LÄÄKKEIDEN HINTALAUTAKUNTA
Läkemedelsprisnämnden

APPLICATION INSTRUCTIONS
HEALTH ECONOMIC EVALUATION
28.3.2025

PREPARING A HEALTH ECONOMIC EVALUATION TO BE ATTACHED TO THE APPLICATION FOR REIMBURSEMENT STATUS AND WHOLESALE PRICE FOR A MEDICINAL PRODUCT

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1 General

The application must be accompanied by a health economic evaluation when the application is made for basic reimbursement status for a medicinal product that contains a new active substance. A health economic evaluation shall be submitted also when significant extension of the reimbursement status is applied for a medicinal product with a valid reimbursement status. A health economic evaluation is usually necessary, when applying an extension for a new indication, a change or a removal of the restriction of reimbursement and when applying reimbursement for other new medicinal product in an indication in which the active substance in question is not already reimbursable. Situations in which a health economic evaluation is necessary are stated in the Pharmaceuticals Pricing Boards' extension application instructions. A health economic evaluation shall also be submitted when specifically required by the Pharmaceuticals Pricing Board. Also otherwise a health economic evaluation can be appended to an application, if the applicant considers it necessary. The applicant may submit a health economic evaluation, for example, when applying for special reimbursement status or when applying for reimbursement status and reasonable wholesale price for a new dosage form of the product.

The health economic evaluation must be prepared according to the guidelines attached to the Decree of the Ministry of Social Affairs and Health on applications and price notifications made to the Pharmaceuticals Pricing Board (*Guidelines for preparing a health economic evaluation*).

The aim of these application instructions is to help the applicant in applying the guidelines for preparing a health economic evaluation. The instructions include recommended practices and procedures as well as examples and sources of information. In this document the guidelines attached to the decree are given in text frames. Specifications and instructions for the passage concerned in the guidelines are provided below each frame. A checklist and source literature for drawing up the evaluation and checking it are added at the end of these instructions.

The applicant is requested to submit the health economic evaluation with appendices together with the other application material to the Pharmaceuticals Pricing Board generally via the electronic service, or alternatively via secure e-mail (instructions for use can be requested from the secretariat of the Pharmaceuticals Pricing Board). The limitations of the e-service must be taken into consideration with the appendices.

2 Application of the guidelines

2.1 General

In these guidelines the parts of the health economic evaluation are dealt with in an order that can be followed when preparing the evaluation.

A table of contents with page numbers must be included at the beginning of the evaluation. The division into paragraphs and the order of presenting matters shown in the guidelines serves as an example of how to present the matters required to be covered in the evaluation.

The health economic evaluation is a part of the application regarding reimbursement status and price. Matters that have been covered comprehensively elsewhere in the application need not be dealt with broadly in the health economic evaluation.

At the beginning of the health economic evaluation the applicant can give background information on the disease to be treated and the therapy alternatives. The introduction should however be kept short, it should not exceed two pages. The information presented elsewhere in the application material need not be repeated in detail.

The evaluation must be reported logically, clearly and transparently. The initial data, calculations, phases of analysis and final results must be verifiable. The application must be accompanied by research reports and other source material on which the evaluation is based. The references to information sources should be made precisely and unambiguously. Grounds must be given for all the assumptions presented in the evaluation. Expert opinions should be reported clearly, too.

A list of the abbreviations used in the report and model file must be attached to the evaluation.

The origin of the initial data must be specified. If a figure is from a publication, the source reference must also include the page number and/or the number of the table from which the figure has been taken. A copy of the source or, if the source is extensive, copies of the pages used must be appended to the application.

The calculation formulas used and their sources have to be presented precisely. The initial data for the formulas have to be presented with the precision described above. Calculations on the costs of medicinal treatment must be presented in an electronic model.

When using experts as a source of the information needed for the evaluation the experts have to be mentioned by name. A signed expert opinion or a compiled report of an expert panel with signatures has to be appended. The signed expert opinion can be replaced by a notification or confirmation of opinion sent by the expert via e-mail. An account must be given of the experts' conflicts of interest.

