

Theses data were manipulated using a computer software program to generate 3D models with fly through capability. The findings of virtual endoscopy were compared to the fibre optic naso-endoscopy. This was done as a double-blind trial. **Results:** High degree of similarity between virtual panendoscopy and conventional fibre optic endoscopy was seen. However, more anatomical details were depicted on virtual panendoscopy where it was not accessible in conventional fibre optic endoscopy. A prospective multi-centre randomized control trial is planned to confirm findings.

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O2.13

Contribution of high resolution pulsed and colour Doppler ultrasound in diagnosis of metastatic lymph nodes in oral cancers

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This study aimed at verifying the contribution of high resolution pulsed and colour Doppler sonography in diagnosis of metastatic lymph nodes in oral cancers. Twenty patients with oral cancer were subjected to ultrasonography of the neck for grey scale, colour flow imaging, and pulsed Doppler. Following neck dissection, nodes identified in the ultrasound and colour Doppler examination were subjected to histopathologic examination. Correlation was then made between ultrasound, Doppler and histopathology results to evaluate the sensitivity and specificity of colour Doppler ultrasonography. We found that long axis/short axis ratio had a specificity of 70.6%, sensitivity of 98.4%, positive predictive value (PPV) of 77.5% and negative predictive value (NPV) of 97.7%. Vascularity pattern had specificity of 90.3%, sensitivity of 79.4% PPV of 89.3% and NPV of 81.1%. Pulsatility index had specificity of 91.9%, sensitivity of 88.8% PPV of 91.8% and NPV of 89%. Resistivity index had specificity of 93.5%, sensitivity of 88.8%, PPV of 93.3% and NPV of 89.2%. Colour flow imaging increases the diagnostic accuracy of detecting metastatic lymph nodes as against grey scale in isolation, while also revealing their proximity to vital structures. Ultrasound hence is recom-

mended for initial non-invasive evaluation of the neck in patients with oral cancers.

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O2.14

Improving survival in oral carcinoma by the use of colour Doppler to accurately assess the neck

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In squamous cell carcinoma of the oral cavity, systemic metastasis rarely occurs without significant metastasis to lymphatics in the neck. Survival is reduced by 50% by metastatic disease. Because of the increased risk of nodal metastases, even in clinically negative necks, most patients undergo neck treatment. Many patients therefore will be subjected to the morbidity of unnecessary treatment. The low accuracy of palpation in assessing the neck for metastatic nodes is well known. Ultrasound-guided FNA may suffer from operator inexperience while conventional ultrasound parameters such as size, homogeneity, shape and brightness are unreliable. However, lymph node metastases significantly showed higher Doppler signals than reactive ones. High resolution of the procedure means the chance of detecting even small changes is increased and the exactness of diagnosis of pathological lymph nodes of the neck significantly improves compared to palpation alone. A high percentage of nodes with malignant disease show abnormal patterns of nodal vascularity. This quick, non-invasive and inexpensive adjunct to palpation needs to be factored into the assessment of the N0 neck to arrive at a rational treatment philosophy with satisfactory outcome.

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O2.15

Experience of a single centre in the use of F-fluorodeoxyglucose positron emission tomography and computed tomography with histopathologic correlation in the staging of head and neck cancer

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Aim: The status of cervical lymph nodes is an important prognostic factor and determinant of management approach in squamous cell head and neck cancer. The aim is to retrospectively evaluate the use of F-fluorodeoxyglucose positron emission tomography (FDG-PET) in the staging of squamous cell head and neck carcinoma and to correlate the PET/CT with other imaging (MRI ± CT) and histopathological status. **Methods:** Positron emission tomography scans were correlated with pathologic results of the neck dissections, site of the primary tumour and the CT scan. Histopathologic analysis was used as the gold standard for the assessment of the sensitivity and specificity of these modalities. **Conclusion:** FDG-PET/CT shows promise in the staging of head and neck cancer and provides additional accuracy to a conventional staging process using CT. We aim to present our experience with this diagnostic imaging modality.

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O2.16

Role of contrast enhanced computed tomography in detecting cervical lymph node metastasis

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Objective: To evaluate the role of contrast enhanced computed tomography (CECT) in detecting cervical lymph node metastasis in oral cancer. **Methods:** Sixteen patients with histopathologically proven oral squamous cell carcinoma who underwent neck dissection(s) were included in the study. All patients underwent preoperative clinical examination (CE), ultrasonography (USG) of neck and CECT. Postoperative neck specimens were sent for histopathology examination (HPE). **Results:** HPE was regarded as the gold standard for diagnosis of nodal metastasis, based on which the results of CE, USG and CECT were compared. Sensitivity of CE, USG and CECT were 54.5%, 72.7% and 81.8%, respectively. **Conclusion:** Clinical examination is the first line in preoperative assessment of neck status in oral cancer; however, considering its low sensitivity, it should be supplemented routinely by advanced modalities like USG and CECT. CECT with its efficiency in detailing soft tissue especially those of the neck and greater sensitivity than USG will be an

important tool for assessment of neck status preoperatively.

