

Online Supplemental Table. Patients’ characteristics of 6 studies

Author	Sex (M/F)	Age	Tumor subsite	Pathology	Treatment method	ROI Definition (Number radiologists, Inter-observer agreement)	ROI Extent	How to draw the ROI	MRI period from therapy (month)	Reference standard		N (Rec/Post)	Rec Mean ± SD of ADC (10 ⁻³ mm ² /s)	Post Mean ± SD of ADC (10 ⁻³ mm ² /s)	Threshold ADC value (10 ⁻³ mm ² /s)
										Rec	Post				
Tshering Vogel	41/5	61 (median)	Lar; Hyp	Un-car	RT; CRT	NR	Volume	Diffusion restriction region or near the primary tumor site; Excluding cystic/necrotic area	3≥	His	His or FU	18/28	1.20 ± 0.49	1.82 ± 0.41	1.30 (sensitivity 0.78, specificity 0.71, accuracy 0.74)
Razek	31/10	63 (mean)	Sin; Oro; Ora; Lar; Par	SCC, MEC, ACC, AC	RT	2, 100% (consensus)	Axial section	Most enhanced region on contrast-enhanced T1- weighted image	4–6	His	His	26/15	0.94 ± 0.16	1.37 ± 0.12	1.07 (sensitivity 0.89, specificity 1.00, accuracy 0.93)
Vaid	71/9	52.8 (mean)	Ora; Ret/Oro; Hyp; Lar; Lar+hyp; Sin; Orb; Sal; Inf	Un-car	Sur + RT; Sur + CRT; RT; CRT; CT	2, 72.8%	Axial section	Solid component of suspicious lesion; Excluding cystic/necrotic, hemorrhagic, or calcific area	3–9	His	His or FU	44/42 (lesion)	0.93 ± 0.19	1.39 ± 0.32	1.20 (sensitivity 0.90, specificity 0.83, accuracy 0.86)
Becker	50/24	62.1 (mean)	Ora; Oro; Lar; Hyp; Nas; Sin	SCC	CRT; Sur+CRT	NR	Axial section	Tumor sections on DWI; Excluding cystic/necrotic area	5–22.5	His or FU	His or FU	43/62 (lesion)	1.10 ± 0.24	1.59 ± 0.42	1.21 (sensitivity 0.81, specificity 0.82)
Jajodia	57/5	49.5 (mean)	Ora, Nas, Thy	Un-car	Sur + RT; Sur + CRT; CRT	NR	Axial section	Darkest region on ADC map; Excluding cystic/necrotic area	3≥	His	His	50/12	1.01 ± 0.22	1.69 ± 0.40	1.30 (sensitivity 0.94, specificity 0.83, accuracy 0.94)
Huang	NR	NR	Nas	Un-car	CRT	2, 81%	Axial section	Nasopharyngeal lesion; Excluding cystic/necrotic, hemorrhagic, or macrovascular area	6≥	FU	FU	27/35	0.98 ± 0.17	1.17 ± 0.15	0.86 (sensitivity 0.88, specificity 0.65, accuracy 0.83)

Lar, larynx; Hyp, hypopharynx; Sin, sinonasal cavity; Oro, oropharynx; Ora, oral cavity; Par, parotid glands; Ret, retromolar trigone; Orb, orbit; Sal, salivary gland; Inf, Infra-temporal fossa; Nas, nasopharynx; Thy, thyroid; Un-car, carcinoma (details unknown); SCC, squamous cell carcinoma; MEC, mucoepidermoid carcinoma; ACC, adenoid cystic carcinoma; AC, Adenocarcinoma; RT, radiotherapy; CRT, chemoradiotherapy; Sur, surgery; NR, not reported; Rec, recurrence; Post, post-treatment change; His, histology; FU, follow up; SD, standard deviation

Online Supplemental Table. MRI characteristics of 6 studies

Author	MRI device		Field Strength (T)	DWI sequence	b-values (s/mm ²)	DWI parameters
	Vendor	Model				
Tshering Vogel	Siemens	Sonata	1.5	EPI	0, 50, 100, 500, 750, 1000	TR/TE = 3500/69, bandwidth 2056, FOV: 290 x 290 mm, matrix: 128 x 104
Razek	Siemens	Symphony	1.5	SSEPI	500, 1000	TR/TE = 10000/108, thickness 5 mm, gap 1 mm, bandwidth 300, FOV: 240 x 240mm–300 x 300, matrix 256 x 128
Becker	Philips	Ingenuity TF PET/MRI	3	SEEPi	0, 50, 100, 500, 750, 1000	voxel, 1.3mm × 1.3mm × 3 mm
Vaid	Philips	Ingenia Release 5	3	EPI	0, 500, 1000	thickness 3 mm, gap 1-2 mm, FOV: 200 x 160mm, matrix 124 x 240
Jajodia	Siemens	Avanto	1.5	SSEPI	0, 400, 800	TR/TE = 10000/108, thickness 5mm, gap 1–2 mm, FOV 230 ×230 mm, matrix 128×128 mm
Huang	Philips	Ingenia	3	EPI	0, 800	TR/TE = 2595/90, thickness 5mm, FOV 230 ×230 mm, matrix 152×152 mm

EPI, echo-planar imaging; SSEPI, single shot echo planar imaging; SEEPi, spin-echo echo-planar imaging;