

# Brain tumours (primary) and brain metastases in adults

## Review Questions

*NICE guideline <number>*

*Methods*

*January 2018*

*Draft for Consultation*

*These evidence reviews were developed by the National Guideline Alliance, hosted by the Royal College of Obstetricians & Gynaecologists*



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ISBN:

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# Diagnosing radiologically identified glioma, meningioma and brain metastases – Imaging Strategy

## 1a - What is the most effective diagnostic imaging in newly diagnosed glioma?

Last searched on 05/09/17

**Database: Embase 1974 to 2017 Week 35, Ovid MEDLINE(R) Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present**

#	Searches
1	exp glioma/ or exp astrocytoma/ or oligodendrogioma/
2	exp Glioblastoma/
3	1 or 2 use ppez
4	exp glioma/ use oemezd or exp astrocytoma/ use oemezd
5	(glioma* or glioblastoma* or GBM or gliosarcoma* or astrocytoma* or oligoastrocytoma* or oligodendrogioma* or oligo?astrocytoma* or xanthoastrocytoma*).tw.
6	or/3-5
7	Meningioma/ use ppez
8	Meningeal Neoplasms/ use ppez
9	exp meningioma/ use oemezd
10	meningioma*.tw.
11	(mening* adj3 (neoplas* or cancer* or carcin* or tumo* or malign* or h?emangiopericytoma* or h?emangioblastoma*).tw.
12	or/7-11
13	6 or 12
14	Diagnostic Imaging/ use ppez
15	diagnostic imaging/ use oemezd
16	exp Neuroimaging/ use ppez
17	exp neuroimaging/ use oemezd
18	Multimodal Imaging/ use ppez
19	multimodal imaging/ use oemezd
20	Radionuclide Imaging/ use ppez
21	exp brain scintiscanning/ use oemezd
22	Perfusion Imaging/ use ppez
23	Neuronal Tract-Tracers/ use ppez
24	neuronal tract tracer/ use oemezd
25	exp Magnetic Resonance Imaging/ use ppez
26	exp nuclear magnetic resonance imaging/ use oemezd
27	Diffusion Magnetic Resonance Imaging/ use ppez

#	Searches
28	exp Magnetic Resonance Spectroscopy/ use ppez
29	proton nuclear magnetic resonance/ use oemezd
30	magnetic resonance.tw.
31	(MRI or MR*1 or NMR*1).tw.
32	(MR adj2 (imag* or neuroimag* or scan* or spectroscop* or elastogra* or examination)).tw.
33	(magnet* adj2 (imag* or neuroimag* or spectroscop* or scan* or elastogra* or examination)).tw.
34	(magneti?ation adj2 imaging).tw.
35	exp Positron-Emission Tomography/ use ppez
36	positron emission tomography/ use oemezd
37	computer assisted emission tomography/ use oemezd
38	(PET adj (scan* or imag* or examination)).tw.
39	positron emission tomogra*.tw.
40	(PET or PET-CT or PETCT or PET MR*1).tw.
41	(spin adj2 (imag* or neuroimag* or spectroscop* or resonance)).tw.
42	(advanced adj2 (imag* or spectroscop* or neuroimag* or scan* or MR* or NMR*)).tw.
43	(chemical shift adj2 (imag* or spectroscop* or neuroimag* or scan* or MR* or NMR*)).tw.
44	(structural adj2 (imag* or spectroscop* or neuroimag* or scan* or MR* or NMR*)).tw.
45	(functional adj2 (imag* or spectroscop* or neuroimag* or scan* or MR* or NMR*)).tw.
46	(diffusion adj2 (imag* or spectroscop* or tractogra* or neuroimag* or scan* or MR* or NMR*)).tw.
47	(perfusion adj2 (imag* or spectroscop* or neuroimag* or scan* or MR* or NMR* or CT)).tw.
48	((axial or transverse) adj2 (imag* or neuroimag* or scan* or CT or tomogra*)).tw.
49	(T1W*1 or T2W*1).tw.
50	((T1 or T2) adj2 (imag* or neuroimag* or scan* or MR* or NMR*)).tw.
51	(DWI or DTI or DSC or DCE or ASL).tw.
52	exp nuclear magnetic resonance imaging agent/ use oemezd
53	dynamic contrast.tw.
54	Fluorodeoxyglucose F18/ use ppez
55	fluorodeoxyglucose f 18/ use oemezd
56	("18F fluorodeoxyglucose" or FDG).tw.
57	Tyrosine/ use ppez
58	"18F fluoro ethyl tyrosine".tw.
59	18F FET.tw.
60	Methionine/ use ppez
61	methionine c 11/ use oemezd
62	((11C or "carbon 11") adj methionine).tw.
63	MET PET.tw.
64	Gadolinium DTPA/ use ppez
65	gadolinium pentetate/ use oemezd
66	gadolinium.tw.
67	or/14-66

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## Diagnosing radiologically identified glioma, meningioma and brain metastases – Imaging Strategy

#	Searches
68	13 and 67
69	limit 68 to english language
70	limit 69 to yr="2002-Current"
71	Letter/ use ppez
72	letter.pt. or letter/ use oemezd
73	note.pt.
74	editorial.pt.
75	Editorial/ use ppez
76	News/ use ppez
77	exp Historical Article/ use ppez
78	Anecdotes as Topic/ use ppez
79	Comment/ use ppez
80	Case Report/ use ppez
81	case report/ or case study/ use oemezd
82	(letter or comment*).ti.
83	or/71-82
84	randomized controlled trial/ use ppez
85	randomized controlled trial/ use oemezd
86	random*.ti,ab.
87	or/84-86
88	83 not 87
89	animals/ not humans/ use ppez
90	animal/ not human/ use oemezd
91	nonhuman/ use oemezd
92	exp Animals, Laboratory/ use ppez
93	exp Animal Experimentation/ use ppez
94	exp Animal Experiment/ use oemezd
95	exp Experimental Animal/ use oemezd
96	exp Models, Animal/ use ppez
97	animal model/ use oemezd
98	exp Rodentia/ use ppez
99	exp Rodent/ use oemezd
100	(rat or rats or mouse or mice).ti.
101	or/88-100
102	70 not 101
103	Meta-Analysis/
104	Meta-Analysis as Topic/
105	systematic review/
106	meta-analysis/
107	(meta analy* or metanaly* or metaanaly*).ti,ab.
108	((systematic or evidence) adj2 (review* or overview*)).ti,ab.
109	((systematic* or evidence*) adj2 (review* or overview*)).ti,ab.

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Diagnosing radiologically identified glioma, meningioma and brain metastases – Imaging Strategy

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#	Searches
110	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
111	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
112	(search* adj4 literature).ab.
113	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
114	cochrane.jw.
115	((pool* or combined) adj2 (data or trials or studies or results)).ab.
116	or/103-104,107,109-114 use ppez
117	or/105-108,110-115 use oemezd
118	or/116-117
119	clinical Trials as topic.sh. or (controlled clinical trial or pragmatic clinical trial or randomized controlled trial).pt. or (placebo or randomi#ed or randomly).ab. or trial.ti.
120	119 use ppez
121	(controlled clinical trial or pragmatic clinical trial or randomized controlled trial).pt. or drug therapy.fs. or (groups or placebo or randomi#ed or randomly or trial).ab.
122	121 use ppez
123	crossover procedure/ or double blind procedure/ or randomized controlled trial/ or single blind procedure/ or (assign* or allocat* or crossover* or cross over* or ((doubl* or singl*) adj blind*) or factorial* or placebo* or random* or volunteer*).ti,ab.
124	123 use oemezd
125	120 or 122
126	124 or 125
127	Epidemiologic Studies/
128	Case Control Studies/
129	Retrospective Studies/
130	Cohort Studies/
131	Longitudinal Studies/
132	Follow-Up Studies/
133	Prospective Studies/
134	Cross-Sectional Studies/
135	or/127-134 use ppez
136	clinical study/
137	case control study/
138	family study/
139	longitudinal study/
140	retrospective study/
141	prospective study/
142	cohort analysis/
143	or/136-142 use oemezd
144	((retrospective\$ or cohort\$ or longitudinal or follow?up or prospective or cross section\$) adj3 (stud\$ or research or analys\$)).ti.
145	135 or 143 or 144
146	118 or 126 or 145

#	Searches
147	102 and 146
148	remove duplicates from 147

**Database: Cochrane Library via Wiley Online**Date of last search: 5<sup>th</sup> September 2017.

ID	Search
#1	MeSH descriptor: [Glioma] explode all trees
#2	(glioma* or glioblastoma* or gliosarcoma* or astrocytoma* or astroblastoma* or oligodendrogloma* or oligodendrocytoma* or oligoastrocytoma* or GBM)
#3	(glial near/3 (neoplas* or cancer* or tumo* or carcin* or malign* or metasta*))
#4	{or #1-#3}
#5	MeSH descriptor: [Meningioma] explode all trees
#6	MeSH descriptor: [Meningeal Neoplasms] explode all trees
#7	meningioma*
#8	(mening* near/3 (neoplas* or cancer* or carcin* or tumo* or malign* or metasta*))
#9	{or #5-#8}
#10	#4 or #9
#11	MeSH descriptor: [Diagnostic Imaging] this term only
#12	MeSH descriptor: [Neuroimaging] explode all trees
#13	MeSH descriptor: [Multimodal Imaging] explode all trees
#14	MeSH descriptor: [Radionuclide Imaging] this term only
#15	MeSH descriptor: [Perfusion Imaging] explode all trees
#16	MeSH descriptor: [Magnetic Resonance Imaging] explode all trees
#17	MeSH descriptor: [Diffusion Magnetic Resonance Imaging] explode all trees
#18	MeSH descriptor: [Magnetic Resonance Spectroscopy] explode all trees
#19	(MRI or MR*1 or NMR*1)
#20	(MR near/2 (imag* or neuroimag* or scan* or spectroscop* or elastogra* or examination))
#21	(magnet* near/2 (imag* or neuroimag* or spectroscop* or scan* or elastogra* or examination))
#22	(magneti?ation near/2 imaging)
#23	MeSH descriptor: [Positron-Emission Tomography] explode all trees
#24	(PET near (scan* or imag* or examination))
#25	positron emission tomogra*
#26	(PET or PET-CT or PETCT or PET MR*1)
#27	MeSH descriptor: [Spin Labels] explode all trees
#28	(spin near/2 (imag* or neuroimag* or spectroscop* or resonance))
#29	(advanced near/2 (imag* or spectroscop* or neuroimag* or scan* or MR* or NMR*))
#30	(chemical shift near/2 (imag* or spectroscop* or neuroimag* or scan* or MR* or NMR*))
#31	(structural near/2 (imag* or spectroscop* or neuroimag* or scan* or MR* or NMR*))
#32	(functional near/2 (imag* or spectroscop* or neuroimag* or scan* or MR* or NMR*))
#33	(diffusion near/2 (imag* or spectroscop* or tractogra* or neuroimag* or scan* or MR* or NMR*))

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Diagnosing radiologically identified glioma, meningioma and brain metastases – Imaging Strategy

ID	Search
#34	(perfusion near/2 (imag* or spectroscop* or neuroimag* or scan* or MR* or NMR* or CT))
#35	((axial or transverse) near/2 (imag* or neuroimag* or scan* or CT or tomogra*))
#36	(T1W*1 or T2W*1)
#37	((T1 or T2) near/2 (imag* or neuroimag* or scan* or MR* or NMR*))
#38	(DWI or DTI or DSC or DCE or ASL)
#39	dynamic contrast
#40	MeSH descriptor: [Fluorodeoxyglucose F18] explode all trees
#41	("18F fluorodeoxyglucose" or FDG)
#42	MeSH descriptor: [Tyrosine] this term only
#43	"18F fluoro ethyl tyrosine"
#44	18F FET
#45	MeSH descriptor: [Methionine] this term only
#46	((11C or "carbon 11") and methionine)
#47	MET PET
#48	MeSH descriptor: [Gadolinium DTPA] this term only
#49	gadolinium
#50	{or #11-#49}
#51	#10 and #50

# Diagnostic imaging for cerebral metastases

## 1b - What is the most appropriate diagnostic imaging for patients being considered for focal treatment of their brain metastases?

Last searched on **05/09/2017**

### Systematic reviews and RCTs

**Database(s): Embase 1980 to 2017 Week 35, Ovid MEDLINE(R) Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present**

#	Searches
1	exp Brain Neoplasms/ use ppez
2	exp brain tumor/ use emez
3	exp Cerebral Cortex/ use ppez
4	exp brain cortex/ use emez
5	exp Brain/ use ppez
6	exp brain/ use emez
7	exp Meninges/ use ppez
8	meninx/ use emez
9	or/1-8
10	exp Neoplasm Metastasis/ use ppez
11	metastasis/ use emez
12	10 or 11
13	9 and 12
14	exp Brain Neoplasms/sc use ppez
15	brain metastasis/ use emez
16	meningeal metastasis/ use emez
17	((brain or cereb* or intracereb* or intracrani* or menin* or brainstem*) adj3 (metasta* or micromet* or macromet* or oligomet* or spread* or carcinomatosis or carcinosis or secondar* or seeding or seeded or disseminat* or migrat*)).tw.
18	or/13-17
19	Diagnostic Imaging/ use ppez
20	diagnostic imaging/ use emez
21	exp Neuroimaging/ use ppez
22	exp neuroimaging/ use emez
23	Multimodal Imaging/ use ppez
24	multimodal imaging/ use emez
25	Radionuclide Imaging/ use ppez
26	exp brain scintiscanning/ use emez
27	exp Magnetic Resonance Imaging/ use ppez
28	exp nuclear magnetic resonance imaging/ use emez

#	Searches
29	exp Magnetic Resonance Spectroscopy/ use ppez
30	proton nuclear magnetic resonance/ use emez
31	magnetic resonance.tw.
32	(MRI or MR*1 or NMR*1).tw.
33	(MR adj2 (imag* or neuroimag* or scan* or spectroscop* or elastogra* or examination)).tw.
34	(magnet* adj2 (imag* or neuroimag* or spectroscop* or scan* or elastogra* or examination)).tw.
35	(magneti?ation adj2 imaging).tw.
36	exp Positron-Emission Tomography/ use ppez
37	positron emission tomography/ use emez
38	computer assisted emission tomography/ use emez
39	(PET adj (scan* or imag* or examination)).tw.
40	positron emission tomogra*.tw.
41	(PET or PET-CT or PET MR*1).tw.
42	(advanced adj2 (imag* or spectroscop* or neuroimag* or scan* or MR* or NMR*)).tw.
43	(structural adj2 (imag* or spectroscop* or neuroimag* or scan* or MR* or NMR*)).tw.
44	(functional adj2 (imag* or spectroscop* or neuroimag* or scan* or MR* or NMR*)).tw.
45	exp nuclear magnetic resonance imaging agent/ use emez
46	dynamic contrast.tw.
47	Fluorodeoxyglucose F18/ use ppez
48	fluorodeoxyglucose f 18/ use emez
49	("18F fluorodeoxyglucose" or FDG).tw.
50	Tyrosine/ use ppez
51	"18F fluoro ethyl tyrosine".tw.
52	18F FET.tw.
53	Methionine/ use ppez
54	methionine c 11/ use emez
55	((11C or "carbon 11") adj methionine).tw.
56	MET PET.tw.
57	Gadolinium DTPA/ use ppez
58	gadolinium pentetate/ use emez
59	gadolinium.tw.
60	or/19-59
61	18 and 60
62	limit 61 to english language
63	limit 62 to yr="2000 -Current"
64	Letter/ use ppez
65	letter.pt. or letter/ use emez
66	note.pt.
67	editorial.pt.
68	Editorial/ use ppez
69	News/ use ppez

#	Searches
70	exp Historical Article/ use ppez
71	Anecdotes as Topic/ use ppez
72	Comment/ use ppez
73	Case Report/ use ppez
74	case report/ or case study/ use emez
75	(letter or comment*).ti.
76	or/64-75
77	randomized controlled trial/ use ppez
78	randomized controlled trial/ use emez
79	random*.ti,ab.
80	or/77-79
81	76 not 80
82	animals/ not humans/ use ppez
83	animal/ not human/ use emez
84	nonhuman/ use emez
85	exp Animals, Laboratory/ use ppez
86	exp Animal Experimentation/ use ppez
87	exp Animal Experiment/ use emez
88	exp Experimental Animal/ use emez
89	exp Models, Animal/ use ppez
90	animal model/ use emez
91	exp Rodentia/ use ppez
92	exp Rodent/ use emez
93	(rat or rats or mouse or mice).ti.
94	or/81-93
95	63 not 94
96	Meta-Analysis/
97	Meta-Analysis as Topic/
98	systematic review/
99	meta-analysis/
100	(meta analy* or metanaly* or metaanaly*).ti,ab.
101	((systematic or evidence) adj2 (review* or overview*)).ti,ab.
102	((systematic* or evidence*) adj2 (review* or overview*)).ti,ab.
103	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
104	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
105	(search* adj4 literature).ab.
106	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
107	cochrane.jw.
108	((pool* or combined) adj2 (data or trials or studies or results)).ab.
109	or/96-97,100,102-107 use ppez

#	Searches
110	or/98-101,103-108 use emez
111	or/109-110
112	clinical Trials as topic.sh. or (controlled clinical trial or pragmatic clinical trial or randomized controlled trial).pt. or (placebo or randomi#ed or randomly).ab. or trial.ti.
113	112 use ppez
114	(controlled clinical trial or pragmatic clinical trial or randomized controlled trial).pt. or drug therapy.fs. or (groups or placebo or randomi#ed or randomly or trial).ab.
115	114 use ppez
116	crossover procedure/ or double blind procedure/ or randomized controlled trial/ or single blind procedure/ or (assign* or allocat* or crossover* or cross over* or ((doubl* or singl*) adj blind*) or factorial* or placebo* or random* or volunteer*).ti,ab.
117	116 use emez
118	113 or 115
119	117 or 118
120	111 or 119
121	95 and 120
122	remove duplicates from 121

## Observational studies

Last searched on 05/09/2017

**Database(s): Embase 1980 to 2017 Week 35, Ovid MEDLINE(R) Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present**

#	Searches
1	exp Brain Neoplasms/ use ppez
2	exp brain tumor/ use emez
3	exp Cerebral Cortex/ use ppez
4	exp brain cortex/ use emez
5	exp Brain/ use ppez
6	exp brain/ use emez
7	exp Meninges/ use ppez
8	meninx/ use emez
9	or/1-8
10	exp Neoplasm Metastasis/ use ppez
11	metastasis/ use emez
12	10 or 11
13	9 and 12
14	exp Brain Neoplasms/sc use ppez
15	brain metastasis/ use emez
16	meningeal metastasis/ use emez
17	((brain or cereb* or intracereb* or intracrani* or menin* or brainstem*) adj3 (metasta* or micromet* or macromet* or oligomet* or spread* or carcinomatosis or carcinosis or secondar* or seeding or seeded or disseminat* or migrat*).tw.

#	Searches
18	or/13-17
19	Diagnostic Imaging/ use ppez
20	diagnostic imaging/ use emez
21	exp Neuroimaging/ use ppez
22	exp neuroimaging/ use emez
23	Multimodal Imaging/ use ppez
24	multimodal imaging/ use emez
25	Radionuclide Imaging/ use ppez
26	exp brain scintiscanning/ use emez
27	exp Magnetic Resonance Imaging/ use ppez
28	exp nuclear magnetic resonance imaging/ use emez
29	exp Magnetic Resonance Spectroscopy/ use ppez
30	proton nuclear magnetic resonance/ use emez
31	magnetic resonance.tw.
32	(MRI or MR*1 or NMR*1).tw.
33	(MR adj2 (imag* or neuroimag* or scan* or spectroscop* or elastogra* or examination)).tw.
34	(magnet* adj2 (imag* or neuroimag* or spectroscop* or scan* or elastogra* or examination)).tw.
35	(magneti?ation adj2 imaging).tw.
36	exp Positron-Emission Tomography/ use ppez
37	positron emission tomography/ use emez
38	computer assisted emission tomography/ use emez
39	(PET adj (scan* or imag* or examination)).tw.
40	positron emission tomogra*.tw.
41	(PET or PET-CT or PET MR*1).tw.
42	(advanced adj2 (imag* or spectroscop* or neuroimag* or scan* or MR* or NMR*)).tw.
43	(structural adj2 (imag* or spectroscop* or neuroimag* or scan* or MR* or NMR*)).tw.
44	(functional adj2 (imag* or spectroscop* or neuroimag* or scan* or MR* or NMR*)).tw.
45	exp nuclear magnetic resonance imaging agent/ use emez
46	dynamic contrast.tw.
47	Fluorodeoxyglucose F18/ use ppez
48	fluorodeoxyglucose f 18/ use emez
49	("18F fluorodeoxyglucose" or FDG).tw.
50	Tyrosine/ use ppez
51	"18F fluoro ethyl tyrosine".tw.
52	18F FET.tw.
53	Methionine/ use ppez
54	methionine c 11/ use emez
55	((11C or "carbon 11") adj methionine).tw.
56	MET PET.tw.
57	Gadolinium DTPA/ use ppez
58	gadolinium pentetate/ use emez

#	Searches
59	gadolinium.tw.
60	or/19-59
61	18 and 60
62	limit 61 to english language
63	limit 62 to yr="2000 -Current"
64	Letter/ use ppez
65	letter.pt. or letter/ use emez
66	note.pt.
67	editorial.pt.
68	Editorial/ use ppez
69	News/ use ppez
70	exp Historical Article/ use ppez
71	Anecdotes as Topic/ use ppez
72	Comment/ use ppez
73	Case Report/ use ppez
74	case report/ or case study/ use emez
75	(letter or comment*).ti.
76	or/64-75
77	randomized controlled trial/ use ppez
78	randomized controlled trial/ use emez
79	random*.ti,ab.
80	or/77-79
81	76 not 80
82	animals/ not humans/ use ppez
83	animal/ not human/ use emez
84	nonhuman/ use emez
85	exp Animals, Laboratory/ use ppez
86	exp Animal Experimentation/ use ppez
87	exp Animal Experiment/ use emez
88	exp Experimental Animal/ use emez
89	exp Models, Animal/ use ppez
90	animal model/ use emez
91	exp Rodentia/ use ppez
92	exp Rodent/ use emez
93	(rat or rats or mouse or mice).ti.
94	or/81-93
95	63 not 94
96	Epidemiologic Studies/
97	Case Control Studies/
98	Retrospective Studies/
99	Cohort Studies/
100	Longitudinal Studies/

#	Searches
101	Follow-Up Studies/
102	Prospective Studies/
103	Cross-Sectional Studies/
104	or/96-103 use ppez
105	clinical study/
106	case control study/
107	family study/
108	longitudinal study/
109	retrospective study/
110	prospective study/
111	cohort analysis/
112	or/105-111 use emez
113	((retrospective\$ or cohort\$ or longitudinal or follow?up or prospective or cross section\$) adj3 (stud\$ or research or analys\$)).ti.
114	104 or 112 or 113
115	95 and 114
116	remove duplicates from 115

### Database: Cochrane Library via Wiley Online

Date of last search: 7th September 2017

ID	Search
#1	MeSH descriptor: [Brain Neoplasms] explode all trees
#2	MeSH descriptor: [Cerebral Cortex] explode all trees
#3	MeSH descriptor: [Brain] explode all trees
#4	MeSH descriptor: [Meninges] explode all trees
#5	{or #1-#4}
#6	MeSH descriptor: [Neoplasm Metastasis] explode all trees
#7	#5 and #6
#8	MeSH descriptor: [Brain Neoplasms] explode all trees and with qualifier(s): [Secondary - SC]
#9	((brain or cereb* or intracereb* or intracran* or mening* or brainstem*) near/3 (metasta* or micromet* or macromet* or oligomet* or spread* or carcinomatosis or carcinosis or secondar* or seeding or seeded or disseminat* or migrat*))
#10	{or #7-#9}
#11	MeSH descriptor: [Diagnostic Imaging] this term only
#12	MeSH descriptor: [Neuroimaging] explode all trees
#13	MeSH descriptor: [Multimodal Imaging] explode all trees
#14	MeSH descriptor: [Radionuclide Imaging] this term only
#15	MeSH descriptor: [Magnetic Resonance Imaging] explode all trees
#16	MeSH descriptor: [Magnetic Resonance Spectroscopy] explode all trees
#17	(MRI or MR*1 or NMR*1)
#18	(MR near/2 (imag* or neuroimag* or scan* or spectroscop* or elastogra* or examination))

ID	Search
#19	(magnet* near/2 (imag* or neuroimag* or spectroscop* or scan* or elastogra* or examination))
#20	(magneti?ation near/2 imaging)
#21	MeSH descriptor: [Positron-Emission Tomography] explode all trees
#22	(PET near (scan* or imag* or examination))
#23	positron emission tomogra*
#24	(PET or PET-CT or PETCT or PET MR*1)
#25	(advanced near/2 (imag* or spectroscop* or neuroimag* or scan* or MR* or NMR*))
#26	(structural near/2 (imag* or spectroscop* or neuroimag* or scan* or MR* or NMR*))
#27	(functional near/2 (imag* or spectroscop* or neuroimag* or scan* or MR* or NMR*))
#28	dynamic contrast
#29	MeSH descriptor: [Fluorodeoxyglucose F18] explode all trees
#30	("18F fluorodeoxyglucose" or FDG)
#31	MeSH descriptor: [Tyrosine] this term only
#32	"18F fluoro ethyl tyrosine"
#33	18F FET
#34	MeSH descriptor: [Methionine] this term only
#35	((11C or "carbon 11") and methionine)
#36	MET PET
#37	MeSH descriptor: [Gadolinium DTPA] this term only
#38	gadolinium
#39	{or #11-#38}
#40	#10 and #39 Publication Year from 2000 to 2017
ID	Search
#1	MeSH descriptor: [Brain Neoplasms] explode all trees
#2	MeSH descriptor: [Cerebral Cortex] explode all trees
#3	MeSH descriptor: [Brain] explode all trees
#4	MeSH descriptor: [Meninges] explode all trees
#5	{or #1-#4}
#6	MeSH descriptor: [Neoplasm Metastasis] explode all trees
#7	#5 and #6
#8	MeSH descriptor: [Brain Neoplasms] explode all trees and with qualifier(s): [Secondary - SC]
#9	((brain or cereb* or intracereb* or intracrani* or menin* or brainstem*) near/3 (metasta* or micromet* or macromet* or oligomet* or spread* or carcinomatosis or carcinosis or secondar* or seeding or seeded or disseminat* or migrat*))
#10	{or #7-#9}
#11	MeSH descriptor: [Diagnostic Imaging] this term only
#12	MeSH descriptor: [Neuroimaging] explode all trees
#13	MeSH descriptor: [Multimodal Imaging] explode all trees
#14	MeSH descriptor: [Radionuclide Imaging] this term only
#15	MeSH descriptor: [Magnetic Resonance Imaging] explode all trees
#16	MeSH descriptor: [Magnetic Resonance Spectroscopy] explode all trees

ID	Search
#17	(MRI or MR*1 or NMR*1)
#18	(MR near/2 (imag* or neuroimag* or scan* or spectroscop* or elastogra* or examination))
#19	(magnet* near/2 (imag* or neuroimag* or spectroscop* or scan* or elastogra* or examination))
#20	(magneti?ation near/2 imaging)
#21	MeSH descriptor: [Positron-Emission Tomography] explode all trees
#22	(PET near (scan* or imag* or examination))
#23	positron emission tomogra*
#24	(PET or PET-CT or PETCT or PET MR*1)
#25	(advanced near/2 (imag* or spectroscop* or neuroimag* or scan* or MR* or NMR*))
#26	(structural near/2 (imag* or spectroscop* or neuroimag* or scan* or MR* or NMR*))
#27	(functional near/2 (imag* or spectroscop* or neuroimag* or scan* or MR* or NMR*))
#28	dynamic contrast
#29	MeSH descriptor: [Fluorodeoxyglucose F18] explode all trees
#30	("18F fluorodeoxyglucose" or FDG)
#31	MeSH descriptor: [Tyrosine] this term only
#32	"18F fluoro ethyl tyrosine"
#33	18F FET
#34	MeSH descriptor: [Methionine] this term only
#35	((11C or "carbon 11") and methionine)
#36	MET PET
#37	MeSH descriptor: [Gadolinium DTPA] this term only
#38	gadolinium
#39	{or #11-#38}
#40	#10 and #39 Publication Year from 2000 to 2017
ID	Search
#1	MeSH descriptor: [Brain Neoplasms] explode all trees
#2	MeSH descriptor: [Cerebral Cortex] explode all trees
#3	MeSH descriptor: [Brain] explode all trees
#4	MeSH descriptor: [Meninges] explode all trees
#5	{or #1-#4}
#6	MeSH descriptor: [Neoplasm Metastasis] explode all trees
#7	#5 and #6
#8	MeSH descriptor: [Brain Neoplasms] explode all trees and with qualifier(s): [Secondary - SC]
#9	((brain or cereb* or intracereb* or intracrani* or menin* or brainstem*) near/3 (metasta* or micromet* or macromet* or oligomet* or spread* or carcinomatosis or carcinosis or secondar* or seeding or seeded or disseminat* or migrat*))
#10	{or #7-#9}
#11	MeSH descriptor: [Diagnostic Imaging] this term only
#12	MeSH descriptor: [Neuroimaging] explode all trees
#13	MeSH descriptor: [Multimodal Imaging] explode all trees
#14	MeSH descriptor: [Radionuclide Imaging] this term only

ID	Search
#15	MeSH descriptor: [Magnetic Resonance Imaging] explode all trees
#16	MeSH descriptor: [Magnetic Resonance Spectroscopy] explode all trees
#17	(MRI or MR*1 or NMR*1)
#18	(MR near/2 (imag* or neuroimag* or scan* or spectroscop* or elastogra* or examination))
#19	(magnet* near/2 (imag* or neuroimag* or spectroscop* or scan* or elastogra* or examination))
#20	(magneti?ation near/2 imaging)
#21	MeSH descriptor: [Positron-Emission Tomography] explode all trees
#22	(PET near (scan* or imag* or examination))
#23	positron emission tomogra*
#24	(PET or PET-CT or PETCT or PET MR*1)
#25	(advanced near/2 (imag* or spectroscop* or neuroimag* or scan* or MR* or NMR*))
#26	(structural near/2 (imag* or spectroscop* or neuroimag* or scan* or MR* or NMR*))
#27	(functional near/2 (imag* or spectroscop* or neuroimag* or scan* or MR* or NMR*))
#28	dynamic contrast
#29	MeSH descriptor: [Fluorodeoxyglucose F18] explode all trees
#30	("18F fluorodeoxyglucose" or FDG)
#31	MeSH descriptor: [Tyrosine] this term only
#32	"18F fluoro ethyl tyrosine"
#33	18F FET
#34	MeSH descriptor: [Methionine] this term only

# Timing and extent of initial surgery for low-grade glioma

## What is the optimal timing and extent of initial surgery for suspected low-grade glioma?

### Systematic review and RCTs

Last searched on **05/09/2017**

**Database(s): Embase 1980 to 2017 Week 35, Ovid MEDLINE(R) Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present**

#	Searches
1	exp Glioma/su use ppez or exp Astrocytoma/su use ppez or Oligodendrogloma/su use ppez
2	exp glioma/su use emez or exp astrocytoma/su use emez
3	1 or 2
4	Neoplasm Grading/ use ppez
5	cancer grading/ use emez
6	4 or 5
7	3 and 6
8	((grade* 2 or two or II) adj3 (glioma* or astrocytoma* or ganglioglioma* or oligodendrogloma* or oligoastrocytoma* or oligo-astrocytoma* or xanthoastrocytoma*).tw.
9	((grade* 1 or one or I) adj3 (glioma* or astrocytoma* or ganglioglioma* or oligodendrogloma* or oligoastrocytoma* or oligo-astrocytoma* or xanthoastrocytoma*).tw.
10	((low grade or non-invasive or mixed or premalignant or pre-malignant or atypical or discrete or diffuse or local* or myxopapillary or pilocytic or cerebellar or pilomyxoid or angioblastic or fibrillary or protoplasmic or chordoid) adj3 (glioma* or astrocytoma* or oligodendrogloma* or oligoastrocytoma* or oligo-astrocytoma* or xanthoastrocytoma*).tw.
11	or/7-10
12	exp Neurosurgical Procedures/ use ppez
13	Neurosurgery/ use ppez
14	exp Biopsy/ use ppez
15	Watchful Waiting/ use ppez
16	Observation/ use ppez
17	exp Monitoring, Physiologic/ use ppez
18	or/12-17
19	exp neurosurgery/ use emez
20	brain biopsy/ use emez
21	craniotomy/ use emez
22	watchful waiting/ use emez
23	observation/ use emez
24	physiologic monitoring/ use emez

