

National Clinical Guideline

Diagnosis, staging, and treatment of patients with breast cancer

Literature Search Strategies

Radiology

Question 1

Clinical Question		
In patients with breast cancer, should all patients have pre-treatment ultrasound of the axilla to determine node status and treatment options?		
PICO		
Population/Problem	Patients with diagnosed breast cancer	
Intervention/Indicator	Ultrasound of the axilla	
Comparator/Control	No ultrasound	
Outcome	To determine node status (node positive or node negative) To determine treatment options Prevention of unnecessary axillary clearance Prevention of morbidity (due to unnecessary axillary clearance) Recurrence Survival / disease free survival	
Is the question specific to any of the categories below?		
GENDER	AGE GROUP	DATE OF PUBLICATION
Male <input type="checkbox"/>	Infant (0 – 23 months) <input type="checkbox"/>	Current year only <input type="checkbox"/>
Female <input type="checkbox"/>	Child (2 – 12 years) <input type="checkbox"/>	0 – 5 years <input type="checkbox"/>
	Adolescent (13 – 18 years) <input type="checkbox"/>	> 5 years <input type="checkbox"/>
	Adult (19 – 65 years) <input type="checkbox"/>	
	Aged (> 65 years) <input type="checkbox"/>	
Question Type		
Therapy/Intervention <input type="checkbox"/> Aetiology/Risk Factors <input type="checkbox"/> Diagnosis <input type="checkbox"/> Prognosis/Prediction <input type="checkbox"/> Frequency/Rate <input type="checkbox"/> Phenomena <input type="checkbox"/> Other <input type="checkbox"/>		
Search Strategy		
Primary Database(s) Searched	MEDLINE/PubMed; CINAHL;	
Search Strategy	S1: (MH "Breast Neoplasms+/US") (2996) S2: (MH "Lymph Nodes") (67232) S3: (MM "Endoscopic Ultrasound-Guided Fine Needle Aspiration") AND (MH "Ultrasonography+") (317) S4: S1 AND S2 (139) S5: (MM "Endoscopic Ultrasound-Guided Fine Needle Aspiration") AND (MH "Ultrasonography+") AND (S1 AND S3) (2) S6: (MH "Ultrasonography+") LIMITERS 2009-2014 ; Human ; Clinical Queries – Diagnosis- Better Balance (9701) S7: (MH "Lymph Nodes+/US") (1252) S8: (MM "Axilla/US") (46) S9: ((MM "Axilla/US")) AND (S7 AND S8)	
Other/Secondary Resources Searched	Cochrane; UTD ; Dynamed ; Trip Database	
Search Strategy: Other Resources	Diagnostic evaluation of women with suspected breast cancer (UTD) Breast imaging: Mammography and ultrasonography (UTD) Clinical features, diagnosis, and staging of newly diagnosed breast cancer (UTD) Ultrasound AND (Breast Neoplasms OR cancer) AND diagnosis (Dynamed) addition of ultrasound to clinical exam and mammogram may help diagnose or rule out breast cancer in patients with palpable breast masses or abnormal screening mammography ultrasound and breast cancer diagnosis (TRIP Database) SIGN 134: Treatment of primary breast cancer (SIGN) Early Breast Cancer Clinical Guideline (CG80) (NICE)	
Comments		
Date	<input type="text"/>	

Question 2

Clinical Question		
In patients with breast cancer who have had ultrasound of the axilla performed, what features on ultrasound indicate that fine needle aspiration (FNA) or core biopsy are required?		
PICO		
Population/Problem	Patients with breast cancer who have had ultrasound of the axilla performed	
Intervention/Indicator	Clinical features on ultrasound which indicate that FNA or core biopsy are required (e.g. lymph node cortical thickness, shape and contour, morphologically abnormal lymph nodes).	
Comparator/Control		
Outcome	Axillary FNA Core biopsy	
Is the question specific to any of the categories below?		
GENDER	AGE GROUP	DATE OF PUBLICATION
Male <input type="checkbox"/>	Infant (0 – 23 months) <input type="checkbox"/>	Current year only <input type="checkbox"/>
Female <input type="checkbox"/>	Child (2 – 12 years) <input type="checkbox"/>	0 – 5 years <input checked="" type="checkbox"/>
	Adolescent (13 – 18 years) <input type="checkbox"/>	> 5 years <input type="checkbox"/>
	Adult (19 – 65 years) <input type="checkbox"/>	
	Aged (> 65 years) <input type="checkbox"/>	
Question Type		
Therapy/Intervention <input checked="" type="checkbox"/>		
Aetiology/Risk Factors <input type="checkbox"/>		
Diagnosis <input type="checkbox"/>		
Prognosis/Prediction <input type="checkbox"/>		
Frequency/Rate <input type="checkbox"/>		
Phenomena <input type="checkbox"/>		
Other <input type="checkbox"/>		
Search Strategy		
Primary Database(s) Searched	MEDLINE/PubMed; CINAHL;	
Search Strategy	S1: (MH "Breast Neoplasms+/US" (2997) S2: (MH "Lymph Nodes+/US) (1252) S3: (MH "Ultrasonography+" (247017) S4: (S1 AND S2) (109) S5: (S1 AND S2) – LIMITERS – 2009-2014; Clinical Queries Filter; Prognosis – Best Balance (13) S6: (MH "Biopsy, Fine-Needle") OR (MH "Biopsy, Needle") OR "core node biopsy" (52005) S7: (S1 AND S2 AND S3) (35)	
Other/Secondary Resources Searched	Cochrane; UpToDate ; Dynamed ; Trip Database	
Search Strategy: Other Resources	(Breast Neoplasms) AND (Biopsy) (Breast Neoplasms) AND (Ultrasound) "Breast Cancer" OR "Breast Neoplasms" AND "fine needle aspiration" OR "core biopsy"	
Comments		
Date	<input type="text"/>	

Question 3

Clinical Question		
In patients over 35 with a palpable breast lesion with normal imaging (mammography and ultrasound), when should clinical core biopsy be performed?		
PICO		
Population/Problem	Patients over 35 with a palpable breast lesion with normal imaging (mammography and ultrasound)	
Intervention/Indicator	Clinical core biopsy (Percutaneous core breast biopsy)	
Comparator/Control	No further intervention	
Outcome	Yield of cancer (cancer detection rate) False negative imaging rate	
Is the question specific to any of the categories below?		
GENDER	AGE GROUP	DATE OF PUBLICATION
Male <input type="checkbox"/>	Infant (0 – 23 months) <input type="checkbox"/>	Current year only <input type="checkbox"/>
Female <input type="checkbox"/>	Child (2 – 12 years) <input type="checkbox"/>	0 – 5 years <input type="checkbox"/>
	Adolescent (13 – 18 years) <input type="checkbox"/>	> 5 years <input type="checkbox"/>
	Adult (19 – 65 years) <input type="checkbox"/>	
	Aged (> 65 years) <input type="checkbox"/>	
Question Type		
Therapy/Intervention <input checked="" type="checkbox"/>		
Aetiology/Risk Factors <input type="checkbox"/>		
Diagnosis <input type="checkbox"/>		
Prognosis/Prediction <input type="checkbox"/>		
Frequency/Rate <input type="checkbox"/>		
Phenomena <input type="checkbox"/>		
Other <input type="checkbox"/>		
Search Strategy		
Primary Database(s) Searched	MEDLINE/PubMed; CINAHL;	
Search Strategy	S1: "palpable breast lesions" (334) S2: "core biops*" OR "guid* biops*" (7505) S3: (MH "Biospy, Large-Core Needle) (258) S4: S2 OR S3 (7653) S5: S1 AND S4 (36) S6: "Breast Lesion*" (5365) S7: "mammogram*" (31508) S8: "normal N4 imag*" (9842) S9: S7 AND S8 (104) S10: (MH "Ultrasonography, Mammary/UT") (22)	
Other/Secondary Resources Searched	Cochrane; UpToDate ; Dynamed ; Trip Database	
Search Strategy: Other Resources	(Mammography OR Ultrasound) AND (Biopsy, Needle) OR ("Core-node biopsy")	
Comments		
Date	<input type="text"/>	

