National Institute for Health and Care Excellence

Prostate cancer: diagnosis and management (update)

Review search strategies

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1 Scoping search strategies

1.1 Scoping searches

Scoping searches were undertaken on the following websites and databases (listed in alphabetical order) in March 2017 to provide information for scope development and project planning. Browsing or simple search strategies were employed.

Guidelines/website	Systematic review/economic evaluations
Audit Commission (archived) Canadian Medical Association Infobase	Campbell Collaboration Cochrane Database of Systematic Reviews
Care Quality Commission	(CDSR)
Core Outcome Measures in Effectiveness Trials	Database of Abstracts of Reviews of Effects
(COMET)	(DARE) – last updated Dec 2014
Department of Health	Evidence Uncertainties (DUETS)
General Medical Council	Health Technology Assessment (HTA) Database
Guidelines & Audit Implementation Network (GAIN)	International Guideline Library NHS Economic Evaluation Database (NHS
Guidelines International Network (GIN)	EED) – last updated December 2014
Health and Social Care Information Centre	National Institute for Health Research (NIHR)
Healthtalk Online	Health Technology Assessment Programme
Medicines and Products Regulatory Agency (MHRA)	NIHR Health Services and Delivery Research (HS&DR)
National Audit Office	PROSPERO
National Clinical Audit and Patient Outcomes Programme	TRIP Database
National Health and Medical Research Council - Australia	
National Institute for Health and Care Excellence (NICE) - published & in development guidelines	
National Institute for Health and Care Excellence	
(NICE) - Topic Selection	
National Prescribing Centre (legacy site) NHS Choices	
NHS England	
NICE Clinical Knowledge Summaries (CKS)	
NICE Evidence Search	
NICE Shared Learning Database	
Patient UK	
Patient Voices	
Public Health England	
Royal College of General Practitioners	
Royal College of Nursing	
Royal College of Pathologists	
Royal College of Physicians	
Royal College of Psychiatrists	
Royal College of Radiologists	
Royal College of Surgeons	
Scottish Government	

Guidelines/website	Systematic review/economic evaluations
Scottish Intercollegiate Guidelines Network (SIGN)	
UK Data Service	
US National Guideline Clearinghouse	
UK National Statistics	
YouthHealth Talk	
Cancer Stats	
British Association of Urological Surgeons	
British Uro-Oncology Group	
BUPA Foundation	
Clatterbridge Centre for Oncology	
Macmillan Cancer Support	
National Cancer Intelligence Network	
National Cancer Research Institute	
Prostate Cancer UK	
Prostate Cancer Support Association (North of England)	
Prostate Cancer Support Association (Central	
England)	
Orchid – Fighting male cancer	
Tackle Prostate Cancer	
The Christie NHS Foundation Trust	
The Royal Marsden NHS Foundation Trust	

1.2 Main searches

Bibliographic databases searched for the guideline

- Cochrane Database of Systematic Reviews CDSR (Wiley)
- Cochrane Central Register of Controlled Trials CENTRAL (Wiley)
- Database of Abstracts of Reviews of Effects DARE (Wiley)
- Health Technology Assessment Database HTA (Wiley)
- EMBASE (Ovid)
- MEDLINE (Ovid)
- MEDLINE Epub Ahead of Print (Ovid)
- MEDLINE In-Process (Ovid)

1.3 Identification of evidence for review questions

The searches were conducted between October 2017 and May 2018 for 9 review questions (RQ).

Searches were re-run in July 2018.

Where appropriate, study design filters (either designed in-house (NICE) or by McMaster or the Scottish Intercollegiate Guidelines Network (SIGN)) were used to limit the retrieval to, for example, randomised controlled trials. Details of the study design filters used can be found in section D3.

2 Review question search strategies

2.1 Search strategy review questions 1 and 3

RQ1: Which of the following, alone or in combination, constitutes the most clinical and costeffective pathway for diagnosing prostate cancer:

- Multiparametric or biparametric MRI alone
- MRI influenced TRUS biopsy
- TRUS biopsy alone

RQ3: Which of the following, alone or in combination, constitutes the most clinical and costeffective pathway for excluding the clinically significant progression of prostate cancer in people with low to intermediate risk (as defined in NICE CG175): Multiparametric/ functional MRI, TRUS biopsy, Transperineal template biopsy?

