Reviewer’s report

Title: INFORMING PATIENTS ABOUT THEIR MUTATION TESTS: CDKN2A c.256G>A IN MELANOMA AS AN EXAMPLE

Version: 0 Date: 29 Jun 2020

Reviewer: Cathryn Koptiuch

Reviewer's report:

This is an interesting write-up of a single melanoma family found to have a likely pathogenic variant in CDKN2A. This manuscript was submitted as a research article though it seems to fit better into the case report category. This is a useful article as more variant-specific information is needed to help clinicians determine the most appropriate recommendations for patients and their families with regards to germline genetic findings. Penetrance of all variants are not all equivalent.

A few specific notes on items in the discussion section of this manuscript:
* Page 8, Line 6: The assumption of 50% of the 16 FRD and SDR of the proband's mother being carriers is an overestimate. 50% of the siblings (N=2) may be presumed carriers and 25% of the siblings' offspring (N=3), making 7 of the 16 FDR/SDR likely carriers of the described variant. Other possibilities should be mentioned that may describe the incomplete penetrance in this family (e.g. de novo variant in proband's mother, possibility of proband's mother being the only one in her sibship that inherited the variant (3% likelihood)).

* Page 8, Line 27: To accommodate no-nuclear family structures (e.g. adopted individuals and those estranged from their relatives), the wording of the sentence "All patients have biological families..." could be reworded.

Additionally, it would be useful if the authors modified Fig 2 to include the maternal cousins of the proband as these individuals are discussed as part of the results and discussion points made by the authors, including a possibly-pertinent cancer diagnosis.

Overall, this paper describes the case well and the authors were thorough in obtaining genetic status on as many close relatives as possible (deceased or alive) in order to inform their conclusions. Methods were appropriate, though it is not clear why only two of the three living individuals who received genetic testing also received genetic counseling.

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