

**Table S1 : Characteristics of patients with ALK rearrangements or with discordant IHC/FISH data; response to crizotinib was recorded when available**

gender	age	centre nb	smoking habit	stage	treatment	crizotinib response	% of tumoral cells	nb of tumor cells analysed by FISH	% of positive nuclei	ALK FISH	Others mutations (EGFR, K-Ras, Her2, PI3KCA, Braf)	ALK qRTPCR	ALK IHC
F	74	1	non-smoker		unknown		60	141	63	ALK rearrangement	wt	wt	positive
F	65	1	non-smoker		<b>crizotinib</b>	response		100	75	ALK rearrangement	wt	wt	positive
F	81	1	non-smoker		no crizotinib		90	100	85	ALK rearrangement	wt	variant 2	positive
F	17	1	non-smoker		<b>crizotinib</b>	partial response	30	100	45	ALK rearrangement	wt	variant 1	positive
F	65	1	unknown		no crizotinib	dead	62	61	65	ALK rearrangement	wt	wt	positive
M	63	1	non-smoker		<b>crizotinib</b>	response	30	103	66	ALK rearrangement	wt	wt	positive
F	69	1	non-smoker		no crizotinib		34	96	37	ALK rearrangement	wt	variant 3a	positive
M	51	1	current smoker		<b>crizotinib</b>	response	45	97	65	ALK rearrangement	wt	variant 3a	positive
F	58	1	non-smoker		<b>crizotinib</b>	response	40	101	73	ALK rearrangement	wt	wt	positive
F	63	1	non-smoker		<b>crizotinib</b>	response	80	104	91	ALK rearrangement	wt	wt	positive
M	59	3	light-smoker	IIB	no crizotinib		50	64	64	ALK rearrangement	wt	NI	positive
F	63	3	unknown		<b>crizotinib</b>	response	50	135	54	ALK rearrangement	wt	variant 1	positive
M	65	3	non-smoker	IB	no crizotinib		70	186	28	ALK rearrangement	wt	wt	positive
M	66	3	light-smoker	IV	<b>crizotinib</b>	response	20	157	75	ALK rearrangement	wt	NI	positive
M	46	3	non-smoker	IV	no crizotinib		70	154	21	ALK rearrangement	wt	variant 1	positive
F	72	3	non-smoker	IIIA	no crizotinib		70	109	77	ALK rearrangement	wt	NI	positive
M	71	3	light-smoker	IV	<b>crizotinib</b>	response	70	115	60	ALK rearrangement	wt		positive

F	62	3	non-smoker	IV	<b>crizotinib</b>	response	50	147	65	ALK rearrangement	wt	variant 3a	positive
F	53	3	non-smoker	IIIB	<b>crizotinib</b>	unknown	50	70	98	ALK rearrangement	wt		positive
M	48	3	non-smoker	IV	<b>crizotinib</b>	response	80	137	93	ALK rearrangement	wt	variant 3a	positive
F	61	3	non-smoker	IV	<b>crizotinib</b>	response	50	124	79	ALK rearrangement	wt	variant 3a	positive
F	49	5	unknown		unknown		90	60	68	ALK rearrangement	unknown	variant 5, 3a	positive
F	31	5	Inconnu	IA	unknown		90	60	36	ALK rearrangement	unknown	variant 2	positive
F	54	5	current smoker	IA	unknown		70	60	38	ALK rearrangement	unknown	variant 2	positive
F	49	5	current smoker	IIA	<b>crizotinib</b>	response	60	60	38	ALK rearrangement	unknown	wt	positive
M	33	6	light-smoker		<b>crizotinib</b>	response	50	100	60	ALK rearrangement	unknown	variant 3a	positive
M	64	6	smoker		no crizotinib		70	100	40	ALK rearrangement	unknown	variant 1	positive
M	67	6	former smoker		no crizotinib		40	100	60	ALK rearrangement	unknown	wt	positive
M	58	6	non-smoker		unknown		60	100	80	ALK rearrangement	unknown		positive
M	74	6	unknown		no crizotinib		50	100	70	ALK rearrangement	unknown		positive
F	65	6	unknown		no crizotinib		60	100	50	ALK rearrangement	unknown		positive
F	68	6	non-smoker		unknown		100	100	80	ALK rearrangement	unknown	variant 1	positive
M	49	6	current smoker		no crizotinib		20	100	40	ALK rearrangement	unknown	NI	positive
F	34	6	unknown		<b>crizotinib</b>	response		100	60	ALK rearrangement	unknown	variant 2	positive
M	44	6	current smoker	IV	<b>crizotinib</b>	response	45	100	90	ALK rearrangement	unknown	wt	positive
F	49	6	light-smoker		<b>crizotinib</b>	response	30	100	40	ALK rearrangement	unknown	variant 1	positive
M	73	6	former smoker		unknown		80	100	80	ALK rearrangement	unknown	variant 1	positive

