Head & Neck 2010

FINAL PROGRAM

Australian & New Zealand Head and Neck Cancer Society
12th Annual Scientific Meeting
2 - 4 September 2010
Novotel Sydney Manly Pacific
Manly, New South Wales

PLATINUM SPONSOR
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WELCOME MESSAGE FROM THE PRESIDENT OF THE ANZHNCS - PROFESSOR SWEE TAN

Dear Members and Colleagues,

It is with great pleasure that I welcome all members of the Society to attend the 12th Annual Scientific Meeting of the Australian & New Zealand Head and Neck Cancer Society. I also extend a warm welcome to all medical and allied health professionals, and trainees who are involved in this area of cancer management.

Our Society stands for excellence in the care of patients with head and neck cancer through multidisciplinary collaboration. This meeting brings together those with different backgrounds, expertise and philosophy, to share with one another what we have learnt in the past year. It provides a forum for discussion on a wide range of topics including tumour aethio-biology, innovation and integration, and functional rehabilitation.

We are privileged to have internationally regarded Professor Ian Frazer, Dr Rainald Knecht, Professor Boguslaw Maciejewski, Dr Taimur Shoaib, Professor Jean Bourhis and Ms Bella Talwar as our keynote speakers. The program will also feature an array of outstanding presenters from around Australia and New Zealand, along with a number of proffered papers.

We are also delighted to offer a pre-meeting workshop consisting of three separate sessions targeting swallowing and communication, nutritional management and nursing care. These interactive workshops aim to encourage open discussion and facilitate direction for future practice, possible working parties, and research.

The social program offers an informal and socially relaxed environment that facilitates networking and cultivates a setting for exchanging ideas and sharing new knowledge amongst the delegates. Bob Smee and members of his convening Team have compiled a truly outstanding program.

Manly provides a fitting backdrop for this Meeting and presents an excellent opportunity for delegates, their partners and families to enjoy the amazing and varied experiences New South Wales has to offer. I invite you all to examine the exciting program and look forward to meeting you.

Yours sincerely

Professor Swee T Tan FRACS PhD
President ANZHNCS

WELCOME MESSAGE FROM THE CONVENER OF THE ANZHNCS ANNUAL SCIENTIFIC MEETING - DR BOB SMEE

Dear Colleagues

Welcome to the 12th Annual Scientific Meeting of the Australian & New Zealand Head and Neck Cancer Society. The Organising Committee and I thank you for your attendance and hope that you enjoy the program.

We are honoured to have the participation of distinguished guests Professor Ian Frazer (QLD), Dr Rainald Knecht (Germany), Professor Boguslaw Maciejewski (Poland), Dr Taimur Shoaib (United Kingdom), Professor Jean Bourhis (France) and Ms Bella Talwar (United Kingdom). They have made significant contributions to the program and we greatly appreciate their support of the Meeting.

In addition to our key note speakers, the scientific program will consist of an array of outstanding presenters from Australasia together with presentations from authors of submitted research papers. Please also take the time to view the posters on display in the exhibition area.

We also wish to acknowledge the support of our major sponsors, Merck Serono - Platinum Sponsor, Elekta – Bronze Sponsor, Varian Medical Systems - Bronze Sponsor and to all the companies participating in the industry exhibition.

Lastly, I would like to acknowledge and thank the Organising Committee for their valuable time and contribution to the Meeting

Enjoy the 2010 ANZHNCS ASM.

Yours sincerely

Dr Bob Smee FRANZCR
Treasurer ANZHNCS
Convener 2010 ANZHNCS ASM

AUSTRALIAN AND NEW ZEALAND HEAD & NECK CANCER SOCIETY (ANZHNCS)

Early in 1998, a number of head and neck oncologists from the disciplines of surgery, radiation oncology and medical oncology met in Sydney to discuss the feasibility of establishing a multidisciplinary head and neck society. A working party was formed and, following a number of meetings, invitations were sent to individuals in these three specialties to become foundation members of the Australian and New Zealand Head & Neck Society.

The initial business meeting was held on Dec 9, 1998 and at that time there were 60 foundation members. The Society adopted as its Constitution the Model Rules for Associations published by the Department of Fair Trading in NSW and the members agreed that their principal objectives would be to promote the practice of head and neck oncology, to educate medical colleagues and the public about our specialty, to foster research and to seek optimal treatment outcomes for our patients.

MEMBERSHIP

Membership of the Australian and New Zealand Head and Neck Cancer Society gives multiple opportunities to keep up with the latest clinical and research developments in the field of head and neck oncology as well as access to local and international leading oncological surgeons for specific clinical case questions and issues. Members are eligible for reduced rates to the Annual Scientific Meeting. For further information about the Society and/or becoming a member visit www.anzhns.org

ORGANISING COMMITTEE

Convener	Bob Smee FRANZCR
Members	Merran Findlay MSc (Nutr Diet), APD
	Gary Morgan FRACS
	Carsten Palme FRACS
	Rachelle Robinson BAppSc (Speech Pathology)
	Michael Veness FRANZCR

ANZHNCS EXECUTIVE COMMITTEE

President	Swee Tan FRACS
Vice President	David Wiesenfeld FRACDS
Secretary	Ben Panizza FRACS
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	Lyndell Kelly FRANZCR
	Suren Krishnan FRACS
	Bernard Lyons FRACS
	Julia MacLean BAppSci
	Guy Rees FRACS
	Kerwin Shannon FRACS

CONTENTS

Keynote Speakers

KEYNOTE SPEAKERS

Professor Jean Bourhis

Professor Jean Bourhis graduated in Paris as a Medical Doctor (MD) and was board certified in Radiation Oncology. He became Professor of Radiation Oncology at the University of Paris in 1999 and since 2002, has been Head of the Radiation Oncology Department at the Institute Gustave Roussy (Villejuif, France). His clinical activity is focused on Head and Neck Oncology and he has been principal investigator of a number of clinical trials in this field, including several multicentric randomized trials. He coordinated several large scale international collaborative meta- analyses, whose contributions have been recognized worldwide.

He is also co-founder and co-chair of the GORTEC group, dedicated to conducting clinical trials in head and neck cancers. Beside his clinical activities, he has a major interest in Laboratory and Translational Research. He spent a year at the Gray Laboratory in London and obtained a PhD in Molecular Oncology in 1992 at the University of Paris.
He is currently the Director of a laboratory dedicated to Experimental and Translational Research in Radiation Oncology. Professor Jean Bourhis is also scientific director of the research and development project ARCHADE in Caen on Hadrontherapy (development of a cyclotron for proton and carbon ions acceleration).

Recently, Professor Jean Bourhis has been elected as the next President of the European Society for Therapeutic Radiology Oncology (ESTRO).

Proudly supported by Merck Serono

Professor Ian Frazer

Ian Frazer is director of the Diamantina Institute of Cancer Immunology and Metabolic Medicine, a research institute of the University of Queensland at the Princess Alexandra Hospital in Brisbane. He was trained as a renal physician and clinical immunologist in Edinburgh, Scotland before emigrating in 1981 to Melbourne, Australia to continue his clinical training and to pursue studies in viral immunology and autoimmunity at the Walter and Eliza Hall institute of Medical Research with Prof Ian Mackay.
In 1985 he moved to Brisbane to take up a teaching post with the University of Queensland, and he now holds a personal chair as head of the Diamantina Institute. This institute employs over 200 researchers and trains over 30 postgraduate students. Dr Frazer's current research interests include immunoregulation and immunotherapeutic vaccines, for which he holds research funding from several Australian and US funding bodies. Dr Frazer teaches immunology to undergraduate and graduate students of the University. He is president of the Cancer Council Australia and is on the Scientific Advisory Council of IARC (International Agency for Research on Cancer). He has sat on various committees of the National Health and Medical Research Council of Australia continuously over the last 15 years. He was chosen as the 2006 Queenslander of the Year and the 2006 Australian of the Year.

Dr Rainald Knecht

Dr Rainald Knecht is Professor for Otolaryngology Head and Neck surgery and Chair of the Department of ORL, Head and Neck Oncology University Medical Center Hamburg-Eppendorf/Germany.
Dr Knecht received his medical training at the Medical School of Heidelberg and Freiburg. After education in general and surgical pathology and scientific residencies in oncologic departments of renowned international Universities like MDA Houston and the Sloan Kettering Cancer Center in New York he completed his education as specialist for Otolarynology Head and Neck surgery with main emphasis on Head and Neck Oncology.

Dr Knecht's surgical work includes endoscopic surgery, reconstructive tumor and tracheal surgery as well as functional laryngeal surgery. Also trained in medical oncology he is working on induction chemotherapy and targeted therapy drawing the line between surgical and nonsurgical approaches in multimodal tumor therapy.
Dr Knecht is author of more than 150 papers on the topic of head and neck and other cancers published in international peer-reviewed journals. He has been Investigator and PI in 32 Clinical studies. He is a member of numerous national and international medical societies and in the board and advisory board of peer reviewed journals and research committees. He is founder of the German Society for the prevention and for the sponsorship of research of laryngeal cancer and member of the Steering Committee of the EORTC, Head and Neck cancer group.

Professor Boguslaw Maciejewski MD, PhD, FACR
Professor Radiation Oncology
Director Cancer Centre, M.Sklodowska-Curie, Memorial Institute, branch Gliwice, Poland.
Graduated Silesian Medical University in 1970, PhD in exp. radiotherapy in 1982, professor since 1991, Director of the Institute in 1991 until present.

Professor Maciejewski's appointments include; Radiotherapy GSF Centre Munich 1981, 1983 Dept. Exp. Radiat. Oncol, UCLA, Los Angeles 1985-1986, 1991, 1995, 1998. MGH Harvard Medical School Boston, USA 1990 – 1991. National Consultant in Radiotherapy 2001 – 2004, Scientific Board of the Ministry of Health 2001 – 2004, IARR Board 1999 – 2002, ESTRO Board 1993 – 1997.

He has been awarded an Individual Prize in Radiotherapy Polish Academy of Sciences – 1989, received the Gilbert Fletcher Gold Medal (USA) – 1994, became an honorary Member of American College of Radiology in 2002 and received the ESTRO Gold Medal in Education in 2004. Professor Maciejewski is an author of over 190 original papers published in Polish and International journals and has presented over 210 lectures throughout the world. He is a member of 5 international scientific journals, teacher and promoter of 26 PhD thesis and 7 habilitation dissertations.

Mr Taimur Shoaib
Mr Shoaib is a consultant plastic and reconstructive head and neck surgeon at the Canniesburn plastic surgery unit at the Glasgow Royal Infirmary in the UK. As part of his training he completed the head and neck interface group fellowship in Oxford, working with maxillofacial, ENT and head and neck plastic surgeons prior to taking up his current post.

Mr Shoaib's main areas of practice are complex skin oncology and head and neck cancers. He has research interests in sentinel node biopsy in oral cancer and helped develop the Canniesburn protocol for the procedure. He has also helped develop national guidelines for the management of melanoma in Scotland and leads the regional skin cancer multidisciplinary team meeting. He is the deputy lead for skin cancer in the West of Scotland.

Ms Bella Talwar
Bella, BSC (Hons), United Kingdom, graduated from Queen Margaret College at Edinburgh in 1995 as a State Registered Dietitan and specialised in Head & Cancer in 1999. She established a Nutrition and Dietetic Service at the Royal National Nose, Throat and Ear Hospital, London and currently is Lead Clinician to a team of four specialist dietitans at the Head & Neck Centre, University College London Hospital, NHS Foundation Trust, UK.

Bella has published in the field of nutrition in Head & Neck Cancer and has represented her professional body for strategic development of dietetic services and clinical aspects for Head & Neck at a local and national level. This includes The National Institute of Clinical Excellence guidelines, Peer Review Quality Assurance of services, National Cancer Action Team - Workforce Project and BAO-HNS Effective Head and Neck Cancer Management 3rd consensus document.

Additionally, she is currently Chairperson of the British Dietetic Association, Oncology Group providing shared leadership in collaboration with group members to be recognised as a key stakeholder group in Cancer Care by continuing to provide guidance and support, expert opinion or involvement in projects.

Her clinical interest and research focus includes outcomes of gastrostomy, pre-operative immune modulating nutrition, cancer cachexia and malnutrition related quality of life. She is committed to and strives towards transformational nutrition care with patient centred excellence through multi-professional working and quality improvement.

Sponsor & Exhibitor Acknowledgement

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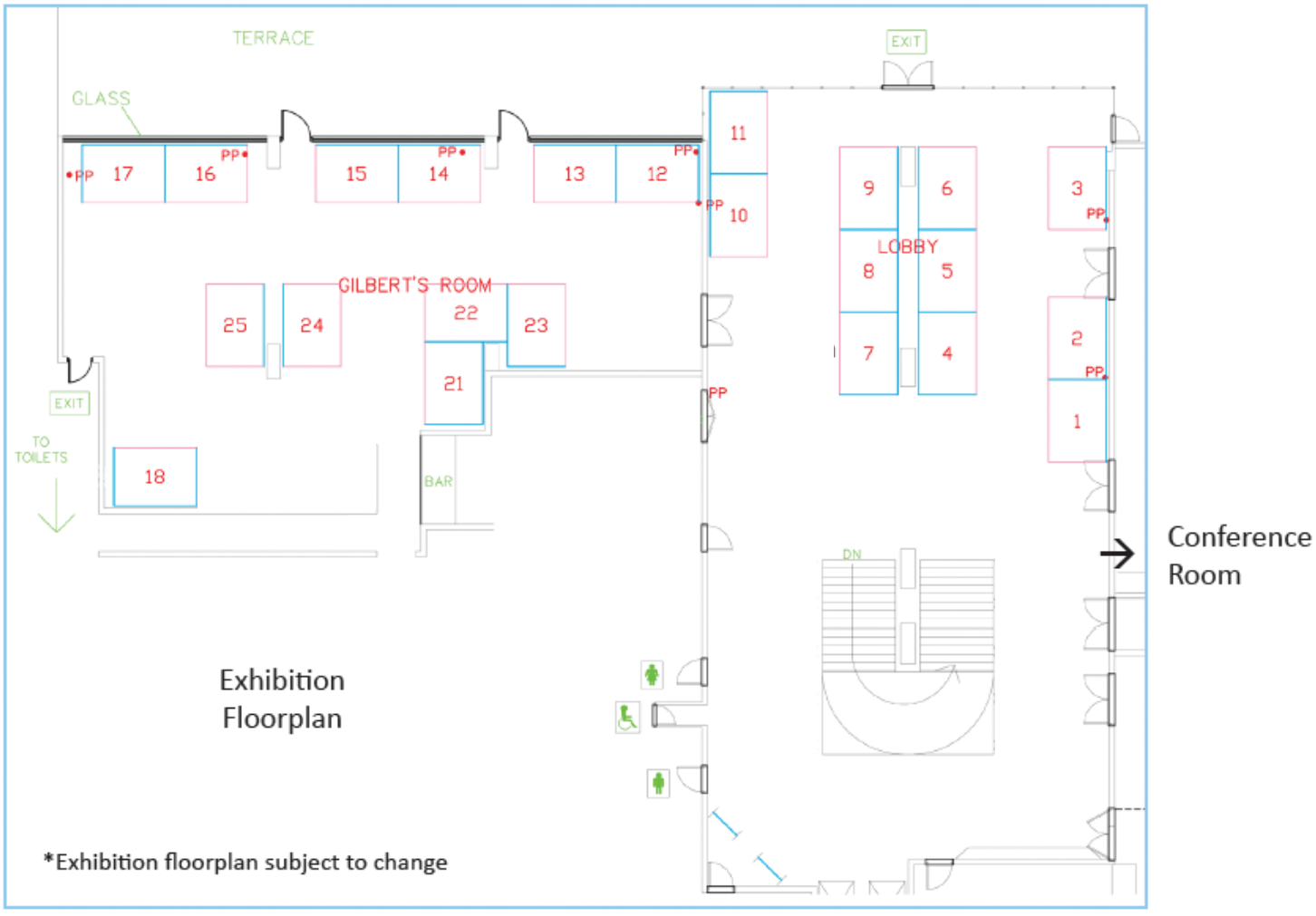

General Information

GENERAL INFORMATION

DATE & VENUE
The 12th Annual Scientific Meeting of the Australian & New Zealand Head and Neck Cancer Society will be held from Thursday 2 September 2010 to Saturday 4 September 2010 at the Novotel Sydney Manly Pacific, 55 North Steyne, Manly, NSW, 2095, Australia.

