

Performance of EGFR mutation specific antibodies (clones 43B2 and 6B6) vs. molecular analysis

Study		.858R	Ex19del			
	Sensitivity Specificity		Sensitivity	Specificity		
Yu et al.	92%	99%	86%	100%		
	(24 of 26)	(193 of 195)	(23 of 26)	(196 of 196)		
Kawahara et	83%	100%	62%	100%		
al.	(19 of 23)	(16 of 16)	(13 of 21)	(16 of 16)		
Kato et al. (9 of 12)		97%	50%	100%		
		(56 of 58)	(9 of 18)	(52 of 52)		
Brevet et al.	95%	99%	74%	99%		
	(20 of 21)	(171 of 173)	(23 of 31)	(161 of 163)		
Fan et al.	93%	100%	74%	99%		
	(40 of 43)	(126 of 126)	(17 of 23)	(145 of 146)		
Bondgaard et	80%	98%	63%	99%		
al.	(8 of 10)	(152 of 155)	(12 of 19)	(153 of 155)		

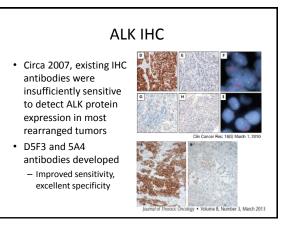
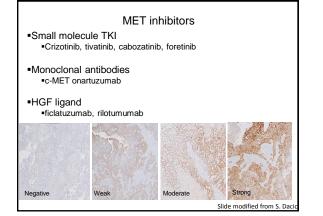


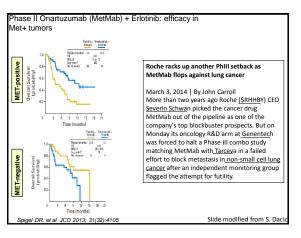
TABLE 2. Correlation	on Between ALK	IHC and ALK FIS	H in Cases St	udied by Bot	h Techniques	for the Curr	ent and Publi	ished
studies			IHC Negative		IHC Positive		IHC Doubtful (Equivocal)	
	Antibody	Total Cases Studied	FISH-	FISH+	FISH-	FISH+	FISH-	FISH +
This study	5.44	373	326	0	0	18	29	0
Published studies								
Rodig et al.20	ALK1	243	233	2	0	8		
Yi et al. ¹⁰	ALK1	101	69	0	22	10	-	_
Paik et al.12	5A4	640	602	0	10	28	-	_
Park et al.19	5A4	262	234	0	3	25	_	_
McLeer-Florin et al.2	5A4	81	59	0	1	19	0	2
Zhang et al.21	SP8	130	110	0	0	15		
Sholl et al.22	5A4	176	162	1	0	13	-	_
Minca et al.10	D5F3	249	217	0	0	32	-	_
Selinger et al.23	ALK1/D5F3	587	581	0	6	7	_	_
Martinez et al.º	D5F3	79	73	0	1	5	-	_
Takamochi et al.24	5A4	360	347	0	3	10	-	-
Total		2908	2687	3	73	172	0	2

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A	.K translocatio	ons in Lung Ad Clinical FISH	enocarcino I and/or IH	ma C	
		ALK +	ALK -	1	
	ALK	25*	0	Sensitivity 96%	NGS and IHC informative in case that fail FISH testing.
Onconanel	Fusion +				
Oncopanel		1 26	190 190	Specificity 100%	

		holl et al. AJSP 20	-	ROS1 IHC 04D6 antibody)
Reference	Notes			
Sholl et al. 2013	210	100	92	Focal expression in a KRAS- mutated tumor Strong expression in a FISH negative tumor
Mescam-Mancini et al. 2014	221	L 100 96.9		Expressed in two HER2- mutated tumors
Cha et al. 2014	330	100	72.6-93.4*	ROS1 expression seen in ROS1 WT tumors from ever-smokers
Boyle et al. 2014	33	100	100	As compared to FISH or RT-PCR

CALIFIC THE REAL PROPERTY.	RET IHC Clinical performance of available antibodies is variable										
	Reference	Clone	IHC pattern		RET N	WT N	Sensitivity	Specificity			
	Tsuta et al. 2014	EPR2871	Any	FISH or RTPCR	21	1774	66.7	86.1			
	Lee et al. 2014	ab134100	Any	Transcript profiling or FISH	15	79	100	87.3			
		3F8	Any	RTPCR	3	154*	100	70.3			
	Sasaki et al.	EPR2871	Any	RTPCR	3	75	100	33.3			
	2014	EPR2871	Mod to strong only	RTPCR	3	75	66.7	77.3			





Wait, there's more ...

- Other mutation-specific antibodies
 BRAF VE1
- Tumor suppressor genes- "predictive" IHC
 - PTEN
 - LKB1
- Resistance mechanisms- ALK and ROS1 targeted therapies
 - Role for re-biopsy?
- Immunotherapy – PDL1 IHC
 - Neoantigen burden

