

## **SUMMARY AND CONCLUSION**

- F In gross examination, colour and consistency were not altered. Mean tissue shrinkage examined after processing by both methods was slightly more in microwave method as compared to routine conventional method. However, no any adverse outcomes were noted in microscopic examination.
- F In microscopic examination, statistically significant difference were present in cellular outline, nuclear cytoplasmic contrast, clarity of nucleus and nucleoli, clarity of chromatin and colour intensity suggesting slightly better results can be obtained by microwave method in comparison to routine method.
- F While comparable results were obtained in parameters like clarity of cellular details, integrity of tissue and clarity of nuclear membrane.
- F There was no statistical difference in eosinophilia/granularity and uniformity in staining parameters.
- F Thus, microwave assisted tissue processing yielded morphology of cells and architecture of histologic material equivalent or better quality to that provided by time-honoured conventional processing method. In addition it is achieved in considerable short duration.
- F Turn around time was assessed for both routine and microwave assisted processing and staining methods The overall processing time by routine method is 16 hours. While the total processing time by domestic microwave was only 67 minutes. Time taken during staining by manual method takes 23 minutes while domestic microwave method utilised 14 minutes for staining.
- F Overall processing and staining time by routine method was 16 hours and 23 minutes while time taken by microwave assisted tissue processing and staining method was 81minutes.
- F Microwave method has many advantages, including convenience, safety, potential to preserve specimen molecular integrity. These properties could be used in subsequent studies, and improvement in the laboratory workflow, allowing the preparation of diagnostic material during the day at family-friendly time.