scailyte®

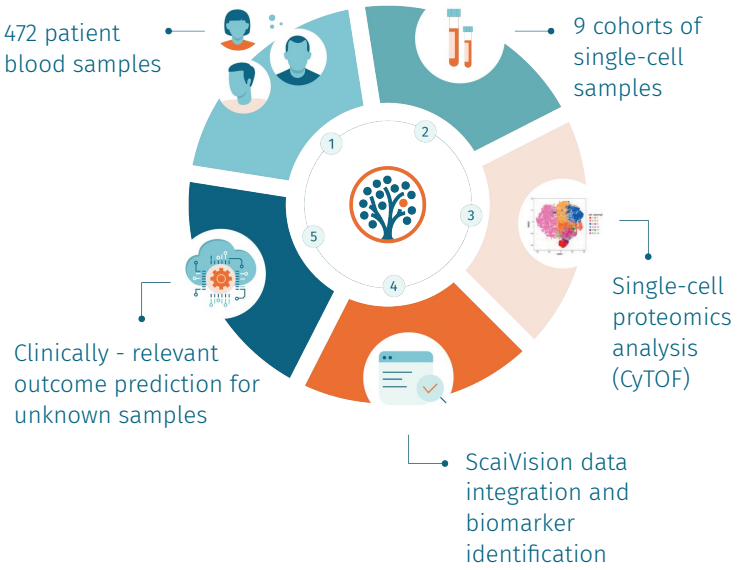
Generating clinically relevant insights from single-cell data

ScaiVision performs **best-in-class** at sample class prediction

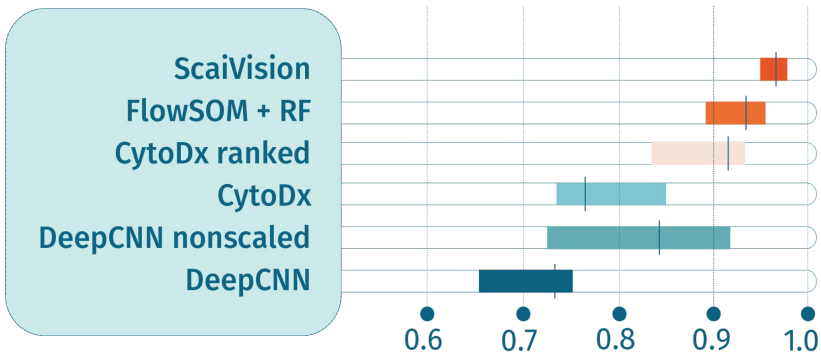
Key advantages of ScaiVision

- Entirely **agnostic** to cell clusters or pre-determined cell types
- **Scalable** analysis of datasets up to hundreds of millions of cells without sub-sampling
- Retains **single-cell resolution** throughout the interpretation stage & calculates the clinical endpoint-associated score for every single cell

Benchmarking study



AUC



Results

- Outperforms all public competitor algorithms at the task of predicting CMV infection status
- ScaiVision attains a mean AUC of 0.96 across all 10 cross-validation splits

Conclusions

- ScaiVision performs as the best-in-class algorithm at identifying molecular biomarkers, which accurately predict clinical status of the samples
- Analysis with ScaiVision unlocks an unparalleled level of high-resolution and clinically relevant discoveries in single-cell datasets

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scailyte®

True precision medicine through single-cell science

Generating clinically relevant insights from single-cell data

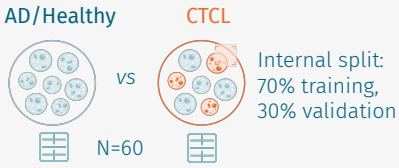
We have built a proprietary cluster-free, unbiased, and highly sensitive AI platform, **ScaiVision,** to accelerate the pace of drug development.

Indication	Clinical question	Technology	Tissue	Patients	Outcome and Status
Sezary Syndrome (CTCL)	Diagnosis of CTCL	CyTOF	PBMCs	60 + 33	0.98 AUC; patent filed (EP19219889) **Assay prototype**
Endometriosis	Diagnosis of endometriosis	scRNA-seq	PBMCs	42 + 60	0.9 AUC; patent filed (EP21204845)
		scRNA-seq	Endometrium	35 + 30	0.9 AUC; patent filed (EP21204856) **Clinical validation and assay development**
Diffuse Large B-Cell Lymphoma (CAR-T cells)	Prediction of therapy response and toxicity	scRNA-seq	Infusion cell product	23	0.8 AUC efficacy prediction 1.0 AUC toxicity prediction
Refractory rheumatoid arthritis	Treatment mode of action	scRNA-seq	Murine hind-limbs	20	1.0 AUC Service project
Solid tumors (TIL therapy)	Prediction of therapy response and toxicity	CITE-seq, TCR-seq	Infusion cell product, PBMCs	55	ongoing Service project
Solid tumors (cancer vaccine)	Prediction of therapy response and toxicity	FC, IHC, proteomics, etc	PBMCs, serum, tumor	20	Descriptive analysis Service project
Autoimmunity	Prediction of therapy response, toxicity, MoA	CITE-seq, TCR-seq, FC	PBMCs	40	ongoing Partnering project
Cell therapy	Prediction of manufacturing success	CITE-seq	PBMCs	24	ongoing Partnering project

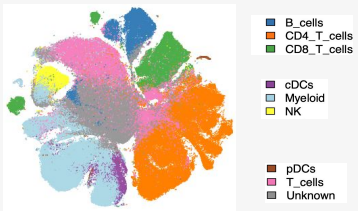
Scailyte discovers an accurate diagnostic biomarker signature for Cutaneous T-Cell Lymphoma (CTCL)

1.) ScaiVision Model Training

Experimental setup:

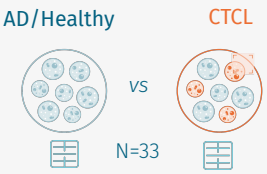


Technology: CyTOF of PBMCs
36 protein markers, 3.5 million cells

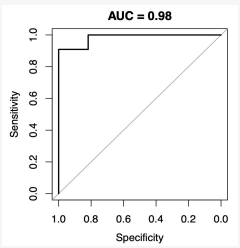


2.) Endpoint prediction

Independent evaluation cohort:



Performance:

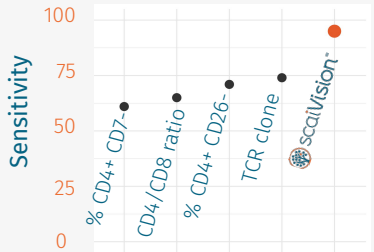


3.) Biomarker characterization

Protein marker ID and IVD prototyping:

Tested FACS panel for 9 cell-surface markers

Patent pending (EP19219889)



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