

## Literature search strategy

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<b>Search coverage</b>	<b>Resources searched*</b>	<b>Dates searched*</b>
Systematic Reviews/Meta analysis	Cochrane Library MEDLINE EMBASE CINAHL	Jan 2003 – Sept 2011
Primary literature	MEDLINE EMBASE CINAHL	Jan 2003 - April 2012

### MEDLINE search strategies

The following are listings of the main Medline strategies used for this guideline. All conventions and symbols are from the Ovid implementation of Medline. Strategies used in other databases were substantially the same, though different terminology may have been used to take account of different thesauri used in non-Medline databases.

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**Systematic review/ generic stem search**

1. exp Breast Neoplasms/
2. Carcinoma, Lobular/
3. exp Carcinoma, Intraductal, Noninfiltrating/
4. Carcinoma, Medullary/
5. ((breast\$ or mammar\$) adj3 (neoplas\$ or cancer\$ or tumo?r\$ or carcinoma\$ or adenocarcinoma\$ or sarcoma\$ or leiomyosarcoma\$ or malignanc\$ or dcis or duct\$ or infiltrating or intraduct\$ or lobul\$ or medullary or tubular)).tw.
6. ((lobul\$ or ductal\$ or intraduct\$ or medullary or tubular) adj2 (carcin\$ or cancer\$ or tumo?r\$ or neoplasm\$ or adenocarcin\$)).tw.
7. DCIS.tw.
8. exp Breast/ or exp Breast Diseases/ or (breast\$ or mammar\$).tw.
9. 6 or 7
10. 8 and 9
11. or/1-5,10

**SIGN Systematic review filter applied**

**KQ: 01**

In patients with breast cancer what is the evidence that adjuvant chemotherapy is effective, compared to no treatment or non-chemotherapy treatment, and what is the optimal chemotherapy regimen?

**Chemotherapy stem:**

1. (Anastrozole or Arimidex).tw.
2. (Exemestane or Aromasin).tw.
3. (Letrozole or Femara).tw.
4. exp Aromatase Inhibitors/
5. aromatase inhibitor\$.tw.
6. exp Antineoplastic Agents, Hormonal/
7. (hormon\$ adj2 (therap\$ or agent\$)).tw.
8. exp Tamoxifen/
9. Tamoxifen.tw.
10. exp Selective Estrogen Receptor Modulators/
11. SERM\$.tw.
12. exp \*Antibodies, Monoclonal/
13. trastuzumab.tw.
14. herceptin.tw.
15. exp Anthracyclines/
16. Anthracycline\$.tw.
17. Epirubicin.tw.
18. Doxorubicin.tw.
19. exp Taxoids/
20. (Docetaxel or Taxotere).tw.
21. (Paclitaxel or Taxol).tw.
22. taxane\$.tw.
23. exp Antineoplastic Protocols/
24. chemotherapy.tw.
25. systemic therap\$.tw.
26. or/1-25

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**Chemotherapy stem combined with combined with PR+ve population**

- 27. Receptors, Progesterone/
- 28. progesterone receptor\$.tw.
- 29. ("PR" or "PgR").tw.
- 30. or/27-29
- 31. Lymphatic Metastasis/
- 32. ((node\$ or nodal) adj2 (positive or involve\$ or status)).tw.
- 33. 31 or 32
- 34. 30 or 33
- 35. breast\$.tw

36: 34 and 35 and 26 +SIGN RCT filter applied

**Chemotherapy stem combined with triple negative population**

- 37. triple neg\$.tw.
- 38. TNBC.tw.
- 39. (ER adj3 (PR or PgR) adj3 HER\$ adj3 (neg\$ or ve)).tw.
- 40. 37 or 38 or 39
- 41. breast\$.tw
- 42: 41 and 42 and 26

**SIGN RCT filter applied**

**KQ02:**

In patients with breast cancer, what is the evidence that adjuvant hormone therapy is effective and what is the optimum duration of therapy?

**All evidence derived from systematic review/meta analysis.**

**KQ03:**

In patients with breast cancer, what is the evidence that neoadjuvant chemotherapy is effective and what is the optimal regimen?

**KQ04:**

In patients with breast cancer, what is the evidence that neoadjuvant hormone aromatase inhibitors therapy is effective and what is the optimal regimen?

- 1. (Anastrozole or Arimidex).tw.
- 2. (Exemestane or Aromasin).tw.
- 3. (Letrozole or Femara).tw
- 4. exp Aromatase Inhibitors/
- 5. aromatase inhibitor\$.tw.
- 6. exp Antineoplastic Agents, Hormonal/
- 7. (hormon\$ adj2 (therap\$ or agent\$)).tw.
- 8. exp Tamoxifen/
- 9. Tamoxifen.tw.
- 10. exp Selective Estrogen Receptor Modulators/
- 11. SERM\$.tw.
- 12. exp \*Antibodies, Monoclonal/
- 13. trastuzumab.tw.
- 14. herceptin.tw.
- 15. exp Anthracyclines/
- 16. Anthracycline\$.tw.
- 17. Epirubicin.tw.
- 18. Doxorubicin.tw.

