Poster 063

# RAPID ONSITE EVALUATION USING AN AUTOMATED SAMPLE PREPARATION SYSTEM

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## Introduction

Rapid On-Site Evaluation (ROSE) has led to an increased diagnostic yield and a reduction in complication rates in bronchoscopic procedures. However, many clinical sites do not offer ROSE due to (i) its cumbersome process, (ii) slow specimen preparation time, and (iii) limited availability of cytology personnel. We report the results of an Automated Sample Preparation (ASP) system that combines both specimen deposition and staining in a compact/mobile unit.

## Materials and Methods

We performed a multicenter study of patients undergoing bronchoscopic procedures of lesions/lymph nodes (brushings, forceps, biopsies, and fine needle aspirations). After initial assessment of adequacy was determined, samples were split into standard of care (SoC) slides and ASP Device prepared slides. Pathologists compared both the preparations and assessed the following metrics: nuclear and cytoplasmic quality, presence of debris, staining quality, and ease of adequacy/diagnosis assessment. A score between 1 and 3 was assigned, with 3 being the best and 1 being the worst.

## Results

The patients were recruited across five different institutions (n = 130). One to three lesions/lymph nodes were sampled from each patient (total FNAs/brushings/biopsies ~ 250). The ASP system provided an improved specimen and staining quality (average score = 2.7) compared to the SoC slides (average score = 2.3). Similarly, the presence of debris was lower on the ASP slides (average score = 2.6) compared to the SoC slides (average score = 2.2). The diagnostic and adequacy concurrences between ASP slides and conventional slides were >95%.

## Conclusions

Initial results suggest that slides prepared by the automated system are of adequate quality for ROSE procedures. This automated system is expected to improve and standardize the ROSE workflow in the bronchoscopy suite by ensuring reproducibility and efficiency. In the future, the use of this instrument can be expanded to other procedures that require Rapid Onsite Evaluation.