The Novotel Sydney Manly Pacific is located in the heart of Manly, opposite one of Sydney's most famous beaches. Manly is located approximately 15 minutes by Jetcat and approximately 30 minutes by car to Sydney's CBD.

OFFICIAL FUNCTIONS
Welcome Reception with the Industry
Thursday 2 September 2010
Level 1, Novotel Sydney Manly Pacific
5:30pm - 7:30pm
Cost: Included for full registration, bookings essential
Additional tickets $68.00 inc GST

Meeting Dinner
Friday 3 September 2010
Harbourview Ballroom, Taronga Centre, Mosman
7:00pm - 11:00pm (coaches depart 6:15pm from the Novotel Hotel, meet in the ground level foyer).
Cost: Included for full registration, bookings essential
Additional tickets $150.00 inc GST

INDUSTRY EXHIBITION
The industry exhibition will be held on Level 1, Novotel Sydney Manly Pacific. All refreshment breaks including morning tea, afternoon tea and lunch will be served in the exhibition room.

REGISTRATION INFORMATION
• Full registration includes; all scientific sessions, final program, luncheons on nominated days, morning and afternoon tea on nominated days, entry to the industry exhibition, Welcome Reception and Meeting Dinner.
• One day registration includes; all scientific sessions, final program, luncheons on nominated days, morning and afternoon tea on nominated days and entry to the industry exhibition.

DRESS
Scientific Sessions and Pre Meeting Workshop: smart casual
Welcome Reception: smart casual
Meeting Dinner: semi-formal

REGISTRATION DESK
The Registration Desk will be located on Level 1, Novotel Sydney Manly Pacific for the duration of the meeting.
Opening Hours:
Wednesday 1 September: 12:00noon - 5:30pm
Thursday 2 September: 11:00am -5:30pm
Friday 3 September: 7:30am - 5:30pm
Saturday 4 September: 8:00am - 2:00pm

INTENTION TO PHOTOGRAPH
Delegates please be advised that photographs may be taken during the meeting and reproduced.

ANZHNCS EXECUTIVE MEETING
A meeting of the ANZHNCS Executive will be held on Thursday 2 September 2010 from 10:30am - 12:00noon in the Barton Room, Level 1, Novotel Sydney Manly Pacific.

SPEAKERS' PREPARATION ROOM
All presenters must report to speaker support located in the Clontarf Room, Level 1 at least two hours prior to the commencement of the session in which you will be presenting.

EVALUATION FORM
An evaluation form can be found in your Meeting bag. Please complete this form and return to the registration desk. The ANZHNCS values your feedback.

CERTIFICATE OF ATTENDANCE
A certificate of attendance can be collected at the time of registration from the staff at the registration desk.

ROYAL AUSTRALASIAN COLLEGE OF SURGEONS CME/CPD POINTS
This educational activity has been approved in the College's CPD Program. Fellows who participate can claim one point per hour (maximum 17 points) in Category 4: Maintenance of Clinical Knowledge and Skill towards the 2010 CPD totals.

NAME BADGES
Name badges must be worn at all times during the meeting and are available from the registration desk.

PROGRAM AT A GLANCE

THURSDAY 2 SEPTEMBER 2010

12:30pm	Session 1 Room: Clarendon/Norfolk/Cutler
3:00pm	Afternoon Tea with the Industry
3:30pm	Session 2: Oncogenic Viruses VIRALYTICS LTD Room: Clarendon/Norfolk/Cutler
4:30pm	Session 3: Society Session Room: Clarendon/Norfolk/Cutler
5:30pm	Welcome Reception with the Industry Level 1, Novotel Sydney Manly Pacific

FRIDAY 3 SEPTEMBER 2010

8:30am	Session 4: Larynx Cancer Room: Clarendon/Norfolk/Cutler
10:30am	Morning tea with the Industry
11:00am	Session 5: Exploring and Applying the Evidence Room: Clarendon/Norfolk/Cutler
12:45pm	Lunch with the Industry
1:30pm	Concurrent Session 6A: Melanomas of the Head and Neck Room: Clarendon/Norfolk/Cutler
1:30pm	Concurrent Session 6B: Multidisciplinary Team Care: Innovation and Integration Room: Barton Room
3:15pm	Afternoon Tea with the Industry
3:45pm	Session 7: Reconstruction Room: Clarendon/Norfolk/Cutler
7:00pm	Meeting Dinner (Coaches depart 6:15pm) Harbourview Ballroom, Taronga Centre

SATURDAY 4 SEPTEMBER 2010

9:00am	Session 8: International Forum Room: Clarendon/Norfolk/Cutler
10:30am	Morning Tea with the Industry
11:00am	Session 9: Head and Neck Cancer as an Orphan Disease: Implications for Management Room: Clarendon/Norfolk/Cutler
12:30pm	Lunch with the Industry
1:30pm	Session 10: What's New in the Neck? Room: Clarendon/Norfolk/Cutler
4:00pm	Meeting Close

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References

1. Erbitux Product Information. Approved January 2010. 2. Licitra L and Felip E. On behalf of the ESMO guidelines Working Group. Ann Oncol 2009;20 (suppl 4):iv121-iv122. 3. http://www.nccn.org/professionals/physicians_gls/f_guidelines.asp. 4. Bonner JA et al. Lancet Oncol. Published online November 7, 2009. DOI:10.1016/S1470-2045(09)70311-0. 5. Vermorken JB et al. N Engl J Med 2008; 359:1116-1127. 6. Bonner J et al. N Engl J Med 2006; 254:567-578

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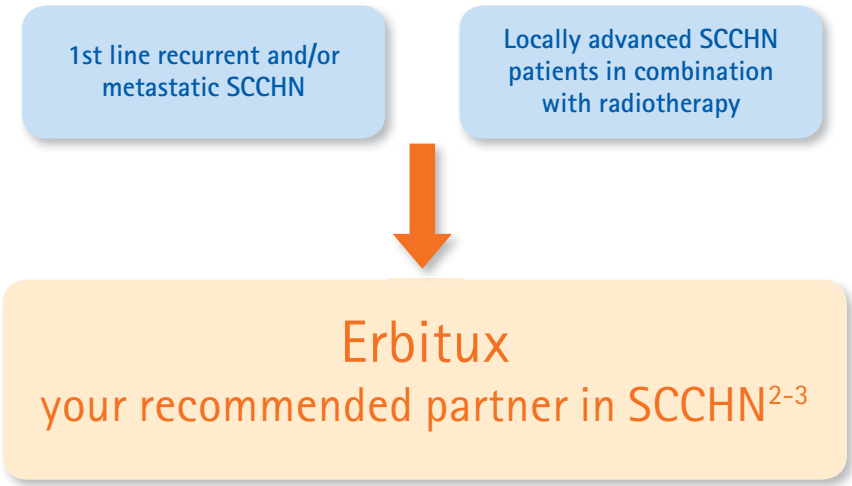

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Please review approved Product Information before prescribing. Product Information is available upon request from Merck Serono.

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SCIENTIFIC PROGRAM

THURSDAY 2 SEPTEMBER 2010

SESSION 1
Chair: Robert Smee
Room: Clarendon/Norfolk/Cutler

12:30pm Introduction/Welcome

12:40pm ***Chris O'Brien Oration***
From the humble strawberry birthmark to head and neck cancer
Swee Tan

1:00pm Altered fractionated radiotherapy for head and neck cancer: Repopulation mystery
Boguslaw Maciejewski

1:30pm New developments in radio chemotherapy and target therapy in head and neck cancer
Rainald Knecht

2:00pm Critical impact of radiotherapy protocol compliance and quality in the treatment of advanced head and neck cancer – results from TROG 02.02
Lester Peters

2:20pm Papillomaviruses then, now and the future. Prospects for control of HPV associated head and neck cancer
Ian Frazer

2:50pm Discussion

3:00pm Afternoon tea with the Industry

SESSION 2: ONCOGENIC VIRUSES
Sponsored by VIRALYTICS LTD ONCOLYTIC VIRUSES
Chair: Guy Rees
Room: Clarendon/Norfolk/Cutler

3:30pm Current status of HPV malignancy in the oropharynx
Eric Moore - ***Chris O'Brien Travelling Fellow***

3:50pm HPV and other markers in oropharyngeal cancer: A multicentre study
Angela Hong

4:00pm Prognostic significance of human papilloma virus (HPV) and other molecular markers in patients with head and neck squamous cell carcinoma treated with chemo-radiation on a Phase III Trial
Danny Rischin

4:10pm A retrospective review of patients treated for tonsillar carcinoma at a single centre
Robert Smee

4:20pm Viralytic therapy for SCC of the head and neck
Stephen Ackland

SESSION 3: SOCIETY SESSION
Chair: Swee Tan
Room: Clarendon/Norfolk/Cutler

4:30pm Intensity modulated radiotherapy using simultaneous - integrated boost for definitive treatment of head and neck cancer: Outcomes from a single institution series
Thomas Eade

4:40pm Determining the clinical utility of novel tumour markers in head and neck squamous cell carcinoma
David Hall

4:50pm Multiple simultaneous free flaps: flexibility in complex head and neck reconstruction
Roger Woods

5:00pm CO2 laser trans-oral microsurgery for oral cavity lesions
Faruque Riffat

5:10pm Platelet rich plasma in the prevention of osteoradionecrosis: A randomised double blinded cross over control trial
Martin Batstone

5:20pm Trans-oral robotic targeted surgery: CR without toxicity
Suren Krishnan

5:30pm-7:30pm Welcome Reception with the Industry

FRIDAY 3 SEPTEMBER 2010

SESSION 4: LARYNX CANCER
Chair: Ben Panizza
Room: Clarendon/Norfolk/Cutler

8:30am Larynx function
Liz Ward

8:45am Organ preservation in head and neck cancer
Rainald Knecht

9:15am Evaluation of the oncologic efficacy of transoral laser microsurgical resection of early glottic cancer
Carsten Palme - ***Chris O'Brien Travelling Fellow***

9:30am Altered fractionated radiotherapy for head and neck cancer: 7 days continuous accelerated irradiation (CAIR): Is weekend-in treatment beneficial? (3 single-institutional trials: CAIR-I&II)
Boguslaw Maciejewski

10:00am Larynx cancer: Optimising non-surgical approaches
Jean Bourhis

10:30am Morning tea with the Industry

SESSION 5: EXPLORING AND APPLYING THE EVIDENCE
Chair: David Wiesenfeld
Room: Clarendon/Norfolk/Cutler

11.00am	Nutritional guidelines: Development of evidence based guidelines for the nutritional management of head and neck cancer **Teresa Brown**
11:15am	Towards improving the therapeutic ratio in head and neck cancer **June Corry**
11:30am	Creating a specialist head and neck dietetic workforce: The UK experience **Bella Talwar**
11:45am	Merkel cell carcinoma: The importance of addressing the regional lymph nodes in clinically node negative patients **Julie Howle**
11:55am	Radiotherapy does not increase the risk of a 2nd malignancy **Rostam Farhadieh**
12:05pm	The Impact of multidisciplinary meetings (MDMs) on patient care **Daisy Mak**
12:15pm	Bone invasion and prognosis in patients with oral cancer. Should all patients with bone invasion be staged T4? **Ardalan Ebrahimi**
12:25pm	Videomanometric examination of pharyngeal swallowing function following total laryngectomy surgery **Julia Maclean**

12:35pm **Lunch with the Industry**

CONCURRENT SESSION 6 (A): MELANOMAS OF THE HEAD AND NECK
Chair: Robert Smee
Room: Clarendon/Norfolk/Cutler

1:30pm	Epidemiology of head and neck melanoma **Bruce Armstrong**
1:45pm	Melanoma – Scottish guidelines and how they are relevant in head and neck cancer **Taimur Shoaib**
2:15pm	Current management of regional lymph nodes for cutaneous melanoma of the head and neck **Kerwin Shannon**
2:30pm	Results of an Intergroup Randomised Trial (TROG 02-01 / ANZMTG 01-02) and its implications for adjuvant radiation therapy neck dissection for nodal melanoma **Bryan Burmeister**
2:45pm	Systemic therapies for melanoma of the head and neck **Georgina Long**
2:55pm	Reconstruction for radical parotidectomy defects **Sydney Ch-Ng**
3:05pm	Tumour vasculogenesis in head and neck cancers **Tinte Itinteang**

CONCURRENT SESSION 6 (B) - MULTIDISCIPLINARY TEAM CARE: INNOVATION AND INTEGRATION
Chair: Merran Findlay and Justine Oates
Room: Barton

1:30pm	Altered fractionation radiotherapy versus chemoradiation in oropharyngeal cancer: Outcomes for swallowing, nutrition and functional impact at 6 months post treatment **Bena Cartmill**
1:40pm	A multidisciplinary pre-treatment clinic for assessment and early intervention in head and neck cancer **Luci Dall'Armi**
1:50pm	Prosthetic Voice Rehabilitation: Provox Vega Voice Prosthesis and review of device life in Australian contexts **Kelli Hancock**
2:00pm	Prevalence of malnutrition among head and neck radiotherapy patients using the patient generated subjective global assessment **Nicole Kiss**
2:10pm	Physiotherapy for accessory nerve shoulder dysfunction following neck dissection surgery: A multicentre randomised controlled trial **Aoife McGarvey**
2:20pm	Head and neck lymphodema - An unrecognised side effect **Jodie Nixon**
2:30pm	**Debate - To PEG or Not?** **Moderator: Gary Morgan** **For:** Chris Milross, Bella Talwar, Virginia Simms **Against:** June Corry, Nicole Kiss, Bena Cartmill

3:15pm **Afternoon tea with the industry**

SESSION 7 - RECONSTRUCTION
Chair: Del Hinckley
Room: Clarendon/Norfolk/Cutler

3:45pm	Role of surgery in multimodality treatment **Rainald Knecht**
4:15pm	Head and neck reconstruction **Taimur Shoaib**

Scientific Program

FRIDAY 3 SEPTEMBER 2010 (Continued)

4:45pm	Maxillary Reconstruction **Jonathon Clarke**
4:55pm	A retrospective analysis of free flap survival and outcomes in patients requiring post-operative inotropic or vasopressor support **Daniel Foley**
5:05pm	**Annual General Meeting - Members Only**
6:15pm	Coaches depart Novotel Sydney Manly Pacific for Harbourview Ballroom, Taronga Centre, Mosman
7:00pm	**Meeting Dinner**

SATURDAY 4 SEPTEMBER 2010

SESSION 8 - INTERNATIONAL FORUM
Room: Clarendon/Norfolk/Cutler

9:00am	Altered fractionated radiotherapy for head and neck cancer: What do we really know about acute mucosal toxicity? **Boguslaw Maciejewski**
9:30am	Combining new molecular targeted drugs with radiotherapy in head and neck cancer **Jean Bourhis**
10:00am	Optical biopsy of mucosal lesion **Khee Chee Soo**
10:15am	Periorbital surgery: Considerations to preserve vision and to facilitate ocular rehabilitation **Wing-yung Cheung**
10:30am	**Morning tea with the Industry**

SESSION 9: HEAD AND NECK CANCER AS AN ORPHAN DISEASE: IMPLICATIONS FOR MANAGEMENT
Chair: June Corry
Room: Clarendon/Norfolk/Cutler

11:00am	Liz Kenny
11:20am	Bernie Lyons
11:40am	Robert Smee
12:00noon	Patterns of care and outcomes study for Aboriginal patients with head and neck cancer having radiation therapy in a tertiary hospital **Raghu Gowda**
12:10pm	Multidisciplinary care of head and neck cancer in Australia and New Zealand **Guy Rees**
12:30pm	**Lunch with the Industry**

SESSION 10 - WHAT'S NEW IN THE NECK?
Chair: Carsten Palme
Room: Clarendon/Norfolk/Cutler

1:30pm	SCC and lymph nodes – Results of the Canniesburn Sentinel Node Trial in Oral / Oropharyngeal Cancers **Taimur Shoaib**
2:00pm	The principles of Intra-operative Monitoring **Neil Mahant**
2:15pm	Nerve monitoring in lateral skull base surgery **Melville Da Cruz**

2:30pm	Thyroid surgery and recurrent laryngeal nerve monitoring **Rob Eisenberg**
2:45pm	Predicting the pattern of regional metastases from cutaneous squamous cell carcinoma of the Head and Neck based on location of the primary **Ardalan Ebrahimi**
2:55pm	Pathological evaluation of sentinel lymph node in head and neck squamous cell carcinoma **Nirav Trivedi**
3:05pm	Physiotherapy for accessory nerve shoulder dysfunction following neck dissection surgery: A literature review **Aoife McGarvey**
3:15pm	Rate of contralateral nodal failure in patients with regionally advanced tonsillar cancer treated unilaterally **Chen Liu**
3:25pm	Retrospective review of 152 cases of thyroid cancer treated at Tan Tock Seng Hospital, Singapore **R Lim**
3:35pm	Elective neck dissection in thick early stage oral squamous carcinoma: What is the effect on survival? **Ardalan Ebrahimi**
3:45pm	Metastatic Cutaneous Head and Neck Squamous Cell Carcinoma Treated in a Regional Area **Roger Grigg**
3:55pm	Discussion
4:00pm	**Close**

ABSTRACTS

PLATELET RICH PLASMA IN THE PREVENTION OF OSTEORADIONECROSIS – A RANDOMISED DOUBLE BLINDED CROSSOVER CONTROLLED TRIAL

M. D. Batstone, J. Cosson and C. Acton

Royal Brisbane Hospital

Introduction: Osteoradionecrosis of the jaws is a significant complication of radiotherapy for the treatment of head and neck cancer. It occurs more frequently in the mandible and its prevention and management remain controversial. PRP has been advocated in multiple surgical sites, both bone and soft tissue, to promote healing and reduce complications. We designed a trial to determine whether PRP would help prevent osteoradionecrosis (ORN) in pre radiotherapy dental extraction sockets.

