Purpose: Endoscopic ultrasound guided fine needle aspiration (EUS-FNA) is a potential method to diagnose pancreatic solid mass, but factors associated with the accurate cytological result of EUS-FNA in pancreatic solid mass are not well known. The aim of this study was to evaluate the yield of EUS-FNA and assess clinical factors associated with accuracy of EUS-FNA.

Methods: From Sep. 2005 to Sep. 2010, patients who had pancreatic mass on other radiologic exam like abdominal ultrasound (US), computerized tomography (CT) or magnetic resonance imaging (MRI) in a single tertiary referral center were included. Among them, patients with pancreatic cystic or mixed tumor were excluded. Total 94 who met the above criteria underwent EUS-FNA by 2 endosonographists. Their medical records were retrospectively reviewed.

Results: Among 94, 78 were diagnosed as malignancy and 16 as benign mass, respectively. Total 100 EUS-FNA were performed because 6 patients experienced 2 times. Sixty four were male and median age was 66 years old. Locations of mass were uncinate process (16), head (35), neck (9), body (18) and tail (22). Mean size by EUS was 3.2±1.0 cm and median number of FNA attempts was 3 (2-6). If positive and suspected malignant cytology was considered as true malignancy, the sensitivity, specificity and accuracy of EUS-FNA were 48.8%, 100.0% and 58.0%. Meanwhile, considering positive or suspected malignant and atypical cytology as malignancy, those were 75.6%, 88.9% and 78.0%. According to former criteria, experience of endosonographist (p=0.04) and FNA more than 3 times (p<0.01) were significantly associated with accuracy by multivariate analysis. As a complication, abdominal pain occurred in 1 (1%) which was conservatively manageable.

Conclusion: The yield of EUS-FNA is influenced by different criteria. According to positive and suspected malignant as true malignancy, experience of endosonographist and number of FNA attempts were significantly associated with accuracy.