Reviewer's report

Title: Vasculature analysis of patient derived tumor xenografts using species-specific PCR assays: evidence of tumor endothelial cells and atypical VEGFA-VEGFR1/2 signalings

Version: 1 Date: 28 November 2013

Reviewer: Jean-Philippe Gratton

Reviewer's report:

General

In this manuscript, the authors have developed human and mouse specific real-time quantitative RT-PCR assays to characterize the vasculature of human tumor xenografts implanted on mice. Eight different tumor types were tested. Human and mouse PECAM1/CD31, ENG/CD105, FLT1/VEGFR1, KDR/VEGFR2 and VEGFA transcripts were analyzed. Expression of human endothelial markers was detected in all tumor types suggesting tumor endothelial transdifferentiation. Bevacizumab treatment of mice implanted with NSCLC induced resulted in reduced expression of mouse endothelial markers while human CD31 and VEGFA were upregulated. The study is somewhat descriptive but well executed and interesting. The results clearly indicate the existence of human tumor endothelial cells in tumor xenografts and provide an interesting perspective to explain resistance to Bevacizumab treatment.

Minor Essential Revisions

Since the supplementary Table 2 is referenced multiple times throughout the manuscript its description should be improved. In its present form, it is very difficult to understand and interpret the data.

Labels for Y-axes in figure 2 (a-d) are missing.

Discretionary Revisions

Legend for Figure 2 could be more explanatory and the labeling of the bar graphs could be improved.

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

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 interest