

# The integrated approach to uncover synthetic lethal interactions for lung cancer patients

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## Abstract

We developed an integrated computational and experimental approach to uncover synthetic lethal interactions in lung cancer (LC). In our study, 24 proteins were evaluated using immunohistochemistry in 137 LC patients, and their pairwise combinations with a total number of 276 were correlated to four clinical factors for overall survival, tumor size, metastasis, and lymph node metastasis. Kaplan-Meier survival curves and univariate Cox regression analysis will be used to obtain the significant differences between abnormal and normal groups for each individual IHC and IHCs of protein pairs. Finally, four clinical factors with significant single proteins and protein pairs will be analyzed by multivariate Cox regression analysis.

Keywords: synthetic lethal, IHC, lung cancer, survival time