

Supplementary Table S1. Anonymized clinical characteristics of interest as reported in patient notes from institutional database.

Patient	CR/PR	Age	Sex	Laterality	Biopsy description of disease	Location (Primary Mass)	HPV Status	Stage	Lymph Node	Chemotherapy Type	Radiation regimen	Smoking Habit	Alcohol Consumption
1	PR	52	M	Right Neck	Loc. Adv. Squamous cell	Base of Tongue	P16+	T3 N2c	Level III	Cisplatin	70gy 33 fractions	lifetime non smoker	occasional drinker
2	PR	54	M	Left Neck	EBV positive non-keratinizing Nasopharyngeal Carcinoma	Nasopharynx	Unknown	not reported	Level II	Cisplatin	70gy 33 fractions	lifetime non smoker	occasional drinker
4	PR	54	M	Right Neck	Squamous cell	Right tonsil	p16+	cT2 N2b	Level II	Cisplatin	70gy 33 fractions	30-pack year	occasional drinker
5	CR	59	M	Left Neck	Squamous cell	Left Tonsil	p16+	cT1 N2b	Level II	Cisplatin	70gy 33 fractions	non smoker	non-drinker
6	CR	82	M	Left Neck	small-cell carcinoma	Left Parotid	Not reported	Not reported	Level II	Carboplatin+ Etoposide	70gy 33 fractions	Not reported	Not reported
7	PR	76	M	Left Neck	metastatic Squamous cell	Bilateral Hypopharynx / Supraglottic Base of Tongue	p16+	T2 N2b	Level IIa	Carboplatin	70gy 33 fractions	22-pack year (quit for 15 years)	non-drinker
8	PR	62	M	Right Neck	Poorly Differentiated Squamous cell	Supraglottic Larynx	Not reported	T2 N2c	Level II	Cisplatin	70gy 33 fractions	non smoker	occasional drinker
9	CR	74	F	Right Neck	Squamous cell	Right Tonsil	p16+	cT2 N2b	Level II / III	No chemo	70gy 33 fractions	non smoker	non-drinker
10	CR	68	M	Left Neck	squamous cell	Left Glossotonsillar Sulcus	p16+	not reported	Level II / III	Cisplatin	70gy 33 fractions	10-pack year	4-5 drinks / week
11	PR	59	M	Left Neck	Squamous cell	Left Tonsil	p16+	N2a	Level II	Cisplatin	70gy 33 fractions	45-pack year (quit in 2015)	1-2 drinks/ day
12	PR	57	M	Left Neck	metastatic Squamous cell	unknown primary of the left neck	p16+ and p63+	N2	Level IIA	Cisplatin	70gy 33 fractions	10-pack year	occasional drinker
14	CR	52	M	Left Neck	Squamous cell	unknown primary of the left neck	Not reported	T4bN2c	Not reported	No Chemo	70gy 33 fractions	30 pack/yr	6 per day
15	PR	55	M	Right Neck	Squamous cell	Presented with metastatic SCC - involvement of Naso & Cribriform Plate	Not reported	T1N2	Not reported	Cisplatin	70gy 33 fractions	10 pack year	4-5 per week
16	PR	68	F	Left Neck	Squamous cell	Not reported	Tonsil	T3N2b	Not reported	Cisplatin	69.96Gy 33 fractions	5 pack year	1 per day
18	PR	61	M	Right Neck	Squamous cell	Right Tonsil	p16+	cT2 N2b	Level II and III	Cisplatin	69.96Gy 33 fractions	30-pack year	occasional drinker
19	PR	60	M	Right Neck	metastatic Squamous cell	unknown primary of the Right Neck	p16-	not reported	Level II / III	No chemo	69.96Gy 33 fractions	40-pack year	previous history of alcohol abuse but discontinued for 25 years

20	CR	70	M	Right Neck	Squamous cell	Right Base of Tongue	p16+	T2 N2a	Level IIa / III	Cisplatin	69.96Gy 33 fractions	15-pack year	6-12 beers / week
