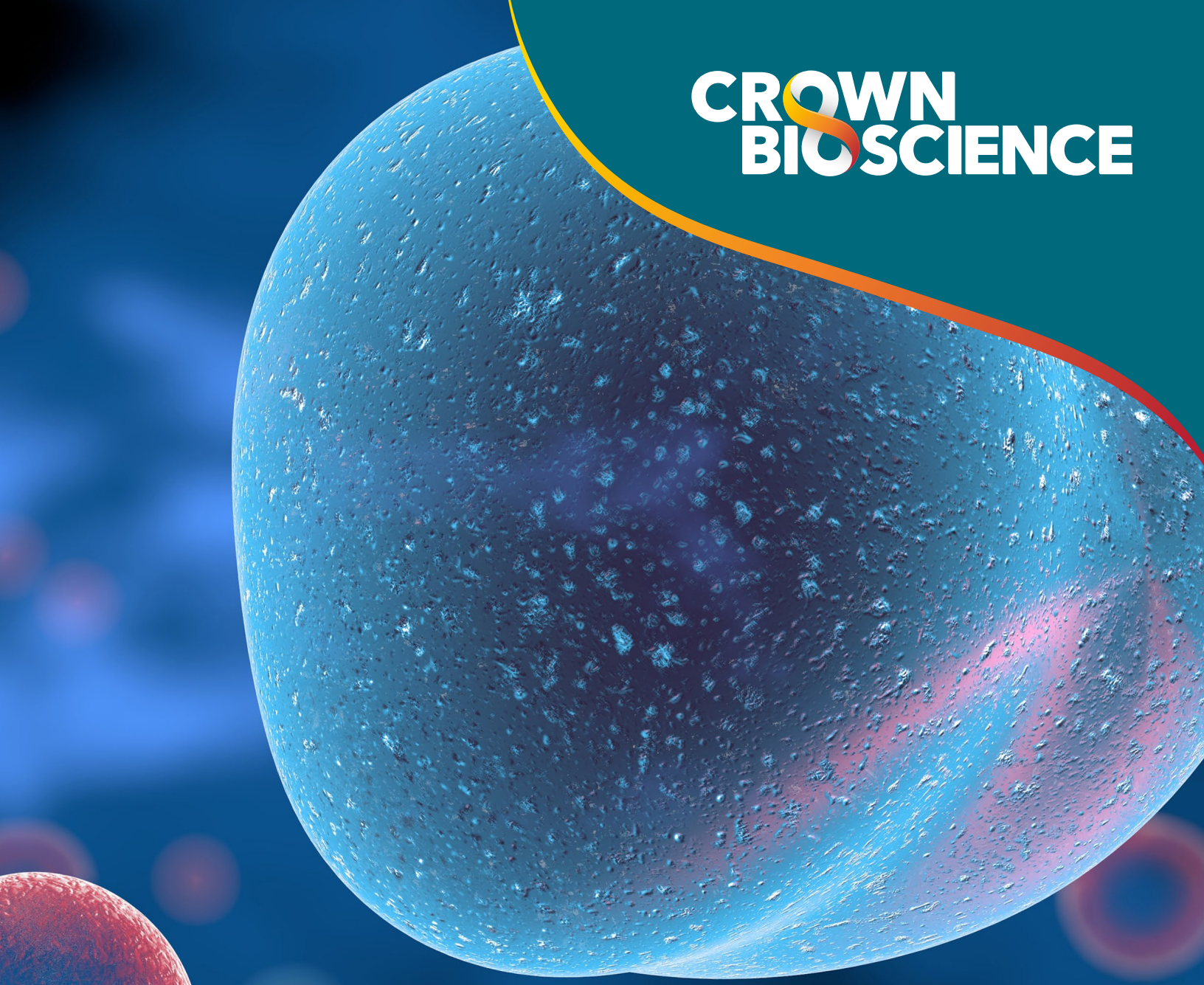
CROWN BIOSCIENCE



3D *Ex Vivo* Patient Tissue Platform

Evaluate oncology drugs in patient tumors with preserved native TME

A JSR Life Sciences Company

FACTSHEET

V1.0

Moving Oncology Models Closer to the Clinic

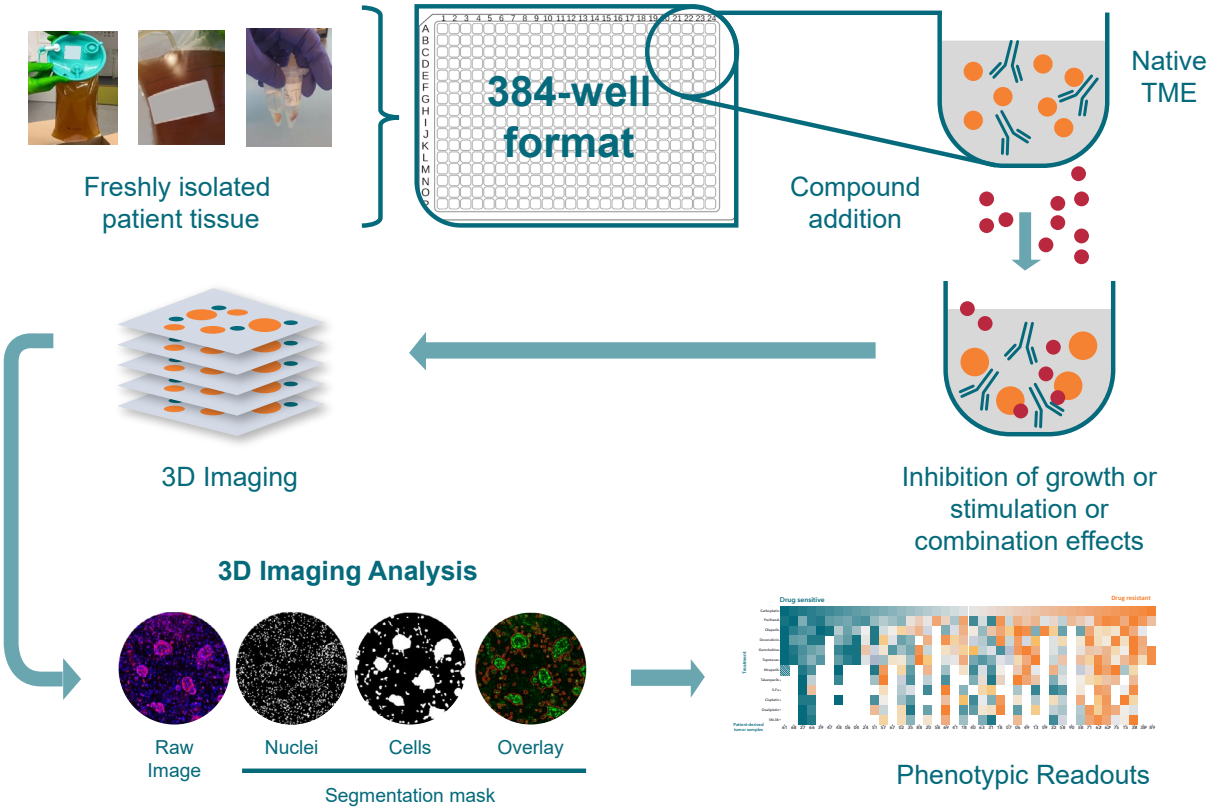
Patient-relevant translational systems that better mimic the heterogeneity and molecular/genetic complexity of human tumors are needed to:

- Understand drug effects on fresh patient tissue with native TME in 3D which is the most physiologically relevant environment preclinically
- Accurately measure tumor killing and immune cell proliferation through proprietary phenotypic high content image (HCI) analysis
- Evaluate immunotherapy effects including immune checkpoint inhibitors (ICI) with endogenous immune cells
- Automated analysis enables robust evaluation of single and combination treatments in high throughput
- Obtain more data for determining whether to progress a candidate into the clinic

Introducing a Unique 3D *Ex Vivo* Patient Tissue Platform

Make better informed decisions about progressing your oncology and immuno-oncology therapeutic candidates with the most patient-relevant *ex vivo* system available.

