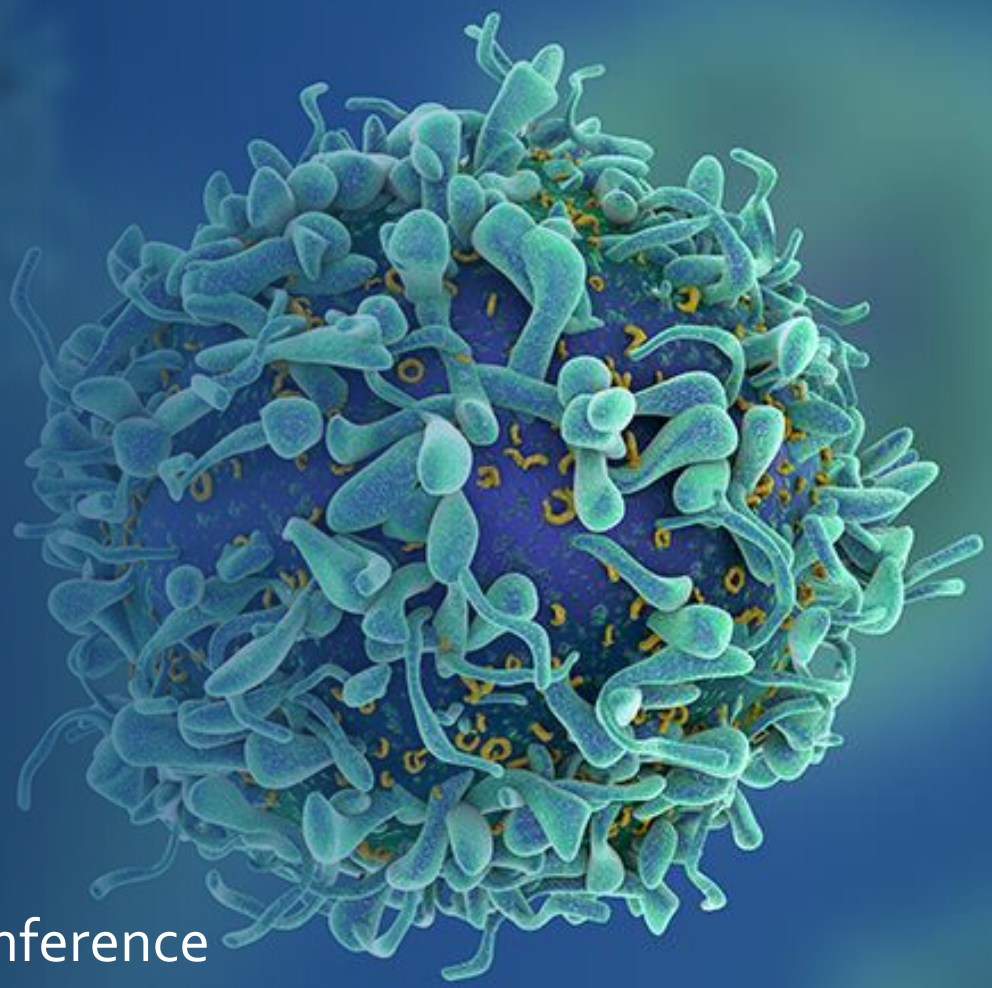
NEON
THERAPEUTICS



Directing the Immune System

Leerink Global Healthcare Conference

February 28, 2019

Neon Therapeutics

OUR MISSION

To be a breakthrough oncology company creating neoantigen-based therapeutics to significantly improve patients' lives

LEADING NEOANTIGEN PLATFORM	Leverage our core platform capabilities to rigorously advance the science of neoantigens
MULTIPLE THERAPEUTIC MODALITIES	Explore both vaccine and cell therapy products to maximize reach across a broad spectrum of cancer patients
PIONEERING CLINICAL DEVELOPMENT	First neoantigen clinical trial in metastatic setting, demonstrating broad immune response in combination with checkpoint inhibitor
WELL CAPITALIZED	Cash balance of $122M as of September 30, 2018; funding into Q2:2020, through multiple inflection points

NEON THERAPEUTICS

Neoantigens Represent Ideal Tumor Targets

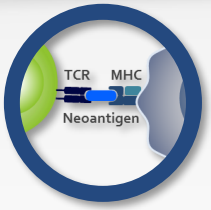
NEOANTIGENS ARE FUNDAMENTAL TO ANTI-TUMOR IMMUNE ACTIVITY

(van Rooij et al 2013, Gubin et al 2014, Rizvi et al 2015)

✓ **INTIMATELY TUMOR-SPECIFIC**	→ Not found on normal tissue
✓ **CAN BE HIGHLY IMMUNOGENIC**	→ Recognized as non-self
✓ **BROAD APPLICABILITY ACROSS CANCERS**	→ Ubiquitously found in cancer
✓ **POTENTIAL DURABLE CLINICAL BENEFIT**	→ Multiple targets to avoid escape

NEON THERAPEUTICS

NEON THERAPEUTICS
Our Differentiated Approach Leveraging Leading Neoantigen Platform



Neoantigens

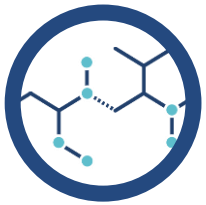
- Neon's core focus

RECON Bioinformatics Engine

- Deep learning neoantigen predictor trained on mono-allelic mass spec data
- Patient data feedback loop further improves predictions
- Class II predictor coming online in 2019

NEO-STIM

- Proprietary, high-throughput T cell induction protocol
- Primes, activates and expands neoantigen-reactive T cells