F	66	6	non-smoker		no crizotinib		60	100	60	ALK rearrangement	unknown		positive
M	65	6	former smoker		unknown		50	100	80	ALK rearrangement	unknown	wt	positive
F	44	2	non-smoker	IIIA	no crizotinib	chemo	40	70	31	ALK rearrangement	wt	wt	positive
F	73	2	non-smoker	IIIA	no crizotinib	chemo	80	80	93	ALK rearrangement	wt	variant 3a	positive
F	54	2	non-smoker	IIIB	<b>crizotinib</b>	stable	70	78	100	ALK rearrangement	wt	wt	positive
M	57	2	current smoker	IV	<b>crizotinib</b>	response	50	81	59	ALK rearrangement	wt	variant 3a	positive
M	42	2	current smoker	IV	no crizotinib	chemo	20	68	70	ALK rearrangement	wt	wt	positive
F	74	2	non-smoker	IIIA	unknown		50	84	33	ALK rearrangement	wt	variant 1	positive
F	66	2	non-smoker		<b>crizotinib</b>	response	70	84	61	ALK rearrangement	wt	variant 5, 7	positive
M	67	2	non-smoker	IB	no crizotinib	dead	60	60	53	ALK rearrangement	wt	variant 2	positive
M	41	4	non-smoker	IV	no crizotinib		30	50	96	ALK rearrangement	wt	wt	positive
M	74	4	light-smoker	IIA	no crizotinib		50	101	55	ALK rearrangement	wt	wt	positive
F	58	4	non-smoker	IV	no crizotinib		50	60	51	ALK rearrangement	wt	variant 1	positive
F	40	4	non-smoker	IA	no crizotinib		80	92	38	ALK rearrangement	wt	variant 3a	positive
M	54	4	non-smoker	IV	no crizotinib		40	215	68	ALK rearrangement	wt	variant 1, 2	positive
F	41	4	non-smoker	IV	no crizotinib		30	163	68	ALK rearrangement	wt	variant 2	positive
M	81	4	non-smoker	IIA	no crizotinib		30	69	50	ALK rearrangement	wt	variant 1	positive
M	72	4	non-smoker	IV	no crizotinib		30	50	80	ALK rearrangement	wt	wt	positive
F	67	4	non-smoker	IA	no crizotinib		50	50	66	ALK rearrangement	wt	wt	positive
M	70	4	non-smoker	IV	no crizotinib		40	50	24	ALK rearrangement	wt		positive

