**Malignancy rates in cytological categories of bile duct cytological specimens in Srinakarind hospital**

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**Abstract:**

**Background:** Cytological evaluation of biliary tract specimens, especially from the common bile duct, is a procedure to identify potential malignant lesions that is less invasive than resection. We investigated the malignancy rate among the cytological diagnostic categories comparing to the histological examination of bile duct specimens.

**Materials and Methods:** A total of 78 cytological bile duct specimens were collected from January 2011 to September 2017. In addition, 44 histological biopsied/resected specimens were retrospectively included in the study. The sensitivity and positive predictive value of cytology were calculated and compared to histological biopsied/resected specimens. The malignancy rates among the cytological diagnostic categories were identified.

**Results:** The sensitivity and specificity of which were 75% and 79%, respectively. The positive predictive value was 67% and negative predictive value was 85%. Among the five cytological categories; “Negative, Atypical, Neoplastic, Suspicious for malignancy and Positive for malignancy” revealed the malignancy rates 15%, 20%, 50%, 64% and 67%, respectively

**Conclusion**: The malignancy rates in specimens that were considered suspicious for malignancy and positive for malignancy categories were 64% and 67%, respectively. Additional advance technique such as FISH technique will be helpful to increase the diagnostic accuracy.