AUSTRALIAN AND NEW ZEALAND
HEAD & NECK
CANCER SOCIETY

Final Program

Australian and New Zealand Head & Neck Cancer Society

15th Annual Scientific Meeting

Thursday 29 August to Saturday 31 August 2013

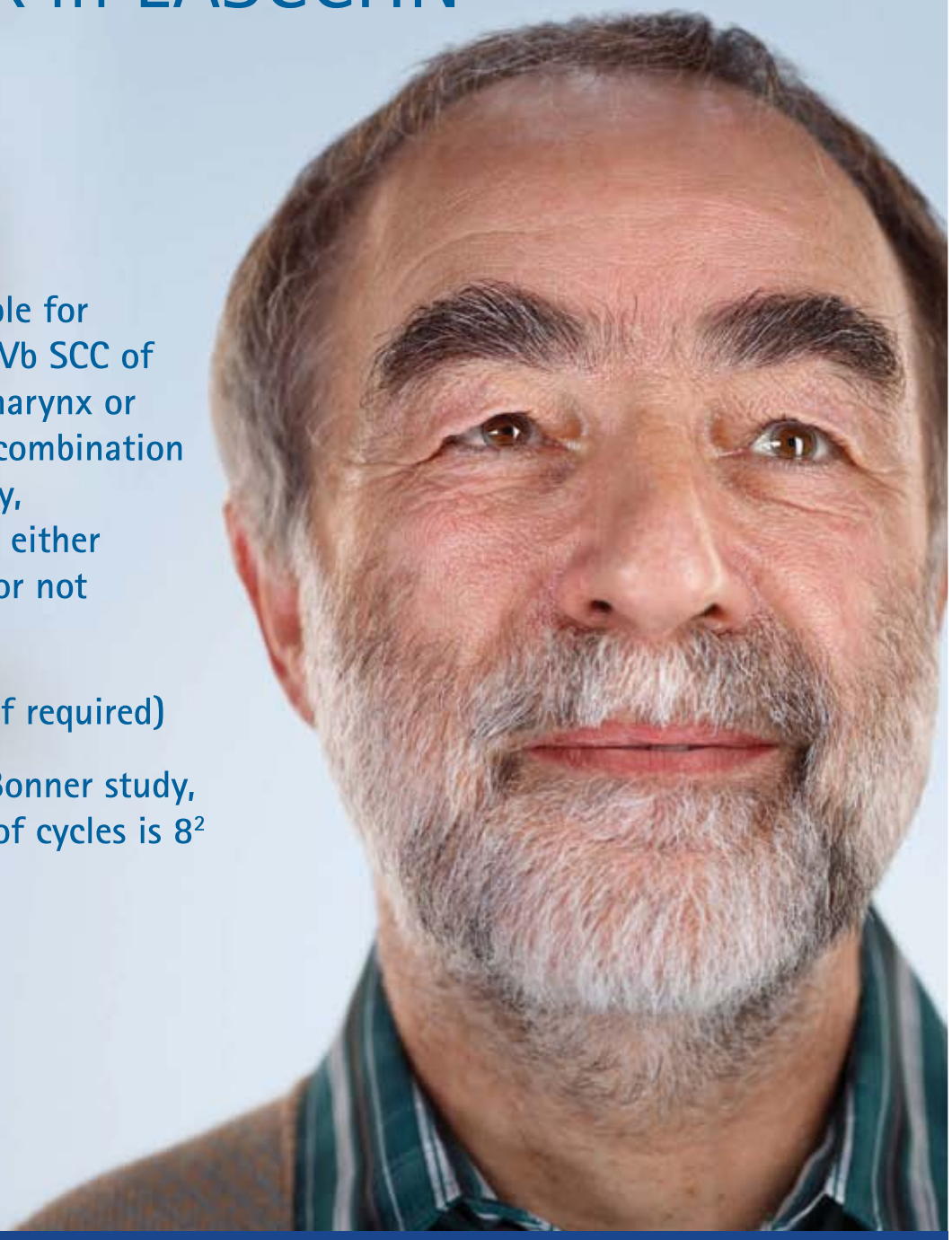
Pullman Melbourne Albert Park

www.anzhncs.org

Platinum Sponsor: Merck Serono MERCK

ERBITUX®
CETUXIMAB

ERBITUX in LASCCHN



PBS LISTING[1]

Erbitux is available for Stage III, IVa or IVb SCC of the larynx, oropharynx or hypopharynx in combination with radiotherapy, when cisplatin is either contraindicated or not tolerated.

