



Template for Reporting Results of DNA Mismatch Repair Testing

Version: 1.0.0.2

Protocol Posting Date: June 2021

This biomarker template is not required for accreditation purposes but may be used to facilitate compliance with CAP Accreditation Program Requirements

Authors

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With guidance from the CAP Cancer and CAP Pathology Electronic Reporting Committees.

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Accreditation Requirements

Completion of the template is the responsibility of the laboratory performing the biomarker testing and/or providing the interpretation. When both testing and interpretation are performed elsewhere (eg, a reference laboratory), synoptic reporting of the results by the laboratory submitting the tissue for testing is also encouraged to ensure that all information is included in the patient's medical record and thus readily available to the treating clinical team. This template is not required for accreditation purposes.

Summary of Changes

v 1.0.0.2

- General Reformatting

Reporting Template

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Select a single response unless otherwise indicated.

CASE SUMMARY: (DNA Mismatch Repair Biomarker Testing)

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DNA MISMATCH REPAIR TESTING

+Specimen Site: _____

+Testing Performed on Block Number(s) (specify): _____

+Immunohistochemistry (IHC) Results for Mismatch Repair (MMR) Proteins (select all that apply)

___ MLH1

+MLH1 Result

___ Intact nuclear expression

___ Loss of nuclear expression

___ Cannot be determined (explain): _____

___ MSH2

+MSH2 Result

___ Intact nuclear expression

___ Loss of nuclear expression

___ Cannot be determined (explain): _____

___ MSH6

+MSH6 Result

___ Intact nuclear expression

___ Loss of nuclear expression

___ Cannot be determined (explain): _____

___ PMS2

+PMS2 Result

___ Intact nuclear expression

___ Loss of nuclear expression

___ Cannot be determined (explain): _____

___ Background non-neoplastic tissue / internal control shows intact nuclear expression

+Mismatch Repair (MMR) Interpretation

___ No loss of nuclear expression of MMR proteins: No evidence of deficient mismatch repair (low probability of MSI-H)

___ Loss of nuclear expression of one or more MMR proteins: deficient mismatch repair

+Microsatellite Instability (MSI) Interpretation

___ MSI-Stable (MSS)

___ MSI-Low (MSI-L)

___ 1-29% of the markers exhibit instability

___ 1 of the 5 NCI or mononucleotide markers exhibits instability

- Other (specify): _____
- MSI-High (MSI-H)
 - Greater than or equal to 30% of the markers exhibit instability
 - 2 or more of the 5 NCI or mononucleotide markers exhibit instability
 - Other (specify): _____
- MSI-Cannot be determined (explain): _____

The presence of MSI-H / deficient mismatch repair may also be an indication for additional testing for Lynch syndrome and genetic counselling.

Heterogeneous expression of MLH1 and PMS2 has been infrequently encountered in endometrial carcinomas (up to 3% of cases). The incidence of heterogeneous expression in other cancer types and its impact on predicting sensitivity to checkpoint inhibition is not currently known.

COMMENTS

Comment(s): _____