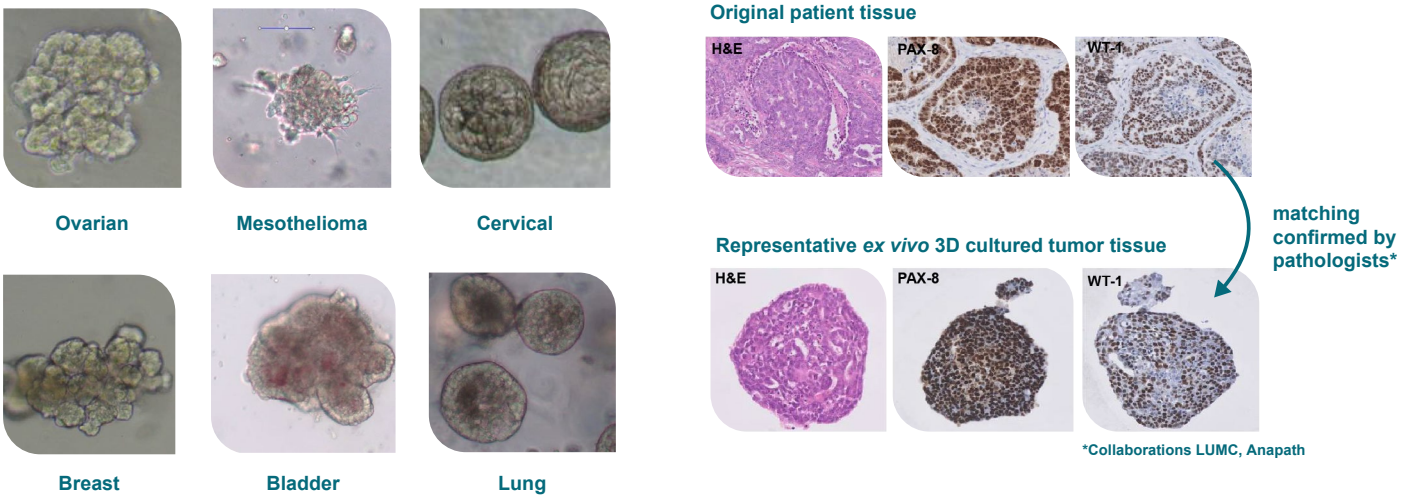
- Derived from fresh patient tumor samples processed within 24 hours of receipt
- Preserves native TME with endogenous immune cells, fibroblasts, and other stromal components
- Patient-specific plate: 50-300 patient tumor tissues directly seeded in hydrogel matrix in 384-well format
- Drug effects including tumor killing and immune cell proliferation are measured by 3D phenotypic HCI analysis
- Additional sample characterization available through flow cytometry, IHC, cytokine analysis, and next generation sequencing



Key advantages:

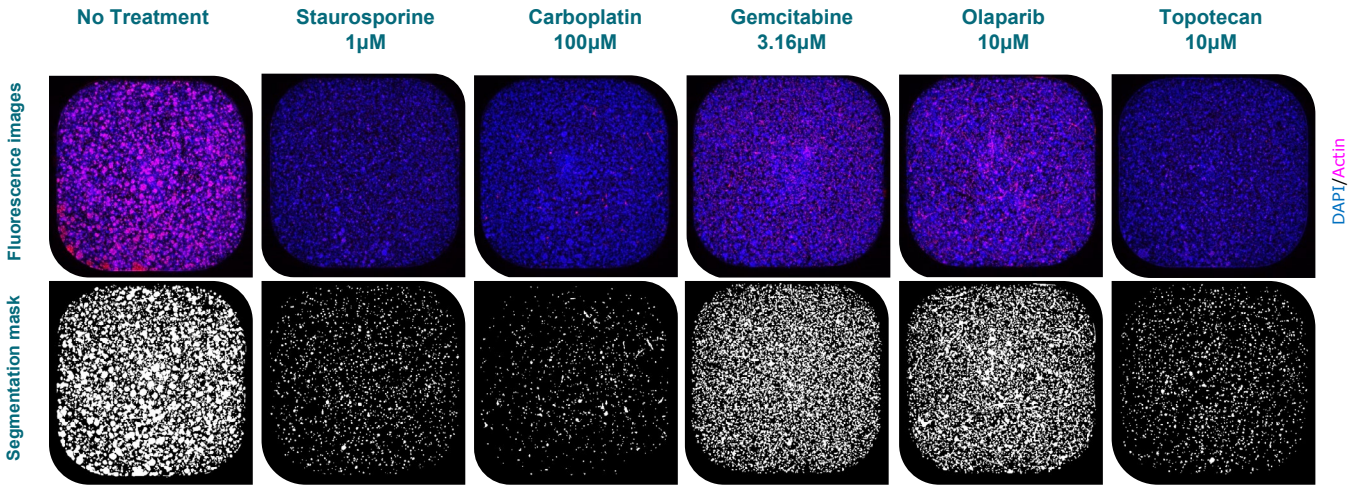
- **Physiologically Relevant Cultures**
  Leveraging fresh patient tumors with endogenous immune cells, fibroblasts, and stromal components preserving the native TME, sourced through qualified tumor tissue providers
- **High-Throughput, Imaging-Based platform**
  Automated high content microscopy used to image 3D cultures grown in 384-well plates to enable efficient combination and dosing regimen evaluations
- **3D Phenotypic High Content Image Analysis**
  Image analysis with proprietary software developed to measure phenotypic changes induced by small molecules and new therapeutic modalities in 3D
- **Accurate Results**
  Tumor killing and immune cell proliferation are accurately measured via phenotypic analysis to support important R&D decisions