1:6 repeats (10 if required)

From landmark Bonner study, median number of cycles is 8[2]

Merck Serono Oncology | *Combination is key™*

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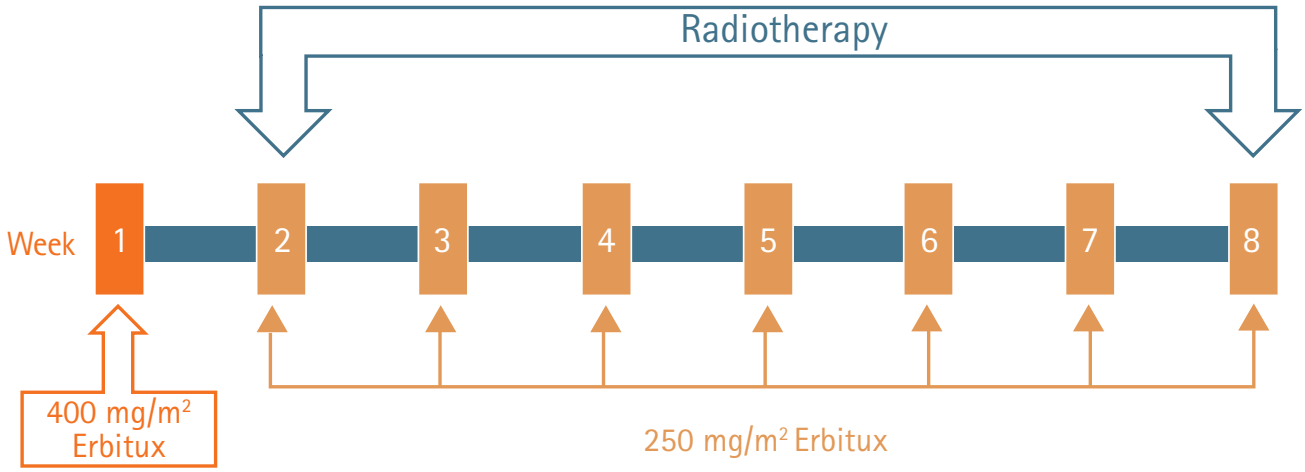
This is what tumour shrinkage looks like

Locally advanced SCCHN dosing regimen: Erbitux + radiotherapy[3]



Erbitux 250mg/m² (except the initial dose which is 400mg/m²). Radiotherapy (70-77 Gy).

PBS Information: Authority required. Refer to PBS Schedule for full authority information.

Please review approved Product Information before prescribing. Product Information is available upon request from Merck Serono or via the TGA website https://www.ebs.tga.gov.au

Erbitux® Minimum PI: Indications: For the treatment of patients with epidermal growth factor receptor (EGFR)-expressing, *K-RAS* wild-type metastatic colorectal cancer (mCRC): 1) in combination with: infusional 5-fluorouracil/folinic acid plus irinotecan*, irinotecan in patients who are refractory to first-line chemotherapy* or in first-line with FOLFOX*, 2) as a single agent in patients who have failed or are intolerant to oxaliplatin-based therapy and irinotecan-based therapy. Also for the treatment of patients with squamous cell cancer of the head and neck (SCCHN): 1) in combination with radiation therapy for locally advanced disease, 2) in combination with platinum-based chemotherapy for recurrent and/or metastatic disease. **Contraindications:** Known severe (grade 3 or 4) hypersensitivity reaction to cetuximab, mutant or unknown *K-RAS* mCRC status*. Contraindications for concomitant therapy must be considered. **Precautions:** Infusion-related reactions; respiratory disorders; skin reactions; electrolyte disturbances; cardiovascular disorders; eye disorders; mCRC patients with *K-RAS* mutations or for whom *K-RAS* status is unknown; combination with capecitabine + irinotecan*; pregnancy Category D; no breast-feeding. **Interactions:** Increased incidence of specific adverse reactions in combination with chemo- or radiotherapy (see below). **Adverse effects:** *Very Common*: skin reactions, hypomagnesaemia, mild to moderate infusion-related reactions, mucositis, increased liver enzyme levels. *Common*: headache, conjunctivitis, diarrhoea, nausea, vomiting, dehydration, hypocalcaemia, anorexia, severe infusion-related reactions, fatigue. The risk of adverse events due to chemotherapy or radiotherapy may be higher when combined with Erbitux: severe leukopenia/neutropenia, infections and infectious complications (with platinum-based agents); cardiac ischaemia, hand-foot syndrome (with fluoropyrimidines); severe diarrhoea (with capecitabine and oxaliplatin); hypokalaemia (with irinotecan or platinum/fluorouracil); radiation-related effects (with radiotherapy). **Dosage:** Initial dose 400 mg/m²; subsequent weekly doses 250 mg/m². Administer intravenously over 120 min for initial dose; 60 min for subsequent doses. Premedicate with antihistamine and corticosteroid for first infusion; recommended for subsequent infusions. Monitor closely during and for at least 1 hour after the end of the infusion. Do not administer chemotherapy agents until at least 1 hour after cetuximab infusion. For mCRC: *K-RAS* status must be determined prior to first infusion; in combination with chemotherapy or as monotherapy, continue until disease progression. For locally advanced SCCHN: start one week prior to and then use concomitantly with radiation therapy. For recurrent/metastatic SCCHN: in combination with platinum-based chemotherapy agent then as monotherapy until disease progression. Based on PI dated 14 May 2013

* Please note change in Product Information

References: 1. http://www.pbs.gov.au/medicine/item/4312Y-4436L-4731B-7223E-7240C-7242E-7273T. **2.** Bonner J A, *et al.* N Engl J Med 2006; 354(6): 567-78. **3.** Erbitux Approved Product Information. Date of last amendment: 26 February 2013.

