

for the critical structures were superimposable in all cases, reflecting the fact that they were not adjacent to an air cavity. A detailed analysis of the impact of the air/flooded cavities on the dose distributions will be presented.

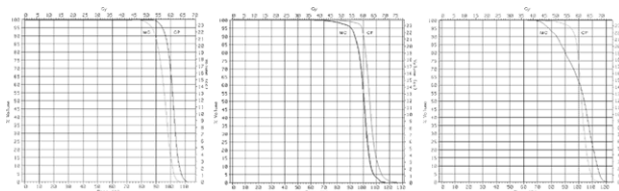


Fig. 1: MC vs. CP calculations for the effect of presence or absence of air cavities in the beam path for (a) anterior, (b) lateral and (c) posterior beam arrangements.

Conclusion: The use of multiple fields did not compensate for the effect of air cavities, as MC consistently demonstrated suboptimal PTV coverage. Of the three arrangements, the posterior one gave the most heterogeneity in PTV dose. This study emphasizes the importance of using MC as a verification tool for IMRT. The clinical consequences of the under dosage could be clinically important and merit further investigation.

1012 POSTER Oral cavity cancer treatment variations and survival comparisons in Ontario, Canada

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Medical practice may vary because of the paucity of randomized trial evidence for the treatment of oral cavity cancers. It is important to assess whether practice variations exist and whether variations are associated with differences in survival and control of the disease.

We used a cancer-registry based database that includes treatment and survival information for all 1809 patients in the province of Ontario, Canada diagnosed with carcinoma of the floor of mouth or anterior tongue between 1991 and 1998. The radiotherapy to surgery ratios, overall survival and cause-specific survival were compared across the nine geographic regions served by the regional cancer centres and among socioeconomic groups (determined using census income information).

The surgery to radiotherapy ratios varied from 1.6:1 and 1.7:1 in the two regions of eastern Ontario (where brachytherapy was available) to 8.6:1 in the Toronto area, where 43% of the patients live. Among socioeconomic quintiles, the poorest group was more likely to be treated with radiotherapy (surgery:radiotherapy ratio of 2.7:1) while the ratio in the other socioeconomic groups ranged from 4.2:1 to 5.2:1. Differences in 5-year overall survival and cause-specific survival were not statistically significantly different across the geographic regions (ranging by 13% and 9% respectively with logrank p-values of 0.47 and 0.98). Overall 5-year survival differed among the socioeconomic groups with 44% survival in the lowest quintile and 55% survival in the highest (logrank p < 0.001). Cause-specific survival varied marginally with rates of 67% in the lowest quintile to 72% in the highest (logrank p = 0.09).

Practice variations in oral cavity cancer may be leading to modifiable differences in the control of the disease. We are currently conducting a population-based retrospective cohort study of over 2500 patients in Ontario to further understand the care delivered to these patients and how it affects outcomes.

1013 POSTER Minimally invasive parathyroidectomy: even without the intraoperative use of quick parathormone measurement or gammaprobe a good operative procedure for primary hyperparathyroidism

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Background: minimally invasive parathyroidectomy is becoming a standard operative procedure for primary hyperparathyroidism. Apart from preoperative localising investigations, the intraoperative use of quick parathormone (PTH) measurement or gammaprobe is advocated. We evaluated the results of minimally invasive parathyroidectomy without the use of these intraoperative techniques.

Patients and Methods: Between May 2001 and May 2005, 65 patients with primary hyperparathyroidism in whom preoperative investigations had shown a solitary adenoma underwent minimally invasive surgery through a 3 cm (lateral) neck incision. Intraoperative PTH assessment and a gammaprobe were not part of the operative procedure.

Results: In 58 patients (89%) minimally invasive parathyroidectomy led to normocalcemia. In the remaining seven patients conventional neck exploration was necessary and resulted in normocalcemia as well. In three of these seven patients the adenoma had been "missed" by the surgeon, while in four patients preoperative investigations had predicted the localisation of the adenoma erroneously.

Conclusion: without the use of intraoperative PTH assessment or gammaprobe minimally invasive parathyroidectomy was successful in 89% of the patients.

1014 POSTER

Economic aspects of amifostine (AM) as adjunctive treatment in during radical radio(RT) and radiochemo(RCT)therapy for head and neck cancer (HNC)

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Objectives: Several studies have shown that Amifostine protects against adverse effects of radical radiotherapy (RT) and radiochemotherapy (RCT) for head and neck cancer. The present study investigates the economic aspects of using amifostine during RT and RCT for patients with head and neck cancer compared to treatment without its use in Switzerland.

Materials and Methods: A meta-analysis of randomised trials was performed to compare the results of RT vs. RT+amifostine and RCT vs. RCT+amifostine on RT-and RCT-induced side effects and to quantify the radioprotective effects of amifostine. The incidence rates for adverse effects (mucositis, acute xerostomia, late xerostomia) were calculated and the resource use for the adverse effects assessed. Medical services and drugs utilised were priced using official tariffs. Resource use data for RCT vs. RCT+amifostine was derived from a randomised phase II study. Incidence rates and unit costs were combined to estimate total treatment costs of treating RT-induced side effects. The benefit of amifostine was then evaluated by comparing total costs of RT and RCT-treatment with/without adjunctive amifostine.

Results: Pooled results of 6 studies showed an overall relative risk reduction (RR) in mucositis of 0.702 (95% CI, 0.492 to 1.001, p=0.050). Five studies showed a significant reduction in favour of patients treated with amifostine with respect to acute xerostomia (RR=0.506, 95% CI, 0.361 to 0.709, p=0.000) and three studies a statistically significant benefit of amifostine on late xerostomia (RR=0.368, 95% CI, 0.132 to 0.868 p=0.024). Economic analysis estimated total treatment costs of side effects at CHF 7,516 vs. CHF 13,439 (RT vs RT+amifostine) and CHF 9,364 vs. CHF 10,759 (RCT vs. RCT+amifostine). Total complications costs per patient were CHF 7,516 vs. CHF 4,670 and CHF 9,364 vs. CHF 2,966 respectively. Higher costs with amifostine treatment of CHF 5,923 (RT) and CHF 1,395 (RCT) represent 44% and 13% of total treatment costs of adverse events. Late xerostomia followed by mucositis was the major cost driver in both treatment modalities. The acquisition cost of amifostine was partially offset by reduced costs (CHF 2,769 and CHF 6,306 respectively) from RT-induced side effects.

Conclusions: Amifostine protects against RT-induced side effects. Preliminary results from this study suggest a cost-saving potential of amifostine as an adjunctive treatment for head and neck cancer patients in Switzerland under both treatment modalities examined, RT and RCT.

1015 POSTER

Imatinib with cisplatin in recurrent and/or metastatic adenoidcystic carcinoma – preliminary results of a phase II study of 18 patients with response assessed by morphological and functional imaging

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Background: Adenoidcystic carcinoma (ACC) of salivary glands may be characterised by slow growth, systemic metastases and poor response to conventional chemotherapy. 80 – 90% of ACC demonstrate c-kit positivity such that treatment with imatinib is conceptually attractive. 3-dimensional synergy analysis has been performed at this centre for both ACC primary