Joint Event on

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Up-regulation of serum mir-339-3p as a diagnostic Biomarker for non-small cell lung cancers

MicroRNAs (miRNAs), small non-coding RNA, play important role as negative regulation of gene expression. Deregulation of miRNAs has been used for predicting cancer progression in various cancers, including non-small cell lung cancer (NSCLC). Therefore, searching for potential non-invasive biomarkers is need for rapid diagnosis of lung cancer. This study aimed to evaluate whether serum miR-339-3p can be a diagnostic biomarker for NSCLC. A retrospective study was designed. Serum was collected from 151 suspected patients with lung cancer. All patients were diagnosed at Songklanagarind Hospital (Hat Yai, Thailand), a university hospital in Southern Thailand, between December 2017 and September 2018. Expression of miR-339-3p was determined by quantitative real-time PCR (qRT-PCR) technique. Receiver operating characteristic (ROC) curve and the area under the curve (AUC) were used to test the diagnostic performance. Result showed that 66 patients were NSCLC and 85 patients were non-NSCLC. The mean relative expression of serum miR-339-3p in NSCLC patients was approximately two times higher compared with that of non-NSCLC patients with P-value of 0.009. In addition, the ROC curve data indicated that this serum miR-339-3p can distinguish the NSCLC patients from the non-NSCLC patients with the AUC of 0.624 (95% CI: 0.53-0.71). The sensitivity was 73% and the specificity was 45%. In conclusion, serum miR-339-3p may serve as a circulating biomarker for diagnosis of lung cancer.

Biography

Keson Trakunram received her both Bachelor's (Biotechnology) and Master's (Pharmacology) degrees form Faculty of Science, Prince of Songkla University (PSU). Presently, she is a philosophy student at Department of Biomedical Sciences, Faculty of Medicine, PSU. According to her thesis, she is interested in microRNAs expression leading to diagnostic biomarkers in lung cancer. Major scope of her study focuses on serum microRNA profiling using microarray and bioinformatics tools. Moreover, she has published about two papers and one international proceeding.

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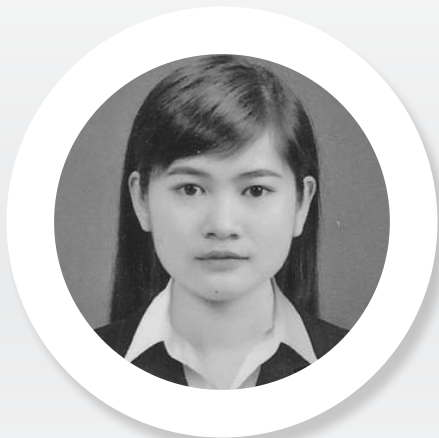
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