

Appendix F: Literature search strategies

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Introduction

Search strategies used for the **Varicose Veins guideline** were run in accordance with the Guidelines Manual (NICE, 2009). All searches were run finally on **17 October 2012** unless otherwise stated. Any studies added to the databases after this date were not included unless specifically stated in the text.

Clinical searches

Searches for **clinical reviews** were run in Medline (OVID), Embase (OVID), and the Cochrane Library (Wiley). Typically, searches were constructed in the following way:

- A PICO format was used for intervention searches. **Population** (P) terms were combined with **Intervention** (I) and sometimes **Comparison** (C) terms (as indicated in the tables under each individual question in Section F.3). An intervention can be a drug, a procedure or a diagnostic test. **Outcome** (O) terms are rarely used in search strategies for interventions. Study type filters (F.1) were added where appropriate.

In addition to the databases outlined above, searches F.3.1 and F.3.4 were run in Cinahl (EBSCO), and F.3.1 in PsycINFO (OVID).

Economic searches

Searches for **economic evidence** were run in Medline (Ovid), Embase (Ovid), the NHS Economic Evaluations Database (NHS EED), the Health Technology Assessment (HTA) database and the Health Economic Evaluation Database (HEED). NHS EED and HTA were searched via the Cochrane (Wiley) interface. For Medline and Embase an economic filter (see F.1.4) was applied to the standard population. All other searches were conducted using only population terms.

F.1 Study design search terms

F.1.1 Systematic review (SR) search terms

Medline search terms

1.	Meta-analysis/
2.	Meta-analysis as topic/
3.	(meta analy* or metanaly* or metaanaly*).ti,ab.
4.	((systematic* or evidence*) adj2 (review* or overview*)).ti,ab.
5.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
6.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
7.	(search* adj4 literature).ab.
8.	(medline or pubmed or cochrane or embase or psychlit or psychlit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
9.	cochrane.jw.
10.	or/1-9

Embase search terms

1.	Systematic review/
2.	Meta-analysis/
3.	(meta analy* or metanaly* or metaanaly*).ti,ab.
4.	((systematic or evidence) adj2 (review* or overview*)).ti,ab.
5.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
6.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
7.	(search* adj4 literature).ab.
8.	(medline or pubmed or cochrane or embase or psychlit or psychlit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
9.	((pool* or combined) adj2 (data or trials or studies or results)).ab.
10.	cochrane.jw.
11.	or/1-10

F.1.2 Randomised controlled studies (RCTs) search terms

Medline search terms

1.	Randomized controlled trial.pt.
2.	Controlled clinical trial.pt.
3.	randomi#ed.ab.
4.	placebo.ab.
5.	randomly.ab.

6.	Clinical trials as topic.sh.
7.	trial*.ti.
8.	or/1-7

Embase search terms

1.	random*.ti,ab.
2.	factorial*.ti,ab.
3.	(crossover* or cross over*).ti,ab.
4.	((doubl* or singl*) adj blind*).ti,ab.
5.	(assign* or allocat* or volunteer* or placebo*).ti,ab.
6.	Crossover procedure/
7.	Single blind procedure/
8.	Randomized controlled trial/
9.	Rouble blind procedure/
10.	or/1-9

F.1.3 Observational studies search terms

Medline search terms

1.	Epidemiologic studies/
2.	exp Case control studies/
3.	exp Cohort studies/
4.	Cross-sectional studies/
5.	case control.ti,ab.
6.	(cohort adj (study or studies or analys*)).ti,ab.
7.	((follow up or observational or uncontrolled or non randomi#ed or nonrandomi#ed or epidemiologic*) adj (study or studies)).ti,ab.
8.	((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys* or cohort*)).ti,ab.
9.	or/1-8

Embase search terms

1.	Clinical study/
2.	exp Case control study/
3.	Family study/
4.	Longitudinal study/
5.	Retrospective study/
6.	Prospective study/
7.	Cross-sectional study/
8.	Cohort analysis/
9.	Follow-up/
10.	cohort*.ti,ab.
11.	9 and 10
12.	case control.ti,ab.
13.	(cohort adj (study or studies or analys*)).ti,ab.
14.	((follow up or observational or uncontrolled or non randomi#ed or nonrandomi#ed or epidemiologic*) adj (study or studies)).ti,ab.

15.	((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys* or cohort*)).ti,ab.
16.	or/1-8,11-15

F.1.4 Health economic search terms

Medline search terms

1.	Economics/
2.	Value of life/
3.	exp "Costs and cost analysis"/
4.	exp Economics, Hospital/
5.	exp Economics, Medical/
6.	exp Resource allocation/
7.	Economics, Nursing/
8.	Economics, Pharmaceutical/
9.	exp "Fees and charges"/
10.	exp Budgets/
11.	budget*.ti,ab.
12.	cost*.ti,ab.
13.	(economic* or pharmaco?economic*).ti,ab.
14.	(price* or pricing*).ti,ab.
15.	(financ* or fee or fees or expenditure* or saving*).ti,ab.
16.	(value adj2 (money or monetary)).ti,ab.
17.	resourc* allocat*.ti,ab.
18.	(fund or funds or funding* or funded).ti,ab.
19.	(ration or rations or rationing* or rationed).ti,ab.
20.	ec.fs.
21.	or/1-20

Embase search terms

1.	Health economics/
2.	exp Economic evaluation/
3.	exp Health care cost/
4.	exp Fee/
5.	Budget/
6.	Funding/
7.	Resource allocation/
8.	budget*.ti,ab.
9.	cost*.ti,ab.
10.	(economic* or pharmaco?economic*).ti,ab.
11.	(price* or pricing*).ti,ab.
12.	(financ* or fee or fees or expenditure* or saving*).ti,ab.
13.	(value adj2 (money or monetary)).ti,ab.
14.	resourc* allocat*.ti,ab.
15.	(fund or funds or funding* or funded).ti,ab.
16.	(ration or rations or rationing* or rationed).ti,ab.

