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# The role of spatial variations of abiotic factors in mediating intratumour phenotypic heterogeneity

Tommaso Lorenzi, Chandrasekhar Venkataraman, Alexander Lorz, Mark A.J. Chaplain

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**Highlights**

- A model of phenotypic heterogenity and selection in avascular solid tumours is presented
- We undertake a rigorous analysis and numerical simulations
- We examine the role played by the spatial distribution of abiotic components of the microenvironment in mediating phenotypic selection of cancer cells.
- The computational simulation results show that inhomogeneities in the spatial distribution of oxygen can promote the creation of distinct local niches

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