If the evaluation is an update to a previous evaluation submitted to the Pharmaceuticals Pricing Board, the changes must be emphasised in the text, for example by underlining them, and a summary of the changes must be added to the beginning of the report.

The evaluation can be prepared in Finnish, Swedish or English. The evaluation should always include a summary in Finnish or Swedish.

The summary should not include more than two pages.

2.2 Therapeutic indication and target group of the evaluation

The health economic evaluation must apply to the therapeutic indication approved for the medicinal product for which reimbursement status is applied for or, if there are several of them, the most important one or ones of them.

If reimbursement is applied for several indications, a separate health economic evaluation should be prepared for each indication. If a health economic evaluation is not presented on all the indications for which reimbursement status is applied for, a reason must be given for this. The most important indication is in general the one with most users or where the consumption of the medicinal product is highest.

If the application concerns restricted reimbursement status for the preparation, the evaluation must focus on the restricted indication.

2.3 Treatment comparators and clinical practice

In the health economic evaluation, the health effects (benefits and adverse effects) and costs of the use of the medicinal product that the application concerns are compared with treatment comparators. The therapies that the medicinal product is compared with are determined on the basis of which indications reimbursement status is applied for. If the medicinal product is meant to replace the use of a certain medicinal product or a certain treatment, the product should be compared to that medicinal product or treatment. The comparator should be therapeutically the most appropriate alternative. There can be several comparators. Reasons must be given for the choice of the comparator, and the choice must be based on Finnish clinical practice.

Therapeutically, the most appropriate treatment comparator can be for instance the treatment that is used most frequently, the minimum therapy, or monitoring without therapy. If the preparation that the application concerns belongs to a group of medicinal products in established use and its indication is comparable to the indication of the other preparations in the group, the other preparations in the group are in general the most appropriate treatment comparators. For instance, the most appropriate treatment comparators of a new beta blocker are other beta blockers.

The comparator product should, as a rule, have an approved indication and be approved for reimbursement for the use concerned should the comparator concerned be used in outpatient care. When choosing the treatment comparator the established treatment practice and which treatment the new medicinal product will replace in practice must however be taken into consideration. If

there are no Finnish guidelines for the treatment of the disease concerned or there is no established practice for its treatment, the treatment comparator must be justified with a Finnish expert opinion. Considering the reliability of a study setting it is justified to include the comparative treatment or treatments from the randomized, controlled trials in the evaluation. In situations where the choice of comparative treatment is not unanimous it is particularly justified to compare the application preparation to more than one comparative treatment options.

2.4 Time horizon

The time horizon for the evaluation is influenced by the indication of the medicinal product. The consequences of the therapies compared should be measured and evaluated using the same principles. The health effects and costs of the therapies must be presented for an equally long period of time. The time period should be long enough to enable taking into account all essential costs and health effects.

If the time horizon is long, for instance the rest of life, the evaluation must also include shorter-term analyses. Time horizons can be for example one, five and ten years, as well as a period of time corresponding to the length of the clinical trial that the evaluation is based on.

2.5 Method of analysis

The method of the health economic evaluation can be cost-utility analysis, cost-minimisation analysis, cost-effectiveness analysis or cost-benefit analysis. Reasons must always be given for the choice of the method.

In most cases a cost-utility analysis, in which health effects are given as quality adjusted life years (QALYs), gives the best support to decision-making. In situations where the therapies compared have equal health effects it is advisable to use the cost-minimisation analysis. In addition to the analysis chosen from among the options mentioned in the text box it is also possible to present a budget impact analysis in the evaluation.

2.6 Modelling

Modelling should be used for the analysis, if there is no other way to take into account all essential health benefits and adverse effects as well as costs. The evaluation must include a detailed account of the structure of the model as well as the data and the calculation formulas used in the model.

The usability of the evaluation is improved if the model is reported transparently. Its structure must be given graphically. The probabilities of the events considered in the model have to be reported. It must appear in detail from the report on which information sources the probabilities of the different events are based and how they have been calculated.

If the model progresses in cycles, the length of a cycle should be justified specifically with regard to the treatment of the disease to be modelled. It is a good idea to use a half-cycle correction in the model or a similar method, unless the cycle is extremely short in length, such as a single day. However, the half-cycle correction cannot be applied to medicinal costs, if this can lead to the underestimation of medicine wastage.

