Aim: To compare genetic aberrations in the oral epithelium of lung cancer patients with those without cancer.

Subjects and Methods: Buccal smears were performed to collect oral epithelium from each of the participants (smoker cancer patients \( n = 50 \), smoker control subjects \( n = 40 \), and nonsmoker control subjects \( n = 25 \)). Cytogenetic changes in the samples were detected by micronuclei assay, whereas p53 and murine double minute 2 (MDM2) polymorphisms were genotyped using polymerase chain reaction-restriction fragment length polymorphism.

Results: p53 codon 72 polymorphism was seen in 44% of cancer patients versus 12.5% in smokers and 12% in nonsmokers of the control group. Similarly, MDM2 single nucleotide polymorphism 309 polymorphism was seen in 34% of patients with lung cancer as opposed to 12.5% of smokers (\( P = 0.038 \)) and 8% of nonsmokers (\( P = 0.019 \)) of the control group.

Conclusion: A higher proportion of individuals with lung cancer demonstrate genetic damage to oral mucosa compared to those without cancer.