Test of InheRET™, an Online Tool to Facilitate NCCN Guideline®-Compliant Referrals for Cancer Genetic Counseling and Increase Access to Care

Amanda Cook¹, David F. Keren¹,², Lynn McCain¹,², Kara Milliron¹,², Lee Schroeder¹,², James Arthurs¹, Diane Harper², Susan Ernst², Philip Zazove³, Jasmine Parvaz², Sofia D. Merajver¹,²

InheRET, Inc.¹ in collaboration with Michigan Medicine, University of Michigan², Ann Arbor, Michigan

### BACKGROUND

Patients are typically unable to recall an accurate and complete family health history in clinic and providers have limited time to collect a three-generation pedigree to identify those patients who are at risk for harboring a pathogenic variant in a cancer susceptibility gene. This pilot evaluated the impact InheRET™, an online family health history gathering, and risk assessment reporting tool developed by members¹ of the project team, has on facilitating National Comprehensive Cancer Network (NCCN) Guideline®-compliant referrals for cancer genetic counseling/genetic evaluation by decreasing and/or removing the barriers of:

1. Time to complete an in-clinic 3-generation family history collection
2. Interpretation of the family and personal history considering current NCCN Guidelines®

### DESIGN & IMPLEMENTATION

InheRET conducted a pilot study at Michigan Medicine clinics. Enrolled patients completed their family health history online from web-enabled devices using InheRET. InheRET not only compiled those family health histories, but also interpreted those histories against current NCCN guidelines and produced patient and physician reports based on patient provided health information.

### CURRENT STATE

#### Identifying the ~60 million unaffected individuals¹ in the United States at risk for inherited cancer susceptibility has the potential to reduce their cancer risk by up to 95%² - with even greater need world-wide

1. Time to complete an in-clinic 3-generation family history collection
2. Interpretation of the family and personal history considering current NCCN Guidelines®

### RESULTS

As of July 31, 2019, 628 patients consented and >80% of those patients completed their InheRET health history. 47.5% of primary care and 81.1% of cancer genetics patients were found to be at increased risk.

<table>
<thead>
<tr>
<th>Primary Care</th>
<th>Genetics</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enrolled</td>
<td>114</td>
<td>340</td>
</tr>
<tr>
<td>Completed Family History</td>
<td>(70.2%)</td>
<td>(85.6%)</td>
</tr>
<tr>
<td>Post-Survey Completed</td>
<td>(85.0%)</td>
<td>(83.5%)</td>
</tr>
<tr>
<td>Genetics Referral Recommended</td>
<td>(47.5%)</td>
<td>(81.1%)</td>
</tr>
<tr>
<td>Physician Discretion</td>
<td>(0%)</td>
<td>(0.7%)</td>
</tr>
<tr>
<td>No Referral Recommended</td>
<td>(52.5%)</td>
<td>(17.5%)</td>
</tr>
</tbody>
</table>

#### FUTURE OBJECTIVES

With its ability to be used from web-enabled devices, InheRET can also be adapted and translated for use with international guidelines and will extend our reach to healthcare providers around the world. We are seeking collaborators to translate the tool to Arabic, Spanish, French, and other languages.

### REFERENCES