Table 1: search strategy RQ1 and 3

Medline strategy, searched 23rd January 2018

Database: Ovid MEDLINE(R) 1946 to Present with Daily Update

- 1 exp Prostatic Neoplasms/
- 2 Prostatic Intraepithelial Neoplasia/
- 3 (prostat* adj4 (neoplas* or cancer* or carcinoma* or adenocarcinom* or tumour* or tumor* or malignan* or metasta* or angiosarcoma* or sarcoma* or teratoma* or lymphoma* or blastoma* or microcytic* or carcino* or leiomyosarcoma* or lump*)).tw.
- 4 PIN.tw.
- 5 or/1-4
- 6 *Magnetic Resonance Imaging/
- 7 (magnet* adj2 (resonance* or imag* or scan* or spectroscop*)).tw.
- 8 (MR adj2 (resonance* or imag* or scan* or spectroscop*)).tw.
- 9 (Dynamic contrast* enhanc* adj2 (MR* or magnet*)).tw.
- 10 (contrast* adj2 (imag* or scan*)).tw.
- 11 ((MRI or MRSI or MP-MR* or MPMR*) adj4 prostat*).tw.
- 12 turbo spin echo*.tw.
- 13 ((diffusion* or weight*) adj2 imag*).tw.
- 14 ((DWI or DCE-MRI or T2W or TSE or T2-weighted MRI*) adj4 prostat*).tw.
- 15 (Multi-parametric or multiparametric* or biparametric* or bi-parametric*).tw.
- 16 *biopsy/ or *image-guided biopsy/
- 17 ((transrectal* or trans-rectal* or transperineal* or trans-perineal*) adj2 (ultrasound* or biops*)).tw.
- 18 ((saturat* or extend* or templat*) adj2 (ultrasound* or biops*)).tw.
- 19 ((TRUS or TRUSB) adj4 prostat*).tw.
- 20 or/6-19
- 21 5 and 20
- 22 Animals/ not Humans/
- 23 21 not 22
- 24 Comment/ or Letter/ or Editorial/ or Historical article/ or (conference abstract or conference paper or "conference review" or letter or editorial or case report).pt.
- 25 23 not 24
- 26 limit 25 to english language

Note: McMaster diagnosis filter plus prostate diagnosis subhedings (OVID) were appended to the stratgey. Date limit applied from 2007 to 2018

Search also run with the NICE systematic review and RCT study filters on 10th April 2018. Date limit applied from 2007 to 2018.

2.2 Search strategy review question 2

RQ2: What is the clinical and cost-effectiveness of active surveillance, radical prostatectomy or radical radiotherapy compared to each other for people with localised prostate cancer?

Table 2: search strategy RQ2

Medline strategy, searched 14th March 2018

Database: Ovid MEDLINE(R) 1946 to Present with Daily Update

- 1 exp Prostatic Neoplasms/
- 2 Prostatic Intraepithelial Neoplasia/
- 3 (prostat* adj4 (neoplas* or cancer* or carcinoma* or adenocarcinom* or tumour* or tumor* or malignan* or metasta* or angiosarcoma* or sarcoma* or teratoma* or lymphoma* or blastoma* or microcytic* or carcino* or leiomyosarcoma* or lump*)).tw.
- 4 PIN.tw.
- 5 or/1-4
- 6 Watchful Waiting/
- 7 ((active* or watch* or expect* or conservat*) adj (surveillan* or monitor* or observat* or wait* or manag*)).tw.
- 8 ((deferr* or delay*) adj1 (treat* or therap*)).tw.
- 9 or/6-8
- 10 exp Prostatic Neoplasms/su
- 11 exp Prostatectomy/
- 12 (radical adj4 prostatectom*).tw.
- 13 or/10-12
- 14 exp radiotherapy/
- 15 radiotherap*.tw.
- 16 (radiat* adj4 (therap* or treatment*)).tw.
- 17 ((external* or conformal*) adj4 (irradiat* or therap* or treat*)).tw.
- 18 ((interstitial* or intracavit* or implant* or surface* or internal*) adj4 (irradiat* or radiation*)).tw.
- 19 curietherap*.tw.
- 20 (radioisotope* adj4 (irradiat* or therap* or treat*)).tw.
- 21 ((seed* or permanent*) adj2 implant*).tw.
- 22 or/14-21
- 23 Brachytherapy/
- 24 brachytherap*.tw.
- 25 exp radiotherapy dosage/
- 26 exp dose-response relationship, radiation/
- 27 (Hyperfraction* or Hyper-fraction* or Hyper fraction* or Hypofraction* or Hypofraction*).tw.
- 28 ((optim* or fraction* or respons*) adj4 (dose* or dosage or schedule*)).tw.
- 29 ((high* or full* or maximum* or larg* or escalat* or supplement* or low* or minimum* or small*) adj4 (dose* or dosage* or schedule*)).tw.
- 30 (HDR or LDR).tw.
- 31 or/23-30
- 32 22 and 31
- 33 9 or 13 or 22 or 32
- 34 5 and 33
- 35 Animals/ not Humans/
- 36 34 not 35
- 37 Comment/ or Letter/ or Editorial/ or Historical article/ or (conference abstract or conference paper or "conference review" or letter or editorial or case report).pt.
- 38 36 not 37
- 39 limit 38 to english language

