Letter to the Editor

Evaluation of DNA-ploidy heterogeneity in gastric cancers *

To the Editor,

Prognostic value of DNA-ploidy in gastric cancers is still a matter of controversy. A possible explanation for the discrepant results reported in the literature could be sampling error in tumours with multiple stemlines differing in DNA-ploidy [2,4].

In order to determine whether or not such heterogeneity exists and play a role in biology of gastric cancers we have analysed two different types of gastric carcinoma; the early gastric carcinoma (EGC) and the advanced gastric carcinoma (AGC).

We have performed DNA-ploidy analysis on multiple samples providing from a group of 17 EGC of which 8 were pure intramucosal and 9 were infiltrating into the sub-mucosa. Then we have analysed 16 AGC, according to the same procedure.

We found an aneuploid DNA-stemline in 8 EGC (47%) more often in tumours invading into the submucosa (5/9) than in pure mucosal tumours (3/8). Multiple DNA-stemlines were found more frequently in submucosal infiltrating tumours (4/5) [3].

From the 16 AGC cases, 15 revealed DNA-aneuploid with heterogeneity in 4 cases (26%).

In conclusion we have reported that 53% of EGC were diploid compared to only 6% of AGC. Heterogeneity was found in 13% intramucosal EGC, 44% in submucosal EGC and 26% of AGC [1].

These results are consistent with the hypothesis of stepwise ploidy progression: from diploid in most

EGC to an euploid but heterogeneous in infiltrating EGC to an euploid but homogeneous in AGC.

This is in agreement with the notion that the development of a single aneuploid, more aggressive, cell clone is a crucial mechanism in the progression from early to advanced gastric cancer.

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