#	Searches
25	patient monitoring/ use emez
26	or/19-25
27	18 or 26
28	(craniotom* or craniectomy* or lesionectomy*).tw.
29	((partial or subtotal or gross or total or maxim* or extent or extensive or complete or greater or awake or wakeful) adj3 (ablat* or biops* or cytoreduc* or debulk* or excis* or microsur* or neurosurg* or operat* or procedure* or resect* or surg*).tw.
30	((watch* adj2 wait*) or (wait adj2 see)).tw.
31	((active or expect* or watch* or patient* or regular* symptom*) adj2 (manag* or monitor* or surveill* or observ* or control*).tw.
32	or/27-31
33	11 and 32
34	limit 33 to english language
35	limit 34 to yr="1980 –Current"
36	Letter/ use ppez
37	letter.pt. or letter/ use emez
38	note.pt.
39	editorial.pt.
40	Editorial/ use ppez
41	News/ use ppez
42	exp Historical Article/ use ppez
43	Anecdotes as Topic/ use ppez
44	Comment/ use ppez
45	Case Report/ use ppez
46	case report/ or case study/ use emez
47	(letter or comment*).ti.
48	or/36-47
49	randomized controlled trial/ use ppez
50	randomized controlled trial/ use emez
51	random*.ti,ab.
52	or/49-51
53	48 not 52
54	animals/ not humans/ use ppez
55	animal/ not human/ use emez
56	nonhuman/ use emez
57	exp Animals, Laboratory/ use ppez
58	exp Animal Experimentation/ use ppez
59	exp Animal Experiment/ use emez
60	exp Experimental Animal/ use emez
61	exp Models, Animal/ use ppez
62	animal model/ use emez
63	exp Rodentia/ use ppez
64	exp Rodent/ use emez

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Timing and extent of initial surgery for low-grade glioma

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#	Searches
65	(rat or rats or mouse or mice).ti.
66	or/53-65
67	35 not 66
68	Meta-Analysis/
69	Meta-Analysis as Topic/
70	systematic review/
71	meta-analysis/
72	(meta analy* or metanaly* or metaanaly*).ti,ab.
73	((systematic or evidence) adj2 (review* or overview*)).ti,ab.
74	((systematic* or evidence*) adj2 (review* or overview*)).ti,ab.
75	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
76	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
77	(search* adj4 literature).ab.
78	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
79	cochrane.jw.
80	((pool* or combined) adj2 (data or trials or studies or results)).ab.
81	or/68-69,72,74-79 use ppez
82	or/70-73,75-80 use emez
83	or/81-82
84	clinical Trials as topic.sh. or (controlled clinical trial or pragmatic clinical trial or randomized controlled trial).pt. or (placebo or randomi#ed or randomly).ab. or trial.ti.
85	84 use ppez
86	(controlled clinical trial or pragmatic clinical trial or randomized controlled trial).pt. or drug therapy.fs. or (groups or placebo or randomi#ed or randomly or trial).ab.
87	86 use ppez
88	crossover procedure/ or double blind procedure/ or randomized controlled trial/ or single blind procedure/ or (assign* or allocat* or crossover* or cross over* or ((doubl* or singl*) adj blind*) or factorial* or placebo* or random* or volunteer*).ti,ab.
89	88 use emez
90	85 or 87
91	89 or 90
92	83 or 91
93	67 and 92
94	remove duplicates from 93

## Observational studies

Last searched on: 05/09/2017

**Database(s): Embase 1980 to 2017 Week 35, Ovid MEDLINE(R) Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present**

#	Searches
1	exp Glioma/su use ppez or exp Astrocytoma/su use ppez or Oligodendrogloma/su use ppez
2	exp glioma/su use emez or exp astrocytoma/su use emez
3	1 or 2
4	Neoplasm Grading/ use ppez
5	cancer grading/ use emez
6	4 or 5
7	3 and 6
8	((grade* 2 or two or II) adj3 (glioma* or astrocytoma* or ganglioglioma* or oligodendrogloma* or oligoastrocytoma* or oligo-astrocytoma* or xanthoastrocytoma*).tw.
9	((grade* 1 or one or I) adj3 (glioma* or astrocytoma* or ganglioglioma* or oligodendrogloma* or oligoastrocytoma* or oligo-astrocytoma* or xanthoastrocytoma*).tw.
10	((low grade or non-invasive or mixed or premalignant or pre-malignant or atypical or discrete or diffuse or local* or myxopapillary or pilocytic or cerebellar or pilomyxoid or angioblastic or fibrillary or protoplasmic or chordoid) adj3 (glioma* or astrocytoma* or oligodendrogloma* or oligoastrocytoma* or oligo-astrocytoma* or xanthoastrocytoma*).tw.
11	or/7-10
12	exp Neurosurgical Procedures/ use ppez
13	Neurosurgery/ use ppez
14	exp Biopsy/ use ppez
15	Watchful Waiting/ use ppez
16	Observation/ use ppez
17	exp Monitoring, Physiologic/ use ppez
18	or/12-17
19	exp neurosurgery/ use emez
20	brain biopsy/ use emez
21	craniotomy/ use emez
22	watchful waiting/ use emez
23	observation/ use emez
24	physiologic monitoring/ use emez
25	patient monitoring/ use emez
26	or/19-25
27	18 or 26
28	(craniotom* or craniectom* or lesionectomy*).tw.
29	((partial or subtotal or gross or total or maxim* or extent or extensive or complete or greater or awake or wakeful) adj3 (ablat* or biops* or cytoreduc* or debulk* or excis* or microsur* or neurosurg* or operat* or procedure* or resect* or surg*).tw.
30	((watch* adj2 wait*) or (wait adj2 see)).tw.

#	Searches
31	((active or expect* or watch* or patient* or regular* symptom*) adj2 (manag* or monitor* or surveill* or observ* or control*).tw.
32	or/27-31
33	11 and 32
34	limit 33 to english language
35	limit 34 to yr="1980 -Current"
36	Letter/ use ppez
37	letter.pt. or letter/ use emez
38	note.pt.
39	editorial.pt.
40	Editorial/ use ppez
41	News/ use ppez
42	exp Historical Article/ use ppez
43	Anecdotes as Topic/ use ppez
44	Comment/ use ppez
45	Case Report/ use ppez
46	case report/ or case study/ use emez
47	(letter or comment*).ti.
48	or/36-47
49	randomized controlled trial/ use ppez
50	randomized controlled trial/ use emez
51	random*.ti,ab.
52	or/49-51
53	48 not 52
54	animals/ not humans/ use ppez
55	animal/ not human/ use emez
56	nonhuman/ use emez
57	exp Animals, Laboratory/ use ppez
58	exp Animal Experimentation/ use ppez
59	exp Animal Experiment/ use emez
60	exp Experimental Animal/ use emez
61	exp Models, Animal/ use ppez
62	animal model/ use emez
63	exp Rodentia/ use ppez
64	exp Rodent/ use emez
65	(rat or rats or mouse or mice).ti.
66	or/53-65
67	35 not 66
68	Epidemiologic Studies/
69	Case Control Studies/
70	Retrospective Studies/
71	Cohort Studies/

#	Searches
72	Longitudinal Studies/
73	Follow-Up Studies/
74	Prospective Studies/
75	Cross-Sectional Studies/
76	or/68-75 use ppez
77	clinical study/
78	case control study/
79	family study/
80	longitudinal study/
81	retrospective study/
82	prospective study/
83	cohort analysis/
84	or/77-83 use emez
85	((retrospective* or cohort* or longitudinal or follow?up or prospective or cross section*) adj3 (stud* or research or analys*)).ti.
86	76 or 84 or 85
87	67 and 86
88	remove duplicates from 87

#### Database: Cochrane Library via Wiley Online

Date of last search: 7<sup>th</sup> September 2017.

ID	Search
#1	MeSH descriptor: [Glioma] explode all trees and with qualifier(s): [Surgery - SU]
#2	MeSH descriptor: [Astrocytoma] explode all trees and with qualifier(s): [Surgery - SU]
#3	MeSH descriptor: [Oligodendrogloma] explode all trees and with qualifier(s): [Surgery - SU]
#4	{or #1-#3}
#5	MeSH descriptor: [Neoplasm Grading] this term only
#6	#4 and #5
#7	((grade* 2 or two or II) near/3 (glioma* or astrocytoma* or ganglioglioma* or oligodendrogloma* or oligoastrocytoma* or oligo-astrocytoma* or xanthoastrocytoma*))
#8	((grade* 1 or one or I) near/3 (glioma* or astrocytoma* or ganglioglioma* or oligodendrogloma* or oligoastrocytoma* or oligo-astrocytoma* or xanthoastrocytoma*))
#9	((low grade or non-invasive or mixed or premalignant or pre-malignant or atypical or discrete or diffuse or local* or myxopapillary or pilocytic or cerebellar or pilomyxoid or angioblastic or fibrillary or protoplasmic or chordoid) near/3 (glioma* or astrocytoma* or oligodendrogloma* or oligoastrocytoma* or oligo-astrocytoma* or xanthoastrocytoma*))
#10	{or #6-#9}
#11	MeSH descriptor: [Neurosurgical Procedures] explode all trees
#12	MeSH descriptor: [Neurosurgery] this term only
#13	MeSH descriptor: [Biopsy] explode all trees
#14	MeSH descriptor: [Watchful Waiting] this term only
#15	MeSH descriptor: [Observation] this term only
#16	MeSH descriptor: [Monitoring, Physiologic] explode all trees

DRAFT FOR CONSULTATION  
Timing and extent of initial surgery for low-grade glioma

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ID	Search
#17	(craniotom* or craniectomy* or lesionectomy*)
#18	((partial or subtotal or gross or total or maxim* or extent or extensive or complete or greater or awake or wakeful) near/3 (ablat* or biops* or cytoreduc* or debulk* or excis* or microsur* or neurosurg* or operat* or procedure* or resect* or surg*))
#19	((watch* near/2 wait*) or (wait near/2 see))
#20	((active or expect* or watch* or patient* or regular* symptom*) near/2 (manag* or monitor* or surveill* or observ* or control*))
#21	{or #11-#20}
#22	#10 and #21 Publication Year from 1980 to 2017

# Molecular markers to determine prognosis / guide treatment for gliomas

## 1d What are the most useful molecular markers to determine prognosis/guide treatment for gliomas?

Last searched on **05/09/2017**

**Database(s): Embase 1980 to 2017 Week 35, Ovid MEDLINE(R) Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present**

#	Searches
1	exp glioma/ or exp astrocytoma/ or oligodendrogioma/
2	exp Glioblastoma/
3	1 or 2 use ppez
4	exp glioma/ use emez or exp astrocytoma/ use emez
5	(glioma* or glioblastoma* or GBM or gliosarcoma* or astrocytoma* or oligoastrocytoma* or oligodendrogioma* or oligo?astrocytoma* or xanthoastrocytoma*).tw.
6	or/3-5
7	Proto-Oncogene Proteins B-raf/ use ppez
8	B Raf kinase/ use emez
9	(BRAF or B-RAF or NS7 or RAFB1).tw.
10	or/7-9
11	Receptor, Epidermal Growth Factor/ use ppez
12	epidermal growth factor receptor/ use emez
13	(epidermal growth factor or egf receptor or (growth factor adj3 receptor) or (erbb-1 adj3 receptor) or (erbb-1 adj3 protein)).tw.
14	(EGFR or ERBB or HER1 or mENA or ERBB1 or PIG61 or NISBD2).tw.
15	or/11-14
16	Telomerase/ use ppez
17	telomerase reverse transcriptase/ use emez
18	telomerase reverse transcriptase.tw.
19	(TERT or hTERT or TERTmut or TP2 or TRT or CMM9 or EST2 or TCS1 or hTRT or DKCA2 or DKCB4 or hEST2 or PFBMFT1).tw.
20	or/16-19
21	10 or 15 or 20
22	6 and 21
23	6 and 10
24	exp Disease Free Survival/ use ppez
25	disease free survival/ use emez
26	survival.tw.
27	exp Prognosis/ use ppez
28	prognosis.tw.

#	Searches
29	exp Survival Rate/ use ppez
30	survival rate/ use emez
31	or/24-30
32	exp Treatment Outcome/ use ppez
33	exp treatment outcome/ use emez
34	((treatment* or therap*) adj (outcome* or response*).tw.
35	or/32-34
36	23 and (31 or 35)
37	22 and 31
38	36 or 37
39	limit 38 to english language
40	limit 39 to yr="2008 -Current"
41	Letter/ use ppez
42	letter.pt. or letter/ use emez
43	note.pt.
44	editorial.pt.
45	Editorial/ use ppez
46	News/ use ppez
47	exp Historical Article/ use ppez
48	Anecdotes as Topic/ use ppez
49	Comment/ use ppez
50	Case Report/ use ppez
51	case report/ or case study/ use emez
52	(letter or comment*).ti.
53	or/41-52
54	randomized controlled trial/ use ppez
55	randomized controlled trial/ use emez
56	random*.ti,ab.
57	or/54-56
58	53 not 57
59	animals/ not humans/ use ppez
60	animal/ not human/ use emez
61	nonhuman/ use emez
62	exp Animals, Laboratory/ use ppez
63	exp Animal Experimentation/ use ppez
64	exp Animal Experiment/ use emez
65	exp Experimental Animal/ use emez
66	exp Models, Animal/ use ppez
67	animal model/ use emez
68	exp Rodentia/ use ppez
69	exp Rodent/ use emez
70	(rat or rats or mouse or mice).ti.

#	Searches
71	or/58-70
72	40 not 71
73	remove duplicates from 72

- Database: Cochrane Library via Wiley Online

Date of last search: 7<sup>th</sup> September 2017.

ID	Search
#1	MeSH descriptor: [Glioma] explode all trees
#2	(glioma* or glioblastoma* or GBM or gliosarcoma* or astrocytoma* or oligoastrocytoma* or oligodendrogioma* or oligo?astrocytoma* or xanthoastrocytoma*)
#3	{or #1-#2}
#4	MeSH descriptor: [Proto-Oncogene Proteins B-raf] this term only
#5	(BRAF or B-RAF or NS7 or RAFB1)
#6	MeSH descriptor: [Receptor, Epidermal Growth Factor] this term only
#7	(epidermal growth factor or egf receptor or (growth factor near/3 receptor) or (erbb-1 near/3 receptor) or (erbb-1 near/3 protein))
#8	(EGFR or ERBB or HER1 or mENA or ERBB1 or PIG61 or NISBD2)
#9	MeSH descriptor: [Telomerase] this term only
#10	(telomerase and reverse and transcriptase)
#11	(TERT or hTERT or TERTmut or TP2 or TRT or CMM9 or EST2 or TCS1 or hTRT or DKCA2 or DKCB4 or hEST2 or PFBMFT1)
#12	{or #3-#11}
#13	#3 and #12 Publication Year from 2008 to 2017

# Management of low grade glioma

## 2a What is the optimal management (observation, surgery, radiotherapy, chemotherapy or combinations of these) for histologically proven low-grade glioma?

Last searched on 07/09/2017

Database(s): Embase 1980 to 2017 Week 35, Ovid MEDLINE(R) Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present

#	Searches
1	((grade* 2 or two or II) adj3 (glioma* or astrocytoma* or ganglioglioma* or oligodendrogloma* or oligoastrocytoma* or oligo-astrocytoma* or xanthoastrocytoma*).tw.
2	((grade* 1 or one or I) adj3 (glioma* or astrocytoma* or ganglioglioma* or oligodendrogloma* or oligoastrocytoma* or oligo-astrocytoma* or xanthoastrocytoma*).tw.
3	((low grade or low-grade or non invasive or non-invasive or mixed or premalignant or pre-malignant or atypical or discrete or diffuse or local* or myxopapillary or pilocytic or cerebellar or pilomyxoid or angiocentric or fibrillary or protoplasmic or chordoid) adj3 (glioma* or astrocytoma* or oligodendrogloma* or oligoastrocytoma* or oligo-astrocytoma* or xanthoastrocytoma*).tw.
4	LGG.tw.
5	or/1-4
6	(dt or rt or su or th).fs.
7	Neurosurgery/ use ppez
8	exp Neurosurgical Procedures/ use ppez
9	Surgical Procedures, Operative/ use ppez
10	exp Biopsy/ use ppez
11	exp Stereotaxic Techniques/ use ppez
12	Neuroendoscopy/ use ppez
13	exp cancer surgery/ use emez
14	exp neurosurgery/ use emez
15	tumor ablation/ use emez
16	brain biopsy/ use emez
17	craniotomy/ use emez
18	exp stereotactic procedure/ use emez
19	((brain or neuro* or intracereb* or intracrani* or crani* or cereb*) adj2 (surg* or microsurg* or manipulat* or procedur* or operat* or resect* or debulk* or excis* or ablat* or biops* or remov* or aspirat* or shunt*).tw.
20	(neurosurg* or craniotom* or craniectom* or lesionectomy*).tw.
21	(ventriculostom* or ventriculocisternostom*).tw.
22	((intra-operat* or intraoperat*) adj3 (technolog* or modalit* or procedur* or technique* or method*).tw.
23	or/6-22
24	exp Radiotherapy/ use ppez

#	Searches
25	exp radiotherapy/ use emez
26	(radiotherap* or radiat* or irradiat* or tomotherap* or radiosurg* or brachytherap* or fractionat* or hyperfraction* or hypofraction* or gamma knife or cyber knife or cyberknife or xknife or arc therap* or proton beam or carbon ion or boron neutron).tw.
27	((proton* or particle* or hadron or neutron) adj2 (therap* or treatment* or procedure* or modalit*).tw.
28	(WBRT or WBI-IMRT or HA-WBRT or LINAC or IMRT or IGRT or XRT or XBT or SRS or SRT or VMAT or 3DCRT or 3D CRT or CRT or BNCT or CPT).tw.
29	Radiation Oncology/ use ppez
30	(chemoradiotherap* chemo-radiotherap* or chemoradiat* or chemo-radiat* or chemoirradiat* or chemo-irradiat* or radiochemotherap* or radio-chemotherap*).tw.
31	or/24-30
32	exp Antineoplastic Agents/ use ppez
33	exp antineoplastic agent/ use emez
34	exp Combined Modality Therapy/ use ppez
35	multimodality cancer therapy/ use emez
36	exp combination drug therapy/ use emez
37	antineoplastic protocols/ use ppez or antineoplastic combined chemotherapy protocols/ use ppez or drug therapy, combination/ use ppez
38	((combin* or concomitant or concurrent) adj2 (therap* or treatment* or regimen* or protocol* or drug* or agent*).tw.
39	CCRT.tw.
40	exp chemotherapy/ use emez
41	chemotherap*.tw.
42	((anticancer or anti-cancer or systemic or antineoplas* or anti-neoplas* or cytotoxi*) adj2 (therap* or treatment* or regimen* or protocol* or drug* or agent*).tw.
43	PCV.tw.
44	Lomustine/ use ppez
45	lomustine/ use emez
46	(belustine or ccnu or cecenu or ceenu or lomustine or nsc?79037).tw.
47	Procarbazine/ use ppez
48	procarbazine/ use emez
49	(matulan or natulan or procarbazine).tw.
50	temozolomide/ use emez
51	(temozolomide or temodal or temodar).tw.
52	Vincristine/ use ppez
53	vincristine/ use emez
54	(citomid or farmistin or leucocristine or oncovin? or onkocristin or vincasar or vincristin? or vincrisul or vintec).tw.
55	or/32-54
56	Watchful Waiting/ use ppez
57	watchful waiting/ use emez
58	Observation/ use ppez
59	observation/ use emez

#	Searches
60	physiologic monitoring/ use emez
61	patient monitoring/ use emez
62	((watch* adj2 wait*) or (wait adj2 see)).tw.
63	((active or expect* or watch* or patient* or regular* symptom*) adj2 (manag* or monitor* or surveill* or observ* or control*)).tw.
64	or/56-63
65	23 or 31 or 55 or 64
66	5 and 65
67	Letter/ use ppez
68	letter.pt. or letter/ use emez
69	note.pt.
70	editorial.pt.
71	Editorial/ use ppez
72	News/ use ppez
73	exp Historical Article/ use ppez
74	Anecdotes as Topic/ use ppez
75	Comment/ use ppez
76	Case Report/ use ppez
77	case report/ or case study/ use emez
78	(letter or comment*).ti.
79	or/67-78
80	randomized controlled trial/ use ppez
81	randomized controlled trial/ use emez
82	random*.ti,ab.
83	or/80-82
84	79 not 83
85	animals/ not humans/ use ppez
86	animal/ not human/ use emez
87	nonhuman/ use emez
88	exp Animals, Laboratory/ use ppez
89	exp Animal Experimentation/ use ppez
90	exp Animal Experiment/ use emez
91	exp Experimental Animal/ use emez
92	exp Models, Animal/ use ppez
93	animal model/ use emez
94	exp Rodentia/ use ppez
95	exp Rodent/ use emez
96	(rat or rats or mouse or mice).ti.
97	or/84-96
98	66 not 97
99	limit 98 to english language
100	limit 99 to yr="1985 -Current"

#	Searches
101	Meta-Analysis/
102	Meta-Analysis as Topic/
103	systematic review/
104	meta-analysis/
105	(meta analy* or metanaly* or metaanaly*).ti,ab.
106	((systematic or evidence) adj2 (review* or overview*).ti,ab.
107	((systematic* or evidence*) adj2 (review* or overview*).ti,ab.
108	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
109	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
110	(search* adj4 literature).ab.
111	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
112	cochrane.jw.
113	((pool* or combined) adj2 (data or trials or studies or results)).ab.
114	or/101-102,105,107-112 use ppez
115	or/103-106,108-113 use emez
116	or/114-115
117	clinical Trials as topic.sh. or (controlled clinical trial or pragmatic clinical trial or randomized controlled trial).pt. or (placebo or randomi#ed or randomly).ab. or trial.ti.
118	117 use ppez
119	(controlled clinical trial or pragmatic clinical trial or randomized controlled trial).pt. or drug therapy.fs. or (groups or placebo or randomi#ed or randomly or trial).ab.
120	119 use ppez
121	crossover procedure/ or double blind procedure/ or randomized controlled trial/ or single blind procedure/ or (assign* or allocat* or crossover* or cross over* or ((doubl* or singl*) adj blind*) or factorial* or placebo* or random* or volunteer*).ti,ab.
122	121 use emez
123	118 or 120
124	122 or 123
125	116 or 124
126	100 and 125
127	remove duplicates from 126

#### Database: Cochrane Library via Wiley Online

Date of last search: 7th September 2017.

ID	Search
#1	((grade* 2 or two or II) near/3 (glioma* or astrocytoma* or ganglioglioma* or oligodendrogioma* or oligoastrocytoma* or oligo-astrocytoma* or xanthoastrocytoma*))
#2	((grade* 1 or one or I) near/3 (glioma* or astrocytoma* or ganglioglioma* or oligodendrogioma* or oligoastrocytoma* or oligo-astrocytoma* or xanthoastrocytoma*))
#3	((low grade or low-grade or non invasive or non-invasive or mixed or premalignant or pre-malignant or atypical or discrete or diffuse or local* or myxopapillary or pilocytic or cerebellar or pilomyxoid or angiocentric or fibrillary or protoplasmic or chordoid) near/3

ID	Search
	(glioma* or astrocytoma* or oligodendrogloma* or oligoastrocytoma* or oligo-astrocytoma* or xanthoastrocytoma*)
#4	LGG
#5	{or #1-#4} Publication Year from 1985 to 2017
#6	MeSH descriptor: [Neurosurgery] this term only
#7	MeSH descriptor: [Neurosurgical Procedures] explode all trees
#8	MeSH descriptor: [Surgical Procedures, Operative] explode all trees
#9	MeSH descriptor: [Biopsy] explode all trees
#10	MeSH descriptor: [Stereotaxic Techniques] explode all trees
#11	MeSH descriptor: [Neuroendoscopy] this term only
#12	((brain or neuro* or intracereb* or intracrani* or crani* or cereb*) near/2 (surg* or microsurg* or manipulat* or procedur* or operat* or resect* or debulk* or excis* or ablat* or biops* or remov* or aspirat* or shunt*)) or neurosurg* or craniotom* or craniectom* or lesionectom* or ventriculostom* or ventriculocisternostom*)
#13	((intra-operat* or intraoperat*) near/3 (technolog* or modalit* or procedur* or technique* or method*))
#14	MeSH descriptor: [Radiotherapy] explode all trees
#15	(radiotherap* or radiat* or irradiat* or tomotherap* or radiosurg* or brachytherap* or fractionat* or hyperfraction* or hypofraction* or gamma knife or cyber knife or cyberknife or xknife or arc therap* or proton beam or carbon ion or boron neutron)
#16	((proton* or particle* or hadron or neutron) near/2 (therap* or treatment* or procedure* or modalit*))
#17	(WBRT or WBI-IMRT or HA-WBRT or LINAC or IMRT or IGRT or XRT or XBT or SRS or SRT or VMAT or 3DCRT or 3D CRT or CRT or BNCT or CPT)
#18	(chemo*radiotherap* or chemo*radiat* or chemo*irradiat* or radio*chemotherap*)
#19	MeSH descriptor: [Antineoplastic Agents] explode all trees
#20	MeSH descriptor: [Combined Modality Therapy] explode all trees
#21	MeSH descriptor: [Antineoplastic Protocols] explode all trees
#22	MeSH descriptor: [Drug Therapy, Combination] this term only
#23	((combin* or concomitant or concurrent) near/2 (therap* or treatment* or regimen* or protocol* or drug* or agent*))
#24	chemotherap*
#25	((anti*cancer or systemic or anti*neoplas* or cytotoxi*) near/2 (therap* or treatment* or regimen* or protocol* or drug* or agent*))
#26	PCV
#27	MeSH descriptor: [Lomustine] explode all trees
#28	(belustine or ccnu or cecenu or ceenu or lomustine)
#29	MeSH descriptor: [Procarbazine] explode all trees
#30	(matulan or natulan or procarbazine)
#31	(temozolamide or temodal or temodar)
#32	MeSH descriptor: [Vincristine] explode all trees
#33	(citomid or farmistin or leucocristine or oncovin* or onkocristin or vincasar or vincristin* or vincrisul or vintec)
#34	MeSH descriptor: [Watchful Waiting] this term only
#35	MeSH descriptor: [Monitoring, Physiologic] explode all trees

ID	Search
#36	((watch* near/2 wait*) or (wait near/2 see))
#37	((active or expect* or watch* or patient* or regular* symptom*) near/2 (manag* or monitor* or surveill* or observ* or control*))
#38	{or #6-#37}
#39	#5 and #38

# Maximal safe resection for glioma

## Which surgical adjuncts optimise maximal safe resection of glioma?

### Systematic reviews and RCTs

Last searched on 12/09/2017

**Database: Embase 1947 to 2017 May 03, Ovid MEDLINE(R) Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present**

#	Searches
1	exp glioma/ or exp astrocytoma/ or oligodendrogioma/
2	exp Glioblastoma/
3	1 or 2 use ppez
4	exp glioma/ use emczd or exp astrocytoma/ use emczd
5	(glioma* or glioblastoma* or GBM or gliosarcoma* or astrocytoma* or oligoastrocytoma* or oligodendrogioma* or oligo?astrocytoma* or xanthoastrocytoma*).tw.
6	or/1-5
7	Surgery, Computer-Assisted/ use ppez
8	computer assisted surgery/ use emczd
9	7 or 8
10	6 and 9
11	Brain Neoplasms/dg use ppez and Brain Neoplasms/su use ppez
12	exp brain radiography/ use emczd and brain tumor/su use emczd
13	11 or 12
14	Neurosurgery/ use ppez
15	neurosurgery/ use emczd
16	Neurosurgical Procedures/ use ppez
17	Craniotomy/ use ppez
18	craniotomy/ use emczd
19	(craniotom* or craniectom*).tw.
20	(ablat* or biops* or cytoreduc* or debulk* or excis* or microsur* or neurosurg* or operat* or procedure* or resect* or surg*).tw.
21	or/14-20
22	6 and 21
23	10 or 13 or 22
24	Neuronavigation/ use ppez
25	neuronavigation/ use emczd
26	Monitoring, Intraoperative/ use ppez
27	exp intraoperative monitoring/ use emczd
28	((intra-operative or intraoperative or peri-operative or perioperative or perisurg* or peri-surg*) adj3 (tech* or modalit* or monitor* or navigat*)).tw.

#	Searches
29	(neuronavigat* or neuro-navigat* or neuroimag* or neuro-imag* or neuromonitor* or neuro-monitor*).tw.
30	((brain or neuro* or intracereb* or intra-cereb* or intracrani* or intra-crani* or crani*) adj2 navigat*).tw.
31	(frameless stereota* or imag* guid*).tw.
32	Aminolevulinic Acid/ use ppez
33	aminolevulinic acid/ use emczd
34	(5ALA or 5-ALA or 5-amino?evulin* or aminolevulinic acid or amino levulinic acid or gliolan or levulan).tw.
35	Fluorescence/ use ppez
36	exp fluorescence/ use emczd
37	fluorescen*.tw.
38	or/24-37
39	Craniotomy/ use ppez
40	Wakefulness/ use ppez or Stereotaxic Techniques/ use ppez
41	39 and 40
42	craniotomy/ use emczd
43	wakefulness/ use emczd or stereotactic procedure/ use emczd
44	42 and 43
45	((awake or wakeful* or stereota*) adj2 (craniotom* or craniectom* or biops* or cytoreduc* or debult* or microsurg* or neurosurg* or operat* or procedure* or resect* or surg*)).tw.
46	or/38,41,44-45
47	exp Neuroimaging/ use ppez
48	exp neuroimaging/ use emczd
49	brain mapping/ use emczd
50	Electric Stimulation/ use ppez
51	electrostimulation/ use emczd
52	Deep Brain Stimulation/ use ppez
53	brain depth stimulation/ use emczd
54	exp Electroencephalography/ use ppez
55	exp electroencephalography/ use emczd
56	((electric* or electro* or brain or cereb* or cortex or cortical or neuro* or subcortex or subcortical or bipolar or bi-polar or monopolar or mono-polar) adj3 (mapping or stimulat*)).tw.
57	(electrocorticogra* or ECoG).tw.
58	(electrosubcorticogra* or ESubCoG).tw.
59	((intracranial or intra-crani*) adj3 electroencephalogra*) or iEEG).tw.
60	Ultrasonography/ use ppez
61	Imaging, Three-Dimensional/ use ppez
62	3D.tw.
63	exp echography/ use emczd
64	three dimensional imaging/ use emczd
65	((intraoperat* or intra-operat* or operative) adj2 (ultraso* or sonogra* or echogra*)).tw.

#	Searches
66	exp Magnetic Resonance Imaging/ use ppez
67	exp nuclear magnetic resonance imaging/ use emczd
68	((intraoperat* or intra-operat* or operative) adj2 (MR*1 or fMRI or magnetic resonance or DTI or imag* or tractogra*).tw.
69	(iMRI or ioMRI).tw.
70	or/46-69
71	23 and 70
72	limit 71 to english language
73	Letter/ use ppez
74	letter.pt. or letter/ use emczd
75	note.pt.
76	editorial.pt.
77	Editorial/ use ppez
78	News/ use ppez
79	exp Historical Article/ use ppez
80	Anecdotes as Topic/ use ppez
81	Comment/ use ppez
82	Case Report/ use ppez
83	case report/ or case study/ use emczd
84	(letter or comment*).ti.
85	or/73-84
86	randomized controlled trial/ use ppez
87	randomized controlled trial/ use emczd
88	random*.ti,ab.
89	or/86-88
90	85 not 89
91	animals/ not humans/ use ppez
92	animal/ not human/ use emczd
93	nonhuman/ use emczd
94	exp Animals, Laboratory/ use ppez
95	exp Animal Experimentation/ use ppez
96	exp Animal Experiment/ use emczd
97	exp Experimental Animal/ use emczd
98	exp Models, Animal/ use ppez
99	animal model/ use emczd
100	exp Rodentia/ use ppez
101	exp Rodent/ use emczd
102	(rat or rats or mouse or mice).ti.
103	or/90-102
104	72 not 103
105	clinical Trials as topic.sh. or (controlled clinical trial or pragmatic clinical trial or randomized controlled trial).pt. or (placebo or randomi#ed or randomly).ab. or trial.ti.

