00424 **Impact of Radiotherapy and Age on Lymph Node Counts in Neck Dissection Specimens From Patients With Head and Neck Cancer**

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Aims: Our study aims to review the impact of preoperative radiotherapy (RT) and other factors on the lymph node count of neck dissection specimens from patients with head and neck cancer.

Methodology: A retrospective study is conducted on all patients with head and neck cancers who had undergone neck dissections in Singapore General Hospital between 1992 and 2013. Patients were categorized into two groups: patients treated with radiation therapy with or without chemotherapy before neck dissection and patients who had undergone neck dissection surgery without any prior radiation. The primary endpoint for this study would be the lymph node count from neck dissection.

Result: The study cohort consists of 1024 neck dissections on 829 patients. There were 596 (58.5%) radical/modified radical neck dissections (ND) involving levels I – V. Within this group, 59 ND (9.9%) had preoperative radiation therapy (RT). Preoperative RT and age are found to significantly reduce nodal yield in both univariate and multivariate analysis in the radical/modified radical neck dissection subgroup. In our multivariate analysis, preoperative RT is shown to decrease the nodal yield by 6.744 (p=0.0023, 95%CI: 2.404 - 11.083). Increasing age independently decreases nodal yield, even after accounting for the effect of RT (p=0.0005, 95%CI: -0.258, -0.072).

Conclusion: Preoperative radiation therapy and advanced age significantly reduce the nodal yield from neck dissections in patients with head and neck cancers. As nodal yield often serves as a surrogate marker of neck dissection adequacy, the benchmark of adequacy should be reconsidered given the expected paucity of lymph nodes in this group of patients.