Value of Routine Immunohistochemical (IHC) Analysis of Colorectal Cancer to Genetic Counseling Referrals

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Lehigh Valley Health Network, Allentown, PA

Introduction:
- Identification of patients with hereditary colorectal cancers (i.e. hereditary non-polyposis colon cancer (HNPCC)) is beneficial for implementing screening and interventions for high-risk families.
- Large scale screening for germline mutations, utilizing immunohistochemical (IHC) analysis of mismatch repair (MMR) proteins, has been shown to be feasible, efficient, and recommended for screening for all colorectal cancers.
- Referral to genetic counseling for high-risk individuals with germline mutations is recommended, but has historically been poor (6.9-21.9%).
- Lehigh Valley Health Network (LVHN) instituted routine IHC analysis of all colorectal cancers beginning in January 2011.

Purpose:
- Compare referral patterns to genetic counseling before and after initiation of routine IHC analysis.

Methods:
- All charts of patients diagnosed with colorectal cancer from July 2010 to July 2011 were retrospectively reviewed.
- Comparison of referral patterns to genetic counseling was performed for the six months prior to institution of routine IHC analysis with the six months following.

Results:
- 216 patients were diagnosed with colorectal cancer between July 2010 and July 2011:
  - 12.6% (11/87) and 85.3% (110/129) of patients underwent IHC analysis before and after routine IHC testing, respectively.

Conclusions:
- The initiation of routine IHC testing identified more patients with MMR protein non-expression; however, it did not improve overall referral rates for genetic counseling.
- Patient age at diagnosis, family history, and history of multiple tumors appear to be stronger factors towards genetic counseling referrals.
- Further studies need to evaluate initiatives to promote patient and physician education.

References: