,672	0.000
TVS	LNG	Hyst	TXA	Hyst	LNG	Hyst	TXA	Hyst	LNG	Hyst	£1,827	1.024	£18,644	0.000
TVS	TXA	Hyst	TXA	Hyst	LNG	Hyst	LNG	Hyst	TXA	Hyst	£972	0.978	£18,588	0.000
TVS	TXA	Hyst	LNG	Hyst	TXA	Hyst	LNG	Hyst	LNG	Hyst	£1,247	0.992	£18,583	0.000
TVS	TXA	Hyst	TXA	Hyst	LNG	Hyst	TXA	Hyst	TXA	Hyst	£966	0.976	£18,559	0.000
TVS	TXA	Hyst	LNG	Hyst	TXA	Hyst	TXA	Hyst	LNG	Hyst	£1,241	0.990	£18,555	0.000
TVS	TXA	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,415	0.979	£18,165	0.000
TVS	TXA	Hyst	LNG	Hyst	LNG	Hyst	TXA	Hyst	LNG	Hyst	£1,409	0.977	£18,137	0.000
TVS	TXA	Hyst	TXA	Hyst	TXA	Hyst	LNG	Hyst	LNG	Hyst	£1,163	0.965	£18,130	0.000
TVS	TXA	Hyst	TXA	Hyst	TXA	Hyst	TXA	Hyst	LNG	Hyst	£1,157	0.963	£18,101	0.000
TVS	TXA	Hyst	TXA	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,330	0.952	£17,712	0.000
TVS	TXA	Hyst	TXA	Hyst	LNG	Hyst	TXA	Hyst	LNG	Hyst	£1,324	0.950	£17,683	0.000
Analysis 10														
	Polyps		**SMF**		**<3cm**		**>3cm**		**NiP**					
Dx Strategy	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**Mean cost**	**Mean QALY**	**Mean NMB**	**Pr (CE)**
LNG-IUS alone	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£497	1.601	£31,519	0.670
TVS	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£820	1.615	£31,474	0.305
TVS	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£843	1.614	£31,442	0.010
LNG-IUS alone	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£466	1.594	£31,420	0.010
TVS	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£789	1.608	£31,376	0.000
TVS	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£812	1.608	£31,345	0.000
OPH	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£713	1.600	£31,295	0.000
OPH	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£733	1.600	£31,266	0.000
EBx	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£780	1.600	£31,220	0.000

Full health economic results														
OPH	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£682	1.594	£31,197	0.000
EBx	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£811	1.600	£31,181	0.000
OPH	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£702	1.593	£31,168	0.000
EBx	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£745	1.594	£31,126	0.000
EBx	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£777	1.593	£31,087	0.000
OPH	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£896	1.548	£30,072	0.000
OPH	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£917	1.548	£30,043	0.000
OPH	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£865	1.542	£29,974	0.000
TVS	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£1,056	1.551	£29,969	0.000
OPH	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£886	1.542	£29,944	0.000
TVS	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£1,079	1.551	£29,937	0.000
TVS	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,025	1.545	£29,871	0.000
TVS	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,048	1.544	£29,840	0.000
TVS	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,021	1.536	£29,694	0.000
TVS	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,044	1.535	£29,662	0.000
TVS	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£989	1.529	£29,596	0.000
TVS	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,012	1.529	£29,565	0.000
EBx	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£1,040	1.525	£29,453	0.000
EBx	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£1,072	1.524	£29,414	0.000
EBx	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,006	1.518	£29,359	0.000
EBx	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,037	1.518	£29,320	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,580	1.527	£28,966	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,597	1.526	£28,924	0.000
EBx	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£895	1.488	£28,868	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,540	1.520	£28,865	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,407	1.513	£28,852	0.000
EBx	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£926	1.488	£28,829	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,557	1.519	£28,823	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,420	1.511	£28,809	0.000
EBx	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£861	1.482	£28,774	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,372	1.506	£28,752	0.000
EBx	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£892	1.481	£28,735	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,385	1.505	£28,710	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,606	1.510	£28,585	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,637	1.509	£28,545	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,547	1.501	£28,481	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,578	1.501	£28,440	0.000
TVS	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£1,257	1.472	£28,189	0.000
TVS	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£1,280	1.472	£28,157	0.000
TVS	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,225	1.466	£28,091	0.000
TVS	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,248	1.465	£28,060	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£1,591	1.461	£27,629	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£1,604	1.459	£27,586	0.000
OPH	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,042	1.429	£27,543	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,556	1.454	£27,529	0.000

