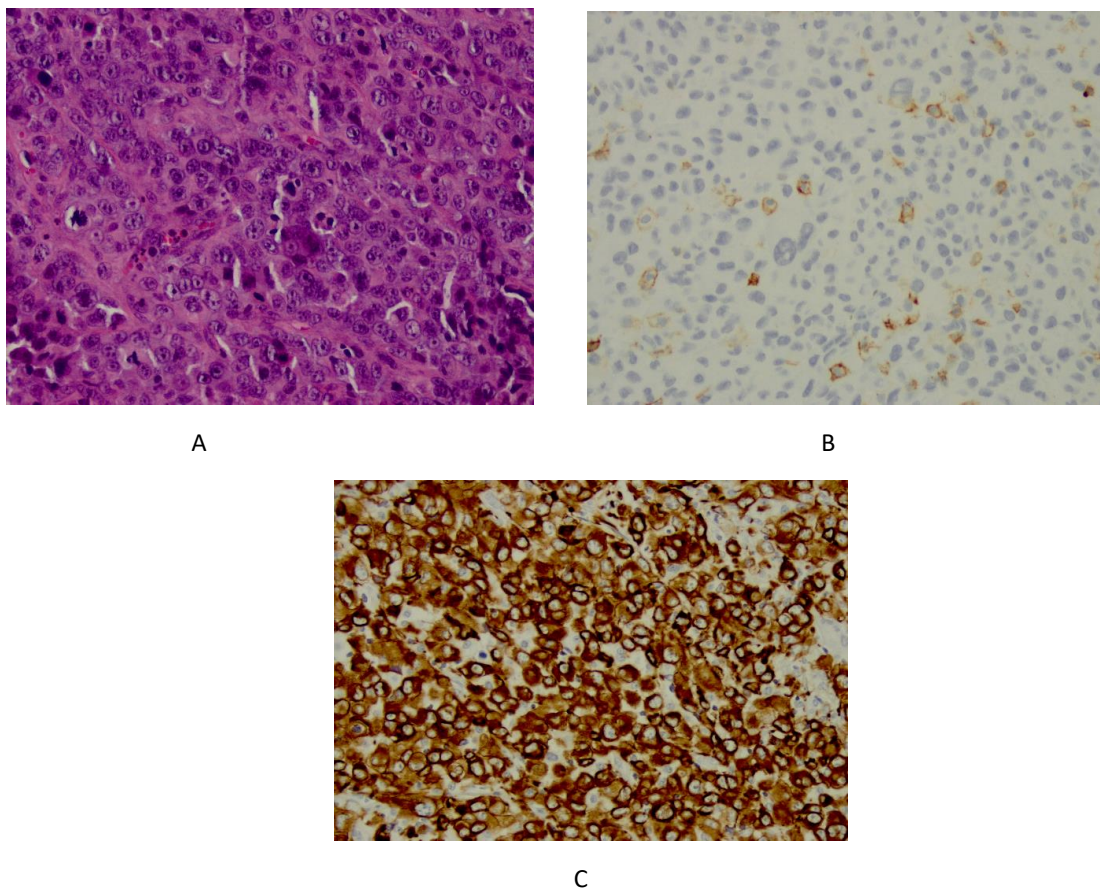# Supplementary:

Figure 1. IHC of lung pleural biopsy Pre-ICI

Figure 2. IHC of cervical lymph node Post-ICI

Figure 3. Scatter plot of rearrangements between different samples.

