


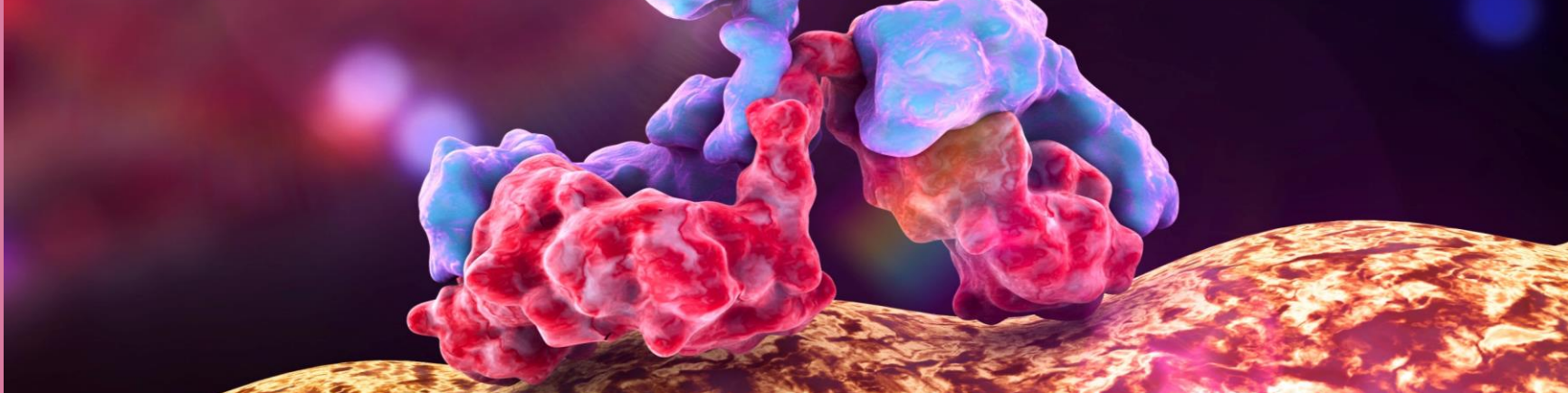
Overview

Vivia's ex vivo TME-aligned 3D model offers a very well controlled environment which can recreate the complexity of the TME and generate a reliable platform for studies on the effects of Bispecific Antibodies (BsAb) in Solid Tumors.

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TME-aligned 3D Solid Tumor Models for Bispecific Antibodies

Vivia's 3D model recapitulates original tumor microenvironment and promotes naïve behavior of tumor and immune cells. Once embedded in this native-like matrix, T-cells and tumor cells interact brought into proximity by BsAb (or multispecific antibodies).

Overall Activity BsAb EGFRxCD3 in Autologous TILs & Samples

Both tumor cell killing, and T cell activation occur at the same EC50.

All three T Cell related parameters (right) overlap, though with different cell counts.

