

## A Comparison of Clinical and Pathological TNM Staging in a COVID-19 Era

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**Abstract :** Introduction: The TNM classification is the global standard for the staging of head and neck cancers. Accurate clinical-radiological staging of tumours (cTNM) is essential to predict prognosis, facilitate surgical planning and determine the need for other therapeutic modalities. This study aims to determine the accuracy of pre-operative cTNM staging using pathological TNM (pTNM) and consider possible causes of TNM stage migration, noting any variation throughout the COVID-19 pandemic. Materials and Methods: A retrospective cohort study examined records of patients with surgical management of head and neck cancer at a tertiary head and neck centre from November 2019 to November 2020. Data was extracted from Somerset Cancer Registry and histopathology reports. cTNM and pTNM were compared before and during the first wave of COVID-19, as well as with other potential prognostic factors such as tumour site and tumour stage. Results: 119 cases were identified, of which 52.1% (n=62) were male, and 47.9% (n=57) were female with a mean age of 67 years. Clinical and pathological staging differed in 54.6% (n=65) of cases. Of the patients with stage migration, 40.4% (n=23) were up-staged and 59.6% (n=34) were down-staged compared with pTNM. There was no significant difference in the accuracy of cTNM staging compared with age, sex, or tumour site. There was a statistically highly significant ( $p < 0.001$ ) correlation between cTNM accuracy and tumour stage, with the accuracy of cTNM staging decreasing with the advancement of pTNM staging. No statistically significant variation was noted between patients staged prior to and during COVID-19. Conclusions: Discrepancies in staging can impact management and outcomes for patients. This study found that the higher the pTNM, the more likely stage migration will occur. These findings are concordant with the oncology literature, which highlights the need to improve the accuracy of cTNM staging for more advanced tumours.

**Keywords :** COVID-19, head and neck cancer, stage migration, TNM staging

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