

EDITORIAL



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Hippocampal avoidance whole-brain radiotherapy (WBRT) actually reduced cognitive loss in patients for up to 6 months after treatment when compared to historic controls.

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Hippocampal avoidance, hepatocellular carcinoma and hemangiopericytoma

Welcome to the 4th-quarter edition of *Applied Radiation Oncology* 2013! On behalf of the advisory board and publisher, we appreciate your continued support of this e-journal.

This year's ASTRO meeting in Atlanta was a success. One of the plenary studies presented at the American Society for Radiation Oncology's (ASTRO) 55th Annual Meeting found hippocampal avoidance whole-brain radiotherapy (WBRT) actually reduced cognitive loss in patients for up to 6 months after treatment when compared to historic controls. This phase II RTOG study (0933) uses sophisticated treatment planning and delivery to minimize dose to the hippocampus, which has been shown to influence memory. In this issue, Dr. Xia and colleagues evaluate techniques used in radiation treatment planning for developing WBRT plans with hippocampal avoidance in their article, *Treatment planning for hippocampus sparing of whole-brain radiation*. By combining treatment planning CT with thin-slice MRI scans and careful delineation of the hippocampus and other critical normal tissues, this article also describes how radiation apertures were designed by computer optimization, while the radiation the gantry rotates around the patient.

Hepatocellular carcinoma (HCC) is not only one of the leading causes of cancer globally, but it is also the third leading cause of cancer mortality after lung and stomach cancer, given its poor survival rate. The need for better management of the disease is increasingly urgent in the United States, where the death rate is rising, primarily due to an increase in hepatitis C and obesity-induced nonalcoholic steatohepatitis. As a result, it is critical that radiation oncologists be current on the most effective treatments, such as stereotactic body radiation therapy (SBRT). In their article, *SBRT for early-stage primary liver cancer*, authors Raymond Schulz and Cal Huntzinger present cases in which refined SBRT techniques allow for safer administration of higher doses of radiation, while minimizing the potential of radiation-induced liver disease.

In the clinical case, *Hemangiopericytoma of the intra- and suprasellar regions*, a female patient presents with hemangiopericytoma, a rare vascular tumor arising from pericytes of Zimmerman, associated with the capillary walls. Dr. Moreno Sánchez and colleagues discuss how intracranial hemangiopericytoma with complete surgical tumor resection was combined with adjuvant radiation therapy and postoperative stereotactic radiosurgery.

Dr. Yu presents a clinical case, *Endometriosis-derived clear-cell carcinoma masquerading as vaginal cancer*, a patient presents with an unusual case of endometriosis-associated clear-cell carcinoma arising in the adnexal region and presenting as vaginal cancer. This case was uniquely treated with chemoradiation and interstitial brachytherapy with complete metabolic and clinical response.

We welcome new article submissions; please visit our [website](#) for details. We also encourage you to participate in our monthly clinical case review [contest](#). The winning case of the month will be published in a future issue of *Applied Radiation Oncology*, and the author will receive an American Express Gift Card in the amount of \$250.