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19. exp Taxoids/
20. (Docetaxel or Taxotere).tw.
21. (Paclitaxel or Taxol).tw.
22. taxane\$.tw.
23. exp Antineoplastic Protocols/
24. chemotherapy.tw.
25. systemic therap\$.tw.
26. Breast Neoplasms/dt, th [Drug Therapy, Therapy]
27. or/1-26
28. Neoadjuvant Therapy/
29. neoadjuvant\$.tw.
30. neo-adjuvant.tw.
31. ((preoperative or pre-operative) adj2 (chemotherapy or therap\$ or treatment\$ or agent\$)).tw.
32. ((presurg\$ or pre-surg\$) adj2 (chemotherapy or therap\$ or treatment\$ or agent\$)).tw.
33. ((surgery or surgical\$) adj3 (before or prior)).tw.
34. 28 or 29 or 30 or 31 or 32 or 33
35. 27 and 34

**Combined with breast cancer search stem**

**SIGN RCT filter applied**

**KQ05:** In men and women with breast cancer who are being treated with aromatase inhibitors or chemotherapy, what is the evidence that treatment with bisphosphonates in relation to bone health and disease modification?

**All evidence derived from systematic review/meta analysis.**

**KQ06:**

In breast cancer patients who have undergone a mastectomy, what is the evidence that radiotherapy to the chest wall improves outcome?

1. mastectomy/ or exp mastectomy, radical/
2. mastectom\$.tw.
3. mammectom\$.tw.
4. 1 or 2 or 3
5. radiotherapy/
6. exp chemoradiotherapy/
7. radiotherapy, adjuvant/
8. exp radiotherapy, computer-assisted/
9. exp radiotherapy dosage/
10. exp radiotherapy, high-energy/
11. radiotherap\$.ti.
12. irradiat\$.ti.
13. radiat\$.ti.
14. or/5-12
15. 4 and 14
16. (mastectom\$ adj3 (radiotherap\$ or irradiat\$ or radiat\$)).tw.
17. 15 or 16

**SIGN RCT filter applied**

**KQ07:**

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In patients with DCIS who have undergone breast conserving surgery, what is the evidence that adjuvant radiotherapy improves outcome?

**Majority of evidence derived from systematic review; one additional primary literature search.**

**Omission of radiotherapy**

1. DCIS.tw.
2. (breast cancer adj3 situ).tw.
3. (ductal carcinoma adj3 situ).tw.
4. ((carcinoma\$ or cancer\$ or tumour\$ or tumor\$) adj3 situ).tw.
5. \*Carcinoma, Intraductal, Noninfiltrating/
6. 4 or 5
7. breast\$.tw.
8. 6 and 7
9. or/1-3,8
10. exp Radiotherapy/
11. (radiotherap\$ or radiat\$ or irradiat\$).tw.
12. 10 or 11
13. 9 and 12
14. \*Breast Neoplasms/rt [Radiotherapy]
15. 9 and 14
16. 13 or 15
17. (avoid\$ or omit\$ or "not necessary" or "not required" or no requir\$ or without or no radio\$ or low risk or surgery alone or (surger\$ adj2 only) or excision alone or (excision adj2 only)).tw.
18. 16 and 17

**KQ08:**

In breast cancer patients who have undergone breast conserving treatment, what is the evidence that adjuvant radiotherapy improves outcome and what is the optimal dose regimen?

1. ((intra-operat\$ or intraoperat\$ or intra operat\$) adj3 (radiotherap\$ or irradiat\$ or radiat\$)).tw.
2. ior.tw.
3. ioert.tw.
4. iort.tw.
5. Intraoperative Period/
6. precision radiotherapy.tw.
7. eliot.tw.
8. targit.tw.
9. radiosurg\$.tw.
10. or/1-9

**Combined with breast cancer search stem  
SIGN RCT filter applied**

**Omission of radiotherapy – unable to search systematically for all BC population**

1. ((omission or omit\$) adj4 (radiotherapy or radiat\$)).tw.
2. (avoid\$ adj4 (radiotherapy or radiat\$)).tw.

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3. (unnecessary adj4 (radiotherapy or radiat\$)).tw.
4. ('not necessar\$' adj4 (radiotherapy or radiat\$)).tw.
5. or/1-4

**Combined with breast cancer search stem  
SIGN RCT filter applied**

**KQ09:**

In patients with breast cancer who have undergone breast conserving surgery, what is the evidence that a radiotherapy boost improves outcome and is there evidence of an optimal dosage?

1. Radiotherapy/
2. exp Radiotherapy Dosage/
3. Radiotherapy, Adjuvant/
4. (radiotherap\$ or irradiat\$ or radiat\$).ti.
5. or/1-4
6. boost\$.tw.
7. (tumor\$ bed or tumour\$ bed).tw.
8. 6 or 7
9. 5 and 8
10. (boost\$ adj3 (radiother\$ or irradiat\$ or bed or tumor\$ or tumour\$ or dos\$)).tw.
11. 9 or 10

**Combined with breast cancer search stem**

**KQ10:**

In patients who have undergone surgery for breast cancer, what evidence is there that time from final surgery to starting a first adjuvant therapy influences outcome and what is the optimum sequencing of treatment?