#	Searches
106	105 use ppez
107	(controlled clinical trial or pragmatic clinical trial or randomized controlled trial).pt. or drug therapy.fs. or (groups or placebo or randomi#ed or randomly or trial).ab.
108	107 use ppez
109	crossover procedure/ or double blind procedure/ or randomized controlled trial/ or single blind procedure/ or (assign* or allocat* or crossover* or cross over* or ((doubl* or singl*) adj blind*) or factorial* or placebo* or random* or volunteer*).ti,ab.
110	109 use emczd
111	106 or 108
112	110 or 111
113	Meta-Analysis/
114	Meta-Analysis as Topic/
115	systematic review/
116	meta-analysis/
117	(meta analy* or metanaly* or metaanaly*).ti,ab.
118	((systematic or evidence) adj2 (review* or overview*)).ti,ab.
119	((systematic* or evidence*) adj2 (review* or overview*)).ti,ab.
120	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
121	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
122	(search* adj4 literature).ab.
123	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
124	cochrane.jw.
125	((pool* or combined) adj2 (data or trials or studies or results)).ab.
126	or/113-114,117,119-124 use ppez
127	or/112-115,117-122 use emczd
128	or/126-127
129	112 or 128
130	104 and 129
131	remove duplicates from 130

## Observational studies

Last searched on 12/09/2017

**Database: Embase 1947 to 2017 May 03, Ovid MEDLINE(R) Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present**

#	Searches
1	exp glioma/ or exp astrocytoma/ or oligodendrogioma/
2	exp Glioblastoma/
3	1 or 2 use ppez
4	exp glioma/ use emczd or exp astrocytoma/ use emczd

#	Searches
5	(glioma* or glioblastoma* or GBM or gliosarcoma* or astrocytoma* or oligoastrocytoma* or oligodendrogioma* or oligo?astrocytoma* or xanthoastrocytoma*).tw.
6	or/1-5
7	Surgery, Computer-Assisted/ use ppez
8	computer assisted surgery/ use emczd
9	7 or 8
10	6 and 9
11	Brain Neoplasms/dg use ppez and Brain Neoplasms/su use ppez
12	exp brain radiography/ use emczd and brain tumor/su use emczd
13	11 or 12
14	Neurosurgery/ use ppez
15	neurosurgery/ use emczd
16	Neurosurgical Procedures/ use ppez
17	Craniotomy/ use ppez
18	craniotomy/ use emczd
19	(craniotom* or craniectom*).tw.
20	(ablat* or biops* or cytoreduc* or debulk* or excis* or microsur* or neurosurg* or operat* or procedure* or resect* or surg*).tw.
21	or/14-20
22	6 and 21
23	10 or 13 or 22
24	Neuronavigation/ use ppez
25	neuronavigation/ use emczd
26	Monitoring, Intraoperative/ use ppez
27	exp intraoperative monitoring/ use emczd
28	((intra-operative or intraoperative or peri-operative or perioperative or perisurg* or peri-surg*) adj3 (tech* or modalit* or monitor* or navigat*).tw.
29	(neuronavigat* or neuro-navigat* or neuroimag* or neuro-imag* or neuromonitor* or neuro-monitor*).tw.
30	((brain or neuro* or intracereb* or intra-cereb* or intracrani* or intra-crani* or crani*) adj2 navigat*).tw.
31	(frameless stereota* or imag* guid*).tw.
32	Aminolevulinic Acid/ use ppez
33	aminolevulinic acid/ use emczd
34	(5ALA or 5-ALA or 5-aminol?evulin* or aminolevulinic acid or amino levulinic acid or gliolan or levulan).tw.
35	Fluorescence/ use ppez
36	exp fluorescence/ use emczd
37	fluorescen*.tw.
38	or/24-37
39	Craniotomy/ use ppez
40	Wakefulness/ use ppez or Stereotaxic Techniques/ use ppez
41	39 and 40

#	Searches
42	craniotomy/ use emczd
43	wakefulness/ use emczd or stereotactic procedure/ use emczd
44	42 and 43
45	((awake or wakeful* or stereota*) adj2 (craniotom* or craniectom* or biops* or cytoreduc* or debult* or microsurg* or neurosurg* or operat* or procedure* or resect* or surg*).tw.
46	or/38,41,44-45
47	exp Neuroimaging/ use ppez
48	exp neuroimaging/ use emczd
49	brain mapping/ use emczd
50	Electric Stimulation/ use ppez
51	electrostimulation/ use emczd
52	Deep Brain Stimulation/ use ppez
53	brain depth stimulation/ use emczd
54	exp Electroencephalography/ use ppez
55	exp electroencephalography/ use emczd
56	((electric* or electro* or brain or cereb* or cortex or cortical or neuro* or subcortex or subcortical or bipolar or bi-polar or monopolar or mono-polar) adj3 (mapping or stimulat*).tw.
57	(electrocorticogra* or ECoG).tw.
58	(electrosubcorticogra* or ESubCoG).tw.
59	((intracranial or intra-cranial) adj3 electroencephalogra*) or iEEG).tw.
60	Ultrasonography/ use ppez
61	Imaging, Three-Dimensional/ use ppez
62	3D.tw.
63	exp echography/ use emczd
64	three dimensional imaging/ use emczd
65	((intraoperat* or intra-operat* or operative) adj2 (ultraso* or sonogra* or echogra*).tw.
66	exp Magnetic Resonance Imaging/ use ppez
67	exp nuclear magnetic resonance imaging/ use emczd
68	((intraoperat* or intra-operat* or operative) adj2 (MR*1 or fMRI or magnetic resonance or DTI or imag* or tractogra*).tw.
69	(iMRI or ioMRI).tw.
70	or/46-69
71	23 and 70
72	limit 71 to english language
73	Letter/ use ppez
74	letter.pt. or letter/ use emczd
75	note.pt.
76	editorial.pt.
77	Editorial/ use ppez
78	News/ use ppez
79	exp Historical Article/ use ppez
80	Anecdotes as Topic/ use ppez

#	Searches
81	Comment/ use ppez
82	Case Report/ use ppez
83	case report/ or case study/ use emczd
84	(letter or comment*).ti.
85	or/73-84
86	randomized controlled trial/ use ppez
87	randomized controlled trial/ use emczd
88	random*.ti,ab.
89	or/86-88
90	85 not 89
91	animals/ not humans/ use ppez
92	animal/ not human/ use emczd
93	nonhuman/ use emczd
94	exp Animals, Laboratory/ use ppez
95	exp Animal Experimentation/ use ppez
96	exp Animal Experiment/ use emczd
97	exp Experimental Animal/ use emczd
98	exp Models, Animal/ use ppez
99	animal model/ use emczd
100	exp Rodentia/ use ppez
101	exp Rodent/ use emczd
102	(rat or rats or mouse or mice).ti.
103	or/90-102
104	72 not 103
105	Epidemiologic Studies/
106	Case Control Studies/
107	Retrospective Studies/
108	Cohort Studies/
109	Longitudinal Studies/
110	Follow-Up Studies/
111	Prospective Studies/
112	Cross-Sectional Studies/
113	or/105-112 use ppez
114	clinical study/
115	case control study/
116	family study/
117	longitudinal study/
118	retrospective study/
119	prospective study/
120	cohort analysis/
121	or/114-120 use emczd

#	Searches
122	((retrospective\$ or cohort\$ or longitudinal or follow?up or prospective or cross section\$) adj3 (stud\$ or research or analys\$)).ti.
123	113 or 121 or 122
124	104 and 123
125	remove duplicates from 124

### Database: Cochrane Library via Wiley Online

Date of last search: 12<sup>th</sup> September 2017.

ID	Search
#1	MeSH descriptor: [Glioma] explode all trees
#2	MeSH descriptor: [Astrocytoma] explode all trees
#3	MeSH descriptor: [Oligodendrogioma] explode all trees
#4	MeSH descriptor: [Glioblastoma] explode all trees
#5	(glioma* or glioblastoma* or GBM or gliosarcoma* or astrocytoma* or oligoastrocytoma* or oligodendrogioma* or oligo?astrocytoma* or xanthoastrocytoma*)
#6	{or #1-#5}
#7	MeSH descriptor: [Surgery, Computer-Assisted] explode all trees
#8	#6 and #7
#9	MeSH descriptor: [Neurosurgery] explode all trees
#10	MeSH descriptor: [Neurosurgical Procedures] explode all trees
#11	(craniotom* or craniectom*)
#12	(ablat* or biops* or cytoreduc* or debulk* or microsur* or neurosurg* or operat* or procedure* or resect* or surg*)
#13	{or #9-#12}
#14	#6 and #13
#15	#8 or #14
#16	MeSH descriptor: [Neuronavigation] explode all trees
#17	MeSH descriptor: [Monitoring, Intraoperative] explode all trees
#18	((intra-operative or intraoperative or peri-operative or perioperative or perisurg* or peri-surg*) near/5 (tech* or modalit* or monitor* or navigat*))
#19	(neuronavigat* or neuro-navigat* or neuroimag* or neuro-imag* or neuromonitor* or neuro-monitor*)
#20	((brain or neuro* or intracereb* or intra-cereb* or intracrani* or intra-crani* or crani*) near/3 navigat*)
#21	(frameless stereota* or imag* guid*)
#22	MeSH descriptor: [Aminolevulinic Acid] explode all trees
#23	(5ALA or 5-ALA or 5-amino?evulin* or aminolevulinic acid or amino levulinic acid or gliolan or levulan)
#24	MeSH descriptor: [Fluorescence] explode all trees
#25	fluorescen*
#26	((awake or wakeful* or stereota*) near/3 (craniotom* or craniectom* or biops* or cytoreduc* or debult* or excis* or microsur* or neurosurg* or operat* or procedure* or resect* or surg*))
#27	MeSH descriptor: [Neuroimaging] explode all trees

ID	Search
#28	MeSH descriptor: [Electric Stimulation] explode all trees
#29	MeSH descriptor: [Deep Brain Stimulation] explode all trees
#30	MeSH descriptor: [Electroencephalography] explode all trees
#31	((electric* or electro* or brain or cereb* or cortex or cortical or neuro* or subcortex or subcortical or bipolar or bi-polar or monopolar or mono-polar) near/3 (mapping or stimulat*))
#32	(electrocorticogra* or ECoG)
#33	(electrosubcorticogra* or ESubCoG)
#34	((intracranial or intra-cranial) near/3 electroencephalogra*) or iEEG)
#35	MeSH descriptor: [Ultrasonography] explode all trees
#36	MeSH descriptor: [Imaging, Three-Dimensional] explode all trees
#37	3D
#38	((intraoperat* or intra-operat* or operative) near/3 (ultraso* or sonogra* or echogra*))
#39	MeSH descriptor: [Magnetic Resonance Imaging] explode all trees
#40	((intraoperat* or intra-operat* or operative) near/3 (MR* or fMR* or magnetic resonance or DTI or imag* or tractogra*))
#41	(iMRI or ioMRI)
#42	{or #16-#41}
#43	#15 and #42

## Managing high grade glioma

**2c Following surgery, what is the optimal management (radiotherapy, chemotherapy, combinations of these, or other therapies such as metformin or tumour-treating fields) of initial high-grade glioma?**

**2d What is the optimal management (surgery, radiotherapy, chemotherapy, combinations of these, or other therapies such as metformin or tumour-treating fields) of recurrent high-grade glioma?**

### Systematic reviews

Last searched on **07/09/2017**

- Database: Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present

#	Searches
1	exp Glioma/ or exp Astrocytoma/ or Oligodendrogioma/
2	Anaplasia/ or Neoplasm Recurrence, Local/
3	secondary.fs.
4	2 or 3
5	1 and 4
6	exp Glioblastoma/
7	5 or 6
8	(glioblastoma* or GBM).tw.
9	gliosarcoma*.tw.
10	((grade* 4 or four or IV) adj3 (glioma* or astrocytoma* or oligodendrogli* or oligodendroblastoma* or oligo?astrocytoma*).tw.
11	((grade* 3 or three or III) adj3 (glioma* or astrocytoma* or oligodendrogli* or oligodendroblastoma* or oligo?astrocytoma*).tw.
12	((high grade or malignant or invasive or anaplas* or recurr* or transform*) adj3 (glioma* or astrocytoma* or oligodendrogli* or oligodendroblastoma* or oligo?astrocytoma*).tw.
13	or/7-12
14	Neurosurgery/
15	exp Neurosurgical Procedures/
16	Surgical Procedures, Operative/
17	exp Stereotaxic Techniques/
18	Neuroendoscopy/
19	surgery.fs.

#	Searches
20	((brain or neuro* or intracereb* or intracrani* or crani* or cereb*) adj2 (surg* or microsurg* or manipulat* or procedur* or operat* or resect* or debulk* or excis* or ablat* or biops* or aspirat* or shunt*).tw.
21	(neurosurg* or craniotom* or craniectom*).tw.
22	(ventriculostom* or ventriculocisternostom*).tw.
23	(intra?operat* adj3 (technolog* or modalit* or procedur* or technique* or method*)).tw.
24	or/14-23
25	exp Radiotherapy/
26	radiotherapy.fs.
27	(radiotherap* or radiat* or irradiat* or tomotherap* or radiosurg* or brachytherap* or fractionat* or hyperfraction* or hypofraction* or gamma knife or cyber knife or cyberknife or xknife or arc therap* or proton beam or carbon ion or boron neutron).tw.
28	(WBRT or WBI-IMRT or HA-WBRT or LINAC or IMRT or IGRT or XRT or XBT or SRS or SRT or VMAT or 3DCRT or 3D CRT or CRT or BNCT).tw.
29	Radiation Oncology/
30	(chemo?radiotherap* or chemo?radiat* or chemo?irradiat* or radio?chemotherap*).tw.
31	or/25-30
32	exp Antineoplastic Agents/
33	exp Combined Modality Therapy/
34	antineoplastic protocols/ or antineoplastic combined chemotherapy protocols/ or drug therapy, combination/
35	((combin* or concomitant or concurrent) adj2 (therap* or treatment* or regimen* or protocol* or drug* or agent*).tw.
36	CCRT.tw.
37	stupp.tw.
38	exp Antibodies, Monoclonal/
39	exp Angiogenesis Inhibitors/
40	exp Vascular Endothelial Growth Factors/
41	Cancer Vaccines/
42	exp Immunotherapy/
43	Oncolytic Virotherapy/
44	exp Antiviral Agents/
45	(virotherap* or anti?viral*).tw.
46	((virus or viral or anti?virus or anti?viral) adj2 (therap* or treatment* or regimen* or protocol* or agent* or drug*).tw.
47	(anti?angiogenic or (angiogenesis and inhibit*).tw.
48	vascular endothelial growth factor*.tw.
49	(VEGF or VEGFR or VEGF-R).tw.
50	drug therapy.fs.
51	chemotherap*.tw.
52	((anti?cancer or systemic or anti?neoplas* or cytotoxi*) adj2 (therap* or treatment* or regimen* or protocol* or drug* or agent*).tw.
53	Bevacizumab/
54	(bevacizumab or altusan or avastin).tw.

#	Searches
55	exp Bleomycin/
56	(blanoxan or blenoxane or bleo?cell or bleolem or bleomycin* or peplomycin or phleomycin*).tw.
57	Carboplatin/
58	(blastocarb or carboplatin or carbosin or carbotec or cbdca or ercar or jm8 or nealorin or neocarbo or nsc24120 or paraplatin* or platinwas or ribocarbo).tw.
59	Carmustine/
60	exp Absorbable Implants/
61	exp Drug Implants/
62	(bcnu or bicnu or carmustine or fivb or gliadel wafer* or nitros?urea* or nitrumon).tw.
63	(cilcane or cilengitide or impetreve).tw.
64	Cisplatin/
65	(biocisplatinum or cddp or cisplatin or cis?diamminedichloroplatinum or cis?platinum or dichlorodiammineplatinum or platidiam or platino* or platinum).tw.
66	Cyclophosphamide/
67	(cyclophosphamide or cyclophosphan* or cytoxan or endoxan or nsc?26271 or neosar or procytox or sendoxan).tw.
68	Cytarabine/
69	(ara?c or arabinofuranosylcytosine or arabinoside or arabinosylcytosine or aracytidine or aracytine or cytarabine or cytonal or cytosar*).tw.
70	Dacarbazine/
71	(biocarbazine or carboxamide or dtic or dticdome or d?carbazine or deticene or icdt or nsc?45388).tw.
72	Dactinomycin/
73	(actinomycin or cosmegan or dactinomycin or meractinomycin).tw.
74	Etoposide/
75	(celltop or eposide or eposin or etomodac or etopos* or exitop or lastet or nsc?141540 or onkoposid or riboposid or toposar or vp?16?213 or vepesid).tw.
76	Ganciclovir/
77	(biolf?62 or bw?759 or cytovene or ganc?clovir or rs?21592 or virgan).tw.
78	(valganc?clovir or cymeval or darilin or patheon or rovalcyte or syntex or valcyt*1 or valixa).tw.
79	(DC?vax or (dentric cell? adj (vaccin* or immunotherap*))).tw.
80	Ifosfamide/
81	(holoxan or ifosfamide or ifosphamide or iso-endoxan or isofosfamide or isophosphamide).tw.
82	(Ipilimumab or yervoy).tw.
83	(irinotecan or campto*).tw.
84	Lomustine/
85	(belustine or ccnu or cecenu or ceenu or lomustine or nsc?79037).tw.
86	Methotrexate/
87	(amethopterin or methotrexate or mexate).tw.
88	Nimustine/
89	(acnu or nimustine or nsc?245382).tw.

#	<b>Searches</b>
90	(nivolumab or opdivo).tw.
91	Procarbazine/
92	(matulan or natulan or procarbazine).tw.
93	(rindopepitum or rintega).tw.
94	(sitimagene ceradenovec or cerepro).tw.
95	Tamoxifen/
96	(nolvadex or novaldex or soltamox or tamoxifen or tomoxithen or zitazonium).tw.
97	(temozolamide or temodal or temodar).tw.
98	Teniposide/
99	(nsc?122819 or ten?poside or vm?26 or vumon).tw.
100	Vinblastine/
101	(lemblastine or velban or velbe or vinblastin* or vincleukoblastin*).tw.
102	Vincristine/
103	(citomid or farmistin or leucocristine or oncovin? or onkocristin or pcv or vincasar or vincristin? or vincrisul or vintec).tw.
104	or/32-103
105	exp Metformin/
106	(dimethylbiguanidine or glucophage or metformin).tw.
107	105 or 106
108	exp Hydroxymethylglutaryl-CoA Reductase Inhibitors/
109	(hmg?coa reductase inhibitor* or statin* or (hydroxymethylglutaryl adj2 inhibitor*)).tw.
110	(atorvastatin or lipitor or liptonorm or ci?981).tw.
111	(lovastatin or 6?methylcompactin or mk?803 or mevacor or mevinolin or monacolin).tw.
112	(meglutol or methylglutar* acid).tw.
113	(pravastatin or bristacol or cs?514 or elisor or eptastatin or lipemol or liplat or lipostat or mevalotin or prareduct or pravac?ol or pravasin or rms?431 or sq?31000 or selektine or vasten).tw.
114	(rosuvastatin or crestor or zd?4522).tw.
115	(simvastatin or mk?733 or synvinolin or zocor).tw.
116	or/108-115
117	Ketogenic Diet/
118	Caloric Restriction/
119	Diet, Carbohydrate-Restricted/
120	Diet, Protein-Restricted/
121	diet therapy.fs.
122	((calor* or carbohydrate* or protein*) adj2 (low or restrict* or diet*)).tw.
123	or/117-122
124	Cannabis/
125	exp Cannabinoids/
126	(cannabi* or hashish* or hemp* or mari?uana* or sativex).tw.
127	or/124-126
128	exp Electric Stimulation Therapy/
129	Electromagnetic Fields/

#	Searches
130	((electr* or tumo* treat*) adj2 (field* or therap* or treatment*).tw.
131	(TTField* or TTF or NovoTTF).tw.
132	or/128-131
133	Watchful Waiting/
134	Observation/
135	(watch* adj2 wait*).tw.
136	((active or expect* or symptom* or watch*) adj2 (manag* or monitor* or surveill* or observ* or control*).tw.
137	(best supportive care or BSC).tw.
138	supportive care.tw.
139	or/133-138
140	or/24,31,104,107,116,123,127,132,139
141	13 and 140
142	limit 141 to english language
143	limit 142 to yr="1977 -Current"
144	Letter/
145	Editorial/
146	News/
147	exp Historical Article/
148	Anecdotes as Topic/
149	Comment/
150	Case Report/
151	(letter or comment* or abstracts).ti.
152	or/144-151
153	Randomized Controlled Trial/ or random*.ti,ab.
154	152 not 153
155	Animals/ not Humans/
156	exp Animals, Laboratory/
157	exp Animal Experimentation/
158	exp Models, Animal/
159	exp Rodentia/
160	(rat or rats or mouse or mice).ti.
161	or/154-160
162	143 not 161
163	Meta-Analysis/
164	Meta-Analysis as Topic/
165	(meta analy* or metanaly* or metaanaly*).ti,ab.
166	((systematic* or evidence*) adj2 (review* or overview*).ti,ab.
167	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
168	(search strateg* or search criteria or systematic search or study selection or data extraction).ab.
169	(search* adj4 literature).ab.

#	Searches
170	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
171	cochrane.jw.
172	or/163-171
173	162 and 172

Last searched on **07/09/2017**

**Database: Embase 1980 to 2016 Week 35.**

#	Searches
1	exp glioma/
2	exp astrocytoma/
3	1 or 2
4	anaplastic carcinoma/
5	tumor recurrence/ or "oncogenesis and malignant transformation"/
6	exp "oncogenesis and malignant transformation"/
7	exp Glioma/ or exp Astrocytoma/
8	anaplastic carcinoma/
9	exp "oncogenesis and malignant transformation"/
10	8 or 9
11	7 and 10
12	glioblastoma/
13	11 or 12
14	(glioblastoma* or GBM).tw.
15	gliosarcoma*.tw.
16	((grade* 4 or four or IV) adj3 (glioma* or astrocytoma* or oligodendrogli* or oligodendroblastoma* or oligo?astrocytoma*).tw.
17	((grade* 3 or three or III) adj3 (glioma* or astrocytoma* or oligodendrogli* or oligodendroblastoma* or oligo?astrocytoma*).tw.
18	((high grade or malignant or invasive or anaplas* or recurr* or transform*) adj3 (glioma* or astrocytoma* or oligodendrogli* or oligodendroblastoma* or oligo?astrocytoma*).tw.
19	or/13-18
20	exp neurosurgery/
21	exp cancer surgery/
22	surgery.fs.
23	exp stereotactic procedure/
24	tumor ablation/
25	((brain or neuro* or intracereb* or intracrani* or crani* or cereb*) adj2 (surg* or microsurg* or manipulat* or procedur* or operat* or resect* or debulk* or excis* or ablat* or biops* or aspirat* or shunt*).tw.
26	(neurosurg* or craniotom* or craniectom*).tw.
27	(ventriculostom* or ventriculocisternostom*).tw.
28	(intra?operat* adj3 (technolog* or modalit* or procedur* or technique* or method*).tw.

#	Searches
29	or/20-28
30	exp radiotherapy/
31	radiotherapy.fs.
32	(radiotherap* or radiat* or irradiat* or tomotherap* or radiosurg* or brachytherap* or fractionat* or hyperfraction* or hypofraction* or gamma knife or cyber knife or cyberknife or xknife or arc therap* or proton beam or carbon ion or boron neutron).tw.
33	(WBRT or WBI-IMRT or HA-WBRT or LINAC or IMRT or IGRT or XRT or XBT or SRS or SRT or VMAT or 3DCRT or 3D CRT or CRT or BNCT).tw.
34	(chemo?radiotherap* or chemo?radiat* or chemo?irradiat* or radio?chemotherap*).tw.
35	or/30-34
36	exp antineoplastic agent/
37	multimodality cancer therapy/
38	exp combination drug therapy/
39	((combin* or concomitant or concurrent) adj2 (therap* or treatment* or regimen* or protocol* or drug* or agent*)).tw.
40	CCRT.tw.
41	stupp.tw.
42	exp chemotherapy/
43	exp monoclonal antibody/
44	oncolytic virotherapy/
45	exp antivirus agent/
46	exp cancer vaccine/
47	cancer gene therapy/
48	exp angiogenesis inhibitor/
49	vasculotropin/
50	exp cancer immunotherapy/
51	target cell destruction/
52	drug therapy.fs.
53	chemotherap*.tw.
54	((anti cancer or systemic or anti neoplas* or cytotoxi*) adj2 (therap* or treatment* or regimen* or protocol* or drug* or agent*)).tw.
55	(virotherap* or anti?viral*).tw.
56	((virus or viral or anti?virus or anti?viral) adj2 (therap* or treatment* or regimen* or protocol* or agent* or drug*)).tw.
57	(anti?angiogenic or (angiogenesis and inhibit*)).tw.
58	vascular endothelial growth factor*.tw.
59	(VEGF or VEGFR or VEGF-R).tw.
60	bevacizumab/
61	(bevacizumab or avastin or altusan).tw.
62	exp Bleomycin/
63	(blanoxan or blenoxane or bleo?cell or bleolem or bleomycin* or peplomycin or phleomycin*).tw.
64	carboplatin/

#	Searches
65	(blastocarb or carboplatin or carbosin or carbotec or cbdca or ercar or jm8 or nealorin or neocarbo or nsc24120 or paraplatin* or platinwas or ribocarbo).tw.
66	carmustine/
67	biodegradable implant/
68	drug implant/
69	(bcnu or bicnru or carmustine or fivb or gliadel wafer* or nitros?urea* or nitrumon).tw.
70	cilengitide/
71	(cilcane or cilengitide or impetreve).tw.
72	cisplatin/
73	(biocisplatin or cddp or cisplatin or cis?diamminedichloroplatinum or cis?platinum or dichlorodiammineplatinum or platidiam or platino* or platinum).tw.
74	cyclophosphamide/
75	(cyclophosphamide or cyclophosphan* or cytoxan or endoxan or nsc?26271 or neosar or procytox or sendoxan).tw.
76	cytarabine/
77	(ara?c or arabinofuranosylcytosine or arabinoside or arabinosylcytosine or aracytidine or aracytine or cytarabine or cytonal or cytosar*).tw.
78	dacarbazine/
79	(biocarbazine or carboxamide or dtic or dticdome or d?carbazine or deticene or icdt or nsc?45388).tw.
80	dactinomycin/
81	(actinomycin or cosmegan or dactinomycin or meractinomycin).tw.
82	dendritic cell vaccine/
83	(DCVAX or (dentr? cell? adj (vaccin* or immnuotherap*)).tw.
84	etoposide/
85	(celltop or eposide or eposin or etomodac or etopos* or exitop or lastet or nsc?141540 or onkoposid or riboposid or toposar or vp?16?213 or vepesid).tw.
86	ganciclovir/
87	(biolf?62 or bw?759 or cytovene or ganc?clovir or rs?21592 or virgan).tw.
88	(valganc?clovir or cymeval or darilin or patheon or rovalcyte or syntex or valcyt?1 or valixa).tw.
89	ifosfamide/
90	(holoxan or ifosfamide or ifosphamide or iso-endoxan or isofosfamide or isophosphamide).tw.
91	ipilimumab/
92	(Ipilimumab or yervoy).tw.
93	irinotecan/
94	(Irinotecan or campto*).tw.
95	lomustine/
96	(belustine or ccnu or cecenu or ceenu or lomustine or nsc79037).tw.
97	methotrexate/
98	(amethopterin or methotrexate or mexate).tw.
99	nimustine/
100	(acnru or nimustine or nsc?245382).tw.

#	Searches
101	nivolumab/
102	(Nivolumab or opdivo).tw.
103	procarbazine/
104	(matulan or natulan or procarbazine).tw.
105	rindopepimut/
106	(rindopepimut or rintega).tw.
107	sitimagene ceradenovec/
108	(sitimagene ceradenovec or cerepro).tw.
109	tamoxifen/
110	(nolvadex or novaldex or soltamox or tamoxifen or tomaxithen or zitazonium).tw.
111	temozolomide/
112	(temozolomide or temodal or temodar).tw.
113	teniposide/
114	(nsc?122819 or ten?poside or vm?26 or vumon).tw.
115	vinblastine/
116	(lemblastine or velban or velbe or vinblastin* or vincaleukoblastine).tw.
117	vincristine/
118	(citomid or farmistin or leucocristine or oncovin? or onkocristin or vincasar or vincristin? or vincrisul or vintec).tw.
119	or/36-118
120	metformin/
121	(dimethylbiguanidine or glucophage or metformin).tw.
122	120 or 121
123	exp hydroxymethylglutaryl coenzyme A reductase inhibitor/
124	(hmg?coa reductase inhibitor* or statin* or (hydroxymethylglutaryl adj2 inhibitor*)).tw.
125	(atorvastatin or lipitor or liptonorm or ci?981).tw.
126	(lovastatin or 6?methylcompactin or mk?803 or mevacor or mevinolin or monacolin).tw.
127	(meglutol or methylglutar* acid).tw.
128	(pravastatin or bristacol or cs?514 or elisor or eptastatin or lipemol or liplat or lipostat or mevalotin or prareduct or pravac?ol or pravasin or rms?431 or sq?31000 or selektine or vasten).tw.
129	(rosuvastatin or crestor or zd?4522).tw.
130	(simvastatin or mk?733 or synvinolin or zocor).tw.
131	or/123-130
132	ketogenic diet/
133	caloric restriction/
134	low calorie diet/
135	low carbohydrate diet/
136	protein restriction/
137	diet therapy.fs.
138	((calor* or carbohydrate* or protein*) adj2 (low or restrict* or diet*)).tw.
139	or/132-138
140	exp cannabinoid/

#	Searches
141	(cannabi* or hashish* or hemp* or mari?uana* or sativex).tw.
142	140 or 141
143	exp electrotherapy/
144	electromagnetic field/
145	((electr* or tumo* treat*) adj2 (field* or therap* or treatment*).tw.
146	(TTFiel* or TTF or NovoTTF).tw.
147	or/143-146
148	watchful waiting/
149	conservative treatment/
150	clinical observation/
151	(watch* adj2 wait*).tw.
152	((active or expect* or symptom* or watch*) adj2 (manag* or monitor* or surveill* or observ* or control*).tw.
153	(best supportive care or BSC).tw.
154	supportive care.tw.
155	or/148-154
156	or/29,35,119,122,131,139,142,147,155
157	19 and 156
158	limit 157 to english language
159	limit 158 to yr="1977 -Current"
160	letter.pt. or letter/
161	note.pt.
162	editorial.pt.
163	case report/ or case study/
164	(letter or comment*).ti.
165	or/160-164
166	randomized controlled trial/ or random*.ti,ab.
167	165 not 166
168	animal/ not human/
169	nonhuman/
170	exp Animal Experiment/
171	exp Experimental Animal/
172	animal model/
173	exp Rodent/
174	(rat or rats or mouse or mice).ti.
175	or/167-174
176	159 not 175
177	systematic review/
178	meta-analysis/
179	(meta analy* or metanaly* or metaanaly*).ti,ab.
180	((systematic or evidence) adj2 (review* or overview*).ti,ab.
181	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.

#	Searches
182	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
183	(search* adj4 literature).ab.
184	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
185	((pool* or combined) adj2 (data or trials or studies or results)).ab.
186	cochrane.jw.
187	or/177-186
188	176 and 187
174	(rat or rats or mouse or mice).ti.
175	or/167-174
176	159 not 175
177	systematic review/
178	meta-analysis/
179	(meta analy* or metanaly* or metaanaly*).ti,ab.
180	((systematic or evidence) adj2 (review* or overview*).ti,ab.
181	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
182	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
183	(search* adj4 literature).ab.
184	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
185	((pool* or combined) adj2 (data or trials or studies or results)).ab.
186	cochrane.jw.
187	or/177-186
188	176 and 187

## Randomised controlled trials

Last searched on: 07/09/2017

**Database: Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present**

#	Searches
1	exp Glioma/ or exp Astrocytoma/ or Oligodendrogioma/
2	Anaplasia/ or Neoplasm Recurrence, Local/
3	secondary.fs.
4	2 or 3
5	1 and 4
6	exp Glioblastoma/
7	5 or 6
8	(glioblastoma* or GBM).tw.
9	gliosarcoma*.tw.

