



EVALUATION OF AUTOMATED EXTRACTION OF FFPE TISSUE AND BRAF V600 PCR TESTING THROUGH VELA DIAGNOSTICS SENTOSA® PRODUCTS

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INTRODUCTION

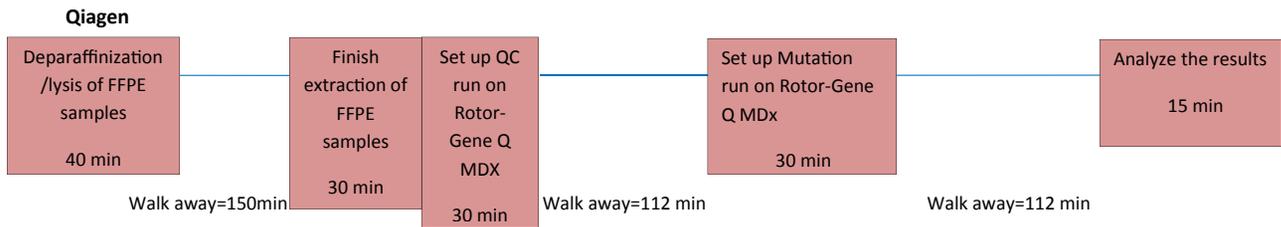
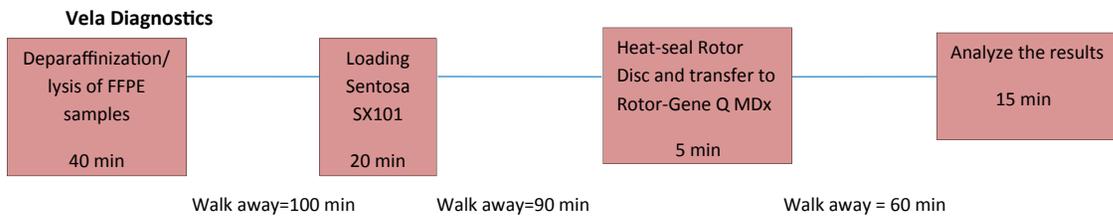
Over the next 10 years around \$2.9 trillion will be cut from the government budget for healthcare spending. This changing landscape in healthcare has now required laboratories to produce more testing with fewer resources available. Many laboratories are looking at automation to alleviate the burden of the reduction of resources, at the same time continuing to expand the molecular test menu.

METHODS

A time study comparison of two BRAF V600 mutation analysis assays was conducted. The first method samples were tested using manual macro-dissection of FFPE tissue using the QIAamp DNA FFPE Tissue kit followed by manual PCR set-up and then PCR amplification using Qiagen BRAF RGQ PCR kit on the Qiagen Rotor-Gene® Q MDX instrument. The second method samples were then tested using automated extraction and PCR set-up using the Sentosa SX101 with the Vela Diagnostics Sentosa SX FFPE gDNA kit and the Sentosa SA BRAF V600 PCR reagents followed by PCR amplification and data analysis on the Rotor-Gene® Q MDX 5plex HRM instrument.

RESULTS

The Vela Diagnostics FFPE extraction protocol requires some hands-on processing before loading the Sentosa SX101. However, once the instrument is loaded a technologist has over one hour of walk-away time, then approximately five minutes of hands-on time transferring the 72-well rotor to the Rotor-Gene® Q MDX 5plex HRM instrument followed by two hours of walk-away time. This process allows BRAF V600 mutation testing to easily be completed in an eight hours shift, while providing a technologist walk-away time to perform other duties within the laboratory. The Qiagen manual extraction allows for little walk-away time followed by a quality assessment run and the BRAF mutation run. The amount of walk-away time is decreased requiring greater resources.



 = Hands on time

 = Walk away time

CONCLUSIONS

The Vela Diagnostics Sentosa SX FFPE gDNA kit and the Sentosa SA BRAF V600 PCR reagents using the Sentosa SX101 and the Rotor-Gene® Q MDX 5plex HRM instrument provide laboratories with an automated solution that will allow technologist significant walk-away time to perform other tasks in the laboratory. The return on investment for laboratories is even greater due to the multi-purpose functions of the Sentosa SX101 and the Rotor-Gene® Q MDX 5plex HRM instrument.

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