

## AB104. P078. Exosomal microRNAs in pancreatic juice have possibility as biomarkers to detect pancreatic ductal adenocarcinoma

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**Background:** Because pancreatic ductal adenocarcinoma (PDAC) is a lethal neoplasm which is often diagnosed late due to difficult early detection, it is crucial to devise biomarkers to detect PDAC. Exosomes are small membrane vesicles secreted from various cells and identified in several body fluids. Recently, some studies have indicated exosomes have a potential to become novel biomarkers. This study aimed to prove the existence of exosomes in pancreatic juice (PJ) and investigate whether exosomal microRNAs (ex-miRs) could be used as biomarkers for PDAC.

**Methods:** PJ was collected by endoscopic retrograde

pancreatography in patients with PDAC and chronic pancreatitis (CP). The ultracentrifuge method was applied to extract the exosomes. Relative expression levels of ex-miR21 and ex-miR155 were quantified and their expression levels were compared between PDAC and CP.

**Results:** A total of 35 PJ samples (27 PDACs and 8 CPs) were collected. Presence of exosomes in PJ was determined by electronic microscope and western blot using anti-CD63, CD81, and TSG101 antibody. Relative expression levels of ex-miR21 and ex-miR155 were significantly higher in PDAC than in CP ( $P < 0.0001$  and  $P = 0.008$ , respectively). On the other hand, the whole PJ had no significant difference in the expression levels of miR21 and miR155 between PDAC and CP ( $P = 0.08$  and  $P = 0.61$ , respectively). Ex-miR21 and ex-miR155 distinguished PDAC from CP with area under the curve values of 0.90 and 0.89, respectively. Accuracies of ex-miR21, ex-miR155, and PJ cytology were 87%, 83%, and 67%, respectively.

**Conclusions:** Ex-miR21 and ex-miR155 in PJ may be potential biomarkers for PDAC.

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