21	CR	64	M	Left Neck	Squamous cell	Larynx	not mentioned	T3 N1	Level III	Cisplatin	69.96Gy 33 fractions	40-pack year	occasional drinker
22	PR	57	M	Left Neck	Squamous cell	Hypopharynx	not tested	T2 N3	Level II / III	Cisplatin	69.96Gy 33 fractions	80-pack years	10 drinks / day
23	PR	66	M	Right Neck	Squamous cell	Right Tonsil	p16+	T2 N2b	Level II	Cisplatin	69.96Gy 33 fractions	non smoker	occasional drinker
24	PR	73	M	Right Neck	Metastatic Squamous cell	Larynx	not tested	T3 N3 M1	Level II	No chemo	69.96Gy 33 fractions	50-pack year	Heavy drinker
25	PR	60	M	Left Neck	Metastatic Squamous cell	Left Glossotonsillar Sulcus Base of Tongue	p16+	T4 N2b	Level II	Cetuximab	69.96Gy 33 fractions	6-pack years	occasional drinker
26	PR	40	M	Right Neck	Squamous cell	Right Oropharynx	Not Reported	T4b N2c	Level II	Cisplatin	69.96Gy 33 fractions	non-smoker	non-drinker
27	PR	61	M	Left Neck	Squamous cell	Base of Tongue	p16+	not reported	Level II/ III	Cisplatin	69.96Gy 33 fractions	30-pack year	10 drinks / week
28	PR	59	M	Left Neck	Squamous cell	Left Oropharynx	unclear	T4 N3 M0	Level II	Cisplatin	69.96Gy 33 fractions	non smoker	non-drinker
29	PR	46	F	Right Neck	Squamous cell	Right Tonsil	p16+	T2/T3 N2	Level II	Cisplatin	69.96Gy 33 fractions	8-pack year (quit 10 yrs ago)	Not reported
30	CR	62	M	Right Neck	squamous cell	Right Base of Tongue	p16+	T2 N2	Level Iib	Cisplatin	69.96Gy 33 fractions	20-pack year	6 beers / night
31	CR	54	M	Right Neck	Squamous cell	Aryepiglottic fold	p16+	T2 N2 M0	Level II/ III	Cisplatin	69.96Gy 33 fractions	10 pack year	2 drinks / day
32	PR	58	M	Right Neck	Squamous cell	Glossotonsillar Sulcus	not reported	not reported	Level II	Cisplatin	69.96Gy 33 fractions	10-pack year +marijuana (quit 10 yrs ago)	previously drank heavily (quit for 20)
33	PR	52	M	Left Neck	Squamous cell	Left Base of Tongue (Tonsillar Base)	p16+	not mentioned	Level II/III	Cisplatin	69.96Gy 33 fractions	17-pack year	12-20 beers / weekend for 20 years
34	CR	75	M	Right Neck	squamous cell	Posterior Pharyngeal	not mentioned	T2 N2a	Level II	No chemo	69.96Gy 33 fractions	former smoker (quit for 50 years)	3/ 4 beers / week
35	CR	71	M	Right Neck	Squamous cell	Right tonsillar and Base of tongue	p16+	T2 N2b	Level IIa	Cisplatin	69.96Gy 33 fractions	2nd hand smoke exposure	3-4 glasses of wine / day
36	CR	49	M	Left Neck	Squamous cell	Left Tonsil	p16+	not mentioned	Level II	No chemo	69.96Gy 33 fractions	Lifetime non-smoker	4-5 glasses of wine / week
37	CR	67	M	Right Neck	Squamous cell	Ipsilateral Nasopharynx base of tongue	p16+	T3 N2c	Level II a/b	Cisplatin	69.96Gy 33 fractions	2 packs a day (quit 1986)	Heavy alcohol use (quit 20 yrs ago)
39	PR	59	M	Right Neck	Squamous cell	Right Tonsil (Oropharynx)	p16+	T2 N2b	Level II	high dose cisplatin (1 cycle) + 2 cycles carboplatin	69.96Gy 33 fractions	Lifetime non-smoker	Lifetime non drinker
40	CR	51	M	Right Neck	squamous cell	BOT	HPV+	T2N3B	unknown	Cisplatin	69.96Gy 33 fractions	non smoker	Socially
42	PR	64	M	Left Neck	Squamous cell	Base of Tongue	p16+	T2 N2a	Level IIa	Cisplatin	69.96Gy 33 fractions	Ex-smoker quit in 2016 (50-pack-years)	26 ounces of rum + beer