F.1.5 Quality of life search terms

Medline search terms

1.	Quality-adjusted life years/
2.	Sickness impact profile/
3.	(quality adj2 (wellbeing or well being)).ti,ab.
4.	sickness impact profile.ti,ab.
5.	disability adjusted life.ti,ab.
6.	(qal* or qtime* or qwb* or daly*).ti,ab.
7.	(euroqol* or eq5d* or eq 5d*).ti,ab.
8.	(qol* or hql* or hqol* or h qol* or hrqol* or hr qol*).ti,ab.
9.	(health utility* or utility score* or disutilit*).ti,ab.
10.	(hui or hui1 or hui2 or hui3).ti,ab.
11.	health* year* equivalent*.ti,ab.
12.	(hye or hyes).ti,ab.
13.	rosser.ti,ab.
14.	(willingness to pay or time tradeoff or time trade off or tto or standard gamble*).ti,ab.
15.	(sf36 or sf 36 or short form 36 or shortform 36 or shortform36).ti,ab.
16.	(sf20 or sf 20 or short form 20 or shortform 20 or shortform20).ti,ab.
17.	(sf12 or sf 12 or short form 12 or shortform 12 or shortform12).ti,ab.
18.	(sf8 or sf 8 or short form 8 or shortform 8 or shortform8).ti,ab.
19.	(sf6 or sf 6 or short form 6 or shortform 6 or shortform6).ti,ab.
20.	or/1-19

Embase search terms

1.	Quality adjusted life year/
2.	"Quality of life index"/
3.	Short form 12/ or Short form 20/ or Short form 36/ or Short form 8/
4.	Sickness impact profile/
5.	(quality adj2 (wellbeing or well being)).ti,ab.
6.	sickness impact profile.ti,ab.
7.	disability adjusted life.ti,ab.
8.	(qal* or qtime* or qwb* or daly*).ti,ab.
9.	(euroqol* or eq5d* or eq 5d*).ti,ab.
10.	(qol* or hql* or hqol* or h qol* or hrqol* or hr qol*).ti,ab.
11.	(health utility* or utility score* or disutilit*).ti,ab.
12.	(hui or hui1 or hui2 or hui3).ti,ab.
13.	health* year* equivalent*.ti,ab.
14.	(hye or hyes).ti,ab.
15.	rosser.ti,ab.
16.	(willingness to pay or time tradeoff or time trade off or tto or standard gamble*).ti,ab.
17.	(sf36 or sf 36 or short form 36 or shortform 36 or shortform36).ti,ab.
18.	(sf20 or sf 20 or short form 20 or shortform 20 or shortform20).ti,ab.
19.	(sf12 or sf 12 or short form 12 or shortform 12 or shortform12).ti,ab.
20.	(sf8 or sf 8 or short form 8 or shortform 8 or shortform8).ti,ab.
21.	(sf6 or sf 6 or short form 6 or shortform 6 or shortform6).ti,ab.

22.	or/1-21
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F.1.6 Diagnostic accuracy

Medline search terms

1.	exp "Sensitivity and specificity"/
2.	(sensitivity or specificity).ti,ab.
3.	((pre test or pretest or post test) adj probability).ti,ab.
4.	(prognos* or predict*).ti,ab,hw.
5.	(PPV or NPV).ti,ab.
6.	Likelihood function/
7.	(ROC curve* or AUC).ti,ab.
8.	(diagnos* adj2 (performance* or accurac* or utilit* or value* or efficien* or effectiveness)).ti,ab.
9.	gold standard.ab.
10.	(improve* adj3 (outcome* or result*)).ti,ab.
11.	Treatment outcome/
12.	or/1-11

Embase search terms

1.	exp "Sensitivity and specificity"/
2.	Diagnostic accuracy/
3.	Diagnostic test accuracy study/
4.	Treatment outcome/
5.	(prognos* or predict*).ti,ab,hw.
6.	(sensitivity or specificity).ti,ab.
7.	((pre test or pretest or post test) adj probability).ti,ab.
8.	(PPV or NPV).ti,ab.
9.	likelihood ratio*.ti,ab.
10.	(ROC curve* or AUC).ti,ab.
11.	(diagnos* adj2 (performance* or accurac* or utilit* or value* or efficien* or effectiveness)).ti,ab.
12.	(improve* adj3 (outcome* or result*)).ti,ab.
13.	gold standard.ab.
14.	or/1-13

F.2 Standard population search strategy

Medline search terms

1.	exp Varicose veins/
2.	(varicos* adj5 vein*).ti,ab.
3.	Saphenous vein/
4.	(sapheno* adj3 (vein* or junction* or incompet* or reflux or insufficien*)).ti,ab.
5.	exp Coronary artery bypass/
6.	((coronary or bypass) and graft).ti,ab.
7.	(3 or 4) not (5 or 6)
8.	1 or 2 or 7

9.	Venous insufficiency/
10.	((venous or vein* or varico* or truncal or valvular) adj3 (insufficien* or incompet* or disorder* or reflux)).ti,ab.
11.	((venous or varico*) adj disease*).ti,ab.
12.	((perforator or superficial or tortuous) adj3 vein*).ti,ab.
13.	(varix or varices or varicosi* or ceap).ti,ab.
14.	((varico* or venous or vein*) adj3 ulcer*).ti,ab.
15.	or/9-14
16.	exp Lower extremity/
17.	(lower adj2 extremit*).ti,ab.
18.	(leg* or limb* or calf or calves or thigh* or groin* or ankle* or foot or feet or pelvis or pelvic or vulva* or vulvo* or ovari* or ovary or vagina* or uterus or uterin*).ti,ab.
19.	or/16-18
20.	8 or (15 and 19)
21.	limit 20 to english language
22.	Letter/
23.	Editorial/
24.	News/
25.	exp Historical article/
26.	Anecdotes as topic/
27.	Comment/
28.	Case report/
29.	(letter or comment*).ti.
30.	or/22-29
31.	30 not (Randomized controlled trial/ or random*.ti,ab.)
32.	Animals/ not Humans/
33.	exp Animals, Laboratory/
34.	exp Animal experimentation/
35.	exp Models, Animal/
36.	exp Rodentia/
37.	(rat or rats or mouse or mice).ti.
38.	or/31-37
39.	21 not 38