Methods: A randomised double blinded controlled trial was performed on patients receiving bilateral radiotherapy which affected the mandible who required pre treatment dental extractions. One side received PRP and the other acted as a control. Blinded assessments were performed at 2 weeks, 2, 6, 9, and 12 months for pain, healing and ORN.

Results: 22 patients were recruited and over a 5 year period following treatment three developed osteoradionecrosis (13.6%). Platelet rich plasma failed to show any benefit in the prevention of ORN. Nor was there any benefit in pain scores or mucosal healing on sides which were treated with PRP.

Discussion: This trial fails to show a benefit in the use of PRP and indeed the rate of ORN was higher on those sides receiving PRP. The rate of ORN is quite high compared to other published series and the prophylactic removal of molar teeth in the field of radiotherapy should be questioned as a preventative measure.

Declaration: The equipment for harvesting of Platelet rich plasma was donated for this trial by 3i.

NUTRITIONAL GUIDELINES: DEVELOPMENT OF EVIDENCE BASED GUIDELINES FOR THE NUTRITIONAL MANAGEMENT OF HEAD AND NECK CANCER

T. Brown, M. Findlay and J. Bauer

Purpose: Malnutrition prevalence in head and neck cancer patients is reported at 50-75%[1], impacting on wound healing, immune response, complications, undesired treatment breaks and unplanned hospital admissions[2]. Consequently nutrition support plays a crucial role, with the potential to influence clinical, cost and patient outcomes. There are currently no comprehensive evidence based guidelines for the nutritional management of this specific patient population, and so this project aims to address this gap.

Methodology: Funding was obtained from the Cancer Institute NSW Oncology Group (Head and Neck). A dietetic steering committee has been established to develop the guidelines, and a multi-disciplinary committee has been formed for consultation with key stakeholders. Clinical questions will be addressed throughout the nutrition care plan, and following literature review, evidence based statements and recommendations will be made. The guidelines will be published in the Wiki format to ensure their currency.

Results: Four key databases have been searched and resulted in identification of 260 articles for review. These articles have been independently critically appraised by at least 2 members of the dietetic steering committee, utilising the NHMRC levels of evidence for grading the body of evidence[3]. Evidence based statements and recommendations are currently being developed.

Conclusions: Once complete the guidelines will be submitted to the Clinical Oncology Society of Australia and Dietitians Association of Australia for endorsement. The guidelines will provide clinicians working in this field access to recommendations for best practice in the nutrition care of head and neck patients and aim to influence practice internationally.

References:

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• Funding for the project supported by Cancer Institute NSW Oncology Group (Head and Neck).
• Funding for the presenting author to attend the conference supported by the Clinical Oncology Society of Australia

RESULTS OF AN INTERGROUP RANDOMISED TRIAL (TROG 02.01/ ANZMTG 01.02) AND ITS IMPLICATIONS FOR ADJUVANT RADIATION THERAPY AFTER NECK DISSECTION FOR NODAL MELANOMA

B. Burmeister, M. Henderson, J. Thompson, R. Fisher, J. Di Iulio, M. Smithers, K. Shannon, A. Hong, H. Hoekstra, S. Carruthers and J. Ainslie

Princess Alexandra Hospital, Brisbane

Background: TROG 02.01/ ANZMTG 01.02 is a randomised trial assessing the value of adjuvant radiation therapy (RT) using specific guidelines and indications for patients at high risk of regional recurrence after lymphadenectomy. Outcomes of the trial relating to the management of melanoma in the head and neck region are presented.

Methods and Material: The trial was designed to sample 250 patients from all 3 nodal basins with stratification according to institution, node site, number of positive nodes, metastatic node size and extent of extranodal spread. Patients were randomised to initial observation or to receive RT (48 Gy in 20 fractions). The major endpoint was regional relapse. Secondary endpoints were overall survival, relapse-free survival, patterns of relapse, late toxicity and quality of life.

Results: 248 patients were eligible for analysis of which 65 (26%) had disease in the head and neck region. Median age was 57 (22 - 87) years, 184 (74%) being male. Half had extranodal spread and most had multiple nodes involved. Following review of eligibility, 31 were excluded from the endpoint analysis. In the 217 remaining patients, regional recurrence was significantly reduced in patients receiving RT (HR 1.77; 95% CI 1.02 - 3.08, p = 0.041). No difference in the time to regional relapse by node site (p = 0.48) or overall/ relapse-free survival was noted. Acute toxicity related to RT was acceptable.

Conclusion: Adjuvant RT after lymphadenectomy for patients at high risk of regional recurrence improves regional control. The trial also confirms the findings of TROG 96.06 phase II trial which showed no difference in relapse after RT according to node site.

ALTERED FRACTIONATION RADIOTHERAPY VS CHEMORADIATION IN OROPHARYNGEAL CANCER: OUTCOMES FOR SWALLOWING, NUTRITION AND FUNCTIONAL IMPACT AT 6 MONTHS POST-TREATMENT

B. Cartmill, P. Cornwell, E. Ward and S. Porceddu

Princess Alexandra Hospital and University of Queensland, Queensland, Australia

Swallowing, nutrition and functional impact outcomes for patients receiving altered fractionation radiotherapy with concomitant boost (AFCB) have not been reported in the literature. Examinations have thus far focussed on toxicity and tolerance of treatment regimens. This paper aims to compare functional outcomes relating to swallowing, weight and nutritional status at 6 months post-treatment in patients who have received AFCB or chemoradiation. We hypothesise the AFCB patients to have superior outcomes when compared with chemoradiation patients.

Videofluoroscopy (VFS) was performed at 6 months post-treatment in patients with T1-T3 oropharyngeal cancers who received AFCB or chemoradiation. VFS assessments were analysed using several objective measures. Weight, BMI and nutritional status were also assessed. Participants rated the functional impact of treatment using two validated assessments.

Significant results were found for measures of airway protection and clinical examination of swallowing with inferior outcomes for chemoradiation patients. No significant differences were found for nutrition or functional impact. Trends suggest chemoradiation patients report greater functional impact for swallowing in emotional, functional, physical and global domains, although these did not reach significance.

Altered fractionation radiotherapy is perceived as a less “toxic” treatment regimen compared with chemoradiation, with patients better able to tolerate treatment and less susceptible to long-term sequelae. In contrast to this perception, our results showed similar outcomes regarding swallowing, nutrition and functional impact. Patients receiving these more intense altered fractionation regimens should be educated regarding their side effects and a requirement for objective swallowing and nutrition intervention in the months post-treatment should be recommended.

PERIORBITAL SURGERY: CONSIDERATIONS TO PRESERVE VISION AND TO FACILITATE OCULAR REHABILITATION

W. Cheung

Division of Plastic Surgery & Head and Neck Surgery, Kwong Wah Hospital, Hong Kong SAR

Major Peri-orbital Ablative & Reconstructive Surgery consists of two main categories in our locality: Globe-sparing vision preservation surgery and Globe-sacrificing prosthetic eye ocular rehabilitation surgery.

Vision preservation is of the highest priority in periorbital surgery. Considerations to preserve the globe should be respected whenever feasible. Tumors involving peri-orbital units should be removed to maximize control and to minimize functional loss. Functional eyelid reconstructions and flap surgery with bony orbit reconstructions after orbital floor resection are selected to enable globe protection and bony support to retain visual functions.

However, when orbital exenteration is deemed necessary, a normal appearing prosthetic eye then becomes the goal of ocular rehabilitation in the field of anophthalmic surgery. There are either immediate or secondary periorbital reconstructive surgeries to facilitate ocular rehabilitations.

Periorbital Reconstructive strategy is set to achieve certain goals of ocular rehabilitation. Firstly, reconstructive surgery should ensure stable wound healing surrounding the orbit, especially when the skull base or the paranasal sinus has been involved. Secondly, Periorbital Ablative Surgery that includes functional-unit-sparing or eyelid-sparing surgery should be advocated. Thirdly, a stable eye socket that could house the ocular prothesis in a normal position or a secondary orbital implant that allow extracocular muscle attachment should be adopted whenever possible. Fourthly, staged reconstructive procedures should be well-planned to restore difficult & long-standing anophthalmic conditions particularly after radiation or severe trauma.

In summary, Plastic Surgeons, Ophthalmic Surgeons and Ocularists must be working closely to facilitate Ocular Rehabilitation so as to provide better outcome for the anopthalmic patients.

RECONSTRUCTION FOR RADICAL PAROTIDECTOMY DEFECTS

S. Ch'ng, B. Ashford, K. Gao and J. Clark

Department of Plastic & Reconstructive Surgery, The Queen Elizabeth Hospital, SA and The Sydney Head & Neck Cancer Institute, NSW

Purpose: Radical parotidectomy presents a unique combination of reconstructive challenges. The high visibility of the region and the specialised structures involved create an inter-dependence between aesthetics and function. This paper describes our surgical concepts and experience in post-radical parotidectomy reconstruction, and highlights some of the errors and pitfalls in our early experience.

Methodology: The various components of reconstruction following radical parotidetomy including contour restoration, skin coverage, mandible reconstruction and facial reanimation are reviewed. We discuss our methods of choice and specific technical refinements, and present historical and current alternatives.
Post-radical parotidectomy reconstruction cases performed from July 2006 – May 2010 were identified. Information on patient demographics, aetiology, reconstruction technique, surgical complications, postoperative adjuvant radiotherapy and survival was culled.

Results: The most common indication was metastatic cutaneous SCC, followed by carcinoma ex pleomorphic adenoma and direct extension from primary cutaneous malignancy. In reconstruction of 21 (M:F=17:4, median age 75 years) radical parotidectomy defects, our standard approach was a combination of anterolateral thigh free flap and cervicofacial flap, repair of the facial nerve with nerve to vastus lateralis segmental interpositional graft, gold weight loading of the upper eyelid, lateral canthopexy, temporalis and digastric muscle transfers and a delayed brow lift. Surgical complications include under-correction of facial reanimation, wound breakdown and infections. 17 (81%) patients received adjuvant radiotherapy (range 50-66G to the primary site, 40-60G to the neck).

Conclusion: Radical parotidectomy is a morbid procedure that is sometimes necessary for oncological control. However, with sound principles and attention to details in reconstruction, quality of life can be greatly improved.

TOWARDS IMPROVING THE THERAPEUTIC RATIO IN HEAD AND NECK CANCER

J. Corry

The intensity of contemporary treatment for locally advanced head and neck cancer is at the upper limit of human tolerance of acute toxicities. While impressive gains in loco-regional control have been achieved, improvements in overall survival have been more modest.

Our hypothesis is that unrecognized sequelae of highly toxic contemporary treatments contribute significantly to patient mortality. This provides motivation to examine the possibility of reducing treatment intensity in selected patients with locally advanced head and neck cancer.

With the demonstration of subgroups of head and neck cancer patients with very good prognosis, major improvements in the technical delivery of radiotherapy, and further research into relevant factors in survivorship, we may be able to improve overall survival of patients with locally advanced head and neck cancer without further increasing, and even reducing, treatment intensity.

NEURAL MONITORING IN LATERAL SKULL BASE SURGERY

M. J. da Cruz

Department of Otolaryngology, University of Sydney, Westmead, Sydney, Australia

Understanding the evidence base for neural monitoring in lateral skull base surgery is best approached from the study of facial nerve outcomes following surgery for microsurgical resection of Acoustic neuromas.

Quantification of facial nerve outcomes in this setting has traditionally been studied from the surgeons' point of view. This approach has merit in defining surgical proficiency, characterising the learning curve in the training of skull base surgeons, and bench marking the minimum levels of competence required to practice in this area.

However, recent interest in quantifying the Quality of Life following acoustic neuroma surgery has lead to interest in exploring the patient's perception of their own outcome following facial nerve palsies from a wide variety of causes.

This paper reviews the rationale for the study of facial nerve outcomes from both the patient's and surgeon's point of view, and explores the differing perceptions of patients and their surgeons of surgical outcomes.

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A MULTIDISCIPLINARY PRE-TREATMENT CLINIC FOR ASSESSMENT AND EARLY INTERVENTION IN HEAD AND NECK CANCER

L. Dall'Armi, D. Forstner, K. Pronk, T. Simpson, C. Baxter, J. McGuinness and J. Clark

Cancer Therapy Centre, Liverpool Hospital, Sydney South West Area Health Service, NSW, Australia

Evaluate the innovative, multidisciplinary pre-treatment clinic for patients with H&N cancer recommended for extensive surgery and/or high dose radiotherapy with/ without chemotherapy. Commenced in January 2010, the clinic provides standardised assessment, early intervention, education, support and referral. The clinic aims to improve patient outcomes.

H&N cancer accounts for relatively small numbers, 3.4% of all new cancers in males in 2005i. Nevertheless, sufferers experience great functional impairments of speech and swallowing, disfigurement and emotional traumaii. International best practice guidelinesiii recommend that pre-treatment assessment and management of the clinical, nutritional and psychological state improves outcomes.

High-risk patients according to specific inclusion criteria are assessed prior to treatment intervention. The weekly clinic is conducted by the Cancer Nurse Coordinator, Dietitian, Speech Pathologist and Social Worker.

Along with a Patient Satisfaction Survey, the following validated assessment tools are employed; Distress Thermometer (psychometric), EORTC QLQ-H&N35 Quality of Life, PG-SGA (dietetic) and Speech Handicap Index (SHI). The SHI and Modified Barium Swallow are implemented where applicable. Follow-up data are collected at 3, 6 and 12 months post-treatment. Clinicians completed a satisfaction survey of the service.

Preliminary results available are evaluations of the Patient and Clinician satisfaction surveys. These demonstrate strong levels of satisfaction and supporting evidence to continue this new model of preventative care.

The clinic requires considerable planning and collaboration with no additional resources or staff. Nevertheless earlier intervention may reduce readmission rates and improve treatment recovery. Positive feedback from patients and clinicians provides the impetus to persevere.

INTENSITY-MODULATED RADIOTHERAPY USING SIMULTANEOUS-INTEGRATED BOOST FOR DEFINTIVE TREATMENT OF HEAD & NECK CANCER: OUTCOMES FROM A SINGLE-INSTITUTION SERIES

M. Johnston, M. Back, L. Guo, A. Guminski, D. Veivers, A. Wignall and **T. N. Eade**

Royal North Shore Hospital

Purpose: To report outcomes of patients with locoregionally advanced squamous cell carcinoma of the head and neck treated with concurrent weekly cisplatin and intensity-modulated radiotherapy using a simultaneous-integrated boost technique (SIB-IMRT).

Methods and Materials: All included patients were treated with the same protocol: SIB-IMRT of 70Gy /35#, 63Gy/35# and 56Gy/35# to the high risk, intermediate risk and low risk regions respectively with concurrent weekly cisplatin 40mg/m2. A minimum of 3 months follow-up was required for inclusion. Immobilization with a Uvex shell and kV/kV imaging was used for daily alignment. Primary endpoints were local recurrence (LR) and regional recurrence (RR). Secondary endpoints were metastases and overall survival. Kaplan Meier estimates were performed with SPSS.

