



Ottava Giornata della Ricerca della Svizzera Italiana

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Modulo per la sottomissione abstract ricerca di LABORATORIO

Titolo (massimo **15 parole**)

Microsatellite instability: development of a fast and reproducible assay for the Bethesda panel analysis

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Testo (massimo **250 parole**, preferibilmente in italiano (accettato anche in inglese), suddiviso in Introduzione, **Metodi**, **Risultati**, **Conclusioni** e **Finanziamento**)

Introduction

The microsatellite instability (MSI) reflects the inactivation of the mismatch repair system and is used as molecular marker for assessing prognosis and treatment decisions in colorectal cancer (CRC) patients. Among the methods used to analyse the MSI status, the Bethesda panel provides the analysis of five loci universally approved for diagnosis, based on the analysis of paired tumour and healthy tissues. To decrease the working time and also the error rate, we developed a new assay based on a ready-to-use mix approach.

Methods

After DNA extraction (QIAamp DNA FFPE Tissue Kit, Qiagen, Chatsworth, CA, USA), we characterized the MSI status of 98 patients affected by CRC. In order to compare the sensitivity of the new assay, the results obtained with the ready-to-use mix (Pentaplex®, Pentabase, Odense, Denmark) were compared to previous data obtained by using the Simplex PCR mastermix (Qiagen), based on the analysis of the five loci in a separated manner.

Results

The results obtained with the ready-to-use mix showed that 25 patients were classified as MSI and 73 patients as microsatellite stable cases. A perfect match between the two methodologies was observed in all the loci (k=11, Cohen's kappa test).

Conclusion

The ready-to-use mix is a more rapid and easy to use assay for a perfect analysis of MSI, enabling laboratories to decrease the work-on-time for such analysis.

Funding

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Visto superiore (prego indicare Nome e Cognome del superiore)

Milo Frattini

Criteri per sottomissione Abstract:
NO Case report
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