When using the decision tree model, the probabilities of realisation of each branch as well as the values of the health effects and costs related to each branch must be presented. In addition, it is important to give the percentages of the patients in the different end nodes of each therapy alternative as well as the cumulative health effects and costs of the treatment pathways leading to the end nodes.

The evaluations based on the Markov model must present the transition probabilities between the alternative health states or, if these are time-dependent or depending on the patient's characteristics, their detailed calculation principle. When using discrete event simulation (DES) or another patient-level simulation model, all the regression models based on source data and their utilisation in making a prediction must be described in detail.

When using the partitioned survival model special attention must be given to selecting and reporting the parametric survival distributions. Probabilities of meeting the endpoint and hazards over time must be presented as diagrams. The validity of the proportional hazards assumption must always be tested and reported, when the data allows for this. It must be disclosed in the evaluation whether proportional hazards were assumed to be valid as the parametric models were derived or whether separate distributions were fitted for each treatment group. Numerous commonly used parametric distribution types (e.g. exponential, generalised Gamma, log-logistic, log-normal, Weibull and Gompertz) must be fitted to the observed survival data, and their fit to the data must be reported using, for example, AIC (Akaike information criterion) and BIC (Bayesian information criterion) values. Additionally, the plausibility of the extrapolations produced with parametric distributions must be assessed and, if possible, validated using external data. The selection of a distribution used in the base case analysis must be based on an overall assessment of the validity of proportional hazards assumption, the fit of the distribution to the observed data as well as the plausibility of the extrapolation the distribution produces. In general, the same distribution type must be used for all compared therapies. The evaluation must include a figure comprising both Kaplan-Meier curve and the predictions produced by various parametric distributions. If all the patients have reached the endpoint, the observed Kaplan-Meier analysis results can be used instead of a parametric model.

The evaluation must be reported with the accuracy described above also when using other modelling methods.

The model on which the results presented are based on must also be provided in an electronic form, and it must be possible to view and edit the calculation formulas and initial data in the electronic document. The model needs to facilitate the addition of new scenarios and the model must not be password protected. Recommended softwares for executing the model are Microsoft Excel and R(1). It must be made known in the report where in the model used information can be found.

(1) R-packages published in CRAN are recommended.

2.7 Estimation of costs

The calculation of costs must include, irrespective of the payer, all direct health care and comparable social welfare costs related to the therapies that are being compared. An examination of the costs of medicinal products alone is not sufficient, except for situations where the cost of the medicinal products is the only difference between the treatments. If productivity losses are included in the cost calculation, the results must also be presented so that those are excluded. A detailed account must be presented of the resources used and unit costs, giving the grounds and source references. The health economic evaluation must be based on as up-to-date information on the costs in Finland as possible.

The costs must be presented so that both the volume of the resources used, e.g. the numbers of visits to doctors or of periods/days of hospitalisation, and their unit costs with precise source references appear from the evaluation. The evaluation must contain information on the resources used

in each health state alternative. Appendix 1 contains a model of the manner of presentation. Note that the hospital bed-day cost usually includes the costs of medicines.

The changes in prices over time must be taken into account by converting unit costs of a past time into present level when necessary. The price index for public expenditure on municipal health services or a corresponding available price index is used in converting health care unit costs into present value and the suitable price indexes in regard to other costs. The index used must be reported.

Data on the costs of the therapy alternatives must be presented in the form of tables so that the reader is able to judge if the results obtained are correct. Costs must also be divided into entities that are relevant to the evaluation. Such are, for example, the costs of the medicinal products being compared, other medicine costs, costs of hospital treatment and costs of outpatient care (cf. Appendix 1).

Examples of the most important expense items:

Direct health care costs

- Medicinal products
- Administration of medicines, devices and materials
- Visits to outpatient care
- Visits to outpatient clinics
- Lengths of hospital stay/bed-days
- Visits by home care staff
- Laboratory and X-ray examinations
- Phone consultations

Direct costs other than health care costs

- Travel expenses
- Social services
- Meals services etc.