Results: Between January 2007 and December 2009 there were 49 eligible patients, 14 (29%) AJCC stage III and 35 (71%) AJCC stage IV. Median follow-up was 21 m onths for living patients. All patients completed radiotherapy to 70 Gy. Local recurrence occurred in 4 patients, 2 of whom had T4 primary disease. Nodal recurrence occurred in 5 patients and no patients recurred out of field. The 2-year actuarial rates of LR and RR were 92% and 89% respectively. Distant metastatic disease occurred in 10 patients. The 2 year overall, metastasis-free and disease-free survival was 84%, 75%, and 68% respectively.

Conclusions: Local recurrence and regional recurrence in this cohort of locoregionally advanced head and neck patients treated using SIB-IMRT with weekly Cisplatin were low, although longer follow-up is required to confirm these results.

ELECTIVE NECK DISSECTION IN THICK EARLY STAGE ORAL SQUAMOUS CELL CARCINOMA: WHAT IS THE EFFECT ON SURVIVAL?

A. Ebrahimi, J. R. Clark and B. G. Ashford

Sydney Head and Neck Cancer Institute

Purpose: Management of the node negative neck in T1-T2 oral squamous cell carcinoma (SCC) remains controversial. We aimed to determine if elective neck dissection (END) improves outcomes in the presence of thick primaries, since this reflects current practice in most institutions and has not been specifically addressed in the literature.

Methodology: Retrospective univariate and multivariable analyses of prospectively collected data, comparing END versus observation in 153 patients with T1-T2 N0 oral SCC ≥ 4mm thick. The end-points for analysis included regional failure, disease-specific and overall survival.

Results: END was performed in 114 patients while in remaining 39 patients the neck was managed by observation alone. Patients undergoing END were significantly more likely to have pT2 tumours (68.4% versus 28.2%, $p < .001$), involved margins (11.4% versus 0.0%, $p = .040$) and adjuvant radiotherapy (38.6% versus 2.6%, $p < .001$) compared to those under observation. Death from oral SCC occurred in 7.9% of patients undergoing END and 30.8% of the observation group. Regional failure accounted for 22% of disease-related deaths in the END group compared to 92% in the observation arm. On multivariable analysis, END was a significant predictor of improved regional control (HR, 0.1; $p < .001$), disease-specific (HR, 0.1; $p < .001$) and overall survival (HR, 0.3; $p = .001$).

Conclusion: END is associated with a clinically significant survival advantage in thick early oral SCC by reducing the risk of regional failure, and we support its routine application in these patients.

BONE INVASION AND PROGNOSIS IN PATIENTS WITH ORAL CANCER: SHOULD ALL PATIENTS WITH BONE INVASION BE STAGED T4?

A. Ebrahimi, R. Murali, M. Elliott and J.R. Clark

Sydney Head and Neck Cancer Institute

Purpose: The current study aimed to determine if bone invasion is an independent prognostic factor in oral squamous cell carcinoma (SCC) after taking into account the extent of bone invasion and potential confounding variables.

Methodology: Retrospective review of 498 patients with oral SCC undergoing surgery with curative intent, of which 101 had pathologically proven bone invasion. Bone invasion was categorized as "absent", "cortical", or "medullary" and tested for association with recurrence and survival.

Results: On multivariable analysis, patients with cortical invasion did not have any significant difference in overall (p = .478) or disease-specific survival (p = .626) when compared to those without bone invasion. In contrast, medullary invasion was a significant independent predictor of reduced overall (HR, 1.9; p = .006) and disease-specific survival (HR, 2.1; p = .010). The adverse prognosis associated with medullary invasion appeared to be conferred by a significantly higher risk of distant metastatic failure (HR, 3.0; p = .037).

Conclusions: We demonstrated that medullary bone invasion is an independent predictor of reduced survival in oral SCC. This appears to be mediated by an increased risk of distant metastatic failure suggesting that these patients may benefit from adjuvant systemic therapy. Furthermore, tumours with cortical invasion alone have a similar prognosis to those without bone invasion, raising the possibility that these patients can be safely managed with surgery alone in the absence of other high-risk features. We present a proposed revision of the current AJCC T staging system based on our results.

A RETROSPECTIVE ANALYSIS OF FREE FLAP SURVIVAL AND OUTCOMES IN PATIENTS REQUIRING POST-OPERATIVE INOTROPIC OR VASOPRESSOR SUPPORT

D. Foley, Q. Lam and Y. Caplash

The Royal Adelaide Hospital, South Australia

The formal statistical analysis for this study is pending. Given the direct implications of our results we feel it is important for the head and neck community to access this study. Updated statistics will be provided ASAP.

Background: There is much debate over the use of inotropes following microvascular free tissue transfer. This stems from a fear of subsequent flap failure due to the potential vasoconstriction of microanastomoses.

Purpose: The aim of the study was to assess the effects of post-operative inotrope infusions on free flap survival

Method: We performed a retrospective analysis of all the free tissue transfers performed at the Royal Adelaide Hospital between 2004 and 2009. Both demographic and clinical data was collected from this cohort. For those patients who required post-operative inotropes, further data was recorded concerning the indication and type of inotrope used. The rates of flap compromise and failure were then compared to a control group derived from the initial cohort.

Results: Preliminary results show that of the 320 patients 18 received infusion of inotropes, vasopressors or both. Of this group 3 patients returned to theatre for flap compromise with 2 flaps surviving and 1 flap being lost (this patient and one other patient died in the perioperative phase). Data has been submitted for statistical analysis but is still pending.

Conclusions: This is the first paper examining the effects of post-operative inotropes and vasopressors on flap survival in humans. Whilst the number of patients who received infusions was small, a failure rate of 5% is lower than expected compared to published failure rates of 11% (Microsurgery, 1980) and thus infusions are unlikely to have a significant impact on flap survival. This conclusion will be reconsidered once statistical data is available and an updated abstract will be submitted.

PAPILLOMAVIRUSES THEN, NOW AND THE FUTURE. PROSPECTS FOR CONTROL OF HPV ASSOCIATED HEAD AND NECK CANCER

I. H. Frazer

The University of Queensland Diamantina Institute

Human papillomavirus infections initiate over 5% of the global cancer burden. The contribution of infection with high risk human papillomavirus (HR HPVs) to head and neck cancer is increasingly recognised. About 50% of oropharyngeal epithelial cancer is associated with integrated HPV16 genetic information. The epidemiology, biology and response to therapy of HR HPV positive cancers in younger men and women strongly suggests that these represent a different disease from the HPV negative cancers seen in older men, and associated with tobacco and alcohol consumption. Vaccines to prevent HR HPV infection in the cervix are highly efficacious at preventing persisting HPV16 infections and should therefore assist in control of HPV positive epithelial tumours, though proof of this through clinical trial will be difficult. Immunotherapy to eradicate HPV associated tumours is also under development, and would be worthy of trial in HR HPV positive head and neck cancer. The contribution of low risk HPVs to recurrent respiratory papillomavirus and associated cancer should also be borne in mind when promoting HPV vaccination strategies.

PATTERNS OF CARE AND OUTCOMES STUDY FOR ABORIGINAL PATIENTS WITH HEAD AND NECK CANCER HAVING RADIATION THERAPY IN A TERTIARY HOSPITAL

R. Gowda[1], A. Chong[2], K. Beckmann[3], M. Penniment[1]

1. Department of Radiation Oncology, Royal Adelaide Hospital
2. Aboriginal Health Council South Australia
3. Cancer Council South Australia

Aims: Aboriginal patients with head and neck cancer have poorer survival than their non- Aboriginal counterparts. There are also long held beliefs that this cohort does not complete their scheduled radiation treatment and experience more side effects. The objective of this study was to look at patterns of patient, tumour, treatment factors and outcomes for Aboriginal cancer patients having radiation therapy at a major tertiary hospital. This study is the first ever in Australia to be done within the radiation oncology setting

Methods: Demographic and clinical data were collected through case note review for all patients identifying as Aboriginal (n=182) and diagnosed with cancer who attended the Royal Adelaide Hospital Radiation Oncology Department from 1995-2006. 46 patients were identified who had head and neck cancer as primary site. TNM staging (1997) was used in all patients. Quantitative methods were used to describe patient demographics, tumour characteristics, and patterns of care. Outcomes were assessed through Kaplan-Meier disease specific survival and multivariate Cox logistic regression modelling.

Results: 36 males (78%) and 10 females (22%) were identified. Two thirds of Aboriginal patients were from remote or very remote areas of the Northern Territory or South Australia. The majority (83%) could speak English. The average age at diagnosis was 51 years. Tobacco and alcohol use was high (95% and 85% respectively), as was the prevalence of hypertension and diabetes (30% and 13%). Weight loss was poorly documented in the case notes. Oral cavity (16/34%) was the commonest site with equal distribution between other sites oropharynx (10/22%), hypopharynx (10/22%)) and larynx (10/22%).The majority were stage IV (85%) with nodal involvement in the majority. Treatment intent was curative in (35/75%) of cases. Around 72% of patients received radiotherapy within 3 months of diagnosis. 15 (32%) had radiation therapy alone, 24 (52%) had surgery + post op radiation therapy and 7 (15%) had primary concurrent chemoradiation. The majority (98%) completed their planned treatment. 18% (8) developed acute Grade III requiring hospital admission for feeding purposes and management of mucositis. Long term morbidity could not be assessed as follow up was lacking. Survival was poor, with 67% surviving at 1 year and 40% at 5 years post-diagnosis. Increased risk of death was related to stage but not remoteness or co-morbidities, other than smoking. There was no long term follow up available most likely related to the remote residence status.

Conclusions: Late stage diagnoses in Aboriginal patients with head and neck cancer, explains to a large part, the poor survival. The vast majority of patients complete their scheduled treatment with no increased morbidity than seen their non aboriginal cohort. Efforts need to focus on encouraging early detection of cancers by education, and evaluation of morbidity in the long term. Preventive interventions like encouraging cessation of smoking and heavy drinking is also an important part of managing cancers in this cohort.

METASTATIC CUTANEOUS HEAD AND NECK SCC TREATED IN A REGIONAL AREA

R. Grigg

Darling Downs Head and Neck Unit, Toowoomba, QLD, Australia

A 10 year prospective study into patients treated by a single surgeon. 110 patients with metastatic cutaneous SCC in the head and neck were treated with a variety of modalities to reveal an overall disease specific survival of over 80%. The data will be presented with specific focus on the outcomes of a regional Head and Neck Unit and whether this has impacted on there survival. Also results will be compared with previous studies to provide comparison for the upcoming POST trial involving chemotherapy. The management of the facial nerve will be discussed as will the treatment of immunocomprimised patients.

DETERMINING THE CLINICAL UTILITY OF NOVEL TUMOUR MARKERS IN HEAD AND NECK SQUAMOUS CELL CARCINOMA

D. Hall, L. Chan, D. Lambie, G. Boyle, P. Parsons and W. Coman

Princess Alexandra Hospital Queensland

Aim: To determine the clinical utility of proteins aB-crystallin (CRYAB), osteonectin (SPARC), plasminogen activator inhibitor type 1 (PAI-1) and urokinase plasminogen activator (uPA) as prognostic and predictive markers in head and neck squamous cell carcinoma.

Method: Archived paraffin tumour sections from 163 head and neck patients treated at the Princess Alexandra Hospital Head and Neck Unit were analysed for the immunohistochemical expression of CRYAB, SPARC, PAI-1 and uPA.

Findings were correlated with clinicopathological data from each patient. Univariate survival analysis using Kaplan-Meier survival curves was used to compare disease free interval (DFI) and overall survival (OS). Multivariate Cox regression analysis was used to obtain adjusted survival estimates and their statistical significance.

Results: We previously identified CRYAB, a heat shock chaperone protein known to be involved in breast cancer and SPARC, a calcium binding glycoprotein which increased collangenase production as independent prognostic markers of disease free interval and overall survival. In addition PAI-1 and uPA, both tumour associated proteolytic factors also approached significance as prognostic markers. This analysis of a larger group of patients should help determine the clinical utility of these markers.

Conclusions: Although further results are pending and will be included as part of this presentation our preliminary work suggests that the clinical utility of these markers remains unclear and requires ongoing investigation. It is likely however that they could form part of a panel of markers useful in determining prognosis and treatment.

PROSTHETIC VOICE REHABILITATION: PROVOX VEGA VOICE PROSTHESIS AND REVIEW OF DEVICE LIFE IN AUSTRALIAN CONTEXT

K. Hancock[1], N. Lawson[1] and E. Ward[2]

[1]Speech Pathology Department, Princess Alexandra Hospital, Brisbane QLD Australia
[2]Centre of Functioning Disability & Health Research, Queensland Health & The University of Queensland, Brisbane Australia

Thirty one laryngectomy patients with average time post surgery of 5 years underwent a clinical trial of two types of indwelling voice prostheses systems. The study involved a three week trial of each device, with the order of device trial randomly allocated. Patient and clinician perceptions and voice related outcome data was collected prior to the trial, and at the end of each three week trial. At the end of the second trial, participants elected to continue with the prosthesis of their choice for the completion of the study. Twenty two (76%) elected to continue with the Provox Vega voice prosthesis and device life data has been subsequently collected. Results relating to initial device life duration, number of devices required within first 12month period and overall patterns of device life comparison to pre trial device life patterns has been analysed. Results indicate that initial device life patterns were comparable to the literature with 75% of participants continuing with first device at 3mths, 55% at 6mths and 25% at 12months. Eighty percent (80%) required only one or two indwelling devices within the first 12months. A review of reasons for device life failure will be outlined and discussed with leakage via the prosthesis being the predominate reason requiring change (79%). A review of cleaning practices of participants and possible links with device life results will also be explored. Results indicate that the device life of the Provox Vega presents as a favourable device in the Australian context.

MERKEL CELL CARCINOMA: THE IMPORTANCE OF ADDRESSING THE REGIONAL LYMPH NODES IN CLINICALLY NODE NEGATIVE PATIENTS

J. R. Howle, T. M. Hughes, V. Gebski and M. J. Veness

Westmead Hospital NSW Australia

Purpose: The aim of this study of patients with Merkel cell carcinoma (MCC) was to analyse for factors predictive of survival and to evaluate the role of sentinel lymph node biopsy (SLNB).

Methodology: A review was undertaken of 136 patients with MCC presenting to Westmead Hospital, Sydney, between 1980 and 2008. Patient and tumour characteristics, treatment and patterns of relapse, were analysed.

Results: Ninety patients presented with stage I disease, and 46 presented with stage II disease, with the primary site located in the head and neck in sixty-four patients (47%). The median follow-up time was 21 months. Sixty-nine patients were treated with surgery followed by adjuvant radiotherapy and 53 were treated with surgery alone. Relapse occurred in 74 (54%) with the regional nodal basin the commonest site. Twenty-four patients developed nodal relapse without prior treatment of the nodal basin. The 5-year survival rate was 62% and the median disease free interval was 16 months. The addition of radiotherapy was associated with a better disease-free survival ($p<0.001$) and overall survival was worse as the number of involved lymph nodes increased. ($p=0.03$).

Conclusion: Relapse is common in MCC, with our study demonstrating a high rate of nodal relapse in patients with stage I disease who had undergone treatment of the primary site only. These patients may have benefited from SLNB and subsequent treatment of the nodal basin if micrometastatic disease had been present, with data supporting the use of radiotherapy. Conversely, SLNB may be used to determine which patients with clinical stage I disease may avoid elective nodal treatment. The importance of the regional lymph nodes was also emphasised by the relationship between the number of involved nodes and overall survival.

TUMOUR VASCULOGENESIS IN HEAD AND NECK CANCERS

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Background: The aggressiveness of cancer is determined by certain factors with the establishment of a tumour vasculature being a critical component. Current dogma that this tumour vasculature arises from pre-existing blood vessels in response to cytokines secreted by cancer cells (tumour angiogenesis) is under increasing scrutiny. The role of cancer stem cells is now an established concept within tumour biology. We have shown that vasculogenesis, a process of de novo blood vessel development, that occurs during embryonic development, forms the basis of infantile haemangioma. We have demonstrated that the expression of primitive haematopoietic markers on the endothelium of haemangioma capillaries denotes a haemogenic endothelium phenotype, a developmental process of blood vessels formation, downstream of embryonic stem cells. We hypothesised that vasculogenesis may account for tumour vasculture in other tumour systems.

Aim: This study investigated the expression of primitive haematopoietic proteins on the endothelium of head and neck mucosal and cutaneous SCC and osteosarcoma.