Question 4a

Clinical Question																																											
In patients with biopsy proven breast cancer, what is the role of breast magnetic resonance imaging (MRI) in the preoperative staging of: <ul style="list-style-type: none"> - patients with biopsy proven ductal carcinoma in situ (DCIS) - patients with biopsy proven invasive breast cancer <ul style="list-style-type: none"> - lobular - ductal 																																											
PICO																																											
Population/Problem																																											
Intervention/Indicator	Breast MRI																																										
Comparator/Control	No MRI																																										
Outcome	Planning of treatment To identify / diagnose cancer To out rule / exclude cancer Sensitivity / specificity of MRI																																										
Is the question specific to any of the categories below?																																											
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Other <input type="checkbox"/>																																											
Search Strategy																																											
Primary Database(s) Searched	MEDLINE/PubMed; CINAHL																																										
Search Strategy	<table style="width: 100%; border-collapse: collapse;"> <tbody> <tr><td style="width: 5%;">#1</td><td style="width: 85%;">(MH "Biopsy+")</td><td style="width: 10%; text-align: right;">221,733</td></tr> <tr><td>#2</td><td>(MH "Breast neoplasms+")</td><td style="text-align: right;">11,636</td></tr> <tr><td>#3</td><td>(MH "Carcinoma, Intraductal, Noninfiltrating+")</td><td style="text-align: right;">4,786</td></tr> <tr><td>#4</td><td>(MH "Magnetic Resonance Imaging+")</td><td style="text-align: right;">393</td></tr> <tr><td>#5</td><td>lobular breast cancer</td><td style="text-align: right;">275</td></tr> <tr><td>#6</td><td>ductal breast cancer</td><td style="text-align: right;">304,153</td></tr> <tr><td>#7</td><td>invasive breast cancer</td><td style="text-align: right;">7,994</td></tr> <tr><td>#8</td><td>(MH "Carcinoma, Ductal, Breast")</td><td style="text-align: right;">214,338</td></tr> <tr><td>#9</td><td>(MH "Carcinoma, Lobular")</td><td style="text-align: right;">3,901</td></tr> <tr><td>#10</td><td>(MH "Preoperative Care+")</td><td style="text-align: right;">57,883</td></tr> <tr><td>#11</td><td>S2 OR S3 OR S5 OR S6 OR S7 OR S8 OR S9 OR S10</td><td style="text-align: right;">272,509</td></tr> <tr><td>#12</td><td>(S2 OR S3 OR S5 OR S6 OR S7 OR S8 OR S9 OR S10) AND (S1 AND S11)</td><td style="text-align: right;">16,703</td></tr> <tr><td>#13</td><td>(S2 OR S3 OR S5 OR S6 OR S7 OR S8 OR S9 OR S10) AND (S1 AND S11) Limiters - Date of Publication: 20090101-20141231</td><td style="text-align: right;">3,821</td></tr> <tr><td>#14</td><td>((S2 OR S3 OR S5 OR S6 OR S7 OR S8 OR S9 OR S10) AND (S1 AND S11)) AND (S4 AND S13)</td><td style="text-align: right;">386</td></tr> </tbody> </table>	#1	(MH "Biopsy+")	221,733	#2	(MH "Breast neoplasms+")	11,636	#3	(MH "Carcinoma, Intraductal, Noninfiltrating+")	4,786	#4	(MH "Magnetic Resonance Imaging+")	393	#5	lobular breast cancer	275	#6	ductal breast cancer	304,153	#7	invasive breast cancer	7,994	#8	(MH "Carcinoma, Ductal, Breast")	214,338	#9	(MH "Carcinoma, Lobular")	3,901	#10	(MH "Preoperative Care+")	57,883	#11	S2 OR S3 OR S5 OR S6 OR S7 OR S8 OR S9 OR S10	272,509	#12	(S2 OR S3 OR S5 OR S6 OR S7 OR S8 OR S9 OR S10) AND (S1 AND S11)	16,703	#13	(S2 OR S3 OR S5 OR S6 OR S7 OR S8 OR S9 OR S10) AND (S1 AND S11) Limiters - Date of Publication: 20090101-20141231	3,821	#14	((S2 OR S3 OR S5 OR S6 OR S7 OR S8 OR S9 OR S10) AND (S1 AND S11)) AND (S4 AND S13)	386
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Other/Secondary Resources Searched	Cochrane ; UTD ; Dynamed																																										
Search Strategy: Other Resources	Breast Cancer; MRI; DCIS																																										
Comments																																											
Date																																											

Question 4b

Clinical Question																													
In patients with metastatic deposits in axillary nodes where no primary cancer has been identified clinically or on conventional imaging, what is the role of breast magnetic resonance imaging(MRI)?																													
PICO																													
Population/Problem	Patients with metastatic deposits in axillary nodes with no primary cancer identified clinically or on conventional imaging																												
Intervention/Indicator	MRI																												
Comparator/Control																													
Outcome	Identification of primary cancer Plan treatment Sensitivity / specificity Sensitivity / specificity of MRI																												
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Male <input type="checkbox"/>	Infant (0 – 23 months) <input type="checkbox"/>	Current year only <input type="checkbox"/>																											
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Therapy/Intervention <input checked="" type="checkbox"/>																													
Aetiology/Risk Factors <input type="checkbox"/>																													
Diagnosis <input type="checkbox"/>																													
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Phenomena <input type="checkbox"/>																													
Other <input type="checkbox"/>																													
Search Strategy																													
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Other/Secondary Resources Searched	Cochrane ; UTD ; Dynamed																												
Search Strategy: Other Resources	Metastatic;Metastases; Axillary nodes; MRI																												
Comments	[Short paragraph describing search].																												
Date																													

Question 4c

Clinical Question																															
In patients with nipple discharge, inversion, retraction, Paget disease or breast dimpling, who have normal ultrasound and mammography, what is the role of breast Magnetic Resonance Imaging (MRI)?																															
PICO																															
Population/Problem	Patients with: - Nipple discharge / bloody discharge - Nipple changes / nipple inversion / nipple retraction - Paget disease / nipple ulceration - Breast dimpling																														
Intervention/Indicator	Breast MRI																														
Comparator/Control	No MRI																														
Outcome	Planning of treatment To identify / diagnose cancer To outrule / exclude cancer Sensitivity / specificity of MRI																														
Is the question specific to any of the categories below?																															
GENDER	AGE GROUP	DATE OF PUBLICATION																													
Male <input type="checkbox"/>	Infant (0 – 23 months) <input type="checkbox"/>	Current year only <input type="checkbox"/>																													
Female <input type="checkbox"/>	Child (2 – 12 years) <input type="checkbox"/>	0 – 5 years <input type="checkbox"/>																													
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	Aged (> 65 years) <input type="checkbox"/>																														
Question Type																															
Therapy/Intervention <input checked="" type="checkbox"/>																															
Aetiology/Risk Factors <input type="checkbox"/>																															
Diagnosis <input type="checkbox"/>																															
Prognosis/Prediction <input type="checkbox"/>																															
Frequency/Rate <input type="checkbox"/>																															
Phenomena <input type="checkbox"/>																															
Other <input type="checkbox"/>																															
Search Strategy																															
Primary Database(s) Searched	MEDLINE/PubMed; CINAHL																														
Search Strategy	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 5%;">#1</td> <td style="width: 85%;">(MH "Paget's Disease, Mammary")</td> <td style="width: 10%; text-align: right;">605</td> </tr> <tr> <td>#2</td> <td>(MH "Nipples+")</td> <td style="text-align: right;">3,773</td> </tr> <tr> <td>#3</td> <td>(MH "Magnetic Resonance Imaging+")</td> <td style="text-align: right;">304,153</td> </tr> <tr> <td>#4</td> <td>nipple discharg*</td> <td style="text-align: right;">767</td> </tr> <tr> <td>#5</td> <td>nipple inversion</td> <td style="text-align: right;">29</td> </tr> <tr> <td>#6</td> <td>nipple retract*</td> <td style="text-align: right;">78</td> </tr> <tr> <td>#7</td> <td>breast dimpl*</td> <td style="text-align: right;">1</td> </tr> <tr> <td>#8</td> <td>S1 OR S2 OR S4 OR S5 OR S6 OR S7</td> <td style="text-align: right;">4,617</td> </tr> <tr> <td>#9</td> <td>(S1 OR S2 OR S4 OR S5 OR S6 OR S7) AND (S3 AND S8)</td> <td style="text-align: right;">86</td> </tr> <tr> <td>#10</td> <td>(S1 OR S2 OR S4 OR S5 OR S6 OR S7) AND (S3 AND S8)</td> <td style="text-align: right;">36</td> </tr> </table>	#1	(MH "Paget's Disease, Mammary")	605	#2	(MH "Nipples+")	3,773	#3	(MH "Magnetic Resonance Imaging+")	304,153	#4	nipple discharg*	767	#5	nipple inversion	29	#6	nipple retract*	78	#7	breast dimpl*	1	#8	S1 OR S2 OR S4 OR S5 OR S6 OR S7	4,617	#9	(S1 OR S2 OR S4 OR S5 OR S6 OR S7) AND (S3 AND S8)	86	#10	(S1 OR S2 OR S4 OR S5 OR S6 OR S7) AND (S3 AND S8)	36
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#10	(S1 OR S2 OR S4 OR S5 OR S6 OR S7) AND (S3 AND S8)	36																													
Other/Secondary Resources Searched	Cochrane ; UTD ; Dynamed																														
Search Strategy: Other Resources	Nipple discharge; Inversion; Retraction, Paget disease; Breast dimpling; MRI																														
Comments																															
Date	<input type="checkbox"/>																														