F	76	4	non-smoker	IV	no crizotinib		80	112	50	ALK rearrangement	wt	variant 1	positive
F	64	4	current smoker	IA	no crizotinib		60	50	70	ALK rearrangement	wt	variant 3a	positive
F	39	4	non-smoker	IV	no crizotinib		30	50	86	ALK rearrangement	wt	variant 3a	positive
F	79	9	non-smoker	IB	unknown		80	196	29	ALK rearrangement	unknown	NI	positive
M	69	9	non-smoker	IV	<b>crizotinib</b>		20	88	21	ALK rearrangement	wt	variant 1	positive
F	78	9	non-smoker	IV	no crizotinib	dead	70	91	27	ALK rearrangement	unknown	variant 3a	positive
M	58	9	current smoker	IA	no crizotinib		100	134	44	ALK rearrangement	unknown	wt	positive
F	61	9	former smoker	IA	<b>crizotinib</b>		80	139	49	ALK rearrangement	unknown		positive
M	52	12	current smoker	IA			50	60	93	ALK rearrangement	wt	variant 1	positive
F	49	12	unknown	IA			60	50	90	<b>Polysomy</b>	wt	variant 1	positive
F	86	11	unknown	IV	unknown		60	50	56	ALK rearrangement	wt	variant 3a	positive
F	53	11	unknown	IV	unknown		80	50	62	ALK rearrangement	wt	variant 3a	positive
F	64	11	non-smoker	IV	no crizotinib	chemo	50	50	74	ALK rearrangement	wt		positive
M	34	11	non-smoker	IV	<b>crizotinib</b>	response	70	30	89	ALK rearrangement	wt	variant 1	positive
F	50	11	non-smoker	IV	no crizotinib	dead	80	75	74	ALK rearrangement	wt	variant 1	positive
F	66	11	non-smoker	IV	<b>crizotinib</b>	response	70	50	84	ALK rearrangement	wt	variant 1	positive
F	73	11	non-smoker	IIIB	no crizotinib	chemo	90	50	80	ALK rearrangement	wt	variant 3a	positive
F	43	11	non-smoker	IV	<b>crizotinib</b>	response	30	50	94	ALK rearrangement	wt		positive
F	69	11	non-smoker	IV	unknown		40	50	86	ALK rearrangement	wt	variant 1	positive
M	45	11	unknown	IVA	no crizotinib	chemo	50	58	58	ALK rearrangement	wt	variant 1	positive
F	62	11	non-smoker	IV	no crizotinib	chemo	50	50	64	ALK	wt		positive

Sex	Age	Smoking	Stage	Treatment	Response	OS (%)	OS (%)	OS (%)	Genotype	Variant	Outcome		
F	74	11	non-smoker	IV	<b>crizotinib</b>	response	20	50	46	rearrangement	wt	variant 2	positive
F	73	11	non-smoker	IIIA	no crizotinib	dead	50	50	96	rearrangement	wt		positive
M	56	10	former smoker	IIA	unknown		80	100	70	rearrangement	wt	wt	positive
F	58	10	unknown	IIB	unknown		70	100	60	rearrangement	wt	variant 5	positive
F	40	10	unknown		<b>crizotinib</b>	response	30	100	70	rearrangement	wt	wt	positive
M	41	10	unknown	IIB	unknown		90	100	80	rearrangement	wt	variant 1	positive
F	40	10	unknown		unknown		30	100	70	rearrangement	wt		positive
M	40	10	unknown	IVB	<b>crizotinib</b>	response	80	100	40	rearrangement	wt	wt	positive
F	71	10	unknown	IV	unknown		70	100	50	rearrangement	wt	wt	positive
M	72	10	unknown	IV	unknown		30	100	35	rearrangement	wt	variant 1	positive
M	80	10	unknown	IIIB	unknown		70	100	55	rearrangement	wt	variant 1	positive
F	56	10	current smoker	IIA	unknown		60	100	40	rearrangement	wt		positive
F	49	10	light-smoker	IA	unknown		70	100	60	rearrangement	wt	variant 1	positive
F	57	10	former smoker	IIA	unknown		70	100	90	rearrangement	wt	variant 3a	positive
F	35	10	light-smoker	IV	<b>crizotinib</b>	response	80	100	40	rearrangement	wt	wt	positive
F	67	10	unknown	IV	unknown		75	100	60	rearrangement	wt	variant 3a	positive
F	62	10	current smoker	IIB	<b>crizotinib</b>	response	90	100	80	rearrangement	wt	variant 3a	positive
M	54	10	unknown	IV	unknown		60	100	60	rearrangement	wt	variant 3a	positive
F	69	10	unknown	IIIA	unknown		20	100	50	rearrangement	wt	variant 3a	positive
M	69	10	current smoker	IB	unknown		80	100	70	ALK	wt	wt	positive