Methods: Immunohistochemistry was performed on paraffin sections of head and neck SCCs and osteosarcomas for brachyury, primitive mesoderm associated protein; CD133, stem cell marker; angiotensin converting enzyme (ACE), haemangioblast associated protein; Tal-1, a haemogenic endothelium-associated transcription factor; and erythropoietin receptor (EPO-R), a receptor associated with primitive haematopoiesis, on the CD34+ endothelium of these tumour systems.

Results: Immunoreactivity for the aforementioned primitive haematopoietic markers was observed on the endothelium of these tumours.

Conclusions: The observation of primitive haematopoietic associated proteins on the endothelium of tumours denotes an embryonic-like process of vasculogenesis. This process is observed in the tumour systems investigated in this study and highlights a role for the de novo interplay of primitive vasculogenesis with localised angiogenesis.

PREVALENCE OF MALNUTRITION AMONG HEAD AND NECK RADIOTHERAPY PATIENTS USING THE PATIENT GENERATED SUBJECTIVE GLOBAL ASSESSMENT

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Purpose: Malnutrition is associated with shorter survival time, treatment interruptions, reduced response to treatment and increased healthcare costs. Diagnosis of malnutrition in head and neck cancer patients in the literature is typically through loss of weight and a low body mass index (BMI <18.5kg/m2). Few studies have used a validated global assessment tool to diagnose malnutrition.
This study aimed to identify the prevalence of malnutrition in a head and neck cancer population during and post radiotherapy (RT) using the Patient Generated Subjective Global Assessment (PG-SGA).

Methodology: The nutritional status of 100 head and neck patients was assessed using the validated PG-SGA tool at various time points during and post RT. Patients were categorised as well nourished, mild to moderately malnourished or severely malnourished. A score was allocated based on weight loss, food intake, nutrition impact symptoms, activity and functional level, metabolic stress and a physical assessment examining subcutaneous fat and muscle loss and fluid status.

Results: In week 1 of RT, 75% of patients were well nourished, 24% mild to moderately malnourished and 1% severely malnourished. Prevalence of mild to moderate malnutrition increased to 61% at the final week of RT and improved to 51% at week 4 post RT and 42% at week 8 post RT. No patients were diagnosed as severely malnourished during or post RT.

Conclusion: Malnutrition prevalence was 25% in patients at commencement of treatment. At week 8 post treatment 42% of patients were still malnourished indicating a requirement for long term nutrition intervention post RT.

TRANS-ORAL ROBOTIC TARGETED SURGERY: CR WITHOUT TOXICITY

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This paper is an editorial comment on the need for multi-disciplinary clinics managing head and neck cancer to consider emerging surgical options when making treatment decisions for patients with head and neck cancer.

Despite advances in techniques for the management of head and neck cancer, the 5 year mortality rate has remained at approximately 50%. Disease recurrence and advanced locoregional disease that is non-resectable remains a frequent cause of death in patients with head and neck cancer.

Surgical excision had been the mainstay of treatment of head and neck cancer. However, the morbidity of surgical approach and surgical treatment had concerned surgical oncologists look for alternative treatment modalities for their patients.

Primary radiation therapy enhanced locoregional control in selected tumours and treatment morbidity varied with the addition of fractionated schemes and now with IMRT. Chemotherapy has been incorporated with radiotherapy. However, in the select group of patients where these strategies resulted in an improvement of local control, treatment toxicity is high. Neo adjuvant protocols and protocols incorporating taxanes have been used in trials to good effect but still subject patients to significant toxicities. Radiation side effects especially osteo radionecrosis are significant contributors to poor quality of life outcomes.

As we gain a better understanding of tumour biology including the role of viruses and as we better understand host biology and the role of certain gene loci in cancer aetiology and pathogenesis, better treatment decisions will be made.

A tailored approach to treatment will include new surgical tools including trans oral robotic surgery and image guidance systems that better localise tumours and define cancer boundaries. This will allow resection of cancers with minimal morbidity and the use of adjuvant treatment at dose levels that can minimise toxicities.

RETROSPECTIVE REVIEW OF 152 CASES OF THYROID CANCER TREATED AT TAN TOCK SENG HOSPITAL, SINGAPORE

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Purpose: The age-standardised ratio of thyroid cancer in Singapore has risen from 4.2 per 100,000 (1968-1972) to 6.5 (1998-2002). We aimed to study the presentation, treatment and outcome of patients diagnosed with thyroid cancer in our tertiary Otolaryngology unit.

Methodology: We performed a retrospective review of 152 consecutive cases of thyroid cancer treated in our department over a 12-year period. Their demographics, histology and outcome were compared against other local and international studies.

Results: The median age of our study population was 49.5 (range 17.2-90.8). There were 117 (77.0%) females and 35 (23%) males. 115/148 (77.7%) were papillary, 16/148 (10.8%) follicular, 4/148 (2.7%) medullary and 10/148 (6.8%) anaplastic carcinomas. Most cases (93.8%) presented with a neck lump. Compressive symptoms (12.5% of all cases) and hoarseness of voice (9.7% of all cases) were predictive of aggressive pathology ($p<0.05$). 44.4% with compressive symptoms and 28.6% with hoarseness of voice were anaplastic carcinomas. Lymph node metastasis were common in anaplastic carcinomas (71.4%), medullary carcinomas (100%), and large tumours (Mean 2.40cm vs 1.65cm, $p=0.016$. Median 2.5cm vs 1.5cm, $p=0.003$). There were 12 deaths directly due to thyroid cancers. 5/12 were anaplastic carcinomas. Mean follow up time was 42.9 months. Survival was calculated and plotted in a Kaplan-Meier survival curve.

Conclusions: Median age of diagnosis exhibited an increasing trend locally (median age of 35 from 1957-1966, median age of 45 from 1988-1994). Distribution of gender and histology remained similar. Certain features at presentation were predictive of aggressive histology. Survival and mortality are comparable despite shorter follow-up times.

RATE OF CONTRALATERAL NODAL FAILURE IN PATIENTS WITH REGIONALLY ADVANCED TONSILLAR CANCER TREATED UNILATERALLY

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Purpose: Standard practice in head and neck radiotherapy is to treat the contralateral neck prophylactically in patients with tonsil cancer presenting with N2a/2b or N3 disease regardless of the laterality of the primary disease. The aim of this study was to determine the rate of contralateral neck failure in patients with advanced ipsilateral nodal disease who were selected for treatment with unilateral radiotherapy techniques. The secondary aim was to review the loco-regional control (LRC) and overall survival (OS) of all tonsil cancer patients treated with (chemo)radiation at the Peter MacCallum Cancer Centre.

Methodology: All patients with a histological diagnosis of squamous cell cancer (SCC) of the tonsil/oropharynx treated with curative intent between January 1990 and December 2002 were reviewed.

Results: 167 eligible patients, median age 57, were identified. Fifty three percent of patients had stage III or IV disease. Forty percent were treated with concurrent chemotherapy. Ninety two percent of patients were staged with a CT and/or PET scan. There was only 1 contralateral node failure in 58 patients (35%) treated with a unilateral technique, this included 19 with N2a/2b or N3 disease. Of these 19 patients, 17 had documented well lateralised primaries, (no documentation of laterality in 2 patients). With a median follow-up of 8.5 years, 5 year LRC and OS rates for Stage II, III and IV disease were 92% and 77%; 84% and 61%, and 86% and 58%, respectively.

Conclusions: Patients with lateralised tonsil tumours had a low rate of contralateral neck failure even with advanced ipsilateral nodal disease, suggesting that unilateral treatment is safe and appropriate. LRC rates for tonsil cancer treated with (chemo)radiation are high.

SYSTEMIC THERAPIES FOR MELANOMA OF THE HEAD AND NECK

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Systemic therapy for melanoma of the head and neck is given in both the adjuvant and metastatic settings. Treatments are broadly characterised by their mode of action, and include immunotherapies, targeted therapies and chemotherapy. Developments in novel immunotherapies (e.g. CTLA4 Antibody) and targeted therapies (e.g. BRAF inhibitors) will be discussed. Clinical trials of targeted therapies are underway in the metastatic population, and for most trials, patients are selected based on the presence of specific mutations in the melanoma, for example BRAF or CKIT mutations. These mutations occur at different rates depending on the histopathological subtype of the melanoma and other clinicopathological features. Targeted agents are yet to be tested in the adjuvant setting.

ALTERED FRACTIONATED RADIOTHERAPY FOR H &N CANCER (1): REPOPULATION MYSTERY

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Purpose: Review of own data and from various European and the US trials on altered dose fractionation regarding to tumour clonogens repopulation and its impact on treatment outcome.

Material and Methods: Gliwice data consisting of 500 skin, 310 $T_{3\text{-}4}N_o$ larynx, 500 oral cavity and oropharynx, and over 4000 H&N cancer data from 7 clinical trials are reviewed. Various altered fractionation schedules were explored including accelerated, hyperfractionated and hybrid regimens with total dose (TD) from less than 50 Gy to over 80 Gy with dose per fraction 1.2 Gy – 2.5 Gy (once-a-day, bid or tid) and OTT ranged from 12-56 days. At least 5-year LRC and DFS were the major end-points. From differences in TD and OTT, dose compensating tumour repopulation per day (D_{rep}) were calculated and the decrease in the LRC per one day extension of the OTT as well.

Results and Conclusions: Early (80-ties) studies on "skin cancer" showed that for OTT over 42 days isoeffect TD should be higher than predicted from Ellis formula suggesting that exponent for Time (T) should be much higher than 0.11.

H&N studies in early 9-ties strongly, support this observation and show that over week 4 of the treatment, 0.6 Gy/day on average compensates accelerated tumour repopulation and this process is likely a major determinant of failure in protracted regimens. Other H&N studies with altered regimens allow to evaluate repopulation more precisely showing that acceleration begins earlier, at the end of week 3 instead of the end of week 4, and D_{rep} increases from 0.6 Gy/day to even 1.8 Gy/day beyond week 7, and this process depends on time itself. All results suggests that once the treatment begins it should be completed as fast as possible, but there is no reason to shorten OTT below 4 weeks because it needs lower TD which likely neutralizes therapeutic benefit.

ALTERED FRACTIONATED RADIOTHERAPY FOR H &N CANCER (2):7-DAYS CONTINUOUS ACCELERATED IRRADIATION (CAIR): IS WEEKEND-IN TREATMENT BENEFICIAL? (THREE SINGLE-INSTITUTION TRIALS: CAIR-I &-II)

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Purpose: To counterbalance tumour clonogens repopulation, efficacy of 7-day fractionated irradiation including weekends was tested in clinical trials versus conventional 5-day treatment (CAIR-I) and concomitant boost (CB) in CAIR-II.

Material and Methods: There were 100 pts. in CAIR-I and 345 pts. recruited in CAIR-II, all with $T_{2-4}N_{0-1}$ oral cavity, oropharynx and supraglotic cancer. In CAIR-I 72 Gy/40fx in 40 days (weekends-in) were used vs. 72 Gy/40fx in 54 days (weekend-off). The OTT was the only variable and differed by 14 days. In CAIR-II 72 Gy/40fx in 40 days were given in both arms, and the only difference was dose intensity: 7fx/7d/wk in the CAIR vs. 7fx/5d/wk in the CB.

Results and Conclusions: 5-yr LRC was significantly higher in favour of 7-day CAIR (75% vs. 33%), and DFS, OS as well. Because of high benefit, the trial was closed earlier for ethical reason. Acute confluent mucositis (CM) was more frequent and severe in arm CAIR than in conventional (91% vs. 75%) but late complications III° were low (4%). In CAIR-II 5-yr. LRC did not differ in both arms (68% CB vs. 65% CAIR) and DFS as well. Incidence of acute CM was almost the same in both arms (87%-CB vs. 90%-CAIR) and late complications were also low in both arms (2.5%). Results of two trials suggest that significant 20-30% benefit in LRC and DFS can be achieved for locally advanced H&N cancer by shortening the OTT by 2 weeks and instead of 7fx/7d (CAIR), 7fx/5d (CB) is similarly effective using b.i.d. on Tuesday and Friday and keeping weekends-free.

ALTERED FRACTIONATED RADIOTHERAPY FOR H &N CANCER (3): WHAT DO WE REALLY KNOW ABOUT ACUTE MUCOSAL TOXICITY?

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Purpose: Incidence, functional and morphological severity of acute mucosal response to various dose fractionation is analyzed to establish dose tolerance limits.

Material and Results: Analyses include 767 pts with various tumour location and stage of H&N cancer treated by radiation at the Institute in Gliwice using six different accelerated, and hyperfractionated regimens. Total dose from 51 to 72 Gy given in the OTT of 23-55 days. Results of some other EORTC and RTOG trials are also analyzed. Dische Scoring System with wide functional and morphological scale was used for regular, everyday scoring. Dische System was compared with a standard EORTC/RTOG scale. Confluent mucosistis (CM) was generally transient, but if it did not heal and progressed into necrosis it was defined as Consequential Late Effect (CLE) and dose-limiting.

Results and Conclusions: The analysis have shown that transient and tolerable CM depends on duration and dose accumulated/week (AD_w) and even- AD of 31.5 Gy can be well tolerated if given not longer than 1.5 wks, whereas AD of 14-16 Gy given in consecutive 5 wks may likely produce not tolerable CLE. Usually CM develops 9 days after 20 Gy is accumulated but for some aggressive regimens (CAIR, HARDE) it may occur earlier, even after 3-5 days. The sooner the onset of CM the longer complete healing. Regular every day scoring showed that acute effects have individual and multi-phasis pattern. If acute effects are scored irregularly and once-a-week then about 20-25% of the CM can easily be missed, and the CM incidence might be underestimated compared to regular, at least 3 week scoring.

VIDEOMANOMETRIC EXAMINATION OF PHARYNGEAL SWALLOWING FUNCTION FOLLOWING TOTAL LARYNGECTOMY SURGERY

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Purpose: The primary aim of this research was to assess peak mid-pharyngeal and intrabolus pressures in a cohort of patients following total laryngectomy surgery to ascertain if differences exist between these measures and age-matched control data. A secondary aim was to assess whether radiographic or manometric measures of pharyngeal swallowing function were related to the presence of self-reported dysphagia and/or to differences in surgical reconstruction.

Methodology: Swallowing function was examined in twenty-four patients following total laryngectomy surgery using videomanometry. Tongue, peak mid-pharyngeal and intrabolus pressures, the presence of anatomical difficulties, post-swallow residue and pharyngeal dimensions, were measured for each patient. For statistical analyses, patients were stratified according to the presence of self-reported dysphagia and by the type of pharyngeal reconstruction that had been performed.

Results: The majority of laryngectomy patients exhibited difficulty in swallowing both a 20ml liquid and a solid bread bolus, resulting in significant post-swallow residue. All laryngectomy patients had significantly decreased peak mid-pharyngeal and increased intrabolus pressure when compared to healthy aged-matched controls. Pharyngeal reconstruction was related to swallowing outcomes, with patients who underwent mucosa and muscle closure having higher peak mid-pharyngeal pressures, and thus more efficient swallowing, than did those who underwent mucosa alone closure. Laryngectomy patients with self-reported dysphagia had a reduced minimum pharyngeal diameter, compared with those without dysphagia, which may account for the higher pressures obtained.

Conclusion: This novel study is the first to provide surgeons with evidence for optimum surgical closure following a total laryngectomy in order to improve swallowing outcomes.

THE IMPACT OF HEAD AND NECK MULTIDISCIPLINARY MEETINGS ON PATIENT MANAGEMENT

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Purpose: To quantify the impact of a multidisciplinary meeting on head and neck cancer management at a tertiary cancer centre.

Methods: Between 1st March 2009 and 1st March 2010, weekly Head and Neck Multidisciplinary meeting (MDM) discussions on all radiation oncology patients seen at the Peter MacCallum Cancer Centre were prospectively documented in an electronic database. MDM discussions were held after initial clinical assessment, but prior to commencement of treatment. Major changes in the initial management plan were defined as changes in treatment intent (curative vs palliative), treatment modality or sequence of combined modalities, or radiotherapy dose and/or volume.

Results: Four hundred and twenty patients were presented at the MDM. Changes were recommended in 67 (16%) patients, of which 46 (69%) were due to disease stage alterations following review of imaging. Major changes were recorded in 63 (15%) patients including: changes in treatment intent (3), changes in treatment modality (27), and changes made in radiotherapy dose and/or volume (43). Four (6%) patients had minor changes that did not result in change in treatment modality, radiotherapy dose or volume.