43	PR	51	M	Right Neck	Squamous cell	Base of Tongue	p16+	not mentioned	Level II	Cisplatin	69.96Gy 33 fractions	40-pack-year (quit 2015)	10 drinks
44	PR	61	M	Right Neck	moderately differentiated Squamous cell	Right Tonsil	p16+	T1 N2c	Level IIa	Cisplatin	69.96Gy 33 fractions	35-pack-year	5-drinks a day (for years)
45	PR	59	M	Left Neck	invasive poorly differentiated Squamous cell	Base of Tongue	p16-	T4 N3	Level II and III	Cisplatin	67.84Gy 32 fractions	Heavy smoker	Binge drinker
46	PR	44	F	Right Neck	Locally Advanced Squamous cell	Base of Tongue	Not reported	Not reported	Level IIA and III	Cisplatin	69.96Gy 33 fractions	10-pack-year	non-drinker
47	PR	57	M	Left Neck	Squamous cell	Left Glossotonsillar Sulcus	p16+	T2 N1	Level IIa	high dose cisplatin (1 cycle) and 1 cycle Carboplatin (due to tinnitus from cisplatin)	69.96Gy 33 fractions	20-pack-year (quit in 1997)	marijuana 50mg/day, 8-10 drinks
48	PR	70	M	Right Neck	poorly differentiated Squamous cell	Right Base of Tongue (Oropharynx)	p16+	T2 N2	Level IIA	Carboplatin AUC 6 (due to tinnitus)	69.96Gy 33 fractions	16-pack-year (quit in 1980)	2 alcoholic drinks
49	PR	69	M	Right Neck	poorly differentiated nonkeratinizing Squamous cell	Right Tonsil (Oropharynx)	p16+	Not reported	Level II	cisplatin low dose (weekly)	69.96Gy 33 fractions	10-pack-year (quit in 1987)	< than 1 glass per week
50	CR	63	M	Right Neck	Squamous cell	Right Tonsil	p16+	T2 N1	Level II a - b	Carboplatin AUC 6 (due to tinnitus)	69.96Gy 33 fractions	Lifetime non-smoker	once a month
51	PR	39	M	Right Neck	metastatic nasopharyngeal carcinoma non keratinizing, undifferentiated (EBV positive)	Nasopharynx	Not reported	IVc	Level II a - b	Gemcitabine/Cisplatin (4 cycles) + Cisplatin low dose (8 cycles)	65.72Gy 31 fractions	10-pack-year	non-drinker
52	PR	63	M	Right Neck	Invasive Squamous cell	Right Piriform Fossa and of the Right Aryepiglottic Fold	Not reported	Not reported	Level II	Cisplatin	69.96Gy 33 fractions	45-pack-year (quit June 2017)	several beers / day
53	PR	65	M	Left Neck	Squamous cell	Base of Tongue	p16+	T3 N2	Level II - III	Cisplatin	69.96Gy 33 fractions	cigars for 30 years	24 beers / week
54	CR	50	M	Left Neck	Squamous cell	Base of Tongue	p16+	T1 N2b	Level IIb - III	Cisplatin	69.96Gy 33 fractions	Lifetime Non-smoker	Not specified
55	PR	79	M	Left Neck	Squamous cell	Unknown primary of the left neck mass	Not reported	Not reported	Level II	No chemo	69.90Gy 30 fractions	Lifetime Non-smoker	occasional social drinker
56	PR	39	M	Left Neck	Poorly differentiated metastatic Squamous cell carcinoma	Left Tonsil	p16+	Not reported	level II	Cisplatin	69.96Gy 33 fractions	ex-smoker quit in 2014 (7.5-pack-years)	occasional social drinker

57	PR	56	M	Right Neck	Locally advanced metastatic nasopharyngeal carcinoma	Nasopharynx	EBV positive	T2N1	Level II - level V	Carboplatin	69.96Gy 33 fractions	Ex-smoker 8 cig / day (quit 15-20 years ago)	1 glass wine/day