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ABN: 72 006 900 830. PA ONC 7/13 AUS 122. July 2013.

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Welcome

Dear Colleagues

On behalf of our Society and the Organising Committee, it is our pleasure to warmly welcome you to Melbourne for the 15th Annual Scientific Meeting of the ANZHNCS.

We especially welcome our International Keynote Speakers: Dr Maura Gillison, Dr Christine Gourin, Dr Barbara Murphy, and Dr Andy Trotti. We are certain you will enjoy your time in Melbourne and thank you for your valuable contribution to our meeting and to our Society.

We welcome also our other invited guest speakers from around Australia and overseas, and thank you for your participation in this meeting.

We are very pleased to have Professor Richard Larkins AO, Chairperson of the Victorian Comprehensive Cancer Centre, present The Chris O'Brien Oration.

We would like to clearly acknowledge the support of Sponsors and Exhibitors whose continuous commitment and involvement with our Society is pivotal to the ongoing success of our Scientific Meetings. We especially thank our Platinum Sponsor: Merck Serono; our Silver Sponsor: Olympus; and our Bronze Sponsors: Aspen Australia, DePuy Synthes, Elekta, and Roche. We also thank all the other companies participating in the industry exhibition.

We encourage Delegates to meet with exhibitors during program breaks and to take the opportunity to view our scientific posters in the exhibition area.

As always, there is much to do and see in Melbourne, and we trust that you will not only enjoy a valuable professional educational experience at the 15th annual ANZHNCS ASM, but also find time to experience some of Melbourne's diverse cultural and sporting opportunities.

Yours sincerely

Janelle Heywood FRANZCR
President ANZHNCS

Anthony Guiney FRACS
Convener ANZHNCS ASM

AUSTRALIAN AND NEW ZEALAND
HEAD & NECK
CANCER SOCIETY

Contents





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 cancer 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 Cancer Society.

The initial business meeting was held on 9 December 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 & 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.anzhncs.org

Major Sponsors

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Convener	Mr Anthony Guiney FRACS, Surgeon, Melbourne
Scientific Conveners	Mr Tim Iseli FRACS, Surgeon, Melbourne Dr Tsien Fua FRANZCR, Radiation Oncologist, Melbourne Dr Jacqui Frowen PhD, Speech Pathologist, Melbourne
Organising Committee	Ms Maria Dikeakos, Cancer Care Coordinator and Project Manager, Melbourne Associate Professor Bernard Lyons FRACS, Surgeon, Melbourne Associate Professor David Wiesenfeld MDSC, FDSRCPS, FRACDS (OMS), Surgeon, Melbourne

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	Mr Tim Iseli FRACS, Surgeon, Melbourne
	Mr Richard Lewis FRACS, Surgeon, Perth
	Associate Professor Ben Panizza FRACS, Surgeon, Brisbane

Keynote Speakers

Maura Gillison MD	Medical Oncologist, The Ohio State University Comprehensive Cancer Center, Columbus, Ohio, United States of America
Christine Gourin MD	Otolaryngologist, Johns Hopkins University, Baltimore, United States of America
Barbara Murphy MD	Medical Oncologist, Vanderbilt-Ingram Cancer Center, Nashville, United States of America
Andrea Trotti MD	Radiation Oncologist, H. Lee Moffitt Cancer Centre, Tampa, United States of America

Keynote Speaker Profiles

Maura L. Gillison MD PhD

Dr Gillison is a Professor of Medicine and Jeg Coughlin Chair of Cancer Research at The Ohio State University Comprehensive Cancer Center in Columbus, Ohio, U.S.A. The Gillison laboratory studies the role of human papillomavirus in the pathogenesis of head and neck cancer. Dr Gillison received her undergraduate degree from Duke University (Durham, N.C., U.S.A) and her Doctorates in Medicine and Philosophy from The Johns Hopkins Medical Institutions (Baltimore, MD, U.S.A.). She rose to the rank of Associate Professor at Johns Hopkins prior to accepting her current position. Dr Gillison has received the Clinical Investigator Award from the Damon Runyon Cancer Research Institute, is a member of the American Society of Clinical Investigation, is a fellow of the American Association for the Advancement of Science, and received the Richard and Hilda Rosenthal Award from the American Association for Cancer Research in 2012. She has published articles in *The New England Journal of Medicine, The Journal of the American Medical Association, The Journal of the National Cancer Institute and The Journal of Clinical Oncology.*

