

EDITORIAL



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State of (the) ART and additional updates in HNC treatment, proton therapy and more

Welcome to the September issue of *ARO*! This month we are pleased to offer a two-part focus on one of the most technically challenging treatment areas in radiation oncology: head and neck cancer.

Treatment of head and neck cancer with radiation therapy demands greater precision and efficiency than many cancer sites for several reasons — sizeable treatment regions, complex anatomy, proximal OARs and more. In *Evolution of treatment planning techniques in external-beam radiation therapy for head and neck cancer*, Qingyang Shang, PhD, and colleagues from the Cleveland Clinic, detail the emergence, efficacy, and acceptance of these technologies, from the traditional three-field technique, to IGRT, IMRT, VMAT, and the promise of ART.

In the companion article, *Adaptive radiation therapy for head and neck cancer*, Aditya Juloori, MD, and co-authors, further describe how ART can improve outcomes by allowing for modification in radiation planning, which is necessitated by anatomical changes of both tumor and normal tissue over the course of treatment. The article discusses the dosimetric benefits, clinical experience, indications and ideal timing, institutional practice from the Cleveland Clinic and other implications of this emerging, albeit controversial, practice.

The issue also features *Pediatric proton therapy in 2015: indications, applications and considerations*, by Jeffrey C. Buchsbaum, MD, PhD, of Indiana University School of Medicine. In this informative review article, Dr. Buchsbaum outlines concepts and epidemiological data that underscore practice patterns in proton therapy, as well as challenges and controversies that will likely spark continued healthy discussion and debate among radiation oncologists.

In addition, we are pleased to bring you two case reports this month: *Presentation of pituitary carcinoma as neck metastasis after irradiation of recurrent pituitary macroadenoma*, describes a patient with a pituitary adenoma that transformed into a pituitary carcinoma with metastasis to submandibular lymph nodes and the parotid gland. The second case report, *Radiographic changes of the lung after stereotactic body radiation therapy*, shows how the Ikezoe and Koenig systems can assess patterns of benign CT changes in the lung after SBRT, and how these changes can evolve even after 2 years. Additional advances in lung cancer treatment are highlighted in the Technology Trends article, *Breathing easier with SBRT, VMAT, 4D MRI and other advances in lung cancer treatment*.

As always, thank you for supporting *ARO*! I hope you enjoy the articles and case reports in the issue, and look forward to seeing you at the 57th Annual ASTRO meeting in San Antonio, Texas, Oct. 18-21, to learn more about the latest advances and studies in radiation oncology.