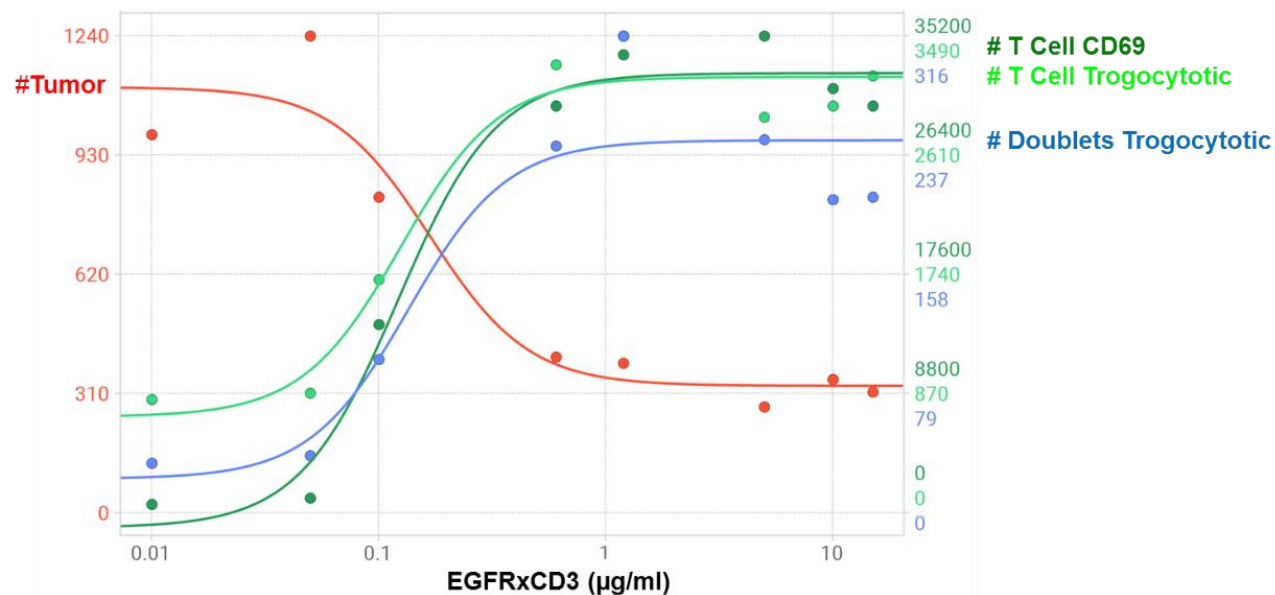


Figure 1. Absolute counts for each cell subset shown before superposed

Combinations with Other IO Drugs like PD1 enhance T Cell activation and tumor killing



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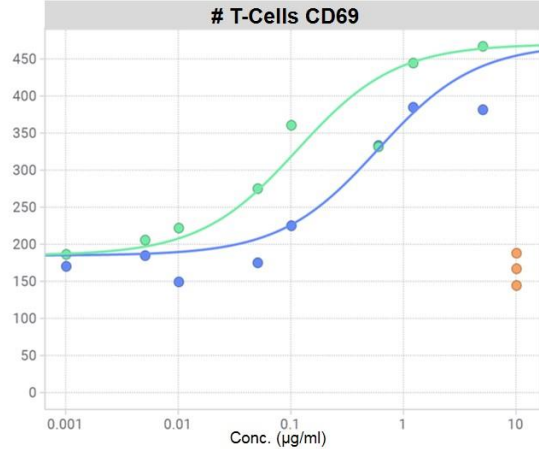
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PD1 enhances T Cell activation



PD1 enhance tumor killing

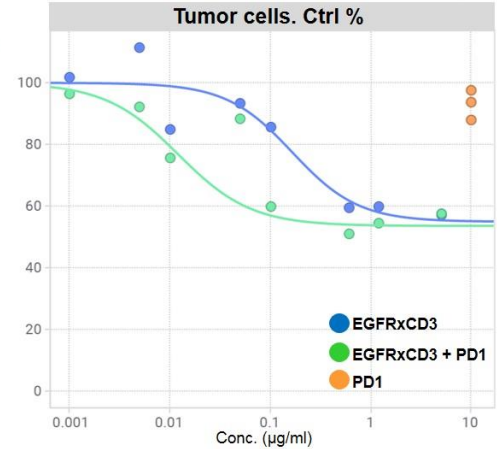
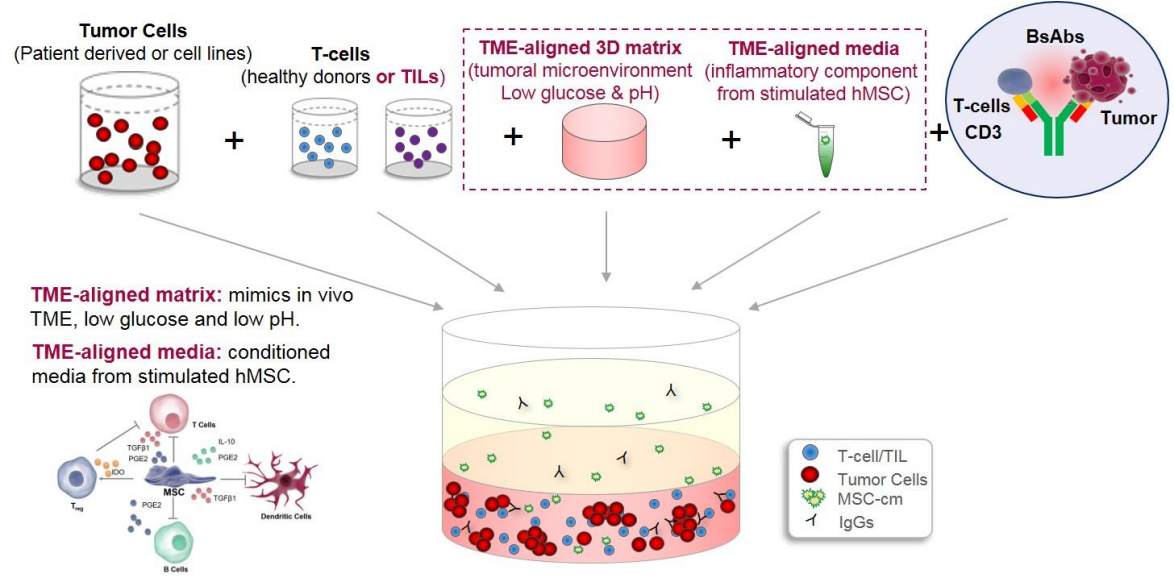