Christine G. Gourin MD MPH FACS

Christine is Associate Professor of Otolaryngology- Head and Neck Surgery and Director of the Clinical Research Program in Head and Neck Cancer at Johns Hopkins University. She received her M.D. degree from the State University of New York Health Science Center at Brooklyn/Downstate Medical Center. She trained in General Surgery and Otolaryngology- Head and Neck Surgery at the University of Vermont, and completed a fellowship in Advanced Head and Neck Oncologic Surgery at the University of Pittsburgh, and received her M.P.H. degree from the Johns Hopkins Bloomberg School of Public Health. Dr Gourin has authored or co-authored over 100 peer-reviewed journal articles, 19 book chapters and 3 books on various topics related to head and neck cancer, and is on the Editorial Board of The Laryngoscope and The Journal of Clinical Oncology. Dr Gourin has been named to America's Top Physicians and Best Doctors in America annually since 2005. Her clinical and research interests focus on quality of care, survival, quality of life and functional outcomes following treatment for head and neck cancer.

Barbara A. Murphy MD

Dr Murphy is Professor of Medicine in the Division of Hematology / Oncology. She serves as the Leader of the Head and Neck Research Team and the Director of the Pain and Symptom Management Program (PSMP) at the Vanderbilt Ingram Cancer Center. The dual role allows her to pursue her personal area of research interest: the early and late sequella of treatment for head and neck cancer patients. Dr Murphy chairs the PSMP Research Team, a multi-disciplinary group of investigators representing numerous schools, divisions and departments within Vanderbilt University Medical Center. In addition she serves as the Clinical Leader for the Head and Neck Team.
Dr Murphy has extensive experience in the development, implementation and management of clinical trials, supportive care studies and grants. She has a significant body of work representing investigator initiate trials. Through the collaborative effort of team members, the following issues in head and neck cancer patients are currently being investigated: 1) measurement of symptom burden associated with cancer therapy, 2) swallowing, nutritional and metabolic changes in head and neck cancer patients undergoing chemoradiation, 3) neuropsychiatric issues associated with treatment, 4) lymphedema and fibrosis: measurement and impact, 5) musculoskeletal impairment: impact on function, 6) oral complications of radiation therapy, 7) caregiver burden and 8) body image issues. Dr Murphy's second area of interest is systems approaches to improving pain control. Dr Murphy was Co-PI on an R-01 evaluating the efficacy of an opioid titration order sheet for improving pain in outpatients with cancer and the PI of an R-21 which extends this area of research to the hospice setting.

Andrea Trotti MD

Dr Andrea Trotti, MD, Moffitt Cancer Center, Medical Consultant/Toxicity/CTC. Andrea "Andy" Trotti, III, MD is an Associate Professor of Radiation Oncology at the Moffitt Cancer Center, University of South Florida College of Medicine, Department of Interdisciplinary Oncology. He has been the Director of Clinical Trials for Radiation Oncology at USF/Moffitt since 1990. A native Floridian, Dr Trotti received his MD from the University of Florida and his Radiation Oncology training at the University of Alabama at Birmingham. He is Board Certified by the American Board of Radiology in Therapeutic Radiology and has been listed in "Best Doctors in America" 1996-2012. He is the Principal Investigator for the Radiation Therapy Oncology Group (RTOG) at USF and serves the RTOG as Co-Chair of the Head and Neck Committee.

He has led numerous NCI or industry sponsored clinical trials, including recently serving as PI for the largest reported randomized international trial for the prevention of mucositis. Dr Trotti has been a principal investigator for 9 clinical trials and has participated in an additional 40 clinical trials. He is currently the Principle Investigator and national leader of an RTOG 700 patient multicenter trial investigating treatment intensity reduction in HPV related cancer of the oropharynx, comparing cisplatin to cetuximab. He serves as a reviewer and consultant to the NCI, NIH and the Medical Research Council in the UK. His research interests include improving the efficacy of radiotherapy in head and neck cancer, reducing toxicity by use of chemotherapy alternatives, as well as studies of reporting systems and interventions of the adverse effects of cancer treatment.

General Information

Registration Information

Full registration includes: all scientific sessions, final program, lunch, 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, lunch, morning and afternoon tea on nominated day and entry to the industry exhibition. Tickets to the Welcome Reception and Meeting Dinner are an additional cost.

Registration Desk

The registration desk is located in the Grand Ballroom Foyer, Level 1 at the Pullman Melbourne Albert Park.

