The problem of estimating the probability of complication in an organ or tissue caused by radiation has been discussed in the literature and several models have been proposed (Schultheiss, Lyman, Jackson, Niemierko). However, practical implementation of these models and their employment for various organs have not been presented. A pseudocode allowing the assessment of the probability of complication for an inhomogeneous dose distribution using the Critical Volume NTCP model the will be presented. The model has four parameters (γ_{50} , D_{50} , μ and σ_{μ}). Two of them (γ_{50} and D_{50}) describe the dose response of a single functional subunit. μ is the population average functional reserve of the organ and σ_{μ} provides a measure of interpatient variability of μ. In order to obtain estimate values of the model parameters for different organs the data published by Emami et al have been used. The maximum likelihood method has been used to fit the Emami data to the Critical Volume model. As a result of the fit the parameter values for different organs have been obtained. Graphs illustrating the goodness-of-fit will be presented as well. The pseudocode consists of two parts. The first part can be used to obtain the maximum-likelihood parameters of the model from the clinical data. The second part is used to estimate NTCP from the organ of interest dose-volume histogram using either the parameters obtained in the first part of the code or the parameters provided with the code and obtained from fitting the Emami data.