
DOWN-REGULATION OF THE NORMAL EPITHELIAL CELL-SPECIFIC 1 (NES1) GENE IS ASSOCIATED WITH UNFAVORABLE OUTCOME OF PROSTATE CANCER.

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Objectives: The Normal Epithelial Cell-specific 1 (NES1) gene encodes a novel serine protease, which is a new member of the expanding human kallikrein gene family. The NES1 gene was thought to act as a tumor suppressor gene. It has been found to be down-regulated in many established breast cancer cell lines. In order to investigate the role of NES1 gene in prostate cancer, we examined its expression at the mRNA level in 20 pair of normal and cancerous prostatic tissues.

Methods: The NES1 expression levels between the cancerous prostatic tissue and its adjacent normal tissue were compared with the semi-quantitative reverse transcriptase polymerase chain reaction (RT-PCR).

Results: Comparing the NES1 expression level between the cancerous prostatic tissue and its normal adjacent part, among these 20 pair of tissues, it was up-regulated in 8 pairs, down-regulated in 8 pairs and has no change in 4 pairs. However, among those 8 pairs that are up-regulated, 7 pairs are R₀ positive (surgical margin negative). For those 8 pairs that are down-regulated, 7 pairs are R₁ positive (surgical margin positive), indicating the down-regulation of NES1 is closely associated with R₁ positive ($p < 0.01$).

Conclusion: Considering R₀ positive is a tumor pathological marker that indicates good prognosis, R₁ positive is an unfavorable marker, we conclude that the down-regulation of NES1 in prostate cancer is closely related to unfavorable outcome. Its role as a new prognostic marker in prostate cancer should be explored further.