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Comparison of cytological preparations and optimization of DNA retrieval from EBUS specimens

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In pharmocogenetic studies DNA extraction from fixed tissues is traditionally problematic as the DNA produced is highly fragmented and yields are often low. This can lead to a failure to obtain a result from some tumor samples thereby preventing the prescription of targeted therapies to some patients. The finding that cytology samples can yield much larger amounts of good quality DNA is therefore of great potential benefit providing an improved resource of DNA for testing. There is also the potential that the greater quantities and higher quality DNA isolated fresh cytology samples will be more suitable for broad based panel screens using NGS where DNA isolated from FFPE tissue is often inadequate. In our study we have analyzed the DNA content in fresh samples and in FFPE samples. The success of sequencing and ability to detect mutations were comparable for both fresh and fixed cells although there was a suggestion that success rates and mutation detection may be better for the fresh cells. However, the sample size is very small and the significance of the data would need to be tested on a larger sample.

Biography

Leena Elizabeth Joseph is the Clinical Director of Pathology at University Hospitals South Manchester and has been based in Manchester, UK from last 18 years. Her specialist interests are in the fields of cardiothoracic, breast and dermatopathology.

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