Multi-omic, plasma biomarkers for non-small cell lung cancer demonstrate strong performance for early cancer detection

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2023 CHEST Annual Meeting

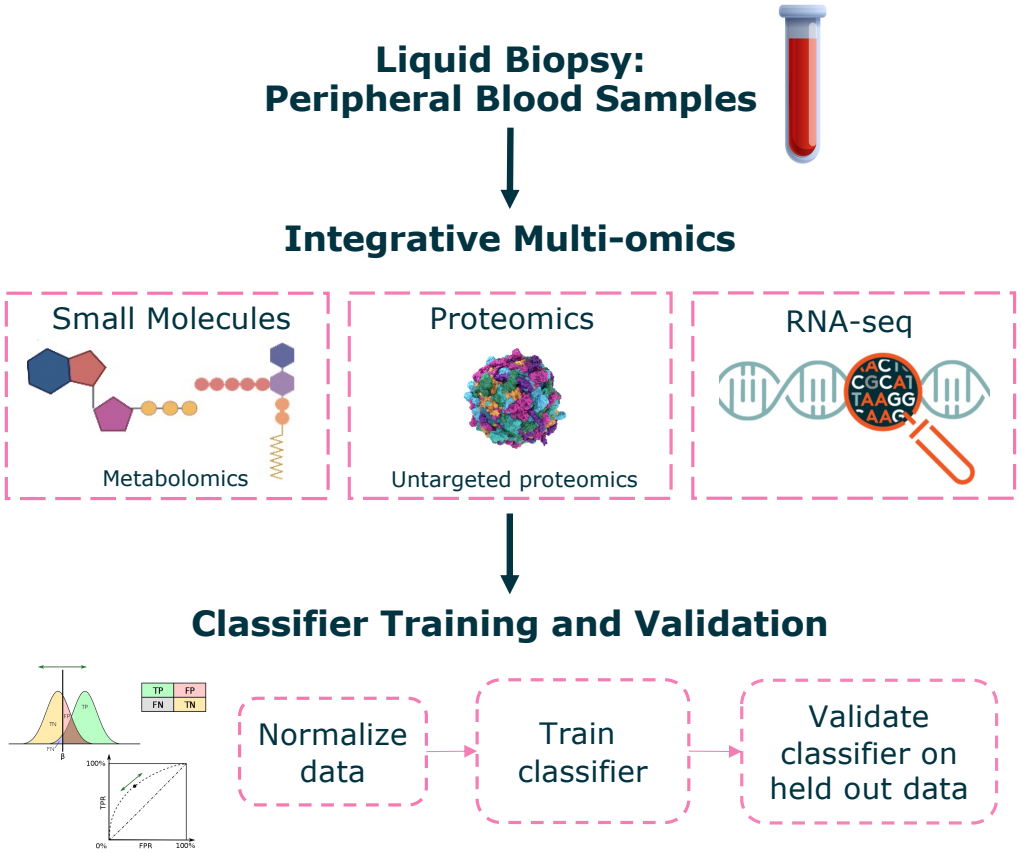
09 October 2023

Conflicts of interest

PrognomiQ: employment

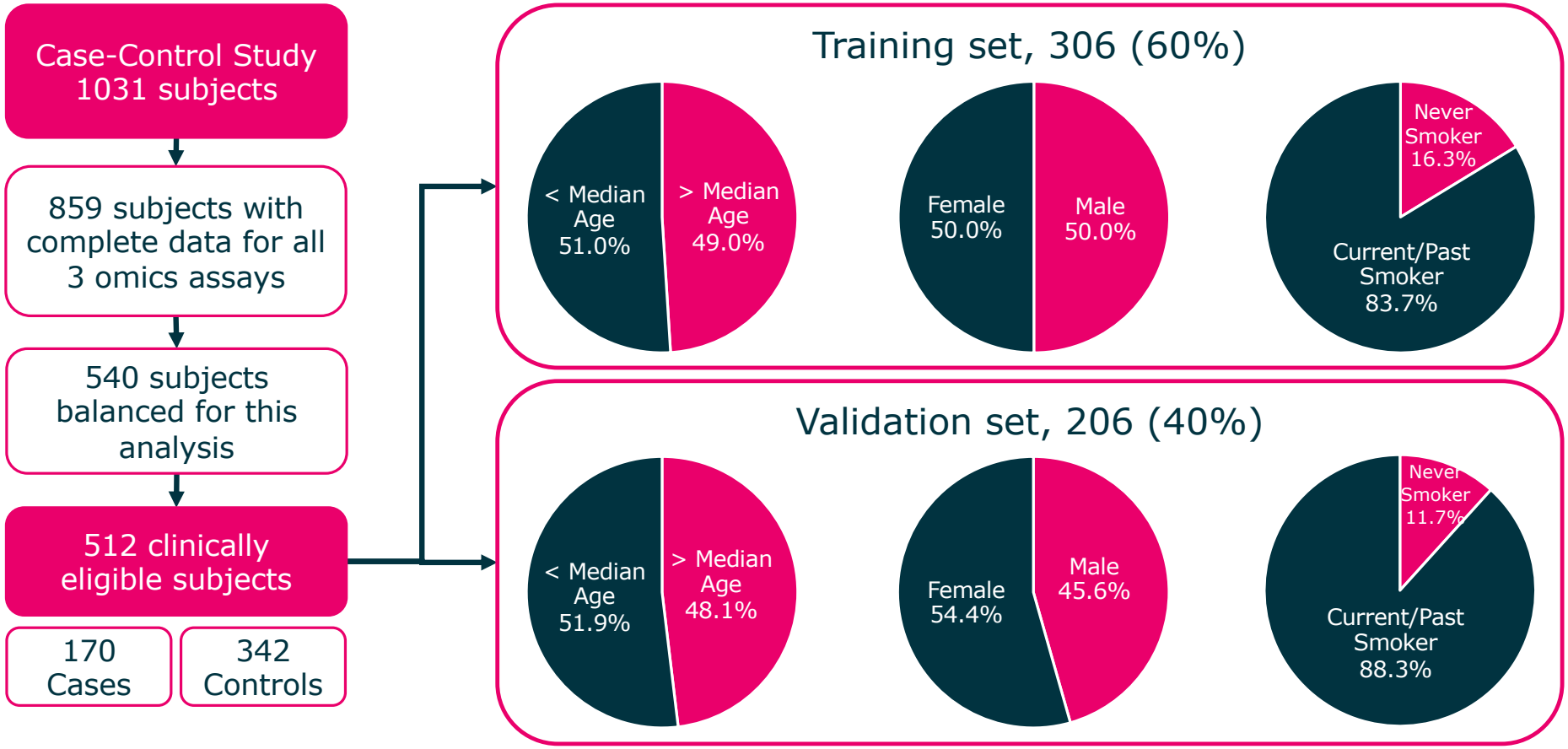
Multi-omics data from a case-control study was used to train a machine learning classifier for NSCLC

