

## LETTER TO THE EDITOR

# Usefulness of the Mononucleotide Marker "BAT-26" for Identification of Microsatellite Instability in Colorectal Cancers

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### Dear Editor

We read with interest the study by Haghghi and colleagues published in the recent issue of *Asian Pacific Journal of Cancer Prevention* (Haghghi et al., 2010). They aimed to find the most frequent of five mononucleotide markers for identification of patients with colorectal cancer with microsatellite instability (MSI). They examined five mononucleotide markers, NR-27, NR-21, NR-24, BAT-25 and BAT-26 to determine MSI status. They found that two out of five mononucleotide markers, NR-21 (25.6%) and BAT-25 (23.1%) showed more instability than the others and concluded that BAT25 and NR-21 may provide diagnostic assistance to find MSI colorectal cancer. Mononucleotide markers have been reported to be sensitive markers to identify MSI colorectal cancers. However, there have been few studies that directly compared the sensitivity of five mononucleotide markers in the same cohort of patients. Haghghi 's study showed that sensitivity differs between mononucleotide markers with NR-21 and BAT-25 showing the highest sensitivity. We believe Haghghi 's study is especially important in the clinical setting because it can minimize the number of markers to be used in clinical practice. However, there is a major issue that needs to be discussed to draw their conclusion.

In Haghghi 's study, no data with regard to another mononucleotide marker "BAT-26" was presented. In our previous studies, we also examined MSI status in colorectal cancers (Watanabe et al., 2001; 2006). We showed that MSI colorectal cancer patients who received adjuvant chemotherapy had better prognosis than MSI colorectal cancer patients who did not (Watanabe et al., 2001). In our study, we determined MSI status using both BAT-25 and BAT-26 and there was no significant difference between BAT-25 and BAT-26 in terms of sensitivity to identify MSI cancers. Other studies also show the efficacy of BAT-26 as a marker to identify MSI cancers (Watanabe et al., 2006; Xicola et al., 2007). However, Haghghi 's study showed that only BAT-25 and not BAT-26 was an effective marker. One possible reason for this may be that some samples might not have been evaluable for BAT-26. Haghghi 's study used DNA extracted from paraffin sections of normal and tumor tissues for PCR assay. Their amplicon size of BAT-26 was 183 bp, while it was 109 for NR-21 and 153 for BAT-25. Since DNA quality is sometimes poor when paraffin embedded tissues is used, we cannot get evaluable results by PCR assays. Especially, this becomes a serious problem when amplicon size is large. In Haghghi 's study,

because amplicon size of BAT-26 was larger than that of NR-21 or BAT-25, there is a possibility that the total number of evaluable cases for BAT-26 was much smaller than that for NR-21 or BAT-25. If this is the case, they need to compare the sensitivity of markers among evaluable cases and not total patients.

Until above issue is sufficiently addressed, we believe it is premature and potentially irresponsible to exclude BAT-26 from suggested markers that provide diagnostic assistance.

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