Table 1. Next generation sequencing result of lung pleural biopsy specimen.
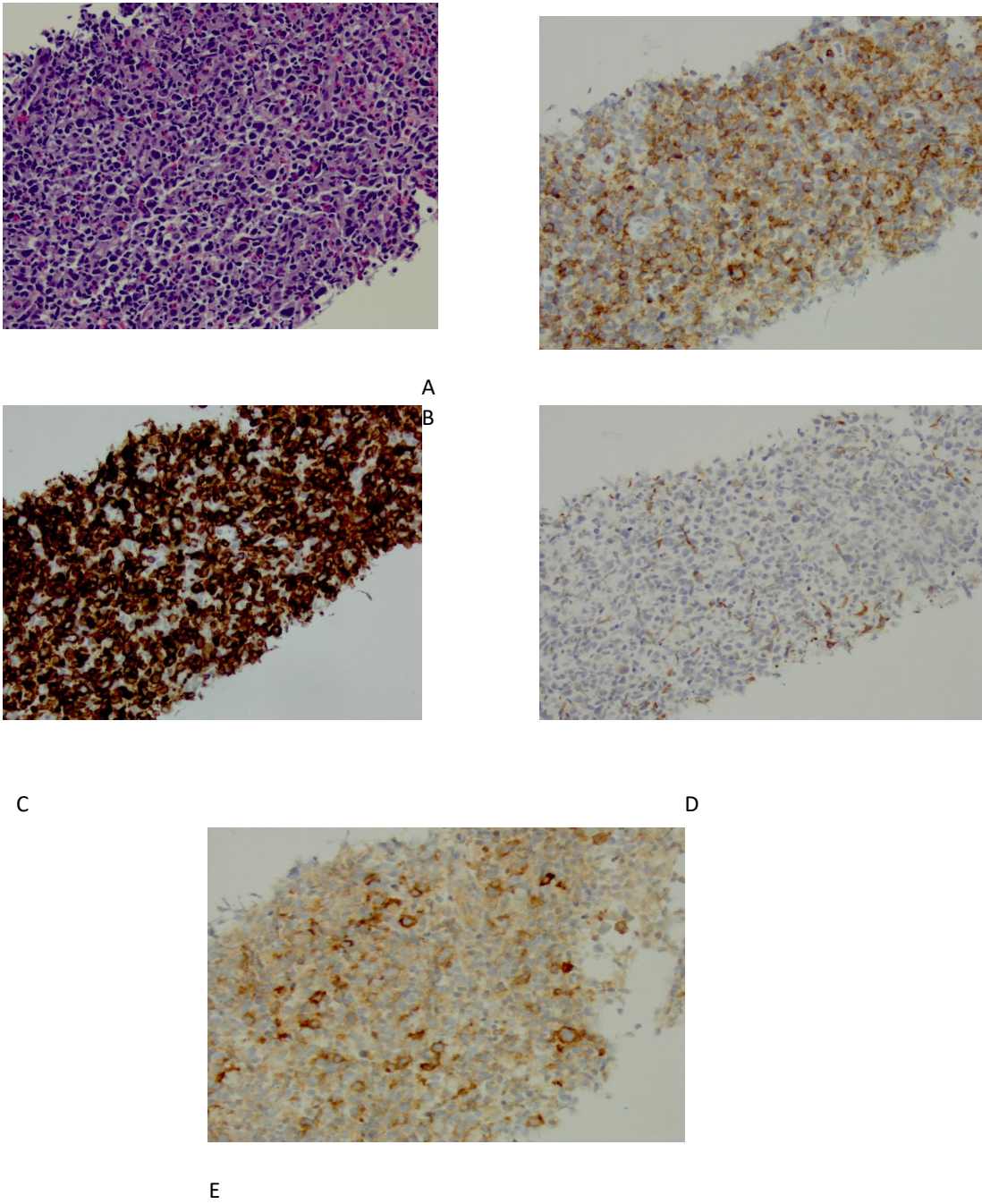
