

**Supplemental Tables for**  
**Liquid biopsy approaches to capture tumor evolution and clinical outcomes**  
**during cancer immunotherapy**

**Lavanya Sivapalan<sup>1</sup>, Joseph Murray<sup>1</sup>, Jenna Canzoniero<sup>1</sup>, Blair Landon<sup>1</sup>, Jennifer Jackson<sup>2</sup>, Susan Scott<sup>1</sup>,  
Vincent Lam<sup>1</sup>, Benjamin Levy<sup>1</sup>, Mark Sausen<sup>2</sup> and Valsamo Anagnostou<sup>1,3</sup>**

<sup>1</sup>The Sidney Kimmel Comprehensive Cancer Center, Johns Hopkins University School of Medicine,  
Baltimore, MD 21287, USA

<sup>2</sup>Personal Genome Diagnostics, Baltimore, MD 21224, USA

<sup>3</sup>The Bloomberg-Kimmel Institute for Cancer Immunotherapy, Johns Hopkins University School of  
Medicine, Baltimore, MD 21287, USA

**\*To whom correspondence should be addressed:**

Valsamo Anagnostou, MD, PhD

Sidney Kimmel Comprehensive Cancer Center

Cancer Research Building 2, Rm 546

1550 Orleans Street, Baltimore, MD, 21287

Tel: 410-614-8948

Email: vanagno1@jhmi.edu

Study	Cohort size	Tumor type	Disease stage	ctDNA analysis method	Additional blood-derived analytes	Treatment(s)
Anagnostou et al., 2019 [23]	n=24	NSCLC	Metastatic	Targeted NGS	Peripheral TCR clonal dynamics	Nivolumab, nivolumab-ipilimumab, nivolumab-anti-Lag3, pembrolizumab, pembrolizumab-chemotherapy
Nabet et al., 2020 [73]	n=99	NSCLC	Advanced	Targeted NGS	Peripheral CD8+ T cell counts	Anti-PD-(L)1
Hwang et al., 2022 [109]	n=24	NSCLC	Early-stage	Targeted NGS	NLR dynamics	Nivolumab, nivolumab-ipilimumab
Goodman et al., 2022 [117]	n=12	B-cell lymphoma	Relapsed	sWGS	Abundance of CAR T-cell construct	CD19 CAR T-cell therapy
Cherng et al., 2022 [118]	n=122	B-cell lymphoma	Relapsed	sWGS	Markers of increased tumor bulk (elevated lactate dehydrogenase and number of extranodal sites)	CD19 CAR T-cell therapy

**Supplemental Table S1. Summary of studies evaluating ctDNA alongside other blood-based features to monitor response to cancer immunotherapy.**

Abbreviations: bTMB, blood tumor mutation burden; C (1), Cycle (1) therapy; CAR T-cell therapy, chimeric antigen receptor T-cell therapy; CTC, circulating tumor cell; DCB, durable clinical benefit; NLR, neutrophil-to-lymphocyte ratio; PFS, progression-free survival; sWGS, shallow whole genome sequencing; TCR, T cell receptor