Germline Assay Guide

Validated Hereditary Cancer Testing
(powered by Ambry Genetics®)

xG+ (CancerNext-Expanded®)
77-gene hereditary cancer DNA test, powered by Ambry Genetics®.

xG (CancerNext®)
36-gene hereditary cancer DNA test, powered by Ambry Genetics®.

xT Solid Tumor/Normal Match
648 gene somatic panel utilizing a normal match to enhance the accuracy of somatic variant calls by filtering out germline variants.

Based on the xT normal match, potential germline findings from a select list of 63 hereditary cancer genes may be reported on xT, if present. These findings may or may not be related to the patient’s current cancer diagnosis.

What are the differences between xG/xG+ Hereditary Cancer Testing and xT Tumor/Normal Match?

xG and xG+ are stand-alone validated germline tests that identify various types of germline alterations, including single and multi-exon deletions/duplications and gene rearrangements.

xG and xG+ are specifically designed to provide hereditary cancer risk assessment and as such, sensitivity and specificity have been rigorously assessed.

Potential germline reporting through xT tumor/normal matched testing assists in the identification of patients who may benefit from confirmatory follow-up testing with xG or xG+.
### xG & xG+ Validated Hereditary Cancer Testing (powered by Ambry Genetics®)

**Genes Assessed**
- **xG (CancerNext®):** 36-gene hereditary cancer DNA test associated with common hereditary cancer types
- **xG+ (CancerNext-Expanded®):** 77-gene hereditary cancer DNA test associated with both common and rare hereditary cancer types

**Types of Variants Detected**
- SNVs, indels, large deletions/duplications, rearrangements/inversions

**Possible Results Included on Report**
- Pathogenic variants, likely pathogenic variants, variants of uncertain significance (VUS)

**Validation**
- Rigorous validation process for hereditary cancer risk assessment

**Secondary Confirmation**
- Performed for regions of inadequate NGS sequencing coverage (Sanger seq, MLPA, targeted chromosomal microarray)

**Sample Types Accepted**
- Blood, Saliva, Cultured Fibroblasts*

**Familial Variant/Cascade Testing**
- Available for pathogenic/likely pathogenic variants

**Variant Reclassification**
- Ambry Genetics® reclassifies; amendments issued through Tempus

**Therapeutic Implications**
- Not included on report

**Patient Genetic Counseling Services**
- Available with ordering provider referral

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### xT Tumor/Normal Match (Potential Germline)

**Genes Assessed**
- 63 hereditary cancer genes

**Types of Variants Detected**
- SNVs, indels

**Possible Results Included on Report**
- Pathogenic variants, likely pathogenic variants

**Validation**
- Validated for somatic testing; no specific hereditary validation

**Secondary Confirmation**
- Not performed

**Sample Types Accepted**
- Blood, Saliva

**Familial Variant/Cascade Testing**
- Not available

**Variant Reclassification**
- Not available

**Therapeutic Implications**
- FDA/NCCN®/OncoKB™ supported therapies included on report

**Patient Genetic Counseling Services**
- Not available

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*Requires Skin Punch Biopsy specimen kit and dedicated requisition.

The reportable findings for the genes included on the above panels are based upon recommendations from the ACMG, the NCCN, and other published literature.

The clinical significance of reported variants are based on germline classification criteria created by the American College of Medical Genetics (ACMG) and Association for Molecular Pathology (AMP).

xG (CancerNext®) / xG+ (CancerNext-Expanded®) powered by Ambry Genetics® is available to select providers.

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