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### **On the determination of the optimal radiation dose on a target tissue volume**

A key problem in radiotherapy consists in determining the appropriate dose to be delivered to a clinical target in order to achieve maximum efficiency over malignant tissue on the one hand, while at the same time sparing healthy tissue and organs at risk as much as possible. In this lecture a model problem will be presented and discussed to address that issue, and a number of consequences of the behaviour of the corresponding solutions will be discussed