Losses of productivity

- Losses of productivity due to the patient's disability for work or reduced work ability
- Losses of time and/or productivity for family member or other informal caregiver
- Losses of productivity caused by premature death

The doses used in the medicinal treatment, the frequency and the route of administration and possible dose titration with grounds and source references must be reported. An account must be given of both the medicinal product that the application concerns and comparator products and, as necessary, of other medicinal products used for the treatment of the disease concerned or of adverse effects, if it is justified to assume that there are differences between the therapies compared in this respect. The dosage of the products compared must be the same by which the health effects used in the evaluation have been achieved.

Dosage, duration of treatment, co-treatment and subsequent treatment data used in the evaluation must be based on the study evidence as the data on efficacy. If the dose, the duration of the therapy or the co-treatments and subsequent treatments used in the clinical trial differ from the routine clinical practice or the summary of product characteristics, the applicant must assess the generalisability of the results and present sensitivity and scenario analyses.

The costs of the medicinal treatment used as treatment comparator must be calculated mainly using a preparation available on the market that complies to the established clinical practice and is most affordable, or the average cost of comparator products weighted by sales according to user or unit. Reasons must be given for the method of calculation that has been chosen. Medicine wastage has to be included in the costs.

Medicine wastage may arise if for instance a package contains medicine for a longer period of treatment than is needed, patient discontinues the treatment while a part of the medicinal package is left unused or if the part of the preparation left unused cannot be used later (e.g. injection preparations).

The costs of medicinal products are calculated using the retail price, excluding VAT. If a medicinal preparation is administered in the outpatient unit within public health care, from which it is also dispensed, the wholesale price has to be used.

Retail price excluding VAT calculated from the proposed wholesale price is used for the product for which reimbursement is sought for When calculating the costs of other medicinal products the prices on the price list published as close as possible to the date of submitting the application must be used. The applicant can, if he or she so desires, present a sensitivity analysis which uses in regard to the comparator products used in outpatient care the VAT excluded retail price that has been derived from the confirmed wholesale price of the comparator product, instead of its market price. In base case, the costs of medical products administered in public health care (hospital product) must be based on the product's wholesale price. In base case, the prices of medicinal products must remain the same throughout the time horizon of the model.

If the comparator product or other medication considered in the evaluation has conditional reimbursement status with a confidential agreement between the Pharmaceuticals Pricing Board and the pharmaceutical company, the applicant must assess the effects of the agreement on the results of the evaluation with sensitivity analyses. The same principal should be applied for hospital products in case of uncertainty related to actual costs. Sensitivity analyses using several price assumptions can be presented.

2.8 Estimation of health effects

The estimations of health states used in the evaluation must be based on research. As the most reliable study design is in general considered controlled and blinded clinical trials in which the alternative therapies are directly compared with each other.

The treatment practices in clinical trials do not always correspond to the routine clinical practice. In clinical trials it is possible, for example, to perform extra laboratory or X-ray examinations, which will affect the treatment or results. In such a situation the evaluation must be based on the treatment practices used in clinical trials. If the applicant has access to information on the routine clinical practice, also these results shall be presented. If it is assumed that there is difference in the patient's adherence to treatment between the clinical trial and the routine clinical practice, the results must also in this case be presented primarily according to the results of the clinical trial. If reliable information is available, also the results according to the routine clinical practice shall be presented. Real World evidence based on e.g. observational studies, registers or patient cohorts must be comprehensively reported concerning the used methods and the data collection, especially when the results in question have not been published in a peer reviewed scientific publication.

The health effects used in the evaluation must be based on all the relevant studies that have been carried out on the therapies compared. Systematic reviews and meta-analyses are often the best way of combining the results of different studies. The applicant must give reasons for why the studies used in the health economic evaluation have been chosen for it.

If the assessment of health effects is based on systematic literature reviews, meta-analyses or indirect comparisons, good scientific practices must be followed in preparing them and reporting on them.

In some situations, for instance because of the properties of the group of patients being reviewed or the length of the monitoring period, it can be justified to use only one or a few clinical trials as the source of health effects.

