Comparative molecular analyses of BRAF-V600E mutant tumors: colorectal cancer (CRC) vs. melanoma

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Abstract (No. 3598)

Background

- Oncogenic activation of BRAF occurs with highest frequency in thyroid (>30%), melanoma (20%), and colorectal cancers (57%).
- BRAF V600E mutation status in colorectal cancer (CRC) was compared to melanoma (Mel).

Methods

- A total of 5193 specimens were tested for BRAF mutational analysis in CRC and Mel.
- SNP-chip genotyping was used for copy number variations.
- The BRAF status of 4432 specimens was included in the analysis.

Results

- BRAF V600E mutations occurred at a higher frequency in CRC than Mel (30% vs. 20%).
- Other alterations included APC, PIK3CA, SMAD4, TP53, and ERBB2.

Conclusion

- BRAF V600E mutation status can be used to distinguish between CRC and Mel.

References

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