



Colorectal Cancer

COMPREHENSIVE TESTING SERVICES



Your single-source laboratory solution

INTEGRATED ONCOLOGY offers a comprehensive test menu to assist in the diagnosis and management of patients with colorectal cancer throughout their continuum of care.

GENETIC RISK EVALUATION

VistaSeq® Hereditary Cancer Panels

Provides an assessment of genetic mutations known to be associated with hereditary cancer syndromes. For a list of VistaSeq Hereditary Cancer Panels, please visit www.integratedoncology.com/vistaseqpanels.

Lynch Syndrome Germline Testing

Full gene sequencing and deletion/duplication analysis to confirm a clinical diagnosis of Lynch syndrome¹. Lynch syndrome accounts for about 3% of all colorectal cancer (CRC) cases.^{2,3}

SCREENING

Septin-9 Gene Methylation Detection

Qualitative in vitro diagnostic method for the detection of methylated *Septin 9* DNA in plasma. The methylated form of *Septin 9* DNA has been associated with the occurrence of colorectal cancer.⁴

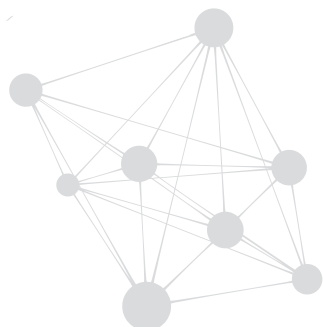
DIAGNOSTIC

Complex Tumor Analysis by IHC

Our extensive antibody library and team of pathologists experienced in varying sub-specialties enable us to provide a differential diagnostic analysis in even the most difficult cases.

Comprehensive Lynch Syndrome Tumor Testing

Tumor testing can reveal whether the colorectal cancer is caused by the genes related to Lynch syndrome. Tumor tests include immunohistochemistry and/or molecular analysis. Positive/absent results indicated a malfunction in the genes connected to Lynch syndrome.



PROGNOSTIC

BRAF Mutations

Colorectal cancer *BRAF*-mutated tumors have shown a worse outcome in terms of progression-free survival and overall survival.⁵

PIK3CA Mutations

Mutations in exon 9 and 20 of the *PIK3CA* gene are negatively associated with progression-free survival in colorectal cancer patients.⁵

Thymidylate Synthase (TS) by IHC

High expression of this marker may indicate a poor prognosis and overall survival in colorectal cancer patients.⁶

P53 by IHC

Alterations of the *p53* tumor suppressor gene have been shown to serve as an independent prognostic marker. High expression of this marker may indicate a poor prognosis.^{7,8}

MONITORING

Cancer Antigen 19-9

For the quantitative determination of CA19-9 tumor-associated antigen in serum or plasma of patients with colorectal cancer to monitor disease process⁹

Carcinoembryonic Antigen (CEA)

For the in-vitro quantitative determination of carcinoembryonic antigen in human serum and plasma. The CEA assay is indicated for serial measurement of CEA to aid in the management of cancer patients.¹⁰

Lipid-associated Sialic Acid (LASA)

Studies have suggested that LASA levels may be useful in monitoring the course of therapy and detecting disease recurrence in certain cancer patients.¹¹

The Integrated Oncology Advantage

PREDICTIVE

Predictive tests for clinical management and treatment decision-making

Test	Detects	Disease	Therapy	Result/Interpretation
<i>KRAS</i> mutation analysis	Mutations in the <i>KRAS</i> gene (exons 2, 3, and 4)	Metastatic CRC	Cetuximab Panitumumab	Result: Positive (presence of mutations) Associated with resistance to therapy ^{12,13}
<i>NRAS</i> mutation analysis	Mutations in the <i>NRAS</i> gene (exons 2, 3, and 4)	Metastatic CRC	Cetuximab Panitumumab	Result: Positive (presence of mutations) Associated with resistance to therapy ^{14,15}
<i>BRAF</i> mutation analysis	Mutations in the <i>BRAF</i> gene	Metastatic CRC	Cetuximab Panitumumab	Result: Positive (presence of a mutation) Associated with resistance to therapy ¹⁶
MSI by PCR or mismatch repair (MMR) proteins by IHC	Microsatellite instability	Metastatic CRC	Pembrolizumab	Result: Positive (presence of microsatellite instability) Associate with sensitivity to therapy ¹⁷
		Stage II CRC	5-FU-based chemotherapy	Result: Positive (presence of microsatellite instability) Associated with resistance to therapy ¹⁸
<i>EGFR</i> by FISH	Amplification of the <i>EGFR</i> gene	Metastatic CRC	Cetuximab	Result: Positive (high copy number) Associated with sensitivity to therapy ¹⁹
<i>PIK3CA</i> mutation analysis	Mutations in the <i>PIK3CA</i> gene (exons 9 & 20)	Metastatic CRC	Cetuximab with chemotherapy in salvage therapy	Result: Positive (presence of mutations) Associated with resistance to therapy ²⁰
Thymidylate synthase (TS) by IHC	TS protein expression	Metastatic CRC	5-FU and 5-FU-related cytotoxic agents	Result: Positive (high intensity expression) Associated with resistance to therapy ^{21,22}
<i>DPD</i> 5-FU toxicity analysis	Mutation in the <i>DPD</i> gene (IVS14+1G>A mutation)	CRC adjuvant and/or metastatic tumor	5-FU-based chemotherapy	Result: Positive (presence of a mutation) Associated with increased risk for severe 5-FU-related toxicity ²³
<i>UGT1A1</i> (Invader® Technology)	Polymorphism <i>UGT1A1</i> *28	CRC adjuvant and/or metastatic tumor	Irinotecan	Result: Positive (presence of polymorphism) Associated with increased risk for severe irinotecan-related toxicity ^{24,25}

**FIND
OUT
MORE**

Learn more about Integrated Oncology's comprehensive menu of testing services. Contact your local Integrated Oncology territory manager, call client services at **800.447.5816**, or visit www.integratedoncology.com.



Integrated Oncology – a LabCorp Specialty Testing Group



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