Table 2. Calculation of reporting odds ratio (ROR).
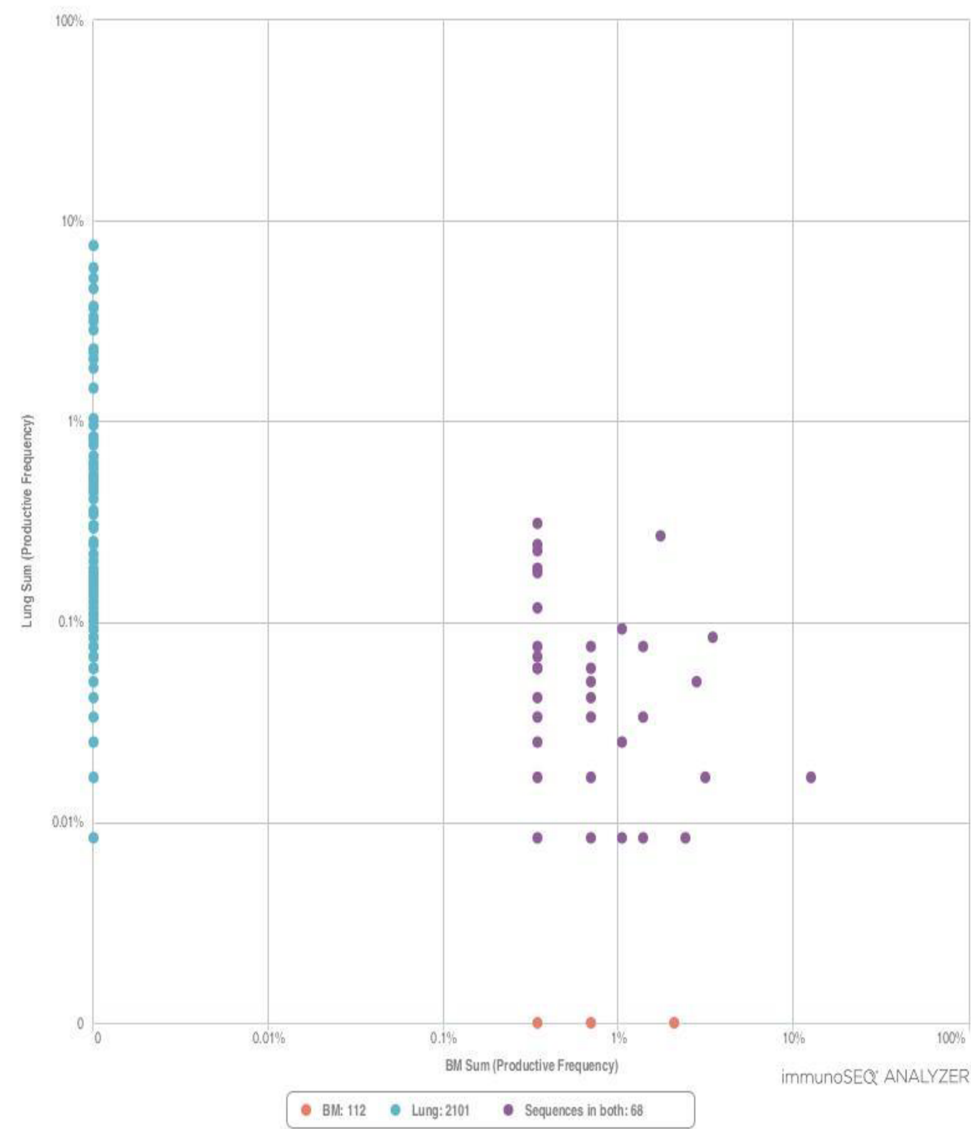
Figure 1. IHC of lung pleural biopsy.

