

Supplementary material for Servagi-Vernat S, et al. Hypoxia-guided adaptive radiation dose escalation in head and neck carcinoma. Acta Oncologica, 2015;54:1008–16.

Supplementary Appendix 1. Patient characteristics.

Patient no.	Tumor site	Tumor stage [#]	Primary tumor volume (ml)	Nodal stage [#]	Node location*
1	OP	4	14.2	3	Ib-II
2	L	2	2.4	0	-
3	L	2	2.5	2b	IIA-III
4	OP	2	14.9	2b	IIA
5	L	4b	52.9	2c	II-III
6	OP	2	31.5	2b	III
7	HP	3	12.4	2b	III-IVA
8	OP	4a	18.9	2b	II
9	HP	4	41.7	2c	III
10	HP	4a	73.0	2c	II-III
11	HP	2	29.5	1	II
12	HP	3	49.2	1	II

HP, hypopharynx; L, larynx; OP, oropharynx. *according to Robbins classification [44]; [#]UICC 7th edition, 2009 [45].

Supplementary Appendix 2. Dose distribution in the planning target volumes before treatment, after 7 fractions and after 17 fractions.

		Pre-treatment (Plan 1)		After 7 fractions (Plan 2)		After 17 fractions (Plan 3)	
		Mean	SD	Mean	SD	Mean	SD
PTV _{N 56Gy_ipsi}	D _{2%} (Gy)	68.13	0.95	70	2.16	72.59	5.85
	D _{5%} (Gy)	66.37	1.06	67	1.06	68.89	2.26
	D _{50%} (Gy)	56.01	0.10	56	0	56	0
	D _{95%} (Gy)	54.66	0.43	54.87	0.65	54.84	0.63
	D _{98%} (Gy)	53.75	0.94	54.06	0.92	53.82	0.67
PTV _{N 56Gy_contr}	D _{2%} (Gy)	64.56	4.40	63.67	4.23	63.41	4.33
	D _{5%} (Gy)	62.14	3.89	61.12	3.88	60.64	3.71
	D _{50%} (Gy)	55.96	0.15	56	0	56	0
	D _{95%} (Gy)	54.64	0.51	54.73	0.73	54.66	0.35
	D _{98%} (Gy)	53.81	0.98	53.95	1.14	53.77	0.66
PTV _{T 70Gy}	D _{2%} (Gy)	77.52	6.16	84.74	6.11	90.60	12.38
	D _{5%} (Gy)	76.59	6.24	83	6.76	87.93	13.18
	D _{50%} (Gy)	71.75	4.38	74.76	5.36	77.57	8.61
	D _{95%} (Gy)	67.60	0.58	67.60	0.82	68.38	2.18
	D _{98%} (Gy)	66.74	0.74	66.60	0.54	66.89	0.95
PTV _{N 70Gy_ipsi}	D _{2%} (Gy)	82.94	2.05	87.56	2.40	87.88	6.06
	D _{5%} (Gy)	81.27	2.68	85.79	3.25	85.57	6.31
	D _{50%} (Gy)	70.27	1.10	71.98	4.27	70.18	0.40
	D _{95%} (Gy)	67.73	0.38	67.64	0.79	67.63	0.49
	D _{98%} (Gy)	66.80	0.93	66.95	1.05	67.04	0.52
PTV _{N 70Gy_contr}	D _{2%} (Gy)	75.12	5.23	77.07	9.37	73	0
	D _{5%} (Gy)	73.40	3.55	74.85	6.40	72.80	0
	D _{50%} (Gy)	69.95	0.17	69.53	0.25	70	0
	D _{95%} (Gy)	68.64	0.45	68.15	1.17	69.70	0
	D _{98%} (Gy)	67.27	1.87	67.72	1.48	69.41	0
PTV _{T 86Gy}	D _{2%} (Gy)	88.17	0.37	89.80	0.67	97.42	0.25
	D _{5%} (Gy)	87.64	0.28	88.22	1.51	95.47	0.84
	D _{50%} (Gy)	85.90	0.11	86.20	0.21	86.69	0.63
	D _{95%} (Gy)	82.92	1.00	83.12	1.28	82.89	0.17
	D _{98%} (Gy)	82.17	1.13	82.42	1.61	81.96	0.35
PTV _{N 86Gy}	D _{2%} (Gy)	88.10	0.97	90.12	1.47	92.50	4.73
	D _{5%} (Gy)	87.62	0.77	89.31	1.15	91.21	3.78
	D _{50%} (Gy)	85.82	0.21	86.29	0.34	86.07	0.23
	D _{95%} (Gy)	83.17	1.02	83.69	1.14	83.40	0.79
	D _{98%} (Gy)	82.44	1.18	82.95	1.45	82.58	1.25
PTV _{T 89.95Gy}	D _{2%} (Gy)	–	–	93.07	1.61	98.78	0.92
	D _{5%} (Gy)	–	–	92.48	1.41	97.62	0.96
	D _{50%} (Gy)	–	–	89.86	0.16	90.40	0.52
	D _{95%} (Gy)	–	–	87.62	0.91	86.36	0.68
	D _{98%} (Gy)	–	–	87.01	1.10	85.42	0.79
PTV _{N 89.95Gy}	D _{2%} (Gy)	–	–	93.02	1.25	93.79	2.01
	D _{5%} (Gy)	–	–	92.47	1.09	93.25	2.04
	D _{50%} (Gy)	–	–	89.97	0.06	90.13	0.36
	D _{95%} (Gy)	–	–	87.69	0.83	87.72	0.71
	D _{98%} (Gy)	–	–	87.17	0.99	87.14	1.01
PTV _{T 101.15Gy}	D _{2%} (Gy)	–	–	–	–	105.46	1.15
	D _{5%} (Gy)	–	–	–	–	104.63	0.80
	D _{50%} (Gy)	–	–	–	–	101.15	0
	D _{95%} (Gy)	–	–	–	–	98.24	0.88
	D _{98%} (Gy)	–	–	–	–	96.87	0.23
PTV _{N 101.15Gy} [#]							

[#]No data as no newborn voxels were observed in the nodes after the 17th fraction.