Reviewer's report

Title: Genes Associated With Prognosis After Surgery For Malignant Pleural Mesothelioma Promote Tumor Cell Survival In Vitro

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Reviewer: Oluf Dimitri O D Røe

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Comments on the paper by Gordon et al.

The paper is interesting and highly relevant. Testing candidate target genes discovered by microarray should be of high priority, and a thorough siRNA and microscopy study has been carried out here.

As this must be published, I have some questions and comments that should be clarified.

Authors contribution: Who actually produced the experimental data?

Introduction:
Chemotherapy has improved survival the last decade, although not impressive, from 9.3-12.1 months.

Materials and methods:
A549 is as far I am concerned a squamous cell lung cancer. (Br J Cancer. 2001 Aug 3;85(3):446-52.
The ability to accumulate deoxyuridine triphosphate and cellular response to thymidylate synthase (TS) inhibition.
Webley SD, Welsh SJ, Jackman AL, Aherne GW.
CRC Centre for Cancer Therapeutics, Institute of Cancer Research, 15 Cotswold Road, Sutton, Surrey, SM2 5NG.)

The origin of the cells should be noted in the methods chapter as well. Since the test was discovered for mesothelioma, why not use a mesothelioma cell line? Are there studies showing that mesothelioma cell lines are not good in high throughput and in transfection studies?

Discussion:
A positive finding is that downregulation of those genes in the squamous cell line may induce apoptosis, so those genes may be targets for other cancers as well. There was also an effect on the normal cells, so a note on the dangers of harming normal cells could be on its place. A natural continuation of this study is to look at mesothelioma cell lines and or animal models.
Corrections
Page 5, line 12: ARHGDIA instead of ARHGIA
Page 11, line 3: A549 are derived from a squamous cell lung tumour.
Page 11 line 12: ..a normal cell line, WI 38…

Fig 5: Why is the cell number index higher in the tumour cells that were knocked
down for the genes ARGDIA, COBLL1, TM4SF1
Should be discussed.

**Level of interest:** An article of importance in its field

**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.