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O2.17

The combination therapy using radiation and laser vaporization for T2 and T3 buccal mucosal carcinoma

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Objective: The treatment of buccal mucosal carcinoma should also consider the aesthetic outcome. This study reviewed the prognosis of patients with late T2 (<3 cm) and T3 buccal mucosal carcinoma, requiring surgical excision followed by reconstruction surgery, treated by a combination of external radiation and LASER vaporization as multidisciplinary therapy. **Materials and methods:** Between 1985 and 2006, 42 patients with primary squamous cell carcinoma of the buccal mucosa were treated under this protocol at Oral Surgery, Saitama Cancer Center. T classification was late T2 (<3 cm), 26 cases and T3, 16 cases. The indication for this therapy is superficial and exophytic type of clinical growth pattern. For each patient, external radiation of 30–50 Gy/15–25fr and CO₂ LASER vaporization were given either in one session or over four sessions. **Results:** The local control rate in successful cases was 73.8% (31/42). The 5-year cumulative survival rate of patients treated curatively by this method was 75.3%. **Conclusion:** This combination therapy allows preservation as well as curative therapy and seems to improve the prognosis. Therefore, this modality seems preferable for patients with buccal mucosal carcinoma from an aesthetic perspective.

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O2.18

Methotrexate: a boon, in head and neck cancers

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The aim was to evaluate rehabilitation of patients in view of prolonging survival and time for disease progression and side effects of methotrexate in locally advanced squamous cell carcinomas of head and neck. Methotrexate, oldest drug, has remained a standard regimen for this cancer was selected for its cost-effectiveness and ease of administration. **Methods:** Patients with histologically proven oral squamous cell carcinoma of head and neck. Methotrexate 1 mg/kg was given intramuscularly once a week for 4 weeks along with hydration. Patients who responded well and became resectable had undergone surgery. **Results:** A pilot study of eight patients was done over a period of 12 months. Three had partial response, three had stable disease and two did not follow-up. Reduction in platelet count was noted. **Conclusions:** It is a simple, cost-effective regimen for palliation in locally advanced squamous cell carcinomas of head and neck region. It also prolongs survival and disease progression.

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O2.19

The enhancement effect of Griseofulvin to aminolevulinic acid-based photodynamic therapy—in vitro study

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Objective: We investigated in this study whether Griseofulvin (GF), which is an antimycotic widely used for the oral treatment of skin fungal infections, enhanced the effect of aminolevulinic acid-based photodynamic therapy (ALA-PDT) in vitro. **Material and methods:** Two human osteosarcoma cell lines from mandible (HOSM-1, HOSM-2), and the human gingiva-derived fibroblast line (HF) representing normal cells were used. GF enhancement of ALA-PDT was evaluated by the MTT assay. Also, GF on intracellular accumulation of protoporphyrin IX (PpIX) was measured with flow cytometry using a FACSCalibur instrument. **Results:** GF enhancement rate of ALA-PDT was 1.65 and 1.27 in HOSM-1 and HOSM-2 cells, respectively, with ALA+GF (25 µg/ml) treatment prior to PDT. And GF

enhancement rate of intracellular PpIX were 1.53 in HOSM-1 cells, and 1.19 in HOSM-2 cells, with ALA + GF (25 µg/ml) treatment. In both cells, the level of GF enhancement rate of intracellular PpIX followed the same trends as GF enhancement rate of ALA-PDT. For HF, great effect was not revealed in this study. **Conclusion:** The present study, although preliminary, strongly suggests that concomitant treatment with ALA and GF may be very useful to enhance the effect of ALA-PDT.

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O2.20

Therapy of rAd-p53 with chemotherapy for advanced oral carcinoma by selective intra-arterial infusion

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Purpose: To evaluate the safety and therapeutic effects of selective intra-arterial rAd-p53 infusion combined with chemotherapy for advanced oral carcinoma. **Methods:** Thirty-six patients with advanced SCC or ACC in oral region were subdivided into two groups. All patients underwent unilateral or bilateral retrograde selective catheterization of ECA. Through the arterial pumps, rAd-p53 combined with chemotherapeutic agents was administered to group I (7 patients), rAd-p53 was administered to group II (6 patients), and chemotherapeutic agents were administered to group III (10 patients). **Results:** The complete response (CR) rate of group I (28.57%) was higher than that of group II (16.67%) and group III (10%). No replication-deficient virus was detected in patient's serum, urine or sputum at an assay. Comparing with group III, the clinical toxic syndromes and complications in the combination therapy group were significantly decreased versus that of chemotherapy group of both the number of cases and the extent ($P < 0.05$). The transactivation of Bax and inactivation of Bcl-2 were only observed in groups I and II. **Conclusion:** Routine chemotherapy combined with rAd-p53 infusion can increase the curative effect and decrease the toxic implication of chemotherapy.

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