Preserving Patient Tumor Biology



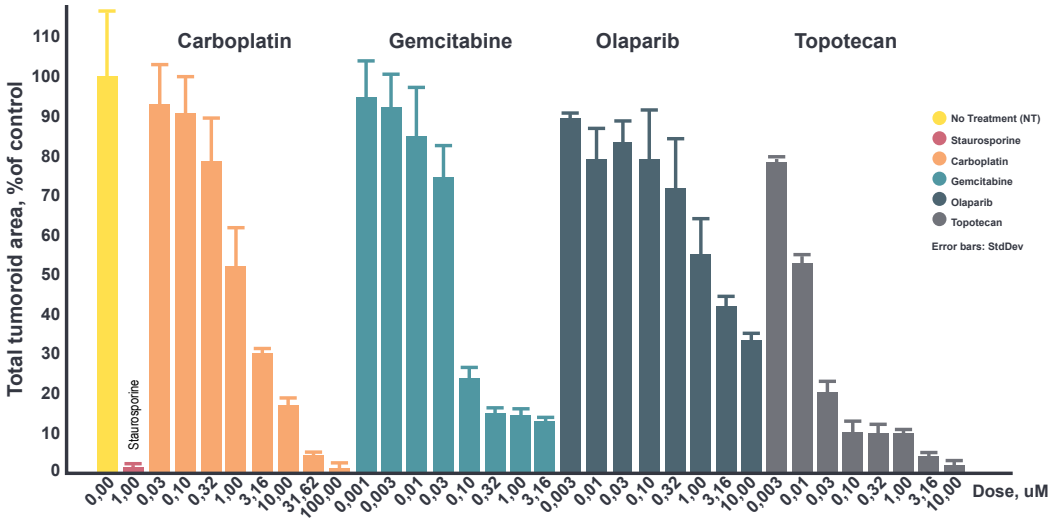
Patient tissues supplied by Vitroscan
Ex vivo testing protocols established for a wide range of solid tumors representing patient tumor biology

