The ctMoniTR Project
ctDNA for Monitoring Treatment Response
ctDNA for Monitoring Treatment Response (ctMoniTR) Project

Do changes in ctDNA levels accurately reflect the therapeutic effect of cancer therapies?

**Step 1**
Advanced NSCLC Treated with Anti-PD(L)1

**Step 2**
Advanced Solid Tumors Treated with Anti-PD(L)1 or TKI

- **Project Kickoff**
- **Data Collection**
- **Data Analysis**
- **Manuscript Submission**

Timeline:
- 2019
- 2020
- 2021
- 2022
- 2023
# ctMoniTR Project

## Outcomes
- Aligned on a methodology to combine data from multiple trials in lung cancer
- Harmonized ctDNA data measured from different assays using different collection schedules
- Manuscript forthcoming

## Approach
- Advanced stage NSCLC treated with PD-(L)1 inhibitors
- Previously collected data from clinical trial and observational cohort studies

<table>
<thead>
<tr>
<th>Workflow</th>
<th>Step 1</th>
<th>Step 2</th>
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| Outcomes | • Aligned on a methodology to combine data from multiple trials in lung cancer  
• Harmonized ctDNA data measured from different assays using different collection schedules  
• Manuscript forthcoming | • Update Step 1 methodology for combining data to account for additional treatment settings and tumor types  
• Harmonize ctDNA data from various uniformly collected datasets  
• Validate Step 1 findings |
| Approach | • Advanced stage NSCLC treated with PD-(L)1 inhibitors  
• Previously collected data from clinical trial and observational cohort studies | • Advanced solid tumors treated with PD-(L)1 inhibitors or TKI  
• Previously collected data from clinical trial and observational cohort studies |
Objectives

1. Investigate the feasibility of harmonizing ctDNA
2. Align on a methodology to combine clinical data from multiple trials
3. Characterize associations between ctDNA values and tumor response

Key Findings

1. Reductions in ctDNA are strongly associated with better clinical outcomes across multiple measures including OS and PFS
2. Baseline ctDNA levels alone were not predictive of clinical outcomes
3. Disparate datasets can be harmonized through statistical methods and other approaches
**ctMoniTR Step 2 Project Overview**

**Objectives:**
- Determine how long after treatment initiation an association between changes in ctDNA and clinical response can be detected
- Explore the extent to which ctDNA can complement RECIST
- Characterize whether changes in ctDNA are a prognostic indicator
- Examine ctDNA as a potential drug development tool or intermediate endpoint

**ctMoniTR Step 2**
- **Module 1**
  - Lung Cancer
  - TKI
- **Module 2**
  - Lung Cancer
  - PD(L)1
- **Module 3**
  - Solid Tumors
  - PD(L)1 or TKI

- 22 clinical trials
- 3,000 patients
- 8 tumor types
- 16 different therapies

Provides an opportunity for generalizability but also represents a challenge in terms of complexity