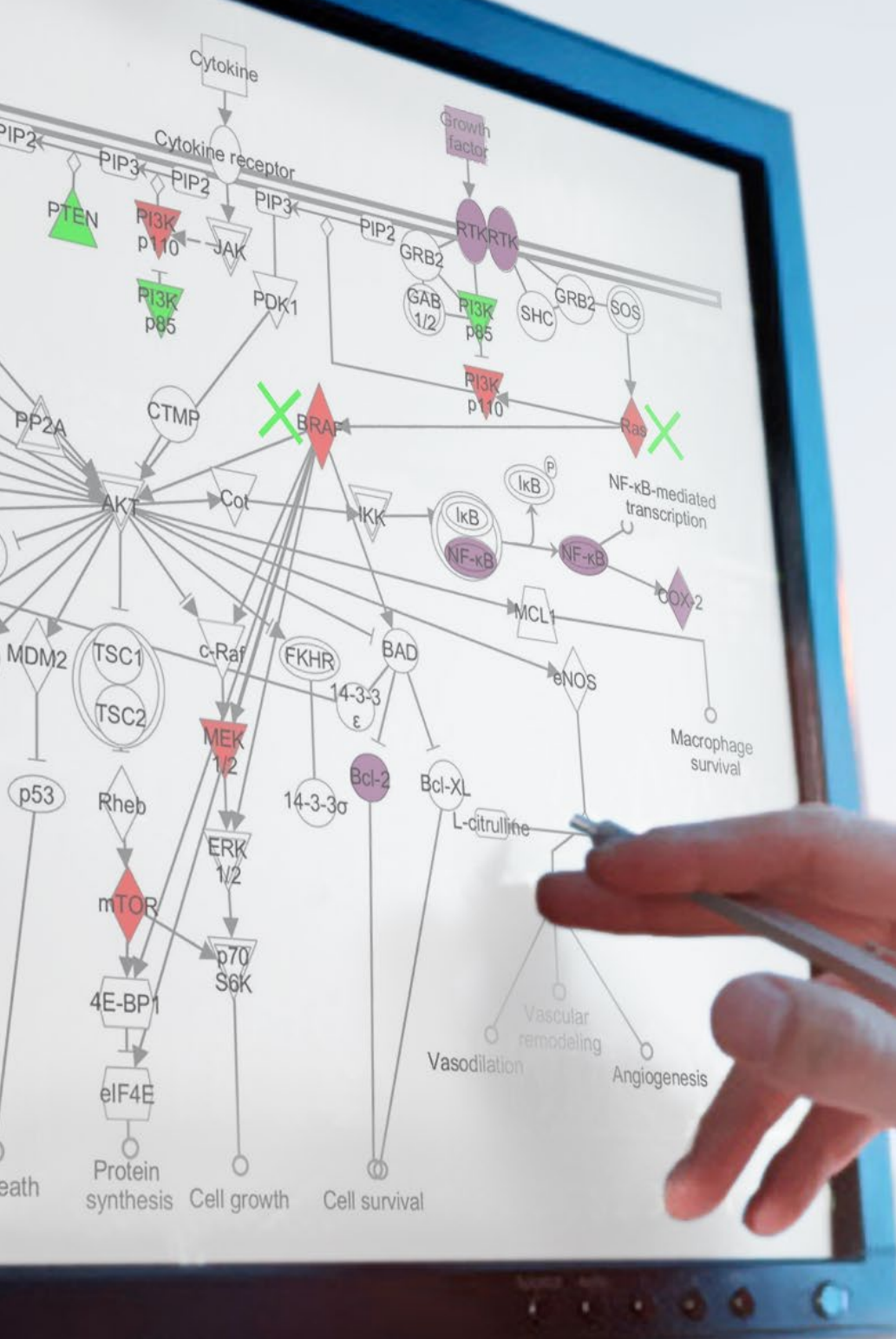


TheraPrint[®] for Breast or Colorectal Cancer

Clinically Relevant
Biomarker Analysis
to Individualize
Cancer Treatment



agendia[®]
decoding cancer

TheraPrint® Your Roadmap to Targeted and Alternative Treatment Planning

- Complements traditional tools to facilitate decision making
- Assesses relevant biomarkers at the RNA and DNA level
- Correlates results with likely response or resistance to treatment
 - Some markers are directly targeted by existing drugs
 - Others are directly involved in resistance or response mechanisms

A greater level of personalized treatment

The promise of individualized therapy starts with an understanding of the underlying biology of a patient's tumor. Armed with this information, physicians are able to offer patients access to novel therapies and to select treatment that is more tailored toward the patient's individual tumor.

A comprehensive assessment

With an expanding arsenal of therapies, an understanding of the molecular changes driving the patient's tumor growth is required to select appropriate treatment.

