PathGroup
Physician Centered. Patient Focused.

SmartGenomics™
Prostate Profile

Oncology Services

Clinical to Genomic

Advanced Standard of Care

PathGroup SmartGenomics: Prostate is designed for ***use at diagnosis*** of primary or metastatic prostate carcinoma to uncover therapeutic options and aid in treatment planning to improve patient outcomes.

- Clinically actionable genomic information for 44 gene mutations, cytogenetic abnormalities (FISH), and whole genome copy number changes (CMA) from a single biopsy
- Fully integrated testing on every case for a complete patient picture

Tailored Genomic Prostate Profile

Next Generation Sequencing (NGS)	
AKT1	Therapeutic implications via PI3K/AKT/mTOR inhibition
APC	Therapeutic target, independent predictor of a poor prognosis in prostate cancer
ARAF	Potential therapeutic targets
ATM	Confers sensitivity to platinums and PARP inhibitors
BRAF	Potential therapeutic target
BRCA1/2	Confers sensitivity to platinums and PARP inhibitors
CDKN2A	Plays a critical role in prostate cancer progression, prognostic marker
CTNNB1	Potential therapeutic target
EGFR	Prognostic value in prostate cancer, potential therapeutic target
ERBB2/4	Related to metastatic potential of prostate cancer
FBXW7	Tumor suppressor linked to prognosis
FGFR1/2/3/4	Potential driver mutation and therapeutic target
IDH1/2	Deregulates cellular metabolism, potential therapeutic target
JAK1/2/3	Potential therapeutic targets
KDR	Recently discovered gene of importance in prostate cancer
KIT	Promotes migration and invasion of prostate cancer cells
KRAS	Potential therapeutic target
MET	Therapeutic target
NF1/2	Tumor suppressor function, potential prognostic value
NOTCH1	Deregulation is a feature of tumorigenesis
NRAS	Potential therapeutic target
NTRK1/2/3	Potential gene fusion partner, therapeutic target
PDGFRA	Potential therapeutic target
PIK3CA	Potential response to TORC1 inhibitor rapamycin and its analogues: everolimus, temsirolimus, and ridaforolimus
PTEN	Potential response to mTOR inhibitor everolimus, PI3K / AKT inhibitors under study
SMAD4	Suspected gatekeeper gene
SMO	Implicated in the development of PCa and progression to more advanced and castration-resistant disease
SRC	Potential therapeutic target
STK1	Tumor suppressor gene
TP53	Patients with TP53 mutations may have better outcomes with bevacizumab, therapeutic target
TSC1/2	Suspected gatekeeper gene
VHL	Potential regulator of PDL1 expression

(profile components listing continued on back)

Fluorescence In Situ Hybridization (FISH)	
PTEN	Prognostic and predictive in combination with ERG
AR	Provides therapeutic guidance
ERG	Prognostic and predictive in combination with PTEN
Cytogenomic Microarray (CMA)	
Whole genome copy number changes in >22,000 genes, 500 of which are implicated in cancer	