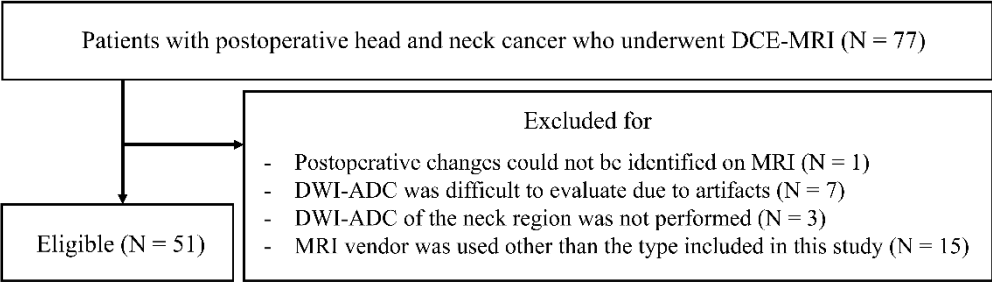


Online Supplemental Table: Demographic and clinical information

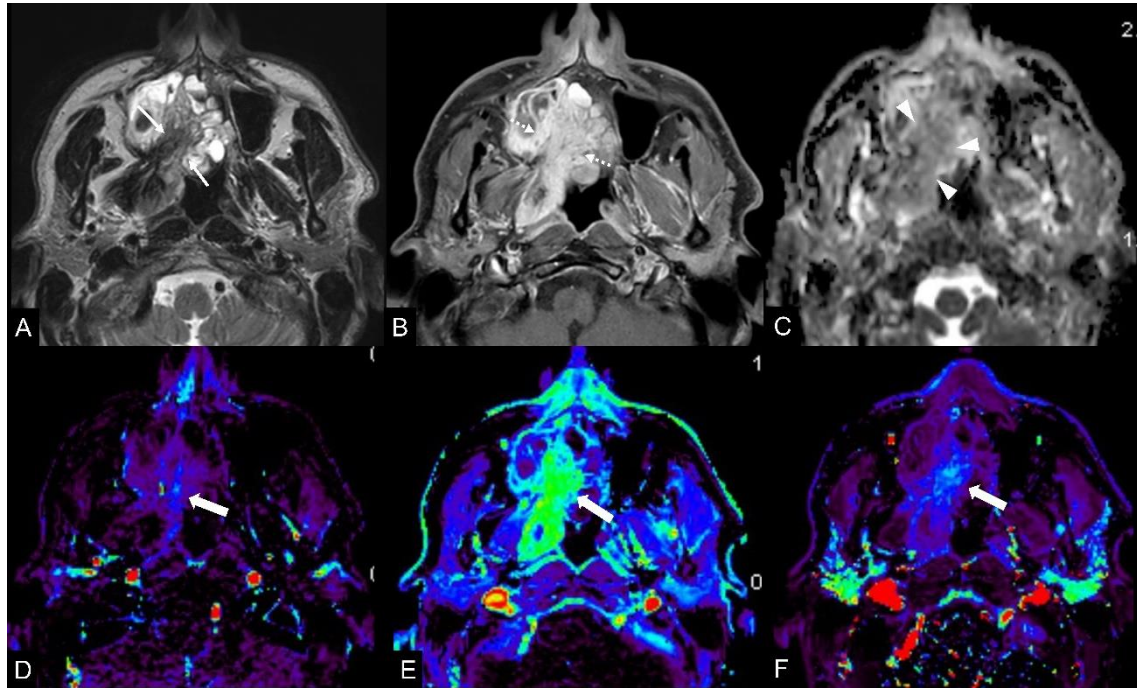
<i>Demographic</i>	
Sex	Male = 31, Female = 20
Median age (years [range])	61 (21– 89)
<i>Clinical</i>	
Subsites of the primary cancer	
Major salivary gland	14/51 (27.5%)
Sinonasal cavity	11/51 (21.6%)
Oral cavity	10/51 (19.6%)
Nasopharynx	8/51 (15.7%)
Oropharynx	6/51 (11.8%)
Cheek	1/51 (2%)
Sinonasal cavity and nasopharynx	1/51 (2%)
Histology of the primary cancer	
Squamous cell carcinoma	26/51 (51%)
Adenoid cystic carcinoma	13/51 (25.5%)
Mucoepidermoid carcinoma	7/51 (13.7%)
Undifferentiated carcinoma	2/51 (4%)
Acinic cell carcinoma	1/51 (2%)
Basal cell adenocarcinoma	1/51 (2%)
Secretory analogue carcinoma	1/51 (2%)
TNM classification of the primary cancer	
T1	9/51 (17.6%)
T2	7/51 (13.7%)
T3	6/51 (11.8%)
T4	27/51 (52.9%)
N0	39/51 (76.5%)
N1	4/51 (7.8%)
N2	6/51 (11.8%)
M0	48/51 (94.1%)
M1	1/51 (2%)
Unknown	2/51 (4%)
Treatment method	
Surgery and radiotherapy	15/51 (29.4%)

Chemoradiotherapy	14/51 (27.5%)
Surgery alone	14/51 (27.5%)
Radiotherapy alone	4/51 (7.8%)
Surgery and chemoradiotherapy	3/51 (5.9%)
Surgery and chemotherapy	1/51 (2%)
Reference method of recurrence (N = 26)	
Pathology	20/26 (76.9%)
Imaging follow-up	6/26 (23.1%)
Reference method of benign post-treatment change (N = 25)	
Pathology	4/25 (16%)
Imaging follow-up	21/25 (84%)

Online Supplemental Figure 1: Flow diagram summarizing the patient selection.