#	Searches
10	((grade* 4 or four or IV) adj3 (glioma* or astrocytoma* or oligodendrogli* or oligodendroblastoma* or oligo?astrocytoma*).tw.
11	((grade* 3 or three or III) adj3 (glioma* or astrocytoma* or oligodendrogli* or oligodendroblastoma* or oligo?astrocytoma*).tw.
12	((high grade or malignant or invasive or anaplas* or recurr* or transform*) adj3 (glioma* or astrocytoma* or oligodendrogli* or oligodendroblastoma* or oligo?astrocytoma*).tw.
13	or/7-12
14	Neurosurgery/
15	exp Neurosurgical Procedures/
16	Surgical Procedures, Operative/
17	exp Stereotaxic Techniques/
18	Neuroendoscopy/
19	surgery.fs.
20	((brain or neuro* or intracereb* or intracrani* or crani* or cereb*) adj2 (surg* or microsurg* or manipulat* or procedur* or operat* or resect* or debulk* or excis* or ablat* or biops* or aspirat* or shunt*).tw.
21	(neurosurg* or craniotom* or craniectom*).tw.
22	(ventriculostom* or ventriculocisternostom*).tw.
23	(intra?operat* adj3 (technolog* or modalit* or procedur* or technique* or method*).tw.
24	or/14-23
25	exp Radiotherapy/
26	radiotherapy.fs.
27	(radiotherap* or radiat* or irradiat* or tomotherap* or radiosurg* or brachytherap* or fractionat* or hyperfraction* or hypofraction* or gamma knife or cyber knife or cyberknife or xknife or arc therap* or proton beam or carbon ion or boron neutron).tw.
28	(WBRT or WBI-IMRT or HA-WBRT or LINAC or IMRT or IGRT or XRT or XBT or SRS or SRT or VMAT or 3DCRT or 3D CRT or CRT or BNCT).tw.
29	Radiation Oncology/
30	(chemo?radiotherap* or chemo?radiat* or chemo?irradiat* or radio?chemotherap*).tw.
31	or/25-30
32	exp Antineoplastic Agents/
33	exp Combined Modality Therapy/
34	antineoplastic protocols/ or antineoplastic combined chemotherapy protocols/ or drug therapy, combination/
35	((combin* or concomitant or concurrent) adj2 (therap* or treatment* or regimen* or protocol* or drug* or agent*).tw.
36	CCRT.tw.
37	stupp.tw.
38	exp Antibodies, Monoclonal/
39	exp Angiogenesis Inhibitors/
40	exp Vascular Endothelial Growth Factors/
41	Cancer Vaccines/
42	exp Immunotherapy/
43	Oncolytic Virotherapy/

#	Searches
44	exp Antiviral Agents/
45	(virotherap* or anti?viral*).tw.
46	((virus or viral or anti?virus or anti?viral) adj2 (therap* or treatment* or regimen* or protocol* or agent* or drug*)).tw.
47	(anti?angiogenic or (angiogenesis and inhibit*)).tw.
48	vascular endothelial growth factor*.tw.
49	(VEGF or VEGFR or VEGF-R).tw.
50	drug therapy.fs.
51	chemotherap*.tw.
52	((anti?cancer or systemic or anti?neoplas* or cytotoxi*) adj2 (therap* or treatment* or regimen* or protocol* or drug* or agent*)).tw.
53	Bevacizumab/
54	(bevacizumab or altusan or avastin).tw.
55	exp Bleomycin/
56	(blanoxan or blenoxane or bleo?cell or bleolem or bleomycin* or peplomycin or phleomycin*).tw.
57	Carboplatin/
58	(blastocarb or carboplatin or carbosin or carbotec or cbdca or ercar or jm8 or nealorin or neocarbo or nsc24120 or paraplatin* or platinwas or ribocarbo).tw.
59	Carmustine/
60	exp Absorbable Implants/
61	exp Drug Implants/
62	(bcnu or bicnru or carmustine or fivb or gliadel wafer* or nitros?urea* or nitrumon).tw.
63	(cilcane or cilengitide or impetreve).tw.
64	Cisplatin/
65	(biocisplatinum or cddp or cisplatin or cis?diamminedichloroplatinum or cis?platinum or dichlorodiammineplatinum or platidiam or platino* or platinum).tw.
66	Cyclophosphamide/
67	(cyclophosphamide or cyclophosphan* or cytoxin or endoxan or nsc?26271 or neosar or procytox or sendoxan).tw.
68	Cytarabine/
69	(ara?c or arabinofuranosylcytosine or arabinoside or arabinosylcytosine or aracytidine or aracytine or cytarabine or cytonal or cytosar*).tw.
70	Dacarbazine/
71	(biocarbazine or carboxamide or dtic or dticdome or d?carbazine or deticene or icdt or nsc?45388).tw.
72	Dactinomycin/
73	(actinomycin or cosmegan or dactinomycin or meractinomycin).tw.
74	Etoposide/
75	(celltop or eposide or eposin or etomodac or etopos* or exitop or lastet or nsc?141540 or onkoposid or riboposid or toposar or vp?16?213 or vepesid).tw.
76	Ganciclovir/
77	(biolf?62 or bw?759 or cytovene or ganc?clovir or rs?21592 or virgan).tw.

#	Searches
78	(valganc?clovir or cymeval or darilin or patheon or rovalcyte or syntex or valcyt*1 or valixa).tw.
79	(DC?vax or (dentic cell? adj (vaccin* or immunotherap*)).tw.
80	Ifosfamide/
81	(holoxan or ifosfamide or ifosphamide or iso-endoxan or isofosfamide or isophosphamide).tw.
82	(Ipilimumab or yervoy).tw.
83	(irinotecan or campto*).tw.
84	Lomustine/
85	(belustine or ccnu or cecenu or ceenu or lomustine or nsc?79037).tw.
86	Methotrexate/
87	(amethopterin or methotrexate or mexate).tw.
88	Nimustine/
89	(acnu or nimustine or nsc?245382).tw.
90	(nivolumab or opdivo).tw.
91	Procarbazine/
92	(matulan or natulan or procarbazine).tw.
93	(rindopepitum or rintega).tw.
94	(sitimagene ceradenovec or cerepro).tw.
95	Tamoxifen/
96	(nolvadex or novaldex or soltamox or tamoxifen or tomoxithen or zitazonium).tw.
97	(temozolomide or temodal or temodar).tw.
98	Teniposide/
99	(nsc?122819 or ten?poside or vm?26 or vumon).tw.
100	Vinblastine/
101	(lemblastine or velban or velbe or vinblastin* or vincleukoblastin*).tw.
102	Vincristine/
103	(citomid or farmistin or leucocristine or oncovin? or onkocristin or pcv or vincasar or vincristin? or vincrisul or vintec).tw.
104	or/32-103
105	exp Metformin/
106	(dimethylbiguanidine or glucophage or metformin).tw.
107	105 or 106
108	exp Hydroxymethylglutaryl-CoA Reductase Inhibitors/
109	(hmg?coa reductase inhibitor* or statin* or (hydroxymethylglutaryl adj2 inhibitor*)).tw.
110	(atorvastatin or lipitor or liptonorm or ci?981).tw.
111	(lovastatin or 6?methylcompactin or mk?803 or mevacor or mevinolin or monacolin).tw.
112	(meglitol or methylglutar* acid).tw.
113	(pravastatin or bristacol or cs?514 or elisor or eptastatin or lipemol or liplat or lipostat or mevalotin or prareduct or pravac?ol or pravasin or rms?431 or sq?31000 or selektine or vasten).tw.
114	(rosuvastatin or crestor or zd?4522).tw.
115	(simvastatin or mk?733 or synvinolin or zocor).tw.

#	Searches
116	or/108-115
117	Ketogenic Diet/
118	Caloric Restriction/
119	Diet, Carbohydrate-Restricted/
120	Diet, Protein-Restricted/
121	diet therapy.fs.
122	((calor* or carbohydrate* or protein*) adj2 (low or restrict* or diet*)).tw.
123	or/117-122
124	Cannabis/
125	exp Cannabinoids/
126	(cannabi* or hashish* or hemp* or mari?uana* or sativex).tw.
127	or/124-126
128	exp Electric Stimulation Therapy/
129	Electromagnetic Fields/
130	((electr* or tumo* treat*) adj2 (field* or therap* or treatment*).tw.
131	(TTField* or TTF or NovoTTF).tw.
132	or/128-131
133	Watchful Waiting/
134	Observation/
135	(watch* adj2 wait*).tw.
136	((active or expect* or symptom* or watch*) adj2 (manag* or monitor* or surveill* or observ* or control*).tw.
137	(best supportive care or BSC).tw.
138	supportive care.tw.
139	or/133-138
140	or/24,31,104,107,116,123,127,132,139
141	13 and 140
142	limit 141 to english language
143	limit 142 to yr="1977 -Current"
144	Letter/
145	Editorial/
146	News/
147	exp Historical Article/
148	Anecdotes as Topic/
149	Comment/
150	Case Report/
151	(letter or comment* or abstracts).ti.
152	or/144-151
153	Randomized Controlled Trial/ or random*.ti,ab.
154	152 not 153
155	Animals/ not Humans/
156	exp Animals, Laboratory/

#	Searches
157	exp Animal Experimentation/
158	exp Models, Animal/
159	exp Rodentia/
160	(rat or rats or mouse or mice).ti.
161	or/154-160
162	143 not 161
163	randomized controlled trial.pt.
164	controlled clinical trial.pt.
165	pragmatic clinical trial.pt.
166	randomi#ed.ab.
167	placebo.ab.
168	drug therapy.fs.
169	randomly.ab.
170	trial.ab.
171	groups.ab.
172	or/163-171
173	Clinical Trials as topic.sh.
174	trial.ti.
175	or/163-167,169,173-174
176	162 and 175

Last searched on: 07/09/2017

**Database: Embase 1980 to 2016 Week 35**

#	Searches
1	exp glioma/
2	exp astrocytoma/
3	1 or 2
4	anaplastic carcinoma/
5	tumor recurrence/ or "oncogenesis and malignant transformation"/
6	exp "oncogenesis and malignant transformation"/
7	exp Glioma/ or exp Astrocytoma/
8	anaplastic carcinoma/
9	exp "oncogenesis and malignant transformation"/
10	8 or 9
11	7 and 10
12	glioblastoma/
13	11 or 12
14	(glioblastoma* or GBM).tw.
15	gliosarcoma*.tw.
16	((grade* 4 or four or IV) adj3 (glioma* or astrocytoma* or oligodendroglial* or oligodendroblastoma* or oligo?astrocytoma*)).tw.

#	Searches
17	((grade* 3 or three or III) adj3 (glioma* or astrocytoma* or oligodendrogli* or oligodendroblastoma* or oligo?astrocytoma*).tw.
18	((high grade or malignant or invasive or anaplas* or recurr* or transform*) adj3 (glioma* or astrocytoma* or oligodendrogli* or oligodendroblastoma* or oligo?astrocytoma*).tw.
19	or/13-18
20	exp neurosurgery/
21	exp cancer surgery/
22	surgery.fs.
23	exp stereotactic procedure/
24	tumor ablation/
25	((brain or neuro* or intracereb* or intracrani* or crani* or cereb*) adj2 (surg* or microsurg* or manipulat* or procedur* or operat* or resect* or debulk* or excis* or ablat* or biops* or aspirat* or shunt*).tw.
26	(neurosurg* or craniotom* or craniectom*).tw.
27	(ventriculostom* or ventriculocisternostom*).tw.
28	(intra?operat* adj3 (technolog* or modalit* or procedur* or technique* or method*).tw.
29	or/20-28
30	exp radiotherapy/
31	radiotherapy.fs.
32	(radiotherap* or radiat* or irradiat* or tomotherap* or radiosurg* or brachytherap* or fractionat* or hyperfraction* or hypofraction* or gamma knife or cyber knife or cyberknife or xknife or arc therap* or proton beam or carbon ion or boron neutron).tw.
33	(WBRT or WBI-IMRT or HA-WBRT or LINAC or IMRT or IGRT or XRT or XBT or SRS or SRT or VMAT or 3DCRT or 3D CRT or CRT or BNCT).tw.
34	(chemo?radiotherap* or chemo?radiat* or chemo?irradiat* or radio?chemotherap*).tw.
35	or/30-34
36	exp antineoplastic agent/
37	multimodality cancer therapy/
38	exp combination drug therapy/
39	((combin* or concomitant or concurrent) adj2 (therap* or treatment* or regimen* or protocol* or drug* or agent*).tw.
40	CCRT.tw.
41	stupp.tw.
42	exp chemotherapy/
43	exp monoclonal antibody/
44	oncolytic virotherapy/
45	exp antivirus agent/
46	exp cancer vaccine/
47	cancer gene therapy/
48	exp angiogenesis inhibitor/
49	vasculotropin/
50	exp cancer immunotherapy/
51	target cell destruction/
52	drug therapy.fs.

#	Searches
53	chemotherap*.tw.
54	((anti cancer or systemic or anti neoplas* or cytotoxi*) adj2 (therap* or treatment* or regimen* or protocol* or drug* or agent*).tw.
55	(virotherap* or anti?viral*).tw.
56	((virus or viral or anti?virus or anti?viral) adj2 (therap* or treatment* or regimen* or protocol* or agent* or drug*).tw.
57	(anti?angiogenic or (angiogenesis and inhibit*)).tw.
58	vascular endothelial growth factor*.tw.
59	(VEGF or VEGFR or VEGF-R).tw.
60	bevacizumab/
61	(bevacizumab or avastin or altusan).tw.
62	exp Bleomycin/
63	(blanoxan or blenoxane or bleo?cell or bleolem or bleomycin* or peplomycin or phleomycin*).tw.
64	carboplatin/
65	(blastocarb or carboplatin or carbosin or carbotec or cbdca or ercar or jm8 or nealorin or neocarbo or nsc24120 or paraplatin* or platinwas or ribocarbo).tw.
66	carmustine/
67	biodegradable implant/
68	drug implant/
69	(bcnu or bicnu or carmustine or fivb or gliadel wafer* or nitros?urea* or nitrumon).tw.
70	cilengitide/
71	(cilcane or cilengitide or impetreve).tw.
72	cisplatin/
73	(biocisplatinum or cddp or cisplatin or cis?diamminedichloroplatinum or cis?platinum or dichlorodiammineplatinum or platidiam or platino* or platinum).tw.
74	cyclophosphamide/
75	(cyclophosphamide or cyclophosphan* or cytoxan or endoxan or nsc?26271 or neosar or procytox or sendoxan).tw.
76	cytarabine/
77	(ara?c or arabinofuranosylcytosine or arabinoside or arabinosylcytosine or aracytidine or aracytine or cytarabine or cytonal or cytosar*).tw.
78	dacarbazine/
79	(biocarbazine or carboxamide or dtic or dticdome or d?carbazine or deticene or icdt or nsc?45388).tw.
80	dactinomycin/
81	(actinomycin or cosmegan or dactinomycin or meractinomycin).tw.
82	dendritic cell vaccine/
83	(DCVAX or (denti* cell? adj (vaccin* or immnuotherap*)).tw.
84	etoposide/
85	(celltop or eposide or eposin or etomodac or etopos* or exitop or lastet or nsc?141540 or onkoposid or riboposid or toposar or vp?16?213 or vepesid).tw.
86	ganciclovir/
87	(biolf?62 or bw?759 or cytovene or ganc?clovir or rs?21592 or virgan).tw.

#	<b>Searches</b>
88	(valganc?clovir or cymeval or darilin or patheon or rovalcyte or syntex or valcyt*1 or valixa).tw.
89	ifosfamide/
90	(holoxan or ifosfamide or ifosphamide or iso-endoxan or isofosfamide or isophosphamide).tw.
91	ipilimumab/
92	(Ipilimumab or yervoy).tw.
93	irinotecan/
94	(Irinotecan or campto*).tw.
95	lomustine/
96	(belustine or ccnu or cecenu or ceenu or lomustine or nsc79037).tw.
97	methotrexate/
98	(amethopterin or methotrexate or mexate).tw.
99	nimustine/
100	(acnu or nimustine or nsc?245382).tw.
101	nivolumab/
102	(Nivolumab or opdivo).tw.
103	procarbazine/
104	(matulan or natulan or procarbazine).tw.
105	rindopepimut/
106	(rindopepimut or rintega).tw.
107	sitimagene ceradenovec/
108	(sitimagene ceradenovec or cerepro).tw.
109	tamoxifen/
110	(nolvadex or novaldex or soltamox or tamoxifen or tomaxithen or zitazonium).tw.
111	temozolomide/
112	(temozolomide or temodal or temodar).tw.
113	teniposide/
114	(nsc?122819 or ten?poside or vm?26 or vumon).tw.
115	vinblastine/
116	(lemblastine or velban or velbe or vinblastin* or vincleukoblastine).tw.
117	vincristine/
118	(citomid or farmistin or leucocristine or oncovin? or onkocristin or vincasar or vincristin? or vincrisul or vintec).tw.
119	or/36-118
120	metformin/
121	(dimethylbiguanidine or glucophage or metformin).tw.
122	120 or 121
123	exp hydroxymethylglutaryl coenzyme A reductase inhibitor/
124	(hmg?coa reductase inhibitor* or statin* or (hydroxymethylglutaryl adj2 inhibitor*)).tw.
125	(atorvastatin or lipitor or liptonorm or ci?981).tw.
126	(lovastatin or 6?methylcompactin or mk?803 or mevacor or mevinolin or monacolin).tw.
127	(meglutol or methylglutar* acid).tw.

#	Searches
128	(pravastatin or bristacol or cs?514 or elisor or eptastatin or lipemol or liplat or lipostat or mevalotin or prareduct or pravac?ol or pravasin or rms?431 or sq?31000 or selektine or vasten).tw.
129	(rosuvastatin or crestor or zd?4522).tw.
130	(simvastatin or mk?733 or synvinolin or zocor).tw.
131	or/123-130
132	ketogenic diet/
133	caloric restriction/
134	low calorie diet/
135	low carbohydrate diet/
136	protein restriction/
137	diet therapy.fs.
138	((calor* or carbohydrate* or protein*) adj2 (low or restrict* or diet*)).tw.
139	or/132-138
140	exp cannabinoid/
141	(cannabi* or hashish* or hemp* or mari?uana* or sativex).tw.
142	140 or 141
143	exp electrotherapy/
144	electromagnetic field/
145	((electr* or tumo* treat*) adj2 (field* or therap* or treatment*)).tw.
146	(TTField* or TTF or NovoTTF).tw.
147	or/143-146
148	watchful waiting/
149	conservative treatment/
150	clinical observation/
151	(watch* adj2 wait*).tw.
152	((active or expect* or symptom* or watch*) adj2 (manag* or monitor* or surveill* or observ* or control*).tw.
153	(best supportive care or BSC).tw.
154	supportive care.tw.
155	or/148-154
156	or/29,35,119,122,131,139,142,147,155
157	19 and 156
158	limit 157 to english language
159	limit 158 to yr="1977 -Current"
160	letter.pt. or letter/
161	note.pt.
162	editorial.pt.
163	case report/ or case study/
164	(letter or comment*).ti.
165	or/160-164
166	randomized controlled trial/ or random*.ti,ab.
167	165 not 166

#	Searches
168	animal/ not human/
169	nonhuman/
170	exp Animal Experiment/
171	exp Experimental Animal/
172	animal model/
173	exp Rodent/
174	(rat or rats or mouse or mice).ti.
175	or/167-174
176	159 not 175
177	random*.ti,ab.
178	factorial*.ti,ab.
179	(crossover* or cross over*).ti,ab.
180	((doubl* or singl*) adj blind*).ti,ab.
181	(assign* or allocat* or volunteer* or placebo*).ti,ab.
182	crossover procedure/
183	single blind procedure/
184	randomized controlled trial/
185	double blind procedure/
186	or/177-185
187	176 and 186

#### Database: Cochrane Library via Wiley Online

Date of last search: 7<sup>th</sup> September 2017.

ID	Search
#1	MeSH descriptor: [Glioma] explode all trees
#2	MeSH descriptor: [Astrocytoma] explode all trees
#3	Oligodendroglioma
#4	{or #1-#3}
#5	MeSH descriptor: [Anaplasia] explode all trees
#6	MeSH descriptor: [Neoplasm Recurrence, Local] explode all trees
#7	#5 or #6
#8	#4 and #7
#9	MeSH descriptor: [Glioblastoma] explode all trees
#10	(glioblastoma* or GBM)
#11	gliosarcoma*
#12	((grade* 4 or four or IV) near/3 (glioma* or astrocytoma* or oligodendrogl* or oligodendroblastoma* or oligo?astrocytoma*))
#13	((grade* 3 or three or III) near/3 (glioma* or astrocytoma* or oligodendrogl* or oligodendroblastoma* or oligo?astrocytoma*))
#14	((high grade or malignant or invasive or anaplas* or recurr* or transform*) near/3 (glioma* or astrocytoma* or oligodendrogl* or oligodendroblastoma* or oligoastrocytoma*))
#15	{or #8-#14}

ID	Search
#16	MeSH descriptor: [Neurosurgery] explode all trees
#17	MeSH descriptor: [Neurosurgical Procedures] explode all trees
#18	MeSH descriptor: [Surgical Procedures, Operative] explode all trees
#19	MeSH descriptor: [Stereotaxic Techniques] explode all trees
#20	MeSH descriptor: [Neuroendoscopy] this term only
#21	Any MeSH descriptor with qualifier(s): [Surgery - SU]
#22	((brain or neuro* or intracereb* or intracrani* or crani* or cereb*) near/2 (surg* or microsurg* or manipulat* or procedur* or operat* or resect* or debulk* or excis* or ablat* or biops* or aspirat* or shunt*))
#23	(neurosurg* or craniotom* or craniectom* or ventriculostom* or ventriculocisternostom*)
#24	(intraoperat* near/3 (technolog* or modalit* or procedur* or technique* or method*))
#25	{or #16-#24}
#26	MeSH descriptor: [Radiotherapy] explode all trees
#27	Any MeSH descriptor with qualifier(s): [Radiotherapy - RT]
#28	(radiotherap* or radiat* or irradiat* or tomotherap* or radiosurg* or brachytherap* or fractionat* or hyperfraction* or hypofraction* or gamma knife or cyber knife or cyberknife or xknife or arc therap* or proton beam or carbon ion or boron neutron)
#29	(WBRT or WBI-IMRT or HA-WBRT or LINAC or IMRT or IGRT or XRT or XBT or SRS or SRT or VMAT or 3DCRT or 3D CRT or CRT or BNCT)
#30	(chemoradiotherap* or chemoradiat* or chemoirradiat* or radiochemotherap*)
#31	{or #26-#30}
#32	MeSH descriptor: [Antineoplastic Agents] explode all trees
#33	MeSH descriptor: [Combined Modality Therapy] explode all trees
#34	MeSH descriptor: [Antineoplastic Protocols] explode all trees
#35	MeSH descriptor: [Drug Therapy, Combination] explode all trees
#36	((combin* or concomitant or concurrent) near/2 (therap* or treatment* or regimen* or protocol* or drug* or agent*))
#37	(CCRT or stup)
#38	MeSH descriptor: [Antibodies, Monoclonal] explode all trees
#39	MeSH descriptor: [Angiogenesis Inhibitors] explode all trees
#40	MeSH descriptor: [Vascular Endothelial Growth Factors] explode all trees
#41	MeSH descriptor: [Cancer Vaccines] explode all trees
#42	MeSH descriptor: [Immunotherapy] explode all trees
#43	MeSH descriptor: [Oncolytic Virotherapy] explode all trees
#44	MeSH descriptor: [Antiviral Agents] explode all trees
#45	(virotherap* or anti-viral*)
#46	((virus or viral or anti-virus or anti-viral) near/2 (therap* or treatment* or regimen* or protocol* or agent* or drug*))
#47	(anti-angiogenic or (angiogenesis and inhibit*))
#48	(vascular endothelial growth factor* or VEGF or VEGFR or VEGF-R)
#49	Any MeSH descriptor with qualifier(s): [Drug therapy - DT]
#50	MeSH descriptor: [Absorbable Implants] explode all trees
#51	chemotherap*

ID	Search
#52	((anti?cancer or systemic or anti?neoplas* or cytotoxi*) near/2 (therap* or treatment* or regimen* or protocol* or drug* or agent*))
#53	(bevacizumab or altusan or avastin or blanoxan or blenoxane or bleo cell or bleolem or bleomycin* or peplomycin or phleomycin* or blastocarb or carboplatin or carbosin or carbotec or cbdca or ercar or jm8 or nealorin or neocarbo or nsc24120 or paraplatin* or platinwas or ribocarbo)
#54	MeSH descriptor: [Drug Implants] explode all trees
#55	MeSH descriptor: [Absorbable Implants] explode all trees
#56	(bcnu or bicnu or carmustine or fivb or gliadel wafer* or nitrosourea* or nitrosurea or nitrumon or cilcane or cilengitide or impetreve or biocisplatin or cddp or cisplatin or cisdiaminedichloroplatinum or cisplatinum or dichlorodiammineplatinum or platidiam or platino* or platinum or cyclophosphamide or cyclophosphan* or cytoxan or endoxan or nsc-26271 or neosar or procytox or sendoxan or ara-c or arabinofuranosylcytosine or arabinoside or arabinosylcytosine or aracytidine or aracytine or cytarabine or cytonal or cytosar*)
#57	(biocarbazine or carboxamide or dtic or dticdome or dacarbazine or deticene or icdt or nsc-45388 or actinomycin or cosmegan or dactinomycin or meractinomycin or celltop or eposide or eposin or etomodac or etopos* or exitop or lastet or nsc-141540 or onkoposid or riboposid or toposar or vp-16-213 or vepesid)
#58	(biolf-62 or bw-759 or cytovene or gangciclovir or gancyclovir or rs-21592 or virgan or valganciclovir or valgancyclovir or cymeval or darilin or patheon or rovalcyte or syntex or valcyt* or valixa)
#59	(holoxan or ifosfamide or ifosphamide or iso-endoxan or isofosfamide or isophosphamide or ipilimumab or yervoy or irinotecan or campto* or belustine or ccnu or cecenu or ceenu or lomustine or nsc-79037 or amethopterin or methotrexate or mexate or acnu or nimustine or nsc-245382 or nivolumab or opdivo)
#60	(matulan or natulan or procarbazine or rindopepimut or rintega or sitimagene ceradenovec or cerepro or nolvadex or novaldex or soltamox or tamoxifen or tomazithen or zitazonium or temozolamide or temodal or temodar or nsc-122819 or teniposide or vm-26 or vumon or lemblastine or velban or velbe or vinblastin* or vincaleukoblastin* or citomid or farmistin or leucocristine or oncovin* or onkocristin or pcv or vincasar or vincristin* or vincrisul or vintec)
#61	(dimethylbiguanidine or glucophage or metformin)
#62	MeSH descriptor: [Hydroxymethylglutaryl-CoA Reductase Inhibitors] explode all trees
#63	(hmg-coa reductase inhibitor* or statin* or (hydroxymethylglutaryl near/2 inhibitor*))
#64	(atorvastatin or lipitor or liptonorm or ci-981 or lovastatin or 6-methylcompactin or mk-803 or mevacor or mevinolin or monacolin or meglitol or methylglutar* acid or pravastatin or bristacol or cs-514 or elisor or eptastatin or lipemol or liplat or lipostat or mevalotin or prareduct or pravacol or pravasin or rms-431 or sq-31000 or selektine or vasten or rosuvastatin or crestor or zd-4522 or simvastatin or mk-733 or synvinolin or zocor)
#65	MeSH descriptor: [Ketogenic Diet] explode all trees
#66	MeSH descriptor: [Diet Therapy] explode all trees
#67	((calor* or carbohydrate* or protein*) near/2 (low or restrict* or diet*))
#68	MeSH descriptor: [Cannabinoids] explode all trees
#69	MeSH descriptor: [Cannabis] explode all trees
#70	(cannabi* or hashish* or hemp* or mari?uana* or sativex)
#71	MeSH descriptor: [Electric Stimulation Therapy] explode all trees
#72	MeSH descriptor: [Electromagnetic Fields] explode all trees
#73	((electr* or tumo* treat*) near/2 (field* or therap* or treatment*))

ID	Search
#74	(TTField* or TTF or NovoTTF)
#75	{or #32-#74}
#76	MeSH descriptor: [Watchful Waiting] explode all trees
#77	(watch* near/2 wait*)
#78	((active or expect* or symptom* or watch*) near/2 (manag* or monitor* or surveill* or observ* or control*))
#79	supportive care
#80	{or #76-#79}
#81	#25 or #31 or #75 or #80
#82	#15 and #81 Publication Year from 1977 to 2016

# Radiotherapy for meningioma

## 3a - Which adults (16 years or older) with inoperable, incompletely excised or recurrent meningioma should be considered for radiotherapy?

Last searched on 05/09/2017

**Database: Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present**

#	Searches
1	Meningioma/
2	Meningeal Neoplasms/
3	meningioma*.tw.
4	(mening* adj3 (neoplas* or cancer* or carcin* or tumo* or malign* or h?emangiopericytoma* or h?emangioblastoma*).tw.
5	or/1-4
6	exp radiotherapy/
7	radiotherapy.fs.
8	(radiotherap* or radiat* or irradiat* or tomotherap* or radiosurg* or brachytherap* or fractionat* or hyperfraction* or hypofraction* or gamma knife or cyber knife or cyberknife or xknife or arc therap*).tw.
9	(WBRT or WBI-IMRT or HA-WBRT or LINAC or IMRT or XRT or XBT or SRS or SRT or VMAT or 3DCRT or 3D CRT or CRT).tw.
10	Radiation Oncology/
11	(chemoradiotherap* or chemo-radiat* or chemo-irradiat*).tw.
12	or/6-11
13	Watchful Waiting/
14	Observation/
15	watchful wait*.tw.
16	((active or expect* or symptom* or watch*) adj2 (manag* or monitor* or surveill* or observ* or control*).tw.
17	(best supportive care or BSC).tw.
18	or/13-17
19	12 and 18
20	Neurosurgery/
21	exp Neurosurgical Procedures/
22	Surgical Procedures, Operative/
23	exp Stereotaxic Techniques/
24	surgery.fs.
25	((brain or neuro* or intracereb* or intracrani* or crani*) adj2 (surg* or microsurg* or manipulat* or procedur* or operat* or resect* or debulk* or excis* or ablat* or biops*).tw.
26	(neurosurg* or craniotom* or craniectom*).tw.

#	Searches
27	((intra-operat* or intraoperat*) adj3 (technolog* or modalit* or procedur* or technique* or method*).tw.
28	or/20-27
29	Neoplasm Recurrence, Local/
30	recur*.tw.
31	29 or 30
32	28 and 31
33	12 or 18 or 19 or 32
34	5 and 33
35	limit 34 to english language
36	Epidemiologic Studies/
37	Case Control Studies/
38	Retrospective Studies/
39	Cohort Studies/
40	Longitudinal Studies/
41	Follow-Up Studies/
42	Prospective Studies/
43	Cross-Sectional Studies/
44	((retrospective\$ or cohort\$ or longitudinal or follow?up or prospective or cross section\$) adj3 (stud\$ or research or analys\$)).ti.
45	or/36-44
46	Meta-Analysis/
47	Meta-Analysis as Topic/
48	(meta analy* or metanaly* or metaanaly*).ti,ab.
49	((systematic* or evidence*) adj2 (review* or overview*)).ti,ab.
50	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
51	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
52	(search* adj4 literature).ab.
53	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
54	cochrane.jw.
55	or/46-54
56	randomized controlled trial.pt.
57	controlled clinical trial.pt.
58	pragmatic clinical trial.pt.
59	randomi#ed.ab.
60	placebo.ab.
61	drug therapy.fs.
62	randomly.ab.
63	trial.ab.
64	groups.ab.
65	or/56-64

#	Searches
66	Clinical Trials as topic.sh.
67	trial.ti.
68	or/56-60,62,66-67
69	45 or 55 or 68
70	35 and 69
71	Letter/
72	Editorial/
73	News/
74	exp Historical Article/
75	Anecdotes as Topic/
76	Comment/
77	Case Report/
78	(letter or comment* or abstracts).ti.
79	or/71-78
80	Randomized Controlled Trial/ or random*.ti,ab.
81	79 not 80
82	Animals/ not Humans/
83	exp Animals, Laboratory/
84	exp Animal Experimentation/
85	exp Models, Animal/
86	exp Rodentia/
87	(rat or rats or mouse or mice).ti.
88	or/81-87
89	70 not 88

Last searched on: 05/09/2017

**Database: Embase Classic+Embase 1947 to 2017 Week 35**

#	Searches
1	exp meningioma/
2	meningioma*.tw.
3	(mening* adj3 (neoplas* or cancer* or carcin* or tumo* or malign* or h?emangiopericytoma* or h?emangioblastoma*)).tw.
4	or/1-3
5	exp radiotherapy/
6	radiotherapy.fs.
7	(radiotherap* or radiat* or irradiat* or tomotherap* or radiosurg* or brachytherap* or fractionat* or hyperfraction* or hypofraction* or gamma knife or cyber knife or cyberknife or xknife or arc therap*).tw.
8	(WBRT or WBI-IMRT or HA-WBRT or LINAC or IMRT or XRT or XBT or SRS or SRT or VMAT or 3DCRT or 3D CRT or CRT).tw.
9	(chemoradiotherap* or chemo-radiat* or chemo-irradiat*).tw.
10	or/5-9
11	watchful waiting/

#	Searches
12	conservative treatment/
13	clinical observation/
14	watchful wait*.tw.
15	((active or expect* or symptom* or watch*) adj2 (manag* or monitor* or surveill* or observ* or control*).tw.
16	(best supportive care or BSC).tw.
17	or/11-16
18	10 and 17
19	exp neurosurgery/
20	exp cancer surgery/
21	exp stereotactic procedure/
22	surgery.fs.
23	((brain or neuro* or intracereb* or intracrani* or crani*) adj2 (surg* or microsurg* or manipulat* or procedur* or operat* or resect* or debulk* or excis* or ablat* or biops*).tw.
24	(neurosurg* or craniotom* or craniectom*).tw.
25	((intra-operat* or intraoperat*) adj3 (technolog* or modalit* or procedur* or technique* or method*).tw.
26	or/19-25
27	tumor recurrence/
28	cancer recurrence/
29	recur*.tw.
30	or/27-29
31	26 and 30
32	10 or 17 or 18 or 31
33	4 and 32
34	limit 33 to english language
35	random*.ti,ab.
36	factorial*.ti,ab.
37	(crossover* or cross over*).ti,ab.
38	((doubl* or singl*) adj blind*).ti,ab.
39	(assign* or allocat* or volunteer* or placebo*).ti,ab.
40	crossover procedure/
41	single blind procedure/
42	randomized controlled trial/
43	double blind procedure/
44	or/35-43
45	systematic review/
46	meta-analysis/
47	(meta analy* or metanaly* or metaanaly*).ti,ab.
48	((systematic or evidence) adj2 (review* or overview*).ti,ab.
49	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
50	(search strategy or search criteria or systematic search or study selection or data extraction).ab.

