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**P53 OVEREXPRESSION AND OUTCOME OF
RADIOTHERAPY IN HEAD & NECK CANCERS**

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Purpose : Experimental studies have implicated the wild type p53 in cellular response to radiation. Whether altered p53 function can lead to changes in clinical radiocurability remains an area of ongoing study. This study was performed to investigate whether any correlation between change of p53 and outcome of curative radiation therapy in patients with head and neck cancers.

Methods : Immunohistochemical analysis with a mouse monoclonal antibody (D0-7) specific for human p53 was used to detect to overexpression of protein in formalin fixed, paraffin-embedded tumor sample from 55 head and neck cancer patients treated with curative radiation therapy (median dose of 7020 cGy) from February 1988 to March 1996 at St. Marys Hospital. Overexpression of p53 was correlated with locoregional control and survival using Kaplan-Meier method. A Cox regression multivariate analysis was performed that included all clinical variables and status of p53 expression.

Results: Thirty-seven (67.2 %) patients showed overexpression of p53 by immunohistochemical staining in their tumor. One hundred percent of oral cavity, 76 % of laryngeal, 66.7 % of oropharyngeal, 66.7 % of hypopharyngeal cancer showed p53 overexpression ($p=0.05$). The status of p53 had significant relationship with stage of disease ($p=0.03$) and history of smoking ($p=0.001$). The overexpression of p53 was not predictive of response rate to radiation therapy. The locoregional control was not significantly affected by p53 status. Overexpression of p53 didnt have any prognostic implication for disease free survival and overall survival. Primary site and stage of disease were significant prognostic factors for survival.

Conclusions: The p53 overexpression as detected by immunohistochemical staining had significant correlation with stage, primary site of disease and smoking habit of patients. The p53 overexpression didnt have any predictive value for outcome of curative radiation therapy in a group of head and neck cancers.