Question 5

Clinical Question		
In women with breast cancer, who / what subgroups should have (staging) additional imaging investigations performed to detect metastases?		
PICO		
Population/Problem	Patients with newly diagnosed breast cancer Tumours: Stage I Stage II Stage III Stage IV	
Intervention/Indicator	Staging investigations (CT, Ultrasound, Chest X-ray, Bone Scan, MRI, PET-CT)	
Comparator/Control	No staging investigations	
Outcome	Detection of metastatic disease Sensitivity & specificity False positives False negatives To determine treatment options / change in management	
Is the question specific to any of the categories below?		
GENDER	AGE GROUP	DATE OF PUBLICATION
Male <input type="checkbox"/>	Infant (0 – 23 months) <input type="checkbox"/>	Current year only <input type="checkbox"/>
Female <input type="checkbox"/>	Child (2 – 12 years) <input type="checkbox"/>	0 – 5 years <input type="checkbox"/>
	Adolescent (13 – 18 years) <input type="checkbox"/>	> 5 years <input type="checkbox"/>
	Adult (19 – 65 years) <input type="checkbox"/>	
	Aged (> 65 years) <input type="checkbox"/>	
Question Type		
Therapy/Intervention <input checked="" type="checkbox"/>		
Aetiology/Risk Factors <input type="checkbox"/>		
Diagnosis <input type="checkbox"/>		
Prognosis/Prediction <input type="checkbox"/>		
Frequency/Rate <input type="checkbox"/>		
Phenomena <input type="checkbox"/>		
Other <input type="checkbox"/>		
Search Strategy		
Primary Database(s) Searched	MEDLINE; PubMed;CINAHL	
Search Strategy	#1	(MH "Breast Neoplasms+") 214,338
	#2	"breast cancer" 175,595
	#3	"breast neoplasms" 214,517
	#4	#1 OR #2 OR #3 257,644
	#5	(MH "Neoplasm Metastasis+/DI") 6,652
	#6	(MH "Neoplasm Staging/MT") 6,617
	#7	#5 AND #6 250
	#8	#4 AND #7 69
Other/Secondary Resources Searched	Cochrane; UpToDate; Dynamed	
Search Strategy: Other Resources	Breast Cancer; Staging; Metastases	
Comments		
Date		

Question 6

Clinical Question																																											
In women with breast cancer who are being staged, what investigations should be performed?																																											
PICO																																											
Population/Problem	Patients with newly diagnosed breast cancer, in whom staging is indicated.																																										
Intervention/Indicator	CT Isotope bone scan Abdominal ultrasound Chest x-ray PET-CT																																										
Comparator/Control	CT Isotope bone scan Abdominal ultrasound Chest x-ray PET-CT																																										
Outcome	Detection of metastatic disease Sensitivity & specificity False positives False negatives																																										
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Other/Secondary Resources Searched	Cochrane; UpToDate; Dynamed																																										

Search Strategy: Other Resources	Breast Cancer; Staging; Investigations
Comments	
Date	

Surgery

Question 7a

Clinical Question																																									
In patients with ductal carcinoma in-situ (DCIS), what is the evidence that breast conservation surgery is more or less effective than mastectomy?																																									
PICO																																									
Population/Problem	Patients with DCIS																																								
Intervention/Indicator	Breast conservation surgery																																								
Comparator/Control	Mastectomy																																								
Outcome	Local recurrence Disease free survival Overall survival																																								
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Search Strategy	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr style="background-color: #ffffcc;"> <th>#</th> <th>Query</th> <th>Results</th> </tr> </thead> <tbody> <tr> <td>S12</td> <td>S6 AND S11</td> <td>77</td> </tr> <tr> <td>S11</td> <td>(MH "Survival") OR (MH "Survival Rate") OR (MH "Survival Analysis+") OR</td> <td>319,688</td> </tr> <tr> <td>S10</td> <td>S6 AND S9</td> <td>28</td> </tr> <tr> <td>S9</td> <td>(MH "Disease-Free Survival") OR "disease free survival"</td> <td>57,339</td> </tr> <tr> <td>S8</td> <td>S6 AND S7</td> <td>133</td> </tr> <tr> <td>S7</td> <td>(MH "Neoplasm Recurrence, Local") OR "local recurrence"</td> <td>20,459</td> </tr> <tr> <td>S6</td> <td>S1 AND S4</td> <td>295</td> </tr> <tr> <td>S5</td> <td>S1 AND S4</td> <td>877</td> </tr> <tr> <td>S4</td> <td>S2 AND S3</td> <td>5,975</td> </tr> <tr> <td>S3</td> <td>(MH "Mastectomy+") OR "mastectomy"</td> <td>28,952</td> </tr> <tr> <td>S2</td> <td>(MH "Mastectomy, Segmental") OR "breast conservation surgery"</td> <td>6,077</td> </tr> <tr> <td>S1</td> <td>(MH "Carcinoma, Intraductal, Noninfiltrating+") OR "ductal carcinoma in situ"</td> <td>10,646</td> </tr> </tbody> </table>		#	Query	Results	S12	S6 AND S11	77	S11	(MH "Survival") OR (MH "Survival Rate") OR (MH "Survival Analysis+") OR	319,688	S10	S6 AND S9	28	S9	(MH "Disease-Free Survival") OR "disease free survival"	57,339	S8	S6 AND S7	133	S7	(MH "Neoplasm Recurrence, Local") OR "local recurrence"	20,459	S6	S1 AND S4	295	S5	S1 AND S4	877	S4	S2 AND S3	5,975	S3	(MH "Mastectomy+") OR "mastectomy"	28,952	S2	(MH "Mastectomy, Segmental") OR "breast conservation surgery"	6,077	S1	(MH "Carcinoma, Intraductal, Noninfiltrating+") OR "ductal carcinoma in situ"	10,646
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Other/Secondary Resources Searched	Uptodate, Cinahl full text. Cochrane																																								
Search Strategy: Other Resources																																									

Comments	
Date	8/7/2014

Question 7b

Clinical Question

In patients with operable invasive breast cancer, what is the evidence that breast conservation surgery is more or less effective than mastectomy (incorporates previous Q2 on mammoplasty)

PICO	
Population/Problem	Patients with operable invasive breast cancer
Intervention/Indicator	Breast conservation surgery
Comparator/Control	Mastectomy
Outcome	Local recurrence Disease free survival Overall survival

Is the question specific to any of the categories below?

GENDER	AGE GROUP	DATE OF PUBLICATION
Male <input type="checkbox"/>	Infant (0 – 23 months) <input type="checkbox"/>	Current year only <input type="checkbox"/>
Female <input checked="" type="checkbox"/>	Child (2 – 12 years) <input type="checkbox"/>	0 – 5 years <input checked="" type="checkbox"/>
	Adolescent (13 – 18 years) <input type="checkbox"/>	> 5 years <input type="checkbox"/>
	Adult (19 – 65 years) <input type="checkbox"/>	
	Aged (> 65 years) <input type="checkbox"/>	

Question Type

Therapy/Intervention

Aetiology/Risk Factors

Diagnosis

Prognosis/Prediction

Frequency/Rate

Phenomena

Other

Search Strategy	Medline																																													
Primary Database(s) Searched																																														
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Other/Secondary Resources Searched	Cinahl, Cochrane, Uptodate
Search Strategy: Other Resources	
Comments	
Date	8/7/2014

Question 8

Clinical Question																																								
In patients undergoing mastectomy for operable breast cancer (in situ or invasive), what is the risk of contralateral cancer and what is the evidence for prophylactic mastectomy?																																								
a) Those who have had a previous breast cancer and now have a local recurrence/second primary breast cancer in the ipsilateral or contralateral breast? b) Those with breast cancer and who had previously been identified as being at an increased risk (medium or high) and those identified with BrCa 1 or 2, what is the evidence for bilateral prophylactic mastectomy?																																								
PICO																																								
Population/Problem	Patients undergoing mastectomy for operable breast cancer (in-situ or invasive)																																							
Intervention/Indicator	Prophylactic mastectomy																																							
Comparator/Control																																								
Outcome	Morbidity Contralateral cancer Mortality																																							
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S9	"contralateral cancer"	111
S8	S6 AND S7	66
S7	(MH "Morbidity+") OR "morbidity"	582,589
S6	S3 AND S4	622
S5	S1 AND S3	622
S4	S1 AND S2	24,830
S3	prophylactic mastectomy	645
S2	(MH "Mastectomy+") OR "mastectomy"	28,954
S1	(MH "Breast Neoplasms+") OR "breast cancer"	257,573

Other/Secondary Resources Searched

Cinahl, Cochrane, Uptodate

Search Strategy: Other Resources

Comments

Date

8/7/2014

Question 9

In patients with breast cancer undergoing mastectomy who are suitable for breast reconstruction, is there any evidence that breast reconstruction, timing of reconstruction, and type of reconstruction effect outcome

PICO	
Population/Problem	Patients with breast cancer undergoing breast reconstruction post-mastectomy
Intervention/Indicator	Immediate reconstruction
Comparator/Control	Delayed breast reconstruction
Outcome	Post operative pain Donor site morbidity Postoperative morbidity including capsular contracture, haematoma, flap necrosis, surgical site infections requiring removal of prosthesis Cosmesis Time to delivery of adjuvant treatment Quality of life (social/sexual) Local recurrence Regional (axillary) recurrence Disease free survival Overall survival

Is the question specific to any of the categories below?

