Objective: The objective of the study is to determine the differential malignancy rates of fine needle aspiration cytology (FNAC) diagnosed as AUS (Atypia of undetermined significance) or FLUS (Follicular lesion of undetermined significance) based on nuclear or architectural atypia and to assess the significance of demographics, cellularity of smears and other limiting factors impacting AUS interpretation.

Methodology: A retrospective review was performed on all thyroid AUS cases between 2013 and 2018 at a tertiary teaching hospital in Manila. Patient demographics were reviewed. A cytopathologist examined the cytologic features, assessed the cellularity and other limiting factors affecting interpretation in all smears with AUS/FLUS diagnosis. The data collected were correlated with the final histopathologic diagnosis in resected cases using logistic regression analysis. Malignancy rates were calculated.

Results: A total of 229 cases were diagnosed as AUS/FLUS generating an AUS rate of 4.7%. Sixty-nine of the 229 (30.0%) underwent surgical excision and yielded 44 (63.8%) confirmed malignant outcomes. The malignancy rate for nodules with nuclear atypia alone was 87.5%, higher than the rate for nodules with both nuclear and architectural atypia at 61.5%. Of the nuclear features, nuclear enlargement and pallor had the highest frequency (85.5%). For architectural atypia, presence of branching sheets and trabeculae (68.1%) was nearly 4 times higher than microfolicular (18.8%). Five AUS cases with inadequate cellularity had malignant histologic outcomes.

Conclusion: The AUS rate was 4.7% which is lower than the Bethesda System published rates of 7-10%. The overall ROM (risk of malignancy) rate is 63.8% and may represent a possible selection bias since the rate was determined based solely on patients who underwent surgery. There is no statistical significance between ROMs amongst the various nuclear and architectural features in cases diagnosed as AUS/FLUS.