

# TumorNext-Lynch™ Increases Clarity for Patients

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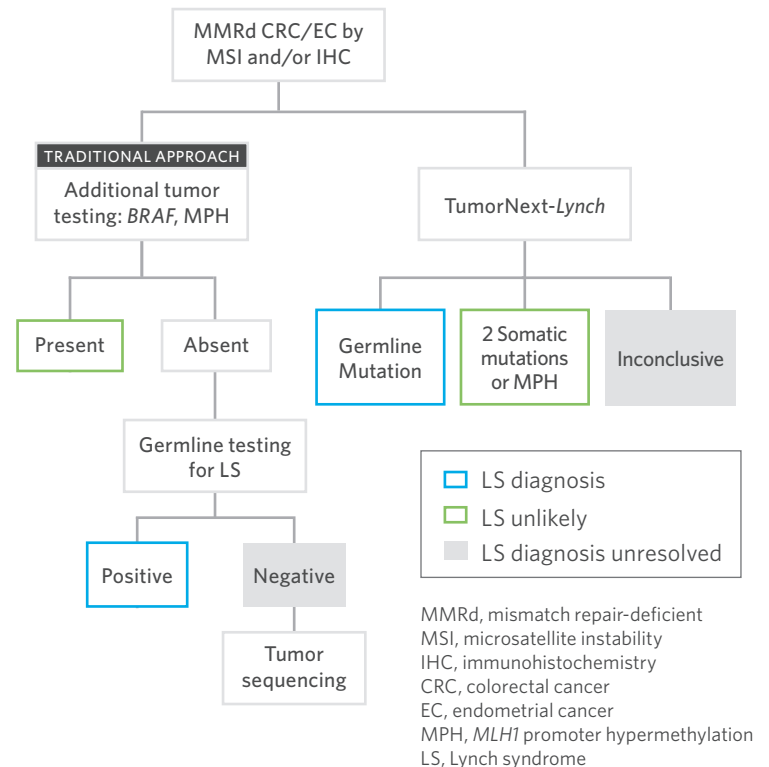
## Paired tumor/germline testing can confirm a diagnosis or indicate that Lynch syndrome is unlikely

Discordant results between tumor and germline testing for Lynch syndrome (LS) occur when the tumor screening results are suggestive of LS, but the germline results are normal. This situation can lead to uncertainty when recommending screening for patients and families. Our study, published in *Journal of Clinical Oncology*, demonstrated that **TumorNext-Lynch provides clear answers for up to 76% of patients** with MMRd\* colorectal or endometrial tumors.

### Background

- LS results from a pathogenic germline mutation in *MLH1*, *MSH2*, *MSH6*, *PMS2* or *EPCAM*.
- Traditionally, screening for LS among newly-diagnosed CRCs and ECs has been a complicated process with multiple steps and the potential for an unclear diagnosis in patients with unexplained MMRd tumors (Figure 1).
- Biallelic somatic (tumor) mutations have been identified in 52-69% of unexplained MMRd tumors<sup>5-7</sup>.
- This study evaluated the use of paired tumor/germline testing<sup>8</sup> to aid in the diagnosis of LS in >700 CRC and EC patients with MMRd tumors and/or clinical histories suggestive of LS.<sup>9</sup>

FIGURE 1. DIAGNOSTIC WORKUP FOR LYNCH SYNDROME

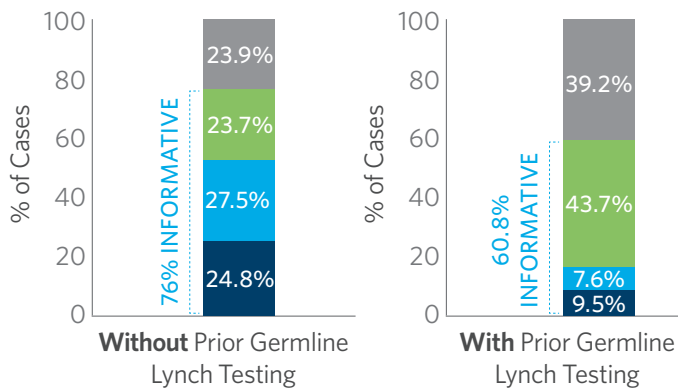


\*MMRd = a tumor found to have loss of staining (aka abnormal IHC) for one or more of the mismatch repair proteins (*MLH1*, *MSH2*, *MSH6*, and/or *PMS2*) and/or a tumor with high microsatellite instability (MSI-H). This evaluation is often done on newly diagnosed colorectal or endometrial cancers to screen for Lynch syndrome and determine eligibility for immunotherapy.

# Key Findings: TumorNext-Lynch Results For MMR-Deficient Colorectal and Endometrial Cancer Cases <sup>9</sup>

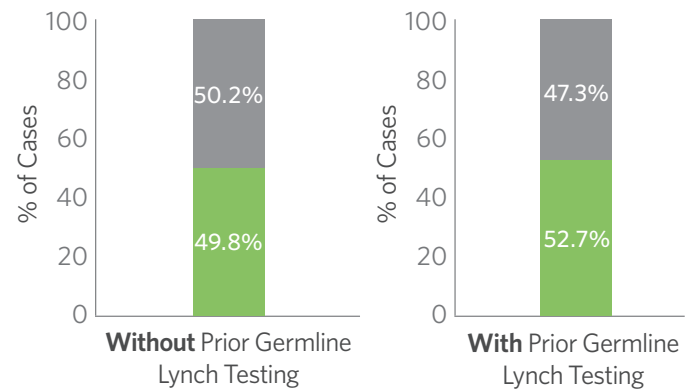
## Overall Results

- TumorNext-Lynch provided informative results in **76.1% of cases without prior germline testing** and in **60.8% of cases with prior germline testing**.
- 24.8% of MMRd cases without prior germline testing were found to have LS.
- 9.5% of cases with **prior uninformative germline testing were diagnosed with LS**.



## Germline Mutation and MPH Results Excluded

- A likely somatic explanation was found in **49.8% of cases that would have remained unresolved** without the addition of tumor sequencing analysis.



Inconclusive (uninformative)
  Double somatic (informative)
  MLH1 Promoter Hypermethylation (informative)
  Germline mutation (informative)

## Key Benefits of TumorNext-Lynch

Provides a clear answer that can be used to guide risk counseling and medical management for >75% patients tested.

Provides more comprehensive information helping to avoid discordant results.

Offers a more streamlined approach to diagnose or rule out Lynch syndrome.

## REFERENCES

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