Abstract Group: 11.1. Lung Cancer

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Title: Association of XPD and CDA polymorphisms with clinical outcome in non-small cell lung cancer in a Chinese population

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Body: XPD plays a key role in the repair of DNA and platinum resistance lesions. Cytidine deaminase genes decide the velocity of catalyze gemcitabine. This study aims at investigating the relationship between the XPD, CDA genotypes and the outcome in NSCLC patients. We used RFLP to evaluate genetic polymorphism of the XPD Asp312Asn, XPD Lys751Gln, CDA Lys27Gln and CDA Ala70Thr in 93 NSCLC patients treated with cisplatin-gemcitabine regimen. 44% of patients carrying the XPD 312Asp/Asp had progression of disease, whereas 55.56% with heterozygous XPD 312Asp/Asn had progression of disease as well. There were no significant correlation between XPD Asp312Asn and clinical benefit (P=0.502). 53.95% of patients with wild-type had clinical benefit (PR and SD), 52.94% of patients carrying XPD 751Lys/Gln responded to therapy. There was no difference between different genotype (P=0.517). But the difference of OS between XPD 312Asp/ Asp and XPD 312Asp/Asn was very significant (20.0 months vs 12.4 months, P=0.04). TTP had no difference between the patients with wide-type genotype (10.7 months) and those carrying XPD 751Lys/Gln (7.0 months); However, the OS of patients with wide-type genotype (20.5 months) was longer than that (11.5 months) of patients carrying XPD 751Lys/Gln. No significant differences in TTP or OS were observed in patients carrying different genotype of CDA Lys27Gln. This investigation provides suggestive evidence of a favorable effect about the XPD 312Asp/Asp and XPD 751Lys/Lys genotype on survival in platinum-treated NSCLC. But CDA 27 polymorphism does not affect the efficacy of gemcitabine.