Opening Hours:

Thursday 29 August 2013	7.30am – 5.00pm
Friday 30 August 2013	7.30am – 5.00pm
Saturday 31 August 2013	8.00am – 1.30pm

Speakers' Support

Presenters are requested to submit their PowerPoint presentations to the speakers' support desk at least one hour prior to the commencement of the session in which they are speaking. The speakers' support desk is located at the rear of the Grand 1 & 2 room. A technician will be available at the speakers' support desk one hour prior to the commencement of the first session and during the catering breaks from Thursday 29 August to Saturday 31 August 2013.

Dress

Scientific Sessions:	Smart Casual
Welcome Reception:	Smart Casual
Meeting Dinner:	Lounge Suit/Cocktail Dress

Business Meetings

ANZHNCS Executive Committee Meeting

Wednesday 28 August 2013, 5.00pm
Room: Park Room, Level 1, Pullman Melbourne Albert Park
(Executive Members only)

ANZHNCS Foundation Meeting

Thursday 29 August 2013, 12.30pm
Room: Grand 3, Level 1, Pullman Melbourne Albert Park
(Foundation Board Members only)

ANZHNCS Annual General Meeting

Friday 30 August 2013, 12.30pm
Room: Grand 1 & 2, Level 1, Pullman Melbourne Albert Park
(ANZHNCS Members only)

CME/CPD Points

This educational activity has been approved in the Royal Australasian College of Surgeons CPD Program. Fellows who participate can claim one point per hour (maximum 16 points) in Category 4: Maintenance of Knowledge and Skills towards 2013 CPD totals.

Certificate of Attendance

A certificate of attendance is included in the delegate Meeting materials and can be collected from the registration desk.

Intention to Photograph

Delegates are advised that photographs may be taken during the Meeting and reproduced.

Official Functions

Welcome Reception

Thursday 29 August 2013, 5.00pm – 7.00pm
Grand Ballroom Foyer
Pullman Melbourne Albert Park
Cost: Included for full registration, bookings essential
Additional tickets $55.00 inc GST

Tickets Essential: If you have a full registration and would like to attend or if you would like to purchase an additional ticket, please enquire with the staff at the registration desk regarding availability.

Meeting Dinner

Friday 30 August 2013, 7.00pm – 10.30pm
Carousel, 22 Aughtie Dr, Albert Park Lake
Cost: Included for full registration, bookings essential
Additional tickets $150.00 inc GST

Tickets Essential: If you have a full registration and would like to attend or if you would like to purchase an additional ticket, please enquire with the staff at the registration desk regarding availability.

Please meet in the foyer of the Pullman Melbourne Albert Park at 6.30pm for a coach transfer to Carousel. Coaches return to the Pullman Melbourne Albert Park departing Carousel from 10.30pm.

