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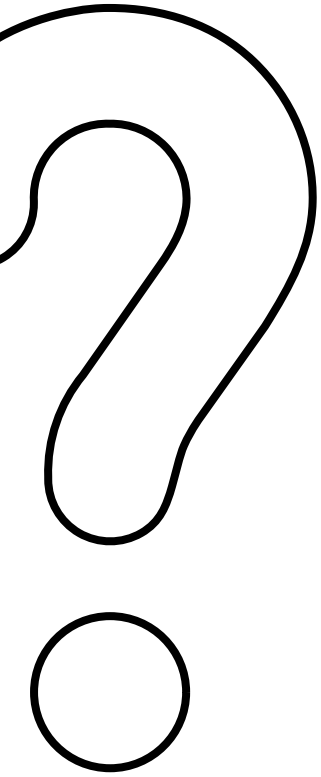
Let Ultivue help solve your problems



For which indications is my drug candidate most efficacious?

Study Plan overview

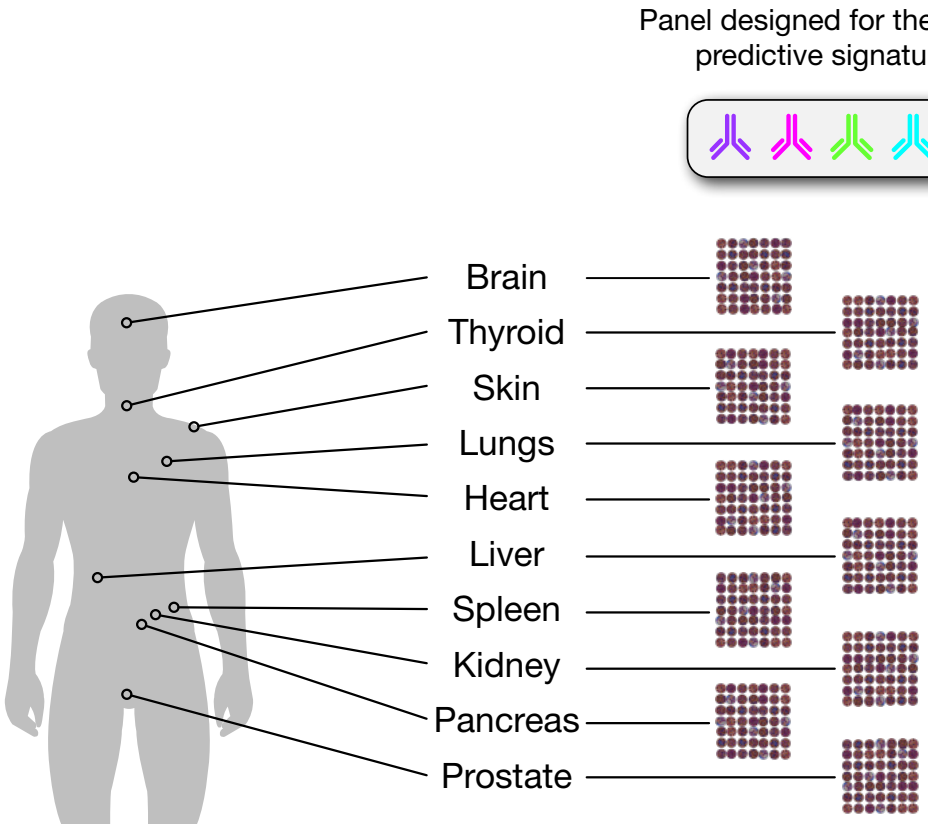
Study Plan

Survey across multiple indications with an established panel to find those with the most potential for treatment

Overview: After discovering an interesting drug candidate, finding the most promising indications to focus on for the next stage of drug development is often the next step. Once a predictive biomarker signature has been identified, this panel of markers can be applied across many indications.

After deciding on a signature that is predictive, it is important to learn which indications are most interesting to focus on for the next stage of drug development.

Samples available: To get a comprehensive look across indications, 10 tissue microarray sections from different indications were used for the study. Each TMA section contained 50 cores.



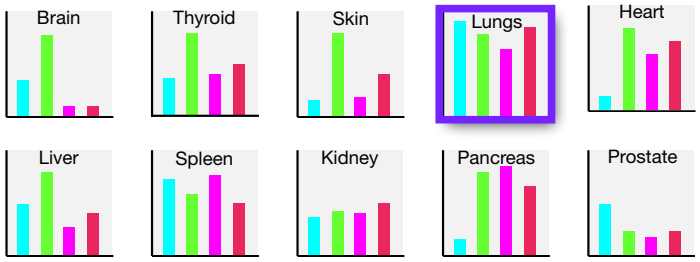
Staining and imaging: All TMAs were stained with the same 4-plex panel. Based on earlier exploratory work, this set of biomarkers was determined to be the most predictive.

Image analysis: To detect the phenotypes and immune cells within the tumor microenvironment, standard image analysis was applied to all TMAs.

The results include:

- Tissue core detection
- Coarse artefact exclusion (folds, blur, bubbles, red blood cells)
- Cell detection via nucleus identification (DAPI)
- Phenotyping based on marker positivity
- Densities and percentages of all single positive cells
- Densities and percentages of phenotypes based on the defined panel

Data Analysis: To understand the indications with the most promise, data analysis was performed on all cores to find the highest frequency of the predefined phenotypes and to look at where the immune landscape showed the biggest differences between tumor and non-tumor regions. For each of the 10 indications represented, an analysis across the TMA cores was also conducted to look into the amount to tumor heterogeneity that was present, another important factor to determine the most promising indications.



The most promising profile is in

Non-Small Cell Lung Cancer (NSCLC)

Results delivery

The researchers received a comprehensive report on the study plan and outcomes including the key differences between indications based on the biomarker profile of the 4-plex panel used in the study. This data provides key information that can inform the direction to focus the development of the potential drug candidate.

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Profiling Cancer Biology

Talk to us

With every solution that we offer, Ultivue is setting the new standard for mIF solutions. Get in touch with our team of experts and find out how we can help you reduce assay development time, assess cell phenotypes and understand spatial relationships across the whole slide.

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