Medline strategy, searched 14th March 2018 Database: Ovid MEDLINE(R) 1946 to Present with Daily Update

Note: SIGN systematic review and RCT study filters appended to strategy. Date limit applied from 2007 to 2018.

2.3 Search strategy review question 4

RQ4: What is the optimal dose and fractionation schedule for people with localised prostate cancer (T1b–T3a N0 M0) who are treated with radical radiotherapy?

Table 3: search strategy RQ4

Medline strategy, searched 18th December 2017 Database: Ovid MEDLINE(R) 1946 to Present with Daily Update

- 1 exp Prostatic Neoplasms/
- 2 Prostatic Intraepithelial Neoplasia/
- 3 (prostat* adj4 (neoplas* or cancer* or carcinoma* or adenocarcinom* or tumour* or tumor* or malignan* or metasta* or angiosarcoma* or sarcoma* or teratoma* or lymphoma* or blastoma* or microcytic* or carcino* or leiomyosarcoma* or lump*)).tw.
- 4 PIN.tw.
- 5 or/1-4
- 6 exp radiotherapy/
- 7 radiotherap*.tw.
- 8 (radiat* adj4 (therap* or treatment*)).tw.
- 9 ((external* or conformal*) adj4 (irradiat* or therap* or treat*)).tw.
- 10 ((interstitial* or intracavit* or implant* or surface* or internal*) adj4 (irradiat* or radiation*)).tw.
- 11 curietherap*.tw.
- 12 (radioisotope* adj4 (irradiat* or therap* or treat*)).tw.
- 13 ((seed* or permanent*) adj2 implant*).tw.
- 14 or/6-13
- 15 Brachytherapy/
- 16 brachytherap*.tw.
- 17 exp radiotherapy dosage/
- 18 exp dose-response relationship, radiation/
- 19 (Hyperfraction* or Hyper-fraction* or Hyper fraction* or Hypofraction* or Hypofraction* or Hypofraction*).tw.
- 20 ((optim* or fraction* or respons* or relation* or dependence* or effect* or scheme* or curve*) adj4 (dose* or dosage or schedule*)).tw.
- 21 ((high* or full* or maximum* or larg* or escalat* or supplement* or low* or minimum* or small*) adj4 (dose* or dosage* or schedule*)).tw.
- 22 (HDR or LDR).tw.
- 23 or/15-22
- 24 5 and 14 and 23
- 25 Animals/ not Humans/
- 26 24 not 25
- 27 Comment/ or Letter/ or Editorial/ or Historical article/ or (conference abstract or conference paper or "conference review" or letter or editorial or case report).pt.
- 28 26 not 27
- 29 limit 28 to english language

Note: NICE systematic review and RCT study filters appended to strategy. Date limit applied from 2008 to 2017.

2.4 Search strategy review question 5 and 6

RQ5: What is the most clinically and cost-effective scheduling of docetaxel added to standard treatment for the treatment of hormone-sensitive locally-advanced prostate cancer?

RQ6: What is the most clinically and cost-effective scheduling of docetaxel added to standard treatment for the treatment of hormone-sensitive metastatic prostate cancer?

