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Journal club

SOX9 upregulation in lung adenocarcinoma

Several SOX genes are involved in lung development and may have functional roles within the lung. SOX9 (a transcription factor) has been shown to be involved in several types of cancer. In this lab-based study, SOX9 expression was investigated in 29 lung adenocarcinoma and 28 normal lung samples using silico data mining, quantitative reverse transcription-PCR and immunohistochemistry.

SOX9 was upregulated at both the mRNA and protein level in the majority of lung adenocarcinomas compared with normal tissue. In addition, recurrent lung adenocarcinoma tissue showed significantly higher SOX9 expression than that of a primary lesion. RNA interference technique and microarray gene expression further demonstrated that knockdown of SOX9 inhibited cell growth, downregulated CDK4 and upregulated p21. These are all important cell cycle regulators and their expression could mediate SOX9-related alteration in cancer cell growth.

SOX9 may be an important biomarker in lung adenocarcinoma which could aid in the early detection and diagnosis of NSCLC. This study builds on our existing knowledge of the role of the molecules involved in the pathogenesis of lung adenocarcinoma.

► **Jiang SS**, Fang WT, Hou YH, *et al*. Upregulation of SOX9 in lung adenocarcinoma and its involvement in the regulation of cell growth and tumorigenicity. *Clin Cancer Res* 2010;**16**:4363–73.

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