Effectiveness must be measured primarily in quality-adjusted life years (QALYs), which have been measured using a validated generic quality of life measure. Effectiveness can also be measured for instance by final endpoints, surrogate endpoints or disease-specific quality of life measures. Reasons must be given for the choices made.

The measure and its valuation method used in the evaluation must be disclosed. When collecting quality of life information from literature, attention must be paid to the applicability of the data in the analysis concerned. For instance the quality of life measure and the valuation method that are used must be the same for different health states. Uncertainty in the health related quality of life due to patient characteristics such as age or used medication, must be assessed and, where necessary, sensitivity analyses must be presented. If information on health-related quality of life of comparative treatments is collected in the clinical trials, the information must be presented.

Health effects to others than the patients themselves must not be included in the evaluation's base case analysis, but these can be presented as a sensitivity analysis.
The applicant must take into consideration that, in particular, in long-term models considerable uncertainty may be associated with deriving the endpoint, such as mortality, by means of a surrogate endpoint. The uncertainty must be evaluated by means of a sensitivity analysis.

The health effects of therapy alternatives, changes in health state and the assumptions used in the evaluation must be presented so precisely that the reader is able to check the results that have been presented.

2.9 Discounting

The health effects and costs occurring beyond one year shall be presented both discounted and undiscounted.

A discount rate of 3 per cent is recommended for both health effects and costs. Scenario analyses can be presented to evaluate the effect of discount rate on the results. Undiscounted results must also be presented.

2.10 Results

The health effects and costs of both the medicinal product that the application concerns and the treatment comparators shall be presented both as total benefits and total costs and as incremental benefits and incremental costs in the form of a table. The main results should be compiled in a separate table.

When presenting results the costs of compared therapies and the health effects achieved with the therapies must be divided into appropriate subcategories. Subcategories of the costs include, for example, the costs caused by the evaluated therapy, administration of medicines, subsequent therapy and other treatments. Concerning health effects, where applicable, the time spent in each health state and the achieved quality-adjusted life years as well as the possible health impacts on persons other than the patient must all be specified. Appendix 2 contains an example of results tables that can be adjusted to suit the applicant's health economic model.

2.11 Assessment of uncertainty and sensitivity analyses

The applicant shall assess the uncertainty related to the variables, the structure of the model used and the methods used in the evaluation. The evaluation must include a sensitivity analysis if the evaluation is based on assumptions or otherwise uncertain premises. Reasons must be given for the sensitivity analyses and the variables chosen for them. Attention should be paid to the most significant uncertainty factors in view of the final results.

The uncertainty of the model used in the evaluation must be assessed with regard to stochastic, parameter, heterogeneity-related and structural uncertainty. Any sensitivity analyses must be reported so that it clearly appears from the report which details in the base case have been modified and how the results will in that case change compared to the base case. Description must be provided on how the sensitivity analyses are repeatable in the electronic model. The results of the sensitivity analysis must be given in a table form. Additionally a graphical presentation method is often illustrative. The factors that have the greatest impact on the results of the evaluation must be identified on the basis of sensitivity analyses.

Parametric uncertainty can be assessed with deterministic and probabilistic sensitivity analyses. The evaluation must present an extensive one-way sensitivity analysis, which can cover all the model's parameters. When selecting the distributions used in stochastic simulations, it must be ensured that the selected distribution is suited for the variable in question and that the simulation has an adequate amount of iterations to even out random variation.

The heterogeneity of the results between various patient groups must be assessed with sub-group analyses, if the sub-group can be identified and analysis is possible. The results may differ based on, for example, the baseline disease activity, the previous therapies or the duration of the disease.

The uncertainty related to the structure of the model must be assessed with alternative assumptions. In the case of the partitioned survival model, it is especially important to assess the uncertainty related to the selection of parametric survival distributions as well as the possible assumption that the difference between treatment groups in overall survival hazard rates persists after treatment ends.

2.12 Sources and appendices

The information and data sources on which the health economic evaluation is based shall be appended to the application documents.

The list of references must include all the sources that have been referred to in the application. The sources must be presented in a logical order, for instance in the order they are referred to or in alphabetical order. If a source publication is extensive, page number, table number or other similar reference should be given.

