

Experimental and patient derived sarcoma models (Sarcomas & Experimental Therapeutics group – ISPA –CIBERONC CB161200390 – Oviedo)

	Cell line	Description	Tumor type	2D culture	CSC enriched - 3D spheres (*)	In vivo xenograft	Reference (***)
MSC-derived sarcoma models	MSC-4H-FC	Human bone marrow-derived MSCs transformed with 5 oncogenic events: (hTERT overexpression / p53 deficiency / Rb deficiency/ c-myc stabilization / FUS-CHOP expression)	Myxoid liposarcoma	yes	yes	yes	Ref 1 (derivation); Ref 2 (3D culture); Refs 3, 4 & 5 (Research)
	T-4H-FC#3	MSC-4H-FC xenograft-derived line carrying 5 oncogenic events: (hTERT overexpression / p53 deficiency / Rb deficiency/ c-myc stabilization / FUS-CHOP expression)					
	MSC-5H-FC	Human bone marrow-derived MSCs transformed with 6 oncogenic events: (hTERT overexpression / p53 deficiency / Rb deficiency/ c-myc stabilization / RAS ^{v12} / FUS-CHOP expression)					
	T-5H-FC#1	MSC-5H-FC xenograft-derived line carrying 6 oncogenic events: (hTERT overexpression / p53 deficiency / Rb deficiency/ c-myc stabilization / RAS ^{v12} / FUS-CHOP expression)					
	BM-MSC-p53-Rb	Mouse bone marrow-derived MSCs KO for p53 and Rb	osteosarcoma	yes	n.d.	Yes (orthotopic or ectopic in hydroxyapatite ceramics)	Ref 6
	BM-MSC-p53	Mouse bone marrow-derived MSCs KO for p53					
	ASC-p53-Rb	Mouse adipose tissue-derived MSCs KO for p53 and Rb					
ASC-p53	Mouse adipose tissue-derived MSCs KO for p53						
Patient-derived cell lines **	CDS11	Primary cell line	chondrosarcoma	yes	yes	Yes (low incidence)	Ref 7
	T-CDS17#4	Primary cell line	chondrosarcoma		yes	Yes	
	CDS18	Primary cell line	chondrosarcoma		n.d.	n.d.	Ref 8
	OST3	Primary cell line	osteosarcoma		n.d.	n.d.	
	OST4						
	SYN01	Primary cell line	Biphasic synovial sarcoma		n.d.	n.d.	
	SARC06	Primary cell line	Undiff. pleomorphic sarcoma		yes	n.d.	
	SARC20	Primary cell line	Undiff. pleomorphic sarcoma		n.d.	n.d.	
	LMS01	Primary cell line	leiomyosarcoma		n.d.	n.d.	
Drug-resistant models	T-CDS17#4-Dox	Doxorubicin resistant primary cell line	chondrosarcoma	yes	yes	n.d.	
	OST3-Dox	Doxorubicin resistant primary cell line	osteosarcoma		n.d.	n.d.	
	143B-Dox	Doxorubicin resistant comercial cell line	osteosarcoma		yes	yes	
	MG63-Dox	Doxorubicin resistant comercial cell line	osteosarcoma		yes	yes	

n.d. – not determined

(*): clonally-formed floating tumorspheres tumors that are enriched in subpopulations presenting cancer stem cells features

(**): there are more cell lines being developed

(**) References:

1. Rodriguez R et al. Stem Cells. 2013; 31(10):2061-72. doi: 10.1002/stem.1472. PMID: 23836491

2. Martinez-Cruzado L et al. Sci Rep. 2016; 6:27878. doi: 10.1038/srep27878. PMID: 27292183
3. Tornin J et al. Oncotarget. 2016; 7(21):30935-50. doi: 10.18632/oncotarget.8817. PMID: 27105533
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6. Rubio R et al. Stem Cells. 2014; 32(5):1136-48. doi: 10.1002/stem.1647. PMID: 24446210
7. Rey V et al. J Clin Med. 2019;8(4):455. doi: 10.3390/jcm8040455. PMID: 30987403
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Experimental and patient derived sarcoma models (Head and Neck Cancer group – ISPA –CIBERONC CB161200390 – Oviedo)

	Cell line	Description	Tumor type	2D culture	CSC enriched - 3D spheres (*)	In vivo xenograft	Reference (***)
HNSCC-derived cell lines	FaDu	From the ATCC (ATCC® HTB-43™)	Pharyngeal squamous cell carcinoma	yes	yes	yes (both orthotopic and xenografts)	Ref 1
	Detroit 562	From the ATCC (ATCC® CCL-138™) Derived from metastatic site. Harbors PIK3CA-activating mutation H1047R	Pharyngeal carcinoma		n.d.	n.d.	
	CAFs**	Cancer-associated fibroblasts populations isolated from primary tumor samples	Primary fibroblasts from HNSCC patients		n.d.	n.d.	Ref 2,3,4
Resistant models	LSC1	Patient-derived cell line from primary HNSCC (T3N2c) Resistant to radio/chemotherapy	Laryngeal squamous cell carcinoma	no	No forming capacity	yes (both orthotopic and xenografts)	

n.d. – not determined

(*): clonally-formed floating tumorspheres tumors that are enriched in subpopulations presenting cancer stem cells features

(**): there are various subpopulations of CAFs isolated from different primary HNSCC

(***) References:

1. Hermida-Prado F, et al. The SRC Inhibitor Dasatinib Induces Stem Cell-Like Properties in Head and Neck Cancer Cells that are Effectively Counteracted by the Mithralog EC-8042. J Clin Med. 2019 Aug 2;8(8):1157. doi: 10.3390/jcm8081157. PMID: 31382448
2. Álvarez-Teijeiro S, et al. Factors Secreted by Cancer-Associated Fibroblasts that Sustain Cancer Stem Properties in Head and Neck Squamous Carcinoma Cells as Potential Therapeutic Targets. Cancers (Basel). 2018 Sep 17;10(9):334. doi: 10.3390/cancers10090334. PMID: 30227608
3. Villaronga MÁ, et al. Analysis of Invasive Activity of CAF Spheroids into Three Dimensional (3D) Collagen Matrices. Methods Mol Biol. 2018;1731:145-154. doi: 10.1007/978-1-4939-7595-2_14. PMID: 29318551

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