parameter	symbol	value	unit
discretization parameters			
element size	Δx	2.5	μm
basic cellular Potts model parameters			
intrinsic cell motility	T	1	-
target volume	A(s)	50.264 *	pixels
		314.16	μm^2
strength of volume constraint	λ	500	-
cell-medium contact cost	J_{cm}	1.25	$pixelside^{-1}$
		0.5	μm^{-1}
cell-cell contact cost	J_{cc}	1.0	μm^{-1}
finite element parameters			
Young's modulus	E	0.5-32	kPa
Poisson's ratio	ν	0.45	-
thickness for 2D analysis	t	10	μm
accuracy level of solver	ψ	0.00001	-
cell traction model			
traction per unit length	μ	0.01 **	$nN\ \mu m^{-1}$
stretch guidance model			
maximum guidance term	$\lambda_{durotaxis}$	10	-
threshold for stiffness preference	E_θ	15	kPa
steepness of stiffness preference	β	0.5	kPa^{-1}
strain stiffening parameter	ε_{st}	0.1	-

* based on a cell diameter of 20μm
** leads to total cell traction around 300nN (1)

Table S1. Parameter settings of the simulation model