Improving Referrals for Universal Genetic Testing for Pancreatic Cancers at a Regional Cancer Center
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Abstract:
National consensus guidelines recommend hereditary testing for all patients with pancreatic cancer, regardless of family history, as identification of actionable mutations can not only guide specific therapy, but also provide impetus to test and screen their family members.

We have quantified the numbers of patients seen at our cancer center with pancreatic cancer via electronic medical record queried for diagnosis of all stages of disease. Of these, we determined those referred for hereditary testing. Between 2021 to 2022, we saw that 19.41% patients, increasing to 38.46% were referred for genetic testing. Of these, pathogenic variants were identified in 15%, with a majority in BRCA2. In 2023, this number of referrals is steadily increasing after active communication with multidisciplinary oncologists in our center.

Methods:
We quantified the numbers of patients seen at Upstate Cancer Center as diagnosed with pancreatic cancer, all stages, via surgical/medical oncology provider-driven referral for hereditary germline testing. In an IRB Exempt study, the numbers of patients seen were tabulated via Epic medical record for diagnosis of pancreatic cancer patients and providers of the multidisciplinary clinics at UCC Downtown Syracuse and satellite locations. In addition, these were confirmed by querying the de-identified RedCap database maintained by the UCC Genetics Program for the types of hereditary mutations detected.

<table>
<thead>
<tr>
<th>Year</th>
<th>No. referrals</th>
<th>Positives</th>
<th>Genes</th>
<th>Implications for increased risks:</th>
<th>Recommendations:</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021</td>
<td>20 (19.41%)</td>
<td>5 (25%)</td>
<td>BRCA2</td>
<td>Hereditary Breast/Ovarian Cancer</td>
<td>Platinum-based chemo + PARP inhibitor</td>
</tr>
<tr>
<td>2022</td>
<td>42 (38.46%)</td>
<td>6 (15%)</td>
<td>ATM</td>
<td>Hereditary Breast/ Pancreatic</td>
<td>Clinical trials for PARP inhibitor</td>
</tr>
<tr>
<td>2023</td>
<td>42 (23.70%)</td>
<td>6 (15.4%)</td>
<td>STK11</td>
<td>Peutz-Jehgers syndrome</td>
<td>Breast and other cancer screening</td>
</tr>
<tr>
<td>2024</td>
<td>Goal 100%</td>
<td></td>
<td>others:</td>
<td></td>
<td>Family testing</td>
</tr>
</tbody>
</table>

For patients:
- Determination of specific targeted therapy

For Family Members:
- Early detection
- Prevention

Conclusion:
We seek to continue to improve upon direct referral for universal testing for all pancreatic cancer patients seen at our center in effort to personalize treatment and identify high-risk families who could benefit from early surveillance. We propose a point-of-care referral by all oncology providers as best practice in order to improve on the referral process for hereditary testing, and to model initiatives by several groups across the nation for this goal.

Abbrev: MGPT = "multigene panel testing" FDUs: “first-degree relatives”

References:

* GC supplies oncology team navigators with pre-testing patient education resources

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