Embase search terms

1.	Varicosis/
2.	Leg varicosis/
3.	(varicos* adj5 vein*).ti,ab.
4.	Saphenous vein/
5.	(sapheno* adj3 (vein* or junction or incompet* or reflux or insufficien*)).ti,ab.
6.	exp Coronary artery bypass graft/
7.	((coronary or bypass) and graft).ti,ab.
8.	(4 or 5) not (6 or 7)
9.	1 or 2 or 3 or 8
10.	exp Vein insufficiency/
11.	((venous or vein* or varico* or truncal or valvular) adj3 (insufficien* or incompet* or disorder*

	or reflux)).ti,ab.
12.	((venous or varico*) adj disease*).ti,ab.
13.	((perforator or superficial or tortuous) adj3 vein*).ti,ab.
14.	(varix or varices or varicosi* or ceap).ti,ab.
15.	((varico* or venous or vein*) adj3 ulcer*).ti,ab.
16.	or/10-15
17.	exp Leg/
18.	(lower adj2 extremi*).ti,ab.
19.	(leg* or limb* or calf or calves or thigh* or groin* or ankle* or foot or feet or pelvis or pelvic or vulva* or vulvo* or ovari* or ovary or vagina* or uterus or uterin*).ti,ab.
20.	or/17-19
21.	9 or (16 and 20)
22.	limit 21 to english language
23.	Letter.pt. or Letter/
24.	Note.pt.
25.	Editorial.pt.
26.	Case report/ or Case study/
27.	(letter or comment*).ti.
28.	or/23-27
29.	28 not (randomized controlled trial/ or random*.ti,ab.)
30.	Animal/ not Human/
31.	Nonhuman/
32.	exp Animal experiment/
33.	exp Experimental animal/
34.	Animal model/
35.	exp Rodent/
36.	(rat or rats or mouse or mice).ti.
37.	or/29-36
38.	22 not 37

Cinahl search terms

S1	(MH "Varicose Veins")
S2	varicos* n5 vein*
S3	(MH "Saphenous Vein")
S4	sapheno* and (vein* or junction* or incompet* or reflux or insufficien*)
S5	(MH "Coronary Artery Bypass+")
S6	(S3 or S4) not S5
S7	S1 or S2 or S6
S8	(MH "Venous Insufficiency")
S9	(venous or vein* or varico* or truncal or valvular) and (insufficien* or incompet* or disorder* or reflux)
S10	(perforator n3 vein*) or (superficial n3 vein*) or (tortuous n3 vein*)
S11	varix or varices or varicosi* or ceap
S12	(venous n1 disease*) or (varico* n1 disease*)
S13	(varico* n3 ulcer*) or (vein* n3 ulcer*) or (venous n3 ulcer*)
S14	S8 or S9 or S10 or S11 or S12 or S13

S15	(MH "Lower Extremity+")
S16	lower n2 extremit*
S17	leg* or limb* or calf or calves or thigh* or groin* or ankle* or foot or feet or pelvis or pelvic or vulva* or vulvo* or ovari* or ovary or vagina* or uterus or uterin*
S18	S15 or S16 or S17
S19	S7 or (S14 and S18)

Cochrane search terms

#1	MeSH descriptor Varicose Veins explode all trees
#2	(varicos* NEAR/5 vein*):ti,ab
#3	MeSH descriptor Saphenous Vein, this term only
#4	(sapheno* NEAR/3 (vein* or junction* or incompet* or reflux or insufficien*)):ti,ab
#5	MeSH descriptor Coronary Artery Bypass explode all trees
#6	((coronary or bypass) and graft):ti,ab
#7	((#3 or #4) and not (#5 OR #6))
#8	(#1 or #2 or #7)
#9	MeSH descriptor Venous Insufficiency, this term only
#10	((venous or vein* or varico* or truncal or valvular) NEAR/3 (insufficien* or incompet* or disorder* or reflux)):ti,ab
#11	((perforator or superficial or tortuous) NEAR/3 vein*):ti,ab
#12	(varix or varices or varicosi* or ceap):ti,ab
#13	((varico* or vein* or venous) NEAR/3 ulcer*):ti,ab
#14	((venous or varico*) NEXT disease*):ti,ab
#15	(#9 or #10 or #11 or #12 or #13 or #14)
#16	MeSH descriptor Lower Extremity explode all trees
#17	(lower NEAR/2 extremit*):ti,ab
#18	(leg* or limb* or calf or calves or thigh* or groin* or ankle* or foot or feet or pelvis or pelvic or vulva* or vulvo* or ovari* or ovary or vagina* or uterus or uterin*):ti,ab
#19	(#16 or #17 or #18)
#20	(#8 or (#15 and #19))

F.3 Searches by specific questions

F.3.1 Patient information

Q. What are the perceptions and expectations of people with varicose veins (e.g. natural history, treatment) and how can they be addressed?

Search constructed by combining the columns in the following table using the AND Boolean operator

Population	Intervention	Study filter used	Date parameters
Varicose veins	Patient information	None	All years - 17/10/2012

Medline search terms

1.	((client* or patient* or user* or carer* or consumer* or customer* or health) adj3 (information* or educat* or knowledge or literacy or belief* or perception* or understanding or expectation* or prefer* or satisfaction or acceptance or compliance or adherence or concordance)).ti,ab,hw.
2.	(information* adj3 (need* or requirement* or support* or seek* or access* or disseminat*)).ti,ab,hw.

