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What is the clinical impact of TumorNext-*Lynch*?

A TALE OF TWO PATIENTS | CASE EXAMPLE

Who is the Patient?

PATIENT 1

- 47 year old female
- Colon cancer diagnosed at age 43
- IHC: Abnormal; loss of MLH1/PMS2
- Normal *MLH1* promoter hypermethylation analysis

PATIENT 2

- 50 year old male
- Colon cancer diagnosed at age 50
- IHC: Abnormal; loss of MLH1/PMS2
- Normal *MLH1* promoter hypermethylation analysis

What is the Family History?

PATIENT 1

- Brother with one colon adenoma at age 45
- Maternal aunt diagnosed with breast cancer at age 45
- Father diagnosed with rectal cancer at age 75
- Paternal first cousin once removed died from pancreatic cancer at age 65

PATIENT 2

Family history unknown, patient adopted

Genetic Testing Results and Impact

CASE 1 - SEQUENTIAL TESTING

2014: *MLH1* sequencing & del/dup negative
2016: CancerNext: *PMS2* VUS, later reclassified as likely benign
2017: TumorNext-*Lynch*: 2 *MLH1* mutations identified in tumor

Case Resolved - Patient does NOT have Lynch syndrome.
Note: Time to case resolution was 4 years.

CASE 2 - PAIRED TUMOR/GERMLINE TESTING

2017: TumorNext-*Lynch*: 2 *MLH1* mutations identified in tumor

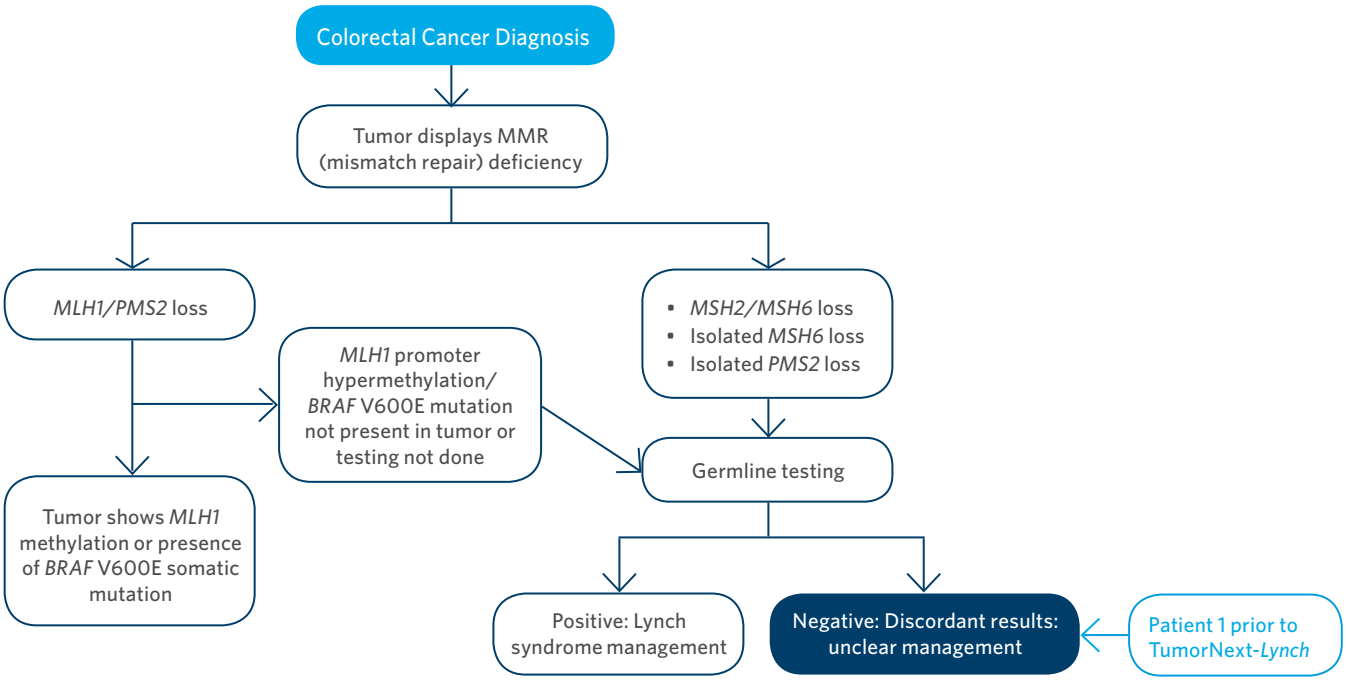
Case Resolved - Patient does NOT have Lynch syndrome.
Note: Time to case resolution was 4 weeks

HOW DID GENETIC TESTING HELP THE PATIENT AND FAMILY?

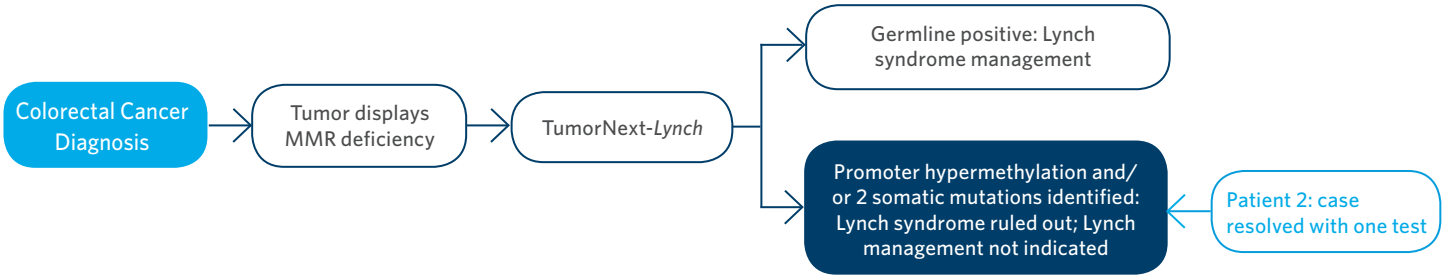
- Abnormal IHC explained by somatic mutations
- Lynch syndrome is ruled out and cancer risk counseling can be adjusted accordingly
- Patient and family members can be followed based on personal/family history but do not need to undergo Lynch syndrome screening per the NCCN® guidelines[1]

Lynch Syndrome Testing Approaches

SEQUENTIAL TESTING: The traditional stepwise testing approach to diagnosing or ruling out Lynch syndrome following abnormal tumor screening



PAIRED SOMATIC/GERMLINE TESTING: A simplified approach to testing following abnormal tumor screening



POINTS FOR YOUR PRACTICE

- Diagnosing or ruling out Lynch syndrome has a significant impact on cancer risk counseling and management
- TumorNext-*Lynch* is a time- and cost-effective approach to rule out or confirm a diagnosis of Lynch syndrome
- Paired tumor/germline testing has the highest likelihood of providing answers for patients with mismatch repair deficiency, leading to more precise cancer risk estimates and management recommendations for the patient and family

References

1. National Comprehensive Cancer Network®. NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®). Genetic/Familial High-Risk Assessment: Colorectal. Version 3.2017.

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