Numerical Simulation of Growth Effects in the Human Liver

Motivation

• Numerical Multiscale Simulation of tumor growth in the liver using the Theory of Porous Media (TPM)
• Basis for clinical application

Possible topics (Bachelor’s or Master’s thesis)

• Investigation of the influence of boundary conditions on hepatic growth processes
• Parameter study to investigate the influence of various factors on growth processes
• Validation of simulation results with clinical data
• Extension of the model by one additional component

Prior knowledge of the following is of advantage:

• Numerical simulations
• FEM (Einführung in die FEM, Numerik)
• Programming experience

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Please don’t hesitate to contact us for further information.