Reviewer's report

Title: Humoral immune response to MUC5AC in patients with colorectal polyps and colorectal carcinoma

Version: 2 Date: 10 September 2005

Reviewer: Samuel B Ho

Reviewer's report:

General
The MUC5AC mucin is often aberrantly expressed in colorectal neoplasia and may have a role in tumor-host interactions. This study reports the detection of circulating MUC5AC mucin peptide antibodies in the serum of patients with colorectal neoplasia using a sensitive ELISA assay. They found that 27% of healthy subjects had detectable MUC5AC antibodies, this percentage increased in patients with colorectal polyps and cancers. In patients with colorectal cancers the disease free and overall survival were shorter in MUC5AC antibody positive patients. The authors need to clarify the association of the antibody levels and clinical variables, and the fact that the antibody levels were not significantly associated with survival on multivariate analysis. The findings are interesting and the main limitation is the small number of patient samples that were tested in each group.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
Specific comments on major issues:
1. Abstract conclusion – the statement is more of a speculation than a conclusion of what the data shows and should be revised. Note that in the multivariate analysis MUC5AC antibody did not correlate with prognosis. This should be mentioned in the abstract. Also in the abstract it states that MUC5AC antibody status did not correlate with clinicopathologic variables, yet in results page 8 it states that MUC5AC antibody positivity was consistently higher in patients with poor prognostic parameters, and this likely explains its association with survival. The fact that this did not reach statistical significance is likely due to the small numbers of patients. This should be discussed in the discussion on page 10 and the authors should not simply state that “MUC5AC antibody n the sera of colorectal carcinoma patients was not significantly correlated with clinicopathological parameters, but disease free survival and overall survival were shorter in MUC5AC antibody positive patients.” Again, on multivariate analysis MUC5AC antibody status was not significantly associated with survival, and may instead be associated with advanced disease stage or poor histology.
2. Results page 7: The histology of the polyps should be specified and correlated with MUC5ac antibodies. The authors note that 21% of polyps were hyperplastic, which are generally not associated with colon cancer risk.
3. In table 3 the histology of the polyps should be specified.

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
Comments on minor issues:
4. Results page 7: in paragraph 3 there should be parentheses around the percentages.
5. In Table 1 recommend adding the percentage of patients with MUC5AC antibody positivity in each subgroup listed.
6. Page 9: “OVS” and “DFS” are not a standard abbreviation and these should be spelled out in the text and tables in each instance.
Discretionary Revisions (which the author can choose to ignore)

**What next?:** Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** No

**Declaration of competing interests:**
I declare I have no competing interests