- Liquid biopsies and machine learning classifiers may allow for early detection of cancer
- Before entering routine clinical practice, the sensitivity and specificity of liquid biopsy tests must be evaluated
- PrognomiQ's multi-omics platform can comprehensively profile multiple plasma biomarker types, aiding the development of highly sensitive and specific liquid biopsy tests



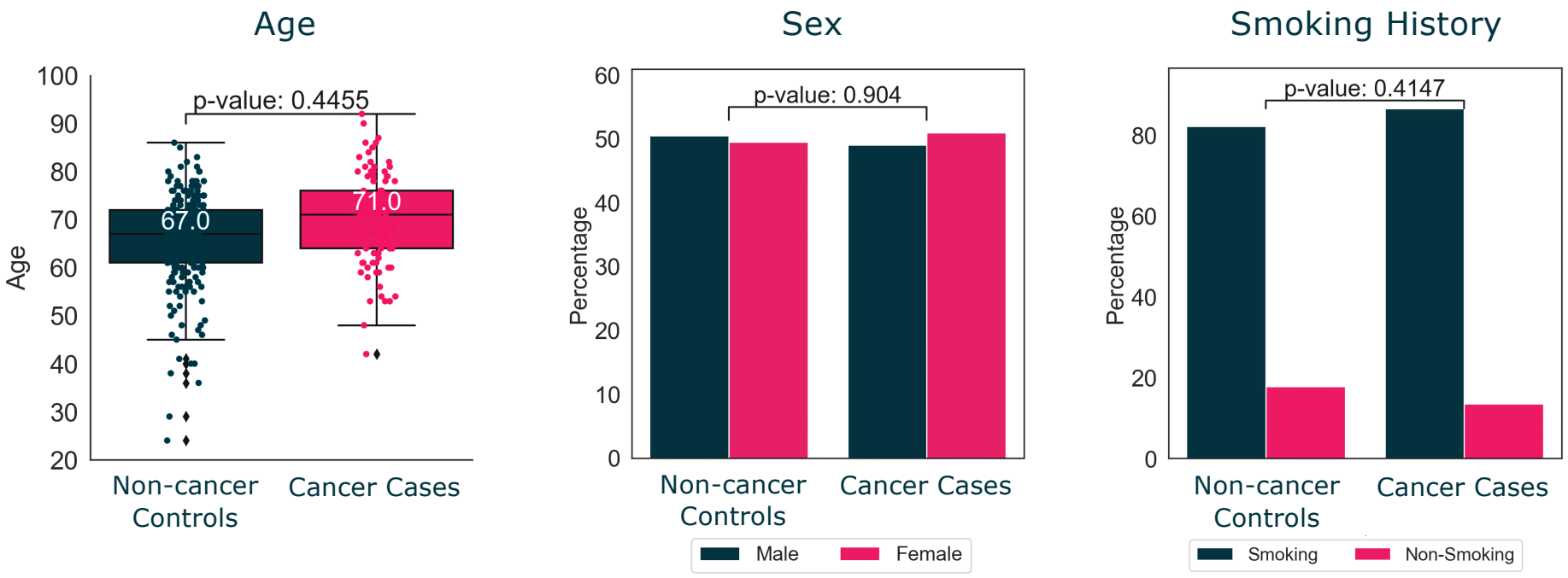
NSCLC, non-small cell lung cancer.

