



**Figure S1.** Two primary cell lines (SCC-73 and SCC-25) were not able to initiate own tubulogenesis in either Matrigel or Myogel, where they remained dispersed as round cell aggregates (A,  $40 \times 10^3$  cells; B,  $60 \times 10^3$  cells).

**Table S1. Patient-derived cell lines and their corresponding data.**

HNSCC cell line	Sex	Age (years)	TNM*	Site	Type	Grade	Passage**
UT-SCC-8	M	42	T2M0N0	Larynx	Pri	G1	51
UT-SCC-14	M	25	T3N1M0	Tongue	Pri	G2	33
UT-SCC-24A	M	41	T2N0M0	Tongue	Pri	G2	14
UT-SCC-24B	M	41	T2N1M0	Neck	Met	G2	15
UT-SCC-28#	F	48	T2N0M0	Floor of mouth	Pri	G1	30
UT-SCC-40	M	65	T3N0M0	Tongue	Pri	G1	10
UT-SCC-44	F	71	T4N2BM0	Gingiva	Pri	G3	33
UT-SCC-73	F	86	T1N0M0	Tongue	Pri	G2	16
UT-SCC-81	M	48	T2N0M0	Tongue	Pri	G1	16
UT-SCC-106A	M	37	T1N0M0	Larynx	Pri	G1	17

HNSCC, head and neck squamous cell carcinoma; M, male; F, female; Pri, primary tumour; Met, metastatic; TNM, tumour, lymph node, and distant metastasis staging. \*TNM is based on the pathology report. \*\*Indicates cell line passage number during the first experiment. # The primary tumour was treated with radiotherapy prior to the surgical resection.