										rearrangement			
M	67	13	non-smoker	IV	no crizotinib		30	100	74	ALK rearrangement	wt	variant 1	positive
M	58	13	current smoker	IV	no crizotinib		70	123	36	ALK rearrangement	wt	variant 1	positive
F	49	13	light-smoker	IIIA	no crizotinib		80	100	82	ALK rearrangement	wt	variant 3a	positive
F	82	13	non-smoker	IV	no crizotinib		20	100	25	ALK rearrangement	wt	variant 3a	positive
M	71	13	current smoker	IIIA	no crizotinib		70	100	57	ALK rearrangement	wt	variant 1	positive
M	34	13	non-smoker	IV	no crizotinib		50	195	28	ALK rearrangement	wt	variant 3a	positive
F	53	13	non-smoker	IIIA	no crizotinib		80	100	85	ALK rearrangement	wt	variant 1	positive
F	48	13	non-smoker	IIIA	no crizotinib		80	100	64	ALK rearrangement	wt	variant 2	positive
M	74	13	non-smoker	IIIA	no crizotinib		70	40	100	ALK rearrangement	wt	variant 3a	positive
F	65	13	non-smoker	IV	no crizotinib		60	100	85	ALK rearrangement	wt	wt	positive
F	69	13	non-smoker	IIIA	no crizotinib		80	17	100	ALK rearrangement	wt	wt	positive
M	30	7	light-smoker	IIIA	<b>crizotinib</b>	response	70	60	86	ALK rearrangement	unknown	wt	positive
F	44	7	non-smoker	IIA	<b>crizotinib</b>	response		60	96	ALK rearrangement	unknown	wt	positive
M	47	7	non-smoker	IV	<b>crizotinib</b>	response	30	60	66	ALK rearrangement	unknown	wt	positive
F	47	7	unknown	IIA	unknown		90	60	91	ALK rearrangement	unknown	wt	positive
F	67	7	current smoker	IIIA	unknown		100	60	89	ALK rearrangement	unknown	variant 3a	positive
M	70	7	light-smoker	IV	<b>crizotinib</b>	response	60	60	44	ALK rearrangement	unknown	variant 3a	positive
F	55	7	unknown		unknown		90	60	81	ALK rearrangement	unknown	wt	positive
M	52	7	non-smoker	IIIA	no crizotinib	surgery	90	60	70	ALK rearrangement	unknown	wt	positive
M	56	10	former smoker	IIA	unknown		80	100	70	ALK	unknown	wt	positive

