Author's response to reviews

Title: Effects on human transcriptome of mutated BRCA1 BRCT domain: a microarray study.

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Author's response to reviews: see over
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Dear Editor,

enclosed please find our manuscript entitled "Effects on human transcriptome of BRCA1 mutated BRCT domain: a microarray study", by Caterina Iofrida and colleagues, to be considered for publication in BMC Cancer as Research Article.

The manuscript includes three tables and three figures. We also provide seven additional files containing detailed microarray results.

We hope that you will find this manuscript of interest to the wide readership of BMC Cancer.

Aim of this work was to study the effects on human cell transcriptome of two BRCA1 missense variants, M1775R and A1789T, both located in the protein BRCT domain. We performed a microarray analysis to characterize gene expression profiles of HeLa cells transfected with one or the other variant in comparison with HeLa cells expressing BRCA1 wild-type. Our results represent the first molecular confirmation of the pathogenetic role of M1775R. In fact, although more than an evidence exists on the pathogenetic role of this BRCA1 variant, the effect of this mutation on human cell transcriptome has never been investigated before. Concerning the A1789T variant, we first suggested a causative role in breast cancer onset and development similar to that of M1775R on the basis of experiments in yeast (Di Cecco et al, Eur J Cancer 2009;45:2187-96). The present work gives further support to this hypothesis and is in line with the very recently suggested role of BRCT domain as the main effector of BRCA1 tumor suppressor activity.

All the authors have participated in the conception, design, analysis and/or writing of the article; all the authors reviewed the final version of the manuscript and approved it for
submission. None of the authors has any competing financial or other interest in relation to this work.

Neither this manuscript nor one with substantially similar content under our authorship has been published or is being considered for publication elsewhere.

We look forward to hearing back from you.

Best regards,

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