Reviewer's report

Title: M1 form of tumor-associated macrophages in lung cancer is positively associated with survival time

Version: 1 Date: 12 January 2010

Reviewer: Lill-Tove Busund

Reviewer's report:

1. The authors have investigated the amount of tumor promoting macrophages (M2) and tumor inhibiting macrophages (M1) in tumor islets and tumor stroma in NSCLC in a short and a long survival group. They find M1 macrophage densities in tumor islet and stroma of the long survival group significantly higher than M1 macrophage densities in tumor islet and stroma of the short survival group. In a multivariate Cox proportional hazards analysis, M1 macrophage density in tumor islet was an independent predictor of patient's survival time. The overall methodology is state of the art.

2. Macrophage polarization and activity in tumor biology is a very interesting and controversial field. The authors have used CD68 which is a rather unspecific antibody as it reacts with a diversity of cells of varying degree of activation. All antibodies are purchased from one and the same manufacturer. Since the findings are exclusively based on the specificity of these antibodies in a double staining kit, I would suggest redoing all the stains with at least one alternative antibody from alternative manufacturer for each marker.

3. The pictures (Figure 1) are rather confusing. Picture a. shows aggregates of pyknotic white blood cells in the lumen of a bronchus. Picture b. shows double stained (?) aggregates of cells/nuclei. I would suggest new pictures demonstrating with higher magnification single cells, double stained M1 and M2 cells in tumor islets and tumor stroma, respectively.