Table 4: search strategy RQ5 and 6

Medline strategy, searched 24th October 2017 Database: Ovid MEDLINE(R) 1946 to October Week 2 2017

- 1 exp Prostatic Neoplasms/
- 2 Prostatic Intraepithelial Neoplasia/
- 3 (prostat* adj4 (neoplas* or cancer* or carcinoma* or adenocarcinom* or tumour* or tumor* or malignan* or metasta* or angiosarcoma* or sarcoma* or teratoma* or lymphoma* or blastoma* or microcytic* or carcino* or leiomyosarcoma* or lump*)).tw.
- 4 PIN.tw.
- 5 or/1-4
- 6 Taxoids/
- 7 (Docetaxel* or Daxotel* or Docefrez* or Taxceus* or Taxoter* or Taxespira* or Texot*).tw.
- 8 or/6-7
- 9 5 and 8
- 10 Animals/ not Humans/
- 11 9 not 10
- 12 Comment/ or Letter/ or Editorial/ or Historical article/ or (conference abstract or conference paper or "conference review" or letter or editorial or case report).pt.
- 13 11 not 12
- 14 limit 13 to english language

Note: NICE systematic review and RCT study filters appended to strategy.

2.5 Search strategy review questions 7

RQ7: What is the clinical and cost-effectiveness of the use of bisphosphonates in people with hormone- relapsed metastatic prostate cancer?

Table 5: search strategy RQ7

Medline strategy, searched 10th October 2017

Database: Ovid MEDLINE(R) 1946 to September Week 4 2017

- 1 exp Prostatic Neoplasms/
- 2 Prostatic Intraepithelial Neoplasia/
- 3 (prostat* adj4 (neoplas* or cancer* or carcinoma* or adenocarcinom* or tumour* or tumor* or malignan* or metasta* or angiosarcoma* or sarcoma* or teratoma* or lymphoma* or blastoma* or microcytic* or carcino* or leiomyosarcoma* or lump*)).tw.
- 4 PIN.tw.
- 5 or/1-4
- 6 Diphosphonates/
- 7 (Bisphosphon* or diphosphon*).tw.
- 8 (Zoledron* or zerlinda or zometa or aclasta).tw.
- 9 (Ibandron* or bonviva or bondron* or iasibon or quodixor).tw.
- 10 Pamidron*.tw.
- 11 Clodronic Acid/
- 12 (Clodron* or loron or bonefos or clasteon or aredia).tw.
- 13 Alendronate/
- 14 (Alendron* or binosto or fosamax or fosavance).tw.
- 15 Risedronate Sodium/
- 16 (Risedron* or actonel).tw.
- 17 or/6-16
- 18 5 and 17
- 19 Animals/ not Humans/
- 20 18 not 19
- 21 Comment/ or Letter/ or Editorial/ or Historical article/ or (conference abstract or conference paper or "conference review" or letter or editorial or case report).pt.

Medline strategy, searched 10th October 2017 Database: Ovid MEDLINE(R) 1946 to September Week 4 2017

22 20 not 21

23 limit 22 to english language

Note: NICE systematic review and RCT study filters appended to strategy.

2.6 Search strategy review question 8

RQ8: What is the most clinically and cost-effective follow-up protocol for people who have a raised PSA, negative MRI and/ or negative biopsy?

Table 6: search strategy RQ8

Medline strategy, searched 24th April 2018

Database: Ovid MEDLINE(R) 1946 to present with daily update

- 1 Prostate-Specific Antigen/
- 2 (Prostate* specific antigen adj2 (rais* or high* or elevate* or rise* or increase*)).tw.
- 3 (PSA adj2 (rais* or high* or elevate* or rise* or increase*)).tw.
- 4 (Kallikrein or semenogelase or seminin or gamma seminoprotein or gamma-seminoprotein or HK3).tw.
- 5 Prostate Health Index.tw.
- 6 PHI.tw.
- 7 or/1-6
- 8 *Magnetic Resonance Imaging/
- 9 (magnet* adj2 (resonance* or imag* or scan* or spectroscop*)).tw.
- 10 (MR adj2 (resonance* or imag* or scan* or spectroscop*)).tw.
- 11 (Dynamic contrast* enhanc* adj2 (MR* or magnet*)).tw.
- 12 (contrast* adj2 (imag* or scan*)).tw.
- 13 ((MRI or MRSI or MP-MR* or MPMR*) adj4 prostat*).tw.
- 14 turbo spin echo*.tw.
- 15 ((diffusion* or weight*) adj2 imag*).tw.
- 16 ((DWI or DCE-MRI or T2W or TSE or T2-weighted MRI*) adj4 prostat*).tw.
- 17 (Multi-parametric or multiparametric* or biparametric* or bi-parametric*).tw.
- 18 or/8-17
- 19 *biopsy/ or *image-guided biopsy/
- 20 ((transrectal* or trans-rectal* or transperineal* or trans-perineal*) adj2 (ultrasound* or biops*)).tw.
- 21 ((saturat* or extend* or templat* or negative*) adj2 (ultrasound* or biops*)).tw.
- 22 ((TRUS or TRUSB) adj4 prostat*).tw.
- 23 or/19-22
- 24 7 and 18
- 25 7 and 23
- 26 or/24-25
- 27 Animals/ not Humans/
- 28 26 not 27
- 29 Comment/ or Letter/ or Editorial/ or Historical article/ or (conference abstract or conference paper or "conference review" or letter or editorial or case report).pt.
- 30 28 not 29
- 31 limit 30 to english language

