1. Talacchi A, Santini B, Savazzi S, et al. Cognitive effects of tumour and surgical treatment in glioma patients. *J Neurooncol* 2011;103:541–549.
2. Tucha O, Smely C, Preier M, et al. Cognitive deficits before treatment among patients with brain tumors. *Neurosurgery* 2000;47:324–333.
3. Scheibel RS, Meyers CA, Levin VA. Cognitive dysfunction following surgery for intracerebral glioma: influence of histopathology, lesion location, and treatment. *J Neurooncol* 1996;30:61–69.
4. Anderson SW, Damasio H, Tranel D. Neuropsychological impairments associated with lesions caused by tumor or stroke. *Arch Neurol* 1990;47:397–405.
5. Harris RJ, Bookheimer SY, Cloughesy TF, et al. Altered functional connectivity of the default mode network in diffuse gliomas measured with pseudo-resting state fMRI. *J Neurooncol* 2014;116:373–379.
6. Bosma I, Reijneveld JC, Klein M, et al. Disturbed functional brain networks and neurocognitive function in low-grade glioma patients: a graph theoretical analysis of resting-state MEG. *Nonlinear Biomed Phys* 2009;3:9.
7. van Dellen E, de Witt Hamer PC, Douw L, et al. Connectivity in MEG resting-state networks increases after resective surgery for low-grade glioma and correlates with improved cognitive performance. *Neuroimage Clin* 2012; 2:1–7.
8. Meyers CA, Wefel JS. The use of the mini-mental state examination to assess cognitive functioning in cancer trials: no ifs, ands, buts, or sensitivity. *J Clin Oncol.* 2003;21:3557–3558.
9. Taphoorn MJ, Heimans JJ, Snoek FJ, et al. Assessment of quality of life in patients treated for low-grade glioma: a preliminary report. *J Neurol Neurosurg Psychiatry* 1992;55:372–376.
10. Huang ME, Wartella JE, Kreutzer JS. Functional outcomes and quality of life in patients with brain tumors: a preliminary report. *Arch Phys Med Rehabil* 2001;82:1540–1546.
11. Meyers CA, Hess KR. Multifaceted end points in brain tumor clinical trials: cognitive deterioration precedes MRI progression. *Neurooncology* 2003;5: 89–95.
12. Brown PD. Low-grade gliomas: the debate continues. *Curr Oncol Rep* 2006;8: 71–77.
13. Meyers CA, Smith JA, Bezjak A, et al. Neurocognitive function and progression in patients with brain metastases treated with whole-brain radiation and motexafin gadolinium: results of a randomized phase III trial. *J Clin Oncol.* 2004;22:157–165.
14. Li J, Bentzen SM, Renschler M, et al. Regression after whole-brain radiation therapy for brain metastases correlates with survival and improved neurocognitive function. *J Clin Oncol* 2007;25:1260–1266.
15. Torres IJ, Mundt AJ, Sweeney PJ, et al. A longitudinal neuropsychological study of partial brain radiation in adults with brain tumors. *Neurology* 2003;60:1113–1118.
16. Brown PD, Jensen AW, Felten SJ, et al. Detrimental effects of tumor progression on cognitive function of patients with high-grade glioma. *J Clin Oncol* 2006;24:5427–5433.
17. Meyers CA, Hess KR, Yung WK, et al. Cognitive function as a predictor of survival in patients with recurrent malignant glioma. *J Clin Oncol* 2000;18:646–650.
18. Armstrong TS, Wefel JS, Wang M, et al. Net clinical benefit analysis of radiation therapy oncology group 0525: a phase III trial comparing conventional adjuvant temozolomide with dose-intensive temozolomide in patients with newly diagnosed glioblastoma. *J Clin Oncol* 2013;31:4076–4084.
19. Rasmussen LS. Postoperative cognitive dysfunction: incidence and prevention. *Best Pract Res Clin Anaesthesiol* 2006;20:315–330.
20. Gehring K, Sawyer AM, Etzel CJ, et al. Prediction of language outcomes after resection of high grade glioma. *Neuro Oncol* 2011;13:iii75.
21. Gehring K, Sawyer AM, Etzel CJ, et al. Prediction of memory outcomes after resection of high grade glioma. *Neuro Oncol* 2011;13:iii75.
22. Peace KA, Orme SM, Padayatty SJ, et al. Cognitive dysfunction in patients with pituitary tumour who have been treated with transfrontal or transsphenoidal surgery or medication. *Clin Endocrinol* 1998;49:391–396.