#	Searches
51	(search* adj4 literature).ab.
52	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
53	((pool* or combined) adj2 (data or trials or studies or results)).ab.
54	cochrane.jw.
55	or/45-54
56	Clinical study/
57	Case control study/
58	family study/
59	longitudinal study/
60	retrospective study/
61	prospective study/
62	cohort analysis/
63	((retrospective* or cohort* or longitudinal or follow?up or prospective or cross section* or observation* or epidemiolog*) adj3 (stud* or research or analys*).ti.
64	or/56-63
65	44 or 55 or 64
66	34 and 65
67	letter.pt. or letter/
68	note.pt.
69	editorial.pt.
70	case report/ or case study/
71	(letter or comment*).ti.
72	or/67-71
73	randomized controlled trial/ or random*.ti,ab.
74	72 not 73
75	animal/ not human/
76	nonhuman/
77	exp Animal Experiment/
78	exp Experimental Animal/
79	animal model/
80	exp Rodent/
81	(rat or rats or mouse or mice).ti.
82	or/74-81
83	66 not 82

#### Database: Cochrane Library via Wiley Online

Date of last search: 5<sup>th</sup> September 2017.

ID	Search
#1	MeSH descriptor: [Meningioma] explode all trees
#2	MeSH descriptor: [Meningeal Neoplasms] explode all trees
#3	meningioma*

ID	Search
#4	(mening* near/3 (neoplas* or cancer* or carcin* or tumo* or malign* or h?emangiopericytoma* or h?emangioblastoma*))
#5	{or #1-#4}
#6	MeSH descriptor: [Radiotherapy] explode all trees
#7	(radiotherap* or radiat* or irradiat* or tomotherap* or radiosurg* or brachytherap* or fractionat* or hyperfraction* or hypofraction* or gamma knife or cyber knife or cyberknife or xknife or arc therap*)
#8	(WBRT or WBI-IMRT or HA-WBRT or LINAC or IMRT or XRT or XBT or SRS or SRT or VMAT or 3DCRT or 3D CRT or CRT)
#9	MeSH descriptor: [Radiation Oncology] this term only
#10	(chemoradiotherap* or chemo-radiat* or chemo-irradiat*) .
#11	{or #6-#10}
#12	MeSH descriptor: [Watchful Waiting] explode all trees
#13	MeSH descriptor: [Observation] this term only
#14	watchful wait*
#15	((active or expect* or symptom* or watch*) near/2 (manag* or monitor* or surveill* or observ* or control*))
#16	(best supportive care or BSC)
#17	{or #12-#16}
#18	MeSH descriptor: [Neurosurgery] explode all trees
#19	MeSH descriptor: [Neurosurgical Procedures] explode all trees
#20	MeSH descriptor: [Surgical Procedures, Operative] explode all trees
#21	MeSH descriptor: [Stereotaxic Techniques] explode all trees
#22	((brain or neuro* or intracereb* or intracrani* or crani*) near/2 (surg* or microsurg* or manipulat* or procedur* or operat* or resect* or debulk* or excis* or ablat* or biops*))
#23	(neurosurg* or craniotom* or metastasectom*)
#24	((intra-operat* or intraoperat*) near/3 (technolog* or modalit* or procedur* or technique* or method*))
#25	{or #18-#24}
#26	MeSH descriptor: [Neoplasm Recurrence, Local] explode all trees
#27	recur*
#28	#26 or #27
#29	#25 and #28
#30	{or #11, #17, #29}
#31	#5 and #30

# Radiotherapy for meningioma

## 3b What is the most effective technique for adults with meningioma who require radiotherapy?

### Systematic reviews and RCTs

Last searched on 07/09/2017

**Database(s): Embase 1980 to 2017 Week 36, Ovid MEDLINE(R) Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present**

#	Searches
1	Meningioma/
2	Meningeal Neoplasms/
3	1 or 2 use ppez
4	exp menigioma/ use emez
5	meningioma*.tw.
6	(mening* adj3 (neoplas* or cancer* or carcin* or tumo* or malign* or h?emangiopericytoma* or h?emangioblastoma*)).tw.
7	or/3-6
8	exp Radiotherapy/ use ppez
9	exp radiotherapy/ use emez
10	radiotherapy.fs.
11	(radiotherap* or radiat* or irradiat* or radiosurg* or brachytherap* or fractionat* or hyperfraction* or hypofraction* or gamma knife or cyber knife or cyberknife or xknife or arc therap* or rapidarc).tw.
12	((proton* or particle* or neutron* or ion*) adj3 (therap* or treatment*)).tw.
13	(3DCRT or 3D CRT or CRT or FSRT or IMRT or XRT or XBT or SRS or SRT or VMAT).tw.
14	exp Stereotaxic Techniques/ use ppez
15	exp stereotactic procedure/ use emez
16	or/8-15
17	7 and 16
18	limit 17 to english language
19	limit 18 to yr="1985 -Current"
20	Letter/ use ppez
21	letter.pt. or letter/ use emez
22	note.pt.
23	editorial.pt.
24	Editorial/ use ppez
25	News/ use ppez
26	exp Historical Article/ use ppez
27	Anecdotes as Topic/ use ppez
28	Comment/ use ppez

#	Searches
29	Case Report/ use ppez
30	case report/ or case study/ use emez
31	(letter or comment*).ti.
32	or/20-31
33	randomized controlled trial/ use ppez
34	randomized controlled trial/ use emez
35	random*.ti,ab.
36	or/33-35
37	32 not 36
38	animals/ not humans/ use ppez
39	animal/ not human/ use emez
40	nonhuman/ use emez
41	exp Animals, Laboratory/ use ppez
42	exp Animal Experimentation/ use ppez
43	exp Animal Experiment/ use emez
44	exp Experimental Animal/ use emez
45	exp Models, Animal/ use ppez
46	animal model/ use emez
47	exp Rodentia/ use ppez
48	exp Rodent/ use emez
49	(rat or rats or mouse or mice).ti.
50	or/37-49
51	19 not 50
52	Meta-Analysis/
53	Meta-Analysis as Topic/
54	systematic review/
55	meta-analysis/
56	(meta analy* or metanaly* or metaanaly*).ti,ab.
57	((systematic or evidence) adj2 (review* or overview*)).ti,ab.
58	((systematic* or evidence*) adj2 (review* or overview*)).ti,ab.
59	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
60	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
61	(search* adj4 literature).ab.
62	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
63	cochrane.jw.
64	((pool* or combined) adj2 (data or trials or studies or results)).ab.
65	or/52-53,56,58-63 use ppez
66	or/54-57,59-64 use emez
67	or/65-66
68	clinical Trials as topic.sh. or (controlled clinical trial or pragmatic clinical trial or randomized controlled trial).pt. or (placebo or randomi#ed or randomly).ab. or trial.ti.

#	Searches
69	68 use ppez
70	(controlled clinical trial or pragmatic clinical trial or randomized controlled trial).pt. or drug therapy.fs. or (groups or placebo or random#ed or randomly or trial).ab.
71	70 use ppez
72	crossover procedure/ or double blind procedure/ or randomized controlled trial/ or single blind procedure/ or (assign* or allocat* or crossover* or cross over* or ((doubl* or singl*) adj blind*) or factorial* or placebo* or random* or volunteer*).ti,ab.
73	72 use emez
74	69 or 71
75	73 or 74
76	67 or 75
77	51 and 76
78	remove duplicates from 77

## Observational studies

Last searched on: 07/09/2017

**Database(s): Embase 1980 to 2017 Week 36, Ovid MEDLINE(R) Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present**

#	Searches
1	Meningioma/
2	Meningeal Neoplasms/
3	1 or 2 use ppez
4	exp meningioma/ use emez
5	meningioma*.tw.
6	(mening* adj3 (neoplas* or cancer* or carcin* or tumo* or malign* or h?emangiopericytoma* or h?emangioblastoma*).tw.
7	or/3-6
8	exp Radiotherapy/ use ppez
9	exp radiotherapy/ use emez
10	radiotherapy.fs.
11	(radiotherap* or radiat* or irradiat* or radiosurg* or brachytherap* or fractionat* or hyperfraction* or hypofraction* or gamma knife or cyber knife or cyberknife or xknife or arc therap* or rapidarc).tw.
12	((proton* or particle* or neutron* or ion*) adj3 (therap* or treatment*)).tw.
13	(3DCRT or 3D CRT or CRT or FSRT or IMRT or XRT or XBT or SRS or SRT or VMAT).tw.
14	exp Stereotaxic Techniques/ use ppez
15	exp stereotactic procedure/ use emez
16	or/8-15
17	7 and 16
18	limit 17 to english language
19	limit 18 to yr="1985 -Current"
20	Letter/ use ppez

#	Searches
21	letter.pt. or letter/ use emez
22	note.pt.
23	editorial.pt.
24	Editorial/ use ppez
25	News/ use ppez
26	exp Historical Article/ use ppez
27	Anecdotes as Topic/ use ppez
28	Comment/ use ppez
29	Case Report/ use ppez
30	case report/ or case study/ use emez
31	(letter or comment*).ti.
32	or/20-31
33	randomized controlled trial/ use ppez
34	randomized controlled trial/ use emez
35	random*.ti,ab.
36	or/33-35
37	32 not 36
38	animals/ not humans/ use ppez
39	animal/ not human/ use emez
40	nonhuman/ use emez
41	exp Animals, Laboratory/ use ppez
42	exp Animal Experimentation/ use ppez
43	exp Animal Experiment/ use emez
44	exp Experimental Animal/ use emez
45	exp Models, Animal/ use ppez
46	animal model/ use emez
47	exp Rodentia/ use ppez
48	exp Rodent/ use emez
49	(rat or rats or mouse or mice).ti.
50	or/37-49
51	19 not 50
52	Epidemiologic Studies/
53	Case Control Studies/
54	Retrospective Studies/
55	Cohort Studies/
56	Longitudinal Studies/
57	Follow-Up Studies/
58	Prospective Studies/
59	Cross-Sectional Studies/
60	or/52-59 use ppez
61	clinical study/
62	case control study/

#	Searches
63	family study/
64	longitudinal study/
65	retrospective study/
66	prospective study/
67	cohort analysis/
68	or/61-67 use emez
69	((retrospective\$ or cohort\$ or longitudinal or follow?up or prospective or cross section\$) adj3 (stud\$ or research or analys\$).ti.
70	60 or 68 or 69
71	51 and 70
72	remove duplicates from 71

### Database: Cochrane Library via Wiley Online

Date of last search: 7<sup>th</sup> September 2017.

ID	Search
#1	MeSH descriptor: [Meningioma] explode all trees
#2	MeSH descriptor: [Meningeal Neoplasms] explode all trees
#3	meningioma*
#4	(mening* near/3 (neoplas* or cancer* or carcin* or tumo* or malign* or h?emangiopericytoma* or h?emangioblastoma*))
#5	{or #1-#4}
#6	MeSH descriptor: [Radiotherapy] explode all trees
#7	(radiotherap* or radiat* or irradiat* or radiosurg* or brachytherap* or fractionat* or hyperfraction* or hypofraction* or gamma knife or cyber knife or cyberknife or xknife or arc therap* or rapidarc)
#8	((proton* or particle* or neutron* or ion*) near/3 (therap* or treatment*))
#9	(3DCRT or 3D CRT or CRT or FSRT or IMRT or XRT or XBT or SRS or SRT or VMAT)
#10	{or #6-#9}
#11	#5 and #10

# Management of brain metastases

**4a - What is the most effective intracranial treatment (surgery, stereotactic radiotherapy, whole-brain radiotherapy, combinations of these, or best supportive care) for single brain metastases?**

**4b - What is the most effective intracranial treatment (surgery, stereotactic radiotherapy, whole-brain radiotherapy, combinations of these, or no treatment) for multiple brain metastases?**

## Systematic reviews and RCTs

Last searched on 07/09/2017

**Database: Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present**

#	Searches
1	exp Brain Neoplasms/
2	exp Cerebral Cortex/
3	exp Brain/
4	exp Meninges/
5	or/1-4
6	exp Neoplasm Metastasis/
7	5 and 6
8	exp Brain Neoplasms/sc
9	7 or 8
10	((brain or cereb* or intracereb* or intracrani* or menin* or brainstem*) adj3 (metasta* or micromet* or macromet* or oligomet* or spread* or carcinomatosis or carcinosis or secondar* or seeding or seeded or disseminat* or migrat*)).tw.
11	9 or 10
12	Neurosurgery/
13	exp Neurosurgical Procedures/
14	Surgical Procedures, Operative/
15	Metastasectomy/
16	exp Stereotaxic Techniques/
17	((brain or neuro* or intracereb* or intracrani* or crani*) adj2 (surg* or microsurg* or manipulat* or procedur* or operat* or resect* or debulk* or excis* or ablat* or biops*)).tw.
18	(neurosurg* or craniotom* or craniectom* or metastasectom*).tw.
19	((intra-operat* or intraoperat*) adj3 (technolog* or modalit* or procedur* or technique* or method*)).tw.
20	or/12-19

#	Searches
21	exp Radiotherapy/
22	radiotherapy.fs.
23	(radiotherap* or radiat* or irradiat* or tomotherap* or radiosurg* or brachytherap* or fractionat* or hyperfraction* or hypofraction* or gamma knife or cyber knife or cyberknife or xknife or arc therap*).tw.
24	(WBRT or WBI-IMRT or HA-WBRT or LINAC or IMRT or XRT or XBT or SRS or SRT or VMAT or 3DCRT or 3D CRT or CRT).tw.
25	Radiation Oncology/
26	(chemoradiotherap* or chemo-radiat* or chemo-irradiat*).tw.
27	or/21-26
28	exp Antineoplastic Agents/
29	antineoplastic protocols/ or antineoplastic combined chemotherapy protocols/
30	exp Antibodies, Monoclonal/ad, tu
31	Cancer Vaccines/ad, tu
32	drug therapy.fs.
33	chemotherap*.tw.
34	((anti cancer or systemic or anti neoplas* or cytotoxi*) adj2 (therap* or treatment* or regimen* or protocol* or drug* or agent*)).tw.
35	Bevacizumab/
36	(bevacizumab or avastin).tw.
37	Carboplatin/
38	(blastocarb or carboplatin or carbosin or carbotec or cbdca or ercar or jm8 or nealorin or neocarbo or nsc24120 or paraplatin* or platinwas or ribocarbo).tw.
39	Carmustine/
40	(bcnu or bicnu or carmustine or fivb or gliadel wafer? or nitrosurea or nitrumon).tw.
41	cilengitide.tw.
42	(DCVAX or (dentric cell? adj (vaccin* or immnuotherap*))).tw.
43	Ifosfamide/
44	(holoxan or ifosamide or ifosphamide or iso-endoxan or isofosfamide or isophosphamide).tw.
45	(Ipilimumab or yervoy).tw.
46	(irinotecan or campto or camptosar).tw.
47	Lomustine/
48	(belustine or ccnu or cecenu or ceenu or lomustine or nsc79037).tw.
49	Methotrexate/
50	(amethopterin or methotrexate or mexate).tw.
51	(nivolumab or opdivo).tw.
52	Procarbazine/
53	(matulan or natulan or procarbazine).tw.
54	(rindopepitut or rintega).tw.
55	Tamoxifen/
56	(nolvadex or novaldex or soltamox or tamoxifen or tomaxithen or zitazonium).tw.
57	(temozolomide or temodal or temodar).tw.

#	Searches
58	Vinblastine/
59	(lemblastine or velban or velbe or vinblastin* or vincleukoblastine).tw.
60	Vincristine/
61	(citomid or farmistin or leucocristine or oncovin? or onkocristin or vincasar or vincristin? or vincrisul or vintec).tw.
62	or/28-61
63	exp Combined Modality Therapy/
64	((combin* or concomitant) adj2 (therap* or treatment* or regimen* or protocol*).tw.
65	63 or 64
66	Watchful Waiting/
67	Observation/
68	watchful wait*.tw.
69	((active or expect* or symptom* or watch*) adj2 (manag* or monitor* or surveill* or observ* or control*).tw.
70	(best supportive care or BSC).tw.
71	or/66-70
72	20 or 27 or 62 or 65 or 71
73	11 and 72
74	limit 73 to yr="1990 -Current"
75	limit 74 to english language
76	Meta-Analysis/
77	Meta-Analysis as Topic/
78	(meta analy* or metanaly* or metaanaly*).ti,ab.
79	((systematic* or evidence*) adj2 (review* or overview*).ti,ab.
80	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
81	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
82	(search* adj4 literature).ab.
83	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
84	cochrane.jw.
85	or/76-84
86	randomized controlled trial.pt.
87	controlled clinical trial.pt.
88	pragmatic clinical trial.pt.
89	randomi#ed.ab.
90	placebo.ab.
91	drug therapy.fs.
92	randomly.ab.
93	trial.ab.
94	groups.ab.
95	or/86-94
96	Clinical Trials as topic.sh.

#	Searches
97	trial.ti.
98	or/86-90,92,96-97
99	85 or 98
100	75 and 99
101	Letter/
102	Editorial/
103	News/
104	exp Historical Article/
105	Anecdotes as Topic/
106	Comment/
107	Case Report/
108	(letter or comment* or abstracts).ti.
109	or/101-108
110	Randomized Controlled Trial/ or random*.ti,ab.
111	109 not 110
112	Animals/ not Humans/
113	exp Animals, Laboratory/
114	exp Animal Experimentation/
115	exp Models, Animal/
116	exp Rodentia/
117	(rat or rats or mouse or mice).ti.
118	or/111-117
119	100 not 118

Last searched on: 07/09/2017

**Database: Embase 1980 to 2016 Week 35**

#	Searches
1	exp brain tumor/
2	exp brain cortex/
3	exp brain/
4	meninx/
5	or/1-4
6	metastasis/
7	5 and 6
8	brain metastasis/
9	meningeal metastasis/
10	8 or 9
11	((brain or cereb* or intracereb* or intracrani* or mening* or brainstem*) adj3 (metasta* or micromet* or macromet* or oligomet* or spread* or carcinomatosis or carcinosis or secondar* or seeding or seeded or disseminat* or migrat*).tw.
12	7 or 10 or 11
13	exp neurosurgery/

#	Searches
14	exp cancer surgery/
15	metastasis resection/
16	exp stereotactic procedure/
17	((brain or neuro* or intracereb* or intracrani* or crani*) adj2 (surg* or microsurg* or manipulat* or procedur* or operat* or resect* or debulk* or excis* or ablat* or biops*).tw.
18	(neurosurg* or craniotom* or craniectom* or metastasectom*).tw.
19	((intra-operat* or intraoperat*) adj3 (technolog* or modalit* or procedur* or technique* or method*).tw.
20	or/13-19
21	exp radiotherapy/
22	radiotherapy.fs.
23	(radiotherap* or radiat* or irradiat* or tomotherap* or radiosurg* or brachytherap* or fractionat* or hyperfraction* or hypofraction* or gamma knife or cyber knife or cyberknife or xknife or arc therap*).tw.
24	(WBRT or WBI-IMRT or HA-WBRT or LINAC or IMRT or XRT or XBT or SRS or SRT or VMAT or 3DCRT or 3D CRT or CRT).tw.
25	(chemoradiotherap* or chemo-radiat* or chemo-irradiat*).tw.
26	or/21-25
27	exp antineoplastic agent/
28	exp chemotherapy/
29	monoclonal antibody/ad, dt [Drug Administration, Drug Therapy]
30	cancer vaccine/ad, dt [Drug Administration, Drug Therapy]
31	drug therapy.fs.
32	chemotherap*.tw.
33	((anti cancer or systemic or anti neoplas* or cytotoxi*) adj2 (therap* or treatment* or regimen* or protocol* or drug* or agent*).tw.
34	bevacizumab/
35	(bevacizumab or avastin or altusan).tw.
36	carboplatin/
37	(blastocarb or carboplatin or carbosin or carbotec or cbdca or ercar or jm8 or nealorin or neocarbo or nsc24120 or paraplatin* or platinwas or ribocarbo).tw.
38	carmustine/
39	(bcnu or bicnu or carmustine or fivb or gliadel wafer? or nitrosurea or nitrumon).tw.
40	cilengitide/
41	cilengitide.tw.
42	dendritic cell vaccine/
43	(DCVAX or (denti* cell? adj (vaccin* or immnuotherap*))).tw.
44	ifosfamide/
45	(holoxan or ifosamide or ifosphamide or iso-endoxan or isofosfamide or isophosphamide).tw.
46	ipilimumab/
47	(Ipilimumab or yervoy).tw.
48	irinotecan/
49	(Irinotecan or campto or camptosar).tw.

#	Searches
50	lomustine/
51	(belustine or ccnu or cecenu or ceenu or lomustine or nsc79037).tw.
52	methotrexate/
53	(amethopterin or methotrexate or mexate).tw.
54	nivolumab/
55	(Nivolumab or opdivo).tw.
56	procarbazine/
57	(matulan or natulan or procarbazine).tw.
58	rindopepimut/
59	(rindopepimut or rintega).tw.
60	tamoxifen/
61	(nolvadex or novaldex or soltamox or tamoxifen or tomaxithen or zitazonium).tw.
62	temozolamide/
63	(temozolamide or temodal or temodar).tw.
64	vinblastine/
65	(lemblastine or velban or velbe or vinblastin* or vincaleukoblastine).tw.
66	vincristine/
67	(citomid or farmistin or leucocristine or oncovin? or onkocristin or vincasar or vincristin? or vincrisul or vintec).tw.
68	or/27-67
69	multimodality cancer therapy/
70	((combin* or concomitant) adj2 (therap* or treatment* or regimen* or protocol*)).tw.
71	69 or 70
72	watchful waiting/
73	conservative treatment/
74	clinical observation/
75	watchful wait*.tw.
76	((active or expect* or symptom* or watch*) adj2 (manag* or monitor* or surveill* or observ* or control*).tw.
77	(best supportive care or BSC).tw.
78	or/72-77
79	20 or 26 or 68 or 71 or 78
80	12 and 79
81	limit 80 to yr="1990 -Current"
82	limit 81 to english language
83	random*.ti,ab.
84	factorial*.ti,ab.
85	(crossover* or cross over*).ti,ab.
86	((doubl* or singl*) adj blind*).ti,ab.
87	(assign* or allocat* or volunteer* or placebo*).ti,ab.
88	crossover procedure/
89	single blind procedure/

#	Searches
90	randomized controlled trial/
91	double blind procedure/
92	or/83-91
93	systematic review/
94	meta-analysis/
95	(meta analy* or metanaly* or metaanaly*).ti,ab.
96	((systematic or evidence) adj2 (review* or overview*).ti,ab.
97	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
98	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
99	(search* adj4 literature).ab.
100	or/93-99
101	92 or 100
102	82 and 101
103	letter.pt. or letter/
104	note.pt.
105	editorial.pt.
106	case report/ or case study/
107	(letter or comment*).ti.
108	or/103-107
109	randomized controlled trial/ or random*.ti,ab.
110	108 not 109
111	animal/ not human/
112	nonhuman/
113	exp Animal Experiment/
114	exp Experimental Animal/
115	animal model/
116	exp Rodent/
117	(rat or rats or mouse or mice).ti.
118	or/110-117
119	102 not 118

## Observational studies

Last searched on: 07/09/2017

**Database: Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present**

#	Searches
1	exp Brain Neoplasms/
2	exp Cerebral Cortex/
3	exp Brain/
4	exp Meninges/

#	Searches
5	or/1-4
6	exp Neoplasm Metastasis/
7	5 and 6
8	exp Brain Neoplasms/sc
9	7 or 8
10	((brain or cereb* or intracereb* or intracran* or menin* or brainstem*) adj3 (metasta* or micromet* or macromet* or oligomet* or spread* or carcinomatosis or carcinosis or secondar* or seeding or seeded or disseminat* or migrat*).tw.
11	9 or 10
12	Neurosurgery/
13	exp Neurosurgical Procedures/
14	Surgical Procedures, Operative/
15	Metastasectomy/
16	exp Stereotaxic Techniques/
17	((brain or neuro* or intracereb* or intracran* or crani*) adj2 (surg* or microsurg* or manipulat* or procedur* or operat* or resect* or debulk* or excis* or ablat* or biops*).tw.
18	(neurosurg* or craniotom* or craniectom* or metastasectom*).tw.
19	((intra-operat* or intraoperat*) adj3 (technolog* or modalit* or procedur* or technique* or method*).tw.
20	or/12-19
21	exp Radiotherapy/
22	radiotherapy.fs.
23	(radiotherap* or radiat* or irradiat* or tomotherap* or radiosurg* or brachytherap* or fractionat* or hyperfraction* or hypofraction* or gamma knife or cyber knife or cyberknife or xknife or arc therap*).tw.
24	(WBRT or WBI-IMRT or HA-WBRT or IMRT or LINAC or XRT or XBT or SRS or SRT or VMAT or 3DCRT or 3D CRT or CRT).tw.
25	Radiation Oncology/
26	(chemoradiotherap* or chemo-radiat* or chemo-irradiat*).tw.
27	or/21-26
28	exp Antineoplastic Agents/
29	antineoplastic protocols/ or antineoplastic combined chemotherapy protocols/
30	exp Antibodies, Monoclonal/ad, tu
31	Cancer Vaccines/ad, tu
32	drug therapy.fs.
33	chemotherap*.tw.
34	((anti cancer or systemic or anti neoplas* or cytotoxi*) adj2 (therap* or treatment* or regimen* or protocol* or drug* or agent*).tw.
35	Bevacizumab/
36	(bevacizumab or avastin).tw.
37	Carboplatin/
38	(blastocarb or carboplatin or carbosin or carbotec or cbdca or ercar or jm8 or nealorin or neocarbo or nsc24120 or paraplatin* or platinwas or ribocarbo).tw.
39	Carmustine/

#	<b>Searches</b>
40	(bcnu or bicnu or carmustine or fivb or gliadel wafer? or nitrosurea or nitrumon).tw.
41	cilengitide.tw.
42	(DCVAX or (dentric cell? adj (vaccin* or immnotherapy*))).tw.
43	Ifosfamide/
44	(holoxan or ifosamide or ifosphamide or iso-endoxan or isofosfamide or isophosphamide).tw.
45	(Ipilimumab or yervoy).tw.
46	(irinotecan or campto or campotosar).tw.
47	Lomustine/
48	(belustine or ccnu or cecenu or ceenu or lomustine or nsc79037).tw.
49	Methotrexate/
50	(amethopterin or methotrexate or mexate).tw.
51	(nivolumab or opdivo).tw.
52	Procarbazine/
53	(matulan or natulan or procarbazine).tw.
54	(rindopepitum or rintega).tw.
55	Tamoxifen/
56	(nolvadex or novaldex or soltamox or tamoxifen or tomoxithen or zitazonium).tw.
57	(temozolomide or temodal or temodar).tw.
58	Vinblastine/
59	(lemblastine or velban or velbe or vinblastin* or vincleukoblastine).tw.
60	Vincristine/
61	(citomid or farmistin or leucocristine or oncovin? or onkocristin or vincasar or vincristin? or vincrisul or vintec).tw.
62	or/28-61
63	exp Combined Modality Therapy/
64	((combin* or concomitant) adj2 (therap* or treatment* or regimen* or protocol*)).tw.
65	63 or 64
66	Watchful Waiting/
67	Observation/
68	watchful wait*.tw.
69	((active or expect* or symptom* or watch*) adj2 (manag* or monitor* or surveill* or observ* or control*).tw.
70	(best supportive care or BSC).tw.
71	or/66-70
72	20 or 27 or 62 or 65 or 71
73	11 and 72
74	limit 73 to yr="1990 -Current"
75	limit 74 to english language
76	Epidemiologic Studies/
77	Case Control Studies/
78	Retrospective Studies/
79	Cohort Studies/

#	Searches
80	Longitudinal Studies/
81	Follow-Up Studies/
82	Prospective Studies/
83	Cross-Sectional Studies/
84	((retrospective\$ or cohort\$ or longitudinal or follow?up or prospective or cross section\$) adj3 (stud\$ or research or analys\$)).ti.
85	or/76-84
86	75 and 85
87	Letter/
88	Editorial/
89	News/
90	exp Historical Article/
91	Anecdotes as Topic/
92	Comment/
93	Case Report/
94	(letter or comment* or abstracts).ti.
95	or/87-94
96	Randomized Controlled Trial/ or random*.ti,ab.
97	95 not 96
98	Animals/ not Humans/
99	exp Animals, Laboratory/
100	exp Animal Experimentation/
101	exp Models, Animal/
102	exp Rodentia/
103	(rat or rats or mouse or mice).ti.
104	or/97-103
105	86 not 104

Last searched on: 07/09/2017

**Database: Embase 1980 to 2016 Week 35**

#	Searches
1	exp brain tumor/
2	exp brain cortex/
3	exp brain/
4	meninx/
5	or/1-4
6	metastasis/
7	5 and 6
8	brain metastasis/
9	meningeal metastasis/
10	8 or 9

#	Searches
11	((brain or cereb* or intracereb* or intracrani* or meninges* or brainstem*) adj3 (metasta* or micromet* or macromet* or oligomet* or spread* or carcinomatosis or carcinosis or secondar* or seeding or seeded or disseminat* or migrat*).tw.
12	7 or 10 or 11
13	exp neurosurgery/
14	exp cancer surgery/
15	metastasis resection/
16	exp stereotactic procedure/
17	((brain or neuro* or intracereb* or intracrani* or crani*) adj2 (surg* or microsurg* or manipulat* or procedur* or operat* or resect* or debulk* or excis* or ablat* or biops*).tw.
18	(neurosurg* or craniotom* or craniectom* or metastasectom*).tw.
19	((intra-operat* or intraoperat*) adj3 (technolog* or modalit* or procedur* or technique* or method*).tw.
20	or/13-19
21	exp radiotherapy/
22	radiotherapy.fs.
23	(radiotherap* or radiat* or irradiat* or tomotherap* or radiosurg* or brachytherap* or fractionat* or hyperfraction* or hypofraction* or gamma knife or cyber knife or cyberknife or xknife or arc therap*).tw.
24	(WBRT or WBI-IMRT or HA-WBRT or LINAC or IMRT or XRT or XBT or SRS or SRT or VMAT or 3DCRT or 3D CRT or CRT).tw.
25	(chemoradiotherap* or chemo-radiat* or chemo-irradiat*).tw.
26	or/21-25
27	exp antineoplastic agent/
28	exp chemotherapy/
29	monoclonal antibody/ad, dt [Drug Administration, Drug Therapy]
30	cancer vaccine/ad, dt [Drug Administration, Drug Therapy]
31	drug therapy.fs.
32	chemotherap*.tw.
33	((anti cancer or systemic or anti neoplas* or cytotoxi*) adj2 (therap* or treatment* or regimen* or protocol* or drug* or agent*).tw.
34	bevacizumab/
35	(bevacizumab or avastin or altusan).tw.
36	carboplatin/
37	(blastocarb or carboplatin or carbosin or carbotec or cbdca or ercar or jm8 or nealorin or neocarbo or nsc24120 or paraplatin* or platinwas or ribocarbo).tw.
38	carmustine/
39	(bcnu or bicnru or carmustine or fivb or gliadel wafer? or nitrosurea or nitrumon).tw.
40	cilengitide/
41	cilengitide.tw.
42	dendritic cell vaccine/
43	(DCVAX or (denti* cell? adj (vaccin* or immnuotherap*))).tw.
44	ifosfamide/

#	Searches
45	(holoxan or ifosamide or ifosphamide or iso-endoxan or isofosfamide or isophosphamide).tw.
46	ipilimumab/
47	(Ipilimumab or yervoy).tw.
48	irinotecan/
49	(Irinotecan or campto or camptosar).tw.
50	lomustine/
51	(belustine or ccnu or cecenu or ceenu or lomustine or nsc79037).tw.
52	methotrexate/
53	(amethopterin or methotrexate or mexate).tw.
54	nivolumab/
55	(Nivolumab or opdivo).tw.
56	procarbazine/
57	(matulan or natulan or procarbazine).tw.
58	rindopepimut/
59	(rindopepimut or rintega).tw.
60	tamoxifen/
61	(nolvadex or novaldex or soltamox or tamoxifen or tomoxithen or zitazonium).tw.
62	temozolomide/
63	(temozolomide or temodal or temodar).tw.
64	vinblastine/
65	(lemblastine or velban or velbe or vinblastin* or vincaleukoblastine).tw.
66	vincristine/
67	(citomid or farmistin or leucocristine or oncovin? or onkocristin or vincasar or vincristin? or vincrisul or vintec).tw.
68	or/27-67
69	multimodality cancer therapy/
70	((combin* or concomitant) adj2 (therap* or treatment* or regimen* or protocol*)).tw.
71	69 or 70
72	watchful waiting/
73	conservative treatment/
74	clinical observation/
75	watchful wait*.tw.
76	((active or expect* or symptom* or watch*) adj2 (manag* or monitor* or surveill* or observ* or control*).tw.
77	(best supportive care or BSC).tw.
78	or/72-77
79	20 or 26 or 68 or 71 or 78
80	12 and 79
81	limit 80 to yr="1990 -Current"
82	limit 81 to english language
83	Clinical study/
84	Case control study/

#	Searches
85	family study/
86	longitudinal study/
87	retrospective study/
88	prospective study/
89	cohort analysis/
90	((retrospective* or cohort* or longitudinal or follow?up or prospective or cross section* or observation* or epidemiolog*) adj3 (stud* or research or analys*).ti.
91	or/83-90
92	82 and 91
93	letter.pt. or letter/
94	note.pt.
95	editorial.pt.
96	case report/ or case study/
97	(letter or comment*).ti.
98	or/93-97
99	randomized controlled trial/ or random*.ti,ab.
100	98 not 99
101	animal/ not human/
102	nonhuman/
103	exp Animal Experiment/
104	exp Experimental Animal/
105	animal model/
106	exp Rodent/
107	(rat or rats or mouse or mice).ti.
108	or/100-107
109	92 not 108

#### Database: Cochrane Library via Wiley Online

Date of last search: 7<sup>th</sup> September 2017.

