Supplementary Tables

Supplement Table 1. Mechanisms of resistance to osimertinib in T790M+ve NSCLC (N=50)

Mechanisms of resistance		% (N)
***EGFR* aberrancy**	*T790M*-loss (N=32)*	50 (16/32)
	EGFR C797S	10 (5/50)
	Acquire *EGFR* mutations (*L792F*(1), *P848L/Q* (2))	6 (3/50)
Alternative common pathway mutations	*PIK3CA* mutation (*E545K, E542K, H1047R*)	14 (7/50)
	HER2 mutation	10 (5/50)
	FGFR mutation	10 (5/50)
	BRAF mutation (*V600A*(1), *N581S*(1), *F595L*(2))	8 (4/50)
	RET mutation	8 (4/50)
	KIT mutation	8 (4/50)
	NRAS mutation	6 (3/50)
	HRAS mutation	6 (3/50)
	FGFR3 mutation	6 (3/50)
Amplification	*CDK4* amplification	6 (3/50)
	HER2 amplification	6 (3/50)
	EGFR amplification	6 (3/50)
	MET amplification	2 (1/50)
	CDK6 amplification	2 (1/50)
	CDK3 amplification	2 (1/50)
SNV	*MET exon 14 skipping*	4 (2/50)
Other uncommon pathways	*TP53* mutation	16 (8/50)
	PTEN mutation	6 (3/50)
	AR mutation	6 (3/50)
	IDH2 mutation	6 (3/50)
	FBXW7 mutation	6 (3/50)
	NTRK mutation	4 (2/50)
	FGFR1 mutation	4 (2/50)
	GNAS mutation	4 (2/50)
	HER3 mutation	2 (1/50)

	AKT mutation	2 (1/50)
	MAP2K1 mutation	2 (1/50)
	ALK mutation	2 (1/50)
	FLT3 mutation	2 (1/50)
	CHEK2 mutation	2 (1/50)
	SMO mutation	2 (1/50)
	DDR2 mutation	2 (1/50)
Others (tissue biopsy)	Small cell transformation	2 (1/50)

*EGFR T790M loss used N=32 due to EGFR T790M was detected in only 32 patients by NGS

Supplement Table 2. Time to detect *T790M* compare from the option of treatments

	n (%)	**Median time to detect *T790M* (mo)**
1st gen EGFR-TKI	42 (84)	14.5 (11.0–17.4)
2nd gen EGFR-TKI	2 (4)	9.6 (8.1-18.7)

	N (%)	**Median time to detect *T790M* (mo)**
Gefitinib followed by osimertinib	25 (50)	14.6 (11.0–17.4)
Erlotinib followed by osimertinib	12 (24)	12.8 (10.3–17.69)
Afatinib followed by osimertinib	5 (10)	9.6 (8.1–18.7)

Supplement Table 3. Association between type of mutation and metastatic organ before treatment with osimertinib (P-value)

	***T790M*- loss**	***PIK3CA mu***	***C797S***	***HER2 mu***	***FGFR2 mu***	***BRAF mu***
Lung	1.00	1.00	1.00	0.59	0.60	0.28
Pleura	0.65	1.00	0.57	0.57	0.22	1.00
Brain	0.04	1.00	0.58	0.58	0.58	1.00
Liver	0.23	1.00	0.42	1.00	0.42	1.00
Bone	0.29	0.23	1.00	0.34	1.00	0.13
Adrenal	1.00	0.25	1.00	1.00	1.00	1.00
Other	1.00	0.58	0.01	1.00	1.00	1.00

Supplement Table 4. Association between types of mutation and metastatic organs after treatment with osimertinib (P-value)

	T790M loss	PIK3CA mu	C797S	HER2 mu	FGFR2 mu	BRAF mu
Lung	1.00	1.00	1.00	0.64	0.64	1.00
Pleura	1.00	0.17	0.31	0.31	1.00	0.56
Brain	0.48	1.00	1.00	0.28	0.28	0.01
Liver	1.00	1.00	0.30	1.00	0.57	0.56
Bone	0.17	1.00	0.58	1.00	0.58	1.00
Adrenal	1.00	0.14	1.00	1.00	1.00	1.00
Other	0.48	1.00	0.19	1.00	1.00	1.00

Supplement Table 5. Subsequence treatment after progression to osimertinib

	N	%
Chemotherapy alone	23	46
No treatment	12	24
Chemo + TKI	6	12
Continue osimertinib + RT	5	10
Afatinib	1	2
Chemo + IO	1	2
RT alone + IT MTX	1	2
Carbo/Pac/Bev/Atezo	1	2