Conclusion: A dedicated head and neck MDM can significantly impact on the management of head and neck cancer patients.

PHYSIOTHERAPY FOR ACCESSORY NERVE SHOULDER DYSFUNCTION FOLLOWING NECK DISSECTION SURGERY: A LITERATURE REVIEW

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Purpose: Neck dissection can result in accessory nerve injury. Accessory nerve shoulder dysfunction (ANSD) describes the pain and impaired range of motion that may occur following neck dissection. The aim of this review is to establish the level

of evidence for the effectiveness of physiotherapy in the post operative management of ANSD.

Methods: A literature search of physiotherapy and ANSD using Medline, CINAHL, PEDro and Cochrane library databases was undertaken.

Results: Physiotherapy has been shown to be well tolerated in this patient group following surgery. However, few studies exist as to the effect of physiotherapy on ANSD. Progressive resisted exercises for scapular muscles has the highest likely benefit for accessory nerve injuries where the nerve remains intact.

Conclusions: There is a need for research to investigate the effects of early, appropriate physiotherapy on the development of ANSD following neck dissection surgery. Such a study has the potential to improve the functional outcome and quality of life in this patient group, and ultimately promote best practice guidelines for management.

Aoife McGarvey is supported by the James Lawrie Research Grant awarded in 2009 by the Calvary Mater Newcastle Hospital. This contribution is free from any conflict of interest.

PHYSIOTHERAPY FOR ACCESSORY NERVE SHOULDER DYSFUNCTION FOLLOWING NECK DISSECTION SURGERY: A MULITICENTRE RANDOMISED CONTROLLED TRIAL

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Purpose: Neck dissection can result in accessory nerve injury, causing accessory nerve shoulder dysfunction (ANSD). Current usual care in Australia if ANSD is present does not involve routine referral to physiotherapy. If referred, patients generally receive a brochure of shoulder exercises, which are not pathology specific.

A literature review by the authors (currently in press) found physiotherapy has been shown to be well tolerated in this patient group following surgery. However few studies exist as to the effect of physiotherapy on ANSD resulting from neck dissection. The current study aims to explore the effect of early screening and referral to physiotherapy versus usual care if ANSD is present following neck dissection.

Methods: Prospective, multicentre randomised controlled single blinded study, stratified according to type of neck dissection. Calvary Mater Newcastle, Liverpool and Westmead hospitals are the study sites. Sample size aim is 62 participants.

Baseline characteristics recorded are age; gender; surgical free flaps; if undergoing radiotherapy; area of cancer. Exclusion criteria are recent past history of shoulder or neck pain; accessory neurotmesis; metastases; unable to understand English; cognitive impairment; significant co-morbidities.

Blinded assessors obtain outcome measures at baseline, three, six and twelve months. Measures include shoulder motion, SPADI (a functional measure) and NDII (a quality of life measure) Intervention group receive supervised pathology specific progressive resisted exercise stabilisation training (PREST) once a week for twelve weeks, with two independent sessions. Control group receive a brochure of generalised shoulder home based exercises.

Results: Data collection in progress. Outcome data is expected within 12 months.

Aoife McGarvey is supported by the James Lawrie Research Grant awarded in 2009 by the Calvary Mater Newcastle Hospital. This contribution is free from any conflict of interest.

CURRENT STATUS OF HPV-RELATED MALIGNANCY IN THE OROPHARYNX

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Purpose: The paradigm of head and neck squamous cell carcinoma (HNSCC) has focused on the long-term exposure to known carcinogens that result in insults to cells at the genetic level that render them immortal. As the exposure to carcinogens (tobacco) has decreased, the incidence of HNSCC has slightly increased. This is the result of a nontraditional model of carcinogenesis related to human papillomavirus (HPV) and its effect on cells in the oropharynx. HPV related oropharynx cancer has introduced several new factors in the current understanding and management of HNSCC. This talk discusses the clinically relevant factors that many influence how the head and neck practitioner diagnoses, counsels, and treats patients with HPV mediated oropharyngeal carcinoma.

Methodology: The medical records of 163 consecutive patients who underwent transoral robotic-assisted surgery (TORS) for OP SCCA at the Mayo Clinic by the author are reviewed. The HPV status by polymerase chain reaction (PCR) on fresh-frozen tumor specimens was characterized. The relationship of HPV + tumors to p16 overexpression, nodal status, extracapsular nodal spread (ECS), adjuvant therapy, local control (LC), regional control (RC), metastasis, overall survival (OS) and disease specific survival (DSS) was recorded.

Results: HPV was found by PCR in fresh frozen tissue samples in 48% of our OP SCCas. HPV tumors were more likely to present in higher nodal stage, more likely to have cystic nodal mets, more likely to overexpress p16. There was no significant difference in ECS, LC, RC, OS, or DSS between HPV positive tumors and HPV negative tumors.

Conclusions: The concept of HPV tumorigenesis in the OP carries multiple relevant connotations for the head and neck surgeon treating patients with OP SCCa. Although multiple studies have demonstrated an improved survival in this patient group, our study did not show significant differences in disease control between HPV+ and HPV- patients, but this may have been related to sample size and overall high disease control in each group. As we learn more about how HPV relates to OP SCCa, new treatment modalities may exist for this disease.

HEAD AND NECK LYMPHOEDEMA- AN UNRECOGNISED SIDE EFFECT

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Purpose: This paper reports the current evidence supporting lymphoedema management post head and neck cancer. An evidence based review was conducted examining the evidence for lymphoedema management in this population. The review identified a gap in the research knowledge base with no high quality, rigorous studies examining this treatment identified. Anecdotal reports of this condition indicate its distressing and functionally limiting impact on patients lives.

Methodology: The Head and Neck Lymphoedema Management Program at Princess Alexandra Hospital, Brisbane was developed using techniques adapted from current knowledge of lymphatic anatomy and physiology combined with evidence based treatments for upper and lower limb lymphoedema.

Results: Qualitative feedback from 15 consecutive patients indicates a favorable response to this treatment, however the lack of an objective assessment measure limits the objectivity of these results. A case study will be presented outlining the management of head and neck lymphoedema, and the potential outcomes of the Princess Alexandra Hospital Head and Neck lymphoedema management approach. This program incorporates lymphatic massage, compression, positioning and exercise treatments.

Conclusions: Current limitations to validating this treatment approach include the lack of a recognised definition of head and neck lymphoedema and the absence of an objective, standardised method of assessment. This research group plan future research to develop these concepts as a platform to establishing the efficacy of the treatment program.

CRITICAL IMPACT OF RADIOTHERAPY PROTOCOL COMPLIANCE AND QUALITY IN THE TREATMENT OF ADVANCED HEAD AND NECK CANCER – RESULTS FROM TROG 02.02

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Purpose: To report the impact of radiotherapy quality on outcome in a large international phase III trial comparing radiotherapy with concurrent cisplatin plus tirapazamine for advanced head and neck cancer.

Methods: The protocol required interventional review of radiotherapy plans by the Quality Assurance Review Center (QARC). All plans and radiotherapy documentation underwent post-treatment review by the Trial Management Committee (TMC) for radiotherapy protocol compliance. Secondary review of non-compliant cases for predicted impact on tumor control was performed. Factors associated with poor protocol compliance were studied and outcome data were analysed in relation to protocol compliance and radiotherapy quality.

Results: At TMC review, 25.4% of cases had non-compliant plans but none in which QARC recommended changes had been made. At Secondary review, 47% of non-compliant cases (12% overall) had deficiencies with a predicted major adverse impact on tumor control. Major deficiencies were unrelated to tumor sub-site, T or N stage (if N+), but were highly correlated with number of patients enrolled at the treating center (<5 patients, 29.8%; >20 patients, 5.4%; $p<0.0001$). In patients who received at least 60 Gy, those

with major deficiencies (n=87) had a markedly inferior outcome compared to those whose treatment was initially protocol compliant (n=502): – 2 yr overall survival 50% v 70%; HR=1.99; p<0.001, and 2 yr freedom from locoregional failure 54% v 78%; HR=2.37; p<0.001.

Conclusion: These results demonstrate the critical importance of radiotherapy quality on outcome of chemoradiation in head and neck cancer. Centres treating only a few patients are the major source of quality problems.

MULTIDISCIPLINARY CARE OF HEAD AND NECK CANCER IN AUSTRALIA AND NEW ZEALAND

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Introduction: A postal survey of Multididisciplinary Head and Neck Clinics was performed in 2010. The first aim of the survey was to establish the structure and personnel involved in MDC's across Australia and New Zealand. The second aim was to establish a 'snapshot' of activity at each clinic on one day to view the range of cases seen and process of care followed.

Methods: Known head and neck cancer clinicians working in hospitals thought to run multidisciplinary clinics across Australia and New Zealand were identified, contact details established and questionnaires emailed / faxed or pasted as appropriate. A total of 20 MDC's replied to the questionnaire, covering most states in Australia and regions of New Zealand. Data from these questionnaires contained de-identified data related to patient care. The information regarding the structure of the clinic and process of care given by the clinic was recorded in a spreadsheet.

Outcomes: The survey indicated that true Multidisciplinary Care occurred in all clinics with Surgeons, Oncologists, Radiologists, pathologists, Nurses, Speech and Swallowing Pathologists, Dieticians and Dental Rehabilitationsists representing most if not all clinics. In all cases, there was group discussion of cases and a mechanism for Consensus decision making was present. Delivery of information directly to the patient from the clinic and to involved clinicians occurred uniformly. A review of the pattern of care is given.

Summary: The delivery of care to head and neck cancer patients across Australia and New Zealand appears to be uniform and of high quality. The gathering of data from a large number of MDC's is the first step to coordinating a National Head and Neck Cancer Database.

CO 2 LASER TRANSORAL MICROSURGERY FOR ORAL CAVITY LESIONS

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Introduction: The carbon dioxide laser is a well described alternative technique for excision of oral cavity lesions. We describe out management paradigm for the treatment of a variety of dysplastic and early malignancy lesions of the oral cavity. Our technique of laser microsurgical resection has many advantages over traditional techniques (diathermy and cold steel) which include superior microscopic control of tumour resection, precise histopathological analysis and improved patient functional outcomes.

Method: Retrospective analysis of a prospective head and neck oncological database of all transoral laser microsurgical oral cavity resection performed by the senior author (CEP).

Results: 46 patients were analysed (21 male, 25 female). In total 63 laser procedures were performed on 54 separate lesions. There were 20 and 34 premalignant and early malignancies respectively. The complication rate was less then 1 %. There was no evidence of disease in 50 lesions. There is persistent dysplasia in 4 cases. We will present our multidisciplinary approach including describing the surgical technique, anaesthesia and pathological analysis.

Conclusion: Transoral CO2 laser is safe and oncologically accurate technique for the excision of oral cavity lesions. The overall success of the technique relies on a combination of patient, tumour, surgeon and institutional factors.

PROGNOSTIC SIGNIFICANCE OF HUMAN PAPILLOMA VIRUS (HPV) AND OTHER MOLECULAR MARKERS IN PATIENTS WITH HEAD AND NECK SQUAMOUS CELL CARCINOMA TREATED WITH CHEMO-RADIATION ON A PHASE III TRIAL

D. Rischin

Purpose: 1) To determine the prognostic importance of p16 and HPV in patients with oropharyngeal cancer treated on a phase III concurrent chemoradiation trial. 2) To determine the prognostic and predictive importance of hepatocyte growth factor (HGF).

Methods: Patients with Stage III/IV head and neck squamous cell cancer were randomized to concurrent radiotherapy and cisplatin +/- tirapazamine. In the p16/HPV substudy, analyses were restricted to patients with oropharyngeal cancer. p16 was detected by immunohistochemistry and HPV by in situ hybridization and PCR. In the HGF substudy all primary sites were eligible. Plasma HGF was measured by ELISA assay.

Results: Slides were available for p16 assay in 206/465 patients, of which 185 were eligible, and p16 and HPV were evaluable in 172. 106/185 (57 %) were p16 positive, and in patients evaluable for both p16 and HPV, 88/102 (86%) of p16 positive were also HPV positive. p16 positive patients had lower T and higher N categories, and better performance status. p16 positive compared with p16 negative tumors were associated with better 2- year overall survival 91% v 74% (HR = 0.36; 95% CI: 0.17-0.74, p=0.004) and failure-free survival 87 % and 72% (HR = 0.39; 95% CI: 0.20 to 0.74, p=0.003). p16 was a significant prognostic factor on multivariable analysis (HR 0.45; 95% CI: 0.21 - 0.96, p=0.04). p16 positive patients had lower rates of locoregional failure and deaths due to other causes. There was a trend favoring the tirapazamine arm for improved locoregional control in p16 negative patients (HR = 0.33; 95% CI: 0.09 to 1.24, p=0.13). Plasma was available for HGF assay in 498 patients. HGF above the median was associated with inferior 2 year overall survival in the control arm compared to HGF below the median, 55% versus 75% (HR 1.97, p = 0.001), but there was no significant difference on the tirapazamine arm. Similar findings were found when analyses were restricted to p16 negative patients. There was a significant interaction between HGF levels and treatment arm, adjusting for known prognostic factors (p = 0.029).

Conclusions: HPV associated oropharyngeal cancer is a distinct entity with a favorable prognosis compared with HPV negative oropharyngeal cancer when treated with cisplatin-based chemoradiation. Baseline plasma HGF levels warrants further investigation as a potential predictive marker of benefit from tirapazamine and other hypoxia targeting therapy.

HEAD AND NECK RECONSTRUCTION

T. Shoaib

Since the first free flap was described in 1957 for a jejunal transfer to the pharynx, head and neck reconstruction has been a topic of interest to the head and neck surgeon. 50 years later, we have refined many of the reconstruction techniques that we use in head and neck cancer. We still have many areas of controversy and opinion, including methods of bony reconstruction (eg DCIA versus Fibular flap), soft tissue choices (eg ALT flap versus FRFF flap) and methods of midface reconstruction. Areas of research interests currently include reducing donor site morbidity, tissue engineering and face transplants and these will also be discussed. This talk will discuss the options and evidence behind some of the choices we make and can make in the future.

MELANOMA – SCOTTISH GUIDELINES AND HOW THEY ARE RELEVANT IN HEAD AND NECK CANCER

T. Shoaib

Guidelines are useful in helping clinicians from different geographic regions and specialties manage diseases in a consistent manner. In Scotland, SIGN (the Scottish Intercollegiate Guidelines Network) produces guidelines. This is a cross specialty organisation based at the Royal College of Physicians of Edinburgh whose remit is to create guidelines where diseases are thought to be managed in different ways around the country. Head and neck melanoma presents its own unique challenges in excision and reconstruction. In this paper, we present the summaries of melanoma guidelines for our unit and discuss the wider implications of the guidelines for the management of head and neck melanoma.

SCC AND LYMPH NODES – RESULTS OF THE CANNIESBURN SENTINEL NODE TRIAL IN ORAL / OROPHARYNGEAL CANCERS

T. Shoaib

Sentinel node biopsy (SNB) in mucosal head and neck cancer was first described in 1996 and over the past 14 years, the technique has developed to a reproducible accurate method of identifying subclinical nodal metastases in the cervical nodes from oral and oropharyngeal primary squamous cell carcinomas. We started performing the procedure at the Canniesburn Plastic Surgery Unit in Glasgow in 1998, initially with blue dye alone, and subsequently added preoperative lymphoscintigraphy and the intraoperative use of a hand held gamma probe. In 2000 a multicentre trial was started and in 2002 a European trial commenced. In this presentation, the results of all these trials will be discussed.

From the collaborative work in head and neck cancer SNB, we know that the technique is an accurate way of identifying lymph node metastases in T1 or T2 oral and oropharyngeal carcinoma.

A RETROSPECTIVE REVIEW OF PATIENTS TREATED FOR TONSILLAR CARCINOMA AT A SINGLE CENTRE

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Purpose: To evaluate retrospectively a population of patients treated for tonsillar carcinoma in a single centre.

Methods & Materials: The Oropharyngeal Cancer database at the Prince of Wales Hospital was audited for all patients presenting: with a diagnosis of squamous cell carcinoma origin in tonsil or tonsillar pillar and having all definitive treatment at POW Hospital. Patient, disease and treatment characteristics were extracted with follow-up information obtained from the database, hospital notes, referring doctors or Cancer Registry. Endpoints evaluated were: 'ultimate local control, regional control and cancer-specific survival'. A sub-group had HPV evaluation on the paraffin embedded biopsy/ operative specimen.