GENDER	AGE GROUP	DATE OF PUBLICATION
Male <input type="checkbox"/>	Infant (0 – 23 months) <input type="checkbox"/>	Current year only <input type="checkbox"/>
Female <input checked="" type="checkbox"/>	Child (2 – 12 years) <input type="checkbox"/>	0 – 5 years <input checked="" type="checkbox"/>
	Adolescent (13 – 18 years) <input type="checkbox"/>	> 5 years <input type="checkbox"/>
	Adult (19 – 65 years) <input type="checkbox"/>	
	Aged (> 65 years) <input type="checkbox"/>	

Question Type

- Therapy/Intervention
- Aetiology/Risk Factors
- Diagnosis
- Prognosis/Prediction
- Frequency/Rate
- Phenomena
- Other

Search Strategy

Primary Database(s) Searched	Medline																					
Search Strategy	<table border="1"> <thead> <tr> <th>#</th> <th>Query</th> <th>Results</th> </tr> </thead> <tbody> <tr> <td>S8</td> <td>(MH "Mammaplasty+/AE/CT")</td> <td>747</td> </tr> <tr> <td>S7</td> <td>"delayed breast reconstruction"</td> <td>46</td> </tr> <tr> <td>S6</td> <td>immediate breast reconstruction AND delayed breast reconstruction</td> <td>6</td> </tr> <tr> <td>S5</td> <td>"immediate breast reconstruction"</td> <td>244</td> </tr> <tr> <td>S4</td> <td>S1 AND S2</td> <td>1,476</td> </tr> <tr> <td>S3</td> <td>S1 AND S2</td> <td>3,904</td> </tr> </tbody> </table>	#	Query	Results	S8	(MH "Mammaplasty+/AE/CT")	747	S7	"delayed breast reconstruction"	46	S6	immediate breast reconstruction AND delayed breast reconstruction	6	S5	"immediate breast reconstruction"	244	S4	S1 AND S2	1,476	S3	S1 AND S2	3,904
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	S1	(MH "Breast Neoplasms+") OR "breast cancer"	257,573
Other/Secondary Resources Searched	Cinahl, Cochrane, Uptodate		
Search Strategy: Other Resources			
Comments			
Date			

Question 10a

Clinical Question																												
What is the appropriate management of the axilla in patients with operable (invasive) breast cancer who have no evidence of axillary lymph nodes metastases at initial diagnosis? (based on clinical, imaging, fine needle aspiration cytology/core biopsy) (ultrasound guided biopsy)																												
PICO																												
Population/Problem	Patients with operable (invasive) breast cancer																											
Intervention/Indicator	Axillary node clearance Axillary node sampling Sentinel node biopsy																											
Comparator/Control																												
Outcome	Risk of anaphylaxis with blue dye used for SLNB Pain Lymphoedema Upper limb morbidity Regional recurrence Overall survival																											
Is the question specific to any of the categories below?																												
GENDER	AGE GROUP	DATE OF PUBLICATION																										
Male <input type="checkbox"/>	Infant (0 – 23 months) <input type="checkbox"/>	Current year only <input type="checkbox"/>																										
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S2	(MH "Neoplasm Invasiveness+") OR "invasive breast cancer"	58,817																										
S1	(MH "Breast Neoplasms+") OR "breast cancer"	257,573																										
Other/Secondary Resources Searched	Cochrane, Cinahl, Uptodate																											

Search Strategy: Other Resources	
Comments	
Date	8/7/2014

Question 10b

Clinical Question
What is the appropriate management of the axilla in patients with operable (invasive) breast cancer undergoing neoadjuvant chemotherapy? (node-positive / node-negative at diagnosis)

PICO	
Population/Problem	Patients with operable (invasive) breast cancer
Intervention/Indicator	Axillary node clearance Axillary node sampling Sentinel node biopsy
Comparator/Control	
Outcome	Risk of anaphylaxis with blue dye used for SLNB Pain Lymphoedema Upper limb morbidity Regional recurrence Overall survival

Is the question specific to any of the categories below?		
GENDER	AGE GROUP	DATE OF PUBLICATION
Male <input type="checkbox"/>	Infant (0 – 23 months) <input type="checkbox"/>	Current year only <input type="checkbox"/>
Female <input checked="" type="checkbox"/>	Child (2 – 12 years) <input type="checkbox"/>	0 – 5 years <input checked="" type="checkbox"/>
	Adolescent (13 – 18 years) <input type="checkbox"/>	> 5 years <input type="checkbox"/>
	Adult (19 – 65 years) <input type="checkbox"/>	
	Aged (> 65 years) <input type="checkbox"/>	

Question Type
Therapy/Intervention <input checked="" type="checkbox"/>
Aetiology/Risk Factors <input checked="" type="checkbox"/>
Diagnosis <input checked="" type="checkbox"/>
Prognosis/Prediction <input checked="" type="checkbox"/>
Frequency/Rate <input type="checkbox"/>
Phenomena <input type="checkbox"/>
Other <input type="checkbox"/>

Search Strategy																			
Primary Database(s) Searched	Medline																		
Search Strategy	<table border="1"> <thead> <tr> <th>#</th> <th>Query</th> <th>Results</th> </tr> </thead> <tbody> <tr> <td>S5</td> <td>S3 AND S4</td> <td>114</td> </tr> <tr> <td>S4</td> <td>(MH "Neoadjuvant Therapy") OR "neoadjuvant chemotherapy"</td> <td>14,883</td> </tr> <tr> <td>S3</td> <td>S1 AND S2</td> <td>1,250</td> </tr> <tr> <td>S2</td> <td>(MH "Axilla") OR "management of the axilla"</td> <td>2,092</td> </tr> <tr> <td>S1</td> <td>(MH "Breast Neoplasms+") OR "breast cancer"</td> <td>60,769</td> </tr> </tbody> </table>	#	Query	Results	S5	S3 AND S4	114	S4	(MH "Neoadjuvant Therapy") OR "neoadjuvant chemotherapy"	14,883	S3	S1 AND S2	1,250	S2	(MH "Axilla") OR "management of the axilla"	2,092	S1	(MH "Breast Neoplasms+") OR "breast cancer"	60,769
#	Query	Results																	
S5	S3 AND S4	114																	
S4	(MH "Neoadjuvant Therapy") OR "neoadjuvant chemotherapy"	14,883																	
S3	S1 AND S2	1,250																	
S2	(MH "Axilla") OR "management of the axilla"	2,092																	
S1	(MH "Breast Neoplasms+") OR "breast cancer"	60,769																	
Other/Secondary Resources Searched	Cochrane, Uptodate, Cinahl																		
Search Strategy: Other Resources																			
Comments																			
Date	8/7/2014																		