ID	Search
#1	MeSH descriptor: [Brain Neoplasms] explode all trees
#2	MeSH descriptor: [Cerebral Cortex] explode all trees
#3	MeSH descriptor: [Brain] explode all trees
#4	MeSH descriptor: [Meninges] explode all trees
#5	{or #1-#4}
#6	MeSH descriptor: [Neoplasm Metastasis] explode all trees
#7	#5 and #6
#8	MeSH descriptor: [Brain Neoplasms] this term only and with qualifier(s): [Secondary - SC]
#9	#7 or #8
#10	((brain or cereb* or intracranial or mening* or brainstem*) near/3 (metasta* or micrometa* or macrometa* or spread* or carcinomatosis or carcinosis or secondar* or seeding or seeded or disseminat* or migrat*))

ID	Search
#11	#9 or #10
#12	MeSH descriptor: [Neurosurgery] explode all trees
#13	MeSH descriptor: [Neurosurgical Procedures] explode all trees
#14	MeSH descriptor: [Surgical Procedures, Operative] explode all trees
#15	MeSH descriptor: [Metastasectomy] explode all trees
#16	MeSH descriptor: [Stereotaxic Techniques] explode all trees
#17	((brain or neuro* or intracranial or crani*) near/2 (surg* or microsurg* or manipulat* or procedur* or operat* or resect* or debulk* or excis*))
#18	(neurosurg* or craniotom* or metastasectom*)
#19	((intra-operat* or intraoperat*) near/3 (technolog* or modalit* or procedur* or technique* or method?))
#20	{or #12-#19}
#21	MeSH descriptor: [Radiotherapy] explode all trees
#22	(radiotherap* or radiat* or irradiat* or radiosurg* or brachytherap* or fractionat* or hyperfraction* or hypofraction* or gamma knife or cyber knife or cyberknife or xknife or arc therap*)
#23	(WBRT or WBI-IMRT or HA-WBRT or IMRT or XRT or XBT or SRS or SRT or VMAT or 3DCRT or 3D CRT or CRT)
#24	MeSH descriptor: [Radiation Oncology] explode all trees
#25	(chemoradiotherap* or chemo-radiat* or chemo-irradiat*)
#26	{or #21-#25}
#27	MeSH descriptor: [Antineoplastic Agents] explode all trees
#28	MeSH descriptor: [Antineoplastic Protocols] explode all trees
#29	MeSH descriptor: [Antineoplastic Combined Chemotherapy Protocols] explode all trees
#30	MeSH descriptor: [Antibodies, Monoclonal] explode all trees
#31	MeSH descriptor: [Cancer Vaccines] explode all trees
#32	chemotherap*
#33	((anti cancer or systemic or anti neoplas* or cytotoxi*) near/2 (therap* or treatment* or regimen* or protocol* or drug* or agent*))
#34	MeSH descriptor: [Bevacizumab] explode all trees
#35	(bevacizumab or avastin)
#36	MeSH descriptor: [Carboplatin] explode all trees
#37	(blastocarb or carboplatin or carbosin or carbotec or cbdca or ercar or jm8 or nealorin or neocarbo or nsc24120 or paraplatin* or platinwas or ribocarbo)
#38	MeSH descriptor: [Carmustine] explode all trees
#39	(bcnu or bicnu or carmustine or fivb or gliadel wafer? or nitrosurea or nitrumon)
#40	cilengitide
#41	(DCVAX or (denti* cell? next (vaccin* or immunotherap*)))
#42	MeSH descriptor: [Ifosfamide] explode all trees
#43	(holoxan or ifosamide or ifosphamide or iso-endoxan or isofosfamide or isophosphamide)
#44	(Ipilimumab or yervoy)
#45	(irinotecan or campto or camptosar)
#46	MeSH descriptor: [Lomustine] explode all trees
#47	(belustine or ccnu or cecenu or ceenu or lomustine or nsc79037)

ID	Search
#48	MeSH descriptor: [Methotrexate] explode all trees
#49	(amethopterin or methotrexate or mexate)
#50	(nivolumab or opdivo)
#51	MeSH descriptor: [Procarbazine] explode all trees
#52	(matulan or natulan or procarbazine)
#53	(rindopepimut or rintega)
#54	MeSH descriptor: [Tamoxifen] explode all trees
#55	(nolvadex or novaldex or soltamox or tamoxifen or tomaxithen or zitazonium)
#56	(temozolomide or temodal or temodar)
#57	MeSH descriptor: [Vinblastine] explode all trees
#58	(lemblastine or velban or velbe or vinblastin* or vincaleukoblastine)
#59	MeSH descriptor: [Vincristine] explode all trees
#60	(citomid or farmistin or leucocristine or oncovin? or onkocristin or vincasar or vincristin? or vincrisul or vintec)
#61	{or #27-#60}
#62	MeSH descriptor: [Combined Modality Therapy] explode all trees
#63	((combin* or concomitant) near/2 (therap* or treatment* or regimen* or protocol*))
#64	#62 or #63
#65	MeSH descriptor: [Watchful Waiting] explode all trees
#66	MeSH descriptor: [Observation] explode all trees
#67	watchful wait*
#68	((active or expect* or symptom* or watch*) near/2 (manag* or monitor* or surveill* or observ* or control*))
#69	(best supportive care or BSC)
#70	{or #65-#69}
#71	{or #20, #26, #61, #64, #70}
#72	#11 and #71 Publication Year from 1990 to 2016

## Follow-up care

**5a – What is the most effective follow-up protocol (including duration, frequency and tests) to detect recurrence after treatment for glioma?**

**5b – What is the most effective follow-up protocol (including duration, frequency and tests) to detect recurrence after treatment for meningioma?**

**5c – What is the most effective follow-up protocol (including duration, frequency and tests) to detect recurrence after treatment for brain metastases?**

Last searched on 07/09/2017

**Database: Embase 1980 to 2017 Week 36, Ovid MEDLINE(R) Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present**

#	Searches
1	exp Glioma/ use ppez
2	exp Glioma/ use oemezd
3	exp Astrocytoma/ use ppez
4	exp Astrocytoma/ use oemezd
5	Oligodendrogioma/ use ppez
6	exp Glioblastoma/ use ppez
7	(glioma* or glioblastoma* or GBM or gliosarcoma* or astrocytoma* or oligoastrocytoma* or oligodendrogioma* or oligo?astrocytoma* or xanthoastrocytoma*).tw.
8	or/1-7
9	Meningioma/ use ppez
10	Meningeal Neoplasms/ use ppez
11	exp Meningioma/ use oemezd
12	meningioma*.tw.
13	(mening* adj3 (neoplas* or cancer* or carcin* or tumo* or malign* or h?emangiopericytoma* or h?emangioblastoma*)).tw.
14	or/9-13
15	exp Brain Neoplasms/ use ppez
16	exp Brain Tumor/ use oemezd
17	exp Cerebral Cortex/ use ppez
18	exp Brain Cortex/ use oemezd
19	exp Brain/ use ppez
20	exp Brain/ use oemezd

## DRAFT FOR CONSULTATION

## Follow-up care

#	Searches
21	exp Meninges/ use ppez
22	Meninx/ use oemezd
23	or/15-22
24	exp Neoplasm Metastasis/ use ppez
25	metastasis/ use oemezd
26	24 or 25
27	23 and 26
28	exp Brain Neoplasms/sc use ppez
29	Brain Metastasis/ use oemezd
30	Meningeal Metastasis/ use oemezd
31	or/28-30
32	27 or 31
33	((brain or cereb* or intracranial or mening* or brainstem*) adj3 (metasta* or micrometa* or macrometa* or spread* or carcinomatosis or carcinosis or secondar* or seeding or seeded or disseminat* or migrat*).tw.
34	32 or 33
35	8 or 14 or 34
36	exp Recurrence/ use ppez
37	Neoplasm Recurrence, Local/ use ppez
38	Disease Progression/ use ppez
39	cancer recurrence/ use oemezd
40	recurrent disease/ use oemezd
41	tumor recurrence/ use oemezd
42	recurr*.ti.
43	or/36-42
44	35 and 43
45	exp Aftercare/ use ppez
46	exp aftercare/ use oemezd
47	(aftercare or "after care" or after-care or follow-up or "follow up" or followup or surveillance).tw.
48	(after treatment or after-treatment or posttreatment or post treatment or post-treatment or post-therap* or post therap*).ti,ab.
49	((post-surg* or post surg* or post-operat* or postoperat* or post operat*) adj1 (evaluat* or monitor* or care)).tw.
50	(post-hospital* or post hospital* or posthospital* or after hospital* or follow* hospital*).ti,ab.
51	disease surveillance/ use oemezd
52	periodic medical examination/ use oemezd
53	"medical record review"/ use oemezd
54	exp patient monitoring/ use oemezd
55	(re-examin* or reexam* or monitor* or periodic examin* or regular examin* or checkup* or check-up* or check up*).ti,ab.
56	follow*.ti.
57	or/45-56

#	Searches
58	44 and 57
59	limit 58 to english language
60	limit 59 to yr="1990 -Current"
61	Letter/ use ppez
62	letter.pt. or letter/ use oemezd
63	note.pt.
64	editorial.pt.
65	Editorial/ use ppez
66	News/ use ppez
67	exp Historical Article/ use ppez
68	Anecdotes as Topic/ use ppez
69	Comment/ use ppez
70	Case Report/ use ppez
71	case report/ or case study/ use oemezd
72	(letter or comment*).ti.
73	or/61-72
74	randomized controlled trial/ use ppez
75	randomized controlled trial/ use oemezd
76	random*.ti,ab.
77	or/74-76
78	73 not 77
79	animals/ not humans/ use ppez
80	animal/ not human/ use oemezd
81	nonhuman/ use oemezd
82	exp Animals, Laboratory/ use ppez
83	exp Animal Experimentation/ use ppez
84	exp Animal Experiment/ use oemezd
85	exp Experimental Animal/ use oemezd
86	exp Models, Animal/ use ppez
87	animal model/ use oemezd
88	exp Rodentia/ use ppez
89	exp Rodent/ use oemezd
90	(rat or rats or mouse or mice).ti.
91	or/78-90
92	60 not 91
93	Meta-Analysis/
94	Meta-Analysis as Topic/
95	systematic review/
96	meta-analysis/
97	(meta analy* or metanaly* or metaanaly*).ti,ab.
98	((systematic or evidence) adj2 (review* or overview*)).ti,ab.
99	((systematic* or evidence*) adj2 (review* or overview*)).ti,ab.

#	Searches
100	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
101	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
102	(search* adj4 literature).ab.
103	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
104	cochrane.jw.
105	((pool* or combined) adj2 (data or trials or studies or results)).ab.
106	or/93-94,97,99-104 use ppez
107	or/95-98,100-105 use oemezd
108	or/106-107
109	clinical Trials as topic.sh. or (controlled clinical trial or pragmatic clinical trial or randomized controlled trial).pt. or (placebo or randomi#ed or randomly).ab. or trial.ti.
110	109 use ppez
111	(controlled clinical trial or pragmatic clinical trial or randomized controlled trial).pt. or drug therapy.fs. or (groups or placebo or randomi#ed or randomly or trial).ab.
112	111 use ppez
113	crossover procedure/ or double blind procedure/ or randomized controlled trial/ or single blind procedure/ or (assign* or allocat* or crossover* or cross over* or ((doubl* or singl*) adj blind*) or factorial* or placebo* or random* or volunteer*).ti,ab.
114	113 use oemezd
115	110 or 112
116	112 or 114
117	Cohort Studies/ or Longitudinal Studies/ or Follow-Up Studies/ or Prospective Studies/ or Comparative Study/
118	117 use ppez
119	cohort analysis/ or longitudinal study/ or follow up/ or prospective study/ or comparative study/
120	119 use oemezd
121	((cohort* or follow-up or follow?up or inciden* or longitudinal or prospective) adj1 (stud* or research or analys*).tw.
122	118 or 120 or 121
123	108 or 115 or 122
124	92 and 123
125	remove duplicates from 124

**Database: Cochrane Library via Wiley Online**Date of last search: 7<sup>th</sup> September 2017.

ID	Search
#1	MeSH descriptor: [Glioma] explode all trees
#2	(glioma* or glioblastoma* or gliosarcoma* or astrocytoma* or astroblastoma* or oligodendrogloma* or oligodendrocytoma* or oligoastrocytoma* or GBM)
#3	(glial near/3 (neoplas* or cancer* or tumo* or carcin* or malign* or metasta*))
#4	{or #1-#3}

ID	Search
#5	MeSH descriptor: [Meningioma] explode all trees
#6	MeSH descriptor: [Meningeal Neoplasms] explode all trees
#7	meningioma*
#8	(mening* near/3 (neoplas* or cancer* or carcin* or tumo* or malign* or metasta*))
#9	{or #5-#8}
#10	MeSH descriptor: [Neoplasm Metastasis] explode all trees
#11	MeSH descriptor: [Brain Neoplasms] explode all trees
#12	MeSH descriptor: [Brain] explode all trees
#13	#11 or #12
#14	#10 and #13
#15	((brain or cereb* or intracranial or mening*) near/3 (metasta* or micometasta* or spread* or involvement or carcinosis or secondar*))
#16	#14 or #15
#17	#4 or #9 or #16
#18	MeSH descriptor: [Recurrence] explode all trees
#19	MeSH descriptor: [Neoplasm Recurrence, Local] explode all trees
#20	recurr*
#21	{or #18-#20}
#22	#17 and #21
#23	MeSH descriptor: [Aftercare] explode all trees
#24	(aftercare or "after care" or after-care or follow-up or "follow up" or followup or surveillance)
#25	("after treatment*" or after-treatment* or posttreatment* or "post treatment*" or post-treatment* or post-therap* or "post therap")
#26	((post-surg* or "post surg*" or post-operat* or postoperat* or "post operat") adj1 (evaluat* or monitor* or care))
#27	(post-hospital* or "post hospital*" or posthospital* or "after hospital*" or "follow* hospital")
#28	{or #23-#27}
#29	#22 and #28 Publication Year from 1990 to 2017

# Surveillance for late effects of treatment for glioma, meningioma or brain metastases

## 5d – What is the most effective surveillance protocol (including no surveillance) for detecting late effects of treatment for glioma, meningioma or brain metastases?

### Systematic reviews and RCTs

Last searched on 12/09/2017

**Database(s): Embase 1974 to 2017 Week 36, Ovid MEDLINE(R) Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present**

#	Searches
1	exp Glioma/ use ppez
2	exp Glioma/ use oemezd
3	exp Astrocytoma/ use ppez
4	exp Astrocytoma/ use oemezd
5	Oligodendrogioma/ use ppez
6	exp Glioblastoma/ use ppez
7	(glioma* or glioblastoma* or GBM or gliosarcoma* or astrocytoma* or oligoastrocytoma* or oligodendrogioma* or oligo?astrocytoma* or xanthoastrocytoma*).tw.
8	or/1-7
9	Meningioma/ use ppez
10	Meningeal Neoplasms/ use ppez
11	exp Meningioma/ use oemezd
12	meningioma*.tw.
13	(mening* adj3 (neoplas* or cancer* or carcin* or tumo* or malign* or h?emangiopericytoma* or h?emangioblastoma*).tw.
14	or/9-13
15	exp Brain Neoplasms/ use ppez
16	exp Brain Tumor/ use oemezd
17	exp Cerebral Cortex/ use ppez
18	exp Brain Cortex/ use oemezd
19	exp Brain/ use ppez
20	exp Brain/ use oemezd
21	exp Meninges/ use ppez
22	Meninx/ use oemezd
23	or/15-22
24	exp Neoplasm Metastasis/ use ppez

## DRAFT FOR CONSULTATION

Surveillance for late effects of treatment for glioma, meningioma or brain metastases

#	Searches
25	metastasis/ use oemezd
26	24 or 25
27	23 and 26
28	exp Brain Neoplasms/sc use ppez
29	Brain Metastasis/ use oemezd
30	Meningeal Metastasis/ use oemezd
31	or/28-30
32	27 or 31
33	((brain or cereb* or intracranial or mening* or brainstem*) adj3 (metasta* or micrometa* or macrometa* or spread* or carcinomatosis or carcinosis or secondar* or seeding or seeded or disseminat* or migrat*).tw.
34	32 or 33
35	8 or 14 or 34
36	exp disease surveillance/ use oemezd
37	exp medical examination/ use oemezd
38	Physical Examination/ use ppez
39	Neurologic Examination/ use ppez
40	neurologic examination/ use oemezd
41	exp neurologic disease assessment/ use oemezd
42	Monitoring, Physiologic/ use ppez
43	patient monitoring/ use oemezd
44	(surveillance or examination or assessment).tw.
45	exp Blood Pressure Determination/ use ppez
46	blood pressure monitoring/ use oemezd
47	exp Hematologic Tests/ use ppez
48	exp blood examination/ use oemezd
49	Hypercholesterolemia/ use ppez
50	cholesterol blood level/ use oemezd
51	((blood or h?ematolog* or h?emoglob* or platelet* or cholesterol) adj (test* or examin* or analys* or cytolog* or scintiscan* or smear* or review* or assess* or evaluat* or monitori*).tw.
52	exp Diagnostic Techniques, Endocrine/ use ppez
53	exp endocrine system examination/ use oemezd
54	(endocrin* adj (test* or examin* or evaluat* or monitor* or assess* or review* or cytolog*).tw.
55	exp Neuropsychological Tests/ use ppez
56	exp neuropsychological tests/ use oemezd
57	Vision, Ocular/ use ppez
58	(neuro* adj (test* or examin* or analys* or assess* or review*).tw.
59	Ophthalmology/ use ppez
60	neuroophthalmology/ use oemezd
61	((ophthalm* or ocular or vision or sight) adj (test* or examin* or evaluat* or monitor* or assess* or review*).tw.

## DRAFT FOR CONSULTATION

Surveillance for late effects of treatment for glioma, meningioma or brain metastases

#	Searches
62	Neuroimaging/ use ppez
63	neuroimaging/ use oemezd
64	exp Magnetic Resonance Imaging/ use ppez
65	exp nuclear magnetic resonance imaging/ use oemezd
66	((MR or magnet*) adj2 (imag* or neuroimag* or scan* or spectroscop* or elastrogra* or examination*).tw.
67	(MRI or MR*1 or NMR*1).tw.
68	exp Self-Examination/ use ppez
69	self examination/ use oemezd
70	self evaluation/ use oemezd
71	Symptom Assessment/ use ppez
72	symptom assessment/ use oemezd
73	((self or patient* or symptom*) adj (report* or review* or assess* or test* or examin* or evaluat* or monitor*).tw.
74	((post-treat* or posttreat* or post-therap* or posttherap* or post-operat* or postoperat* or post-surg* or postsurg*) adj (report* or review* or assess* or test* or examin* or evaluat* or monitor*).tw.
75	((after or complete* or finish* or following) adj (therap* or treat* or radiotherap* or surger* or chemo*) adj (report* or review* or assess* or test* or examin* or evaluat* or monitor*).tw.
76	or/36-75
77	exp Treatment Outcome/ use ppez
78	outcome assessment/ use oemezd
79	((treat* or therap* or modalit* or surger* or resect* or operat* or radiothera* or chemo*) adj2 outcome*).tw.
80	exp Disease Progression/ use ppez
81	Late Onset Disorders/ use ppez
82	exp disease course/ use oemezd
83	Quality of Life/ use ppez
84	exp quality of life/ use oemezd
85	Disease-Free Survival/ use ppez
86	overall survival/ use oemezd
87	exp Stroke/ use ppez
88	exp cerebrovascular accident/ use oemezd
89	((cerebrovascular or brain vascular or cerebr* vascular) adj (accident* or apoplexy)).tw.
90	exp Vision Disorders/ use ppez
91	exp visual impairment/ use oemezd
92	exp Cataract/ use ppez
93	exp cataract/ use oemezd
94	(cataract* or lens* opac* or lens* cloud* or pseudoaphakia*).tw.
95	(((visual or vision or sight or eyesight or eye*) adj (loss* or impair*)) or (amauros* or blind*).tw.
96	Neoplasm Metastasis/ use ppez
97	metastasis/ use oemezd
98	(second* adj (cancer* or tumo* or neoplas* or carcinoma*).tw.

## DRAFT FOR CONSULTATION

Surveillance for late effects of treatment for glioma, meningioma or brain metastases

#	Searches
99	exp Hypopituitarism/ use ppez
100	hypopituitarism/ use oemezd
101	((hypopituitarism or ((sheehan or seldon or simmonds) adj (disease* or syndrome*))).tw.
102	((hypophys* or pituitar*) adj (insufficien* or deficien* or fail* or hypofunction*)).tw.
103	exp Neurobehavioral Manifestations/ use ppez
104	exp Neurocognitive Disorders/ use ppez
105	neurological complication/ use oemezd
106	(neuro* adj (declin* or disorder* or impair* or deficien* or insufficien* or complicat*)).tw.
107	radiation necrosis/ use oemezd
108	Radiation Injuries/ use ppez
109	Necrosis/ use ppez
110	(radionecrosis or radio-necrosis).tw.
111	((radiat* or irradiat* or radiotherap*) adj2 (necrosis or injur* or abnormalit* or destruct* or death)).tw.
112	or/77-111
113	35 and 76 and 112
114	limit 113 to english language
115	limit 114 to yr="1990 -Current"
116	Letter/ use ppez
117	letter.pt. or letter/ use oemezd
118	note.pt.
119	editorial.pt.
120	Editorial/ use ppez
121	News/ use ppez
122	exp Historical Article/ use ppez
123	Anecdotes as Topic/ use ppez
124	Comment/ use ppez
125	Case Report/ use ppez
126	case report/ or case study/ use oemezd
127	(letter or comment*).ti.
128	or/116-127
129	randomized controlled trial/ use ppez
130	randomized controlled trial/ use oemezd
131	random*.ti,ab.
132	or/129-131
133	128 not 132
134	animals/ not humans/ use ppez
135	animal/ not human/ use oemezd
136	nonhuman/ use oemezd
137	exp Animals, Laboratory/ use ppez
138	exp Animal Experimentation/ use ppez
139	exp Animal Experiment/ use oemezd

## DRAFT FOR CONSULTATION

Surveillance for late effects of treatment for glioma, meningioma or brain metastases

#	Searches
140	exp Experimental Animal/ use oemezd
141	exp Models, Animal/ use ppez
142	animal model/ use oemezd
143	exp Rodentia/ use ppez
144	exp Rodent/ use oemezd
145	(rat or rats or mouse or mice).ti.
146	or/133-145
147	115 not 146
148	Meta-Analysis/
149	Meta-Analysis as Topic/
150	systematic review/
151	meta-analysis/
152	(meta analy* or metanaly* or metaanaly*).ti,ab.
153	((systematic or evidence) adj2 (review* or overview*).ti,ab.
154	((systematic* or evidence*) adj2 (review* or overview*).ti,ab.
155	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
156	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
157	(search* adj4 literature).ab.
158	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
159	cochrane.jw.
160	((pool* or combined) adj2 (data or trials or studies or results)).ab.
161	or/148-149,152,154-159 use ppez
162	or/150-153,155-160 use oemezd
163	or/161-162
164	clinical Trials as topic.sh. or (controlled clinical trial or pragmatic clinical trial or randomized controlled trial).pt. or (placebo or randomi#ed or randomly).ab. or trial.ti.
165	164 use ppez
166	(controlled clinical trial or pragmatic clinical trial or randomized controlled trial).pt. or drug therapy.fs. or (groups or placebo or randomi#ed or randomly or trial).ab.
167	166 use ppez
168	crossover procedure/ or double blind procedure/ or randomized controlled trial/ or single blind procedure/ or (assign* or allocat* or crossover* or cross over* or (doubl* or singl*) adj blind*) or factorial* or placebo* or random* or volunteer*).ti,ab.
169	168 use oemezd
170	165 or 167
171	169 or 170
172	163 or 171
173	147 and 172
174	remove duplicates from 173

## Observational studies

Last searched on: 12/09/2017

**Database(s): Embase 1974 to 2017 Week 36, Ovid MEDLINE(R) Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present**

#	Searches
1	exp Glioma/ use ppez
2	exp Glioma/ use oemezd
3	exp Astrocytoma/ use ppez
4	exp Astrocytoma/ use oemezd
5	Oligodendrogioma/ use ppez
6	exp Glioblastoma/ use ppez
7	(glioma* or glioblastoma* or GBM or gliosarcoma* or astrocytoma* or oligoastrocytoma* or oligodendrogioma* or oligo?astrocytoma* or xanthoastrocytoma*).tw.
8	or/1-7
9	Meningioma/ use ppez
10	Meningeal Neoplasms/ use ppez
11	exp Meningioma/ use oemezd
12	meningioma*.tw.
13	(mening* adj3 (neoplas* or cancer* or carcin* or tumo* or malign* or h?emangiopericytoma* or h?emangioblastoma*).tw.
14	or/9-13
15	exp Brain Neoplasms/ use ppez
16	exp Brain Tumor/ use oemezd
17	exp Cerebral Cortex/ use ppez
18	exp Brain Cortex/ use oemezd
19	exp Brain/ use ppez
20	exp Brain/ use oemezd
21	exp Meninges/ use ppez
22	Meninx/ use oemezd
23	or/15-22
24	exp Neoplasm Metastasis/ use ppez
25	metastasis/ use oemezd
26	24 or 25
27	23 and 26
28	exp Brain Neoplasms/sc use ppez
29	Brain Metastasis/ use oemezd
30	Meningeal Metastasis/ use oemezd
31	or/28-30
32	27 or 31
33	((brain or cereb* or intracranial or mening* or brainstem*) adj3 (metasta* or micrometa* or macrometa* or spread* or carcinomatosis or carcinosis or secondar* or seeding or seeded or disseminat* or migrat*).tw.

## DRAFT FOR CONSULTATION

Surveillance for late effects of treatment for glioma, meningioma or brain metastases

#	Searches
34	32 or 33
35	8 or 14 or 34
36	exp disease surveillance/ use oemezd
37	exp medical examination/ use oemezd
38	Physical Examination/ use ppez
39	Neurologic Examination/ use ppez
40	neurologic examination/ use oemezd
41	exp neurologic disease assessment/ use oemezd
42	Monitoring, Physiologic/ use ppez
43	patient monitoring/ use oemezd
44	(surveillance or examination or assessment).tw.
45	exp Blood Pressure Determination/ use ppez
46	blood pressure monitoring/ use oemezd
47	exp Hematologic Tests/ use ppez
48	exp blood examination/ use oemezd
49	Hypercholesterolemia/ use ppez
50	cholesterol blood level/ use oemezd
51	((blood or h?ematolog* or h?emoglob* or platelet* or cholesterol) adj (test* or examin* or analys* or cytolog* or scintiscan* or smear* or review* or assess* or evaluat* or monitori*).tw.
52	exp Diagnostic Techniques, Endocrine/ use ppez
53	exp endocrine system examination/ use oemezd
54	(endocrin* adj (test* or examin* or evaluat* or monitor* or assess* or review* or cytolog*).tw.
55	exp Neuropsychological Tests/ use ppez
56	exp neuropsychological tests/ use oemezd
57	Vision, Ocular/ use ppez
58	(neuro* adj (test* or examin* or analys* or assess* or review*)).tw.
59	Ophthalmology/ use ppez
60	neuroophthalmology/ use oemezd
61	((ophthalm* or ocular or vision or sight) adj (test* or examin* or evaluat* or monitor* or assess* or review*).tw.
62	Neuroimaging/ use ppez
63	neuroimaging/ use oemezd
64	exp Magnetic Resonance Imaging/ use ppez
65	exp nuclear magnetic resonance imaging/ use oemezd
66	((MR or magnet*) adj2 (imag* or neuroimag* or scan* or spectroscop* or elastrogra* or examination)).tw.
67	(MRI or MR*1 or NMR*1).tw.
68	exp Self-Examination/ use ppez
69	self examination/ use oemezd
70	self evaluation/ use oemezd
71	Symptom Assessment/ use ppez

## DRAFT FOR CONSULTATION

Surveillance for late effects of treatment for glioma, meningioma or brain metastases

#	Searches
72	symptom assessment/ use oemezd
73	((self or patient* or symptom*) adj (report* or review* or assess* or test* or examin* or evaluat* or monitor*).tw.
74	((post-treat* or posttreat* or post-therap* or posttherap* or post-operat* or postoperat* or post-surg* or postsurg*) adj (report* or review* or assess* or test* or examin* or evaluat* or monitor*).tw.
75	((after or complete* or finish* or following) adj (therap* or treat* or radiotherap* or surger* or chemo*) adj (report* or review* or assess* or test* or examin* or evaluat* or monitor*).tw.
76	or/36-75
77	exp Treatment Outcome/ use ppez
78	outcome assessment/ use oemezd
79	((treat* or therap* or modalit* or surger* or resect* or operat* or radiothera* or chemo*) adj2 outcome).tw.
80	exp Disease Progression/ use ppez
81	Late Onset Disorders/ use ppez
82	exp disease course/ use oemezd
83	Quality of Life/ use ppez
84	exp quality of life/ use oemezd
85	Disease-Free Survival/ use ppez
86	overall survival/ use oemezd
87	exp Stroke/ use ppez
88	exp cerebrovascular accident/ use oemezd
89	((cerebrovascular or brain vascular or cerebr* vascular) adj (accident or apoplexy)).tw.
90	exp Vision Disorders/ use ppez
91	exp visual impairment/ use oemezd
92	exp Cataract/ use ppez
93	exp cataract/ use oemezd
94	(cataract* or lens* opac* or lens* cloud* or pseudoaphakia*).tw.
95	((visual or vision or sight or eyesight or eye*) adj (loss* or impair*)) or (amauros* or blind*).tw.
96	Neoplasm Metastasis/ use ppez
97	metastasis/ use oemezd
98	(second* adj (cancer* or tumo* or neoplas* or carcinoma*)).tw.
99	exp Hypopituitarism/ use ppez
100	hypopituitarism/ use oemezd
101	(hypopituitarism or ((sheehan or seldon or simmonds) adj (disease or syndrome))).tw.
102	((hypophys* or pituitar*) adj (insufficien* or deficien* or fail* or hypofunction*).tw.
103	exp Neurobehavioral Manifestations/ use ppez
104	exp Neurocognitive Disorders/ use ppez
105	neurological complication/ use oemezd
106	(neuro* adj (decline or disorder* or impair* or deficien* or insufficien or complicat*).tw.
107	radiation necrosis/ use oemezd
108	Radiation Injuries/ use ppez

## DRAFT FOR CONSULTATION

Surveillance for late effects of treatment for glioma, meningioma or brain metastases

