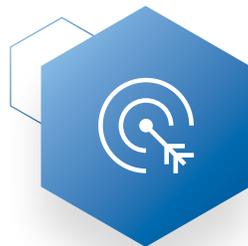




# Tumour Profiling Service

A better guide for  
Molecular Intelligence





# MI Profile™

Comprehensive tumour profiling with MI Profile™ assesses DNA, RNA and Proteins with multiple technologies (NGS DNA/RNA, PyroSeq, IHC, ISH) to reveal a more complete molecular blueprint to guide precise and individualised treatment decisions.

## Standard of Care + Clinical Trial Biomarkers

• Immunotherapy • Targeted Therapy • Chemotherapy • Clinical Trials



### DNA

Next-Generation Sequencing  
(Mutations, Indels &  
Copy Number Alterations)



### RNA

Whole Transcriptome  
Sequencing (Fusions &  
Variant Transcripts)



### Protein

Immunohistochemistry



# Profiling Technologies

Caris Molecular Intelligence uses multiple tumour profiling technologies to identify explicit genomic and proteomic aberrations and better understand the biology driving tumour growth.

- **Next-Generation Sequencing (NGS):** rapidly examines and more broadly detects somatic point mutations, small insertions and deletions, copy number alterations, gene fusions, as well as genomic signatures, including microsatellite instability (MSI) and tumour mutational burden (TMB).
- **Pyro Sequencing (PyroSeq):** detects and quantifies mutations, methylation, etc., through sequencing by synthesis
- **Fragment Analysis (FA/Frag. Analysis):** detects changes in DNA or RNA to indicate the presence or absence of a genetic marker; useful in limited tissue situations, i.e. lung cancer
- **Polymerase Chain Reaction (PCR):** quickly amplifies copies of a specific region of DNA or RNA for analysis
- **Immunohistochemistry (IHC):** determines level of protein expression
- **in situ Hybridization:** detects gene deletions, amplifications, translocations and fusions
- **Microdissection:** Tumour enrichment to increase and isolate a larger portion of cancer cells and improve the chances for successful testing from small tumour samples



# MI Tumour Seek™

MI Tumour Seek™ is a Next-Generation Sequencing (NGS)-based tumour profiling assay that covers DNA point mutations, copy number alterations, insertions/deletions, and RNA Whole Transcriptome Sequencing (Fusions & Variant Transcripts) for all tumour types. Microsatellite Instability (MSI) and Tumour Mutational Burden (TMB) are also included with every order to inform immunotherapy opportunities.



**DNA**  
Next-Generation Sequencing  
(Mutations, Indels &  
Copy Number Alterations)

- ✓ 592 genes
- ✓ 750x depth of coverage
- ✓ 8-10 slides
- ✓ 8-14 day turnaround time

All solid tumour cancers



**RNA**  
Whole Transcriptome  
Sequencing (Fusions &  
Variant Transcripts)

- ✓ ~22,000 genes
- ✓ 60 million reads/sample
- ✓ 2-5 slides
- ✓ 8-14 day turnaround time

All solid tumour cancers



## Immunotherapy Diagnostics Expertise



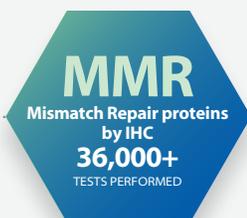
**PD-L1**  
Programmed Cell  
Death-Ligand 1 by IHC  
**93,000+**  
TESTS PERFORMED



**MSI**  
Microsatellite Instability  
by NGS  
**52,000+**  
TESTS PERFORMED



**TMB**  
Tumour Mutational Burden  
by NGS  
**60,000+**  
TESTS PERFORMED



**MMR**  
Mismatch Repair proteins  
by IHC  
**36,000+**  
TESTS PERFORMED

By harnessing the body's immune system to detect and destroy tumour cells, immune checkpoint inhibitors are rapidly ushering in a new era of precision medicine. Identify patients more likely to respond to immunotherapies with reliable molecular information based on validated assays for MMR, MSI, PD-L1 and TMB in our state-of-the-art laboratory.



# MI Profile Report

Caris Molecular Intelligence reports are built to maximise clinical utility in an easy-to-interpret format. We understand that clinicians need treatment information fast. That's why our report was built by oncologists for oncologists. With results back in under 3 weeks, we'll help you find answers when you need them the most.

