

Significant increased of DeltaNp53 expression found in cholangiocarcinoma patients with short time survival

Nichapavee Nutthasirikul¹, Siriporn Patrakitkomjorn², Temduang Limpaboon², Chanwit Leelayuwat², Patcharee Jearanaikoon²

¹The Centre of Research and Development of Medical Diagnostic Laboratories (CMDL), Khon Kaen University, Thailand,

²Faculty of Associated Medical Science, Khon Kaen University, Thailand

p53 is known as the most common mutated tumor suppressor gene in various human cancers including cholangiocarcinoma (CCA). Even though high incidence of p53 mutation of 40% was reported in CCA but the remaining 60% of p53 inactivation CCA are unclear. Recently, it was discovered that p53 gene can encode DNp53 isoform generated from the alternative DN promoters. Lack of N-Terminal domain, or DNp53, exhibits a dominant-negative inhibition of normal apoptotic function of p53 protein. This study was aimed to evaluate the potential in using of expression profile of DNp53 and full length p53 (TAp53) isoform to predict cancer outcome of CCA patient. Total of 48 CCA patients were divided into 2 groups with long (n=24) and short time survival (n=24) according to group median survival time at 23.38 weeks. All studied samples were subjected to determine DNp53 and TAp53 isoform level using quantitative RT-PCR (qPCR). Expression pattern was also divided into high and low expression. A significant correlation was observed between high expression of DNp53 with short time survival (Kaplan-Meier test, p-value=0.025) except TAp53 isoform (p-value = 0.175). In conclusion, this study is firstly demonstrated the over-expression of DNp53 transcript in CCA and its use as the potential marker to predict patient survival of CCA. However, expression at protein level of TAp53 and DNp53 should be explored in further study.