Note: McMaster diagnosis filter plus prostate diagnosis subhedings (OVID) appended to the strategy.

2.7 Search strategy review questions 9

RQ9: What is the most clinically and cost-effective follow-up protocol for people with prostate cancer who have had radical treatment, with specific regard to: duration of follow-up, frequency of follow-up appointments, the type of examination or blood tests, the respective roles of primary and secondary care in follow-up?

Table 7: search strategy RQ9

Medline strategy, searched 30th May 2018

Database: Ovid MEDLINE(R) 1946 to Present with Daily Update

- 1 exp Prostatic Neoplasms/
- 2 Prostatic Intraepithelial Neoplasia/
- 3 (prostat* adj4 (neoplas* or cancer* or carcinoma* or adenocarcinom* or tumour* or tumor* or malignan* or metasta* or angiosarcoma* or sarcoma* or teratoma* or lymphoma* or blastoma* or microcytic* or carcino* or leiomyosarcoma* or lump*)).tw.
- 4 PIN tw
- 5 or/1-4
- 6 exp Prostatic Neoplasms/su
- 7 exp Prostatectomy/
- 8 (radical adj4 prostatectom*).tw.
- 9 (radical adj4 (therap* or treatment*)).tw.
- 10 or/6-9
- 11 exp radiotherapy/
- 12 radiotherap*.tw.
- 13 (radiat* adj4 (therap* or treatment*)).tw.
- 14 ((external* or conformal*) adj4 (irradiat* or therap* or treat*)).tw.
- 15 ((interstitial* or intracavit* or implant* or surface* or internal*) adj4 (irradiat* or radiation*)).tw.
- 16 curietherap*.tw.
- 17 (radioisotope* adj4 (irradiat* or therap* or treat*)).tw.
- 18 ((seed* or permanent*) adj2 implant*).tw.
- 19 Brachytherapy/
- 20 brachytherap*.tw.
- 21 (Hyperfraction* or Hyper-fraction* or Hyper fraction* or Hypofraction* or Hypofraction* or Hypofraction*).tw.
- 22 ((high* or full* or maximum* or larg* or escalat* or supplement* or low* or minimum* or small*) adj4 (dose* or dosage* or schedule*)).tw.
- 23 (HDR or LDR).tw.
- 24 or/11-23
- 25 10 or 24
- 26 Follow-Up Studies/ or Aftercare/
- 27 ((Aftercare or after car* or after-car* or after treat or after-treat*) adj6 prostat*).tw.
- 28 ((Follow-up* or follow up*) adj6 prostat*).tw.
- 29 ("follow-up protocol*" or "follow-up strateg*" or "follow-up appointment*" or "follow-up clinic*" or "follow-up car*" or "follow-up review*" or "follow-up regime*" or "follow-up checklist*" or "follow-up procedure*" or "follow-up therap*" or "follow-up program*" or "follow-up plan*" or "follow-up polic*" or "follow-up approach*" or "follow-up schedule*" or "follow-up scheme*" or "follow-up practice*" or "follow-up system*").tw.
- 30 ("follow up protocol*" or "follow up strateg*" or "follow up appointment*" or "follow up clinic*" or "follow up car*" or "follow up review*" or "follow up regime*" or "follow up checklist*" or "follow up procedure*" or "follow up treat*" or "follow up therap*" or "follow up program*" or "follow up plan*" or "follow up polic*" or "follow up approach*" or "follow up schedule*" or "follow up scheme*" or "follow up practice*" or "follow up system*").tw.
- 31 ("repeat* protocol*" or "repeat* strateg*" or "repeat* appointment*" or "repeat* clinic*" or "repeat* car*" or "repeat* review*" or "repeat* regime*" or "repeat* checklist*" or "repeat* procedure*" or "repeat* treat*" or "repeat* program*" or "repeat* plan*" or "repeat* polic*" or "repeat* schedule*" or "repeat* scheme*" or "repeat* system*").tw.
- 32 ("review* protocol*" or "review* strateg*" or "review* appointment*" or "review* clinic*" or "review* car*" or "review* checklist*" or "review* procedure*" or "review* treat*" or "review* program*" or "review* plan*" or "review* polic*" or "review* approach*" or "review* schedule*" or "review* scheme*" or "review* system*").tw.
- 33 *Neoplasm Recurrence, Local/
- 34 Recurrence/ and exp Prostatic Neoplasms/
- 35 Disease-Free Survival/ and exp Prostatic Neoplasms/
- 36 Survivorship/ and exp Prostatic Neoplasms/
- 37 ((Overall or free) adj1 surviv*).tw.
- 38 Survivorship*.tw.
- 39 ((Disease* or pathological*) adj1 (progress* or surviv* or recurrence*)).tw.
- 40 (Clinical adj1 (progess* or recurrence*)).tw.

