DRAMATIC OVEREXPRESSION OF THE KALLIKREIN-LIKE GENE 2 (KLK-L2), IN OVARIAN CARCINOMAS

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Objectives: Kallikrein-like gene-2 (KLK-L2) is one of the newly identified members of the kallikrein gene family (GeneBank Accession #AF135028). In normal human tissues, KLK-L2 is highly expressed in skin, mammary gland and testis tissues. From the high degree of homology between KLK-L2 and other members of the kallikrein family, we speculated that the KLK-L2 gene product is likely to be a secreted protein. Hence, it would be of great interest to investigate changes in KLK-L2 expression at different points of cancer development, as detection of such changes may be used for diagnosing and monitoring cancer. The current study examines and compares, preliminarily, the expression of KLK-L2 gene transcripts in normal, benign and cancerous human ovarian tissues (n = 5 per group).

Methods: Total RNA was extracted and subsequently used for reverse transcription polymerase chain reaction (RT-PCR).

Results: Results were scored as negative, weakly, moderately or highly expressed KLK-L2 mRNA. We found relatively low expression of mRNA in both normal (2 weakly positive signals) and benign tissues (2 weakly positive signals, 1 moderately positive signal). In contrast, the mRNA expression was dramatically elevated in all five cancerous tissues examined (all scored as highly expressed).

Conclusion: These data strongly suggest that KLk-L2 is frequently overexpressed in ovarian tumors. In conclusion, KLk-L2 protein may contribute as a new tumor marker for diagnosis and monitoring of ovarian carcinoma.