

# Analysis of Cahn–Hilliard–Brinkman models for tumour growth

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Tumour growth models have been successful in describing many phenomena relevant for medical applications. We will introduce phase field systems for tumour growth by coupling the Cahn–Hilliard equation to a diffusion equation for a nutrient. In addition, also a coupling to flow equations of Darcy–, Stokes– and Brinkman–type are discussed. We will present existence and uniqueness results, study sharp interface limits and briefly discuss patient specific parameter estimation using reduced order modeling.

## REFERENCES

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