Full health economic results														
OPH	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,062	1.429	£27,514	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,569	1.453	£27,486	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£1,816	1.464	£27,473	0.000
OPH	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,010	1.423	£27,445	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£1,833	1.463	£27,431	0.000
OPH	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,031	1.422	£27,416	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,781	1.459	£27,393	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,776	1.457	£27,372	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,798	1.457	£27,352	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,793	1.456	£27,330	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,740	1.452	£27,293	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,758	1.450	£27,251	0.000
EBx	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£1,155	1.413	£27,101	0.000
EBx	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£1,187	1.412	£27,062	0.000
EBx	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,121	1.406	£27,007	0.000
EBx	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,153	1.406	£26,968	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£1,867	1.434	£26,818	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£1,898	1.434	£26,778	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,808	1.426	£26,713	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,722	1.420	£26,681	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,839	1.426	£26,673	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,752	1.420	£26,641	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,662	1.412	£26,576	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,693	1.411	£26,536	0.000
OPH	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£1,225	1.377	£26,320	0.000
OPH	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£1,245	1.377	£26,291	0.000
OPH	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,194	1.371	£26,222	0.000
OPH	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,214	1.370	£26,192	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£2,017	1.396	£25,900	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£2,034	1.395	£25,859	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,976	1.389	£25,800	0.005
TVS	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,994	1.388	£25,758	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,736	1.369	£25,637	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,749	1.367	£25,594	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,701	1.362	£25,537	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,714	1.360	£25,494	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£1,982	1.345	£24,914	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£2,013	1.344	£24,874	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,923	1.337	£24,809	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,954	1.336	£24,769	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£1,920	1.317	£24,413	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£1,932	1.315	£24,371	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,885	1.310	£24,314	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,897	1.308	£24,271	0.000
Analysis 11														

Full health economic results

	Polyps		SMF		<3cm		>3cm		NiP					
Dx Strategy	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**Mean cost**	**Mean QALY**	**Mean NMB**	**Pr (CE)**
TVS	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,668	1.470	£27,734	0.920
TVS	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,595	1.458	£27,565	0.075
TVS	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,661	1.436	£27,058	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,618	1.427	£26,921	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,587	1.424	£26,889	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,520	1.413	£26,749	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,605	1.391	£26,213	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,507	1.377	£26,041	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£1,936	1.399	£26,040	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,862	1.387	£25,872	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,651	1.371	£25,765	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,584	1.359	£25,597	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£1,928	1.365	£25,364	0.000
TVS	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,855	1.353	£25,196	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,645	1.337	£25,099	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,578	1.325	£24,931	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£1,921	1.341	£24,899	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,508	1.313	£24,750	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,823	1.328	£24,728	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,409	1.299	£24,579	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,348	1.296	£24,578	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,490	1.297	£24,452	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,281	1.285	£24,410	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£1,870	1.310	£24,333	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,416	1.285	£24,283	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£1,908	1.305	£24,191	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,802	1.298	£24,165	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,495	1.277	£24,042	0.000
EBx	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,809	1.291	£24,020	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,343	1.263	£23,912	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,396	1.263	£23,871	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,482	1.263	£23,776	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,275	1.251	£23,744	0.000
TVS	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,089	1.241	£23,721	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£1,864	1.277	£23,667	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,409	1.251	£23,607	0.000
TVS	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,024	1.229	£23,556	0.000
OPH	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,797	1.265	£23,499	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£1,567	1.236	£23,146	0.000
TVS	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,079	1.206	£23,041	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,500	1.224	£22,977	0.000
TVS	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,015	1.195	£22,876	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£1,757	1.226	£22,758	0.000