Results: In this Ethics approves study there were 177 patients with minimum 2 year follow-up. 127 (72%) males and 50 (29%) females. Only 14 (8%) were never smokers. 30 patients had a prior malignancy diagnosis. The cancer was operable in 160 (90%) and 164 patients (92%) were fit enough for a surgical procedure. Staging was 17 (10%) Stage I, 35 (20%) II, 56 (32%) III, and 69 (39%) Stage IV respectively. Treatment was surgery 16, Radiotherapy 102, and surgery plus radiotherapy in 57. Ultimate local control was achieved in 140 (78%), however 46 patients (26%) developed a new primary. The outcome for the 63 patients with HPV evaluations of the primary specimens does not indicate a more favourable outcome for those patients who are HPV,P16 positive.

Conclusion: Despite 71% of patients presenting with Stage III/IV disease, local control was achieved in 78% and cancer-specific survival rate was 69.8%, with results statistically uninfluenced by HPV status.

CREATING A SPECIALIST HEAD AND NECK DIETETIC WORKFORCE: THE UK EXPERIENCE

B. P. Talwar

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Over the past decade there has been a range of important policy guidance and key documents which have shaped the delivery of Head & Neck cancer services in the UK. The Calman-Hine Reports (1995) was a landmark document which set the strategic framework for creating a network of cancer care in England and Wales defined by a geographical region. The NHS Cancer Plan (2000) placed an emphasis on prevention and a focus on the guiding principal that all patients should have equal access to uniform high-quality of care across organisation boundaries in both the community and hospital wherever they may like to ensure the best possible survival and quality of life.

The National Institute of Excellence set out to provide Improvement Outcomes Guidance for the organisation and structure of Head & Neck cancer services in 2004. This document recognises the presenting characteristics and multiple demands on health & social needs of this patient group. It acknowledges that treatment has a permanent affect on organs essential for the human activity like breathing, speaking, eating and drinking. Identifying the need that patients require expert support before, during and after treatment with continued access to services, and that issues are site specific impacting on quality of life and therefore outcomes are crucial. This guidance set out key recommendations for health organisations, managers and lead clinicians to improve effectiveness and efficiency of services for cancer patients relating to multidisplinary team membership including dietitans as core members of the team across the patient pathway.

The Department of Health (2008) Manuals for Cancer Services: Peer Review Measures evaluated the implementation of the IOG guidance document. The aim was to undertake an independent, fair review of multidisciplinary services to ensure that patient safety, quality and effectiveness of care, improved patient experience, dissemination of good practice and establishment of benchmarks for learning and sharing for all involved with this patient group.

These documents set the direction for standards of dietetic workforce and more recently a joint collaboration with the Department of Health and National Cancer Action Team have led to the development of site specific tumour pathways

including one for Head & Neck cancer. Each key episode of care along the patient's journey has integrated symptom specific care pathways supported by evidence based practice where available and defined levels of intervention for specialist therapists. A national workforce toolkit is currently under establishment for Allied Health Professionals in order to provide population based workforce figures to support commissioning based service models for local adaptation.

The UK faces a significantly challenging financial environment from the impact of the economic downturn on national NHS funding, creating a competitive market for healthcare services outside and within cancer care. As dietitans we have never been more challenged then now to put quality, innovation, productivity and prevention at the heart of what we do whilst maintaining patient centeredness in our mind. Continuing to work collaboratively across the MDT is crucial to channel this task.

This presentation aims to provide a brief overview of the national context and how this has supported the development of a site specific dietetic workforce with examples of service establishment, innovation in practice and future survival!

PATHOLOGICAL EVALUATION OF SENTINEL LYMPH NODE IN HEAD AND NECK SQUAMOUS CELL CARCINOMA

N. P. Trivedi, V. Kekatpure, Hiran KR, S. Iyer and M. A. Kuriakose

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Objective: The objective of this study is to determine relative efficacy of different methods of pathological evaluation of sentinel lymph nodes in oral squamous cell carcinoma.

Methods: Sentinel lymph nodes harvested as part of an on going prospective randomized study were evaluated systemically to compare relative efficacy of different methods of pathological evaluation of sentinel lymph nodes. This included frozen section, imprint cytology, routine hematoxylin and eosin (H&E) staining, serial step sectioning with H&E and immunohistochemistry (IHC). The identified metastases were classified into macro metastasis (> 2.0 mm), micro metastasis (0.2 mm to 2.0 mm), isolated tumor cells of less than 0.2 mm size and single tumor cells.

Results: Total 192 sentinel lymph nodes in 80 patients were harvested. Occult metastasis was detected in 20 patients. Frozen section and imprint cytology identified occult metastasis in 10/20 patients. Routine H&E evaluation detected metastasis in 13 patients, while serial step sectioning with H&E and IHC upstaged the disease in seven further patients (9%). Macro metastasis and micro metastases were detected in 8 and 7 patients respectively, while isolated tumour cells were detected in 5 patients. Frozen section detected macro metastasis in 7/8 cases but failed to detect smaller deposits in majority of cases (missed micro metastasis in 4/7 and isolated tumor cells in 5/5). Serial step sectioning upstaged the disease by 10% and sensitivity and negative predictive value of serial step sectioning with H&E was 90% and 97% respectively.

Conclusion: Frozen section and imprint cytology are not effective in identifying occult metastasis in oral squamous cell carcinoma. Immunohistochemistry and serial step sectioning are required to identify micro metastasis and isolated tumor cells.

LARYNX FUNCTION

L. Ward

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Purpose: Research over the past two decades into the early and late toxicity of various RT-based organ preservation treatments, particularly those which involve intensification of treatment such as chemo-XRT and accelerated regimens, has consistently demonstrated that organ preservation is not synonymous with functional preservation. In this invited presentation, the topic of discussion is the preservation of "function", and what we now know about impaired laryngeal function following non-surgical protocols.

Methodology: The current evidence base for functional outcomes for both voice and swallowing following organ preservation treatment will be examined within a framework which considers (a) what is known about treatment toxicity and its impact on laryngeal function, (b) the impact of reduced laryngeal function on the patients' global health and outcomes, and (c) the future of non-surgical treatments, and how the detrimental impact on laryngeal function could be minimised.

Conclusion: Persistent, long term impaired laryngeal function needs to be acknowledged as a significant limiting factor of organ-preservation protocols.

MULTIPLE SIMULTANEOUS FREE FLAPS: FLEXIBILITY IN COMPLEX HEAD AND NECK RECONSTRUCTION

Y. Caplash, **R. H. Woods** and R. Coren

Royal Adelaide Hospital, Adelaide, South Australia

Head and neck pathology often creates complex reconstructive challenges involving multiple tissue types, multi-lamellar structures and large defects. The Royal Adelaide Hospital experience using multiple free flaps simultaneously has yielded many solutions to these challenges. We review our prospectively recorded case series of 20 free flaps in 10 patients without flap failure, over 6 years (2004-2010). These included 8 procedures for malignancy and 2 for osteoradionecrosis. Ninety percent of the resections included a bony defect, and all had soft tissue defects in lining, or both bulk and lining. The variety of reconstructive options for complex defects is detailed, and harmonious combinations recommended. We describe our techniques for optimisation of theatre ergonomics including patient positioning, flap selection, side selection and surgical team coordination. Microsurgical anastamosis of flap pedicles to separate suitable recipient vessels in the neck, with use of vein grafts where required, enabled safer flap perfusion. Flap inset in a stepwise fashion from deep to superficial and complex to simple structures provided best recontouring and recreation of the resected tissues. The nuances of these techniques are carefully explored.
Multiple simultaneous free flaps have enabled increased flexibility and better reconstructive results in the arena of complex head and neck resection.

NOTES:

POSTER ABSTRACTS

TREATMENT OF LEAKAGE AROUND A VOICE PROSTHESIS: UTILISING A NEW APPROACH

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Trachea-esophageal puncture (TEP) speech is well established as the most popular alaryngeal voice post surgery. However, voice prosthesis management is not without challenges and complications for some patients. Persistent leakage around a voice prosthesis can have a significant impact on a patients health and quality of life. The objective of this study was to determine if the use of VOX Implants™ Injectable Bulking Agent was a successful treatment for persistent leakage around a voice prosthesis.

Review of current literature revealed only one paper reporting the successful use of this treatment method with two case examples discussed. The clinicians at Princess Alexandra Hospital (PAH) were keen to trial and evaluate the use of VOX implants for management of this post-laryngectomy/pharyngolaryngectomy complication. During the past 6 months patients presenting with enlargement of the tracheo-esophageal fistula (TOF) despite correctly fitted voice prosthe ses or trial of modified voice prostheses have been treated with injection of a bulking agent (VOX; formally known as Bioplastique). An audit of these patient charts was completed to examine pre-injection status (including location of leakage, type of voice prostheses used/trialled, history of strategies attempted to prevent leakage) and post-injection results (including amount of VOX injected, ease of injection, leakage status post injection. Pre and post injection images have been collected where able as well as patient and clinician feedback.

This poster presentation will present the results of this chart audit and discuss the use of this new treatment option for persistent leakage around a voice prosthesis. Learnings associated with the injection technique and post-injection follow-up will be highlighted.

HEAD AND NECK CANCER EDUCATION FORUM FOR ALLIED HEALTH IN NSW - DEMYSTIFYING THE DISEASE

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Cancer Institute NSW

Purpose: In 2007, there were 957 new cases of head and neck (H&N) cancer in NSW, representing 3.4% of all cancers in males and 1.6% in females. These numbers are relatively small; however the care needs of patient with H&N cancer are multi-faceted and complex.

The inaugural Optimising Care for Patients with Head and Neck Cancer professional education forum aimed to provide multidisciplinary clinical education for health professionals caring for patients with H&N cancer and improve awareness of current treatment practices.

Methodology: The program aligned with the Cancer Institute NSW, NSW Oncology Group (NSWOG) terms of reference to encourage sub-specialisation and exchange of knowledge. Determined by a clinical sub-committee, the day featured 11 presentations and a multidisciplinary Q&A panel. Educational themes were aligned to the patient journey – from signs, symptoms, referral pathways and treatment to palliative care.

Results: The forum was held in Sydney in October 2009, exceeding capacity with 194 attendees representing over 25 disciplines and 70 hospitals/organisations. The Cancer Institute NSW supported travel and accommodation for over 40 participants from rural and regional NSW and ACT. 100% of participants reported that the day met their needs and 100% would attend a similar education day in the future. The most helpful session was "The Patient Perspective" presented by a H&N cancer survivor. Overall, participants liked the MDT approach to the program most. 70% of attendees felt they would benefit from a yearly event.

Conclusions: The forum successfully achieved its objectives, providing education for a multidisciplinary group of H&N health professionals across rural, regional and metropolitan NSW. The forum was highly valued and achieved outstanding evaluation results.

PATHOLOGY REPORTING IN ORAL CANCER: A PROPOSED STRUCTURED REPORTING SYSTEM FOR AUSTRALASIA

H. Coleman, J. E. Dahlstrom, N. W. Johnson, E. Salisbury, G. Morgan, M. Veness, D. Ellis and M. Judge

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ACT Pathology, The Canberra Hospital and Australian National University Medical School
Griffith University
SESIAHS Prince of Wales Hospital. Head and Neck Cancer Service, Westmead Hospital
Head and Neck Cancer Service, Westmead Hospital and the University of Sydney
SA Pathology and Flinders University
Royal College of Pathologists of Australasia

Whilst schemes exist in the UK and North America, there is at present no internationally standardized instrument for reporting head and neck pathology. It can be difficult to assess information in reports across jurisdictions because of lack of uniformity in content and presentation. This also creates difficulties for coding by cancer registries.

Purpose: The aim of this protocol is to ensure that oral cancer pathology reports are uniform in their content, contain relevant information and can be easily interpreted so they can be used to direct further treatment and provide a guide for discussing prognosis.

Methodology: A multidisciplinary committee (comprising four pathologists, a head and neck surgeon and a radiation oncologist) was formed as part of the Cancer Services Advisory Committee of the Royal College of Pathologists of Australasia (RCPA) in 2010. All members of the committee have acknowledged expertise in oral cancer. The group includes additional representation from the Royal College of Pathologists (UK) and the College of American Pathologists. Relevant stakeholders such as the Australian & New Zealand Head and Neck Society have been identified and will be consulted. Stakeholders will be invited to nominate a representative to review the protocol before endorsement by the RCPA.

Results: The group has met to develop the standards and guidelines to be used in the development of the oral cancer protocol. The protocol is in its first draft.

Conclusions: It is envisaged that all oral cancer cases throughout Australasia will be reported according to this protocol, thus ensuring that all current histopathological prognosticators will be identified and included in a clinically and pathologically complete and standardized head and neck pathology report.

VMAT IN HEAD AND NECK RADIOTHERAPY: A PLANNING COMPARISON WITH INTENSITY-MODULATED RADIOTHERAPY USING SIMULTANEOUS INTEGRATED BOOST

M. Johnston, S. Clifford, R. Bromley, M. Back, L. Oliver and **T. N. Eade**

Royal North Shore Hospital

Purpose: A planning study was undertaken to assess whether Volumetric-modulated arc therapy (VMAT) was able to meet planning objectives for complex Head and Neck radiotherapy cases using a simultaneous integrated boost technique.

Patients and Methods: CT data from ten patients with locoregionally-advanced head-and-neck cancer (5 oropharynx and 5 nasopharynx) were selected. The prescription dose was 7000cGy, 6300cGy and 5600cGy to the high-dose, intermediate-dose and low-dose PTV respectively. Dosimetric parameters for targets and organ at risk were based on RTOG IMRT protocols; 95% (D95) of the high dose PTV was required to receive 7000cGy, D95 for the intermediate and low dose PTV's was 5985cGy and 5320cGy respectively. Double arc VMAT (DA) and 9 -Field IMRT plans were produced for each case. Plan quality was compared using dose-volume-histograms.

Results: IMRT plans typically required three times the number of monitor units (MU) as DA plans. The D95 for PT V 70 was 96-100% of prescribed dose for IMRT plans and 100% for all DA plans. Dose conformity was slightly better for IMRT plans. Both IMRT and DA achieved acceptable plans in terms of sparing of critical structures (spinal cord, brainstem). Contralateral parotid-sparing was better with DA, with mean dose of 2508cGy (range 2135-3002 cGy) for oropharynx, and 3137cGy (range 2347-3552 cGy) for nasopharynx cases.

Conclusion: A simultaneous integrated boost DA VMAT plan was able to be produced, and was dosimetrically comparable to our standard 9 field IMRT plans. There was approximately 1/3 of the monitor units required for a DA plan compared to IMRT.

PARATHYROIDECTOMIES FOR SECONDARY HYPERPARATHYOIDISM: PRE AND POST OP USAGE OF CALCIUM SUPPLEMENTATION AND EFFECT ON CALCIUM LEVELS

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Introduction: Secondary hyperparathyroidism requiring parathyroidectomy can cause post-operative hypocalcaemia. Pre-operative calcium loading is required, however not much research has been conducted into this area.

Method: For this cohort via a retrospective study over the past year, we investigated the followng: percentage preloaded with calcium, (for non/preloaded categories;) average pre/post op calcium level, post op calcium supplementation, requirement of IV calcium gluconate post op and length of stay in hospital. Information was gained via audit of patient notes.

Results: 33% were preloaded ($p<0.05$, significantly different). For the non-preloaded the pre-operative calcium level was 2.73. In the preloaded cohort this was 2.47mmol/l ($p<0.0001$, significantly different).The average calcium levels post op were 2.12 in those who recieved no calcium and 2.22 in the pre-loaded ($p>0.10$). 100% of both non/pre-loaded categories required post op calcium supplementation (non-preloaded required higher doses of alfacalcidol) 33% of the non loaded cases required IV calcium gluconate compared with 0% of the preloaded cases. The admission duration of those who had not received calcium was 7.5 day compared with 6 days (pre-loaded) ($p<0.0001$).

Discussion and conclusions: We determined an association between preloading with alfacalcidol and increased risk of post op hypocalcaemia, IV calcium gluconate usage and prolonged hospital stay and develop recommendations for calcium preloading this cohort to prevent post operative complications.

ORAL CANCER AT A TASMANIAN TERTIARY REFERRAL CLINIC, THE ROYAL HOBART HOSPITAL

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The aim of this study was to retrospectively investigate the demographics, aetiological factors and treatment modalities of the oral cancers referred to the Holman Clinic at the Royal Hobart Hospital. Holman Clinic includes a multidisciplinary head and neck clinic which functions as a tertiary referral centre for Southern Tasmania and involves ENT surgeons, Oral and Maxillofacial Surgeons, Plastic and Reconstructive Surgeons, Radiation Oncologists and Medical Oncologists.