1. Time Factors/
2. Radiotherapy, Adjuvant/
3. Chemotherapy, Adjuvant/
4. exp Chemoradiotherapy/
5. Combined Modality Therapy/
6. or/2-5
7. 1 and 6
8. ((time to or time from or timing or interval\$ or delay\$ or wait\$ or schedule\$ or sequenc\$ or concurrent\$ or start\$ or initiat\$) adj3 (radiotherapy or chemotherapy or irradiation or adjuvant or irradiat\$ or systemic or radiation or postoperativ\$ or post operativ\$)).ti.
9. 7 or 8

**KQ11:**

In patients with invasive breast cancer with node + disease who have undergone axillary node clearance who should receive treatment to the supraclavicular fossa?

1. (supraclavicular adj3 (radio\$ or radiation\$ or treat\$ or therapy or beam\$ or field\$)).tw.
2. (supra clavicular adj3 (radio\$ or radiation\$ or treat\$ or therapy or beam\$ or field\$)).tw.

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3. four field\$.tw.
4. breast\$.tw.
5. 3 and 4
6. 1 or 2 or 5
7. (supraclavicular or supra clavicular).tw.
8. Clavicle/ra [Radiography]
9. exp Breast Neoplasms/
10. Carcinoma, Lobular/
11. exp Carcinoma, Intraductal, Noninfiltrating/
12. Carcinoma, Medullary/
13. ((breast\$ or mammar\$) adj3 (neoplas\$ or cancer\$ or tumo?r\$ or carcinoma\$ or adenocarcinoma\$ or sarcoma\$ or leiomyosarcoma\$ or malignanc\$ or dcis or duct\$ or infiltrating or intraduct\$ or lobul\$ or medullary or tubular)).tw.
14. ((lobul\$ or ductal\$ or intraduct\$ or medullary or tubular) adj2 (carcin\$ or cancer\$ or tumo?r\$ or neoplasm\$ or adenocarcin\$)).tw.
15. DCIS.tw.
16. exp Breast/ or exp Breast Diseases/ or (breast\$ or mammar\$).tw.
17. 14 or 15
18. 16 and 17
19. or/9-13,18
20. 7 or 8
21. 19 and 20
22. 6 or 21

**KQ12:**

In patients with operable in situ or invasive breast cancer, what is the evidence that breast conservation surgery is more or less effective than mastectomy?

**Majority of evidence derived from systematic review; one additional primary literature search.**

**Surgical margins in DCIS**

1. Carcinoma, Intraductal, Noninfiltrating/
2. ductal carcinoma in situ.tw.
3. DCIS.tw.
4. or/1-3
5. Mastectomy, Segmental/
6. mastectom\$.tw.
7. lumpectom\$.tw.
8. BCS.tw.
9. breast-conserv\$ surgery.tw.
10. breast conserv\$ surgery.tw.
11. wide local excision.tw.
12. WLE.tw.
13. exp Mastectomy/
14. mammectom\$.tw.
15. or/5-14
16. ((surgical or tumo?r or resection or free or normal) adj3 margin\$).tw.
17. 15 or 16
18. 4 and 17

**SIGN RCT filter applied**

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**KQ13:**

In patients with operable in situ or invasive breast cancer undergoing breast conservation surgery what is the evidence that therapeutic mammoplasty is more or less effective than standard conservation surgery?

**All evidence derived from systematic review/meta analysis.**

**KQ14:**

In patients undergoing mastectomy for operable breast cancer what are the risks of contralateral cancer?

**No primary literature search carried out**

**KQ15:**

In patients who are suitable for breast reconstruction, is there any evidence that immediate as compared to delayed reconstruction impacts on outcome?

1. Mammoplasty/
2. immediat\$.tw.
3. delay\$.tw.
4. 2 and 3
5. 1 and 4
6. reconstruct\$.tw.
7. breast\$.tw.
8. 6 and 7
9. 4 and 8
10. 5 or 9
11. donor site morbidity.tw.
12. (reconstruct\$ and breast\$).tw.
13. (1 or 12) and 11
14. 13 or 10

**KQ16:**

What is the appropriate management of the axilla in patients with operable (invasive) breast cancer?

**Majority of evidence derived from systematic review; one additional primary literature search.**

**Management of the axilla in DCIS**

1. Carcinoma, Intraductal, Noninfiltrating/
2. ductal carcinoma in situ.tw.
3. DCIS.tw.
4. or/1-3
5. Lymph Nodes/
6. slnb.tw.
7. ((sentinel or axill\$ or lymph\$) adj3 nod\$).tw.
8. alnd.tw.
9. ((samp\$ or clear\$ or biopsy) adj3 nod\$).tw.
10. Sentinel Lymph Node Biopsy/
11. Lymphatic Metastasis/
12. (metastat\$ adj3 lymph\$).tw.

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13. (axill\$ adj3 (sampl\$ or clear\$ or manage\$)).tw.

14. or/5-13

15.4 and 14

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