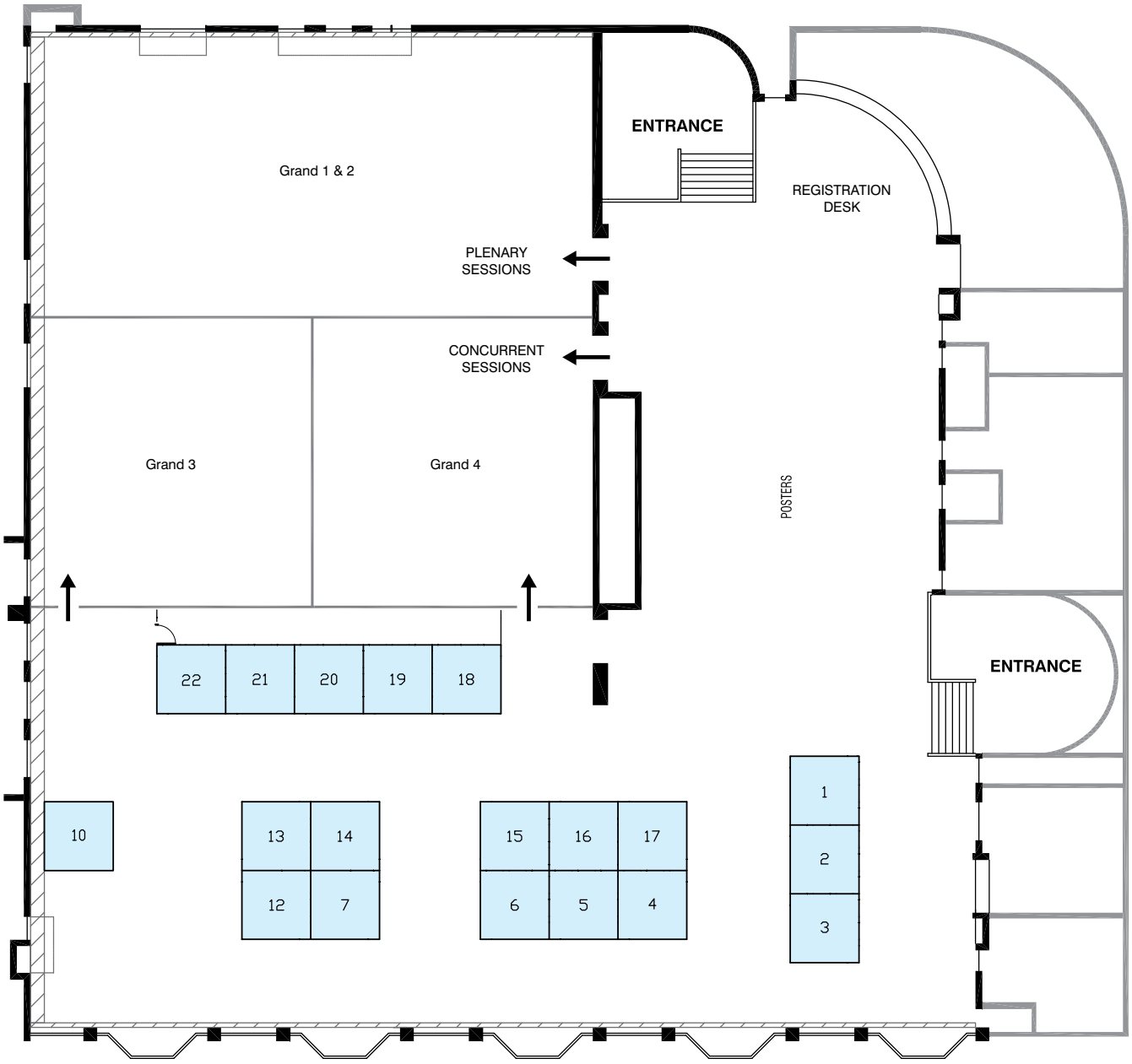

Carousel, Albert Park Lake

Dietary Requirements

Please note that the venue is responsible for all catering at the meeting and RACS does not inspect or control food preparation areas or attempt to monitor ingredients used. You should contact the venue directly for all special dietary requirements during the event, irrespective of whether details have been provided to RACS. If RACS requests information about your dietary requirements for a specific event RACS will endeavour to forward the information provided to the venue (time permitting). RACS will not retain information provided for future events, so you must verify your requirements for each event. Even if information is requested or provided, RACS takes no responsibility for ensuring that the venue acknowledges your dietary requirements or that these requirements can be met. In all cases you must verify for yourself that your dietary requirements have been met and RACS refutes any and all liability for any failure to adequately provide your special dietary requirements or any consequential damage resulting from such failure.

Exhibition Floor Plan

Floor plan correct at the time of printing however the Meeting Organisers reserve the right to change the floor plan without notice.



16	Aspen Australia
5	Avant Insurance
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Tri-Society Head & Neck Oncology Meeting 2014

Thursday 14 - Saturday 16 August 2014

Darwin Convention Centre, Darwin, Northern Territory, Australia

SAVE THE DATE!

www.anzhncs.org

Australian and New Zealand Head & Neck Cancer Society
Hong Kong Head & Neck Society
Society of Otolaryngology Head & Neck Surgery Singapore

AUSTRALIAN AND NEW ZEALAND HEAD & NECK CANCER SOCIETY

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SOHNSS SOCIETY OF OTOLARYNGOLOGY HEAD & NECK SURGERY SINGAPORE

FINAL PROGRAM

Final Program correct at the time of printing. However, the Meeting Organisers reserve the right to change the program without notice.

Wednesday 28 August 2013

5.00pm **ANZHNCS Executive Committee Meeting**
Park Room
(Executive Members only)

Thursday 29 August 2013

SESSION 1: OPENING SESSION
8.30am – 10.40am
Chair: Janelle Heywood
Room: Grand 1 & 2

8.30am Introduction/Welcome
Anthony Guiney

8.40am Chris O'Brien Oration
Richard Larkins AO

9.10am **Keynote Lecture**
Epidemiology of the human papilloma virus
Maura Gillison *Sponsored by Merck Serono* Merck Serono MERCK

9.30am **Keynote Lecture**
Tools for reporting adverse events and quality of life in head and neck cancer
Andy Trotti

9.50am **Keynote Lecture**
Dysphagia and nutritional issues in head and neck cancer patients
Barbara Murphy

10.10am **Keynote Lecture**
Quality improvement in head and neck cancer care
Christine Gourin

10.30am Tribute to Kie Kian Ang, M.D., PhD
Lester Peters

10.40am – 11.10am Morning Tea with the Industry, Grand Ballroom Foyer

SESSION 2: SKIN CANCER
11.10am – 12.30pm
Chair: Matthew Campbell
Room: Grand 1 & 2

11.10am Treatment of advanced skin SCC – More than just a slash and burn concept
Sandro Porceddu

