

REASONS TO BELIEVE—BIostatISTICS & Methodology FOR THE Neurosurgeon

What Isn't a Case-Control Study?

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Kimberly P. Kicielinski, Esther B. Dupépe, Amber S. Gordon, Nancy E. Mayo, Beverly C. Walters

RADIATION ONCOLOGY REVIEW SERIES

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EDITOR'S CHOICE

The Promise of Proton Therapy for Central Nervous System Malignancies

Jennifer Vogel, Ruben Carmona, Christopher G. Ainsley, Robert A. Lustig

Radiation therapy plays a significant role in management of benign and malignant diseases of the CNS. Patients may be at risk of acute and late toxicity from RT due to dose deposition in critical normal structures. In contrast to conventional photon delivery techniques, proton therapy is characterized by Bragg peak dose deposition which results in decreased exit dose beyond the target and greater sparing of normal structure which may reduce the rate of late toxicities. Dosimetric studies have demonstrated reduced dose to normal structures using proton therapy as compared to photon therapy. Clinical studies demonstrate safety, feasibility, and low rates of acute toxicity. Technical challenges in proton therapy remain, including understanding of depth of proton penetration and the biological activity in the distal Bragg peak. Longer clinical follow-up is required to demonstrate reduction in late toxicities as compared to conventional photon-based RT. In this review, we summarize the current clinical literature and areas of active investigation in proton therapy for adult CNS malignancies.

COMMENTARY (ONLINE ONLY)

Commentary: The Promise of Proton Therapy for Central Nervous System Malignancies

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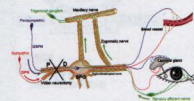
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Long-Term Outcome of Spinal Cord Stimulation in Failed Back Surgery Syndrome: 20 Years of Experience With 224 Consecutive Patients

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On the Cover

This month's cover illustrates the surgical anatomy of the sphenopalatine ganglion involving chronic rhinitis (vidian nerve), dry eye syndrome, and cluster headache (deep and greater superficial petrosal nerve). The purpose of this study was to provide neurosurgeons with an alternative method of sphenopalatine ganglion management. Vidian neurectomy can be reproducibly accomplished through the endoscopic transsphenoidal approach. This technique has been employed to treat more than 1000 patients with chronic rhinitis without serious complication. Read more on p. 1059.



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