Author's response to reviews

Title: Immunohistochemical analysis of cancer stem cell markers in locally advanced pancreatic adenocarcinoma patients after neoadjuvant chemoradiotherapy

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Dear Editor, BMC Cancer

Attached please find our above-named manuscript for consideration as a "Full paper" in the BMC Cancer.

Cancer stem cells (CSCs) are generally thought to self-renew and to be tumorigenic and anticancer therapy-resistant. Clinicopathological analyses of CSC markers after neoadjuvant chemoradiotherapy (NACRT) have been performed in various types of cancers, but the prognostic impact of CSC marker expressions in locally advanced pancreatic adenocarcinoma (LAPA) after NACRT has not yet been reported.

Here we examined 28 cases of LAPA (all cT3 and NACRT, n = 17; non-NACRT, n = 11) by clinicopathological analysis, and we found that in the NACRT group, the expression frequencies of CD44 and ALDH1 were significantly higher and CD133 expression was significantly lower. The expression of CD133 was inversely correlated with that of ALDH1 and CD133-positive and ALDH1-negative expression were each significantly associated with unfavorable patient outcomes in the NACRT group.

This is the first report showing that NACRT affected the expression frequencies of CD44, CD133 and ALDH1 in LAPA patients and that CD133-positive and/or ALDH1-negative expression was associated with poor outcomes in patients who have undergone NACRT. Our findings suggest that CD133 and ALDH
expressions are useful predictors of prognosis in LAPA patients who have received NACRT.

We believe that our paper will be of interest to a wide range of readers of the *BMC Cancer*, including physicians and pathologists who are involved in the treatment of pancreatic cancers.

The work is original and has not been submitted for publication elsewhere. All of the authors have reviewed this manuscript and have agreed that they contributed to this study. None of the authors have any conflicts of interest regarding this work.

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Thank you very much for your consideration of this manuscript.

Yours sincerely,

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