An individualized genomic fingerprint

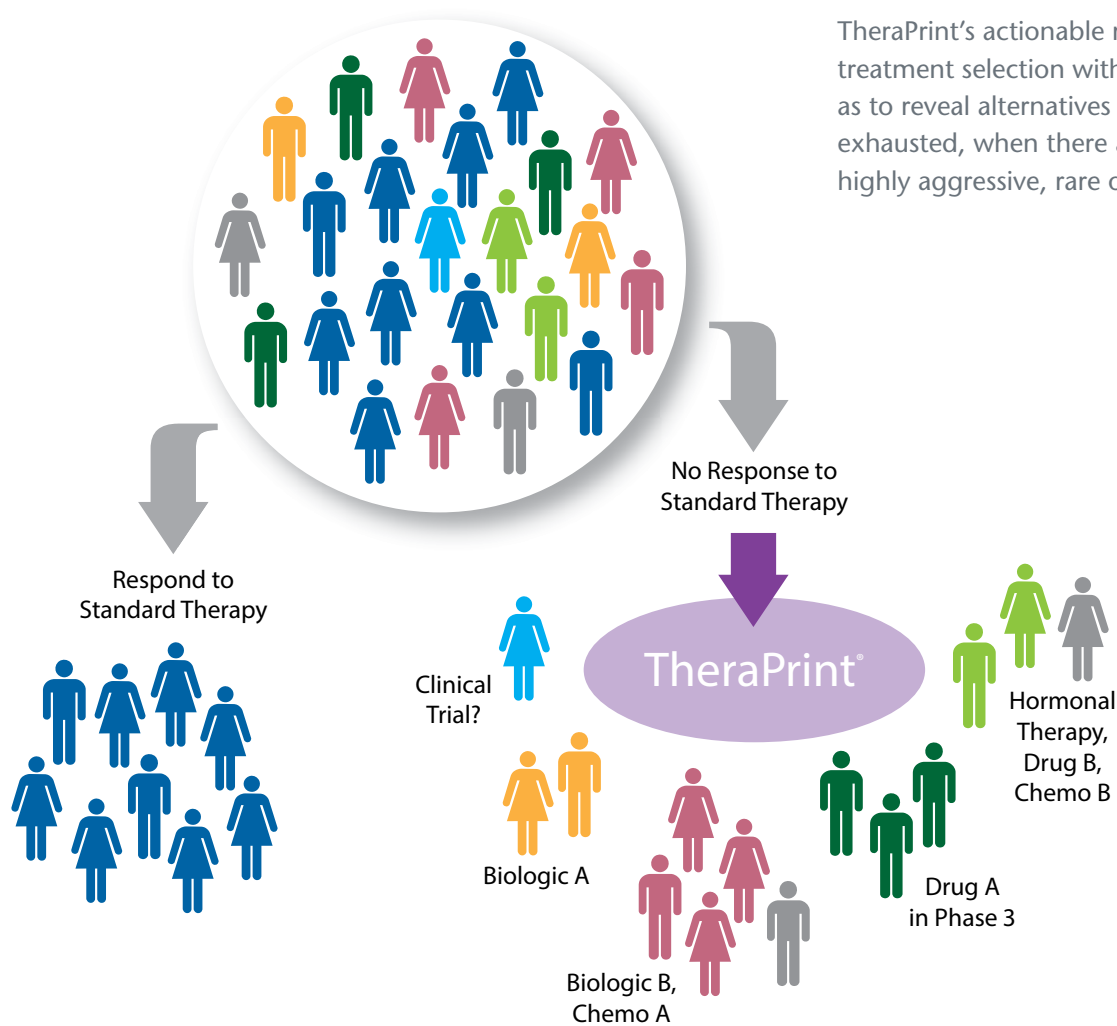
TheraPrint provides individualized gene expression results for dozens of relevant biomarkers—along with variant analysis for four genes—to interrogate each tumor.

Correlated with potential therapies and clinical trials

This unique genomic fingerprint of the tumor is then matched with potential target therapies and trials. The results are based upon extensive review of global clinical literature correlating specific biomarkers to drug sensitivity or resistance.

Actionable results

TheraPrint's actionable results can be used to guide treatment selection within the standard of care, as well as to reveal alternatives when the standard of care has been exhausted, when there are comorbidities, or in cases of highly aggressive, rare or unresectable tumors.



Breast

TheraPrint for breast cancer provides an individualized genomic fingerprint of the patient's tumor with gene expression results for 55 biomarkers and variant analysis results for 4 genes identified as potential markers for predicting response to a variety of hormonal, chemical, and biological therapies.

55 Biomarkers
with variant analysis for
4 key genes

Colorectal

TheraPrint for colorectal cancer provides an individualized genomic fingerprint of the patient's tumor with gene expression results for 39 biomarkers and variant analysis results for 4 genes that have been identified as potential markers for predicting response to a variety of chemical and biological therapies.


