Cytology is undergoing a change. The focus of this one-day meeting is on the need of cytologists to embrace such change and to integrate molecular cytopathology into practice.

A number of experts will discuss the opportunities that NGS offers in different fields of cytopathology, to increase mutation detection sensitivity in paucicellular smears and to extend the analysis to a larger number of gene regions.

Until recently, cytological samples were only tested by sequential single-gene mutational tests. Next-generation sequencing, matched with multiplex capture of targeted gene regions and analysed by sophisticated bioinformatics tools, enables the simultaneous detection of multiple mutations in multiple genes. By the development of miniaturized technology and of benchtop sequencers it is not unlikely that NGS will soon be adopted for routine molecular diagnostics, including cytological samples.