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Literature search strategies

3.	((patient* or user* or carer* or consumer* or customer* or health) adj3 (literature or leaflet* or booklet* or pamphlet* or questionnaire* or survey* or handout* or internet or website* or consult* or interview*)).ti,ab.
4.	Telemedicine/
5.	Interview/
6.	Telephone/
7.	Publications/
8.	Pamphlets/
9.	Internet/
10.	or/1-9

Embase search terms

1.	((client* or patient* or user* or carer* or consumer* or customer* or health or medical) adj3 (information* or educat* or knowledge or literacy or belief* or perception* or understanding or expectation* or attitude* or prefer* or satisfaction or acceptance or compliance or adherence or concordance or advocacy)).ti,ab,hw.
2.	(information* adj3 (need* or requirement* or support* or seek* or access* or disseminat*)).ti,ab,hw.
3.	((patient* or user* or carer* or consumer* or customer* or health) adj3 (literature or leaflet* or booklet* or pamphlet* or questionnaire* or survey* or handout* or internet or website* or consult* or interview*)).ti,ab.
4.	exp Telehealth/
5.	exp Interview/
6.	Telephone/
7.	Publication/
8.	Internet/
9.	or/1-8

Cinahl search terms

S1.	(MH "Varicose Veins")
S2.	varicos* n5 vein*
S3.	(MH "Saphenous Vein")
S4.	sapheno* and (vein* or junction* or incompet* or reflux or insufficien*)
S5.	(MH "Coronary Artery Bypass+")
S6.	(S3 or S4) not S5
S7.	S1 or S2 or S6
S8.	(MH "Venous Insufficiency")
S9.	(venous or vein* or varico* or truncal or valvular) and (insufficien* or incompet* or disorder* or reflux)
S10.	(perforator n3 vein*) or (superficial n3 vein*) or (tortuous n3 vein*)
S11.	varix or varices or varicosi* or ceap
S12.	(venous n1 disease*) or (varico* n1 disease*)
S13.	(varico* n3 ulcer*) or (vein* n3 ulcer*) or (venous n3 ulcer*)
S14.	S8 or S9 or S10 or S11 or S12 or S13
S15.	(MH "Lower Extremity+")
S16.	lower n2 extremit*
S17.	leg* or limb* or calf or calves or thigh* or groin* or ankle* or foot or feet or pelvis or pelvic or vulva* or vulvo* or ovari* or ovary or vagina* or uterus or uterin*

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Literature search strategies

S18.	S15 or S16 or S17
S19.	S7 or (S14 and S18)
S20.	information* n2 need* or information* n2 requirement* or information* n2 support* or information* n2 seek* or information* n2 access* or information* n2 disseminat*
S21.	patient* n3 information* or patient* n3 knowledge or patient* n3 educat*
S22.	carer* n3 information* or carer* n3 knowledge or carer* n3 educat* or health* n3 information* or health* n3 educat*
S23.	patient* n3 literature or patient* n3 leaflet* or patient* n3 booklet* or patient* n3 pamphlet* or patient* n3 questionnaire* or patient* n3 survey* or patient* n3 handout* or patient* n3 internet or patient* n3 website*
S24.	TI (patient* or satisfaction*) and (questionnaire* or survey*)
S25.	(MH "Access to Information+")
S26.	S20 or S21 or S22 or S23 or S24 or S25
S27.	S19 and S26
S28.	PT anecdote or PT audiovisual or PT bibliography or PT biography or PT book or PT book review or PT brief item or PT cartoon or PT commentary or PT computer program or PT editorial or PT games or PT glossary or PT historical material or PT interview or PT letter or PT listservs or PT masters thesis or PT obituary or PT pamphlet or PT pamphlet chapter or PT pictorial or PT poetry or PT proceedings or PT "questions and answers" or PT response or PT software or PT teaching materials or PT website
S29.	S27 not S28
S30.	English Language OR Exclude Medline records
S31.	S29 and S30

Cochrane search terms

#1.	MeSH descriptor Patient Acceptance of Health Care, this term only
#2.	MeSH descriptor Patient Compliance, this term only
#3.	MeSH descriptor Patient Education as Topic, this term only
#4.	MeSH descriptor Patient Preference, this term only
#5.	MeSH descriptor Patient Satisfaction, this term only
#6.	MeSH descriptor Consumer Health Information, this term only
#7.	MeSH descriptor Consumer Satisfaction, this term only
#8.	MeSH descriptor Health Literacy, this term only
#9.	MeSH descriptor Health Knowledge, Attitudes, Practice, this term only
#10.	MeSH descriptor Telemedicine, this term only
#11.	MeSH descriptor Access to Information, this term only
#12.	MeSH descriptor Information Dissemination, this term only
#13.	MeSH descriptor Information Seeking Behavior, this term only
#14.	MeSH descriptor Pamphlets, this term only
#15.	MeSH descriptor Internet, this term only
#16.	MeSH descriptor Interviews as Topic explode all trees
#17.	MeSH descriptor Telephone, this term only
#18.	MeSH descriptor Telemedicine, this term only
#19.	((client* or patient* or user* or carer* or consumer* or customer* or health) NEAR/3 (information* or educat* or knowledge or literacy or belief* or perception* or attitude* or understanding or expectation* or prefer* or satisfaction or acceptance or compliance or adherence or concordance)):ti,ab
#20.	(information* NEAR/3 (need* or requirement* or support* or seek* or access* or

	disseminat*)):ti,ab
#21.	((patient* or user* or carer* or consumer* or customer* or health) NEAR/3 (literature or leaflet* or booklet* or pamphlet* or questionnaire* or survey* or handout* or internet or website* or consult* or interview*)):ti,ab
#22.	(#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 or #17 or #18 or #19 or #20 or #21)

PsycINFO search terms

1.	(varicos* adj5 vein*).ti,ab.
2.	((venous or vein* or varico* or truncal or valvular) adj3 (insufficien* or incompet* or disorder* or reflux)).ti,ab.
3.	((venous or varico*) adj disease*).ti,ab.
4.	((perforator or superficial or tortuous) adj3 vein*).ti,ab.
5.	(varix or varices or varicosi* or ceap).ti,ab.
6.	((varico* or venous or vein*) adj3 ulcer*).ti,ab.
7.	(leg* or limb* or calf or calves or thigh* or groin* or ankle* or foot or feet or lower extremit*).ti,ab.
8.	(2 or 3 or 4 or 5 or 6) and 7
9.	1 or 8

F.3.2 Assessment for referral

F.3.2.1 Disease progression

- Q. a) In people with leg varicose veins at CEAP class C2 which signs, symptoms and/or patient characteristics are associated with disease progression to i) C3, ii) C4* iii) C6?
- b) In people with leg varicose veins at CEAP class C3 which signs, symptoms and/or patient characteristics are associated with disease progression to i) C4* ii) C6?
- c) In people with leg varicose veins at CEAP class C4* which signs, symptoms and/or patient characteristics are associated with disease progression to C6?