F	79	9	non-smoker	IB	unknown		80	196	29	rearrangement ALK rearrangement	unknown	NI	positive
F	56	7	non-smoker	IV	<b>crizotinib</b>	response	40	60	85	rearrangement	unknown	wt	positive
F	47	11	current smoker	IV	unknown		40	75	10	no ALK rearrangement	unknown	wt	<b>positive</b>
M	57	11	current smoker	IV	unknown		90	50	10	no ALK rearrangement	unknown	wt	<b>positive</b>
F	83	1	non-smoker		unknown		30	100	10	no ALK rearrangement	wt	wt	negative
M	74	10	unknown	IIIA	unknown		70	100	10	no ALK rearrangement	unknown	NI	negative
M	62	11	current smoker	IVA	unknown		80	100	10	<b>Polysomy</b> no ALK	unknown	wt	<b>positive</b>
F	61	6	unknown		unknown		60	100	10	rearrangement no ALK	unknown	variant 1	<b>positive</b>
M	77	10	unknown	IVA	unknown		80	80	12	rearrangement no ALK	unknown	wt	<b>positive</b>
M	86	13	light-smoker	IA	unknown		90	100	12	rearrangement no ALK	K ras	wt	<b>positive</b>
M	57	1	former smoker		unknown		35	100	13	rearrangement no ALK	unknown	wt	<b>positive</b>
M	76	7	current smoker	IIIA	unknown		80	60	13	rearrangement no ALK	unknown	wt	negative
F	70	2	non-smoker	IIIB	unknown		80	97	14	rearrangement no ALK	wt		<b>positive</b>
M	69	10	unknown		unknown		80	62	14	rearrangement	unknown	wt	negative
F	65	10	former smoker	IVA	unknown		80	62	16	ALK rearrangement	unknown	wt	positive
M	63	10	unknown	IV	unknown		80	61	16	ALK rearrangement	unknown	wt	<b>negative</b>
M	59	10	unknown		unknown		80	60	17	ALK rearrangement	unknown	wt	<b>negative</b>
F	52	10	unknown	IIA	unknown		70	60	18	ALK rearrangement	unknown	wt	<b>negative</b>
F	62	4	current smoker	IV	no crizotinib		70	50	18	ALK rearrangement	unknown	wt	positive
M	54	4	non-smoker	IV	no crizotinib		50	50	18	ALK rearrangement	unknown	wt	<b>negative</b>

F	65	10	unknown		unknown		70	63	19	ALK rearrangement	unknown	wt	positive
M	54	9	non-smoker	IV	no crizotinib	chemo	70	217	19	ALK rearrangement	unknown	variant 1	positive
M	53	6	current smoker		<b>crizotinib</b>	response	80	100	20	ALK rearrangement	unknown		positive
F	50	12	current smoker	IIIA	unknown		10	111	19	ALK rearrangement	<b>K ras</b>	wt	positive
F	80	10	unknown	IIIA	unknown		70	100	20	ALK rearrangement	unknown		positive
M	65	10	unknown	IIB	unknown		70	100	20	ALK rearrangement	<b>wt</b>	wt	<b>negative</b>
M	62	10	unknown	IV	unknown		30	60	20	ALK rearrangement	unknown	wt	<b>negative</b>
M	65	6	current smoker		unknown		95	100	30	ALK rearrangement	unknown		<b>negative</b>
M	64	10	unknown	IVA	unknown		60	59	22	ALK rearrangement	unknown	wt	<b>negative</b>
M	72	10	former smoker	IB	unknown		80	100	40	ALK rearrangement	unknown	wt	<b>negative</b>
M	56	13	former smoker	IIIA	unknown		20	100	54	ALK rearrangement	wt	wt	<b>negative</b>
M	53	10	unknown	IV	unknown		25	100	60	ALK rearrangement	unknown	wt	<b>negative</b>
M	82	6	current smoker		unknown		75	100	70	ALK rearrangement	unknown	variant 1	<b>negative</b>
M	66	11	unknown		unknown		70	50	92	ALK rearrangement	unknown	variant 1	<b>negative</b>
M	78	1	former smoker		unknown		81	0	NA	non interpretable	K ras	wt	negative
F	59	3	current smoker	IV	unknown		30	0	NA	non interpretable	unknown	wt	negative
F	87	3	non-smoker	IIIA	unknown		20	0	NA	non interpretable	unknown	wt	negative
F	77	3	non-smoker	IIIA	unknown		70	0	NA	non interpretable	unknown	wt	negative
M	60	3	unknown	IA	unknown		10	0	NA	non interpretable	unknown	wt	negative
M	66	10	unknown	IV	unknown		50	0	NA	non interpretable	unknown	variant 1	positive
F	64	5	unknown		<b>crizotinib</b>	response	40	0	NA	non interpretable	unknown	variant 2	positive