58	PR	58	M	Right Neck	Invasive squamous cell carcinoma of unknown primary	unknown primary (suspected BOT)	Not reported	Not reported	level IIA and B	Cisplatin	69.96Gy 33 fractions	Occasional cigars over 15 years	Six to eight drinks per week
59	CR	58	M	Right Neck	Squamous Cell Carcinoma	Base of Tongue	p16+	T4 N2	level II	Cisplatin	69.96Gy 33 fractions	Never smoked	Not reported
60	CR	80	M	Right Neck	Poorly Differentiated Squamous cell carcinoma	Right Tonsil	p16+	T2 N2	Level II	No Chemo	69.96Gy 33 fractions	Smoked for 3 years (0.5 to 1 pack per day)	occasional drinker
63	PR	44	M	Left Neck	Squamous cell carcinoma	Mandibular mucosa, left mandible	Not reported	T4 N2c	Level I - IV	Cisplatin	69.96Gy 33 fractions	Lifetime non-smoker	Minimal consumption
64	PR	76	M	Left Neck	Squamous cell carcinoma with bilateral neck involvement	Base of Tongue	Not reported	T4 N2	Not reported	No chemo	69.96Gy 33 fractions	Lifetime non-smoker	2-3 drinks/week
65	CR	65	M	Left Neck	Squamous cell carcinoma	Base of Tongue	Not reported	T4a N2	Level IIA/III	Cisplatin	69.96Gy 33 fractions	Lifetime non-smoker	3-4 drinks/day
66	CR	47	M	Left Neck	Squamous Cell Carcinoma	Oropharynx	p16+	T4	Not reported	Cisplatin	69.96Gy 33 fractions	Lifetime non-smoker	Not reported
68	PR	61	F	Left Neck	Squamous Cell Carcinoma	Nasopharynx	Not reported	T4	Level IIA	No Chemo	69.96Gy 33 fractions	Smoker - 40packs/year	Not reported
69	CR	56	M	Right Neck	Squamous Cell Carcinoma	Hypopharynx	Not reported	T4	Level IIA+b	Cisplatin	69.96Gy 33 fractions	Smoker - 30packs/year	Socially
70	CR	67	M	Right Neck	Squamous Cell Carcinoma	Unknown primary	p16+	T0	N1	Cisplatin	69.96Gy 33 fractions	Quit smoking (1pack/year for 20 yrs)	Socially
71	CR	70	M	Right Neck	Squamous Cell Carcinoma	Right BOT	p16+	T4	N1	Cisplatin	69.96Gy 33 fractions	Quit smoking (50pack/year)	Socially
73	CR	71	M	Right Neck	Squamous Cell Carcinoma	Supraglottic laryngeal	Not reported	T3	N2c	Cisplatin	70Gy 35 fractions	non-smoker	non-alcoholic
74	PR	78	M	Right Neck	Squamous Cell Carcinoma	Right Tonsillar	p16+	T2	N1	Cisplatin	69.96Gy 33 fractions	non-smoker	non-alcoholic
75	CR	68	M	Right Neck	Squamous Cell Carcinoma	Right soft palate	p16+	Not reported	Not reported	Cisplatin	69.96Gy 33 fractions	Smoker (45 pack/year)	non-alcoholic
76	PR	65	M	Right Neck	Squamous Cell Carcinoma	Oropharynx	p16+	T2	N1	Cisplatin	70Gy 35 fractions	Smoker (2 pack/year)	18 glasses per week
77	PR	53	M	Right Neck	Squamous Cell Carcinoma	Oropharynx	Not Reported	T0/N3	L11	Cisplatin	70Gy 33 fractions	1/4 pack/day since age	non-alcoholic

												of 20 - quit two weeks ago	
78	PR	36	M	Right Neck	Nasopharyn- geal Carci- noma	Not re- ported	EBV positive	Not re- ported	Level IIA & IIB	Cisplatin (high dose)	70Gy 33 fractions	Ex-smoker (2 packs/year -quit 1 year ago)	non-alcoholic
79	PR	55	M	Right neck	Squamous cell carci- noma	Base of tongue	p16+	T4	N2	Cisplatin	70Gy 33 fractions	Non- smoker	non-alcoholic
80	PR	67	M	Left Neck	Squamous cell carci- noma	Unknown primary	Not re- ported	Not re- ported	Level IIB	Carboplatin	70Gy 33 fractions	Non- smoker	4 drinks per week