Testing Oncology Therapeutics on Patient Tumors



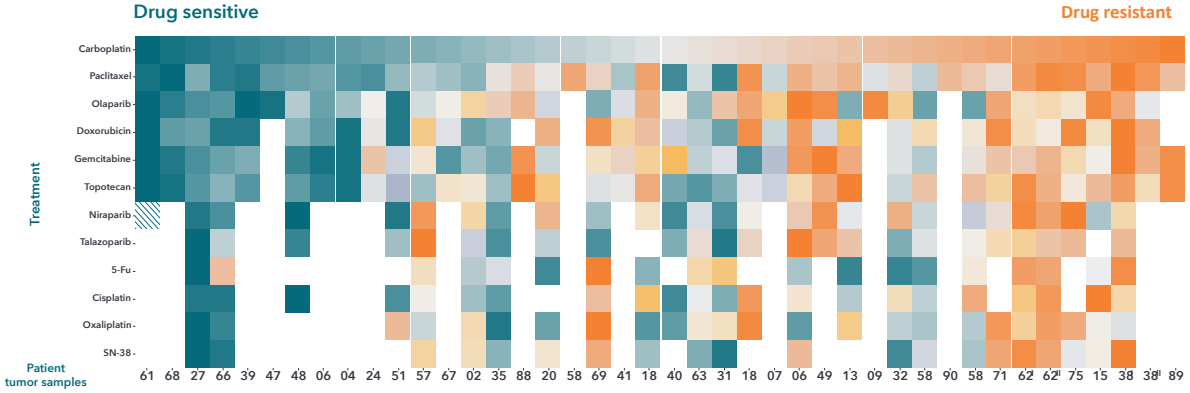
Fluorescence images and filtered segmentation masks of various tumor-targeting compounds on *ex vivo* tissue isolated from ascites of ovarian cancer patient to test therapies with different targets and MoAs

Testing Oncology Therapeutics at Various Doses on Patient Tumors



Concentration-dependent tumor killing response to chemotherapeutic drugs carboplatin, gemcitabine, and topotecan, as well as the PARP inhibitor olaparib observed in *ex vivo* tumor tissue isolated from ovarian cancer patient

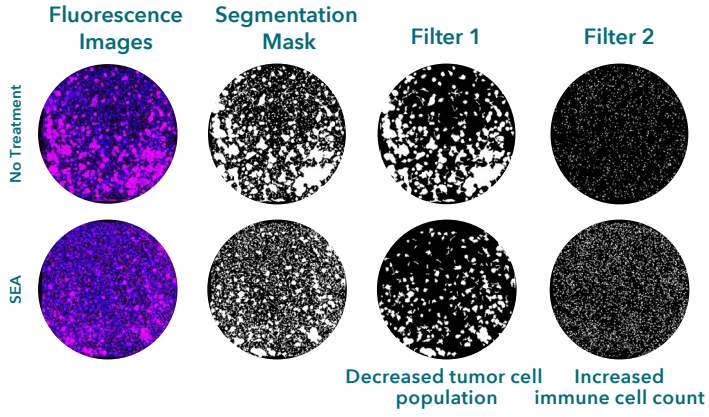
Assessing Differential Responses to Standard of Care in Patients



Visualizing patient tumor response to SoC chemotherapy treatments, a representation of high throughput capabilities

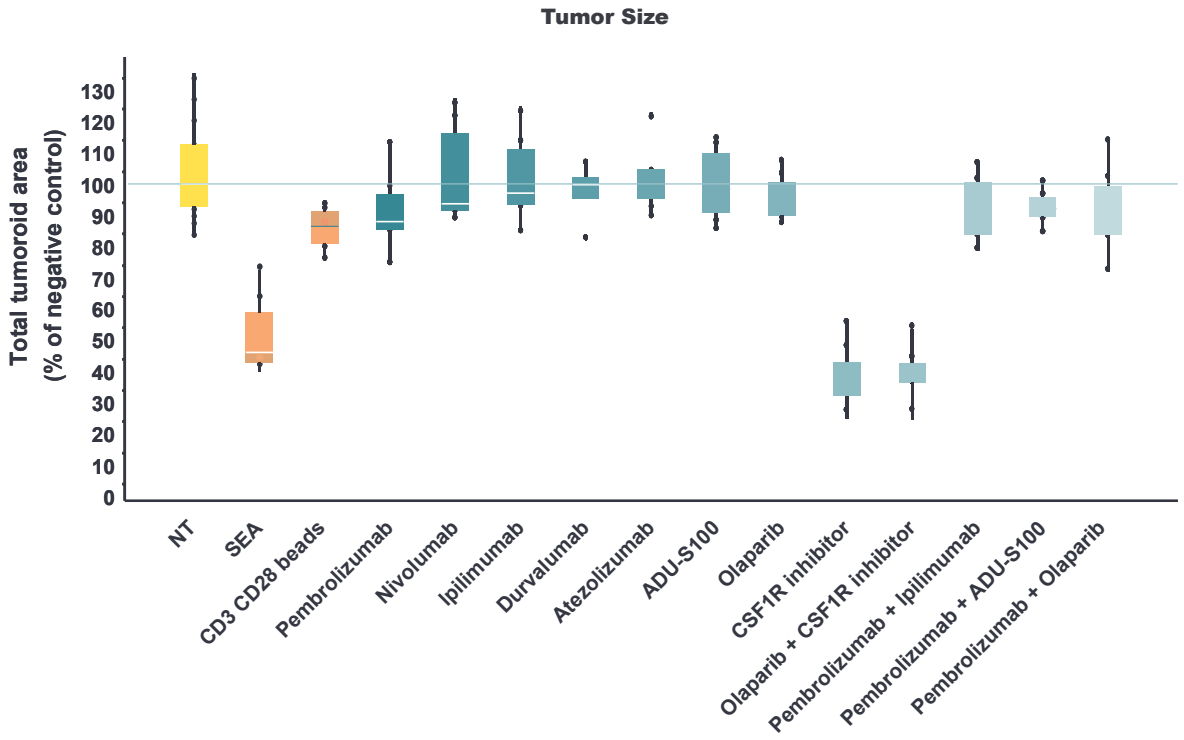
Discriminating Therapeutic Effects On Tumor and Immune Cell Populations

