MARKERS TO STUDY HUMAN COLONIC CELLMULTIPLE PROLIFERATION

EDITOR.—We noted with interest the paper by Kubben et al (Gut 1994; 35: 530–5) on a comparison between proliferating cell nuclear antigen (PCNA) and ex vivo bromodeoxyuridine (BrdU) labelling. We have compared PCNA labelling in 86 human colorectal tumours to bromodeoxyuridine (IdUrd) labelling after in vivo administration using both flow cytometric and immunohistochemical methods.

In contrast with the authors’ findings, we have not found a significant correlation between the two labels. This was despite correct fixing for the presence of IdUrd labelled daughter nuclei (a problem that has not been discussed in this paper) and using a variety of fixatives when assessing PCNA labelling. In our experience, the strongest correlation seen has been on comparison between IdUrd labelling assessed immunohistochemically and PCNA labelling after fixation in methanol (r=0.38, p=0.015). Fixation methods seem to affect the identification of PCNA in different parts of the cell cycle and the apparently higher expression of PCNA than BrdU in Kubben’s paper reflects this.

As we have stated before, we feel that in comparisons such as this, it is necessary to analyse much a greater number of specimens from a greater number of subjects and attach less clinical significance to a weak correlation that is statistically significant.

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REPLY

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Correlation of BrdU and PCNA immunohistochemistry on human colorectal tissue

<table>
<thead>
<tr>
<th>Author</th>
<th>Tissue</th>
<th>Subjects (n)</th>
<th>r</th>
<th>p Value</th>
<th>Mab</th>
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<tr>
<td>Kubben</td>
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<td>PC10</td>
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<td></td>
<td>Adenocarcinoma</td>
<td>86</td>
<td>0.38</td>
<td>0.015</td>
<td>PC10</td>
</tr>
</tbody>
</table>

Mab = monoclonal antibody against proliferating cell nuclear antigen; r = correlation coefficient.

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