Supplementary Table S8. Repetitive tests with discordant results

			Material	Diagnosis	Test result	TKI Tx	Best response (TTD, mo)	Note
Primary	Lung	PCNB	FFPE block	Adenocarcinoma	not identified			
Primary	Lung	Lobectomy	FFPE block	Adenocarcinoma, acinar predominant	Exon19del	Gefitinib	SD (NR, 30+) ^b	
Primary	Lung	Lobectomy	FFPE block	Adenocarcinoma, acinar predominant	G719X			
Metastatic	Pleura	VATS Bx	FFPE block	Metastatic adenocarcinoma	not identified	Afatinib	PD (3)	Mutation not detected in an earlier biopsy
Primary	Lung	PCNB	FFPE block	Adenocarcinoma with mucinous differentiation	not identified			
Primary	Lung	PCNB	FFPE block	Adenocarcinoma, mucinous type	Exon19del	Erlotinib	SD (ND, 2)	Mutation not detected by NGS
Primary	Lung (RUL)	Lobectomy	FFPE block	Adenocarcinoma, acinar predominant	L858R			
Metastatic	Lung (LUL)	Wedge resection	FFPE block	Metastatic adenocarcinoma with solid and signet ring cell feature	not identified	Not done		ALK IHC+ (overexpression) observed in both specimens
Metastatic	Lymph node	PCNB	FFPE block	Metastatic adenocarcinoma	Exon19del			
Metastatic	Spine	Tumorectomy	FFPE block (decalcified)	Metastatic adenocarcinoma	not identified	Gefitinib	PR (6)	
Metastatic	Lymph node	EBUS-TBNA Bx	FFPE block	Metastatic adenocarcinoma	Exon20ins L858R			1050D (1) 14 (1)
Metastatic	Pleura	Pleurectomy	FFPE block	Metastatic adenocarcinoma	L858R	Gefitinib I	PR (20)	L858R (only) detected in plasma test
Metastatic	Pleura	VATS Bx	FFPE block	Metastatic adenocarcinoma	G719X S768I			
Metastatic	Liver	PCNB	FFPE block	Metastatic adenocarcinoma	G719X	Afatinib	SD (7)	
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TKI, tyrosine kinase inhibitor; Tx, therapy; TTD, time to treatment discontinuation; PCNB, percutaneous needle biopsy; FFPE, formalin-fixed paraffin-embedded; SD, stable disease; NR, not reached; VATS, video-assisted thoracoscopic surgery; Bx, biopsy; PD, progressive disease; ND, not detected; ALK, anaplastic lymphoma kinase; IHC, immunohistochemistry; PR, partial response; EBUS-TBNA, endobronchial ultrasound-transbronchial needle aspiration.

aSub numbers in chronological order; bGefitinib was used for diffuse pleural thickening with mild hypermetabolism which was not definite for metastasis.