Reviewer's report

Title: Results of concurrent radio-chemotherapy for the treatment of head and neck squamous cell carcinoma in everyday clinical practice

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Reviewer: Hans Christiansen

Reviewer's report:

In their manuscript "Results of concurrent radio-chemotherapy for the treatment of head and neck squamous cell carcinoma in everyday clinical practice", the authors retrospectively analyzed the results of concurrent chemo-radiotherapy at their institution. They conclude that the outcome was favourable and significantly improved in recent years. In spite of the fact that there are numerous retrospective analyses in the literature dealing with treatment outcome after chemo-radiotherapy for locally advanced squamous cell head and neck cancer, it is in principle an interesting study and worthy of consideration – especially in the light of the special aspect of early – treatment-related? – mortality. However, there are several points left that should be addressed before a final decision on publication can be made. In detail:

1. To my mind - as mentioned above - , the special aspect of early – treatment-related?! – mortality is of special interest in the context of the manuscript. The analysis of this issue differs the presented study from numerous other retrospective analyses of chemo-radiotherapy of locally advanced squamous cell head and neck cancer. Therefore, this aspect should especially focussed and more emphasized throughout the whole manuscript as well as the abstract (!) - eventually, the title could be enlarged as follows: "Results of concurrent radio-chemotherapy for the treatment of head and neck squamous cell carcinoma in everyday clinical practice with special reference to early mortality". In this context, the paragraph 5.1.2 ("Discussion"-section: "Comparison of therapy-associated mortality") could be lightened by the use of an additional table, in which the presented data can be compared with the literature at first sight.

2. The authors divided the analyzed patient population into two cohorts of either before or after the year 2000. What was the reason to set the "cut-off" after the year 2000 (e.g. Routine use of modern high precision radiotherapy techniques [3D-CRT / IMRT] at that time? Routine use of concomitant chemo-radiotherapy at that time?)? In this context, an extensive debate about the reasons for better treatment outcome after the year 2000 is missing (e.g. Use of modern high precision radiotherapy techniques or concomitant chemo-radiotherapy, see above). An appropriate paragraph should be added in the "Discussion"-section (including discussion of respective references).

3. To illustrate the influence of non-disease-specific death, disease-specific-survival (DSS) should also be calculated and discussed in the
light of the data presented and the current literature.

4. Furthermore, a few annotations concerning the dose-volume-concept (GTV/CTV/PTV) would be helpful. How many patients received conventional, 3D-conformal or IMRT radiotherapy treatment? Similarly, please quantify the use of systemic concomitant chemotherapy (How many patients received what kind of chemotherapy [doses?]?)? What were the reasons to schedule some patients for radiotherapy alone? Where there differences in treatment outcome between the respective treatment groups?).

5. In addition, the frequency of acute and chronic side effects should be presented more in detail (quantitatively) using an international accepted scoring system for acute (e.g. CTCAE) as well as chronic (e.g. LENT / SOMA) toxicity (potentially with the help of additional tables).

6. In the "Methods"-section (Statistical analyses) it is stated that "the variables related to the patients, diseases, and treatments, which are shown as proportions or as median and range in table 1, ..." – Confusingly, the respective table 1 in the addendum deals with "A summary of the causes of death while under therapy". Please clarify.

7. Finally – to my mind –, "table 2" is termed "figure 3" by mistake in the addendum.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

'I declare that I have no competing interests'