Point/Counterpoint: Is there a role for radiotherapy in the treatment of primary CNS lymphoma?

Patrick Y. Wen

Center For Neuro-Oncology, Dana-Farber/Brigham and Women's Cancer Center and Harvard Medical School

Corresponding Author: Patrick Y. Wen, MD, Center For Neuro-Oncology, Dana-Farber/Brigham and Women's Cancer Center and Harvard Medical School, 450 Brookline Ave, Boston, MA 02215 (Patrick_Wen@dfci.harvard.edu).

Primary central nervous system lymphoma (PCNSL) is a relatively rare form of extra-nodal non-Hodgkin's lymphoma that accounts for approximately 4% of primary central nervous system tumors. Treatment with high-dose methotrexate-based chemotherapeutic regimens have resulted in response rates of 60-70% or higher and long-term survival in 15-30% of patients. While PCNSL is sensitive to radiation therapy, the duration of response is relatively short, and treatment is associated with delayed neurotoxicity, especially in the elderly. Increasingly, there is a debate regarding the value of radiation therapy in the initial treatment of patients with PCNSL. This is reflected in the two ongoing randomized studies of newly diagnosed PCNSL being conducted in the United States. One, sponsored by NRG Oncology, evaluates the value of adding radiation therapy to chemotherapy (NCT01399372). In contrast, a second study, conducted by the Alliance in Clinical Trials in Oncology Cooperative Group, eliminates radiation therapy completely and compares standard chemotherapy alone with chemotherapy followed by autologous stem cell transplantation (NCT01511562). In the subsequent articles, Dr. Lisa DeAngelis from Memorial Sloan Kettering Cancer Center discusses the data supporting a role for radiotherapy for the initial treatment of PCNSL, while Dr. Michael Weller from the University Hospital Zurich provides a counter-argument against the use of radiation therapy.

Whither whole brain radiotherapy for primary CNS lymphoma?

Lisa M. DeAngelis

Department of Neurology, Memorial Sloan Kettering Cancer Center, New York, New York

Corresponding Author: Lisa M. DeAngelis, MD, Department of Neurology, Memorial Sloan Kettering Cancer Center, York Avenue 1275, New York, NY 10065 (deangell@mskcc.org).

Whole brain radiotherapy (WBRT) is usually avoided in the initial treatment of patients with primary central nervous system lymphoma (PCNSL). Although efficacious, combined modality therapy has been abandoned by most physicians due to reports of neurotoxicity in patients who received it. WBRT has been so vilified that many physicians will not even consider it when a patient...