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 Singula™ assessment.

2. Assessment sections

1. Drug Response Prediction

This section illustrates predicted response to therapies of interest for this indication. The response is indicated as an easily interpretable, ‘Responder’ or ‘Non-responder’, with no grey zone ambiguity.

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 (✓) 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. 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.

4.1 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.

5. Therapy Rationale(s)

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

6. 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.

7. 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.