Medline strategy, searched 30th May 2018 Database: Ovid MEDLINE(R) 1946 to Present with Daily Update

- 41 metasta* recurrence*.tw.
- 42 "Biochemical no Evidence of Disease".tw.
- 43 "Bio-chemical no Evidence of Disease".tw.
- 44 ((Biochemical* or bio-chemical*) adj1 recurrence*).tw.
- 45 Patient Discharge/ and exp Prostatic Neoplasms/
- 46 (Discharge* and prostat*).tw.
- 47 Self Care/ and exp Prostatic Neoplasms/
- 48 Self-Management/ and exp Prostatic Neoplasms/
- 49 ((self* adj1 (care* or manage*)) and prostat*).tw.
- 50 or/26-49
- 51 5 and 25 and 50
- 52 Animals/ not Humans/
- 53 51 not 52
- Comment/ or Letter/ or Editorial/ or Historical article/ or (conference abstract or conference paper or "conference review" or letter or editorial or case report).pt.
- 55 53 not 54
- 56 limit 55 to english language

Note: SIGN systematic review, RCT and observational study filters appended to strategy. Date limit applied from 2005 to 2018.

3 Study Design Filters

Table 13: study design filters

The MEDLINE systematic review, randionmised controlled trials (RCT), diagnostic, and observational studies filters are presented below.

NICE Systematic review

- 1. Meta-Analysis.pt.
- 2. Network Meta-Analysis/
- 3. Meta-Analysis as Topic/
- 4. Review.pt.
- 5. exp Review Literature as Topic/
- 6. (metaanaly\$ or metanaly\$ or (meta adj3 analy\$)).tw.
- 7. (review\$ or overview\$).ti.
- 8. (systematic\$ adj5 (review\$ or overview\$)).tw.
- 9. ((quantitative\$ or qualitative\$) adj5 (review\$ or overview\$)).tw.
- 10. ((studies or trial\$) adj2 (review\$ or overview\$)).tw.
- 11. (integrat\$ adj3 (research or review\$ or literature)).tw.
- 12. (pool\$ adj2 (analy\$ or data)).tw.
- 13. (handsearch\$ or (hand adj3 search\$)).tw.
- 14. (manual\$ adj3 search\$).tw.
- 15. or/1-14
- 16. Animals/ not Humans/
- 17. 15 not 16

NICE RCT

- 1. Randomized Controlled Trial.pt.
- 2. Controlled Clinical Trial.pt.
- 3. Clinical Trial.pt.
- 4. exp Clinical Trials as Topic/
- 5. Placebos/
- 6. Random Allocation/
- 7. Double-Blind Method/
- 8. Single-Blind Method/
- Cross-Over Studies/
- 10. ((random* or control* or clinical*) adj3 (trial* or stud*)).tw.
- 11. (random* adj3 allocat*).tw.
- 12. placebo*.tw.
- 13. ((singl* or doubl* or trebl* or tripl*) adj (blind* or mask*)).tw.
- 14. (crossover* or (cross adj over*)).tw.
- 15. or/1-14
- 16. Animals/ not Humans/
- 17. 15 not 16