Search constructed by combining the columns in the following table using the AND Boolean operator

Population	Intervention	Study filter used	Date parameters
Varicose veins	Disease classification AND disease progression	Observational studies* [Medline and Embase only]	All years - 17/10/2012

*Observational search filter in F.1.3 expanded for this question

Medline search terms

1.	(CEAP or C2 or C3 or C4 or C5 or C6 or C-2 or C-3 or C-4 or C-5 or C-6).ti,ab.
2.	(class* or stage* or staging).ti,ab.
3.	(skin adj2 (discol* or change* or pigment*)).ti,ab.
4.	(ulcer* or oedem* or edem* or lipoderm* or eczema or atroph*).ti,ab.
5.	or/1-4
6.	Disease progression/
7.	Natural history/
8.	Risk factors/
9.	(risk* or course* or predict* or incidence or prognos* or progress* or natural history).ti,ab.

10.	or/6-9
11.	5 and 10
12.	Epidemiologic studies/
13.	exp Case control studies/
14.	exp Cohort studies/
15.	Cross-sectional studies/
16.	case control.ti,ab.
17.	((follow up or observational or uncontrolled or non randomi#ed or nonrandomi#ed or epidemiologic*) adj (study or studies)).ti,ab.
18.	((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys* or cohort*)).ti,ab.
19.	(cohort* or group* or subgroup* or participant*).ti,ab.
20.	or/12-19
21.	11 and 20

Embase search terms

1.	Disease classification/
2.	(CEAP or C2 or C3 or C4 or C5 or C6 or C-2 or C-3 or C-4 or C-5 or C-6).ti,ab.
3.	(class* or stage* or staging).ti,ab.
4.	(skin adj2 (discol* or change* or pigment*)).ti,ab.
5.	(ulcer* or oedem* or edem* or lipoderm* or eczema or atroph*).ti,ab.
6.	or/1-5
7.	Risk factor/
8.	Disease course/
9.	Disease exacerbation/
10.	Predictive value/
11.	(risk* or course* or predict* or incidence or prognos* or progress* or natural history).ti,ab.
12.	or/7-11
13.	6 and 12
14.	Clinical study/
15.	exp Case control study/
16.	Family study/
17.	Longitudinal study/
18.	Retrospective study/
19.	Prospective study/
20.	Cross-sectional study/
21.	Cohort analysis/
22.	Follow-up/
23.	case control.ti,ab.
24.	((follow up or observational or uncontrolled or non randomi#ed or nonrandomi#ed or epidemiologic*) adj (study or studies)).ti,ab.
25.	((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys* or cohort*)).ti,ab.
26.	(cohort* or group* or subgroup* or participant*).ti,ab.
27.	or/14-26
28.	13 and 27

F.3.2.2 Prediction of treatment outcomes

Q. In people with leg varicose veins are there any factors (clinical signs and symptoms or patient reported outcomes) that would predict increased benefits or harms from interventional treatments for varicose veins?

Search constructed by combining the columns in the following table using the AND Boolean operator

Population	Intervention	Study filter used	Date parameters
Varicose veins	Interventional treatments AND risk factors	RCTs, SRs and Observational studies* [Medline and Embase only]	All years - 17/10/2012

*Observational search filter in F.1.3 expanded for this question

Medline search terms

1.	Vascular surgical procedures/
2.	Ablation techniques/
3.	Laser therapy/
4.	Sclerotherapy/
5.	Sclerosing solutions/
6.	Sodium tetradecyl sulfate/
7.	(scleros* or sclerotherap* or sclero therap* or UGFS).ti,ab.
8.	(polidocanol or POL or sodium tetradecyl or STS or sotradecol or fibrovein or sclerovein).ti,ab.
9.	(foam or microfoam or liquid).ti,ab.
10.	(strip* or cryostrip* or saphenect* or disconnect*).ti,ab.
11.	(avuls* or phlebectom* or microphlebectom* or miniphlebectom* or trans illuminate* or transilluminate* or trivex).ti,ab.
12.	surg*.ti.
13.	(ablat* or endoluminal or laser or radiofrequency or radio frequency or endovenous or RFA or EVLT).ti,ab.
14.	or/1-13
15.	Risk factors/
16.	Risk assessment/
17.	exp Treatment outcome/
18.	Prognosis/
19.	Disease progression/
20.	(risk* or benefit* or harm* or predis* or pre dispos* or prognos* or course* or progress* or predict* or characteristic* or factor*).ti,ab.
21.	(age or gender or sex or BMI or heredity or weight or body mass or family history or obes* or pregnan* or birth or childbirth or lifestyle or occupation or contracept* or mobility or smoking or drinking or co-morb* or comorb* or reflux).ti,ab.
22.	or/15-21
23.	14 and 22

Embase search terms

1.	Phlebectomy/
2.	Sclerotherapy/
3.	Sclerosing agent/
4.	Tetradecyl sulfate sodium/
5.	Polidocanol/

6.	Vein stripping/
7.	Laser surgery/
8.	Radiofrequency ablation/
9.	Endovenous laser ablation/
10.	(avuls* or phlebectom* or microphlebectom* or miniphlebectom* or trans illuminate* or transilluminate* or trivex).ti,ab.
11.	(scleros* or sclerotherap* or UGFS).ti,ab.
12.	(polidocanol or POL or sodium tetradecyl or STS or sotradecol or fibrovein or sclerovein).ti,ab.
13.	(foam or microfoam or liquid).ti,ab.
14.	(strip* or cryostrip* or saphenect* or disconnect*).ti,ab.
15.	(ablat* or endoluminal or laser or radiofrequency or radio frequency or endovenous or RFA or EVLT).ti,ab.
16.	surg*.ti.
17.	or/1-16
18.	risk.hw.
19.	predict*.hw.
20.	Treatment outcome/
21.	Treatment failure/
22.	Treatment response/
23.	Prognosis/
24.	Disease course/
25.	(risk* or benefit* or harm* or predis* or pre dispos* or prognos* or course* or progress* or predict* or characteristic* or factor*).ti,ab.
26.	(age or gender or sex or BMI or heredity or weight or body mass or family history or obes* or pregnan* or birth or childbirth or lifestyle or occupation or contracept* or mobility or smoking or drinking or co-morb* or comorb* or reflux).ti,ab.
27.	or/18-26
28.	17 and 27