Full health economic results														
EBx	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£1,810	1.227	£22,729	0.000
EBx	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£991	1.182	£22,658	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,684	1.214	£22,589	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,712	1.213	£22,557	0.000
EBx	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£921	1.171	£22,499	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£1,562	1.202	£22,480	0.000
OPH	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,494	1.190	£22,312	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£1,750	1.192	£22,082	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£1,797	1.191	£22,021	0.000
TVS	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£1,357	1.169	£22,019	0.000
EBx	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£977	1.146	£21,949	0.000
TVS	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,676	1.180	£21,914	0.000
TVS	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,292	1.157	£21,854	0.000
EBx	Polypectomy	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,699	1.177	£21,849	0.000
EBx	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£908	1.135	£21,790	0.000
TVS	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£1,347	1.134	£21,339	0.000
TVS	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,282	1.123	£21,174	0.000
OPH	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£1,100	1.113	£21,164	0.000
OPH	LNG	Hyst	TCRF	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£1,036	1.102	£20,998	0.000
EBx	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£1,293	1.096	£20,636	0.000
OPH	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£1,091	1.079	£20,494	0.000
EBx	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,224	1.085	£20,477	0.000
OPH	LNG	Hyst	TCRF	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£1,028	1.068	£20,327	0.000
OPH	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£797	1.055	£20,309	0.005
EBx	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£880	1.057	£20,258	0.000
TVS	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	Hyst	£911	1.056	£20,216	0.000
OPH	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£734	1.044	£20,142	0.000
EBx	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£811	1.046	£20,099	0.000
TVS	LNG	Hyst	LNG	Hyst	LNG	Hyst	Hyst		LNG	2nd Gen	£846	1.045	£20,051	0.000
EBx	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£1,280	1.060	£19,927	0.000
LNG-IUS alone	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£541	1.022	£19,899	0.000
EBx	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,210	1.049	£19,768	0.000
OPH	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£1,319	1.053	£19,732	0.000
LNG-IUS alone	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£478	1.010	£19,731	0.000
OPH	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£789	1.021	£19,638	0.000
OPH	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,255	1.041	£19,566	0.000
EBx	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£867	1.021	£19,550	0.000
TVS	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	£901	1.022	£19,536	0.000
OPH	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£725	1.010	£19,471	0.000
EBx	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£797	1.009	£19,391	0.000
TVS	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	Hyst	LNG	2nd Gen	£836	1.010	£19,371	0.000
OPH	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£1,310	1.019	£19,062	0.000
OPH	LNG	Hyst	TCRF	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,247	1.007	£18,895	0.000
OPH	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£1,016	0.995	£18,876	0.000
OPH	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£953	0.983	£18,710	0.000

Full health economic results														
TVS	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£1,178	0.985	£18,514	0.000
TVS	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,113	0.973	£18,349	0.000
EBx	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£1,183	0.971	£18,237	0.000
OPH	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£1,008	0.961	£18,206	0.000
EBx	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	Hyst		LNG	2nd Gen	£1,113	0.960	£18,078	0.000
OPH	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£944	0.949	£18,039	0.000
TVS	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£1,169	0.950	£17,834	0.000
TVS	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,104	0.939	£17,669	0.000
EBx	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	Hyst	£1,169	0.935	£17,528	0.000
EBx	LNG	Hyst	LNG	Hyst	2nd Gen	Hyst	LNG	Hyst	LNG	2nd Gen	£1,100	0.923	£17,369	0.000
Analysis 12														
	Polyps		**SMF**		**<3cm**		**>3cm**		**NiP**					
Dx Strategy	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**1st line**	**2nd line**	**Mean cost**	**Mean QALY**	**Mean NMB**	**Pr (CE)**
TVS	Polypectomy	Hyst	TCRF	Hyst	Hyst		Hyst		LNG	Hyst	£3,174	1.468	£26,189	0.603
TVS	Polypectomy	Hyst	TCRF	Hyst	1st Gen	Hyst	Hyst		LNG	Hyst	£3,080	1.456	£26,030	0.318
TVS	Polypectomy	Hyst	TCRF	Hyst	2nd Gen	Hyst	Hyst		LNG	Hyst	£3,069	1.449	£25,902	0.079