23. Duffau H. New concepts in surgery of WHO grade II gliomas: functional brain mapping, connectionism and plasticity—a review. *J Neurooncol* 2006;79: 77–115.
24. Robles SG, Gatignol P, Lehericy S, et al. Long-term brain plasticity allowing a multistage surgical approach to World Health Organization Grade II gliomas in eloquent areas. *J Neurosurg* 2008;109:615–624.
25. Dietrich J, Monje M, Wefel J, et al. Clinical patterns and biological correlates of cognitive dysfunction associated with cancer therapy. *Oncologist* 2008;13:1285–1295.
26. Greene-Schloesser D, Moore E, Robbins ME. Molecular pathways: radiation-induced cognitive impairment. *Clin Cancer Res* 2013;19:2294–2300.
27. Douw L, Klein M, Fagel SS, et al. Cognitive and radiological effects of radiotherapy in patients with low-grade glioma: long-term follow-up. *Lancet Neurol* 2009;8:810–818.
28. Brown PD, Cerhan JH. Same, better, or worse? Neurocognitive effects of radiotherapy for low-grade gliomas remain unknown. *Lancet Neurol* 2009;8: 779–781.
29. Armstrong CL, Hunter JV, Ledakis GE, et al. Late cognitive and radiographic changes related to radiotherapy: initial prospective findings. *Neurology* 2002; 59:40–48.
30. Glosser G, McManus P, Munzenrider J, et al. Neuropsychological function in adults after high dose fractionated radiation therapy of skull base tumors. *Int J Radiat Oncol Biol Phys* 1997;38:231–239.
31. Jalali R, Goswami S, Sarin R, et al. Neuropsychological status in children and young adults with benign and low-grade brain tumors treated prospectively with focal stereotactic conformal radiotherapy. *Int J Radiat Oncol Biol Phys* 2006;66:S14–S19.
32. Laack NN, Brown PD, Ivnik RJ, et al. Cognitive function after radiotherapy for supratentorial low-grade glioma: a North Central Cancer Treatment Group prospective study. *Int J Radiat Oncol Biol Phys* 2005;63:1175–1183.
33. Steinvorth S, Welzel G, Fuss M, et al. Neuropsychological outcome after fractionated stereotactic radiotherapy (FSRT) for base of skull meningiomas: a prospective 1-year follow-up. *Radiother Oncol* 2003;69:177–182.
34. Vigliani MC, Sichez N, Poisson M, et al. A prospective study of cognitive functions following conventional radiotherapy for supratentorial gliomas in young adults: 4-year results. *Int J Radiat Oncol Biol Phys* 1996; 35:527–533.
35. Brown PD, Buckner JC, Uhm JH, et al. The neurocognitive effects of radiation in adult low-grade glioma patients. *Neurooncology* 2003;5:161–167.
36. Steinvorth S, Wenz F, Wildermuth S, et al. Cognitive function in patients with cerebral arteriovenous malformations after radiosurgery: prospective long-term follow-up. *Int J Radiat Oncol Biol Phys* 2002;54:1430–1437.
37. Komaki R, Meyers CA, Shin DM, et al. Evaluation of cognitive function in patients with limited small cell lung cancer prior to and shortly following prophylactic cranial irradiation. *Int J Radiat Oncol Biol Phys* 1995; 33:179–182.
38. Laack NN, Brown PD. Cognitive sequelae of brain radiation in adults. *Semin Oncol* 2004;31:702–713.
39. Arriagada R, Le Chevalier T, Borie F, et al. Prophylactic cranial irradiation for patients with small-cell lung cancer in complete remission. *J Natl Cancer Inst* 1995;87:183–190.
40. Gregor A, Cull A, Stephens RJ, et al. Prophylactic cranial irradiation is indicated following complete response to induction therapy in small cell lung cancer: results of a multicentre randomised trial. United Kingdom Coordinating Committee for Cancer Research (UKCCCR) and the European Organization for Research and Treatment of Cancer (EORTC). *Eur J Cancer* 1997;33:1752–1758.
41. Wolfson AH, Bae K, Komaki R, et al. Primary analysis of a phase II randomized trial Radiation Therapy Oncology Group (RTOG) 0212: impact of different total doses and schedules of prophylactic cranial irradiation on chronic neurotoxicity and quality of life for patients with limited-disease small-cell lung cancer. *Int J Radiat Oncol Biol Phys* 2011;81:77–84.