SIGN Systematic review

- 1. Meta-Analysis as Topic/
- 2. meta analy\$.tw.
- 3. metaanaly\$.tw.
- 4. Meta-Analysis/
- 5. (systematic adj (review\$1 or overview\$1)).tw.
- 6. exp Review Literature as Topic/
- 7. or/1-6

The MEDLINE systematic review, randionmised controlled trials (RCT), diagnostic, and observational studies filters are presented below.

- 8. cochrane.ab.
- 9. embase.ab.
- 10. (psychlit or psyclit).ab.
- 11. (psychinfo or psycinfo).ab.
- 12. (cinahl or cinhal).ab.
- 13. science citation index.ab.
- 14. bids.ab.
- 15. cancerlit.ab.
- 16. or/8-15
- 17. reference list\$.ab.
- 18. bibliograph\$.ab.
- 19. hand-search\$.ab.
- 20. relevant journals.ab.
- 21. manual search\$.ab.
- 22. or/17-21
- 23. selection criteria.ab.
- 24. data extraction.ab.
- 25. 23 or 24
- 26. Review/
- 27. 25 and 26
- 28. Comment/
- 29. Letter/
- 30. Editorial/
- 31. animal/
- 32. human/
- 33. 31 not (31 and 32)
- 34. or/28-30,33
- 35. 7 or 16 or 22 or 27
- 36. 35 not 34

SIGN RCT

- 1 Randomized Controlled Trials as Topic/
- 2 randomized controlled trial/
- 3 Random Allocation/
- 4 Double Blind Method/
- 5 Single Blind Method/
- 6 clinical trial/
- 7 clinical trial, phase i.pt
- 8 clinical trial, phase ii.pt
- 9 clinical trial, phase iii.pt
- 10 clinical trial, phase iv.pt
- 11 controlled clinical trial.pt
- 12 randomized controlled trial.pt
- 13 multicenter study.pt
- 14 clinical trial.pt
- 15 exp Clinical Trials as topic/
- 16 or/1-15
- 17 (clinical adj trial\$).tw
- 18 ((singl\$ or doubl\$ or treb\$ or tripl\$) adj (blind\$3 or mask\$3)).tw
- 19 PLACEBOS/

The MEDLINE systematic review, randionmised controlled trials (RCT), diagnostic, and observational studies filters are presented below.

- 20 placebo\$.tw
- 21 randomly allocated.tw
- 22 (allocated adj2 random\$).tw
- 23 or/17-22
- 24 16 or 23
- 25 case report.tw
- 26 letter/
- 27 historical article/
- 28 or/25-27
- 29 24 not 28

McMaster Diagnosis studies

1. sensitiv:.mp. OR diagnos:.mp. OR di.fs.

Prostate Diagnosis subheadings (OVID)

1. Prostate/dg or Prostatic Neoplasms/dg

SIGN Observational studies

- 1 Epidemiologic studies/
- 2 Exp case control studies/
- 3 Exp cohort studies/
- 4 Case control.tw.
- 5 (cohort adj (study or studies)).tw.
- 6 Cohort analy\$.tw.
- 7 (Follow up adj (study or studies)).tw.
- 8 (observational adj (study or studies)).tw.
- 9 Longitudinal.tw.
- 10 Retrospective.tw.
- 11 Cross sectional.tw.
- 12 Cross-sectional studies/
- 13 or/1-12

Note: the following terms were removed from this filter for RQ9 searches:

- exp case control studies/
- Case control.tw.

Health economics search strategy

4.1 Economic evaluations and quality of life data

Sources searched to identify economic evaluations

- NHS Economic Evaluation Database NHS EED (Wiley) last updated Dec 2014
- Health Technology Assessment Database HTA (Wiley) last updated Oct 2016
- Embase (Ovid)
- MEDLINE (Ovid)
- MEDLINE In-Process (Ovid)
- Econlit (Ovid)

Search filters to retrieve economic evaluations and quality of life papers were appended to the population and intervention terms in the Ovid databases to identify relevant evidence between October 2017 and May 2018. Searches were then re-run in July 2018.

