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Overview of Modeling Techniques for Wound Healing

Recent advances in wound healing have occurred from many directions. ODE models are used to track variations in cell and chemical concentrations during the course of wound healing, to explore parameter sensitivity and to identify possible treatment therapies. PDE models are used to track blood vessel formation, investigate tissue matrix repair and to understand the spatial dynamics involved in the healing process. Agent based and stochastic models are used to investigate patient specific variables and to understand patient variability in wound healing outcomes. This talk will present an overview of the recent developments in the field and begin the conversation about how the different results can be combined into a comprehensive model.