Question 10c

Clinical Question																						
What is the appropriate management of the axilla in patients with operable (invasive) breast cancer with sentinel node positive ITCs, micromets or macromets?																						
PICO																						
Population/Problem	Patients with operable (invasive) breast cancer																					
Intervention/Indicator	Axillary node clearance Axillary node sampling Sentinel node biopsy																					
Comparator/Control																						
Outcome	Risk of anaphylaxis with blue dye used for SLNB Pain Lymphoedema Upper limb morbidity Regional recurrence Overall survival																					
Is the question specific to any of the categories below?																						
GENDER	AGE GROUP	DATE OF PUBLICATION																				
Male <input type="checkbox"/>	Infant (0 – 23 months) <input type="checkbox"/>	Current year only <input type="checkbox"/>																				
Female <input checked="" type="checkbox"/>	Child (2 – 12 years) <input type="checkbox"/>	0 – 5 years <input checked="" type="checkbox"/>																				
	Adolescent (13 – 18 years) <input type="checkbox"/>	> 5 years <input type="checkbox"/>																				
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	Aged (> 65 years) <input type="checkbox"/>																					
Question Type																						
Therapy/Intervention <input checked="" type="checkbox"/>																						
Aetiology/Risk Factors <input type="checkbox"/>																						
Diagnosis <input type="checkbox"/>																						
Prognosis/Prediction <input checked="" type="checkbox"/>																						
Frequency/Rate <input type="checkbox"/>																						
Phenomena <input type="checkbox"/>																						
Other <input type="checkbox"/>																						
Search Strategy																						
Primary Database(s) Searched	Medline																					
Search Strategy	<table border="1"> <thead> <tr> <th>#</th> <th>Query</th> <th>Results</th> </tr> </thead> <tbody> <tr> <td>S6</td> <td>S1 AND S5</td> <td>62</td> </tr> <tr> <td>S5</td> <td>S2 AND S3</td> <td>180</td> </tr> <tr> <td>S4</td> <td>S2 AND S3</td> <td>331</td> </tr> <tr> <td>S3</td> <td>isolated tumo#r cell*</td> <td>814</td> </tr> <tr> <td>S2</td> <td>(MH "Sentinel Lymph Node Biopsy") OR "sentinel node"</td> <td>9,346</td> </tr> <tr> <td>S1</td> <td>(MH "Axilla") OR "management of the axilla"</td> <td>9,967</td> </tr> </tbody> </table>	#	Query	Results	S6	S1 AND S5	62	S5	S2 AND S3	180	S4	S2 AND S3	331	S3	isolated tumo#r cell*	814	S2	(MH "Sentinel Lymph Node Biopsy") OR "sentinel node"	9,346	S1	(MH "Axilla") OR "management of the axilla"	9,967
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S1	(MH "Axilla") OR "management of the axilla"	9,967																				
Other/Secondary Resources Searched																						
Search Strategy: Other Resources	Cochrane, Cinahl, Uptodate																					
Date	8/7/2014																					

Question 11a

Clinical Question		
For patients receiving breast conserving surgery (BCS) and post-operative radiation therapy (RT) for ductal carcinoma in situ (DCIS), what constitutes an adequate surgical margin?		
PICO		
Population/Problem	Patients with a primary diagnosis of DCIS receiving BCS and post-operative / adjuvant radiotherapy	
Intervention/Indicator	Extent of margins / Clear surgical margins	
Comparator/Control	Surgical margins not clear	
Outcome	Ipsilateral breast tumour recurrence (IBTR) related to surgical margins. Local recurrence in the preserved breast.	
Is the question specific to any of the categories below?		
GENDER	AGE GROUP	DATE OF PUBLICATION
Male <input type="checkbox"/>	Infant (0 – 23 months) <input type="checkbox"/>	Current year only <input type="checkbox"/>
Female <input checked="" type="checkbox"/>	Child (2 – 12 years) <input type="checkbox"/>	0 – 5 years <input checked="" type="checkbox"/>
	Adolescent (13 – 18 years) <input type="checkbox"/>	> 5 years <input type="checkbox"/>
	Adult (19 – 65 years) <input type="checkbox"/>	
	Aged (> 65 years) <input type="checkbox"/>	
Question Type		
Therapy/Intervention <input checked="" type="checkbox"/>		
Aetiology/Risk Factors <input checked="" type="checkbox"/>		
Diagnosis <input checked="" type="checkbox"/>		
Prognosis/Prediction <input checked="" type="checkbox"/>		
Frequency/Rate <input checked="" type="checkbox"/>		
Phenomena <input type="checkbox"/>		
Other <input type="checkbox"/>		

Search Strategy																																
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Other/Secondary Resources Searched	Cochrane, Cinahl, Uptodate																															
Search Strategy: Other Resources																																
Comments																																
Date	8/7/2014																															

Question 11b

Clinical Question		
For patients receiving breast conserving surgery (BCS) and post-operative radiation therapy (RT) for <u>invasive</u> breast cancer, what constitutes an adequate surgical margin?		
PICO		
Population/Problem	Patients with a primary diagnosis of invasive cancer receiving BCS and post-operative / adjuvant radiotherapy	
Intervention/Indicator	Extent of margins / clear surgical margins	
Comparator/Control	Surgical margins not clear	
Outcome	Ipsilateral breast tumour recurrence (IBTR) related to surgical margins. Local recurrence in the preserved breast.	
Is the question specific to any of the categories below?		
GENDER	AGE GROUP	DATE OF PUBLICATION
Male <input type="checkbox"/>	Infant (0 – 23 months) <input type="checkbox"/>	Current year only <input type="checkbox"/>
Female <input checked="" type="checkbox"/>	Child (2 – 12 years) <input type="checkbox"/>	0 – 5 years <input checked="" type="checkbox"/>
	Adolescent (13 – 18 years) <input type="checkbox"/>	> 5 years <input type="checkbox"/>
	Adult (19 – 65 years) <input type="checkbox"/>	
	Aged (> 65 years) <input type="checkbox"/>	
Question Type		
Therapy/Intervention <input checked="" type="checkbox"/>		
Aetiology/Risk Factors <input checked="" type="checkbox"/>		
Diagnosis <input type="checkbox"/>		
Prognosis/Prediction <input checked="" type="checkbox"/>		
Frequency/Rate <input type="checkbox"/>		
Phenomena <input type="checkbox"/>		
Other <input type="checkbox"/>		

Search Strategy																																						
Primary Database(s) Searched	Medline																																					
Search Strategy	<table border="1"> <thead> <tr> <th>#</th> <th>Query</th> <th>Results</th> </tr> </thead> <tbody> <tr> <td>S11</td> <td>S1 AND S2 AND S4 AND S9</td> <td>25</td> </tr> <tr> <td>S10</td> <td>S8 AND S9</td> <td>5</td> </tr> <tr> <td>S9</td> <td>"surg* margin**"</td> <td>2,344</td> </tr> <tr> <td>S8</td> <td>S1 AND S2 AND S5</td> <td>51</td> </tr> <tr> <td>S7</td> <td>S1 AND S2 AND S5</td> <td>103</td> </tr> <tr> <td>S6</td> <td>S1 AND S2 AND S3 AND S5</td> <td>1</td> </tr> <tr> <td>S5</td> <td>(MH "Neoplasm Invasiveness+") AND (MH "Breast Neoplasms+")</td> <td>7,091</td> </tr> <tr> <td>S4</td> <td>(MH "Neoplasm Recurrence, Local") OR (MH "Recurrence") OR "local recurrence"</td> <td>249,795</td> </tr> <tr> <td>S3</td> <td>"post-operative" OR post operative</td> <td>8,435</td> </tr> <tr> <td>S2</td> <td>(MH "Radiotherapy, Adjuvant") OR "adjuvant radiotherapy"</td> <td>19,392</td> </tr> <tr> <td>S1</td> <td>"breast conserving surgery" OR (MH "Mastectomy, Segmental")</td> <td>7,389</td> </tr> </tbody> </table>		#	Query	Results	S11	S1 AND S2 AND S4 AND S9	25	S10	S8 AND S9	5	S9	"surg* margin**"	2,344	S8	S1 AND S2 AND S5	51	S7	S1 AND S2 AND S5	103	S6	S1 AND S2 AND S3 AND S5	1	S5	(MH "Neoplasm Invasiveness+") AND (MH "Breast Neoplasms+")	7,091	S4	(MH "Neoplasm Recurrence, Local") OR (MH "Recurrence") OR "local recurrence"	249,795	S3	"post-operative" OR post operative	8,435	S2	(MH "Radiotherapy, Adjuvant") OR "adjuvant radiotherapy"	19,392	S1	"breast conserving surgery" OR (MH "Mastectomy, Segmental")	7,389
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S1	"breast conserving surgery" OR (MH "Mastectomy, Segmental")	7,389																																				
Other/Secondary Resources Searched	Cochrane, Cinahl, Uptodate																																					
Search Strategy: Other Resources																																						

