

Introduction

- Patient-administered digital tools can help identify individuals in need of cancer genetic testing.
- To ensure such tools are brief, patient friendly, and reliable, decisions must be made about what personal and family history questions to include.
- In developing such a tool, we sought data on the value of including questions about family history of metastatic prostate cancer (mPCa) and family history of triple-negative breast cancer (TNBC) at ≤ 60 yo.

Aim

To determine how often a family history of 1) mPCa or 2) TNBC at ≤ 60 yo is critical to guideline-based assessments of need for cancer genetic testing, in pedigrees taken by genetic counselors (GCs).

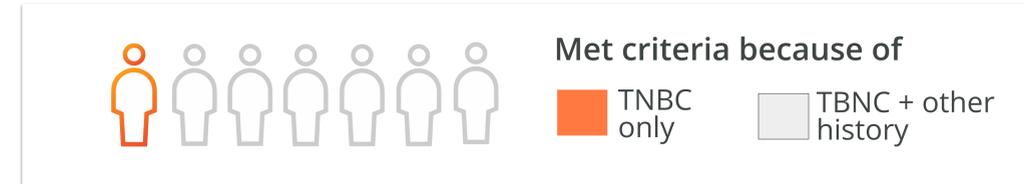
Methods

1. Retrospective chart review of 759 consecutive pre-test oncology patients from our telehealth genetic counseling organization.
2. Patients were evaluated to see if they met criteria based on family history of 1) TNBC at ≤ 60 yo or 2) mPCa, as noted in 3-generation pedigree taken by a GC.
3. Patients that met criteria based on such history were then assessed to see if they met criteria by other means.

Results

Family history of TNBC ≤ 60 yo is rarely the only reason a patient meets criteria.

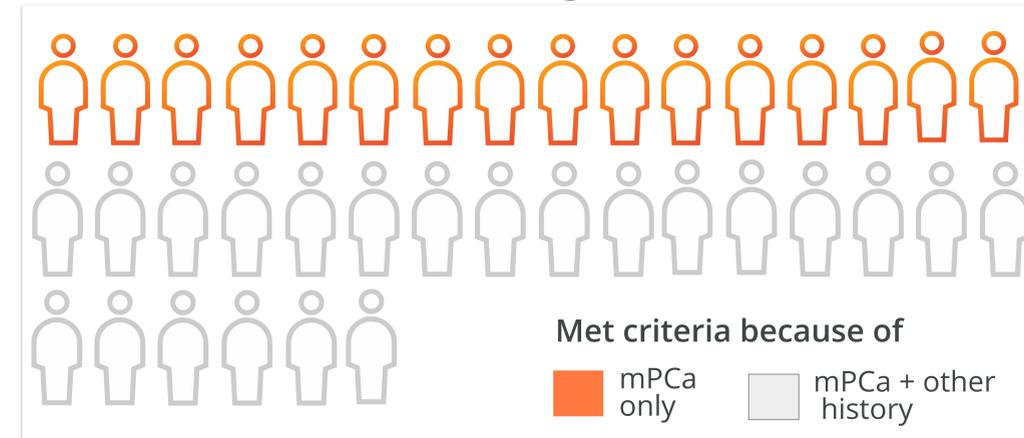
- 7/759 (0.9%) met criteria due to relative's TNBC at ≤ 60 yo.
- However, nearly all (6/7 (85.7%)) of these patients had an additional reason for meeting criteria.



- 1/759 (0.1%) patients would be mis-categorized as not meeting criteria for genetic testing if the tool didn't ask about family history of TNBC at ≤ 60 yo.

Family history of metastatic prostate cancer is sometimes the only reason a patient meets criteria.

- 38/759 (5.0%) patients met criteria due to relative's mPCa.
- Just over half (22/38 (57.9%)) of these patients had an additional reason for meeting criteria.



- 16/759 (2.1%) would be mis-categorized as not meeting criteria if the tool didn't ask about family history of mPCa.

Discussion

- Including questions about a family history of TNBC ≤ 60 yo in a patient-administered digital tool to identify individuals in need of genetic testing would likely not contribute much to the tool's sensitivity.
- Including questions about a family history of mPCa could make meaningful improvements to the tool's sensitivity.
- The frequency of pedigrees containing a family history of mPCa (5.0%) suggests patients can report that history.
- Question(s) about family history of mPCa need to be carefully worded to facilitate accurate history reporting in a patient-administered tool.

Conclusions

- A patient-administered digital tool to assess need for cancer genetic testing should include questions about having a relative with mPCa, but not TNBC at ≤ 60 yo.
- Data from pedigrees can be used to inform the design and development of digital clinical tools.

Limitations

- Patients' ability to report these aspects of family history when speaking with a GC may differ from when completing a patient-administered digital tool.
- Frequency of these two aspects of family history and their role in meeting criteria likely depend on the composition of the patient population.