

### Supplementary Material S1: NTCP Equation and Coefficients

Normal tissue complication probability (NTCP) was calculated as  $NTCP = \frac{1}{1+e^{-S}}$ , where  $S = \beta_0 + \sum_i(\beta_i \cdot x_i)$  [26]. The coefficients  $\beta$  for each dose value  $x$  are presented in Table A1 below. The primary tumor location for all patients was assumed to be in pharynx.

Table S1: Variable coefficients used to estimate the NTCP values [26].

VARIABLES	ENDPOINTS			
	Xerostomia after 6 months		Dysphagia after 6 months	
	Grade $\geq 2$	Grade $\geq 3$	Grade $\geq 2$	Grade $\geq 3$
Constant ( $\beta_0$ )	-2.2951	-3.7286	-4.0536	-7.6174
$\sqrt{D_{\text{mean}}(I. Parotid)} + \sqrt{D_{\text{mean}}(C. Parotid)}$	0.0996	0.0855		
$D_{\text{mean}}(Both Submandibulars)$	0.0182	0.0156		
$D_{\text{mean}}(Oral Cavity)$			0.0300	0.0259
$D_{\text{mean}}(PCM Sup)$			0.0236	0.0203
$D_{\text{mean}}(PCM Med)$			0.0095	0.0303
$D_{\text{mean}}(PCM Inf)$			0.0133	0.0341
Primary Tumor Location in Pharynx			-0.6281	0.0387