Objective
Treatment for head and neck cancer is associated with severe oral complications, such as reduced salivary flow rate, mucositis, or development or exacerbation of caries and/or periodontitis (Mosel 2011). Periodontitis represents a chronic inflammatory process, which is regarded as a risk factor for cancer development as well as after cancer treatment as a risk factor for development of osteoradionecrosis of the jaw (Katsura 2008). The present study aimed to assess oral health status and dentist consultation habits of patients at least 6 months after cancer treatment for squamous cell carcinoma in the upper aero-digestive tract.

Methods
Thirty-eight patients [27 male / 11 female, age range 21 to 79 years] participated in the present cross-sectional study. All participants were asked on dental treatment before and after cancer treatment, daily oral hygiene, habits (e.g. smoking and alcohol consumption), education, income, and family status. The decayed, missing, and filled teeth (DMFT- index, and clinical plaque control record (PCR; O’Leary 1972), community periodontal index of treatment needs (CPITN; Ainamo 1982), disease severity according to CDC/AAP criteria (Eke 2012) and radiological (alveolar bone loss) periodontal parameters were determined.

Results
Twenty-two of 38 patients consulted a dentist for a check-up before cancer treatment and of those 17 received a treatment, of which tooth extraction was most often performed (in 59% of the cases; Figure 1).

Although 71% of the patients consulted a dentist within the last year, 90% of the examined patients presented the necessity of dental treatment at time-point of evaluation; 75% had at least one decayed tooth, with an average of 4 decayed teeth. The average DMF-T-index was 25.5. A professional oral hygiene session was never performed in 40% (Figure 2) of the patients and the mean PCR was 65% (Figure 3). Seventy-two percent showed a CPITN of 3 or 4 (Figure 4) and 31% of the patients presented moderate and 47% severe periodontitis. A mean alveolar bone loss of 4.3mm was determined. The consultation of a dentist before cancer treatment presented no significant effect on the oral health status after cancer treatment.

Conclusion
The oral health status of patients after cancer treatment for squamous cell carcinoma in the upper aero-digestive tract presented to an extremely high degree the necessity of treatment for oral diseases, such as caries and periodontitis. Regarding the risks associated with these oral diseases after cancer treatment, e.g. in severe cases the development of osteoradionecrosis of the jaw, the multi-disciplinary teams in cancer care might profit by the regular inclusion of dental professionals, who are experienced in the dental treatment of cancer patients. This cooperation could improve the dental treatment before, as well as the sustainment of oral health after cancer treatment.

References