The medical histories and a database of the Holman Clinic were used as the sources of data for this study. A total of 280 patients were treated for oral cancer at the Royal Hobart Hospital from 2003 to 2010.

The distribution of anatomical sites of the oral cancers and aetiological factors involved were analyzed. The data, and the trends found, were compared to those previously documented over the past 25 years.

VELOPHARYNGEAL FUNCTION AFTER TRANS ORAL ROBOTIC RESCETION

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Purpose: The management of Oropharyngeal cancer has the potential for the significant functional morbidities of dysphagia and velopharyngeal incompetence. Trans Oral Robotic Surgery is emerging as a surgical treatment option in patients with oropharyngeal cancer. This paper discusses the experience at the Royal Adelaide Hospital and addresses the issue of velopharyngeal function after TORS with and without reconstruction.

Methodology: 20 consecutive patients with selected T1, T2 and T3 Oropharyngeal cancers who had Trans Oral Robotic Resection as part of the treatment protocol for oropharyngeal cancer between July 2008 and June 2010. 10 patients had no repair 6 had primary trans oral pharyngoplasty, 2 had local flap repairs and 2 had free flap repairs. Prospectively collected data on swallowing and velopharyngeal function, including clinical symptoms, quality of life data using Voice Handicap Index, MDADI and FACT - H&N and Video Barium swallows.

Results: All patients had velopharyngeal incompetence in the first two weeks after resection. All but one patient had resolution of symptoms in the period between resection and radiation. All but one patient had resolution of symptoms three months after completion of adjuvant therapy. One patient who had primary resection with pharyngoplasty and no adjuvant treatment had persistent velopharyngeal dysfunction more than four months after TORS.

Conclusions: Trans Oral Robotic Surgery is not associated with significant velopharyngeal dysfunction.

POST - TREATMENT FDG - PET IN PATIENTS UNDERGOING IMRT FOR HEAD AND NECK CANCER

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Aims: To report the negative (NPV) and positive predictive value (PPV) of post treatment FDG-PET (postPET) in patients treated with IMRT for locally advanced head and neck cancer.

Methodology: Consecutive IMRT patients treated at NSCC over a 25 month period were reviewed and included if a postPET had been performed. A minimum follow up of 9 months was required unless recurrence had occurred. Patients with nasopharyngeal primaries were excluded. Primary and nodal sites were assessed independently. PostPET results were coded as partial response (PR) if there was equivocal or definite abnormal metabolism present or complete response (CR) if initial abnormal metabolism had resolved.

Results: A total of 41 patients were included with a median follow up of 25 months. The primary sites were oropharynx (n=31) , hypopharynx (n=3), larynx (n=5) and carcinoma of unknown primary (n=2). The AJCC staging was T1 (21%), T2 (33%), T3 (26%), T4 (11%), N0 (21%), N1 (17%), N2 (57%) and N3 (2%). Concurrent chemotherapy was given in 83% of the cohort. Median time to postPET was 82 days. There were 4 recurrences at the primary site and PostPET was false-positive (FP) in 2 patients. No patients with CR had a subsequent recurrence. The PPV was 33% and the NPV was 100%. There were 4 nodal recurrences. PostPET was FP in 2 patients and FN in 2 patients, with a PPV of 33% and a NPV of 93%.

Conclusions: Post treatment FDG-PET has a high negative predictive value for residual disease in both primary and nodal sites.

DOES THE RATE OF HYPOCALCAEMIA VARY DURING THE EVOLUTION OF A INDIVIDUAL SURGEON'S THYROID PRACTICE? : A 16 YEAR CASE REVIEW

V. Padhye, D. J. Howe, N. Sharma and J. C. Watkinson

The Birmingham University Hospital, United Kingdom

Background: Hypocalcaemia is a common complication following total thyroidectomy. It occurs as a result of inadvertent injury to the parathyroid glands. The rate of reported long term surgical hypocalcaemia following surgery is variable and the criteria by which hypocalcaemia is identified also varies within the literature1. This case series reports mature results from a single tertiary centre and also tracks the rate of hypocalcaemia as surgery evolves.

Methods: Tertiary head and neck centre in UK. A retrospective case series. Cases identified from analysis of a prospective thyroid database from 1994-2009.Results.Rates of post-operative hypocalcaemia were reviewed from 1993 to 2009 using a dedicated database. Six hundred and twenty three Total or Completion thyroidectomies were reviewed. The rate of temporary hypocalcaemia overall was 21%, this compares with published data of 30-35%2. Analysis year by year indicates that over the study period rate of permanent hypocalcaemia reduced from 2.6%(114 cases, 18 of which were for Graves disease) to 0%(139 cases, 46 of which were for Graves disease).

Conclusion: In this series the overall rate of permanent hypocalcaemia was 3%. The data supports the conjecture that rates of permanent hypocalcaemia reduced as surgical practice evolves and is refined.

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PHYSICIAN ASSESSMENT IN PATIENTS UNDERGOING HEAD AND NECK CANCER SURGERY

V. Padhye and C. Gibb

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Aim: The Royal Adelaide Hospital Peri-Operative High Risk Clinic (POHR) was established in 2006 for the medical assessment of elective surgical patients. Given the frequency of coexisting medical morbidities and urgency of surgical intervention, this service has been extensively utilised in the head and neck cancer surgery cohort. The aim of this audit is to evaluate the frequency of recommendations made in this clinic in head and neck cancer surgery patients. Both routine recommendations for common medical problems and individual recommendations were assessed.

Methods: Restrospective case series analysis of 20 head and neck cancer surgery patients referred to POHR.

Results: Of the 20 patients assessed, 19 proceeded for surgery, with 1 deciding against surgical intervention. Only 2 patients had their surgery briefly delayed to undergo medical investigations and appropriate treatment. Another 2 had elective admissions prior to surgery for medical optimisation. All patients had routine recommendations, mostly for cardiac, pulmonary and renal management. Rehabilitation, delirium and thromboprophylaxis general recommendations were also made in most patients. Individual interventions were made in 19 out of the 20 patients. The commonest recommendation was a medication change in 15 of the 20 patients. 5 patients had further medical subspecialty referrals made and 5 had further medical investigations prior to proceeding to surgery.

Conclusion: A high burden of medical disease was found in elective head and neck cancer patients. All patients had some form of recommendations made for optimal medical care in the perioperative period. This outcome suggests that routine physician assessment should be considered prior to head and neck cancer surgery.

OROPHARYNGEAL CANCER IN SOUTH AUSTRALIA- INCIDENCE AND SURVIVAL OVER 30 YEARS. CHANGING PATTERNS

G. L. Rees

Royal Adelaide Hospital

Introduction: Data regarding Cancer Incidence and Survival has been collected in South Australia for the last 30 years. A review of this data allows us to view the current impact of his disease on our population and outcomes of treatment. We may view current trends and future predicted changes to allow better management of health resources.

Methods: Since 1977, all new cancers, treatment and survival has been recorded in South Australia by the Cancer Registry. The database has been analysed to retrieve data regarding incidence and survival between 1977 and 2006 for all cases of Oropharyngeal Cancer.

Outcomes: More than 600 cases of Oropharyngeal cancer have been recorded in this database. The sex ratio of cases over this period has been approximately 3.5 males to one female. The age at presentation is quite wide for head and neck cancers - spreading form 40-79 years quite evenly. The average annual incidence over the 30 year period has been 15 cases a year for males and 4.4 cases a year for females. The annual incidence of oropharyngeal cancer has risen by 96% in males and 116% in females over this time. The rate of rise of cases has been approximately 0.5 cases per year for males over the 30 year period and 0.15 cases per year for females. In the last 8 years, the rate of increase has jumped to 1.5 cases per year for males and 0.25 cases a year for females. If current rates of increase in incidence continue, an extra 7.5 extra males and 1.25 extra females will develop oropharyngeal cancer in the next 5 years in South Australia. Numbers of deaths, there has been a relative decline relative to incidence over the time period. Over the first 21 years, the annual percentage of patients dead compared to incidence was 57% males and 51% females. This has fallen to an average over the last 9 years of 37% of males dying and 30% of females. In the last three years.

VOICE OUTCOMES AFTER TRANSORAL LASER MICROSURGERY FOR EARLY GLOTTIC CANCER

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Introduction: Early glottis cancer can be treated with radiotherapy or transoral laser microsurgical resection (TLMR) with equivalent published oncological outcomes. The majority of laryngeal cancer in Australia affects the glottis (up to 75%) mostly presenting as a T1 or T2 lesion. Significant debate exists as to the superior modality when considering upper aerodigestive tact function importantly level of phonation.

Aim: Review the voice outcome of 20 patients following TLMR of early glottic cancer.

Method: Retrospective review of a prospective head and neck oncological database of all patients presenting with early (CIS, T1, T2) glottic cancers between February 2005 to date was performed. Patients were prospectively analyzed together with a dedicated speech pathologist utilizing validated Voice Related QOL, Voice Handicap Index (VJI) and FACT-G questionnaires. Additional information relating to patients overall experience was also collected.

Results: Overall 79 patients underwent TLMR for early glottis cancer. The overall complication rate was 25% (major and minor). 7 patients developed disease recurrence and were successfully salvaged. The larynx preservation rate was 97%. 99% patients were alive with no disease at the end of the study period and 1 was lost to follow up. Patient directed voice and quality of life outcomes were VRQOL 81.88 +/- 21.69, VHI 22.85 +/- 23.42, FACT-G 87.23 +/- 16.99 and FACT-H&N 27.53 +/- 6.17. All patients stated they would undergo laser treatment again if required.

Conclusion: The excellent oncological outcomes of transnormal laser resection early glottis cancer are enhanced by the favourable patient scored vocal and quality of life outcomes. Of note, all patients felt they had made the correct choice for their treatment and would undergo laser treatment again if required.

'AND IN THE END, IT'S NOT THE YEARS IN YOUR LIFE THAT COUNT. IT'S THE LIFE IN YOUR YEARS' ABRAHAM LINCOLN: COMMUNICATION AND SWALLOWING FUNCTIONAL OUTCOMES IN HEAD AND NECK ONCOLOGY PATIENTS – THE DEVELOPMENT OF A PROSPECTIVE DATABASE

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Treatment outcomes and efficacy have traditionally been based on disease cure and survival, however this does not reflect the impact on a patients functional status and quality of life. There has been limited comprehensive, longitudinal evaluation of communication and swallowing functional outcomes of patients treated for head and neck cancer. It is well known, however, that this patient population suffers significant morbidity in these areas. In view of this, there are few validated functional outcome measurement tools available to assess communication and swallowing unique to this patient group.

Since 1990, data relating to demographics, disease and treatment of head and neck oncology patients has been collected, analysed and published by the oncology research department at Prince of Wales Hospital. In 2008, an attempt was made to incorporate functional outcomes but was unsuccessful due to clinical work demands. From Dec 2009 a 2 year full time Speech Pathology position was funded to conduct a communication and swallowing outcomes project.

By prospectively adding this component to the database, evidence based functional outcomes of communication and swallowing will be available, directly impacting on the future treatment and management of patients. Data collected will highlight communication and swallowing impairment and performance level as well as identifying associated barriers and levels of distress. Oral intake tolerated, speech intelligibility, voice function and therapy offered and completed by patients will be recorded consistently at various time points. Reliable functional outcome measures and predictors for communication and swallowing outcomes will be identified. This poster will outline the investigative process, outcome measures and information to be collected and the status of the database to date.

COMPARTMENTAL RESECTION FOR INFRATEMPORAL FOSSA CLEARANCE IN BUCCAL SQUAMOUS CELL CARCINOMA INVOLVING RETROMOLAR TRIGONE.

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Objective: Buccal squamous carcinoma involving retromolar trigone (RMT) and infratemporal fossa (ITF) predicts poor outcome and most patient present with local recurrence at skull base. We regularly perform compartmental resection for ITF clearance in these cases. Main objective of this paper is to systemically evaluate the pathological specimen for margins and to evaluate local control rate.

Method: 30 cases of buccal mucosa tumors with extension in RMT and ITF were included in this prospective study. Surgery carried was wide local excision with segmental mandibulectomy & upper partial maxillectomy with complete ITF clearance. In all cases, complete pterygoid muscles with pterygoid plates were included in specimen. All patients were given adjuvant treatment. Patients were followed up for local recurrence.

Results: All thirty cases were buccal mucosa tumors involving RMT. 22 out of 30 had (recent onset / worsening) trismus. CT scan showed ITF involvement in 10/30 of these cases. All patients with ITF involvement on CT scan had trismus. Pathological evaluation showed involvement of pterygoid muscles in 20 of these cases. In two cases ITF margins were pathologically positive. Pterygoid were pathologically involved in 10 cases where CT showed no ITF erosion and in 4 cases where there was no trismus. Bone was pathologically involved in 14 cases. One patient with positive margin has developed local recurrence. (Median follow up of 18 months).
Conclusion: Buccal mucosa tumor with RMT involvement spreads thro pterygoid muscle in infratemporal fossa and it is important to clear ITF to achieve negative margins at skull base.

ATYPICAL FIBROXANTHOMA AND MALIGNANT FIBROHISTIOCYTOMA - A TEN-YEAR REVIEW

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Purpose: To review the differences between atypical fibroxanthoma (AFX) and malignant fibrohistiocytoma (MFH).

Methodology: Consecutive cases of MFH and AFX were reviewed from our non-melanoma skin cancer (NMSC) database 1996-2007 for the Central Region of New Zealand. Medline search and recent pathology textbooks were reviewed to determine current opinions and evidence for the diagnostic differences between AFX and MFH.

Results: Of the 54,002 NMSC lesions excised from 26,138 patients over a 10-year period, 102 (0.2%) were histologically reported as AFX and 14 (0.03%) as MFH, with a mean age of 77 (range, 51-93) and 87 (range, 62-76) years respectively. The mean size of AFX was 16.3 (5-70) mm occurring on the head and neck (n=97), limb (n=3), trunk (n=2). 15 (14.7%) lesions were incompletely excised. 12 (11.7%) cases developed local recurrence and 1 reported metastasis. The mean size of MFH was 20.9 (range 7-50) mm occurring on the head and neck (n=10), trunk (n=2), groin (n=1) and limb (n=1). 3 (21.4%) lesions were incompletely excised and there were 3 cases of metastasis. 2 (14.3%) patients developed local recurrence. Although the literature states differentiating clinical and histologic features between AFX and MFH, no immunohistochemical (IHC) stain reliably differentiates between them.

Conclusion: Differentiating AFX from MFH based on histology and IHC is difficult and our cases did not conform to the typical presentation indicated in the literature. AFX and MFH are best regarded as belonging to a spectrum of soft tissue sarcomas with variable aggressiveness.

A RARE CASE OF AMELOBLASTIC CARCINOMA

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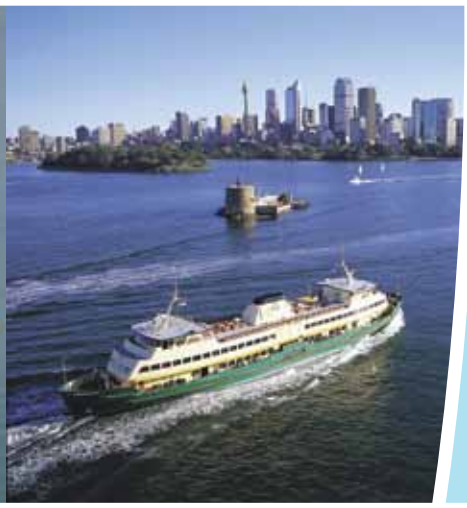
Background: Ameloblastic carcinoma is a rare type of Ameloblastoma, which has had little mention in the literature. A number of cases have been published over many years, with no institution able to produce a substantial case series.
It is thought to be an aggressive tumour which can metastasize and which originates in the embryonic tooth components.
The primary treatment modality involves surgical resection, however radiotherapy and chemotherapy have been used in the past with some small effect.

Methods/Results: Here we present a case of a 40 year old female diagnosed with a mandibular lesion by a dentist and later confirmed as an Ameloblastic carcinoma after surgical resection. We also briefly review the available literature on the natural history and management options of this rare tumour.

Conclusion: Ameloblastic carcinoma is primarily a surgical condition that is best treated with resection, with little indication that other modalities are helpful. Once metastases occur the prognosis tends to be poor.

NOTES:



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