

Validation of a Hereditary Cancer Risk Assessment Scoring Tool for Use by Non-Genetics Trained Healthcare Workers

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Topic: Genetics

Objectives

Hereditary cancer risk assessment has the potential to identify at-risk individuals and provide risk-reducing strategies, but disparities in access to genetic services can limit screening and appropriate referral for testing in safety net care settings. Tools tailored to non-genetics trained healthcare workers may help to mitigate this issue. The aim of this study is to validate a companion scoring tool for an original National Comprehensive Cancer Network (NCCN) based questionnaire utilized in a community health worker (CHW) supported hereditary cancer risk assessment program in a public safety net hospital.

Methods

A set of ten de-identified, representative patient questionnaires were retrospectively reviewed by 19 non-genetics trained healthcare personnel and 2 certified genetic counselors (CGCs) using an original companion scoring algorithm. The evaluators were asked to independently score each questionnaire as 1) testing indicated, 2) testing not indicated or 3) review with CGC. Scoring by the 19 different reviewers was compared to the scoring by the 2 CGCs and the original score assigned by either a gynecologic oncologist or a CGC.

Results

There was 100% concordance among the original scorer and the two CGCs who participated in this study. There was 100% concordance in 4/5 questionnaires in which testing was indicated. For the remaining questionnaire where testing was indicated, 97% designated such, and 3% designated “review with CGC.” For the five questionnaires in which testing was not indicated, 63% designated “review with CGC.” There were only two instances in which an evaluator deemed testing to be indicated when it was not (false positives: 2%). There was not a single case in which the non-genetics trained evaluator deemed genetic testing not indicated when it should have been performed (false negatives: 0%).

Conclusions

In this study various non-genetics trained healthcare workers independently assessed hereditary cancer risk questionnaires with high accuracy utilizing an original companion scoring algorithm. This suggests the feasibility of successfully using this hereditary cancer risk assessment and companion scoring tool by non-genetics trained healthcare personnel to identify high risk patients for referral to genetic counseling and testing.

Abstract Table or Graph



	Genetic testing indicated		Genetic testing not indicated	
	No. (N=95)	Percentage (%)	No. (N=95)	Percentage (%)
Evaluators' Scoring				
Testing indicated	92	97	2	2
Review with CGC	3	3	60	63
Testing not indicated	0	0	33	35

*Certified Genetic Counselor (CGC)

Table 1. Accuracy of Non-Genetics Trained Evaluator Scoring: Highlighted in green are the percentages of concordant scores between non-genetics trained evaluators and CGCs vs discordant scores (highlighted in red).