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# Simulating the Evolution of Skin Melanoma using Heat Transfer

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## Simulating the Evolution of Skin Melanoma using Heat Transfer

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Melanoma is the most dangerous form of skin cancer. It originates from the epidermal layer of the skin and its severity determines how it evolves. Most melanomas begin by spreading horizontally within the epidermal layer before growing vertically into the dermis. We study the evolution of such a tumor by monitoring the heat profile that is generated at the surface of the skin directly above the tumor. We also investigate the effect on the steady state temperature at the skin surface of a tumor that is near large blood vessels. The model is governed by the Pennes equation.