39 Biomarkers
with variant analysis for
4 key genes

Analysis of markers that indicate likely response or resistance to a variety of therapies

THERAPY	BREAST CANCER	COLORECTAL CANCER
ENDOCRINE THERAPY		
Anti-Androgen	●	
Aromatase inhibitors	●	
SERM	●	
CHEMOTHERAPY		
Alkylating Agents	●	●
Anthracyclines	●	●
Anti-metabolites	●	●
General	●	●
Mitotic inhibitors/Taxanes	●	●
Platinum Based	●	●
Topoisomerase inhibitors	●	●
TARGETED THERAPY		
Angiogenesis inhibitor	●	●
Anti-EGFR inhibitors		●
DNA Repair System Modulators/PARP inhibitors	●	●
EGFR-downstream inhibitors	●	●
HER2/EGFR inhibitors	●	
HER2/PI3K-downstream Pathway inhibitors	●	
Kinase inhibitors and other pathways		●
Other Kinase inhibitors	●	
OTHER		
BH3 Mimetic	●	●
Bisphosphonates or Diphosphonates	●	
Cox2 inhibitors		●
Demethylating Agents	●	
IGFR inhibitor	●	●
Inhibitors of Apoptosis Proteins Antagonists	●	●
Proteasome inhibitor	●	●
SMO Antagonist		●
TGF-beta inhibitors		●

Comprehensive TheraPrint® results are provided in an easily referenced report along with expert clinical interpretation by a medical oncologist

The report includes the patient's results for all biomarkers and a clinical relevance statement with a short description of how expression and mutation presence are linked to response or resistance to the associated drugs. Additional detailed clinical and biological background information about each marker, drug names and literature references are available to the ordering physician.



Colorectal Cancer

PAGE 1 OF 5

PATIENT/ID Patient: Smitty Smith DOB: 01-Jan-1900 Patient #: #34590-X Report Date:

TheraPrint® RESULTS

Gene	Result Expression		Level of Evidence	Clinical Relevance
	Low	High		
Alkylating Agents (e.g. oxaliplatin)				
MGMT	X		●●○	Low expression of MGMT is correlated to promoter hypermethylation and increased sensitivity to alkylating agents.
Anthracyclines				
TOP2A	X		●●○	High Expression of TOP2A (in breast cancer) has been correlated to response.
Anti-Metabolites (e.g. fluorouracil, floxuridine, methotrexate, capecitabine)				
CES2		X	●●○	High expression of CES2 may be linked to positive response to capecitabine and gemcitabine chemotherapy.
CCND1	X		●●○	High cyclin D (CCND1) expression indicates benefit from adjuvant 5-FU/LEV treatment, particularly in stage III colon cancer.
TYMP		X	●●○	High expression of TYMP indicates a better response to capecitabine-based chemotherapy.
DPYD	X		●●●	Low DPYD expression is associated with response to 5-FU-based treatment.
RRM1	X		●●○	High levels of RRM1 expression are predictive of poor response to gemcitabine-based chemotherapy.
TS (TYMS)	X		●●○	High expression of TYMS is indicative of resistance to 5-FU-based therapy.
MLH1		X	●●○	Low MLH1 expression indicates a MSI phenotype and reduced benefit from 5-FU therapy.
SMAD4		X	●●○	Low expression of SMAD4 is correlated to poor prognosis and poor response to 5-FU.
Mitotic Inhibitors/ Taxanes				
SPARC		X	●●○	High expression of SPARC might be indicative for response to taxanes therapy, especially nab-paclitaxel.
Platinum Based				
ERCC1	X		●●○	Low ERCC1 expression is correlated to better benefit from platinum-containing regimen.
Topoisomerase Inhibitors (e.g. irinotecan)				
CES2		X	●●○	High expression of CES2 may be linked to positive response to irinotecan chemotherapy.
TOP2A	X		●●○	High expression of TOP2A is associated with resistance to irinotecan and etoposide chemotherapy.
TOP1	X		●●○	Low expression of TOP1 is associated with resistance to irinotecan and etoposide chemotherapy.
General (e.g. mitomycin)				
AURKA	X		●●○	High expression of AURKA is associated with resistance to irinotecan and etoposide chemotherapy.
MKI67	X		●●●	High expression of MKI67 is associated with resistance to irinotecan and etoposide chemotherapy.
ABCB1 (P-gp)		X	●●○	Increased expression level of ABCB1 is associated with resistance to irinotecan and etoposide chemotherapy.
BCL2		X	●●○	High expression of BCL2 might indicate poor response to chemotherapy.
BIRC5	X		●●○	High expression of BIRC5 are linked to poor prognosis and are associated with radiotherapy and chemotherapy resistance.

●●● = Level 3 (Relevance shown in clinical trials)
 ●●○ = Level 2 (Multiple studies showing cause-effect between gene activity and drug response)
 ●○○ = Level 1 (Pre-clinical studies or studies in other cancers showing relevance of marker)
 ○○○ = Level 0 (Strong biological indication but no direct evidence)

Legend

Expression: Low High

Low expression on left of bar.
High expression on right of bar.

Color Gradient: Green = Sensitivity
Blue = Resistance

Color Density: High expression sensitivity
Low expression sensitivity
High expression resistance
Low expression resistance

Color density indicates strength of association with drug response.

Patient Score: X

Individual patient score for expression indicated with "X".

Variant Analysis:
wt
 e.g. Wildtype (wt) green indicates likely sensitivity to drug

His 1047 Arg

e.g. Mutation at H1047 indicates likely resistance to drug