



***ERCC1* C118T polymorphism has predictive value for platinum-based chemotherapy in patients with late-stage bladder cancer**

Z.C. Xu^{1*}, H.Z. Cai^{1*}, X. Li^{1*}, W.Z. Xu¹, T. Xu¹, B. Yu¹, Q. Zou¹ and L. Xu²

¹Department of Urologic Surgery,
The Affiliated Cancer Hospital of Jiangsu Province, Nanjing Medical University,
Nanjing, China

²Department of Thoracic Surgery,
The Affiliated Cancer Hospital of Jiangsu Province, Nanjing Medical University,
Nanjing, China

*These authors contributed equally to this study.

Corresponding author: L. Xu

E-mail: xulin_surgery@163.com

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ABSTRACT. This study aims to investigate the association between *ERCC1* codon C118T polymorphism and the response rate of platinum-based chemotherapy in patients with late-stage bladder cancer. A total of 41 eligible patients histologically confirmed as having stage IV muscle-invasive transitional cell carcinoma of the bladder were treated with platinum-based chemotherapy for 2-6 cycles. The genotypes of patients were determined by PCR amplification of genomic DNA followed by restriction enzyme digestion. Positive responses were categorized as complete and partial responses. In addition, progression-free survival (PFS) and overall survival (OS) were also determined as indicators of long-term outcomes. The genotype frequencies of C/C, C/T and T/T genotypes were 56.1, 34.1, and 9.8%, respectively. Positive response was observed in 14 patients (34.1%), while 27 patients (65.9%) were

negative responders. As compared with individuals carrying the C/T and T/T genotypes, those with the C/C genotype had significantly improved short-term treatment responses ($P = 0.018$). The median PFS of patients carrying the C/C genotype was 6.3 months, while that of patients with C/T and T/T genotypes was 4.2 months ($P = 0.023$). Moreover, the median OS for patients carrying the C/C genotype was also longer as compared with that of patients carrying C/T and T/T (11.7 months vs 8.5 months, $P = 0.040$). Our results indicated that the *ERCC1* codon 118 polymorphism may have predictive potential for chemotherapy treatment responses in late-stage bladder cancer patients.

Key words: *ERCC1*; Polymorphism; Bladder cancer; Chemotherapy