Cochrane search terms

#1.	MeSH descriptor Vascular Surgical Procedures, this term only
#2.	MeSH descriptor Ablation Techniques, this term only
#3.	MeSH descriptor Laser Therapy, this term only
#4.	MeSH descriptor Sclerotherapy, this term only
#5.	MeSH descriptor Sclerosing Solutions, this term only
#6.	MeSH descriptor Sodium Tetradecyl Sulfate, this term only
#7.	(scleros* or sclerotherap* or "sclero therapy" or UGFS):ti,ab
#8.	(polidocanol or POL or "sodium tetradecyl" or STS or sotradecol or fibrovein or sclerovein):ti,ab
#9.	(foam or microfoam or liquid):ti,ab
#10.	(strip* or cryostrip* or saphenect* or disconnect*):ti,ab
#11.	(avuls* or phlebectom* or microphlebectom* or miniphlebectom* or "trans illuminated" or transilluminate* or trivex):ti,ab
#12.	(ablat* or endoluminal or laser or radiofrequency or "radio frequency" or endovenous or RFA or EVLT):ti,ab
#13.	surg*:ti
#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)
#15.	MeSH descriptor Risk Factors, this term only

#16.	MeSH descriptor Risk Assessment, this term only
#17.	MeSH descriptor Treatment Outcome explode all trees
#18.	MeSH descriptor Prognosis, this term only
#19.	MeSH descriptor Disease Progression, this term only
#20.	(risk* or benefit* or harm* or predis* or "pre disposed" or "pre disposition" or prognos* or course* or progress* or predict* or characteristic* or factor*):ti,ab
#21.	(age or gender or sex or BMI or heredity or weight or "body mass" or "family history" or obes* or pregnan* or birth or childbirth or lifestyle or occupation or contracept* or mobility or smoking or drinking or co-morbidity or comorbidities or comorb* or reflux):ti,ab
#22.	(#15 or #16 or #17 or #18 or #19 or #20 or #21)
#23.	(#14 and #22)

F.3.3 Assessment for treatment

The following two questions were searched using a single strategy:

- Q1. Does the use of duplex ultrasound during assessment improve outcome after interventional treatment compared to no duplex scanning in people with leg varicose veins?**
- Q2. What is the diagnostic accuracy of hand held Doppler (HHD) compared to gold standard of duplex scanning when used in patients with varicose veins?**

Search constructed by combining the columns in the following table using the AND Boolean operator

Population	Intervention	Study filter used	Date parameters
Varicose veins	Duplex ultrasound	Diagnostic accuracy [Medline and Embase only]	All years – 17/10/2012

Medline search terms

1.	exp Ultrasonography, Doppler/
2.	Ultrasonography, Interventional/
3.	(ultraso* or echograph* or sonogra* or Doppler or duplex or DU or DUS).ti,ab.
4.	or/1-3

Embase search terms

1.	Echography/
2.	Doppler echography/
3.	Endoscopic echography/
4.	Color ultrasound flowmetry/
5.	Diagnostic imaging/
6.	(ultraso* or echograph* or sonogra* or Doppler or duplex or DU or DUS).ti,ab.
7.	or/1-6

Cochrane search terms

#1.	MeSH descriptor Ultrasonography, Doppler explode all trees
#2.	MeSH descriptor Ultrasonography, Interventional, this term only
#3.	(ultraso* or echograph* or sonogra* or Doppler or duplex or DU or DUS):ti,ab
#4.	(#1 or #2 or #3)
#5.	MeSH descriptor Sensitivity and specificity explode all trees
#6.	MeSH descriptor Prognosis, this term only

#7.	MeSH descriptor Treatment outcome, this term only
#8.	MeSH descriptor Likelihood functions, this term only
#9.	(sensitivity or specificity):ti,ab
#10.	((("pre test" or pretest or "post test") NEXT probability):ti,ab
#11.	(prognos* or predict*):ti,ab
#12.	(PPV or NPV):ti,ab
#13.	("ROC curve*" or AUC):ti,ab
#14.	(diagnos* NEAR/2 (performance* or accurac* or utilit* or value* or efficien* or effectiveness)):ti,ab
#15.	"gold standard":ab
#16.	(improve* NEAR/3 (outcome* or result*)):ti,ab
#17.	(#5 or #6 or #7 or #8 or #9 or #10 or #11 or #12 or #13 or #14 or #15 or #16)
#18.	(#4 and #17)

F.3.4 Conservative management

The following four questions were searched using a single strategy:

- Q1. What is the clinical and cost effectiveness of compression therapy compared with no treatment or lifestyle advice in people with leg varicose veins?**
- Q2. What is the clinical and cost effectiveness and safety of compression therapy compared with foam sclerotherapy in people with leg varicose veins?**
- Q3. What is the clinical and cost effectiveness and safety of compression therapy compared with stripping surgery in people with leg varicose veins?**
- Q4. What is the clinical and cost effectiveness and safety of compression therapy compared with endothermal ablation in people with leg varicose veins?**

Search constructed by combining the columns in the following table using the AND Boolean operator

Population	Intervention	Study filter used	Date parameters
Varicose veins	Compression therapy	RCTs, SRs and Observational studies [Medline and Embase only]	All years - 17/10/2012

