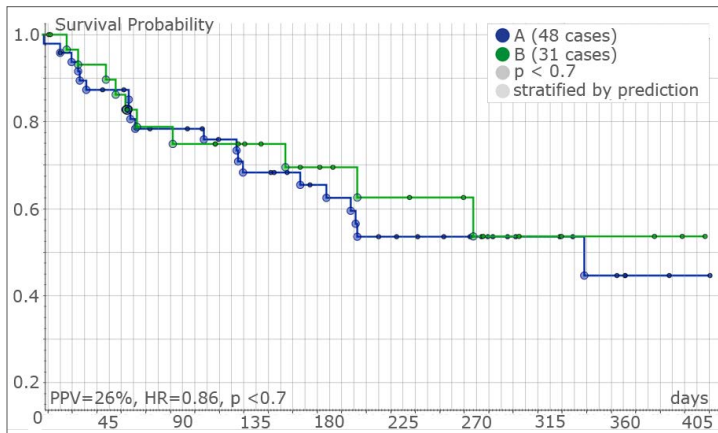
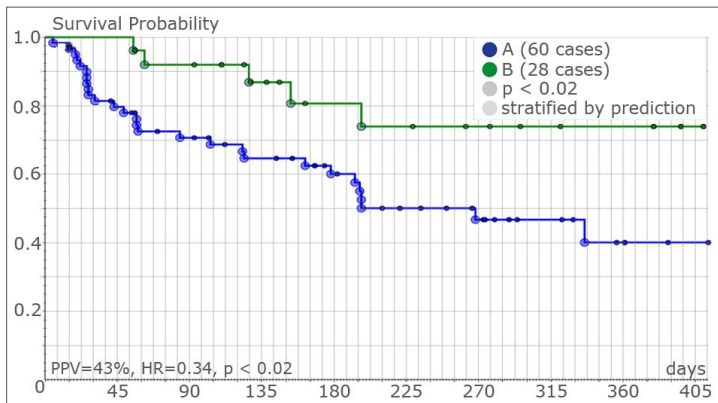


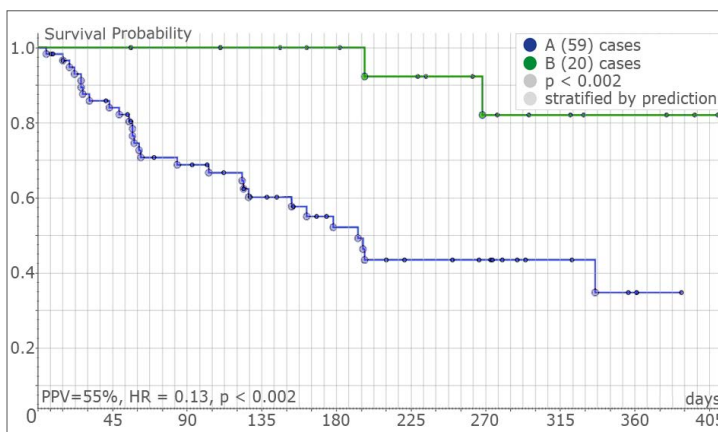
# The Power of Tissue Phenomics<sup>®</sup>: The Discovery of a Novel Signature to Improve Patient Stratification



A) Kaplan-Meier curve with traditional manual scoring



B) Kaplan-Meier curve with Definiens image analysis automating traditional scoring



C) Kaplan-Meier curve with Definiens image analysis and novel signature

**Using the Tissue Phenomics approach, Definiens developed a comprehensive diagnostic test that exceeded traditional manual scoring for predicting therapy response.**

## Study Synopsis

- The manual pathologist score did not significantly predict therapy response (Figure A).
- With Definiens image analysis, automated scoring of the manual read showed promising results in improving the statistical significance of the survival curve (Figure B).
- Using virtual multiplexing, Definiens performed an additional round of image analysis on the consecutive staining of two immuno-oncology biomarkers.
- More than 60 biomedical features were classified and correlated to clinical response data.
- From the multitude of possible phen combinations, a highly predictive candidate was identified as a novel signature.
- By using the new signature in addition to image analysis, Definiens improved the predictive value, hazard ratio, and statistical significance in the survival curves (Figure C).

## Benefits

- Definiens' technology mines tissue data for meaning to reduce pipeline risk. It can quantify all tissue features in context and then combine this information with other data types to mine the data for patterns and predictive signatures.
- Identification of a promising CDx candidate for drug development.

## Implications

- Reduce risk by advancing the most promising candidates all the way to launch.
- Robust data package correlating biomarkers with responders is available for regulatory submission and diagnostic test development.