Reviewer's report

Title: The impact of chemotherapy-associated neutrophil/lymphocyte counts on the efficacy of adjuvant chemotherapy in colorectal cancer

Version: 2 Date: 2 October 2012

Reviewer: Thierry Lecomte

Reviewer's report:

This paper describes in a series of colorectal cancer patients the prognostic role of chemotherapy-associated lymphopenia. This is an interesting and important subject article but the actual study does not meet the high expectations. There are major methodological errors in the way in which the study was performed which make the results unreliable.

Major points:

It is a prospective or a retrospective study? This point must be clarified.

- The majority of included patients have stage II colorectal cancer. It is surprising because adjuvant chemotherapy for stage II colon cancer remains still controversial.

- The patient population is not as well characterized as it might be.

- The study selection criteria excluded patients who had absolute baseline lymphocyte counts < 1.0x10^9 cells/L. According my point of view, this criteria of exclusion is not justified.

- We do not know how many patients with rectal cancer received neoadjuvante (chemo-)radiotherapy. Previous radiotherapy could affect lymphocyte count during adjuvant chemotherapy.

- Baseline lymphocyte counts are not reported in the manuscript.

- We do not know why patients who had to stop adjuvant for severe toxicity were excluded from analysis? According my point of view, exclusion of these patients is not justified.

Disease-free survival (DFS) as surrogate end-point for overall survival (OS) is considered an accepted end-point for adjuvant trials in colorectal cancer. So, DFS is not more representative in the assessment of adjuvant chemotherapy efficacy. The evaluation of overall survival as secondary end point should be performed.

Minor points:

- Number of patient with lymphopenia > 660 are not reported in the manuscript.

- The rate of FOLFOX-associated neutropenia must be discuss (In MOSAIC study, neutropenia grade ¾ rate was observed in 41,1% of patients).

Chemotherapy-associated lymphopenia is reported rarely in clinical trials. This
point should be discussed.

**Level of interest:** An article of limited interest

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests