

## **Appendix IV**

### **Concomitant Chemotherapy and Radiotherapy in Squamous Cell Head and Neck Cancer (excluding nasopharynx)**

#### **Background:**

Stage I and II Head and Neck Squamous Cell Carcinomas (HNSCC) are primarily treated with surgery, radiotherapy or a combination of the two. These same two modalities have also been used alone or in combination to treat Stage III and IV disease. However, the results of this standard treatment for stage III and IV are poor with long-term survival in fewer than 30% of patients. As a result, other therapeutic approaches such as the addition of chemotherapy have been studied. Although adjuvant and neoadjuvant chemotherapy studies have not consistently yielded improved results, an individual patient data meta-analysis done by the Meta-Analysis of Chemotherapy on Head and Neck Cancer (MACH-NC) collaborative group has shown a significant overall survival benefit of 8% at 2 and 5 years when concomitant or alternating chemoradiotherapy was used instead of radiotherapy alone. Other meta-analyses have consistently shown similar results (see Table 1).

After consideration of patient preference, physician judgment and toxicity issues in determining clinical management for individual patients, we propose that selected non-nasopharyngeal HNSCC with Stage III or IV disease be treated with concomitant chemoradiotherapy (CT-RT).

It is strongly recommended that patients who will be undergoing concurrent chemoradiation have a prophylactic

gastrostomy tube inserted, as enteral nutrition is generally required during and after treatment. See Part 5 for information on enteral nutrition.

#### **Choice of Chemotherapy Regimen:**

Various regimens have been utilized including single-agent daily cisplatin or carboplatin and cisplatin plus infusional 5-fluorouracil. Due to significant overlapping toxicities with radiotherapy and poor patient tolerance, 5-fluorouracil has not been included in our protocol. Our regimen utilizes cisplatin (100mg/m<sup>2</sup>) given IV concurrently on days 1, 22, 43 of radiotherapy.

#### **Eligible Patients:**

These include patients with *Stage III and IV* squamous cell carcinoma of the head and neck (excluding nasopharynx). Specifically, these are *T2N2-3M0*, *T3-4 any N M0* with a primary squamous cell carcinoma of the oral cavity, oropharynx, hypopharynx, or larynx. Patients with *T1-2N1* or *T1N2-3* are excluded.

#### **References:**

1. Stell PM, Rawson NSB. Adjuvant chemotherapy in head and neck cancer. *Br J Cancer* 1990;61:779-87.
2. Munro AJ. An overview of randomized controlled trials of adjuvant chemotherapy in head and neck cancer. *Br J Cancer* 1995;71:83-91.
3. El-Sayed S, Nelson N. Adjuvant and adjunctive chemotherapy in the management of squamous cell carcinoma of the head and neck region: A meta-

analysis of prospective and randomized trials. *J Clin Oncol* 1996;14:838-47.

- Pignon JP, Bourhis J, Domenge C, Designé L, and the MACH-NC Collaborative Group. Chemotherapy added to locoregional treatment for head and neck squamous-cell carcinoma: three meta-analyses of updated individual data. *Lancet* 2000;355:949-55.
- Browman GP, Hodson DI, Mackenzie RG, Bestic N, and Zuraw L., Concomitant Chemotherapy and Radiotherapy in Squamous Cell Head and Neck Cancer (Excluding Nasopharynx), Practice Guideline Report No. 5-6a  
[http://www.ccopebc.ca/guidelines/head/cpg5\\_6a.html](http://www.ccopebc.ca/guidelines/head/cpg5_6a.html)

**Table 1. Published meta-analyses that include concomitant chemotherapy and radiotherapy in squamous cell head and neck cancer\* (from CCOPGI – see ref. 5)**

	<b>Stell &amp; Rawson (1)</b>	<b>Munro (2)</b>	<b>El-Sayed &amp; Nelson (3)</b>	<b>Pignon et al (MACH-NC) (4)</b>	<b>This analysis (5)</b>
<b>Year published</b>	1990	1995	1996	2000	2000
<b>Data type</b>	Published	Published	Published	IPD	Published
<b># trials found</b>	23	54	25	63	-
<b># concurrent</b>	9	16	11	26	18
<b>Results**:</b>					
<b>OR</b>	0.98	0.56			0.62
<b>RR (HR)</b>			(0.78)	0.81	0.83***
<b>RD (%)</b>		13.7	5	8§	11
<p>* HR, hazard ratio; IPD, individual patient data; OR, odds ratio; RD, absolute risk difference in % survival; RR, risk ratio or relative risk.  ** Results shown are for deaths.  *** The 95% confidence interval around the RR (0.83) is 0.76 to 0.90, P&lt;0.00001.  § At 5 years.</p>					