Comments	
Date	8/7/2014

Medical Oncology

Question 12

Clinical Question																																		
In patients with breast cancer a) What is the evidence that adjuvant chemotherapy is effective? b) What is the optimal chemotherapy regimen?																																		
PICO																																		
Population/Problem	Patients with breast cancer (incl. men, pre-menopausal women and post-menopausal women) who are: Lymph node positive (+) or lymph node-negative (-) Oestrogen receptor (ER) + or (ER) - Human Epidermal Growth Factor Receptor 2 (HER2) + or (HER2) -																																	
Intervention/Indicator	a) Non-anthracycline containing regimens b) Anthracycline containing regimens c) Taxane containing regimens d) Trastuzumab containing regimens																																	
Comparator/Control																																		
Outcome	Disease free survival Overall survival Toxicity																																	
Is the question specific to any of the categories below?																																		
GENDER	AGE GROUP																																	
Male <input checked="" type="checkbox"/>	Infant (0 – 23 months) <input type="checkbox"/>																																	
Female <input checked="" type="checkbox"/>	Child (2 – 12 years) <input type="checkbox"/>																																	
	Adolescent (13 – 18 years) <input type="checkbox"/>																																	
	Adult (19 – 65 years) <input type="checkbox"/>																																	
	Aged (> 65 years) <input type="checkbox"/>																																	
	DATE OF PUBLICATION																																	
	Current year only <input type="checkbox"/>																																	
	0 – 5 years <input checked="" type="checkbox"/>																																	
	> 5 years <input type="checkbox"/>																																	
Question Type																																		
Therapy/Intervention <input checked="" type="checkbox"/>																																		
Aetiology/Risk Factors <input checked="" type="checkbox"/>																																		
Diagnosis <input type="checkbox"/>																																		
Prognosis/Prediction <input checked="" type="checkbox"/>																																		
Frequency/Rate <input type="checkbox"/>																																		
Phenomena <input type="checkbox"/>																																		
Other <input type="checkbox"/>																																		
Search Strategy																																		
Primary Database(s) Searched	Medline																																	
Search Strategy	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #ffffcc;"> <th>#</th> <th>Query</th> <th>Results</th> </tr> </thead> <tbody> <tr> <td>S11</td> <td>S7 AND S10</td> <td>18</td> </tr> <tr> <td>S10</td> <td>S8 OR S9</td> <td>4,771</td> </tr> <tr> <td>S9</td> <td>ER negative</td> <td>2,502</td> </tr> <tr> <td>S8</td> <td>"(ER) positive"</td> <td>3,842</td> </tr> <tr> <td>S7</td> <td>S5 AND S6</td> <td>232</td> </tr> <tr> <td>S6</td> <td>(MH "Survival") OR (MH "Survival Rate") OR (MH "Survival Analysis")</td> <td>56,741</td> </tr> <tr> <td>S5</td> <td>S1 AND S2 AND S3</td> <td>1,005</td> </tr> <tr> <td>S4</td> <td>S1 AND S2 AND S3</td> <td>2,594</td> </tr> <tr> <td>S3</td> <td>(MH "Treatment Outcome+") OR (MH "Comparative Effectiveness Research") OR "effectiveness"</td> <td>886,832</td> </tr> <tr> <td>S2</td> <td>(MH "Chemotherapy, Adjuvant") OR "adjuvant chemotherapy"</td> <td>39,353</td> </tr> </tbody> </table>	#	Query	Results	S11	S7 AND S10	18	S10	S8 OR S9	4,771	S9	ER negative	2,502	S8	"(ER) positive"	3,842	S7	S5 AND S6	232	S6	(MH "Survival") OR (MH "Survival Rate") OR (MH "Survival Analysis")	56,741	S5	S1 AND S2 AND S3	1,005	S4	S1 AND S2 AND S3	2,594	S3	(MH "Treatment Outcome+") OR (MH "Comparative Effectiveness Research") OR "effectiveness"	886,832	S2	(MH "Chemotherapy, Adjuvant") OR "adjuvant chemotherapy"	39,353
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	S1	(MH "Breast Neoplasms+"# OR #MH "Breast Neoplasms, Male"# OR "breast cancer" OR #MH	257,607
Other/Secondary Resources Searched	Cochrane, Cinahl, Uptodate		
Search Strategy: Other Resources			
Comments			
Date	8/7/2014		

Question 13a

Clinical Question																																		
In pre-menopausal patients with breast cancer that is ER + and/or PR +: a) What is the evidence that adjuvant hormone therapy is effective? b) What is the optimum endocrine agent? c) What is the optimum strategy of endocrine therapy? d) What is the optimum duration of therapy?																																		
PICO																																		
Population/Problem	Pre-menopausal patients with breast cancer Oestrogen receptor (ER) + Progesterone receptor (PR) +																																	
Intervention/Indicator	Tamoxifen Ovarian suppression/ablation																																	
Comparator/Control	Ovarian suppression/ablation plus tamoxifen vs. tamoxifen alone in pre-menopausal women 5 years of endocrine therapy vs. longer																																	
Outcome	Disease free survival Overall survival Adverse events (include venous thromboembolism, menopausal symptoms, endometrial cancer)																																	
Is the question specific to any of the categories below?																																		
GENDER	AGE GROUP																																	
Male <input type="checkbox"/>	Infant (0 – 23 months) <input type="checkbox"/>																																	
Female <input checked="" type="checkbox"/>	Child (2 – 12 years) <input type="checkbox"/>																																	
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S4	oestrogen receptor	4,192																																
S3	(MH "Receptors, Progesterone") OR "progesterone receptor"	20,317																																

Other/Secondary Resources Searched Search Strategy: Other Resources Comments Date	S2	(MH "Premenopause") OR "pre-menopausal"	7,065
	S1	(MH "Breast Neoplasms+") OR "breast cancer"	257,607
	Cochrane, Cinahl, Uptodate		
Date			8/7/2014

Question 13b

Clinical Question																															
In post-menopausal patients with breast cancer that is ER + and/or PR +: a) What is the evidence that adjuvant hormone therapy is effective? b) What is the optimum endocrine agent? c) What is the optimum strategy of endocrine therapy? d) What is the optimum duration of therapy?																															
PICO																															
Population/Problem	Post-menopausal patients with breast cancer Oestrogen receptor (ER) + Progesterone receptor (PR) +																														
Intervention/Indicator	Tamoxifen Aromatase inhibitors																														
Comparator/Control	Aromatase inhibitors vs. tamoxifen in postmenopausal women Sequential therapy with tamoxifen and an aromatase inhibitor in postmenopausal women 5 years of endocrine therapy vs. longer																														
Outcome	Disease free survival Adverse events (include venous thromboembolism, menopausal symptoms, endometrial cancer) Overall survival																														
Is the question specific to any of the categories below?																															
GENDER	AGE GROUP																														
Male <input type="checkbox"/>	Infant (0 – 23 months) <input type="checkbox"/>																														
Female <input checked="" type="checkbox"/>	Child (2 – 12 years) <input type="checkbox"/>																														
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	DATE OF PUBLICATION																														
	Current year only <input type="checkbox"/>																														
	0 – 5 years <input checked="" type="checkbox"/>																														
	> 5 years <input type="checkbox"/>																														
Question Type																															
Therapy/Intervention <input checked="" type="checkbox"/>																															
Aetiology/Risk Factors <input checked="" type="checkbox"/>																															
Diagnosis <input type="checkbox"/>																															
Prognosis/Prediction <input checked="" type="checkbox"/>																															
Frequency/Rate <input checked="" type="checkbox"/>																															
Phenomena <input type="checkbox"/>																															
Other <input type="checkbox"/>																															
Search Strategy																															
Primary Database(s) Searched	Medline																														
Search Strategy	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr style="background-color: #ffffcc;"> <th>#</th> <th>Query</th> <th>Results</th> </tr> </thead> <tbody> <tr> <td>S13</td> <td>S1 AND S12</td> <td>71</td> </tr> <tr> <td>S12</td> <td>S7 AND S10</td> <td>103</td> </tr> <tr> <td>S11</td> <td>S7 AND S10</td> <td>354</td> </tr> <tr> <td>S10</td> <td>S8 OR S9</td> <td>48,171</td> </tr> <tr> <td>S9</td> <td>hormon* ther*</td> <td>20,097</td> </tr> <tr> <td>S8</td> <td>(MH "Hormone Replacement Therapy+") OR (MH "Neoadjuvant Therapy") OR "hormone"</td> <td>38,817</td> </tr> <tr> <td>S7</td> <td>S5 AND S6</td> <td>1,477</td> </tr> <tr> <td>S6</td> <td>(MH "Postmenopause") OR "post-menopausal"</td> <td>22,724</td> </tr> <tr> <td>S5</td> <td>S2 OR S3 OR S4</td> <td>46,834</td> </tr> </tbody> </table>	#	Query	Results	S13	S1 AND S12	71	S12	S7 AND S10	103	S11	S7 AND S10	354	S10	S8 OR S9	48,171	S9	hormon* ther*	20,097	S8	(MH "Hormone Replacement Therapy+") OR (MH "Neoadjuvant Therapy") OR "hormone"	38,817	S7	S5 AND S6	1,477	S6	(MH "Postmenopause") OR "post-menopausal"	22,724	S5	S2 OR S3 OR S4	46,834
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S7	S5 AND S6	1,477																													
S6	(MH "Postmenopause") OR "post-menopausal"	22,724																													
S5	S2 OR S3 OR S4	46,834																													

