

Correlation of neuroendocrine differentiation features with prognosis of non-small cell lung cancer in Chinese population

Feng Jianguo (Zhejiang Cancer Hospital, China), Ying Lisha Zhejiang Cancer Hospital, China), Sheng Huaying (Zhejiang Cancer Hospital, China)

BACKGROUND: Neuroendocrine carcinoma represents a spectrum of tumors from the low-grade typical carcinoid (TC) to the high-grade large-cell NE carcinoma (LCNEC) and small-cell carcinoma (SCLC). The improvement in histological diagnostic tools, including neuroendocrine markers by immunohistochemistry (IHC), has also led to increased recognition of non-small cell lung cancer (NSCLC) with neuroendocrine differentiation (NE differentiation). However, little is known regarding the prevalence and clinical implications of NE differentiation in patients with NSCLC. This study aimed to investigate the potential clinical implication of NE differentiation in NSCLC.

HYPOTHESIS: This study aimed to investigate the potential clinical implication of NE differentiation in NSCLC.

METHODS: X Tissue microarray collected from 451 NSCLC cases of Chinese patients were analyzed with IHC for NE markers, tumor suppressor P53 and proliferation protein Ki-67, and the correlations of immunostaining for these molecular markers with pathological and clinical features were analyzed.,

RESULTS: Our result showed that NE differentiation in NSCLC is not uncommon, and was detectable in almost 30% of studied patients. The results also revealed strong links of these NE markers or NE differentiation with pathological classification, clinical stages and cell differentiation of NSCLC, and a finding that NE differentiation indicated worse overall survival and disease free survival. Compared with mutant P53 and Ki-67, NE markers showed more significance as for prognostic evaluation. Multi-factor COX analysis further suggested a potential clinical impact for NE differentiation as an independent indicator of poor prognosis for NSCLC patients.