Editorial on “Predictors and Prevalence of Nodal Disease in Salvage Oropharyngectomy”

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In this issue of *Annals of Surgical Oncology*, Heft Neal et al.¹ explore the characteristics of nodal disease in patients undergoing salvage oropharyngectomy for failures following prior radiation therapy for head and neck cancer. The basis for this study stems from the unknown rate of occult nodal disease in patients undergoing a salvage oropharyngectomy for a local recurrence. The goal was to determine the need for routine performance of an elective neck dissection concomitantly with a salvage oropharyngectomy, a procedure that in a prior irradiated field adds morbidity and significantly affects patients' functional outcomes from further fibrosis of tissues following surgery.²

The authors retrospectively reviewed patients who underwent head and neck irradiation at a single tertiary academic cancer center for a primary head and neck cancer that subsequently underwent a salvage oropharyngectomy. The authors retrospectively examined the clinical data of 95 patients who met criteria between the period from 1998 to 2017. Within this cohort, the overall nodal positivity rate was 21%. Interestingly, in the cohort, 68% of patients were clinically node-negative on both clinical examination and imaging; only 6% of this group had pathologically positive nodes on nodal dissection. On a multivariate analysis a higher recurrent T classification and time to failure were predictive of nodal positivity. The higher likelihood of nodal disease with a higher recurrent T classification likely

represents the increased tumor burden and metastatic potential of the primary site. There was a lower likelihood of nodal metastases 2 years since primary treatment, consistent with other studies showing most locoregional failures within the first 2 years after treatment.³ Despite the relatively small number of patients and a large proportion without human papillomavirus (HPV) status in this study, this low rate of occult node positivity in clinically node-negative patients undergoing a salvage oropharyngectomy suggests that only a super selective neck dissection, for the purpose of access and identifying vessels for free flap reconstruction may be needed. Eliminating the need for an elective neck dissection, preventing the added morbidity including injury to the accessory nerve with resultant shoulder weakness and pain, dysphagia from further fibrosis, wound infection, and skin flap breakdown with potential vessel exposure.

For those who were clinically node-positive, the majority (67%) had pathologically positive nodes as would be expected and supports the performance of a neck dissection in this cohort. The majority of patients were found to have nodal disease in levels II–IV. However, particularly in patients with base of tongue lesions the contralateral neck had a high level of nodal positivity. This suggests that in the salvage setting for an oropharyngeal failure a selective neck dissection may be adequate in most settings. With PET-CT showing a sensitivity of 86% and negative predictive value of 93% in the salvage setting for nodal disease. The need to treat the contralateral neck, particularly in base of tongue failures may be guided by preoperative imaging.

Within the study, the unavailability of the HPV status in more than 50% patients, particularly in the current era of an HPV epidemic is a pity. As the literature suggests salvage

surgery for those with HPV-positive disease is more favorable than those with HPV-negative disease.^{4,5} Therefore, it would be useful to know whether differences in prevalence and patterns of nodal disease in respect to HPV status may affect the decision on need for elective neck dissection and which nodal basins to dissect.

Overall, this is a useful research article for the head and neck surgeon when addressing patients with oropharynx failures, guiding the decision of whether an elective neck dissection needs to be performed and the levels that should be dissected when needed in this setting.

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