Background & Objective: Thyroid tumor is the most common endocrine neoplasm. Fine needle aspiration (FNA) cytology is a rapid and minimally invasive for investigation of the thyroid nodule. This study conducts to compare the “general routine screening of thyroid FNA method (GSCT-FNA)” with our study designed the challenges of “consensus screening thyroid FNA method (CSCT-FNA)”. The authors evaluate the two channels of cytological screening for diagnosis and accuracy, and to the cause of diagnostic errors with an eventual aim to improve diagnostic accuracy.

Material and Methods: A retrospective study carried out at Department of Pathology in Sunpasitiprasong hospital. 1) A total of 745 patients with clinically palpable solitary thyroid nodule including in these study between January 2012 to December 2014 for “GSCT-FNA” method. 2) The our design for challenges of “in January 2015 to August 2017. The results review as categorized and comparing cytology and corresponding histopathology “CSCT-FNA” method reported. The statistical analysis including false positive rate, false negative rate, sensitivity, specificity, positive predictive value, negative predictive value and accuracy of the procedure determined.

**Results**

The total 745 cases of FNA including; 37(4.96%) for unsatisfactory smears, 708 (95.03%) cases of satisfactory for evaluation. The males 151(20.26%) and females 594(79.73%), M:F ratio of 1:4. The age ranging from 16 to 87 years, a median age of 51.5 The FNA diagnosis as benign in 619 cases (87.42%), suspicious lesion in 20 cases (2.0%), malignant in 69 cases (9%).

**Discussion and Conclusions:**

The “CSCT-FNA” is high effective than “GSCT-FNA” in our study which is the optional to decrease false negative rate and enhancing to confidence for screening thyroid cytology. FNA is a high accuracy of diagnostic tool for the initial screening and differentiating between benign and malignant of the thyroid lesion. The false negative diagnoses are follicular pattern, papillary carcinoma arising in cystic goiter and papillary micro-nodule carcinoma. The reason for false positive diagnoses is the occurrence of nuclear features characteristic of papillary thyroid carcinoma in other thyroid lesions. Awareness of cytoptologist/screener and pathologist regarding these pitfalls can minimize false negative and false positive diagnosis.