Table 14: Economic evaluation and quality of life filters

Medline Strategy NICE Economic evaluations 1 Economics/ 2 exp "Costs and Cost Analysis"/ 3 Economics, Dental/ 4 exp Economics, Hospital/ 5 exp Economics, Medical/ 6 Economics, Nursing/ 7 Economics, Pharmaceutical/ 8 Budgets/ 9 exp Models, Economic/ 10 Markov Chains/ 11 Monte Carlo Method/ 12 Decision Trees/ 13 econom*.tw. 14 cba.tw. 15 cea.tw. 16 cua.tw. 17 markov*.tw. 18 (monte adj carlo).tw. 19 (decision adj3 (tree* or analys*)).tw. 20 (cost or costs or costing* or costly or costed).tw. 21 (price* or pricing*).tw. 22 budget*.tw. 23 expenditure*.tw. (value adj3 (money or monetary)).tw. 25 (pharmacoeconomic* or (pharmaco adj economic*)).tw. 26 or/1-25 NICE Quality of life (QoL) 1 "Quality of Life"/

Medline Strategy

- 2 quality of life.tw.
- 3 "Value of Life"/
- 4 Quality-Adjusted Life Years/
- 5 quality adjusted life.tw.
- 6 (qaly* or qald* or qale* or qtime*).tw.
- 7 disability adjusted life.tw.
- 8 daly*.tw.
- 9 Health Status Indicators/
- 10 (sf36 or sf 36 or short form 36 or shortform 36 or sf thirtysix or sf thirty six or shortform thirtysix or short form thirt
- 11 (sf6 or sf 6 or short form 6 or shortform 6 or sf six or sfsix or shortform six or short form six).tw.
- 12 (sf12 or sf 12 or short form 12 or shortform 12 or sf twelve or sftwelve or shortform twelve or short form twelve).tw.
- 13 (sf16 or sf 16 or short form 16 or shortform 16 or sf sixteen or sfsixteen or shortform sixteen or short form sixteen).tw.
- 14 (sf20 or sf 20 or short form 20 or shortform 20 or sf twenty or sftwenty or shortform twenty or short form twenty).tw.
- 15 (eurogol or euro gol or eq5d or eq 5d).tw.
- 16 (qol or hql or hqol or hrqol).tw.
- 17 (hye or hyes).tw.
- 18 health* year* equivalent*.tw.
- 19 utilit*.tw.
- 20 (hui or hui1 or hui2 or hui3).tw.
- 21 disutili*.tw.
- 22 rosser.tw.
- 23 quality of wellbeing.tw.
- 24 quality of well-being.tw.
- 25 qwb.tw.
- 26 willingness to pay.tw.
- 27 standard gamble*.tw.
- 28 time trade off.tw.
- 29 time tradeoff.tw.
- 30 tto.tw.
- 31 or/1-30

SIGN Economic studies

- 1 Economics/
- 2 "costs and cost analysis"/
- 3 Cost allocation/
- 4 Cost-benefit analysis/
- 5 Cost control/
- 6 Cost savings/
- 7 Cost of illness/
- 8 Cost sharing/
- 9 "deductibles and coinsurance"/
- 10 Medical savings accounts/
- 11 Health care costs/
- 12 Direct service costs/
- 13 Drug costs/
- 14 Employer health costs/
- 15 Hospital costs/

Medline Strategy

- 16 Health expenditures/
- 17 Capital expenditures/
- 18 Value of life/
- 19 Exp economics, hospital/
- 20 Exp economics, medical/
- 21 Economics, nursing/
- 22 Economics, pharmaceutical/
- 23 Exp "fees and charges"/
- 24 Exp budgets/
- 25 (low adj cost).mp.
- 26 (high adj cost).mp.
- 27 (health?care adj cost\$).mp.
- 28 (fiscal or funding or financial or finance).tw.
- 29 (cost adj estimate\$).mp.
- 30 (cost adj variable).mp.
- 31 (unit adj cost\$).mp.
- 32 (economic\$ or pharmacoeconomic\$ or price\$ or pricing).tw.
- 33 or/1-32

Note: The SIGN economics studies filter was appended to the strategies for RQ2 and RQ9 along with the NICE QoL filter.

The NICE economic evaultions and NICE QoL filters were appened to all other strategies.