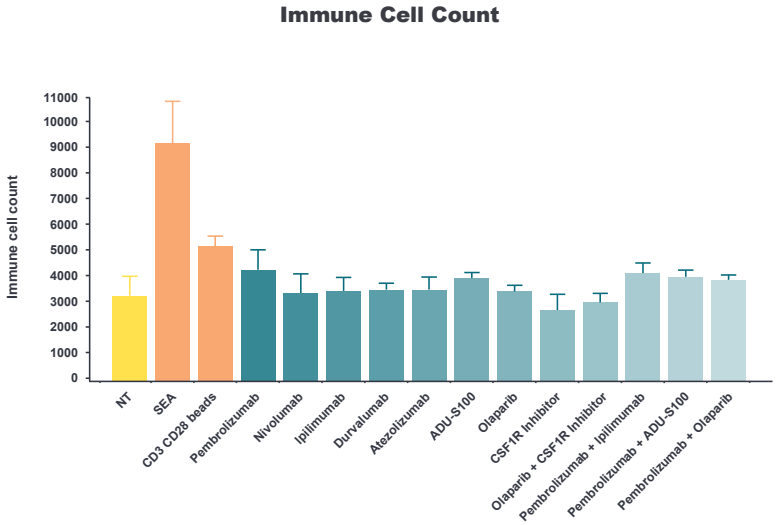
- Dissect different cell populations within samples by separating tumoroids by size
- Identify big tumor clusters versus single cells
- Assess tumor killing activity and immune cell proliferation using phenotypic analysis

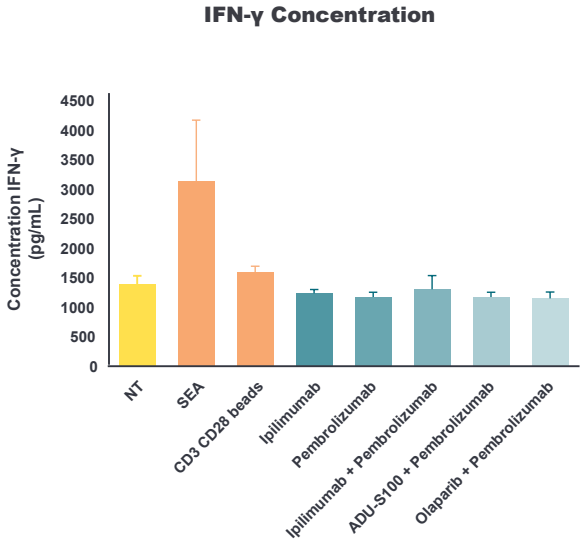


In partnership with:

Reporting on Immunotherapy Responses with Phenotypic Readouts







Immunotherapy effects on NSCLC tumor killing and immune cell proliferation confirmed by IFN-γ increase detected in supernatants

Get in touch

Sales
US: +1 858 622 2900
UK: +44 870 166 6234
busdev@crownbio.com
www.crownbio.com

Science
consultation@crownbio.com