

Table 1. Summary of all the fusion+ cases

Tumor Type	Gene fusion by Archer	Number of Cases	Gender	Median Age at Diagnosis	Locations	Confirmation by FISH, NGS or RT-PCR
Alveolar Soft Part Sarcoma	ASPCR1-TFE3	2	F	24	Extremity	not done
Clear cell sarcoma of soft tissue	EWSR1-ATF1	1	F	63	Chest wall	FISH+
Desmoplastic small round cell tumor	EWSR1-WT1	1	M	47	Abdomen	not done
DFSP, fibrosarcomatous transformation	COL1A1-PDGFB	1	M	67	Leg	not done
Ewing sarcoma	EWSR1-ERG	5	5F, 9M	28	Head and neck, trunk, pelvis&viscera, extremity, dura, mediastinum	3 FISH+, 1 not done, 1 FISH-
	EWSR1-FLI1	5				2 FISH+, 1 NGS+, 3 not done
	EWSR1-PATZ1	1				EWSR1 FISH-, NGS+
	FUS-FEV	2				1 FISH+, 1 not done
	FUS-ERG	1				FISH+
Ewing-like sarcoma (undifferentiated round cell sarcoma)	BCOR-CCNB3	3	7F, 3M	27.5	Head and neck, trunk, extremity, pelvis&viscera	1 FISH+, 2 not done
	CIC-CUX4	7				1 FISH+, 6 not done
Extraskeletal myxoid chondrosarcoma	EWSR1-NR4A3	1	2M	47	Thigh	1 FISH+, 1 not done
	TAF15-NR4A3	1				
Hemangioendothelioma, Epithelioid	WWTR1-CAMTA1	4	3F, 1M	39.5	Liver, mediastinum	1 FISH+, 2 not done
Hemangioendothelioma, Pseudomyogenic	ACTB-FOSB	2	1F, 1M	34.5	Shoulder, vertebra	1 FISH-, 1 not done
Infantile fibrosarcoma	ETV6-NTRK3	1	F	2	Cheek	FISH+
Inflammatory myofibroblastic tumor	ETV6-NTRK3	2	2F, 2M	18.5	Lung and chest wall	2 FISH+
	TFG-ROS1	1				FISH+, NGS+
	EML4-ALK	1				not done
	TPM3-NTRK1	1				not done
Lipofibromatosis-like neural tumor	LMNA-NTRK1	1	1F, 1M	50	Extremity	not done
	TPM3-NTRK1	1				not done
Liposarcoma, myxoid/round cell	FUS-DDIT3	3	1F, 2M	32	Thigh, scrotum	2 FISH+, 1 not done
Perivascular epithelioid cell tumor cell tumor	VCP-TFE3	1	M	69	Pancreas	FISH+
Rhabdomyosarcoma, alveolar	PAX3-FOXO1	5	5F, 2M	10	Extremity, head & neck	5 FISH+, 1 RT-PCR+, 1 not done
	PAX7-FOXO1	2				
Rhabdomyosarcoma, NOS	FUS-TFCP2	1	F	74	Oral mucosa	FISH+
Soft Tissue Myoepithelial tumor	TRPS1-PLAG1	1	1F, 1M	34	Soft tissue	1 FISH+, 1 not done
	CTNNB1-PLAG1	1			Sacral soft tissue	
Solitary Fibrous Tumor	NAB2-STAT6	9	4F, 5M	51	Head & neck, trunk abdomen, extremities	2 NGS+
Synovial sarcoma	SS18-SSX1	6	4F, 5M	39	Extremity, proximal limb, lung	6 FISH+, 3 not done
	SS18-SSX2	3				
Sarcoma, NOS	MYLK-BRAF	1	2F, 1M	49	Lung, abdomen	not done
	ZC3H7B-BCOR	1				not done
	TPM3-NTRK1	1				NGS+