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CORRESPONDENCE

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Post-radiotherapy morphological changes of parotid gland are dose- and radiotherapy technique-dependent

The Editor,

We would like to thank the author for providing the additional information on pre- and post-therapeutic assessment of submandibular glands in CT [1]. It is of great interest to know the time dependent changes of the submandibular glands following radiochemotherapy [1]. Regarding this, we would like to provide further information from our recent studies [2, 3]. In investigating the sonographic appearances of parotid glands in two groups of patients (nasopharyngeal carcinoma (NPC) patients received intensity-modulated radiotherapy (IMRT) with parotid sparing, and NPC patients received conventional radiotherapy without parotid sparing) and healthy subjects, we found that parotid glands in patients treated with IMRT had a sonographic appearance similar to that in healthy subjects (*i.e.* usually hyperechoic, homogeneous and marginally seen intra-parotid ducts), while parotid glands in patients treated with conventional RT tended to be hypoechoic, heterogeneous and clearly seen intra-parotid ducts [2]. The result of this study shows that the sonographic appearance of the parotid gland in post-radiotherapy patients was dependent on the radiotherapy techniques; this may be related to the different radiation doses delivered to the parotid glands.

In another study, we compared the parotid gland volume of a group of NPC patients before and 2–3 years after radiotherapy using CT [3]. The results of the study showed that the parotid gland volume decreased after radiotherapy and the degree of parotid volume shrinkage was dose-dependent [3].

The assessment of salivary glands after radiotherapy is important [4]. Radiologists and sonographers should be aware of the dose- and radiotherapy technique-dependent variations of parotid glands when examining patients with previous head and neck radiotherapy.

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