All sources used should be attached to the application. If there is a supplement or an appendix connected with an article, include also the supplementary material. Where necessary, the applicant may only submit the used parts of very extensive sources. For sources that are only available on the Internet, the precise source reference and hyperlink shall be given. The Internet source must be freely available.

The attachments to an application that are delivered to the Pharmaceuticals Pricing Board in electronic format must be named informatively, e.g. Health_economic_evaluation.pdf, Health_economic_model.xsl, Source_HE_Lastname_year.pdf, Expert_statement_Lastname.pdf.

If the file format for the material that is added to the application is not permitted or the size of the files exceeds the maximum permitted size, the applicant must contact the Pharmaceuticals Pricing Board.

3 Checklist

Please check that

- the patient group of the evaluation corresponds to the applied reimbursement;
- the treatment comparators have been chosen in accordance with the instructions;
- the time horizon conforms to the instructions;
- reasons have been given for the choices and assumptions made;
- the model has been described clearly;
- the parameters for the model (e.g. transition probabilities) have been described in detail:
- an electronic model has been attached with the application material;
- the volumes of resources used in the cost calculation with source references have been presented;
- the unit costs of the resources used in the cost calculation with precise source references have been presented;
- information on efficacy and health-related quality of life can be found in the sources attached with the evaluation;
- the parameters derived from source information with calculation formulas have been presented;
- the results have been presented clearly both discounted and undiscounted;
- the uncertainty associated with the evaluation has been assessed;
- the source references are precise;
- the sources used have been attached with the application material;
- changes compared to the previous evaluation have been reported, if this is an update to the evaluation.

4 Literature

Brazier J et al. (2017). Measuring and Valuing Health Benefits for Economic Evaluation. Oxford University Press.

Briggs A et al. (2006). Decision Modelling for Health Economic Evaluation. Oxford University Press.

Drummond MF et al. (2015). Methods for the Economic Evaluation of Health Care Programmes. 4th edition. Oxford University Press.

Helsingin ja Uudenmaan sairaanhoitopiirin hinnastot (Pricing in the Hospital District of Helsinki and Uusimaa). (hyperlink: http://www.hus.fi/hus-tietoa/talous/Hinnoittelu/Sivut/default.aspx)

Higgins JPT, Thomas J, Chandler J, Cumpston M, Li T, Page MJ, Welch VA (editors) (2019). *Cochrane Handbook for Systematic Reviews of Interventions* version 6.0 (updated February 2022). Cochrane. (hyperlink: http://www.training.cochrane.org/handbook).

Mäkelä M et al. (ed.) (2007). Menetelmien arviointi terveydenhuollossa (Technology assessment in health care). Kustannus Oy Duodecim.

Mäklin S, Kokko P (2021). Terveyden- ja sosiaalihuollon yksikkökustannukset Suomessa vuonna 2017. THL - työpaperi 21/2020. (hyperlink: https://urn.fi/URN:ISBN:978-952-343-493-6)

Official Statistics of Finland (OSF): Price index of public expenditure. Statistics Finland. (hyperlink: http://www.stat.fi/til/jmhi/index_en.html)

Social Insurance Institution (Kela). Medicinal Products Database. (hyperlink: https://asiointi.kela.fi/laakekys_app/LaakekysApplication?kieli=en)

Links: 30.11.2023

APPENDIX 1. An example of presentation of costs

Appendix Table 1A. Information used in the base case on the use of resources in the therapies compared, health state 1.

Cost item	Use of resources		Source
	Therapy A	Therapy B	
Direct health care costs			
Costs of medicinal products			
Medicine A (application product)	5 mg x 2/day, 30 days	-	Source, page/Table
Medicine B (comparator product)	-	20 mg x 1/day, 15 days	Source, page/Table
Additional medicine C	1 mg x 3/day, 30 days	1 mg x 3/day, 30 days	Source, page/Table
Outpatient costs			
Visits to general practitioners	1 visit/30 days	1 visit/30 days	Expert opinion
Visits to specialists	0,25 visits /30 days	0,5 visits/30 days	Expert opinion
Cost of hospital treatment			
Periods of hospitalisation	0,6 periods/30 days	-	Expert opinion
Direct costs other than health care costs			
Travel expenses			
Travel expenses, primary health care	2 travels/30 days	2 travels/30 days	cf. use of resources above
Travel expenses, specialised medical care	1,7 travels/30 days	1 travel/30 days	cf. use of resources above
Losses of productivity			
Patient's absence from work	7 days/30 days	3 days/30 days	Source, page/Table

Appendix Table 1B. Unit costs used in the base case.