Medline search terms

1.	Pressure/
2.	Bandages/
3.	exp Compression bandages/
4.	Intermittent pneumatic compression devices/
5.	((compressi* or pressure) and (hosiery or stocking* or bandag*)):ti,ab.
6.	((compressi* or pressure or hosiery or stocking* or bandag*) adj2 (therap* or treatment* or device* or eccentric or pneumatic)):ti,ab.
7.	((elastic or system* or support) adj2 (hosiery or stocking* or bandag*)):ti,ab.
8.	(external* adj2 compression).ti,ab.
9.	conservative treatment*.ti,ab.
10.	or/1-9

Embase search terms

1.	Compression/
2.	exp Compression therapy/

3.	Compression bandage/
4.	*Bandage/
5.	Compression garment/
6.	Intermittent pneumatic compression device/
7.	((compressi* or pressure) and (hosiery or stocking* or bandag*)).ti,ab.
8.	((compressi* or pressure or hosiery or stocking* or bandag*) adj2 (therap* or treatment* or device* or eccentric or pneumatic)).ti,ab.
9.	((elastic or system* or support) adj2 (hosiery or stocking* or bandag*)).ti,ab.
10.	(external* adj2 compression).ti,ab.
11.	conservative treatment*.ti,ab.
12.	or/1-11

Cinahl search terms

S1	(MH "Compression therapy")
S2	(MH "Compression garments")
S3	(compressi* or pressure) and (hosiery or stocking* or bandag*)
S4	(compressi* n2 therap*) or (compressi* n2 treatment) or (compressi* n2 device*) or (compressi* n2 eccentric) or (compressi* n2 pneumatic) or (pressure n2 therap*) or (pressure n2 treatment)
S5	(elastic n2 hosiery) or (elastic n2 stocking*) or (elastic n2 bandag*) or (system n2 hosiery) or (system n2 stocking*) or (system n2 bandag*) or (support n2 hosiery) or (support n2 stocking*) or (support n2 bandag*)
S6	external* n2 compression
S7	conservative treatment*
S8	S1 or S2 or S3 or S4 or S5 or S6 or S7

Cochrane search terms

#1	MeSH descriptor Pressure, this term only
#2	MeSH descriptor Bandages, this term only
#3	MeSH descriptor Compression Bandages explode all trees
#4	MeSH descriptor Intermittent Pneumatic Compression Devices, this term only
#5	((compressi* or pressure) and (hosiery or stocking* or bandag*)):ti,ab
#6	((compressi* or pressure or hosiery or stocking* or bandag*) NEAR/2 (therap* or treatment* or device* or eccentric or pneumatic)):ti,ab
#7	((elastic or system* or support) NEAR/2 (hosiery or stocking* or bandag*)):ti,ab
#8	(external* NEAR/2 compression):ti,ab
#9	(conservative NEXT treatment*):ti,ab
#10	(#1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9)

F.3.5 Interventional treatment

F.3.5.1 Stripping surgery

The following two questions were searched using a single strategy:

- Q1. What is the clinical and cost effectiveness and safety of stripping surgery compared with sclerotherapy in people with truncal leg varicose veins?**
- Q2. What is the clinical and cost effectiveness and safety of stripping surgery compared with endothermal ablation in people with truncal leg varicose veins?**

Search constructed by combining the columns in the following table using the AND Boolean operator

Population	Intervention	Study filter used	Date parameters
Varicose veins	Stripping surgery	RCTs and SRs [Medline and Embase only]	All years - 17/10/2012

Medline search terms

1.	Vascular surgical procedures/
2.	(strip* or cryostrip* or saphenect*).ti,ab.
3.	surg*.ti.
4.	or/1-3

Embase search terms

1.	Vein stripping/
2.	(strip* or cryostrip* or saphenect*).ti,ab.
3.	surg*.ti.
4.	or/1-3

Cochrane search terms

#1	MeSH descriptor Vascular Surgical Procedures, this term only
#2	(strip* or cryostrip* or saphenect*).ti,ab
#3	(#1 or #2)

F.3.5.2 Sclerotherapy

Q. What is the clinical and cost effectiveness of sclerotherapy compared with endothermal ablation in people with truncal leg varicose veins?

Search constructed by combining the columns in the following table using the AND Boolean operator

Population	Intervention	Study filter used	Date parameters
Varicose veins	Sclerotherapy	RCTs, SRs and Observational studies [Medline and Embase only]	All years – 17/10/2012

Medline search terms

1.	Sclerotherapy/
2.	Sclerosing solutions/
3.	Sodium tetradecyl sulfate/
4.	(scleros* or sclerotherap* or UGFS).ti,ab.
5.	(polidocanol or POL or sodium tetradecyl or STS or sotradecol or fibrovein or sclerovein).ti,ab.
6.	(foam or microfoam or liquid).ti,ab.
7.	or/1-6

Embase search terms

1.	Sclerotherapy/
2.	Sclerosing agent/
3.	Tetradecyl sulfate sodium/
4.	Polidocanol/
5.	(scleros* or sclerotherap* or UGFS).ti,ab.
6.	(polidocanol or POL or sodium tetradecyl or STS or sotradecol or fibrovein or sclerovein).ti,ab.
7.	(foam or microfoam or liquid).ti,ab.
8.	or/1-7

Cochrane search terms

#1	MeSH descriptor Sclerotherapy, this term only
#2	MeSH descriptor Sclerosing solutions, this term only
#3	MeSH descriptor Sodium tetradecyl sulfate, this term only
#4	(scleros* or sclerotherap* or UGFS):ti,ab
#5	(polidocanol or POL or sodium tetradecyl or STS or sotradecol or fibrovein or sclerovein):ti,ab
#6	(foam or microfoam or liquid):ti,ab
#7	(#1 or #2 or #3 or #4 or #5 or #6)

F.3.5.3 Avulsion surgery

The following two questions were searched using a single strategy:

- Q1. What is the clinical and cost effectiveness of avulsion surgery compared with sclerotherapy in people with tributary leg varicose veins?**
- Q2. What is the clinical and cost effectiveness of truncal treatment accompanied by tributary treatment (avulsion or sclerotherapy) compared with truncal treatment alone in people with leg varicose veins?**

