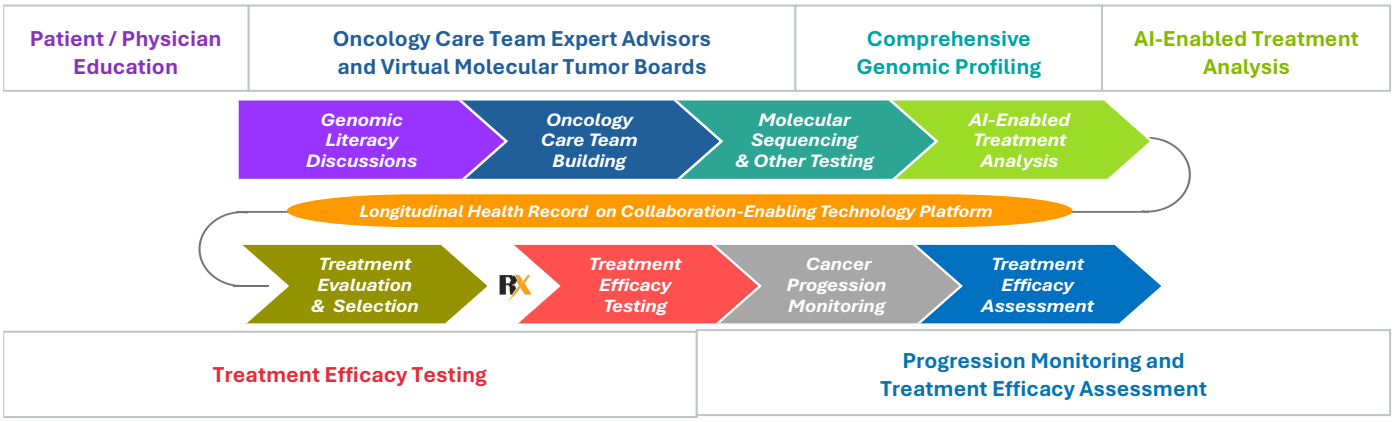
TPA Network Research Consortium
a Healthcare-Focused Non-Profit Enterprise

Patient-Centric **Precision Medicine Protocol**

Cancer is typically approached with outdated, one-size-fits-all, one-drug-at-a-time standard-of-care treatment. By contrast, precision medicine uses a cancer's unique genomic profile to make a diagnosis, create a patient-specific therapy, monitor disease progression and measure treatment efficacy. Sadly, precision medicine is more of an aspiration than a reality for all but ≈ 15% of cancer patients.



Our *Precision Medicine Protocol* consists of a series of steps that are effective at shepherding patients through their cancer journey and our challenging healthcare system … a trek that is often made more difficult when it is pursued as an upgrade to SoC therapy. It is built upon Dr. Harold Benjamin's pioneering "patient active" concept that catalyzes patients from passive bystanders into genomically-informed and empowered shared decision-makers … and leverages leading oncologists, precision medicine experts, molecular testing labs and AI-enabled treatment-matching tools. When treatment selection is guided by genomics vs. organ site alone it can dramatically increase a patient's viable treatment options.

Protocol Steps	Standard-of Care Treatment	Precision Medicine	State-of-the-Art Treatment
Genomic Literacy Discussions	*Low*	*Moderate*	*Substantial*
Oncology Care Team Building	*Constrained Practice*	*Less Constrained Practice*	*Unconstrained Practice*
	Clinical Trial Friendly	*Clinical Trial Matching*	*N = 1 Study Capable*
Longitudinal Health Record	*Unavailable*	*Unlikely*	*Likely*
Pharmacogenomic PGx Testing	*None*	*Unlikely*	*Likely*
Comprehensive Genomic Profiling	*NGS for Stage IV Only*	*NGS Panel (≈ 650 Genes)*	*NGS+WES+WST (20K Genes)*
		DNA Analysis	*DNA / RNA / Protein Analysis*
AI-Enabled Tx Analysis	*Rare*	*Possible but Unlikely*	*Routinely Performed*
		Algorithm Based	*Algorithm + Biosimulation*
Treatment Approach	*Tissue-Based Treatment*	*Genomic-Guided Treatment*	*Network-Targeted Therapy*
	Consensus Guideline-Based	*Unrestricted Science-Based*	*Unrestricted Science-Based*
	One-Size-Fits-All	*Customized Treatments*	*Customized Treatments*
	Focused on Sameness	*Focused on Uniqueness*	*Focused on Uniqueness*
	Ltd. Nutritional Info	*SoC Nutritional Guidance*	*Nutritional Genomics*
	No PGx-Guided Dosing	*Possible PGx-Guided Dosing*	*PGx-Informed Dosing*
Treatment Selection	*Only FDA-Approved Drugs*	*Only FDA-Approved Drugs*	*Only FDA-Approved Drugs*
	One-Drug → One-Target	*Multi-Variant Targeting*	*Variant + Node Targeting*
	Only NCCN Combos	*FDA-Approved Combinations*	*Novel Bespoke Combos*
	Often Toxic Dosing	*More Informed Dosing*	*Low Toxicity Txs Prioritized*
Treatment Efficacy Testing	*None*	*None*	*Performed*
Cancer Progression Monitoring	*None*	*None*	*Periodically Performed*
Treatment Efficacy Assessment	*None*	*None*	*Periodically Performed*