Peptide-based immunogen design

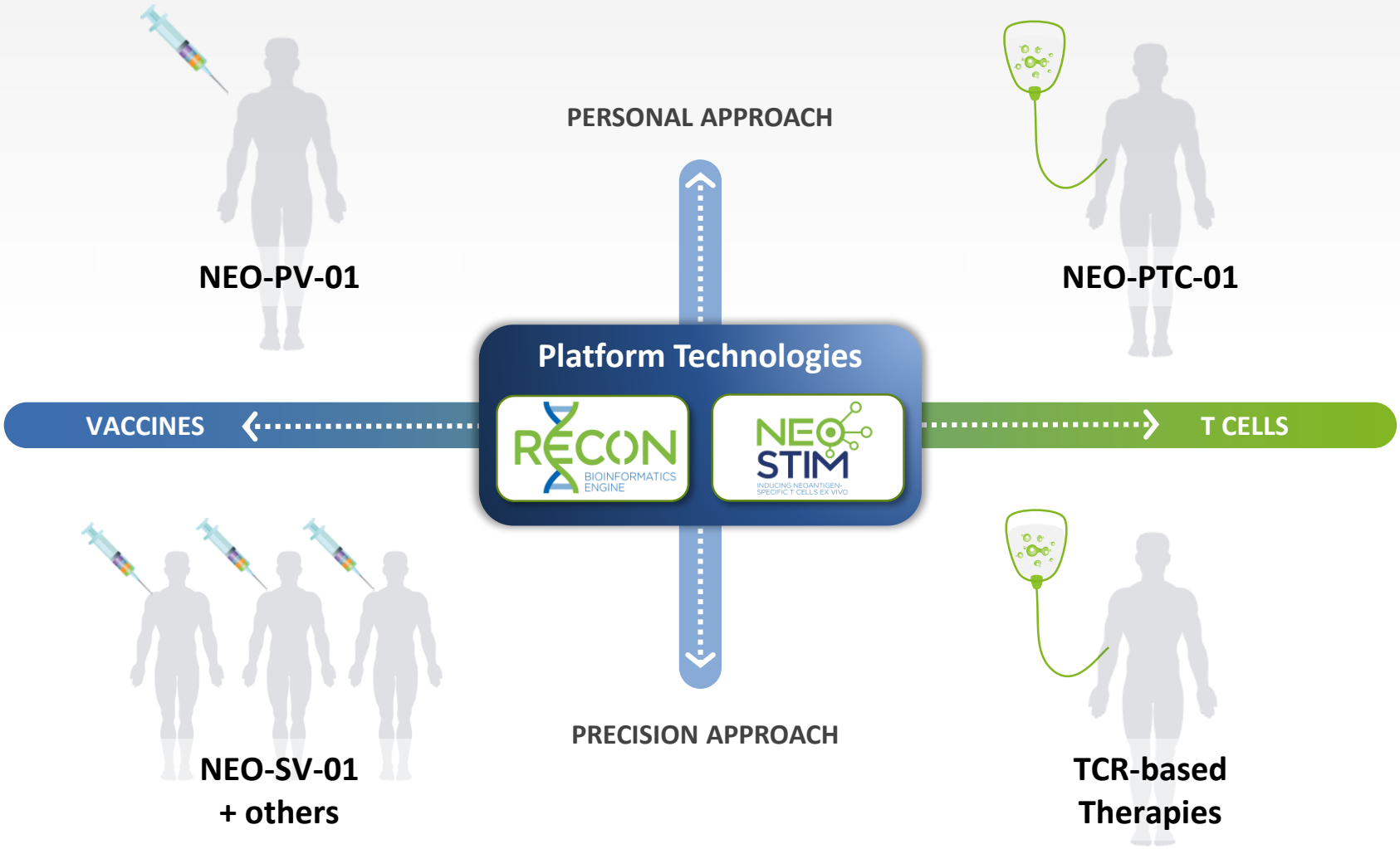
- Safe, immunogenic and scalable
- Neon's proprietary immunogen design can generate over 10-fold improvement in epitope immunogenicity

Immune Monitoring

- Large combinatorial class I tetramer library for precise immunogenicity readouts
- Serial pre- and post-treatment apheresis & tumor biopsies
- Neoantigen-specific T cell functional & cytotoxicity assays

NEON THERAPEUTICS

MULTIPLE MODALITIES TO TARGET NEOANTIGENS: Vaccines & T Cells



Targeting Neoantigens Across Three Programs

NEON / ONE

	RESEARCH & PRECLINICAL DEVELOPMENT	PHASE 1	LATER STAGE	CATALYSTS
NEO-PV-01 Personal neoantigen vaccine	**NT-001:** αPD-1 (Opdivo) Combo – Melanoma, NSCLC, Bladder Cancer			52-Week Data – 1H:19
	NT-002: αPD-1 (Keytruda) + Chemo Combo – NSCLC			52-Week Data – 2H:19
	NT-003: αPD-1 + aCD40 / αCTLA4 Combo – Melanoma			Immune Data – 1H:20
	NT-004: Trial in earlier disease setting			
NEO-PTC-01 Personal neoantigen T cell therapy	Phase 1 Trial planned in solid tumor setting			File CTA in Europe – 1H:19

NEON / SELECT

	TARGET DISCOVERY	TARGET VALIDATION	PRECLINICAL DEVELOPMENT	PHASE 1	LATER STAGE	CATALYSTS
NEO-SV-01 Precision neoantigen vaccine	Phase 1 Trial planned in breast cancer					File First IND – 1H:19

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