42. Gore EM, Bae K, Wong SJ, et al. Phase III comparison of prophylactic cranial irradiation versus observation in patients with locally advanced non-small-cell lung cancer: primary analysis of radiation therapy oncology group study RTOG 0214. *J Clin Oncol* 2011;29:272–278.
43. Sun A, Bae K, Gore EM, et al. Phase III trial of prophylactic cranial irradiation compared with observation in patients with locally advanced non-small-cell lung cancer: neurocognitive and quality-of-life analysis. *J Clin Oncol* 2011;29:279–286.
44. Penitzka S, Steinvorth S, Sehlleier S, et al. Assessment of cognitive function after preventive and therapeutic whole brain irradiation using neuropsychological testing. *Strahlenther Onkol* 2002;178:252–258.
45. Chang EL, Wefel JS, Hess KR, et al. Neurocognition in patients with brain metastases treated with radiosurgery or radiosurgery plus whole-brain irradiation: a randomised controlled trial. *Lancet Oncol* 2009;10:1037–1044.
46. Brown PD, Kee AY, Eshleman JS, et al. Adjuvant whole brain radiotherapy: strong emotions decide but rationale studies are needed: in regard to Brown et al. (Int J Radiat Oncol Biol Phys 2008;70:1305–1309). In reply to Drs. Larson and Sahgal. *Int J Radiat Oncol Biol Phys* 2009;75:316–317.
47. Mahmood U, Kwok Y, Regine WF, et al. Whole-brain irradiation for patients with brain metastases: still the standard of care. *Lancet Oncol* 2010;11: 221–222.
48. Monje M, Dietrich J. Cognitive side effects of cancer therapy demonstrate a functional role for adult neurogenesis. *Behav Brain Res* 2012;227:376–379.
49. Gondi V, Mehta MP, Pugh S, et al. Memory preservation with conformal avoidance of the hippocampus during whole-brain radiotherapy for patients with brain metastases: Primary endpoint results of RTOG 0933. *Int J Radiat Oncol Biol Phys* 2013;87:1186.
50. Gondi V, Tome WA, Marsh J, et al. Estimated risk of perihippocampal disease progression after hippocampal avoidance during whole-brain radiotherapy: safety profile for RTOG 0933. *Radiother Oncol* 2010;95:327–331.
51. Anderson-Hanley C, Sherman ML, Riggs R, et al. Neuropsychological effects of treatments for adults with cancer: a meta-analysis and review of the literature. *J Int Neuropsychol Soc* 2003;9:967–982.
52. Jansen CE, Miaskowski C, Dodd M, et al. A metaanalysis of studies of the effects of cancer chemotherapy on various domains of cognitive function. *Cancer* 2005;104:2222–2233.
53. Falleti MG, Sanfilippo A, Maruff P, et al. The nature and severity of cognitive impairment associated with adjuvant chemotherapy in women with breast cancer: a meta-analysis of the current literature. *Brain Cogn* 2005; 59:60–70.

54. Ahles TA, Root JC, Ryan EL. Cancer- and cancer treatment-associated cognitive change: an update on the state of the science. *J Clin Oncol* 2012;30:3675–3686.
55. Wefel JS, Schagen SB. Chemotherapy-related cognitive dysfunction. *Curr Neurol Neurosci Rep* 2012;12:267–275.
56. Dietrich J, Kesari S. Effect of cancer treatment on neural stem and progenitor cells. *Cancer Treat Res* 2009;150:81–95.
57. Seigers R, Schagen SB, Van Tellingen O, et al. Chemotherapy-related cognitive dysfunction: current animal studies and future directions. *Brain Imaging Behav* 2013;7:453–459.
58. Cimprich B, Reuter-Lorenz P, Nelson J, et al. Prechemotherapy alterations in brain function in women with breast cancer. *J Clin Exp Neuropsychol* 2010;32:324–331.
59. Wefel JS, Lenzi R, Theriault RL, et al. The cognitive sequelae of standard-dose adjuvant chemotherapy in women with breast carcinoma: results of a prospective, randomized, longitudinal trial. *Cancer* 2004;100:2292–2299.
60. Berman MG, Askren MK, Sook Jung M, et al. Pretreatment worry and neurocognitive responses in women with breast cancer. *Health Psychol* 2014;33:222–231.
61. Lopez Zunini RA, Scherling C, Wallis N, et al. Differences in verbal memory retrieval in breast cancer chemotherapy patients compared to healthy controls: a prospective fMRI study. *Brain Imaging Behav* 2013;7:460–477.