11.25am Reconstruction of the lips
Jeremy Wilson

11.35am Management of Merkel Cell Carcinoma of the head and neck
Matthew Foote

11.45am Lips – radiotherapy vs surgery?
Liz Kenny

11.55am Impact of CLL on cutaneous squamous cell carcinoma
Jonathan Tomaszewski

12.05pm New therapies for melanoma
Grant McArthur

12.20pm Facial nerve reconstruction – local options
Damien Grinsell

12.30pm ANZHNCS Foundation Meeting
Room: Grand 3
(Foundation Board Members only)

12.30pm – 1.30pm Lunch with the Industry, Grand Ballroom Foyer

CONCURRENT SESSION 3a: MANAGEMENT OF THE NECK
1.30pm – 2.50pm
Chair: Peter Thomson
Room: Grand 1 & 2

1.30pm Keynote Lecture
Management of the neck after chemoradiotherapy
Christine Gourin

1.45pm Keynote Lecture
Role of PET imaging at Johns Hopkins
Christine Gourin

2.00pm Imaging characteristics of the at risk neck
Pramit Phal

2.10pm Vessel options for reconstruction after neck dissection
Scott Ferris

2.20pm Physiotherapy following neck management: the Clinician experience
Aoife McGarvey

2.30pm Panel / Controversies

CONCURRENT SESSION 3b: ALLIED HEALTH SESSION
1.30pm – 2.50pm
Chair: Jacqui Frowen
Room: Grand 4

1.30pm Keynote Lecture
Screening for head and neck cancer symptom burden
Barbara Murphy

1.45pm Comparison of primary versus secondary voice prosthesis placement
Felicity Megee

1.55pm Prophylactic swallowing exercises for chemoradiotherapy
Amanda Dwyer

2.05pm Using technology to deliver prophylactic swallowing exercises
Bena Cartmill

2.15pm Swallow function in head and neck cancer patients with a prophyalctic PEG: a prospective study with long term follow up
Ann-Louise Spurgin

2.25pm A new look at the provision of nurse-led information for people with head and neck cancer
Wendy Poon

2.35pm Enteral feeding and nutritional management in head and neck cancer: Current best practice
Teresa Brown

2.50pm – 3.20pm Afternoon Tea with the Industry, Grand Ballroom Foyer

SESSION 4: LARYNGEAL CANCER
3.20pm – 5.00pm
Chair: Neil Vallance
Room: Grand 1 & 2

3.20pm Medal of Excellence award
Presented by Janelle Heywood

3.30pm Speech pathology management of early glottic cancer
Robyn Burnett

3.40pm How good are we at non-surgical preservation of the larynx?
June Corry

3.50pm **Keynote Lecture**
Long term results of three RTOG studies: 90-03 (altered fractionation); 91-11 (larynx preservation); 95-12 (altered fractionation in T2 larynx)
Andy Trotti

4.05pm Tips for optimal transoral laser microsurgery
Elizabeth Sigston

4.15pm Managing complications of transoral laser microsurgery
Peter Thomson

4.25pm A systematic review of stomal recurrence in laryngectomy patients with pre-operative tracheostomy
Ajmal Masood

4.35pm Management of locally advanced – (T3-T4) glottic laryngeal carcinomas
Robert Smee

4.45pm Questions

5.00pm – 7.00pm **Welcome Reception**
Grand Ballroom Foyer, Pullman Melbourne Albert Park

Friday 30 August 2013

SESSION 5: OROPHARYNX
8.30am – 9.50am
Chair: June Corry
Room: Grand 1 & 2

8.30am Keynote Lecture
RTOG 1016: HPV trial
Andy Trotti

8.45am Keynote Lecture
Impact of smoking on outcomes in HPV
Maura Gillison *Sponsored by Merck Serono*

9.00am TROG randomised study in low risk HPV tumours
Danny Rischin

9.15am Prognostic markers in HPV
Angela Hong

9.30am Human papilloma virus in oropharyngeal SCC at the Top End
Mahiban Thomas

9.40am Managing mucositis with humidification during radiotherapy for head and neck cancer: TROG 07.03 RadioHUM results
Andrew Macann

9.50am Panel / Controversies

10.20am – 10.50am Morning Tea with the Industry, Grand Ballroom Foyer

CONCURRENT SESSION 6a: THYROID
10.50am – 12.30pm
Chair: Elizabeth Sigston
Room: Grand 1 & 2

10.50am Involved recurrent laryngeal nerve – surgical options
Stephen Kleid

11.00am Follow up of thyroid cancer
Simon Forehan

11.10am The evolving role of radioiodine therapy in thyroid cancer
Eddie Lau

11.22am Targeted therapy for advanced thyroid cancer
Ben Solomon

11.32am Comparison of indeterminate and atypical fine-needle aspiration cytology with thyroid histology: A retrospective analysis of malignancy risk based on age and sex
Keith Potent