Search constructed by combining the columns in the following table using the AND Boolean operator

Population	Intervention	Study filters used	Date parameters
Varicose veins	Avulsion surgery	RCTs, SRs and Observational studies [Medline and Embase only]	All years - 17/10/2012

Medline search terms

1.	(avuls* or phlebectom* or microphlebectom* or miniphlebectom* or trans illuminate* or transilluminate* or trivex).ti,ab.
2.	(stab or hook*).ti,ab.
3.	((ambula* or minim* invasive) adj3 surg*).ti,ab.
4.	(branch* adj2 (venous or vein or varicos*)).ti,ab.
5.	tributar*.ti,ab.
6.	or/1-5

Embase search terms

1.	Phlebectomy/
2.	(avuls* or phlebectom* or microphlebectom* or miniphlebectom* or trans illuminate* or transilluminate* or trivex).ti,ab.
3.	(stab or hook*).ti,ab.
4.	((ambula* or minim* invasive) adj3 surg*).ti,ab.
5.	(branch* adj2 (venous or vein or varicos*)).ti,ab.
6.	tributar*.ti,ab.
7.	or/1-6

Cochrane search terms

#1	(avuls* or phlebectom* or microphlebectom* or miniphlebectom* or trans illuminate* or transilluminate* or trivex):ti,ab
#2	(stab or hook*):ti,ab
#3	((ambula* or minim* invasive) NEAR/3 surg*):ti,ab
#4	(branch* NEAR/2 (venous or vein or varicos*)):ti,ab
#5	tributar*:ti,ab

#6	(#1 or #2 or #3 or #4 or #5)
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F.3.6 Compression post treatment

Q. What is the clinical and cost effectiveness of compression post-ablative treatment compared with ablative treatment alone in people with truncal leg varicose veins?

Search constructed by combining the columns in the following table using the AND Boolean operator

Population	Intervention	Study filter used	Date parameters
Varicose veins	Compression therapy	RCTs, SRs and Observational studies [Medline and Embase only]	All years - 17/10/2012

Medline search terms

1.	Pressure/
2.	Bandages/
3.	exp Compression bandages/
4.	Intermittent pneumatic compression devices/
5.	((compressi* or pressure) and (hosiery or stocking* or bandag*)).ti,ab.
6.	((compressi* or pressure or hosiery or stocking* or bandag*) adj2 (therap* or treatment* or device* or eccentric or pneumatic)).ti,ab.
7.	((elastic or system* or support) adj2 (hosiery or stocking* or bandag*)).ti,ab.
8.	(external* adj2 compression).ti,ab.
9.	conservative treatment*.ti,ab.
10.	or/1-9

Embase search terms

1.	Compression/
2.	exp Compression therapy/
3.	Compression bandage/
4.	*Bandage/
5.	Compression garment/
6.	Intermittent pneumatic compression device/
7.	((compressi* or pressure) and (hosiery or stocking* or bandag*)).ti,ab.
8.	((compressi* or pressure or hosiery or stocking* or bandag*) adj2 (therap* or treatment* or device* or eccentric or pneumatic)).ti,ab.
9.	((elastic or system* or support) adj2 (hosiery or stocking* or bandag*)).ti,ab.
10.	(external* adj2 compression).ti,ab.
11.	conservative treatment*.ti,ab.
12.	or/1-11

Cinahl search terms

S1	(MH "Compression therapy")
S2	(MH "Compression garments")
S3	(compressi* or pressure) and (hosiery or stocking* or bandag*)
S4	(compressi* n2 therap*) or (compressi* n2 treatment) or (compressi* n2 device*) or (compressi* n2 eccentric) or (compressi* n2 pneumatic) or (pressure n2 therap*) or (pressure n2 treatment)
S5	(elastic n2 hosiery) or (elastic n2 stocking*) or (elastic n2 bandag*) or (system n2 hosiery) or (system n2 stocking*) or (system n2 bandag*) or (support n2 hosiery) or (support n2 stocking*) or (support n2 bandag*)

S6	external* n2 compression
S7	conservative treatment*
S8	S1 or S2 or S3 or S4 or S5 or S6 or S7

Cochrane search terms

#1	MeSH descriptor Pressure, this term only
#2	MeSH descriptor Bandages, this term only
#3	MeSH descriptor Compression Bandages explode all trees
#4	MeSH descriptor Intermittent Pneumatic Compression Devices, this term only
#5	((compressi* or pressure) and (hosiery or stocking* or bandag*)):ti,ab
#6	((compressi* or pressure or hosiery or stocking* or bandag*) NEAR/2 (therap* or treatment* or device* or eccentric or pneumatic)):ti,ab
#7	((elastic or system* or support) NEAR/2 (hosiery or stocking* or bandag*)):ti,ab
#8	(external* NEAR/2 compression):ti,ab
#9	(conservative NEXT treatment*):ti,ab
#10	(#1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9)

F.4 Economic searches

F.4.1 Economic reviews

Economic searches were run in Medline and Embase by combining the standard population with an economic filter, and limiting by date range (see table below). Economic searches were executed in the HEED and Cochrane (NHS EED and HTA) databases by running a standard population without date limitation. Search terms for the HEED database are given below (for Cochrane population see F.2).

Search constructed by combining the columns in the following table using the AND Boolean operator

Population	Study filter used	Date parameters
Varicose veins	Economic [Embase and Medline]	<ul style="list-style-type: none"> 2009 - 17/10/2012 (Medline and Embase) All years - 17/10/2012 (NHS EED, HTA and HEED)

HEED search terms

1.	AX=varicos* AND vein*
2.	AX=sapheno* AND vein*
3.	AX=venous AND insufficien*
4.	CS=1 OR 2 OR 3

F.4.2 Quality of life reviews

Quality of life (QOL) searches were run in Medline and Embase by combining the standard population with the QOL filter (F.1.5) without date limitation.

Search constructed by combining the columns in the following table using the AND Boolean operator

Population	Study filter used	Date parameters
Varicose veins	QOL	All years – 17/10/2012