Figure 2. Ovarian Cancer with Autologous TILs (E:T Ratio 1:2)

PD1 alone does not active T cells or induce tumor cell kill

We can also evaluate TRISPECIFIC ANTIBODIES ex vivo activity

TME-Aligned 3D Model for Immune Oncology Effects



Analysis Leverage Power of Multiparametric Flow Cytometry After Disaggregating 3D Assays



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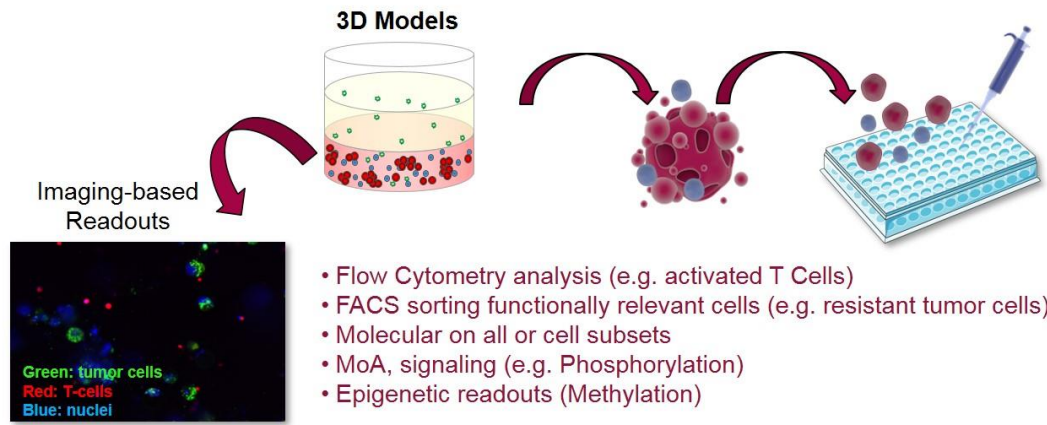


Image-based Readouts	Disaggregated Retrieved Cells
Cell viability / proliferation profile from mixed populations	Cell viability / proliferation profile from individual cells
Cell phenotyping limited to few markers / fixed cells	Up to 7 colour markers in alive or fixed cells – full cell profiling within mixed cell populations
High variability due focal distance	Good statistics & reproducibility
High time consuming	Low time consuming
Does not allow additional readouts	Retrieval of cells for Molecular Biology & other assays

Highlights

- Validated in 14 years at big pharma with clinical trials & mouse models for targeted and cytotoxic drugs.
- Best models for IO drugs such as BsAbs:
 - Immunosuppressor TME lowers T cell activation
 - Key differentiating factor among 3D models
- Suitable for Trispecific Antibodies as well
- Disaggregating cells for flow cytometry enables powerful assays
- Sorting resistant or other relevant cell subsets
- Molecular profiling: we can identify the molecular basis of resistance to a BsAb in tumor and T cells
- Access to cell lines & patient samples
 - Including autologous TILs for IO assays
 - Assays suitable for carcinomas