Question 14

Clinical Question																																		
For women with breast cancer, what subgroups of patients would benefit from neoadjuvant systemic therapy and what is the optimum regimen?																																		
PICO																																		
Population/Problem	Patients with breast cancer																																	
Intervention/Indicator	Neoadjuvant chemotherapy Neoadjuvant trastuzumab Neoadjuvant endocrine therapy																																	
Comparator/Control																																		
Outcome	Pathological complete response (pCR) Rates of Breast Conserving Surgery (i.e. inoperable to operable) Overall survival Local / regional recurrence Disease free / recurrence free survival Local / regional recurrence Toxicity																																	
Is the question specific to any of the categories below?																																		
GENDER	AGE GROUP	DATE OF PUBLICATION																																
Male <input type="checkbox"/>	Infant (0 – 23 months) <input type="checkbox"/>	Current year only <input type="checkbox"/>																																
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Aetiology/Risk Factors <input type="checkbox"/>																																		
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Phenomena <input type="checkbox"/>																																		
Other <input type="checkbox"/>																																		
Search Strategy																																		
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S2	(MH "Breast Neoplasms+/DT") OR "breast cancer"	49,492																																

	S1	(MH "Breast Neoplasms+DT") OR "breast cancer"	184,642
Other/Secondary Resources Searched	Cochrane, Cinahl, Uptodate		
Search Strategy: Other Resources			
Comments			
Date	8/7/2014		

Radiation Oncology

Question 15

Clinical Question																																														
In patients who have undergone a mastectomy for breast cancer, what is the evidence that radiotherapy to the chest wall improves outcome?																																														
PICO																																														
Population/Problem	Patients with breast cancer treated surgically with mastectomy and axillary staging																																													
Intervention/Indicator	Chest wall radiotherapy +/- regional nodal radiotherapy (any dose/cycle)																																													
Comparator/Control	No radiotherapy																																													
Outcome	Local – regional recurrence >2 months Breast cancer specific survival 5 yrs, 10 yrs Disease free survival 5 yrs, 10 yrs Non breast cancer survival 5 yrs, 10 yrs Overall survival 5 yrs, 10 yrs Toxicity																																													
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Phenomena <input type="checkbox"/>																																														
Other <input type="checkbox"/>																																														
Search Strategy																																														
Primary Database(s) Searched	MEDLINE/PubMed; CINAHL;																																													
Search Strategy	<table border="1"> <tr> <td>#1</td> <td>(MH "Neoplasms+")</td> <td>2,547,252</td> </tr> <tr> <td>#2</td> <td>(MH "Breast Neoplasms+")</td> <td>214,318</td> </tr> <tr> <td>#3</td> <td>S1 OR S2</td> <td>2,547,252</td> </tr> <tr> <td>#4</td> <td>TX "breast cancer"</td> <td>175,417</td> </tr> <tr> <td>#5</td> <td>TX "breast neoplasms"</td> <td>214,497</td> </tr> <tr> <td>#6</td> <td>S4 OR S5</td> <td>257,105</td> </tr> <tr> <td>#7</td> <td>S3 AND S6</td> <td>227,834</td> </tr> <tr> <td>#8</td> <td>(MH "Mastectomy+")</td> <td>23,060</td> </tr> <tr> <td>#9</td> <td>(MH "Radiotherapy+")</td> <td>137,296</td> </tr> <tr> <td>#10</td> <td>TX "regional nodal radiotherapy"</td> <td>3</td> </tr> <tr> <td>#11</td> <td>S9 OR S10</td> <td>137,296</td> </tr> <tr> <td>#12</td> <td>(MH "Thoracic Wall")</td> <td>2,149</td> </tr> <tr> <td>#13</td> <td>TX "chest wall"</td> <td>12,985</td> </tr> <tr> <td>#14</td> <td>S12 OR S13</td> <td>13,707</td> </tr> <tr> <td>#15</td> <td>S11 AND S14</td> <td>978</td> </tr> </table>	#1	(MH "Neoplasms+")	2,547,252	#2	(MH "Breast Neoplasms+")	214,318	#3	S1 OR S2	2,547,252	#4	TX "breast cancer"	175,417	#5	TX "breast neoplasms"	214,497	#6	S4 OR S5	257,105	#7	S3 AND S6	227,834	#8	(MH "Mastectomy+")	23,060	#9	(MH "Radiotherapy+")	137,296	#10	TX "regional nodal radiotherapy"	3	#11	S9 OR S10	137,296	#12	(MH "Thoracic Wall")	2,149	#13	TX "chest wall"	12,985	#14	S12 OR S13	13,707	#15	S11 AND S14	978
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	#16	S8 AND S15	316
	#17	S8 AND S15 [Limiters - Date of Publication: 2009 - 2014]	85
Other/Secondary Resources Searched	Cochrane; UpToDate; Dynamed		
Search Strategy: Other Resources	mastectomy AND radiation		
Comments			
Date	<input type="checkbox"/>		

Question 16

Clinical Question			
In patients with DCIS who have undergone breast conserving surgery, what is the evidence that adjuvant radiotherapy improves outcome?			
PICO			
Population/Problem	Patients with DCIS treated with breast conserving surgery		
Intervention/Indicator	Radiotherapy (any dose/cycle)		
Comparator/Control	No radiotherapy		
Outcome	Local recurrence Overall survival		
Is the question specific to any of the categories below?			
GENDER	AGE GROUP	DATE OF PUBLICATION	
Male <input type="checkbox"/>	Infant (0 – 23 months) <input type="checkbox"/>	Current year only <input type="checkbox"/>	
Female <input type="checkbox"/>	Child (2 – 12 years) <input type="checkbox"/>	0 – 5 years <input type="checkbox"/>	
	Adolescent (13 – 18 years) <input type="checkbox"/>	> 5 years <input type="checkbox"/>	
	Adult (19 – 65 years) <input type="checkbox"/>		
	Aged (> 65 years) <input type="checkbox"/>		
Question Type			
Therapy/Intervention <input checked="" type="checkbox"/>			
Aetiology/Risk Factors <input type="checkbox"/>			
Diagnosis <input type="checkbox"/>			
Prognosis/Prediction <input type="checkbox"/>			
Frequency/Rate <input type="checkbox"/>			
Phenomena <input type="checkbox"/>			
Other <input type="checkbox"/>			
Search Strategy			
Primary Database(s) Searched	MEDLINE/PubMed; CINAHL		
Search Strategy	#1	(MH "Mastectomy, Segmental")+	2768
	#2	(MH "Carcinoma, Intraductal NonInvasive")+	7605
	#3	S1 AND S2	307
	#4	(MH "Radiotherapy, Adjuvant")	16769
	#5	S1 AND S4 [Limits - Clinical Trials & RCTs]	48
	#6	TX Lumpectomy	5215
	#7	S4 AND S6	410
	#8	(S1 AND S4) AND (S5 AND S6)	12
	#9	(TX Post Lumpectomy) AND (Radiotherapy) [Limits - Human]	35
Other/Secondary Resources Searched	Cochrane ; UTD ; Dynamed		
Search Strategy: Other Resources	DCIS AND Radiotherapy (41) Adjuvant radiation therapy for women with newly diagnosed, non-metastatic breast cancer (UpToDate) Radiation therapy for breast cancer (Dynamed)		
Comments			
Date	<input type="checkbox"/>		

