Genetic testing for at-risk patients with colorectal and/or pancreatic cancer at our institution, a QI project:

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Background

A) Colorectal cancer (CRC)
- CRC is the third leading cause of cancer-related deaths in the USA. It’s expected to cause about 53,200 deaths during 2020.
- There is evidence that screening all CRC patients (pts) with microsatellite instability (MSI) or immunohistochemistry (IHC) is a cost-effective approach for identifying those who should be offered germline molecular genetic testing for Lynch syndrome.
- Identifying Lynch syndrome in CRC pts was linked to improved health outcomes in their relatives.
- Hence, the NCCN recommends universal screening for all CRC pts for Lynch syndrome using MSI or IHC testing.

B) Pancreatic cancer (PC)
- PC is one of the deadliest malignancies known. It is expected to cause about 47,050 deaths during 2020 in the USA.
- The current NCCN guidelines recommend genetic counseling and germline testing in all PC pts.
- This recommendation was based on evidence that germline genetic mutations were identified in 5.5% of all PC pts, including 5.2% of pts without a family history of PC.
- Relatives of pts with Lynch syndrome or genetically mutated PC could be offered genetic testing/ counseling, and where indicated, additional surveillance for various cancers based upon their risk.
- This study aimed to assess the level of adherence to the NCCN recommendations for genetic testing in pts with CRC and PC.

Methods

- Single institution retrospective chart review study.
- Approved by the Institutional Review Board at Marshall University, Huntington, WV.
- Data were collected from the following:
  - Cancer Registry of Edwards Comprehensive Cancer Center (ECCC).
  - Pathology department at Cabell Huntington Hospital.
  - Medical charts of colorectal and pancreatic cancer pts who received treatment at ECCC.

Results

- Among 159 pts diagnosed with CRC between Jan 2017 and June 2019 at ECCC.
  - 31 pts (19.5%) had MSI or IHC testing.
  - 4 pts had positive MSI high, all of which were referred for further genetic testing/ counseling.
  - 24 pts were diagnosed with CRC below the age of 50 years old with 12 pts (50%) had genetic testing/ counseling.
  - Out of 20 pts diagnosed with PC between June 2018 and June 2019 at ECCC, only 5 pts (25%) had genetic testing/ counseling.

Conclusions

- Genetic testing for at-risk pts with CRC or PC at our institution is still not optimum.
- We believe this may be due to numerous issues, including staff education regarding current recommendations.
- We propose an automatic referral system for genetic testing to be performed by our pathologists and nurse navigator upon initial diagnosis for all at-risk pts.

References