Cost item	Unit cost (€)	Source figure	Source
Direct health care costs			
Costs of medicinal products			
Medicine A, daily dosage	xx	Product, package, price (€)	Applicant
Medicine B, daily dosage	xx	Product, package, price (€)	Prices of medicinal products, date
Additional medicine C, daily dosage	xx	Product, package, price (€)	Prices of medicinal products, date
Outpatient costs			
Visit to a general practitioner	xx	Cost (€), index	Kapiainen el al. 2014, page/Table; source of index
Visit to a specialist	xx	Cost (€), index	Kapiainen el al. 2014, page/Table; source of index
Costs of hospital treatment			
Period of hospitalisation	xx	Type of hospital, specialty, cost (€)	Hospital District of Helsinki and Uusimaa prices 2018, page
Direct costs other than health care costs			
Travel expenses			
Travel expenses, primary health care	xx	Cost (€), index	source; source of index
Travel expenses, specialised medical care	xx	Cost (€), index	source; source of index
Losses of productivity			
Patient's absence from work 1 day	xx	Type of cost, cost (€), index	Statistics Finland 2017; source of index

Appendix Table 1C. Summary of the average costs of the therapies compared, base case.

	Average cost (€)	
Cost item	Therapy A	Therapy B
Direct health care costs		
Costs of medicinal products	xx	xx
Medicine A	xx	-
Medicine B	-	xx
Additional medicine C	xx	xx
Outpatient costs	xx	xx
Visits to general practitioners	xx	xx
Visits to specialists	xx	xx
Costs of hospital treatment	xx	xx
Direct costs other than health care costs		
Travel expenses	xx	xx
Travel expenses, primary health care	xx	xx
Travel expenses, specialised medical care	xx	xx
Direct costs, total	***xx***	***xx***
Losses of productivity		
Patient's absence from work	xx	xx
Direct and indirect costs, total	***xx***	***xx***

APPENDIX 2. An example of results tables

Appendix Table 2a. Average total costs and QALYs (quality adjusted life years) of the base case, discounted and undiscounted.

Therapy alternatives	Total costs, €	Difference between costs, €	QALYs	Difference between QALYs	ICER*, €/QALY
discount rate 3%					
Therapy A Therapy B	39,990 23,142	16,849	1.383 0.904	0.479	35,158
discount rate 0%					
Therapy A Therapy B	42,822 24,950	17,872	1.506 0.984	0.522	34,226

*ICER = incremental cost-effectiveness ratio = incremental costs / incremental QALYs = total costs (therapy A – therapy B) / QALYs (therapy A – therapy B)

Appendix Table 2b. Health effects and costs of the base case by health state, discounted and undiscounted.

Health states of the model	Life years			Quality adjusted life years			Costs, €		
	Therapy A	Therapy B	Difference	Therapy A	Therapy B	Difference	Therapy A	Therapy B	Difference
discount 3 %									
Health state 1	0.716	0.271	0.445	0.580	0.219	0.360	20,278	4,935	15,343
Health state 2	1.237	1.054	0.183	0.804	0.685	0.119	19,712	18,206	1,506
discount 0 %									
Health state 1	0.733	0.274	0.459	0.594	0.222	0.372	20 748	4,982	15,766
Health state 2	1.404	1.173	0.231	0.913	0.763	0.150	22 074	19,968	2,106

Appendix Table 2c. Costs of the base case by cost item, discounted.

Cost item	Therapy A	Therapy B	Difference
First line medicinal therapy, €	14,932	2,911	12,020
Second line medicinal therapy, €	2,256	2,524	-268
Use of healthcare resources, €	22,803	17,707	5,096
Total, €	39,990	23,142	16,849