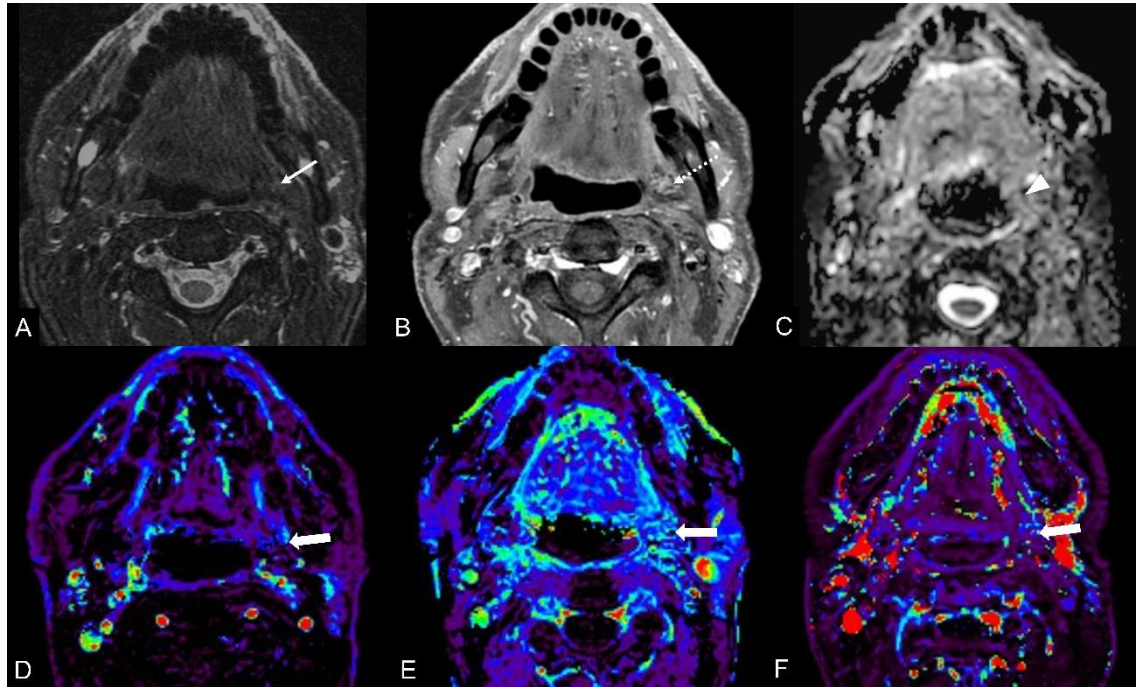
Online Supplemental Figure 2: A case of head and neck cancer recurrence.



A 51-year-old man. After surgery and radiation therapy for adenoid cystic carcinoma of the right maxillary sinus. The right maxillary sinus surgical bed mass shows low signal intensity (arrows) on T2WI (A) and mild enhancement (dotted arrows) on post-contrast fat-suppressed T1WI (B). ADC map (C) shows low signal (arrowheads), with an $nADC_{mean}$ of 1.47. DCE-MRI (D, Vp; E, Ve; F, Ktrans) shows increased parameters (thick arrows), with an nVp of 7.66, nVe of 2.43, and $nKtrans$ of 3.02.

$nADC_{mean}$, normalized mean apparent diffusion coefficient; DCE, dynamic contrast-enhanced; Vp, plasma volume; Ve, extracellular extravascular volume fraction; Ktrans, volume transfer constant between EES and blood plasma per minute, nVp , normalized Vp; nVe , normalized Ve, $nKtrans$, normalized Ktrans

Online Supplemental Figure 3: A case of benign post-treatment change of head and neck cancer.



A 62-year-old man. After surgery and chemoradiation therapy for squamous cell carcinoma of the left palatine tonsil. The left lateral wall of oropharynx shows some low signal intensity (arrows) on fat-suppressed T2WI (A) and slight enhancement (dotted arrows) on post-contrast fat-suppressed T1WI (B). ADC map (C) shows some high signal (arrowheads), with an $nADC_{mean}$ of 2.09. DCE-MRI (D, V_p ; E, V_e ; F, K_{trans}) shows no increased parameters (thick arrows), with an nV_p of 0.67, nV_e of 1.14, and nK_{trans} of 1.97.

$nADC_{mean}$, normalized mean apparent diffusion coefficient; DCE, dynamic contrast-enhanced; V_p , plasma volume; V_e , extracellular extravascular volume fraction; K_{trans} , volume transfer constant between EES and blood plasma per minute), nV_p , normalized V_p ; nV_e , normalized V_e , nK_{trans} , normalized K_{trans}