62. Mandelblatt JS, Hurria A, McDonald BC, et al. Cognitive effects of cancer and its treatments at the intersection of aging: what do we know; what do we need to know? *Semin Oncol* 2013;40:709–725.
63. Cheung YT, Lim SR, Ho HK, et al. Cytokines as mediators of chemotherapy-associated cognitive changes: current evidence, limitations and directions for future research. *PLoS One* 2013;8:e81234.
64. Reid-Arndt SA, Yee A, Perry MC, et al. Cognitive and psychological factors associated with early posttreatment functional outcomes in breast cancer survivors. *J Psychosoc Oncol* 2009;27:415–434.
65. Collins B, Mackenzie J, Tasca GA, et al. Persistent cognitive changes in breast cancer patients 1 year following completion of chemotherapy. *J Int Neuropsychol Soc* 2013:1–10.
66. Koppelmans V, Breteler MM, Boogerd W, et al. Late effects of adjuvant chemotherapy for adult onset non-CNS cancer; cognitive impairment, brain structure and risk of dementia. *Crit Rev Oncol Hematol* 2013;88:87–101.
67. Koppelmans V, Breteler MM, Boogerd W, et al. Neuropsychological performance in survivors of breast cancer more than 20 years after adjuvant chemotherapy. *J Clin Oncol* 2012;30:1080–1086.
68. Ahles TA. Brain vulnerability to chemotherapy toxicities. *Psychooncology* 2012;21:1141–1148.
69. Vearncombe KJ, Rolfe M, Wright M, et al. Predictors of cognitive decline after chemotherapy in breast cancer patients. *J Int Neuropsychol Soc* 2009; 15:951–962.
70. van Dam FS, Schagen SB, Muller MJ, et al. Impairment of cognitive function in women receiving adjuvant treatment for high-risk breast cancer: high-dose versus standard-dose chemotherapy. *J Natl Cancer Inst.* 1998; 90:210–218.
71. Collins B, MacKenzie J, Tasca GA, et al. Cognitive effects of chemotherapy in breast cancer patients: a dose-response study. *Psychooncology* 2013;22: 1517–1527.
72. Ahles TA, Saykin AJ. Candidate mechanisms for chemotherapy-induced cognitive changes. *Nat Rev Cancer* 2007;7:192–201.
73. Small BJ, Rawson KS, Walsh E, et al. Catechol-O-methyltransferase genotype modulates cancer treatment-related cognitive deficits in breast cancer survivors. *Cancer* 2011;117:1369–1376.
74. Deprez S, Billiet T, Sunaert S, et al. Diffusion tensor MRI of chemotherapy-induced cognitive impairment in non-CNS cancer patients: a review. *Brain Imaging Behav* 2013;7:409–435.
75. Saykin AJ, de Ruiter MB, McDonald BC, et al. Neuroimaging biomarkers and cognitive function in non-CNS cancer and its treatment: current status and recommendations for future research. *Brain Imaging Behav* 2013; 7:363–373.
76. de Ruiter MB, Schagen SB. Functional MRI studies in non-CNS cancers. *Brain Imaging Behav* 2013;7:388–408.
77. Kesler SR, Wefel JS, Hosseini SM, et al. Default mode network connectivity distinguishes chemotherapy-treated breast cancer survivors from controls. *Proc Natl Acad Sci U S A* 2013;110:11600–11605.
78. Koppelmans V, Groot MD, de Ruiter MB, et al. Global and focal white matter integrity in breast cancer survivors 20 years after adjuvant chemotherapy. *Hum Brain Mapp* 2014;35:889–899.
79. de Ruiter MB, Reneman L, Boogerd W, et al. Late effects of high-dose adjuvant chemotherapy on white and gray matter in breast cancer survivors: converging results from multimodal magnetic resonance imaging. *Hum Brain Mapp* 2012;33:2971–2983.
80. McDonald BC, Conroy SK, Ahles TA, et al. Gray matter reduction associated with systemic chemotherapy for breast cancer: a prospective MRI study. *Breast Cancer Res Treat* 2010;123:819–828.
81. Deprez S, Amant F, Smeets A, et al. Longitudinal assessment of chemotherapy-induced structural changes in cerebral white matter and its correlation with impaired cognitive functioning. *J Clin Oncol* 2012;30:274–281.
82. Gong X, Schwartz PH, Linskey ME, et al. Neural stem/progenitors and glioma stem-like cells have differential sensitivity to chemotherapy. *Neurology* 2011;76:1126–1134.