Question 17

Clinical Question																										
In breast cancer patients who have undergone breast conserving surgery, what is the evidence that adjuvant radiotherapy improves outcome and what is the optimal dose regimen?																										
PICO																										
Population/Problem	Patients with invasive breast cancer who have undergone breast conservation surgery																									
Intervention/Indicator	Radiotherapy: >2 Gy/fraction vs. ≤2 Gy/fraction																									
Comparator/Control	No radiotherapy																									
Outcome	Local recurrence >2mts Overall survival – 5 yr, 10 yr Disease free survival – 5yr, 10yr Regional recurrence >2 months Cosmesis Harms including pain and toxicity																									
Is the question specific to any of the categories below?																										
GENDER	AGE GROUP	DATE OF PUBLICATION																								
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Therapy/Intervention <input type="checkbox"/>																										
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Phenomena <input type="checkbox"/>																										
Other <input type="checkbox"/>																										
Search Strategy																										
Primary Database(s) Searched	MEDLINE/PubMed; CINAHL																									
Search Strategy	<table border="1"> <tr> <td>#1</td> <td>(MH "Mastectomy Segmental")</td> <td>5849</td> </tr> <tr> <td>#2</td> <td>TX Lumpectomy</td> <td>5215</td> </tr> <tr> <td>#3</td> <td>(MH "Radiotherapy, Adjuvant")</td> <td>16771</td> </tr> <tr> <td>#4</td> <td>(S2 OR S3)</td> <td>9624</td> </tr> <tr> <td>#5</td> <td>(MM "Neoplasm Recurrence, Local")</td> <td>32568</td> </tr> <tr> <td>#6</td> <td>(MH "Dose Fractionation")</td> <td>6125</td> </tr> <tr> <td>#7</td> <td>(S5 AND S7) AND (S4 AND S7)</td> <td>104</td> </tr> <tr> <td>#8</td> <td>((S5 AND S7) AND (S4 AND S7) AND (S4 AND S5 AND S6))</td> <td>18</td> </tr> </table>		#1	(MH "Mastectomy Segmental")	5849	#2	TX Lumpectomy	5215	#3	(MH "Radiotherapy, Adjuvant")	16771	#4	(S2 OR S3)	9624	#5	(MM "Neoplasm Recurrence, Local")	32568	#6	(MH "Dose Fractionation")	6125	#7	(S5 AND S7) AND (S4 AND S7)	104	#8	((S5 AND S7) AND (S4 AND S7) AND (S4 AND S5 AND S6))	18
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#8	((S5 AND S7) AND (S4 AND S7) AND (S4 AND S5 AND S6))	18																								
Other/Secondary Resources Searched	Cochrane ; UTD ; Dynamed																									
Search Strategy: Other Resources	"Mastectomy, Segmental" (2)																									
Comments	Fraction size in radiation treatment for breast conservation in early breast cancer (Cochrane) Adjuvant radiation therapy for women with newly diagnosed, non-metastatic breast cancer Radiation therapy for breast cancer																									
Date																										

Question 18

Clinical Question		
In otherwise healthy breast cancer patients who have undergone breast conserving surgery, are there any sub populations in terms of age, tumour size and nodal involvement where radiotherapy is not necessary? What are the outcomes for these patients?		
PICO		
Population/Problem	Otherwise healthy breast cancer patients who have undergone breast conserving treatment	
Intervention/Indicator	Radiotherapy (any dose/cycle)	
Comparator/Control	No radiotherapy	
Outcome	Survival Local recurrence Cosmesis Pain Number of mastectomies	
Is the question specific to any of the categories below?		
GENDER	AGE GROUP	DATE OF PUBLICATION
Male <input type="checkbox"/>	Infant (0 – 23 months) <input type="checkbox"/>	Current year only <input type="checkbox"/>
Female <input type="checkbox"/>	Child (2 – 12 years) <input type="checkbox"/>	0 – 5 years <input type="checkbox"/>
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	Adult (19 – 65 years) <input type="checkbox"/>	
	Aged (> 65 years) <input type="checkbox"/>	
Question Type		
Therapy/Intervention <input type="checkbox"/>		
Aetiology/Risk Factors <input type="checkbox"/>		
Diagnosis <input type="checkbox"/>		
Prognosis/Prediction <input checked="" type="checkbox"/>		
Frequency/Rate <input type="checkbox"/>		
Phenomena <input type="checkbox"/>		
Other <input type="checkbox"/>		
Search Strategy		
Primary Database(s) Searched	MEDLINE/PubMed; CINAHL	
Search Strategy	S1: (MH "Breast Neoplasms/SU") (29,121) S2: tx breast conserving surgery (2,994) S3: (MH "Mastectomy, Segmental")+ (5849) S4: S2 or S3 (7381) S5: S1 AND S4 (5434) S6: S5 (Publication type : Clinical Trial AND [Limits – Human] (348)) S7: S6 Limit: (64) S8: S5 (Publication type : RCT AND [Limits–Human AND <5years (86] S9: S7 OR S8 (148)	
Other/Secondary Resources Searched	Cochrane; UTD ; Dynamed	
Search Strategy: Other Resources	Used Clinical Trials and Randomised Control Trials	
Comments		
Date		

Question 19

Clinical Question																																			
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?																																			
PICO																																			
Population/Problem	Patients with invasive breast cancer who have undergone breast conservation surgery																																		
Intervention/Indicator	Radiotherapy boost (<i>aimed at tumour bed with or without the use of clips</i>)																																		
Comparator/Control	No radiotherapy boost																																		
Outcome	Local recurrence Overall survival Cosmesis Harms, including pain and toxicity																																		
Is the question specific to any of the categories below?																																			
GENDER	AGE GROUP	DATE OF PUBLICATION																																	
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#11	#8 AND #9 [Limiters - Date of Publication: 2009 - 2014]	282																																	
Other/Secondary Resources Searched	Cochrane; UpToDate; Dynamed																																		
Search Strategy: Other Resources	radiotherapy boost AND breast cancer																																		

Comments	
Date	

Question 20

Clinical Question																				
In patients who have undergone surgery for breast cancer, what evidence is there that time from final surgery to starting a first adjuvant radiation therapy influences outcome?																				
PICO																				
Population/Problem	Patients who have undergone surgery for breast cancer																			
Intervention/Indicator	Adjuvant radiation therapy (any accepted regimen)																			
Comparator/Control																				
Outcome	Local recurrence Overall survival Disease free survival Regional recurrence																			
Is the question specific to any of the categories below?																				
GENDER	AGE GROUP	DATE OF PUBLICATION																		
Male <input type="checkbox"/>	Infant (0 – 23 months) <input type="checkbox"/>	Current year only <input type="checkbox"/>																		
Female <input type="checkbox"/>	Child (2 – 12 years) <input type="checkbox"/>	0 – 5 years <input type="checkbox"/>																		
	Adolescent (13 – 18 years) <input type="checkbox"/>	> 5 years <input type="checkbox"/>																		
	Adult (19 – 65 years) <input type="checkbox"/>																			
	Aged (> 65 years) <input type="checkbox"/>																			
Question Type																				
Therapy/Intervention <input checked="" type="checkbox"/>																				
Aetiology/Risk Factors <input type="checkbox"/>																				
Diagnosis <input type="checkbox"/>																				
Prognosis/Prediction <input type="checkbox"/>																				
Frequency/Rate <input type="checkbox"/>																				
Phenomena <input type="checkbox"/>																				
Other <input type="checkbox"/>																				
Search Strategy																				
Primary Database(s) Searched	MEDLINE/PubMed; CINAHL																			
Search Strategy	<table border="1"> <tr> <td>#1</td> <td>(MH "Breast Neoplasms+")</td> <td>214,318</td> </tr> <tr> <td>#2</td> <td>(MH "General Surgery")</td> <td>33,455</td> </tr> <tr> <td>#3</td> <td>(MH "Radiotherapy, Adjuvant")</td> <td>16,771</td> </tr> <tr> <td>#4</td> <td>(MH "Treatment Outcome+")</td> <td>641,873</td> </tr> <tr> <td>#5</td> <td>#1 AND #2</td> <td>277</td> </tr> <tr> <td>#6</td> <td>#1 AND #2 [Limiters - Date of Publication: 2009 - 2014]</td> <td>49</td> </tr> </table>		#1	(MH "Breast Neoplasms+")	214,318	#2	(MH "General Surgery")	33,455	#3	(MH "Radiotherapy, Adjuvant")	16,771	#4	(MH "Treatment Outcome+")	641,873	#5	#1 AND #2	277	#6	#1 AND #2 [Limiters - Date of Publication: 2009 - 2014]	49
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Other/Secondary Resources Searched	Cochrane; UpToDate; Dynamed																			
Search Strategy: Other Resources	adjuvant radiation AND breast cancer																			
Comments																				
Date																				

Question 21

Clinical Question																	
In patients with invasive breast cancer with node+ disease who have undergone axillary node dissection, who should receive regional radiation?																	
PICO																	
Population/Problem	Node+ breast cancer patients treated with axillary clearance																
Intervention/Indicator	Regional radiation (to specific lymph node area e.g., supraclavicular, axilla, post axilla boost (PAB) internal mammary)																
Comparator/Control	No regional radiation																
Outcome	SCF recurrence Local recurrence >2months Overall survival 5 yrs, 10 yrs Disease free survival Regional recurrence																
Is the question specific to any of the categories below?																	
GENDER	AGE GROUP																
Male <input type="checkbox"/>	Infant (0 – 23 months) <input type="checkbox"/>																
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Other/Secondary Resources Searched	Cochrane; UpToDate; Dynamed																
Search Strategy: Other Resources	axillary node dissection AND regional radiation																

Comments	<input type="text"/>
Date	<input type="text"/>