A

B

C

Figure 1 A. H&E staining of left pleural biopsy specimen. B. CD45 staining negative by IHC.

C. CK positive by IHC.

Figure 2. IHC of cervical lymph node Post-ICI

A

B

C

D

E

Figure 2 A. H&E Stain of lymph node B. CD45 positive by IHC. C. CD3 positive by IHC D. CK negative by IHC. E. CD30 positive by IHC.

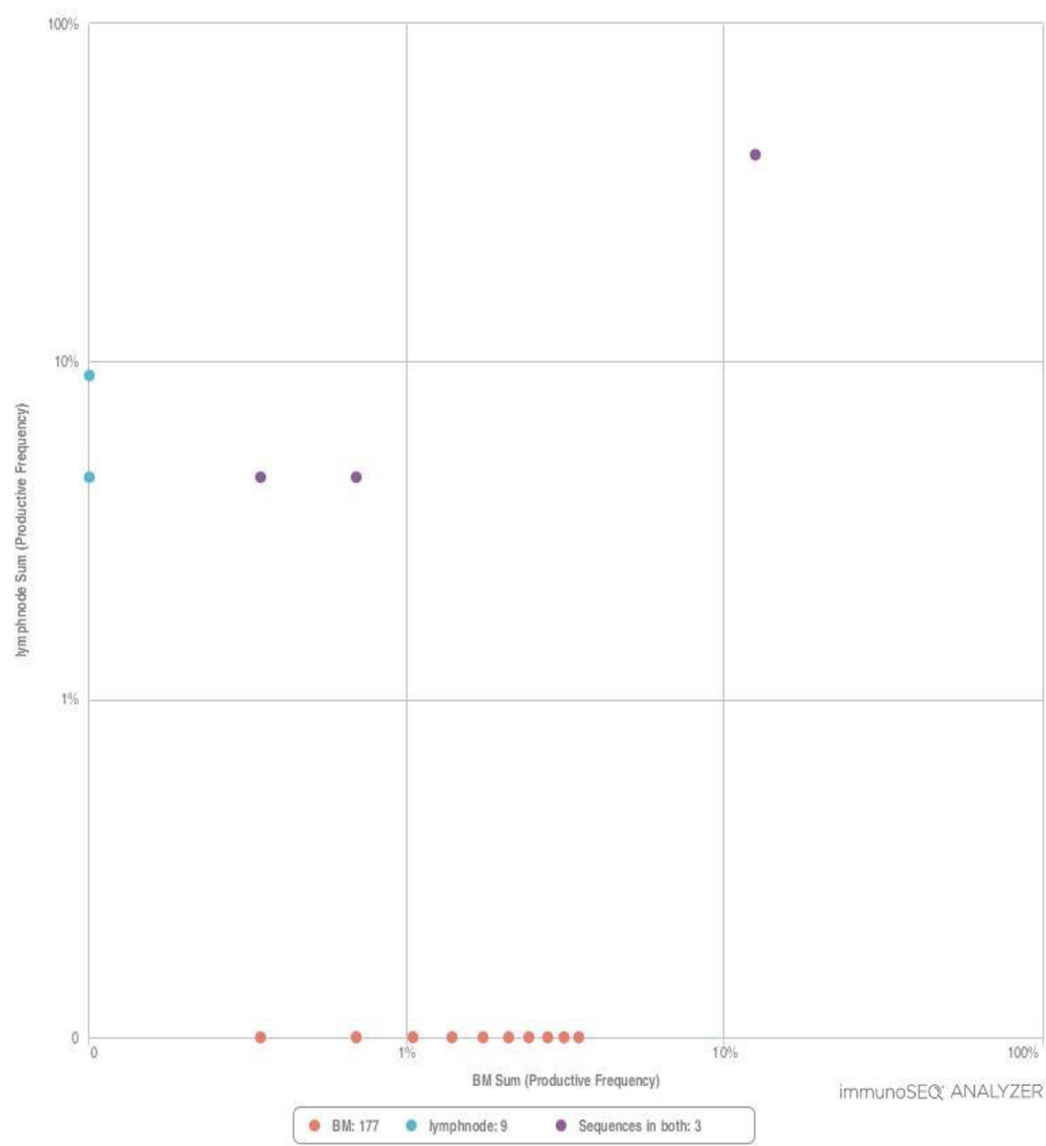Figure 3A. Scatter plot of rearrangements by TCRβ sequencing between lung and bone marrow sample.

Figure 3B. Scatter plot of rearrangements by TCRβ sequencing between lymph node and bone marrow sample.

Table 1. Mutations found on NGS on pleural biopsy prior to PD1 inhibitor

Mutation	Alteration
TP53	P71fs
CIC	R934W
ITK	V587I
LRP1B	V4109I
	G2474S
	T1043S
MECOM	Q351E
MYH9	E1960K
NKX2-1	A188fs
NUMA1	Y1836H
NUTM1	I739T
RECQL4	V652M
RPTOR	A826T
SMO	P641A
TRIM26	V136I
TRIM33	Q609X

Table 2. ROR calculation for risk of T-cell lymphoma due to CPI

Total AEs in FAERS from 2012-2018	10603289
Total AEs in FAERS for CPIs from 2012-2018 (Pembrolizumab, Nivolumab and Ipilimumab)	50445
Total AEs for T-cell lymphoma in FAERS from 2012-2018	1334
Total AEs for T-cell lymphoma sec to CPIs from 2012-2018	12
ROR for T-cell lymphoma sec to CPI vs other drugs in database	1.91 (95% CI 1.08-3.37)