

Supplemental Material S1. Patient demographics, clinical aspects of diagnosed cancer and hearing characteristics by treatment arm and primary tumor location. HN = head and neck cancer; ORO = oropharyngeal cancer; TE = testicular cancer; BL = bladder cancer; ASHA = American Speech-Language-Hearing Association; SRO = sensitive range for ototoxicity; SPL = sound pressure level; PE = program evaluation, dB = decibel.

¹Oropharyngeal cancer includes tonsil, base of tongue, uvula, and soft palate

*Clinical staging was compiled from medical records and, if necessary, interpreted from prognostic/staging done by the oncologist which utilized the TNM system created by the American Joint Committee on Cancer and the International Union Against Cancer. For this system, T = tumor size; N = spread to nearby lymph nodes; M = metastasis or spread to other parts of the body.

*Medical record indicated high grade urothelial carcinoma, unable to locate TMN staging or clinical staging

****In the cohort diagram we indicate that 4 people did not follow up; here we show that one additional participant did not have hearing thresholds tested within the SRO at baseline, which precluded analysis of their SRO hearing shift data

Arm	A-OM (N = 24)				UC (N = 22)					ALL
Primary tumor location	HN	Oro ¹	Lung	Kidney	HN	Oro ¹	Lung	TE	BL	-
N	4	13	6	1	5	7	7	1	2	46
Age, mean (range), y	63.8 (57-69)	63.1 (51-70)	66 (58-78)	78	62.8 (54-67)	70.1 (63-77)	64.5 (58-69)	30	69.5 (67-72)	64.7 (30-78)
Clinical Stage ⁺ , No. (%)										
I	-	1	-	-	-	-	-	-	-	1
IA	-	-	1	-	-	-	1	-	-	2
IB	-	-	-	-	-	-	1	-	-	1
II	-	-	-	-	-	-	1	-	1	2
IIA	-	-	1	-	-	-	-	-	-	1
IIB	-	-	1	-	-	-	1	-	-	2
III	1	1	-	-	1	-	-	-	-	3
IIIA	-	-	2	-	-	-	3	-	-	5
IIIB	-	-	1	-	-	-	-	1	-	2
IV	-	-	-	-	-	-	-	-	1	1
IVA	3	11	-	-	4	7	-	-	-	25
Unknown	-	-	-	1*	-	-	-	-	-	1*
Chemotherapy regimen										
Cisplatin cycles, No. (%)										
1	-	1	1	-	-	-	-	-	-	2
2	-	-	-	-	-	-	-	-	1	1
3	-	1	1	-	-	-	1	-	-	3
4	-	1	4	1	-	2	4	-	1	13
5	-	3	-	-	1	2	-	-	-	6

6	2	4	-	-	2	2	1	-	-	11
7	1	3	-	-	1	1		-	-	6
8	1	-	-	-	1	-	-	-	-	3
20	-	-	-	-	-	-	1	1	-	1
Cisplatin initial dose, mean (range), mg/m ²	40 (40-40)	41.9 (30-75)	68.3 (60-80)	70	40 (40-40)	38.6 (30-40)	63.6 (50-75)	20	70 (70-70)	49.1 (20-80)
Cisplatin cumulative dose, at last audiogram, mean (range), mg/m ²	203 (0-320)	195 (40-240)	218 (80-300)	280	208 (0-320)	179 (0-240)	259 (0-450)	400	210 (140-280)	214 (0-450)
Combination agent, No. (%)										
Cetuximab	-	1 (4.2)	-	-	-	-		-	-	1 (2.2)
Docetaxel	-	1 (4.2)	-	-	-	-		-	-	1 (2.2)
Etoposide	-	-	3 (12.5)	-	-	-	4 (18.2)	1 (4.5)	-	8 (17.4)
Filgrastrim	-	-	-	-	-	-		-	1 (4.5)	1 (2.2)
Flourouracil (5FU)	-	1 (4.2)	-	-	-	-		-	-	1 (2.2)
Gemcitabine	-	-	-	1 (4.2)	-	-		-	2 (9.1)	3 (6.5)
Pemetrexed	-	-	3 (12.5)	-	-	-	3 (13.6)	-	-	6 (13)
Concurrent Radiation	4 (100)	13 (100)	0	0	5 (100)	7 (100)	4 (57.1)	0	0	33 (71.7)
Radiation dose, mean (range), Gy	68.3 (63-70)	69.5 (63-70)	-	-	69.3 (67-70)	69.4 (66-70)	57.3 (45-70)	-	-	67.8 (45-70)
Radiation right cochlear dose, mean (range), Gy	3.7 (2-7)	13.9 (2-56)	-	-	17.1 (5-54)	12.2 (3-27)	0	-	-	8.0 (0-56)
Radiation left cochlear dose, mean (range), Gy	2.9 (2-4)	17.8 (3-43)	-	-	27.0 (2-72)	12.5 (3-36)	0	-	-	10.1 (0-72)
Hearing characteristics										
Pure tone average (0.5, 1, 2, 3, 4 kHz) at PE1, mean (range), dB SPL	44.8 (31.5-62.5)	36.8 (18.5-60.5)	40.5 (24.5-64.5)	47 (47-47)	39.7 (19-62.5)	47.6 (31-59)	42.6 (26-56.5)	18.5 (18.5-18.5)	59.5 (45.5-73.5)	41.6 (18.5-73.5)

Pure tone average (0.5, 1, 2, 3, 4 kHz) at last PE, mean (range), dB SPL	43.3 (29-63)	42 (23.5-67.5)	43.7 (24.5-63.5)	49.5 (49.5-49.5)	35.4 (22-51)	49.9 (35-61)	42.1 (27.5-52.0)	20 (20-20)	67.8 (48.5-87.0)	43.7 (20-87)
SRO at baseline PE1, mean (range), dB SPL	74.7 (69.6-80)	72.8 (48.2-87.1)	72.6 (61.1-83.2)	77.5 (77.5-77.5)	72.9 (53.9-84.3)	80.9 (66.8-91.8)	75.1 (66.1-83.2)	48.2 (48.2-48.2)	80.9 (76.8-85.0)	74.5 (48.2-91.8)
SRO at last PE, mean (range), dB SPL	80.5 (72.9-88.2)	81.7 (60.4-103.2)	76.7 (58.2-92.1)	81.1 (81.1-81.1)	82.6 (76.1-90.7)	88.9 (83.9-91.8)	78.8 (68.2-86.8)	56.8 (56.8-56.8)	91.3 (83.9-98.6)	81.4 (56.8-103.2)
ASHA significant shift, No. (%)	2 (67)	11 (85)	4 (67)	0	3 (100)	3 (50)	2 (33)	1 (100)	2 (100)	28 (68)
****No audiologic follow up or incomplete baseline, No.	1	0	0	0	2	1	1	0	0	5