83. Dietrich J, Han R, Yang Y, et al. CNS progenitor cells and oligodendrocytes are targets of chemotherapeutic agents in vitro and in vivo. *J Biol* 2006;5:22.
84. Konat GW, Kraszpulski M, James I, et al. Cognitive dysfunction induced by chronic administration of common cancer chemotherapeutics in rats. *Metab Brain Dis* 2008;23:325–333.
85. Lyons L, ElBeltagy M, Bennett G, et al. Fluoxetine counteracts the cognitive and cellular effects of 5-fluorouracil in the rat hippocampus by a mechanism of prevention rather than recovery. *PLoS One* 2012;7:e30010.
86. Vijayanathan V, Gulinello M, Ali N, et al. Persistent cognitive deficits, induced by intrathecal methotrexate, are associated with elevated CSF concentrations of excitotoxic glutamate analogs and can be reversed by an NMDA antagonist. *Behav Brain Res* 2011;225:491–497.
87. Dubois M, Lapinte N, Villier V, et al. Chemotherapy-induced long-term alteration of executive functions and hippocampal cell proliferation: role of glucose as adjuvant. *Neuropharmacology* 2013;79:234–248.
88. Brown PD, Buckner JC, O'Fallon JR, et al. Effects of radiotherapy on cognitive function in patients with low-grade glioma measured by the Folstein mini-mental state examination. *J Clin Oncol* 2003;21:2519–2524.
89. Gehring K, Roukema JA, Sitskoorn MM. Review of recent studies on interventions for cognitive deficits in patients with cancer. *Expert Rev Anticancer Ther* 2012;12:255–269.
90. Khuntia D, Brown P, Li J, et al. Whole-brain radiotherapy in the management of brain metastasis. *J Clin Oncol* 2006;24:1295–1304.
91. Butler JM Jr, Case LD, Atkins J, et al. A phase III, double-blind, placebo-controlled prospective randomized clinical trial of d-threo-methylphenidate HCl in brain tumor patients receiving radiation therapy. *Int J Radiat Oncol Biol Phys* 2007;69:1496–1501.
92. Gleason JF Jr, Case D, Rapp SR, et al. Symptom clusters in patients with newly-diagnosed brain tumors. *J Support Oncol* 2007;5:427–433.
93. Rapp SR, Case D, Peiffer A, et al. Phase III randomized, double-blind, placebo-controlled trial of donepezil in irradiated brain tumor survivors. *J Clin Oncol* 2013;31:Abstract 2006.
94. Brown PD, Pugh S, Laack NN, et al. Memantine for the prevention of cognitive dysfunction in patients receiving whole-brain radiotherapy: a randomized, double-blind, placebo-controlled trial. *Neuro Oncol* 2013;15:1429–1437.
95. Gehring K, Sitskoorn MM, Gundy CM, et al. Cognitive rehabilitation in patients with gliomas: a randomized, controlled trial. *J Clin Oncol* 2009;27: 3712–3722.
96. Fardell JE, Vardy J, Johnston IN, et al. Chemotherapy and cognitive impairment: treatment options. *Clin Pharmacol Ther* 2011;90:366–376.
97. Ercoli LM, Castellon SA, Hunter AM, et al. Assessment of the feasibility of a rehabilitation intervention program for breast cancer survivors with cognitive complaints. *Brain Imaging Behav* 2013;7:543–553.
98. Ferguson RJ, McDonald BC, Rocque MA, et al. Development of CBT for chemotherapy-related cognitive change: results of a waitlist control trial. *Psychooncology* 2012;21:176–186.
99. Von Ah D, Storey S, Jansen CE, et al. Coping strategies and interventions for cognitive changes in patients with cancer. *Semin Oncol Nurs* 2013;29: 288–299.
100. Cherrier MM, Anderson K, David D, et al. A randomized trial of cognitive rehabilitation in cancer survivors. *Life Sci* 2013;93:617–622.
101. Schuurs A, Green HJ. A feasibility study of group cognitive rehabilitation for cancer survivors: enhancing cognitive function and quality of life. *Psychooncology* 2013;22:1043–1049.
102. Von Ah D, Carpenter JS, Saykin A, et al. Advanced cognitive training for breast cancer survivors: a randomized controlled trial. *Breast Cancer Res Treat* 2012;135:799–809.
103. Buitenweg JI, Murre JM, Ridderinkhof KR. Brain training in progress: a review of trainability in healthy seniors. *Front Hum Neurosci* 2012;6:183.