

Sample ID	Gender	Age	Pathology	Tissue type	Molecular subtype	TNM stage	Lesion	Organoid establishment
LU01	Male	69	Adenocarcinoma in situ	Biopsy	CK(+), TTF-1(+), P40(-), Ki-67(5%+), ALK(D5F3)TC(-), ALK(D5F3)NC(-)	pT1bN0Mx	Primary	Yes
LU02	Female	82	Squamous-cell carcinoma	Surgical specimen	CK(+), TTF-1(-), P40(+), P63(+), Ki-67(60%+)	pT1cN0Mx	Primary	Yes
LU03	Male	51	Invasive Adenocarcinoma	Surgical specimen	TTF-1(+), CK7(+), CK20(-), NapsinA(+), CK5/6(-), P40(-), Syn(-), CgA(-), CD56(-), ALK(D5F3)(-), Ki-67(5-10%+)	pT2aN2Mx	Primary	Yes
LU04	Female	60	Invasive Adenocarcinoma	Surgical specimen	CK(+), TTF-1(+), P40(-), Ki-67(10%+), ALK(D5F3)TC(-), ALK(D5F3)NC(-)	pT1bN0Mx	Primary	Yes
LU05	Female	61	Moderately differentiated Adenocarcinoma	Surgical specimen	TTF1(+), NapsinA(+), CK7(+), CK20(partially +), SATB2(-), CDX-2(-), CK5/6(-), p40(-), ALK(D5F3)(-), Ki-67(15-20%+)	pT2aN1Mx	Primary	Yes
LU06	Male	63	Small cell lung cancer	Biopsy	CK7(+), TTF1(+), CK5/6(-), P40(-), CgA(partially +), Syn(+), CD56(+), Ki-67(90%+)	Not Applicable	Primary	Yes
LU07	Male	67	Moderately differentiated invasive adenocarcinoma	Surgical specimen	CK(+), TTF-1(+), P40(-), Ki-67(5%+), ALK(D5F3)TC(-), ALK(D5F3)NC(-)	pT1cN0Mx	Primary	Yes
LU08	Female	69	Invasive Adenocarcinoma	Surgical specimen	CK7(+), CK20(-), TTF-1(+), NapsinA(+), CK5/6(-), P40(-), ALK(1A4)(-), Ki-67(2%+)	pT1cN0Mx	Primary	Yes
LU09	Male	76	Squamous-cell carcinoma	Surgical specimen	CK5/6(+), P40(+), P63(+), CK7(partially +), TTF-1(+), NapsinA(-), CK(+), mutated P53(-), Syn(-), CgA(-), ALK(-), Ki-67(80%+)	pT3N0Mx	Primary	Yes
LU10	Male	73	Squamous-cell carcinoma	Surgical specimen	CK(+), TTF-1(-), P40(+), Ki-67(70%+), ALK(D5F3)(-), ALK(D5F3)NC(-)	T1aNxMx	Primary	Yes
LU11	Male	58	Invasive Adenocarcinoma	Surgical specimen	CK(+), TTF-1(+), P40(-), Ki-67(8%+), ALK(D5F3)TC(-), ALK(D5F3)NC(-)	pT2aN0Mx	Primary	Yes
LU12	Male	77	Poorly Differentiated Adenocarcinoma	Surgical specimen	CK5/6(-), CK7(+), TTF-1(+), NapsinA(weak +), p40(-), SMARCA2(+), SMARCA4(+), INI-1(+), Ki-67(50-60%+), ALK(D5F3)(-), EBf	pT2aN1Mx	Primary	Low organoid formation
LU13	Male	69	Poorly differentiated invasive adenocarcinoma	Surgical specimen	CK(+), TTF-1(+), P40(-), Ki-67(30%+), ALK(D5F3)TC(-), ALK(D5F3)NC(-)	pT2N0Mx	Primary	Contamination
LU14	Male	83	Invasive Adenocarcinoma	Surgical specimen	CK(+), TTF-1(+), Ki-67(5%+), ALK(D5F3)TC(-), ALK(D5F3)NC(-), P40(-)	pT1bN0Mx	Primary	Contamination
LU15	Female	77	Invasive Adenocarcinoma	Surgical specimen	CK(+), TTF-1(+), CK7(+), NapsinA(+), P40(-), P63(-), CK20(-), ALK(D5F3)TC(-), ALK(D5F3)NC(-), Ki-67(20%+)	pT1cN0Mx	Primary	Yes
LU16	Male	79	Squamous-cell carcinoma	Surgical specimen	CK5/6(+), TTF-1(+), NapsinA(+), P40(+), ALK(1A4)(0), Ki-67(30%+)	pT2bN1Mx	Primary	Yes
LU17	Male	66	Squamous-cell carcinoma	Surgical specimen	TTF-1(-), CK7(-), P40(+), CK5/6(+), CgA(-), Syn(-), CD56(-), Ki-67(40%+)	pT1bN0Mx	Primary	Yes
LU18	Female	54	Invasive Adenocarcinoma	Surgical specimen	CK7(+), CK20(-), TTF-1(+), NapsinA(+), CK5/6(-), P40(-), ALK(-), Ki-67(20%+)	pT1cN0Mx	Primary	Yes
LU19	Male	69	Invasive Adenocarcinoma	Biopsy	PD-L1:TC(1%+)	T2aN3M1c IVb	Primary	Yes