**MI PROFILE** Final Report **CARIS** LIFE SCIENCES

**Patient**  
 Name: Patient, Test  
 Date of Birth: XX/Mon/19XX  
 Sex: Male  
 Case Number: TN19-XXXXXX  
 Diagnosis: Mucinous adenocarcinoma

**Specimen Information**  
 Primary Tumor Site: Transverse colon  
 Specimen Site: Liver  
 Specimen ID: ABC-1234-XYZ  
 Specimen Collected: XX-Mon-2019  
 Completion of Testing: XX-Mon-2019

**Ordered By**  
 Ordering Physician, MD  
 Cancer Center  
 123 Main Street  
 Springfield, NY 12345, USA  
 T (120) 456-7890

**High Impact Results**

BIOMARKER	METHOD	RESULT	THERAPY ASSOCIATION	BIOMARKER LEVEL*
Mismatch Repair Status	IHC	Deficient	nivolumab, nivolumab/ipilimumab combination, pembrolizumab	Level 1
MSI	NGS	High		
BRAF	NGS	Mutated, Pathogenic E600K (p.V600E)	Vinorelbine + (regorafenib or panitumumab) + vemurafenib	Level 2
ERBB2 (Her2/Neu)	ISH	Amplified	vemurafenib/tadalafil monotherapy	Level 3A
			lapatinib, pertuzumab, trastuzumab	Level 3A

**Important Note**  
 \* Biomarker reporting classification: Level 1 - highest level of clinical evidence and/or biomarker association included on the drug label; Level 2 - strong evidence of clinical significance per the endorsed by standard clinical guidelines; Level 3 - potential clinical significance (3A - evidence exists in patient's tumor type, 3B - evidence exists in another tumor type)

**Additional Results**

Biomarker	Method	Result
NRX1	RNA-Seq	Fusion Not Detected
NRX2	RNA-Seq	Fusion Not Detected
NRX3	RNA-Seq	Fusion Not Detected
Tumor Mutational Burden		
ERBB2 pT790V		

**OTHER FINDINGS**

**Additional Results** (Screenshot of another report section)

Contains important biomarker and associated therapy results

Provides important information about drug/ biomarker associations and comments from Caris pathologists and/or molecular geneticists

Lists disease-relevant biomarker information, as well as other altered biomarker results

Navigate among therapies with potential benefit (noted in green)

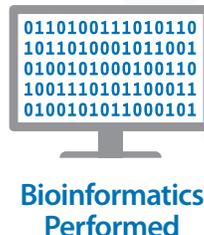
Identify therapies with potential lack of benefit (noted in red)

Utilise the *Clinical Trials Connector* to match biomarkers with open clinical trials through *MI Portal*



# How Tumour Profiling Works

In order to decode cancer and illuminate a clearer path to precision medicine, Caris Molecular Intelligence performs comprehensive molecular testing on DNA, RNA and Proteins using sophisticated technologies and state-of-the-art bioinformatics. Molecular testing is performed in Caris' state-of-the-art, 66,000 sq-ft laboratory in Phoenix, Arizona. The Caris laboratory holds the industry's strictest quality and compliance accreditations, including ISO 15189, CAP, CLIA, NY State and CE Mark.





# Why Caris?

With the promise of precision medicine becoming a reality, molecular profiling has become standard of care for many cancer types – and required for certain therapies (companion dx). More than ever, oncologists need a trusted tumour profiling partner to provide reliable, high-quality molecular information to guide more precise and individualised treatment decisions.

Caris Molecular Intelligence® identifies key molecular features of cancer and provides molecular insights to aid oncologists in personalising cancer therapies for their solid tumour cancer patients. Caris Molecular Intelligence helps oncologists:

- **navigate among therapies with potential benefit;**
- **identify therapies that may not have been considered;**
- **determine drugs with potential lack of benefit (avoiding unnecessary toxicities and costs); and**
- **match patients to clinical trials.**

## The Most Experienced Comprehensive Tumour Profiling Provider



### Unmatched Experience

- 2,342,000+ tests completed
- 160,000+ clinical cases performed



### Immunotherapy Dx Expertise

- PD-L1 by IHC, including TPS and CPS scoring methods
- Mismatch Repair (MMR) proteins by IHC: MLH1, MSH2, MSH6, PMS2
- Microsatellite Instability (MSI) by NGS
- Tumour Mutational Burden (TMB) by NGS



### Rigorous Quality Standards

- CAP, CLIA, NYSDOH, ISO15189, CE Mark certified/approved
- 66,000-square-foot central laboratory
- Staffed by: bioinformaticians, oncologists, molecular geneticists, pathologists and PhD scientists



### Limited Tissue Capabilities

- Tumour enrichment via microdissection
- Multiple reflex options to alternative technologies/methods



### Rapid Turnaround Time

- Report in under 3 weeks from ordering to results

→ [www.CarisMolecularIntelligence.com](http://www.CarisMolecularIntelligence.com)



Precision Oncology is the exclusive partner of Caris Molecular Intelligence  
in Australia and New Zealand.



To order or learn more, visit [www.precisiononcology.com.au](http://www.precisiononcology.com.au)  
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 [www.CarisMolecularIntelligence.com](http://www.CarisMolecularIntelligence.com)