Subjects were divided into training and validation sets and balanced for multiple confounders



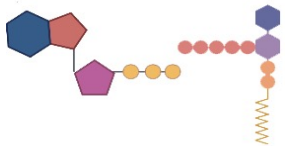
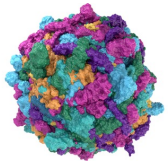
NSCLC case and control subjects in the training set were balanced for confounders

Distribution of cancer case and non-cancer control subject characteristics



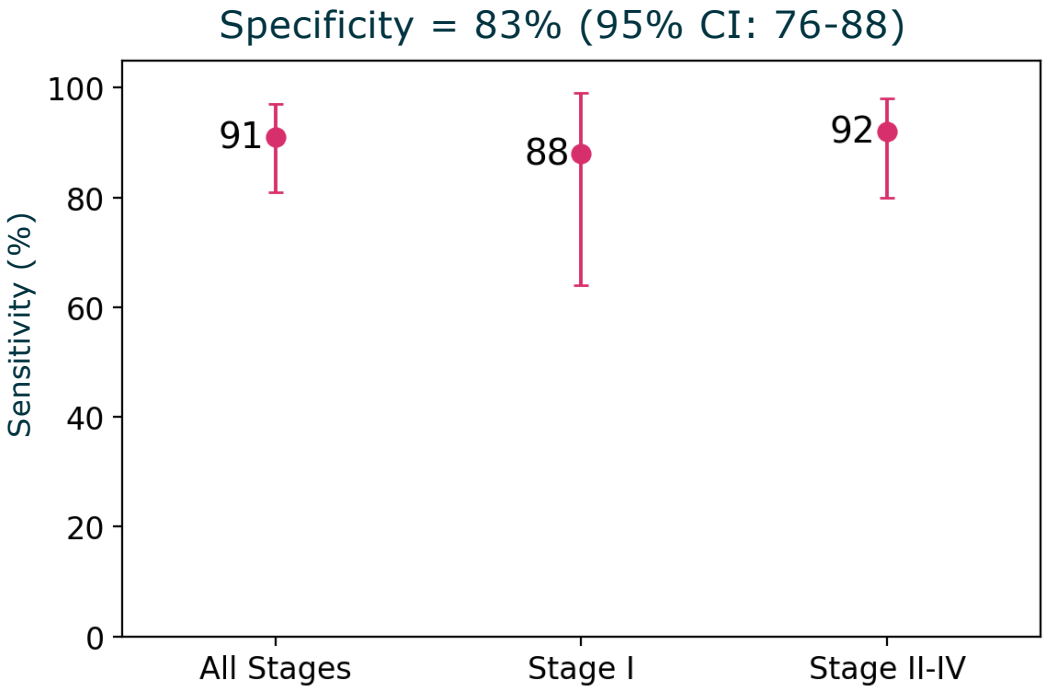
NSCLC, non-small cell lung cancer.

A large number of omics data features were detected during classifier training

Omics Type	Average number of features per subject
Metabolomics 	**1307** metabolites
Proteomics 	**4440** proteins & **30,063** unique peptides
RNA-seq 	**111,176** transcripts

The classifier demonstrated high sensitivity for early- and late-stage NSCLC during validation

The validation set had a classification AUC of 0.93 (95% CI: 0.89-0.96)



Cancer Stage	Sensitivity % (95% CI)
All stages	91 (81-97)
Stage I	88 (64-99)
Stage II-IV	92 (80-98)

AUC, area under the curve; CI, confidence interval; NSCLC, non-small cell lung cancer.

Thank you!

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