Advances in diagnostic modalities to detect occult lymph node metastases in head and neck squamous cell carcinoma


Regional metastasis is a prominent feature of head and neck squamous cell carcinoma (HNSCC) and is an important prognostic factor. The currently available imaging techniques for assessment of the neck have limitations in accuracy; thus, elective neck dissection has remained the usual choice of management of the clinically N0 neck (cN0) for tumors with significant (≥20%) incidence of occult regional metastasis. As a consequence, the majority of patients without regional metastasis will undergo unnecessary treatment. The purpose of this review was to discuss new developments in techniques that potentially improve the accuracy of the assessment of the neck in patients with HNSCC. Although imaging has improved in the last decades, a limitation common to all imaging techniques is a lack of sensitivity for small tumor deposits. Therefore, complementary to improvements in imaging techniques, developments in more invasive diagnostic procedures, such as sentinel node biopsy (SNB) will add to the accuracy of diagnostic algorithms for the staging of the neck. © 2014 Wiley Periodicals, Inc. Head Neck, 2014.