Reviewer’s report

Title: Differential regulation of MMPs by E2F1, Sp1 and NF-kappaB controls the small cell lung cancer invasive phenotype

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Reviewer: Athanassios AK Kotsinas

Reviewer’s report:

The present report Li and collaborators provide combined in vivo and in vitro evidence that the E2F1 transcription factor has an important role in modulating invasion and possibly metastasis in human small cell lung carcinomas (SCLCs). Specifically they demonstrate in SCLC cell lines that E2F1 upregulated MMP16 directly and MMP indirectly via SP1 and NF#B (as assessed by its p65 subunit). The functional data were corroborated by in vivo observations in a series of human SCLCs. Given the very recent report of Johnson et al (Cancer Res 2012) demonstrating for the first time that E2F transcription factors regulated expression of MMPs, the work of Li and colleagues makes a major advance by demonstrating in vivo the functionality of this relationship in SCLCs.

Overall the work is well designed and performed, with clear results.

Major Compulsory Revisions:

1. English language should be very carefully attended throughout the text. Some points are hard to read.
2. We would like to bring to the attention of the authors on another publication that can be also incorporated in the first paragraph of the Discussion regarding E2F1 status in non-small cell lung cancer (Gorgoulis et al J Pathol 2002).
3. In the results section the reason for choosing to look for E2F1 binding sites in the MMPs should be supported by referencing the work Johnson et al, Cancer Res 2012 (ref 9 in the manuscript).

Minor Compulsory Revisions:

1. The word bronchial (and not bronichial) should be corrected in figures.

Level of interest: An article of importance in its field

Quality of written English: Not suitable for publication unless extensively edited

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