

2010

Should Hypopharynx Cancer Continue to be Included in “Multi-Head and Neck” Trials within the RTOG?

R. Den

Thomas Jefferson University Hospitals

Q. Zhang

RTOG Statistical Center

D. Cagnetti

Thomas Jefferson University Hospitals

M. Machtay

Case Western Reserve University School of Medicine

J. S. Cooper

Maimonides Medical Center

Follow this and additional works at: <https://jdc.jefferson.edu/bodinejournal>



Part of the [Oncology Commons](#)

See next page for additional authors

[Let us know how access to this document benefits you](#)

Recommended Citation

Den, R.; Zhang, Q.; Cagnetti, D.; Machtay, M.; Cooper, J. S.; Garden, A. S.; Jones, C. U.; Yom, S.; and Ang, K. K. (2010) "Should Hypopharynx Cancer Continue to be Included in “Multi-Head and Neck” Trials within the RTOG?," *Bodine Journal*: Vol. 3 : Iss. 1 , Article 27.

DOI: <https://doi.org/10.29046/TBJ.003.1.026>

Available at: <https://jdc.jefferson.edu/bodinejournal/vol3/iss1/27>

This Article is brought to you for free and open access by the Jefferson Digital Commons. The Jefferson Digital Commons is a service of Thomas Jefferson University's [Center for Teaching and Learning \(CTL\)](#). The Commons is a showcase for Jefferson books and journals, peer-reviewed scholarly publications, unique historical collections from the University archives, and teaching tools. The Jefferson Digital Commons allows researchers and interested readers anywhere in the world to learn about and keep up to date with Jefferson scholarship. This article has been accepted for inclusion in *Bodine Journal* by an authorized administrator of the Jefferson Digital Commons. For more information, please contact: JeffersonDigitalCommons@jefferson.edu.

Should Hypopharynx Cancer Continue to be Included in “Multi-Head and Neck” Trials within the RTOG?

Authors

R. Den, Q. Zhang, D. Cignetti, M. Machtay, J. S. Cooper, A. S. Garden, C. U. Jones, S. Yom, and K. K. Ang

Should Hypopharynx Cancer Continue to be Included in “Multi-Head and Neck” Trials within the RTOG?

Den, R.,¹ Zhang, Q.,² Cognetti, D.,³ Machtay, M.,⁴ Cooper, J.S.,⁵ Garden, A.S.,⁶ Jones, C.U.,⁷ Yom, S.,⁸ Ang, K.K.⁶

¹Department of Radiation Oncology, Thomas Jefferson University and Hospitals, Philadelphia, PA

²RTOG Statistical Center, Philadelphia, PA

³Department of Otolaryngology, Thomas Jefferson University and Hospitals, Philadelphia, PA

⁴Case Western Reserve University School of Medicine, Cleveland, OH

⁵Maimonides Medical Center, Brooklyn, NY

⁶University of Texas M.D. Anderson Cancer Center, Houston, TX

⁷Radiological Associates to Sacramento, Sacramento, CA

⁸University of California San Francisco, San Francisco, CA.

Purpose/Objective(s)

It is becoming increasingly evident that the behavior of cancers from different subsites of the head and neck varies greatly despite similar histologic appearance. As current head and neck trials are focusing more on a risk-based approach, it is unclear into which trials patients with hypopharyngeal primaries (HP) should be included. Thus, we undertook to examine whether patients with HP perform as well as oropharyngeal primaries (OP) in the definitive setting and whether HP perform as well as larynx primaries (LX) in the post-operative setting in the multi-institutional setting.

Materials/Methods

We investigated two situations. First, in the definitive setting of RTOG 9003 (RT: 4 regimens), we limited our analysis to those OP cancer patients with >10 year smoking history to minimize the potential confounder of HPV positivity, a known good prognostic marker. In the postoperative setting of RTOG 9501 (RT vs. CRT) we compared HP cancer vs. LX cancer. The effects of primary site on disease-free and overall survival (DFS, OS) and pattern of failure (local regional control, LC, and distant metastases, DM) were evaluated using Cox proportional hazards models adjusted for primary site, T stage, N stage, treatment, and KPS. Logistic regression was used to model the probability of Grade 3-5 late toxicity (> 90 days from start of radiation therapy) in HP patients as compared to other sites.

Results

A total of 108 HP and 605 OP were analyzed from RTOG 9003. In RTOG 9501, 40 HP and 86 LX primaries were analyzed.

In the definitive setting, when limiting OP to those with > 10 pack-years, there is some indication that HP has worse OS [HR 1.14 (0.91-1.43)] and DFS [HR 1.2 (0.96-1.5)]. There was no indication of worse LC or DM rate.

In the postoperative setting, HP did not have worse outcomes to patients with LX in terms of OS [HR 1.09 (0.69-1.7)], DFS [HR 1.01 (0.65-1.57)], LC [HR 1.15 (0.53-2.5)], and DM [HR 1.3 (0.75-2.26)].

There is no indication that HP patients have more Grade 3-5 late toxicity than other sites in either the postoperative or definitive setting.

Conclusion

Patients with primary HP carcinoma have worse OS, and DFS, in the definitive setting in comparison to OP patients with greater than 10 year smoking history. In the postoperative setting, patients with HP have similar outcomes to LX patients. This suggests that HP patients do not require separate trials, but consideration should be given to stratification by disease site in future multi-H&N trials.

This project was supported by RTOG grant U10 CA21661, and CCOOP grant U10 CA37422 from the National Cancer Institute (NCI).