#	Searches
109	Necrosis/ use ppez
110	(radionecrosis or radio-necrosis).tw.
111	((radiat* or irradiat* or radiotherap*) adj2 (necrosis or injur* or abnormalit* or destruct* or death)).tw.
112	or/77-111
113	35 and 76 and 112
114	limit 113 to english language
115	limit 114 to yr="1990 -Current"
116	Letter/ use ppez
117	letter.pt. or letter/ use oemezd
118	note.pt.
119	editorial.pt.
120	Editorial/ use ppez
121	News/ use ppez
122	exp Historical Article/ use ppez
123	Anecdotes as Topic/ use ppez
124	Comment/ use ppez
125	Case Report/ use ppez
126	case report/ or case study/ use oemezd
127	(letter or comment*).ti.
128	or/116-127
129	randomized controlled trial/ use ppez
130	randomized controlled trial/ use oemezd
131	random*.ti,ab.
132	or/129-131
133	128 not 132
134	animals/ not humans/ use ppez
135	animal/ not human/ use oemezd
136	nonhuman/ use oemezd
137	exp Animals, Laboratory/ use ppez
138	exp Animal Experimentation/ use ppez
139	exp Animal Experiment/ use oemezd
140	exp Experimental Animal/ use oemezd
141	exp Models, Animal/ use ppez
142	animal model/ use oemezd
143	exp Rodentia/ use ppez
144	exp Rodent/ use oemezd
145	(rat or rats or mouse or mice).ti.
146	or/133-145
147	115 not 146
148	Epidemiologic Studies/
149	Case Control Studies/

#	Searches
150	Retrospective Studies/
151	Cohort Studies/
152	Longitudinal Studies/
153	Follow-Up Studies/
154	Prospective Studies/
155	Cross-Sectional Studies/
156	or/148-155 use ppez
157	clinical study/
158	case control study/
159	family study/
160	longitudinal study/
161	retrospective study/
162	prospective study/
163	cohort analysis/
164	or/157-163 use oemezd
165	((retrospective\$ or cohort\$ or longitudinal or follow?up or prospective or cross section\$) adj3 (stud\$ or research or analys\$)).ti.
166	156 or 164 or 165
167	147 and 166
168	remove duplicates from 167

**Database: Cochrane Library via Wiley Online**Date of last search: 12<sup>th</sup> September 2017.

ID	Search
#1	MeSH descriptor: [Glioma] explode all trees
#2	(glioma* or glioblastoma* or gliosarcoma* or astrocytoma* or astroblastoma* or oligodendrogioma* or oligodendrocytoma* or oligoastrocytoma* or GBM)
#3	(glial near/3 (neoplas* or cancer* or tumo* or carcin* or malign* or metasta*))
#4	{or #1-#3}
#5	MeSH descriptor: [Meningioma] explode all trees
#6	MeSH descriptor: [Meningeal Neoplasms] explode all trees
#7	meningioma*
#8	(mening* near/3 (neoplas* or cancer* or carcin* or tumo* or malign* or metasta*))
#9	{or #5-#8}
#10	MeSH descriptor: [Neoplasm Metastasis] explode all trees
#11	MeSH descriptor: [Brain Neoplasms] explode all trees
#12	MeSH descriptor: [Brain] explode all trees
#13	#11 or #12
#14	#10 and #13
#15	((brain or cereb* or intracranial or mening*) near/3 (metasta* or micometasta* or spread* or involvement or carcinosis or secondar*))
#16	#14 or #15

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Surveillance for late effects of treatment for glioma, meningioma or brain metastases

ID	Search
#17	#4 or #9 or #16
#18	MeSH descriptor: [Physical Examination] explode all trees
#19	MeSH descriptor: [Neurologic Examination] explode all trees
#20	MeSH descriptor: [Monitoring, Physiologic] explode all trees
#21	(surveillance or examination or assessment or monitor* or followup or follow-up)
#22	MeSH descriptor: [Blood Pressure Determination] explode all trees
#23	MeSH descriptor: [Hematologic Tests] explode all trees
#24	MeSH descriptor: [Hypercholesterolemia] explode all trees
#25	((blood or h?ematolog* or h?emoglob* or platelet* or cholesterol) near (test* or examin* or analys* or cytolog* or scintiscan* or smear* or review* or assess* or evaluat* or monitor*))
#26	MeSH descriptor: [Diagnostic Techniques, Endocrine] explode all trees
#27	(endocrin* near (test* or examin* or evaluat* or monitor* or assess* or review* or cytolog*))
#28	MeSH descriptor: [Neuropsychological Tests] explode all trees
#29	MeSH descriptor: [Vision, Ocular] explode all trees
#30	(neuro* near (test* or examin* or analys* or assess* or review*))
#31	MeSH descriptor: [Ophthalmology] explode all trees
#32	((ophthalm* or ocular or vision or sight) near (test* or examin* or evaluat* or monitor* or assess* or review*))
#33	MeSH descriptor: [Neuroimaging] explode all trees
#34	MeSH descriptor: [Magnetic Resonance Imaging] explode all trees
#35	((MR or magnet*) near/2 (imag* or neuroimag* or scan* or spectroscop* or elastrogra* or examination*))
#36	(MRI or MR*1 or NMR*1)
#37	MeSH descriptor: [Self-Examination] explode all trees
#38	MeSH descriptor: [Symptom Assessment] explode all trees
#39	((self or patient* or symptom*) near (report* or review* or assess* or test* or examin* or evaluat* or monitor*))
#40	((post-treat* or posttreat* or post-therap* or posttherap* or post-operat* or postoperat* or post-surg* or postsurg*) near (report* or review* or assess* or test* or examin* or evaluat* or monitor*))
#41	((after or complete* or finish* or following) near (therap* or treat* or radiotherap* or surger* or chemo*) near (report* or review* or assess* or test* or examin* or evaluat* or monitor*))
#42	{or #18-#41}
#43	#17 and #42
#44	MeSH descriptor: [Treatment Outcome] explode all trees
#45	((treat* or therap* or modalit* or surger* or resect* or operat* or radiothera* or chemo*) near/2 outcome*)
#46	MeSH descriptor: [Disease Progression] explode all trees
#47	MeSH descriptor: [Late Onset Disorders] explode all trees
#48	MeSH descriptor: [Quality of Life] explode all trees
#49	MeSH descriptor: [Disease-Free Survival] explode all trees
#50	MeSH descriptor: [Stroke] explode all trees
#51	((cerebrovascular or brain vascular or cerebr* vascular) near (accident* or apoplexy))
#52	MeSH descriptor: [Vision Disorders] explode all trees

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ID	Search
#53	MeSH descriptor: [Cataract] explode all trees
#54	(cataract* or lens* opac* or lens* cloud* or pseudoaphakia*)
#55	((visual or vision or sight or eyesight or eye*) near (loss* or impair*)) or (amaurosis* or blind*))
#56	MeSH descriptor: [Neoplasm Metastasis] explode all trees
#57	(second* near (cancer* or tumo* or neoplas* or carcinoma*))
#58	MeSH descriptor: [Hypopituitarism] explode all trees
#59	(hypopituitarism or ((sheehan or seldon or simmonds) near (disease* or syndrome*)))
#60	((hypophys* or pituitar*) near (insufficien* or deficien* or fail* or hypofunction*))
#61	MeSH descriptor: [Neurobehavioral Manifestations] explode all trees
#62	MeSH descriptor: [Neurocognitive Disorders] explode all trees
#63	(neuro* near (declin* or disorder* or impair* or deficien* or insufficien* or complicat*))
#64	MeSH descriptor: [Radiation Injuries] explode all trees
#65	MeSH descriptor: [Necrosis] explode all trees
#66	(radionecrosis or radio-necrosis)
#67	((radiat* or irradiat* or radiotherap*) near/2 (necrosis or injur* or abnormalit* or destruct* or death))
#68	{or #44-#67}
#69	#43 and #68 Publication Year from 1990 to 2017

## Follow-up care – care needs

### 5e - What are the health and social care support needs of people with brain tumours (primary) and brain metastases and their families and carers?

Last searched on 12/09/2017

**Database: Embase 1980 to 2017 Week 36 & MEDLINE(R) Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present**

#	Searches
1	exp Glioma/ use ppez
2	exp Glioma/ use oemezd
3	exp Astrocytoma/ use ppez
4	exp Astrocytoma/ use oemezd
5	Oligodendrogioma/ use ppez
6	exp Glioblastoma/ use ppez
7	(glioma* or glioblastoma* or GBM or gliosarcoma* or astrocytoma* or oligoastrocytoma* or oligodendrogioma* or oligo?astrocytoma* or xanthoastrocytoma*).tw.
8	or/1-7
9	Meningioma/ use ppez
10	Meningeal Neoplasms/ use ppez
11	exp Meningioma/ use oemezd
12	meningioma*.tw.
13	(mening* adj3 (neoplas* or cancer* or carcin* or tumo* or malign* or h?emangiopericytoma* or h?emangioblastoma*).tw.
14	or/9-13
15	exp Brain Neoplasms/ use ppez
16	exp Brain Tumor/ use oemezd
17	exp Cerebral Cortex/ use ppez
18	exp Brain Cortex/ use oemezd
19	exp Brain/ use ppez
20	exp Brain/ use oemezd
21	exp Meninges/ use ppez
22	Meninx/ use oemezd
23	or/15-22
24	exp Neoplasm Metastasis/ use ppez
25	metastasis/ use oemezd
26	24 or 25
27	23 and 26
28	exp Brain Neoplasms/sc use ppez
29	Brain Metastasis/ use oemezd

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## Follow-up care – care needs

#	Searches
30	Meningeal Metastasis/ use oemezd
31	or/28-30
32	27 or 31
33	((brain or cereb* or intracranial or mening* or brainstem*) adj3 (metasta* or micrometa* or macrometa* or spread* or carcinomatosis or carcinosis or secondar* or seeding or seeded or disseminat* or migrat*).tw.
34	32 or 33
35	Brain Neoplasms/co, px use ppez
36	Brain Tumor/co, rh use oemezd
37	35 or 36
38	8 or 14 or 34 or 37
39	exp Aftercare/ use ppez
40	"Continuity of Patient Care"/ use ppez
41	exp Aftercare/ use oemezd
42	Follow Up/ use oemezd
43	(followup or follow-up or follow up).ti,ab.
44	(aftercare or after-care or after care).ti,ab.
45	(after treatment or after-treatment or posttreatment or post treatment or post-treatment or post-therap* or post therap*).ti,ab.
46	(post-hospital* or post hospital* or posthospital* or after hospital* or follow* hospital*).ti,ab.
47	treated.ti,ab.
48	Transitional Care/ use oemezd
49	Patient Transfer/ use oemezd
50	periodic medical examination/ use oemezd
51	(re-examin* or reexamin or surveillance or monitor* or periodic examin* or regular examin* or checkup* or check-up* or check up*).ti,ab.
52	Watchful Waiting/ use ppez
53	Watchful Waiting/ use oemezd
54	exp Treatment Outcome/ use ppez
55	exp Treatment Outcome/ use oemezd
56	exp General Health Status Assessment/ use oemezd
57	exp Mental Function Assessment/ use oemezd
58	or/39-57
59	38 and 58
60	"Patient Care Planning"/ use ppez
61	Patient Care Planning/ use oemezd
62	"Health Services Needs and Demand"/ use ppez
63	health care need/ use oemezd
64	*Quality of Life/ use ppez
65	*"quality of life"/ use oemezd
66	Long-Term Care/ use ppez
67	Long Term Care/ use oemezd
68	Cancer Rehabilitation/ use oemezd

#	Searches
69	Social Support/ use ppez
70	Social Support/ use oemezd
71	Community Networks/ use ppez
72	Community Care/ use oemezd
73	"Community Health Planning"/ use ppez
74	Palliative Care/og, px, ut use ppez
75	Terminal Care/px, ut use ppez
76	Terminal Care/ use oemezd
77	(transmural adj (care or healthcare or service* or clinic*1)).tw.
78	(discharg* adj (plan* or patient*)).tw.
79	*Hospital Discharge/ use oemezd
80	care network*.tw.
81	community care.tw.
82	(social network* or social support*).tw.
83	exp Psychotherapy/ use ppez
84	Psychotherapy/ use oemezd
85	Psychosocial Care/ use oemezd
86	psychosocial support*.tw.
87	supportive care.tw.
88	exp Physical Therapy Modalities/ use ppez
89	exp Physiotherapy/ use oemezd
90	exp Physical Performance/ use oemezd
91	exp Motor Activity/ use ppez
92	Motor Activity/ use oemezd
93	(physical adj2 support*).tw.
94	Occupational Therapy/ use ppez
95	Occupational Therapy/ use oemezd
96	Independent Living/ use ppez
97	Independent Living/ use oemezd
98	Independence/ use oemezd
99	Activities of Daily Living/ use ppez
100	Daily Life Activity/ use oemezd
101	(daily adj (life or live* or living or activit* or difficult* or problem* or support*)).tw.
102	Lifestyle Modification/ use oemezd
103	Self Care/ use ppez
104	Self Care/ use oemezd
105	Automobile Driving/ use ppez
106	exp Car Driving/ use oemezd
107	(driv* adj1 (abilit* or inabilit* or difficult* or problem*)).tw.
108	Patient Education as Topic/ use ppez
109	Patient Education/ use oemezd
110	educat*.ti.

#	Searches
111	Personal Autonomy/ use ppez
112	Personal Autonomy/ use oemezd
113	Personal Value/ use oemezd
114	Personhood/ use ppez
115	Personhood/ use oemezd
116	((autonomy or mastery) adj2 (loss* or losing or personal or support* or abilit* or inabilit* or problem* or difficult*).tw.
117	Individuality/ use ppez
118	exp Self Concept/ use oemezd
119	(self-esteem or self esteem or personhood).tw.
120	exp Adaptation, Psychological/ use ppez
121	exp Adaptive Behavior/ use oemezd
122	Life Change Events/ use ppez
123	attitude to change/ use oemezd
124	exp Behavioral Symptoms/ use ppez
125	Anxiety/ use ppez
126	Anxiety/ use oemezd
127	Patient Worry/ use oemezd
128	Resilience Psychological/ use ppez
129	exp Coping Behavior/ use oemezd
130	exp Stress/co, pc, rh use oemezd
131	((stress* or emotion* or orientat* or resilien* or coheren* or cope* or coping or chang*) adj2 (strateg* or support* or care* or difficult* or problem*).tw.
132	Caregivers/px use ppez
133	Caregiver/ use oemezd
134	exp Family/px use ppez
135	exp Family/ use oemezd
136	exp Family Life/ use oemezd
137	Survivors/ use ppez
138	Cancer Survivor/ use oemezd
139	Interpersonal Relations/ use ppez
140	Human Relation/ use oemezd
141	Physician-Patient Relations/ use ppez
142	Doctor Patient Relation/ use oemezd
143	Nurse-Patient Relations/ use ppez
144	Nurse Patient Relationship/ use oemezd
145	exp Nursing Care/ use ppez
146	exp Nursing Care/ use oemezd
147	Financial Support/ use ppez
148	exp Financial Management/ use oemezd
149	((financ* or money or expenditure or bills) adj2 (support* or loss or personal or strateg* or difficult* or problem*).tw.
150	exp Work/ use ppez

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Follow-up care – care needs

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#	Searches
151	Work/ use oemezd
152	exp Employment/ use ppez
153	Employment/ use oemezd
154	Job Adaptation/ use oemezd
155	((work*or job* or employ* or profession* or occupation*) adj2 (return* or resum* or support* or adapt* or loss* or difficult* or problem* or abilit* or inabilit*)).tw.
156	Rehabilitation, Vocational/ use ppez
157	Vocational Rehabilitation/ use oemezd
158	Work Resumption/ use oemezd
159	Quality of Working Life/ use oemezd
160	Fatigue/px, rh use ppez
161	exp fatigue/rh use oemezd
162	exp Communication/px use ppez
163	Communication Skill/ use oemezd
164	Neurocognitive Disorders/ use ppez
165	cognitive defect/rh, si, th use oemezd
166	((neuroconiti* or cogniti*) adj (disorder* or dysfunct* or impair* or problem* or difficult*)).tw.
167	exp memory disorder/rh, th use oemezd
168	(memor* adj (loss* or disorder* or dysfunct* or impair* or problem* or difficult* or inabilit*)).tw.
169	amnesi*.ti,ab.
170	exp Advance Care Planning/ use ppez
171	*advance care planning/ use oemezd
172	Living Will/ use oemezd
173	(advance* directive* or living will* or power of attorney or ulysses contract* or psychiatric will* or right to die).tw.
174	or/60-173
175	59 and 174
176	limit 175 to english language
177	limit 176 to yr="1990 -Current"
178	Letter/ use ppez
179	letter.pt. or letter/ use oemezd
180	note.pt.
181	editorial.pt.
182	Editorial/ use ppez
183	News/ use ppez
184	exp Historical Article/ use ppez
185	Anecdotes as Topic/ use ppez
186	Comment/ use ppez
187	Case Report/ use ppez
188	case report/ or case study/ use oemezd
189	(letter or comment*).ti.
190	or/178-189

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Follow-up care – care needs

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#	Searches
191	randomized controlled trial/ use ppez
192	randomized controlled trial/ use oemezd
193	random*.ti,ab.
194	or/191-193
195	190 not 194
196	animals/ not humans/ use ppez
197	animal/ not human/ use oemezd
198	nonhuman/ use oemezd
199	exp Animals, Laboratory/ use ppez
200	exp Animal Experimentation/ use ppez
201	exp Animal Experiment/ use oemezd
202	exp Experimental Animal/ use oemezd
203	exp Models, Animal/ use ppez
204	animal model/ use oemezd
205	exp Rodentia/ use ppez
206	exp Rodent/ use oemezd
207	(rat or rats or mouse or mice).ti.
208	or/195-207
209	177 not 208
210	exp Qualitative Research/ use ppez
211	exp qualitative research/ use oemezd
212	exp Surveys/ and Questionnaires/ use ppez
213	exp Questionnaire/ use oemezd
214	exp Health Services Research/ use ppez
215	action research/ use oemezd
216	Interview/ use ppez
217	exp interview/ use oemezd
218	Interviews as Topic/ use ppez
219	(interview* or qualitative or experience* or theme*).tw.
220	or/210-219
221	209 and 220
222	remove duplicates from 221

Last searched on 13/09/2017

**Database: AMED (Allied and Complementary Medicine) 1985 to September 2017**

#	Searches
1	brain neoplasms/
2	(glioma* or glioblastoma* or GBM or gliosarcoma* or astrocytoma* or oligoastrocytoma* or oligodendrogloma* or oligo?astrocytoma* or xanthoastrocytoma*).tw.
3	meningioma*.tw.
4	(mening* adj3 (neoplas* or cancer* or carcin* or tumo* or malign* or h?emangiopericytoma* or h?emangioblastoma*)).tw.

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Follow-up care – care needs

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#	Searches
5	exp brain/
6	meninges.tw.
7	5 or 6
8	neoplasms/
9	7 and 8
10	neoplasm metastasis/
11	1 or 9
12	10 and 11
13	((brain or cereb* or intracranial or mening* or brainstem*) adj3 (metasta* or micrometa* or macrometa* or spread* or carcinomatosis or carcinosis or secondar* or seeding or seeded or disseminat* or migrat*).tw.
14	12 or 13
15	1 or 2 or 3 or 4 or 14
16	exp general patient care/
17	(followup or follow-up or follow up).ti,ab.
18	(aftercare or after-care or after care).ti,ab.
19	(after treatment or after-treatment or posttreatment or post treatment or post-treatment or post-therap* or post therap*).ti,ab.
20	(post-hospital* or post hospital* or posthospital* or after hospital* or follow* hospital*).ti,ab.
21	treated.ti,ab.
22	"continuity of patient care"/
23	patient transfer/
24	patient discharge/
25	(re-examin* or reexam or surveillance or monitor* or periodic examin* or regular examin* or checkup* or check-up* or check up*).ti,ab.
26	"Outcome and process assessment"/
27	(watch* adj wait*).tw.
28	exp patient assessment/
29	or/16-28
30	15 and 29
31	limit 30 to yr="1990 -Current"
32	limit 31 to english

Last searched on: 13/09/2017

**Database: Ebsco CINAHL Plus**

#	Query
S107	S99 AND S106
S106	S100 OR S101 OR S102 OR S103 OR S104 OR S105
S105	TX (interview* or experienc* or theme*)
S104	(MH "Research, Nursing")
S103	(MH "Observational Methods+")
S102	(MH "Interviews+")
S101	TX qualitative

#	Query
S100	(MH "Qualitative Studies+")
S99	S37 AND S98
S98	S38 OR S39 OR S40 OR S41 OR S42 OR S43 OR S44 OR S45 OR S46 OR S47 OR S48 OR S49 OR S50 OR S51 OR S52 OR S53 OR S54 OR S55 OR S56 OR S57 OR S58 OR S59 OR S60 OR S61 OR S62 OR S63 OR S64 OR S65 OR S66 OR S67 OR S68 OR S69 OR S70 OR S71 OR S72 OR S73 OR S74 OR S75 OR S76 OR S77 OR S78 OR S79 OR S80 OR S81 OR S82 OR S83 OR S84 OR S85 OR S86 OR S87 OR S88 OR S89 OR S90 OR S91 OR S92 OR S93 OR S94 OR S95 OR S96 OR S97
S97	TX (advance* directive* or living will* or power of attorney or ulysses contract* or psychiatric will* or right to die)
S96	(MH "Advance Directives+")
S95	(MH "Advance Care Planning")
S94	TX amnesi*
S93	TX (memor* N (loss* or disorder* or dysfunct* or impair* or problem* or difficult* or inabilit*))
S92	(MH "Memory Disorders+")
S91	TX ((neuroconiti* or cogniti*) N (disorder* or dysfunct* or impair* or problem* or difficult*))
S90	(MH "Cognition Disorders")
S89	(MH "Communication+")
S88	(MH "Fatigue")
S87	(MH "Work Capacity Evaluation")
S86	(MH "Work Redesign")
S85	(MH "Rehabilitation, Vocational+")
S84	TX ((work* or job* or employ* or profession* or occupation*) N2 (return* or resum* or support* or adapt* or loss* or difficult* or problem* or abilit* or inabilit*))
S83	(MH "Job Accommodation")
S82	TX ((financ* or money or expenditure or bills or debt*) N2 (support* or loss or personal or strateg* or difficult* or problem*))
S81	(MH "Financial Management+")
S80	(MH "Financial Support")
S79	(MH "Cancer Survivors")
S78	(MH "Family")
S77	(MH "Caregiver Support")
S76	(MH "Caregivers")
S75	TX ((stress* or emotion* or orientat* or resilien* or coheren* or cope* coping or chang*) N2 (strateg* or support* or care* or difficult* or problem*))
S74	(MH "Stress, Psychological+")
S73	(MH "Anxiety")
S72	(MH "Behavioral Symptoms+")
S71	(MH "Adaptation, Psychological+")
S70	TX (self-esteem or self esteem or personhood or self-concept or self concept or individuality)
S69	(MH "Individuality")
S68	TX ((autonomy or mastery) N2 (loss* or losing or personal or support* or abilit* or inabilit* or problem* or difficult*))
S67	(MH "Life Experiences")

#	Query
S66	(MH "Personal Values")
S65	TI educat*
S64	(MH "Patient Education")
S63	TX (driv* N1 (abilit* or inabilit* or difficult* or problem*))
S62	(MH "Vehicle Operation+")
S61	(MH "Self Care+")
S60	(MH "Home Modification")
S59	(MH "Home Modification")
S58	(MH "Life Style Changes")
S57	TX ((daily or independen*) N2 (life or live* or living or activit* or difficult* or problem* or support*))
S56	TX (physical N2 support*)
S55	(MH "Motor Activity")
S54	(MH "Physical Therapy")
S53	TX supportive care
S52	TX psychosocial support*
S51	(MH "Psychotherapy+")
S50	(MH "Terminal Care+/PF/OG")
S49	TX (social network* or social support*)
S48	TX community care
S47	TX care network*
S46	(discharg* N (plan* or patient*))
S45	TX (transmural N3 (care or healthcare or service* or clinic*1))
S44	(MH "Community Health Services+")
S43	(MH "Support, Psychosocial")
S42	(MH "Activities of Daily Living+")
S41	(MH "Long Term Care")
S40	(MH "Quality of Life+")
S39	(MH "Health and Welfare Planning+")
S38	(MH "Patient Care Plans+")
S37	S18 AND S36
S36	S19 OR S20 OR S21 OR S22 OR S23 OR S24 OR S25 OR S26 OR S27 OR S28 OR S29 OR S30 OR S31 OR S32 OR S33 OR S34 OR S35
S35	(MH "Long Term Care")
S34	(MH "Quality of Life+")
S33	(MH "Health Services Needs and Demand+")
S32	(MH "Physical Examination+")
S31	(MH "Functional Assessment+")
S30	(MH "Health Status+")
S29	(MH "Outcomes (Health Care)+")
S28	TX (re-examin* or reexamin or surveillance or monitor* or periodic examin* or regular examin* or checkup* or check-up* or check up*)
S27	(MH "Transitional Care")

#	Query
S26	TX treated
S25	TX (post-hospital* or post hospital* or posthospital* or after hospital* or follow* hospital*)
S24	TX (after treatment or after-treatment or posttreatment or post treatment or post-treatment or post-therap* or post therap*)
S23	(aftercare or after-care or after care)
S22	TX (followup or follow-up or follow up)
S21	(MH "Continuity of Patient Care+")
S20	(MH "Holistic Care")
S19	(MH "After Care")
S18	S16 OR S17
S17	(MH "Brain Neoplasms+/PF/CO/RH/SS")
S16	S3 OR S7 OR S15
S15	S13 OR S14
S14	TX ((brain or cereb* or intracranial or menin* or brainstem*) N3 (metasta* or micrometa* or macrometa* or spread* or carcinomatosis or carcinosis or secondar* or seeding or seeded or disseminat* or migrat*))
S13	S11 AND S12
S12	(MH "Neoplasm Metastasis+")
S11	S8 OR S9 OR S10
S10	(MH "Meninges")
S9	(MH "Brain+")
S8	(MH "Brain Neoplasms+")
S7	S4 OR S5 OR S6
S6	TX (menin* N3 (neoplas* or cancer* or carcin* or tumo* or malign* or h?emangiopericytoma* or h?emangioblastoma*))
S5	TX meningioma*
S4	(MH "Meningeal Neoplasms+")
S3	S1 OR S2
S2	TX (glioma* or glioblastoma* or GBM or gliosarcoma* or astrocytoma* or oligoastrocytoma* or oligodendrogloma* or oligo?astrocytoma* or xanthoastrocytoma*)
S1	(MH "Glioma")

### Database: Cochrane Library via Wiley Online

Date of last search: 13<sup>th</sup> September 2017

ID	Search
#1	MeSH descriptor: [Glioma] explode all trees
#2	MeSH descriptor: [Astrocytoma] explode all trees
#3	MeSH descriptor: [Oligodendrogloma] explode all trees
#4	MeSH descriptor: [Glioblastoma] explode all trees
#5	(glioma* or glioblastoma* or GBM or gliosarcoma* or astrocytoma* or oligoastrocytoma* or oligodendrogloma* or oligo?astrocytoma* or xanthoastrocytoma*)
#6	{or #1-#5}
#7	MeSH descriptor: [Meningioma] explode all trees

ID	Search
#8	MeSH descriptor: [Meningeal Neoplasms] explode all trees
#9	meningioma*
#10	(mening* near/3 (neoplas* or cancer* or carcin* or tumo* or malign* or h?emangiopericytoma* or h?emangioblastoma*))
#11	{or #7-#10}
#12	MeSH descriptor: [Neoplasm Metastasis] explode all trees
#13	MeSH descriptor: [Brain Neoplasms] explode all trees
#14	MeSH descriptor: [Brain] explode all trees
#15	MeSH descriptor: [Cerebral Cortex] explode all trees
#16	MeSH descriptor: [Meninges] explode all trees
#17	{or #13-#16}
#18	#12 and #17
#19	MeSH descriptor: [Brain Neoplasms] explode all trees and with qualifier(s): [Secondary - SC]
#20	((brain or cereb* or intracranial or mening* or brainstem*) near/3 (metasta* or micrometa* or macrometa* or spread* or carcinomatosis or carcinosis or secondar* or seeding or seeded or disseminat* or migrat*))
#21	{or #18-#20}
#22	#6 or #11 or #21
#23	MeSH descriptor: [Brain Neoplasms] explode all trees and with qualifier(s): [Complications - CO, Psychology - PX]
#24	#22 or #23
#25	MeSH descriptor: [Aftercare] explode all trees
#26	MeSH descriptor: [Continuity of Patient Care] explode all trees
#27	(followup or follow-up or follow up)
#28	(aftercare or after-care or after care)
#29	(after treatment or after-treatment or posttreatment or post treatment or post-treatment or post-therap* or post therap* or follow* treatment or follow* therap*)
#30	(post-hospital* or post hospital* or posthospital* or after hospital* or follow* hospital*)
#31	treated
#32	(re-examin* or reexam or surveillance or monitor* or periodic examin* or regular examin* or checkup* or check-up* or check up*)
#33	MeSH descriptor: [Watchful Waiting] explode all trees
#34	MeSH descriptor: [Treatment Outcome] explode all trees
#35	{or #25-#34}
#36	#24 and #35
#37	MeSH descriptor: [Patient Care Planning] explode all trees
#38	MeSH descriptor: [Health Services Needs and Demand] explode all trees
#39	MeSH descriptor: [Quality of Life] explode all trees
#40	MeSH descriptor: [Long-Term Care] explode all trees
#41	MeSH descriptor: [Social Support] explode all trees
#42	MeSH descriptor: [Community Networks] explode all trees
#43	MeSH descriptor: [Community Health Planning] this term only

ID	Search
#44	MeSH descriptor: [Palliative Care] this term only and with qualifier(s): [Organization & administration - OG, Psychology - PX]
#45	MeSH descriptor: [Terminal Care] this term only and with qualifier(s): [Organization & administration - OG, Psychology - PX]
#46	(transmural near (care or healthcare or service* or clinic*1))
#47	(discharg* near (plan* or patient*))
#48	care network*
#49	community care
#50	(social network* or social support*)
#51	MeSH descriptor: [Psychotherapy] explode all trees
#52	psychosocial support*
#53	supportive care
#54	MeSH descriptor: [Physical Therapy Modalities] explode all trees
#55	MeSH descriptor: [Motor Activity] explode all trees
#56	(physical adj2 support*)
#57	MeSH descriptor: [Occupational Therapy] this term only
#58	MeSH descriptor: [Independent Living] this term only
#59	MeSH descriptor: [Activities of Daily Living] this term only
#60	((daily or independen*) near (life or live* or living or activit* or difficult* or problem* or support*))
#61	MeSH descriptor: [Home Care Services] explode all trees
#62	MeSH descriptor: [Self Care] explode all trees
#63	MeSH descriptor: [Automobile Driving] explode all trees
#64	(driv* near (abilit* or inabilit* or difficult* or problem*))
#65	MeSH descriptor: [Patient Education as Topic] this term only
#66	educat*
#67	MeSH descriptor: [Personal Autonomy] this term only
#68	MeSH descriptor: [Personhood] this term only
#69	((autonomy or mastery) near (loss* or losing or personal or support* or abilit* or inabilit* or problem* or difficult*))
#70	MeSH descriptor: [Individuality] this term only
#71	(self-esteem or self esteem or personhood)
#72	MeSH descriptor: [Adaptation, Psychological] explode all trees
#73	MeSH descriptor: [Behavioral Symptoms] explode all trees
#74	MeSH descriptor: [Anxiety] this term only
#75	MeSH descriptor: [Resilience, Psychological] explode all trees
#76	MeSH descriptor: [Adaptation, Psychological] explode all trees
#77	((stress* or emotion* or orientat* or resilien* or coheren* or cope* or coping or chang*) near (strateg* or support* or care* or difficult* or problem*))
#78	MeSH descriptor: [Caregivers] explode all trees and with qualifier(s): [Psychology - PX]
#79	MeSH descriptor: [Family] explode all trees and with qualifier(s): [Psychology - PX]
#80	MeSH descriptor: [Survivors] explode all trees
#81	MeSH descriptor: [Financial Support] explode all trees

ID	Search
#82	((financ* or money or expenditure or bills or debt*) near (support* or loss or personal or strateg* or difficult* or problem*))
#83	MeSH descriptor: [Work] explode all trees
#84	MeSH descriptor: [Employment] explode all trees
#85	((work*or job* or employ* or profession* or occupation*) near (return* or resum* or support* or adapt* or loss* or difficult* or problem* or abilit* or inabilit*))
#86	MeSH descriptor: [Rehabilitation, Vocational] explode all trees
#87	MeSH descriptor: [Fatigue] explode all trees and with qualifier(s): [Psychology - PX, Rehabilitation - RH]
#88	MeSH descriptor: [Communication] explode all trees
#89	MeSH descriptor: [Neurocognitive Disorders] explode all trees
#90	((neuroconiti* or cogniti*) near (disorder* or dysfunct* or impair* or problem* or difficult*))
#91	(memor* near (loss* or disorder* or dysfunct* or impair* or problem* or difficult* or inabilit*))
#92	amnesi*
#93	MeSH descriptor: [Advance Care Planning] explode all trees
#94	(advance* directive* or living will* or power of attorney or ulysses contract* or psychiatric will* or right to die)
#95	{or #37:#94}
#96	#36 and #95 Publication Year from 1990 to 2017

Last searched on: 12/09/2017

**Database: HMIC Health Management Information Consortium 1979 to May 2017**

#	Searches
1	glioma/
2	(glioma* or glioblastoma* or GBM or gliosarcoma* or astrocytoma* or oligoastrocytoma* or oligodendrogloma* or oligo?astrocytoma* or xanthoastrocytoma*).tw.
3	meningioma*.tw.
4	(mening* adj3 (neoplas* or cancer* or carcin* or tumo* or malign* or h?emangiopericytoma* or h?emangioblastoma*).tw.
5	brain cancer/
6	exp brain/
7	exp meninges/
8	6 or 7
9	exp neoplasms/
10	8 and 9
11	((brain or cereb* or intracranial or mening* or brainstem*) adj3 (metasta* or micrometa* or macrometa* or spread* or carcinomatosis or carcinosis or secondar* or seeding or seeded or disseminat* or migrat*).tw.
12	1 or 2 or 3 or 4 or 5 or 10 or 11
13	exp after care/
14	exp after care services/
15	(followup or follow-up or follow up).ti,ab.
16	(after treatment or after-treatment or posttreatment or post treatment or post-treatment or post-therap* or post therap*).ti,ab.

