



The Cellworks
Ventura™ Report
Decoded

Cellworks
PERSONALIZED THERAPY. TRANSPARENT DESIGN.



1. Goal

Cellworks provides two standard assessments to a Medical Oncologist. The *first*, Singula™, predicts standard care (SC) drug response in patients. The *second*, Ventura™, predicts optimal N=1 therapy options, selecting from all FDA-approved molecules. This document illustrates how to interpret a Ventura™ assessment.

2. Assessment sections

1. Personalized Therapy Recommendation(s)

This section provides the combination(s), from amongst all FDA-approved drugs, predicted to provide best clinical response for an individual patient. To determine the predicted response, Cellworks finds combination(s) that modulate critical biomarkers in the appropriate manner.

2. Patient Disease Characteristics: Key Biomarker(s)

By leveraging biosimulation modeling, Cellworks determines key biomarkers that lie at the cross-section of the patient's genomic aberrations. Amongst all the identified biomarkers only key biomarkers are highlighted in this section. Further, Cellworks bases the strength of its therapy recommendation, in part, on the ability of the recommended compounds to impact these biomarkers appropriately.

3. Biomarker Impact Score

This table shows the impact that the therapies of interest have on the 'Key Biomarkers' identified for the patient profile. The check symbol ('✓') symbol implies that the therapy was successful in impacting the biomarker. 'Biomarker Impact Score' is a ratio of biomarkers modulated by a recommended therapy to the total number of key biomarkers.

4. Predicted Drug Sensitivity or Resistance (Histogram)

Drug Efficacy Score: This is a comparative score for the single and combination drugs. This score includes Simulation Score and Biological Evidence Score. Simulation Score is effect of the drug on the identified disease specific biomarker(s) and phenotype. Biological Evidence Score is based on an algorithm that includes presence of drug response genes and prioritization of indication specific drug class.

4.1 Single Drug Efficacy Prediction

The histogram shows single drug efficacy on the patient profile, moving from most efficacious drugs, to the least efficacious drugs i.e drugs that the profile is sensitive to, to drugs that the profile is resistant to.

4.2 Drug Combination Efficacy Prediction

The histogram shows drug combinations, with efficacy decreasing from left to right of the histogram. The single drugs found to be most efficacious on the patient profile, are combinatorially tested on the patient



profile to provide this output. A maximum of 20 drug combinations will be included in this section.

5. Summary of Patient Genomic Profile

This section provides an aggregated overview of the genomics that were used for this patient therapy assessment. It shows the type of input received from the sequencing lab partner with the number of genetic mutations copy number variations (CNVs) reported and optionally any epigenetic data that may be reported.

5.1 Detailed Information of Genomic Aberration(s) Modeled

This section lists all the mutations, CNVs and epigenetic data which are modeled via Cellworks' biosimulation for the patient. These are an expanded form of the summary information provided in the 'Patient Genomics' section. This information forms the only patient specific input on which a Cellworks assessment is based. It is typically provided by a NGS lab partner.

6. Therapy Rationale(s)

This section shows the actionable target of the drug compound and pathways to the phenotype response through each intermediate node.

7. Genomic Aberration to Key Biomarker Pathway(s)

This section illustrates molecular biochemical pathways from a genomic aberration in the patient profile to critical biomarkers identified by Cellworks' biosimulation. The description is accompanied by relevant PMIDs that were used to determine the interaction.

8. Terms of Usage

This section describes terms of usage under which this patient therapy assessment has been provided by Cellworks.

3. Frequently Asked Questions

3.1 Does Cellworks take into account toxicity of the drugs? The current assessment assumes that the drugs are faithfully delivered to the site of action. Cellworks takes into account all molecular interactions once delivered to the site of action (pharmacodynamics (PD) of the drug compound). Cellworks does NOT account for absorption, distribution, metabolism & excretion (ADME) properties of the drug that determine how the drug is delivered to the site of action. Any toxicity in the delivery process, or pharmacokinetics (PK), is NOT taken into account.