DRAFT FOR CONSULTATION  
Follow-up care – care needs

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#	Searches
17	(post-hospital* or post hospital* or posthospital* or after hospital* or follow* hospital*).ti,ab.
18	treated.ti,ab.
19	patient transfer/
20	exp health checks/
21	(re-examin* or reexamin or surveillance or monitor* or periodic examin* or regular examin* or checkup* or check-up* or check up*).ti,ab.
22	exp outcomes/
23	exp assessment/
24	"continuity of patient care"/
25	or/13-24
26	12 and 25
27	limit 26 to english
28	limit 27 to yr="1990 -Current"

12/09/2017

**Database: PsycINFO 1806 to August Week 36 2017**

#	Searches
1	glioma/
2	(glioma* or glioblastoma* or GBM or gliosarcoma* or astrocytoma* or oligoastrocytoma* or oligodendrogioma* or oligo?astrocytoma* or xanthoastrocytoma*).tw.
3	1 or 2
4	meningioma*.tw.
5	(mening* adj3 (neoplas* or cancer* or carcin* or tumo* or malign* or h?emangiopericytoma* or h?emangioblastoma*).tw.
6	4 or 5
7	exp Brain Neoplasms/
8	exp Cerebral Cortex/
9	exp BRAIN/
10	exp Brain Stem/
11	meninges/
12	or/7-11
13	metastasis/
14	12 and 13
15	((brain or cereb* or intracranial or mening* or brainstem*) adj3 (metasta* or micrometa* or macrometa* or spread* or carcinomatosis or carcinosis or secondar* or seeding or seeded or disseminat* or migrat*).tw.
16	14 or 15
17	3 or 6 or 16
18	exp brain neoplasms/
19	17 or 18
20	exp AFTERCARE/
21	"continuum of care"/
22	posttreatment followup/

DRAFT FOR CONSULTATION  
Follow-up care – care needs

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#	Searches
23	(followup or follow-up or follow up).ti,ab.
24	(aftercare or after-care or after care).ti,ab.
25	(after treatment or after-treatment or posttreatment or post treatment or post-treatment or post-therap* or post therap*).ti,ab.
26	(post-hospital* or post hospital* or posthospital* or after hospital* or follow* hospital*).ti,ab.
27	treated.ti,ab.
28	client transfer/
29	exp outpatient treatment/
30	outpatients/
31	(re-examin* or reexam or surveillance or monitor* or periodic examin* or regular examin* or checkup*).ti,ab.
32	exp monitoring/
33	(watch* adj wait*).tw.
34	"remission (disorders)"/
35	"recovery (disorders)"/
36	"relapse (disorders)"/
37	hospital discharge/
38	discharge planning/
39	exp measurement/
40	or/20-39
41	19 and 40
42	needs assessment/
43	exp health care delivery/
44	"quality of life"/
45	life changes/
46	exp life satisfaction/
47	exp lifestyle/
48	daily activities/
49	"activities of daily living"/
50	assisted living/
51	exp Well Being/
52	long term care/
53	palliative care/
54	terminally ill patients/
55	rehabilitation/
56	social support/
57	exp community services/
58	community involvement/
59	(transmural adj (care or healthcare or service* or clinic*1)).tw.
60	care network*.tw.
61	community care.tw.
62	(social network* or social support*).tw.

#	<b>Searches</b>
63	exp psychotherapy/
64	psychosocial rehabilitation/
65	psychosocial readjustment/
66	psychosocial support*.tw.
67	supportive care.tw.
68	physical therapy/
69	exp motor processes/
70	(physical adj2 support*).tw.
71	occupational therapy/
72	self-care skills/
73	adaptive behavior/
74	(daily adj (life or live* or living or activit* or difficult* or problem* or support*)).tw.
75	driving behavior/ or drivers/
76	(driv* adj1 (abilit* or inabilit* or difficult* or problem*)).tw.
77	client education/
78	educat*.ti.
79	"Independence (Personality)"/
80	Autonomy/
81	Self-Determination/
82	Personal Values/
83	exp Self-Concept/
84	((autonomy or mastery) adj2 (loss* or losing or personal or support* or abilit* or inabilit* or problem* or difficult*)).tw.
85	(self-esteem or self esteem or personhood).tw.
86	exp emotional states/
87	"resilience (psychological)"/
88	coping behavior/
89	"sense of coherence"/
90	exp stress/ or stress management/
91	((stress* or emotion* or orientat* or resilien* or coheren* or cope* or coping or chang*) adj2 (strateg* or support* or care* or difficult* or problem*)).tw.
92	caregivers/ or caregiver burden/
93	exp family members/
94	financial strain/
95	((financ* or money or expenditure or bills) adj2 (support* or loss or personal or strateg* or difficult* or problem*)).tw.
96	"quality of work life"/
97	exp occupational stress/
98	work-life balance/
99	work load/ or work scheduling/
100	working conditions/
101	occupational health/

#	Searches
102	((work* or job* or employ* or profession* or occupation*) adj2 (return* or resum* or support* or adapt* or loss* or difficult* or problem* or abilit* or inabilit*)).tw.
103	exp vocational rehabilitation/
104	fatigue/
105	exp communication skills/ or exp verbal communication/
106	neurocognition/
107	cognitive impairment/
108	((neuroconiti* or cogniti*) adj (disorder* or dysfunct* or impair* or problem* or difficult*).tw.
109	exp memory disorders/
110	(memor* adj (loss* or disorder* or dysfunct* or impair* or problem* or difficult* or inabilit*)).tw.
111	amnesi*.tw.
112	advance directives/
113	(advance* directive* or living will* or power of attorney or ulysses contract* or psychiatric will* or right to die).tw.
114	or/42-113
115	41 and 114
116	limit 115 to english language
117	limit 116 to yr="1990 -Current"

Last searched on: 13/09/2017

**Database: Web of Science Social Science Citation Index (SSCI) 1990 to present**

#20	(#19 AND #18) AND LANGUAGE: (English) DocType=All document types; Language>All languages;
#19	(TS=(qualitative or interview* or experienc* or action research or questionnaire* or observational or participant observ* or theme* or thematic analys?s or grounded theor* or grounded stud* or grounded research* or grounded analys?s or field stud* or field research* or discourse analys?s or discurs* analys?s or narrative analys?s or nursing research methodology or ethnograph* or ethnonursing or ethnological research or phenomenol* or life stor*)) AND LANGUAGE: (English) DocType=All document types; Language>All languages;
#18	(#17 AND #16) AND LANGUAGE: (English) DocType=All document types; Language>All languages;
#17	(#5 OR #4 OR #3 OR #2 OR #1) AND LANGUAGE: (English) DocType=All document types; Language>All languages;
#16	(#15 OR #14 OR #13 OR #12 OR #11 OR #10 OR #9 OR #8 OR #7 OR #6) AND LANGUAGE: (English) DocType=All document types; Language>All languages;
#15	(TS=((health or function or status) SAME assess*)) AND LANGUAGE: (English) DocType=All document types; Language>All languages;
#14	(TS=treatment* outcome*) AND LANGUAGE: (English) DocType=All document types; Language>All languages;
#13	(TS=(watch* SAME wait*)) AND LANGUAGE: (English) DocType=All document types; Language>All languages;

#12	(TS=(re-examin* or reexamin* or surveillance or monitor* or periodic examin* or regular examin* or checkup* or check-up* or check up or check ups)) AND LANGUAGE: (English) DocType=All document types; Language=All languages;
#11	(TS=transition* care) AND LANGUAGE: (English) DocType=All document types; Language=All languages;
#10	(TS=treated) AND LANGUAGE: (English) DocType=All document types; Language=All languages;
#9	(TS=(post-hospital* or post hospital* or posthospital* or after hospital* or follow* hospital*)) AND LANGUAGE: (English) DocType=All document types; Language=All languages;
#8	(TS=(after treatment or after-treatment or posttreatment or post treatment or post-treatment or post-therap* or post therap*)) AND LANGUAGE: (English) DocType=All document types; Language=All languages;
#7	(TS=(aftercare or after-care or after care)) AND LANGUAGE: (English) DocType=All document types; Language=All languages;
#6	(TS=(followup or follow-up or follow up)) AND LANGUAGE: (English) DocType=All document types; Language=All languages;
#5	(TS=(primary brain cancer* or primary brain tumo?r* or primary brain neoplasm*)) AND LANGUAGE: (English) DocType=All document types; Language=All languages;
#4	(TS=((brain or cereb* or intracranial or mening* or brainstem*) NEAR3 (metasta* or micrometa* or macrometa* or spread* or carcinomatosis or carcinosis or secondar* or seeding or seeded or disseminat* or migrat*))) AND LANGUAGE: (English) DocType=All document types; Language=All languages;
#3	(TS=(mening* NEAR3 (neoplas* or cancer* or carcin* or tumo* or malign* or h?emangiopericytoma* or h?emangioblastoma*))) AND LANGUAGE: (English) DocType=All document types; Language=All languages;
#2	(TS=meningioma*) AND LANGUAGE: (English) DocType=All document types; Language=All languages;
#1	(TS=(glioma* or glioblastoma* or GBM or gliosarcoma* or astrocytoma* or oligoastrocytoma* or oligodendrogloma* or oligo?astrocytoma* or xanthoastrocytoma*)) AND LANGUAGE: (English) DocType=All document types; Language=All languages;

# Referring adults with primary brain tumours or brain metastases for neurological rehabilitation assessment

## 6a - What are the facilitators and barriers to providing appropriate neurological rehabilitation assessment in people with brain tumours (primary) and brain metastases?

Last searched on 07/09/2017

**Database: Embase 1980 to 2017 Week 36 2017 & MEDLINE(R) Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present**

#	Searches
1	exp Glioma/ use ppez
2	exp Glioma/ use oemezd
3	exp Astrocytoma/ use ppez
4	exp Astrocytoma/ use oemezd
5	Oligodendrogioma/ use ppez
6	exp Glioblastoma/ use ppez
7	(glioma* or glioblastoma* or GBM or gliosarcoma* or astrocytoma* or oligoastrocytoma* or oligodendrogioma* or oligo?astrocytoma* or xanthoastrocytoma*).tw.
8	or/1-7
9	Meningioma/ use ppez
10	Meningeal Neoplasms/ use ppez
11	exp Meningioma/ use oemezd
12	meningioma*.tw.
13	(mening* adj3 (neoplas* or cancer* or carcin* or tumo* or malign* or h?emangiopericytoma* or h?emangioblastoma*)).tw.
14	or/9-13
15	exp Brain Neoplasms/ use ppez
16	exp Brain Tumor/ use oemezd
17	exp Cerebral Cortex/ use ppez
18	exp Brain Cortex/ use oemezd
19	exp Brain/ use ppez
20	exp Brain/ use oemezd
21	exp Meninges/ use ppez
22	Meninx/ use oemezd
23	or/15-22
24	exp Neoplasm Metastasis/ use ppez
25	metastasis/ use oemezd

## DRAFT FOR CONSULTATION

Referring adults with primary brain tumours or brain metastases for neurological rehabilitation assessment

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#	Searches
26	24 or 25
27	23 and 26
28	exp Brain Neoplasms/sc use ppez
29	Brain Metastasis/ use oemezd
30	Meningeal Metastasis/ use oemezd
31	or/28-30
32	27 or 31
33	((brain or cereb* or intracranial or mening* or brainstem*) adj3 (metasta* or micrometa* or macrometa* or spread* or carcinomatosis or carcinosis or secondar* or seeding or seeded or disseminat* or migrat*).tw.
34	32 or 33
35	exp Brain Neoplasms/rh use ppez
36	exp brain tumor/rh
37	35 or 36
38	8 or 14 or 34 or 37
39	rehabilitation.fs.
40	Neurological Rehabilitation/ use ppez
41	neurorehabilitation/ use oemezd
42	(neurorehab* or neuro-rehab* or neuro* rehab*).tw.
43	40 or 42
44	exp Rehabilitation/ use ppez
45	exp rehabilitation/ use oemezd
46	Recovery of Function/ use ppez
47	rehabilitation care/ use oemezd
48	or/44-47
49	exp Health Services Accessibility/ use ppez
50	health care delivery/ use oemezd
51	exp Neurology/ use ppez
52	exp neurology/ use oemezd
53	Oncology Service, Hospital/ use ppez
54	cancer center/ use oemezd
55	oncology/ use oemezd
56	exp Ambulatory Care/ use ppez
57	exp ambulatory care/ use oemezd
58	Neuropsychology/ use ppez
59	neuropsychology/ use oemezd
60	exp "psychological phenomena and processes"/ use ppez
61	exp "psychological and psychiatric procedures"/ use oemezd
62	exp Neuropsychological Tests/ use ppez
63	exp neuropsychological tests/ use oemezd
64	exp Behavior Therapy/ use ppez
65	exp behavior therapy/ use oemezd

## DRAFT FOR CONSULTATION

Referring adults with primary brain tumours or brain metastases for neurological rehabilitation assessment

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#	<b>Searches</b>
66	Physical Therapy Modalities/ use ppez
67	physiotherapy/ use oemezd
68	exp Primary Health Care/ use ppez
69	exp primary health care/ use oemezd
70	exp General Practice/ use ppez
71	general practice/ use oemezd
72	General Practitioners/ or Physicians, Primary Care/ or Physicians, Family/ use ppez
73	general practitioner/ use oemezd
74	exp Community Health Services/ use ppez
75	exp community care/ use oemezd
76	Inpatients/ use ppez
77	hospital patient/ use oemezd
78	Outpatients/ use ppez
79	outpatient/ use oemezd
80	exp Patient Care Team/ use ppez
81	Rehabilitation Nursing/ use ppez
82	Rehabilitation Nursing/ use oemezd
83	Oncology Nursing/ use ppez
84	exp oncology nursing/ use oemezd
85	Neuroscience Nursing/ use ppez
86	neuroscience nursing/ use oemezd
87	exp Home Nursing/ use ppez
88	exp home care/ use oemezd
89	exp Community Health Nursing/ use ppez
90	exp community health nursing/ use oemezd
91	exp Consultants/ use ppez
92	exp consultation/ use oemezd
93	Neurologists/ use ppez
94	neurologist/ use oemezd
95	Oncologists/ use ppez
96	exp oncologist/ use oemezd
97	Physical therapists/ use ppez
98	physiotherapist/ use oemezd
99	Occupational Therapists/ use ppez
100	occupational therapist/ use oemezd
101	speech language pathologist/ use oemezd
102	exp Family/ use ppez
103	exp family/ use oemezd
104	Caregivers/ use ppez
105	caregiver/ use oemezd
106	exp Employment/ use ppez

## DRAFT FOR CONSULTATION

Referring adults with primary brain tumours or brain metastases for neurological rehabilitation assessment

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#	Searches
107	exp employment/ use oemezd
108	exp Work/ use ppez
109	exp work/ use oemezd
110	exp Rehabilitation Centers/ use ppez
111	sheltered workshop/ use oemezd
112	rehabilitation centers/ use oemezd
113	exp "Prostheses and Implants"/ use ppez
114	exp "prostheses and orthoses"/ use oemezd
115	exp Orthotic Devices/ use ppez
116	exp Neural Prostheses/ use ppez
117	exp neuroprosthesis/ use oemezd
118	or/49-117
119	48 and 118
120	rehab*.tw.
121	(neuro* or psycho* or oncolog* or cancer* or sensory or cogniti*).tw.
122	(physiotherap* or physical therap* or cognitive therap* or behavio?r therap*).tw.
123	(outpatient* or inpatient* or hospital* or home* or local* or communit* or famil* or carer* or caregiver*).tw.
124	((primary or family) adj (care* or healthcare or medical care or practi* or doctor* or physician* or clinician* or nurse*).tw.
125	(general practi* or gp*1).tw.
126	(employ* or work* or occupation* or vocation*).tw.
127	(nurs* or consultant* doctor* or specialist* physician* or clinician* or health professional* or staff or therapist* or prosthe* or orthopti* or ortho* or speech or language).tw.
128	(multidisciplinary or multi-disciplinary or integrated or interdisciplinary or inter-disciplinary).tw.
129	(obstacle* or barrier* or obstruct* or facilitat* or takeup or "take up" or access*).tw.
130	or/121-129
131	120 and 130
132	39 or 43 or 119 or 131
133	exp "Referral and Consultation"/ use ppez
134	patient referral/ use oemezd
135	patient assessment/ use oemezd
136	(refer*1 or referr*).tw.
137	Symptom Assessment/ use ppez
138	symptom assessment/ use oemezd
139	exp Health Status/ use ppez
140	exp health status/ use oemezd
141	exp Health Status Indicators/ use ppez
142	exp health status indicator/ use oemezd
143	exp general health status assessment/ use oemezd
144	exp mental function assessment/ use oemezd

## DRAFT FOR CONSULTATION

Referring adults with primary brain tumours or brain metastases for neurological rehabilitation assessment

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#	Searches
145	exp side effect assessment/ use oemezd
146	neurologic disease assessment/ use oemezd
147	exp Disability Evaluation/ use ppez
148	Program Evaluation/ use ppez
149	exp program evaluation/ use oemezd
150	"Predictive Value of Tests"/ use ppez
151	predictive value/ use oemezd
152	exp "Outcome Assessment (Health Care)"/ use ppez
153	outcome assessment/ use oemezd
154	(assess* or evaluat* or monitor*).tw.
155	or/133-154
156	38 and 132 and 155
157	limit 156 to english language
158	Letter/ use ppez
159	letter.pt. or letter/ use oemezd
160	note.pt.
161	editorial.pt.
162	Editorial/ use ppez
163	News/ use ppez
164	exp Historical Article/ use ppez
165	Anecdotes as Topic/ use ppez
166	Comment/ use ppez
167	Case Report/ use ppez
168	case report/ or case study/ use oemezd
169	(letter or comment*).ti.
170	or/158-169
171	randomized controlled trial/ use ppez
172	randomized controlled trial/ use oemezd
173	random*.ti,ab.
174	or/171-173
175	170 not 174
176	animals/ not humans/ use ppez
177	animal/ not human/ use oemezd
178	nonhuman/ use oemezd
179	exp Animals, Laboratory/ use ppez
180	exp Animal Experimentation/ use ppez
181	exp Animal Experiment/ use oemezd
182	exp Experimental Animal/ use oemezd
183	exp Models, Animal/ use ppez
184	animal model/ use oemezd
185	exp Rodentia/ use ppez

## DRAFT FOR CONSULTATION

Referring adults with primary brain tumours or brain metastases for neurological rehabilitation assessment

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#	Searches
186	exp Rodent/ use oemezd
187	(rat or rats or mouse or mice).ti.
188	or/175-187
189	157 not 188
190	remove duplicates from 189

Last searched on: 07/09/2017

### Database: AMED (Allied and Complementary Medicine) 1985 to September 2017 & HMIC Health Management Consortium 1979 to August 2017

#	Searches
1	glioma/ use hmic
2	brain cancer/ use hmic
3	brain neoplasms/ use amed
4	(glioma* or glioblastoma* or GBM or gliosarcoma* or astrocytoma* or oligoastrocytoma* or oligodendrogloma* or oligo?astrocytoma* or xanthoastrocytoma*).tw.
5	meningioma*.tw.
6	(mening* adj3 (neoplas* or cancer* or carcin* or tumo* or malign* or h?emangiopericytoma* or h?emangioblastoma*)).tw.
7	or/1-6
8	exp brain/ use hmic
9	exp brain/ use amed
10	exp meninges/ use hmic
11	meninges.tw.
12	or/8-11
13	exp neoplasms/ use hmic
14	neoplasms/ use amed
15	13 or 14
16	12 and 15
17	neoplasm metastasis/ use amed
18	7 or 16
19	17 and 18
20	((brain or cereb* or intracranial or mening* or brainstem*) adj3 (metasta* or micrometa* or macrometa* or spread* or carcinomatosis or carcinosis or secondar* or seeding or seeded or disseminat* or migrat*).tw.
21	19 or 20
22	3 or 4 or 5 or 6 or 21
23	exp rehabilitation/ use hmic
24	exp rehabilitation services/ use hmic
25	rehabilitation/ use amed
26	exp rehabilitation centers/ use amed
27	exp rehabilitation modalities/ use amed
28	rehabilitation speciality/ use amed

## DRAFT FOR CONSULTATION

Referring adults with primary brain tumours or brain metastases for neurological rehabilitation assessment

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#	Searches
29	rehab*.tw.
30	(neurorehab* or neuro-rehab* or neuro* rehab*).tw.
31	or/23-30
32	22 and 31
33	limit 32 to english language
34	remove duplicates from 33

Last searched on: 13/09/2017

### Database: EBSCO Host CINAHL Plus

#	Query
S21	S16 AND S20
S20	S17 OR S18 OR S19
S19	TX (neurorehab* or neuro-rehab* or neuro* rehab*)
S18	TX rehab*
S17	(MH "Rehabilitation+")
S16	S3 OR S7 OR S15
S15	S13 OR S14
S14	TX ((brain or cereb* or intracranial or mening* or brainstem*) N3 (metasta* or micrometa* or macrometa* or spread* or carcinomatosis or carcinosis or secondar* or seeding or seeded or disseminat* or migrat*))
S13	S11 AND S12
S12	(MH "Neoplasm Metastasis+")
S11	S8 OR S9 OR S10
S10	(MH "Meninges")
S9	(MH "Brain+")
S8	(MH "Brain Neoplasms+")
S7	S4 OR S5 OR S6
S6	TX (mening* N3 (neoplas* or cancer* or carcin* or tumo* or malign* or h?emangiopericytoma* or h?emangioblastoma*))
S5	TX meningioma*
S4	(MH "Meningeal Neoplasms+")
S3	S1 OR S2
S2	TX (glioma* or glioblastoma* or GBM or gliosarcoma* or astrocytoma* or oligoastrocytoma* or oligodendrogioma* or oligo?astrocytoma* or xanthoastrocytoma*)
S1	(MH "Glioma")

### Database: Cochrane Library via Wiley Online

Date of last search: 12/09/2017

ID	Search
#1	MeSH descriptor: [Glioma] explode all trees
#2	(glioma* or glioblastoma* or gliosarcoma* or astrocytoma* or astroblastoma* or oligodendrogioma* or oligodendrocytoma* or oligoastrocytoma* or GBM)

## DRAFT FOR CONSULTATION

Referring adults with primary brain tumours or brain metastases for neurological rehabilitation assessment

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ID	Search
#3	ependymoma*
#4	(glial near/3 (neoplas* or cancer* or tumo* or carcin* or malign* or metasta*))
#5	{or #1-#4}
#6	MeSH descriptor: [Meningioma] explode all trees
#7	MeSH descriptor: [Meningeal Neoplasms] explode all trees
#8	meningioma*
#9	(mening* near/3 (neoplas* or cancer* or carcin* or tumo* or malign* or metasta*))
#10	{or #6-#9}
#11	MeSH descriptor: [Neoplasm Metastasis] explode all trees
#12	MeSH descriptor: [Brain Neoplasms] explode all trees
#13	MeSH descriptor: [Brain] explode all trees
#14	#12 or #13
#15	#11 and #14
#16	((brain or cereb* or intracranial or mening*) near/3 (metasta* or micometasta* or spread* or involvement or carcinosis or secondar*))
#17	#15 or #16
#18	#5 or #10 or #17
#19	MeSH descriptor: [Brain Neoplasms] explode all trees and with qualifier(s): [Rehabilitation - RH]
#20	#18 or #19
#21	MeSH descriptor: [Neurological Rehabilitation] explode all trees
#22	(neurorehab* or neuro-rehab* or neuro* rehab*)
#23	MeSH descriptor: [Rehabilitation] explode all trees
#24	MeSH descriptor: [Recovery of Function] explode all trees
#25	rehab*
#26	{or #21-#25}
#27	#20 and #26

12/09/2017

### Database: PsycINFO 1806 to September Week 36 2017

#	Searches
1	glioma/
2	(glioma* or glioblastoma* or GBM or gliosarcoma* or astrocytoma* or oligoastrocytoma* or oligodendrogioma* or oligo?astrocytoma* or xanthoastrocytoma*).tw.
3	1 or 2
4	meningioma*.tw.
5	(mening* adj3 (neoplas* or cancer* or carcin* or tumo* or malign* or h?emangiopericytoma* or h?emangioblastoma*)).tw.
6	4 or 5
7	exp Brain Neoplasms/
8	exp Cerebral Cortex/
9	exp BRAIN/

## DRAFT FOR CONSULTATION

Referring adults with primary brain tumours or brain metastases for neurological rehabilitation assessment

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#	Searches
10	exp Brain Stem/
11	meninges/
12	or/7-11
13	metastasis/
14	12 and 13
15	((brain or cereb* or intracranial or mening* or brainstem*) adj3 (metasta* or micrometa* or macrometa* or spread* or carcinomatosis or carcinosis or secondar* or seeding or seeded or disseminat* or migrat*).tw.
16	14 or 15
17	3 or 6 or 16
18	exp brain neoplasms/
19	17 or 18
20	exp Rehabilitation/
21	rehab*.tw.
22	(neurorehab* or neuro-rehab* or neuro* rehab*).tw.
23	or/20-22
24	19 and 23
25	limit 24 to english language

Last searched on: 13/09/2017

### Database: REHABDATA

(<http://www.naric.com/?q=en/SearchRehabdata>)

No save facility, so no search strategy recorded.

Keywords used: glioma, glioblastoma, astrocytoma, oligodendrogloma, meningioma, brain tumour/tumor, brain cancer, brain metastasis/metastases, brain neoplasms

Last searched on: 13/09/2017

### Database: Web of Science Social Science Citation Index (SSCI) 1900 to present

#	Searches
8	#7 AND #6
7	(TS=(rehab* or neurorehab* or neuro-rehab* or neuro* rehab*)) AND LANGUAGE: (English) ;
6	#5 OR #4 OR #3 OR #2 OR #1
5	(TS=(primary brain cancer* or primary brain tumo?r* or primary brain neoplasm*)) AND LANGUAGE: (English)
4	(TS=((brain or cereb* or intracranial or mening* or brainstem*) NEAR3 (metasta* or micrometa* or macrometa* or spread* or carcinomatosis or carcinosis or secondar* or seeding or seeded or disseminat* or migrat*))) AND LANGUAGE: (English) ;
3	(TS=(mening* NEAR3 (neoplas* or cancer* or carcin* or tumo* or malign* or h?emangiopericytoma* or h?emangioblastoma*))) AND LANGUAGE: (English)
2	(TS=meningioma*) AND LANGUAGE: (English)

## DRAFT FOR CONSULTATION

Referring adults with primary brain tumours or brain metastases for neurological rehabilitation assessment

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#	Searches
1	(TS=(glioma* or glioblastoma* or GBM or gliosarcoma* or astrocytoma* or oligoastrocytoma* or oligodendrogioma* or oligo?astrocytoma* or xanthoastrocytoma*)) AND LANGUAGE: (English)

# Health Economics

12/09/2017

**Database: Ovid MEDLINE(R) Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present**

#	Searches
1	exp Glioma/
2	(glioma* or glioblastoma* or gliosarcoma* or astrocytoma* or astroblastoma* or oligodendrogioma* or oligodendrocytoma* or oligoastrocytoma* or GBM).tw.
3	ependymoma*.tw.
4	(glial adj3 (neoplas* or cancer* or tumo* or carcin* or malign* or metasta*)).tw.
5	or/1-4
6	Meningioma/
7	Meningeal Neoplasms/
8	meningioma*.tw.
9	(mening* adj3 (neoplas* or cancer* or carcin* or tumo* or malign* or metasta*)).tw.
10	or/6-9
11	exp Neoplasm Metastasis/
12	exp Brain Neoplasms/
13	exp Brain/
14	12 or 13
15	11 and 14
16	((brain or cereb* or intracranial or mening*) adj3 (metasta* or micrometasta* or spread* or involvement or carcinosis or secondar* or disseminat* or migrat*).tw.
17	15 or 16
18	or/5,10,17
19	Economics/
20	Value of life/
21	exp "Costs and Cost Analysis"/
22	exp Economics, Hospital/
23	exp Economics, Medical/
24	Economics, Nursing/
25	Economics, Pharmaceutical/
26	exp "Fees and Charges"/
27	exp Budgets/
28	budget*.ti,ab.
29	cost*.ti.
30	(economic* or pharmaco?economic*).ti.
31	(price* or pricing*).ti,ab.
32	(cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
33	(financ* or fee or fees).ti,ab.
34	(value adj2 (money or monetary)).ti,ab.
35	or/19-34

#	Searches
36	18 and 35
37	limit 36 to yr="2014 -Current"

12/09/2017

**Database: Embase 1980 to 2017 Week 36**

#	Searches
1	exp glioma/
2	(glioma* or glioblastoma* or gliosarcoma* or astrocytoma* or astroblastoma* or oligodendrogloma* or oligodendrocytoma* or oligoastrocytoma* or GBM).tw.
3	ependymoma*.tw.
4	(glial adj3 (neoplas* or cancer* or tumo* or carcin* or malign* or metasta*)).tw.
5	or/1-4
6	exp meningioma/
7	meningioma*.tw.
8	(mening* adj3 (neoplas* or cancer* or carcin* or tumo* or malign* or metasta*)).tw.
9	or/6-8
10	exp metastasis/
11	exp brain tumor/
12	exp brain/
13	11 or 12
14	10 and 13
15	exp brain metastasis/
16	((brain or cereb* or intracranial or mening*) adj3 (metasta* or micrometasta* or spread* or involvement or carcinosis or secondar* or disseminat* or migrat*).tw.
17	or/14-16
18	or/5,9,17
19	health economics/
20	exp economic evaluation/
21	exp health care cost/
22	exp fee/
23	budget/
24	funding/
25	budget*.ti,ab.
26	cost*.ti.
27	(economic* or pharmaco?economic*).ti.
28	(price* or pricing*).ti,ab.
29	(cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
30	(financ* or fee or fees).ti,ab.
31	(value adj2 (money or monetary)).ti,ab.
32	or/19-31
33	18 and 32
34	limit 33 to yr="2014 -Current"

12/09/2017

**Database: Cochrane Library, Issue 9 of 12, September 2017 (Health Technology Assessment Database: issue 6 of 12, October 2016; NHS Economic Evaluation Database: Issue 2 of 4, April 2015)**

ID	Search
#1	MeSH descriptor: [Glioma] explode all trees
#2	(glioma* or glioblastoma* or gliosarcoma* or astrocytoma* or astroblastoma* or oligodendrogloma* or oligodendrocytoma* or oligoastrocytoma* or GBM)
#3	(glial near/3 (neoplas* or cancer* or tumo* or carcin* or malign* or metasta*))
#4	{or #1-#3}
#5	MeSH descriptor: [Meningioma] explode all trees
#6	MeSH descriptor: [Meningeal Neoplasms] explode all trees
#7	meningioma*
#8	(mening* near/3 (neoplas* or cancer* or carcin* or tumo* or malign* or metasta*))
#9	{or #5-#8}
#10	MeSH descriptor: [Neoplasm Metastasis] explode all trees
#11	MeSH descriptor: [Brain Neoplasms] explode all trees
#12	MeSH descriptor: [Brain] explode all trees
#13	#11 or #12
#14	#10 and #13
#15	((brain or cereb* or intracranial or mening*) near/3 (metasta* or micometasta* or spread* or involvement or carcinosis or secondar*))
#16	#14 or #15
#17	#4 or #9 or #16