11.42am VISMODEGIB, a hedgehog pathway inhibitor (HPI) in advanced basal cell carcinoma (ABCC): STEVIE study interim analysis in 300 patients
Dedee Murrell

11.52am Panel / Controversies

CONCURRENT SESSION 6b: FREE PAPERS
10.50am – 12.30pm
Chair: Liz Ward
Room: Grand 4

10.50am Adapting the road show model; utilising VC to support regional education provision
Julie Saunders

11.00am Long terms outcomes of a head and neck cancer Dietitian-Led Clinic (DLC)
Jane Harrowfield

11.10am Gastro-omental free flap reconstruction in salvage pharyngolaryngectomy – voice and swallowing outcomes
Jessica Boehm

11.20am Preliminary findings of the ALOHA Assessment of Lymphoedema of Head and Neck
Jodie Nixon

11.30am Pretreatment factors associated with dysphagia and enteral nutrition use post radiotherapy (+/- chemotherapy)
Sophie Chandler

11.40am A retrospective validation of the criteria for proactive gastrostomy tube insertion in patients with head and neck cancer in the era of tomotherapy
Vanessa Getliffe

11.50am Survivors' experiences of dysphagia-related services following head and neck cancer: Implications for clinical practice
Rebecca Nund

12noon Physiological changes to the swallowing mechanism following (chemo)radiotherapy for head and neck cancer: a systematic review
Laurelie Wall

12.10pm Maximising shoulder function following neck accessory nerve injury after neck dissection: a multicentre randomised controlled trial
Aoife McGarvey

12.20pm Improving the identification and management of supportive care needs for patients with cancer
Maria Dikeakos

12.30pm **ANZHNCS Annual General Meeting**
Room: Grand 1 & 2
(ANZHNCS Members only)

12.30pm – 1.30pm Lunch with the Industry, Grand Ballroom Foyer

SESSION 7: ORAL CANCER
1.30pm – 2.55pm
Chair: David Wiesenfeld
Room: Grand 1 & 2

1.30pm Management of trismus
Jasvir Singh

1.42pm Maxillofacial prosthodontics, where are we heading?
Christine Wallace

1.52pm Keynote Lecture
Dental health in head and neck cancer patients: measuring late effects
Barbara Murphy

2.12pm Risk factors for developing oral SCC
Michael McCullough

2.23pm Dental prevention following head and neck cancer treatment
John O'Grady

2.34pm Oral cavity biomarkers
Annette Lim

2.45pm Osteoradionecrosis – my approach
Kirstie MacGill

2.55pm – 3.25pm Afternoon Tea with the Industry, Grand Ballroom Foyer

SESSION 8: MULTIDISCIPLINARY CARE
3.25pm – 5.00pm
Chair: Matthew Foote
Room: Grand 1 & 2

3.25pm Keynote Lecture
Lymphedema and fibrosis in head and neck cancer
Barbara Murphy

3.40pm Cricopharyngeal dysfunction – assessment and treatment
Julia Maclean

3.50pm A cancer specific approach to advance care planning
Natasha Michael

4.00pm Ethics in head and neck oncology
Sarah Breier

4.20pm Multidisciplinary care of head and neck cancer in Australia and New Zealand
Guy Rees

4.30pm Four years down the track: long-term swallowing outcomes after (chemo)radiotherapy
Jacqui Frowen

4.40pm Measuring the impact of multidisciplinary pre-operative education for head and neck cancer surgery patients
Penny Chapman

4.50pm Depression and anxiety in head and neck cancer patients
Jeremy Couper

7:00pm – 10.30pm Meeting Dinner
Carousel
22 Aughtie Dr., Albert Park Lake
(Refer to General Information on page 10 for coach transfer details)

Saturday 31 August 2013

CONCURRENT SESSION 9a: ISSUES IN THE MAXILLA, MANDIBLE AND BASE OF SKULL
9.00am – 10.00am
Chair: Ben Dixon
Room: Grand 1 & 2

9.00am Ocular and orbital issues in head and neck tumour management
Thomas Hardy

9.10am Reconstructing the CSF barrier
Brent Uren

9.20am Improving functional outcomes following orbital floor resection
Anand Ramakrishnan

9.30am Bony union in free flap mandible reconstruction
Saam Tourani

9.40am Mandibular swing with subciliary incision – an alternative approach to maxillary tumour with infratemporal fossae/ nasopharynx extension
Hubert Low

9.50am Osseointegrated implant based dental rehabilitation in head and neck reconstruction patients - the M D Anderson Cancer Center experience
Sydney Ch'ng

CONCURRENT SESSION 9b: FREE PAPERS
9.00am – 10.00am
Chair: Stephen Kleid
Room: Grand 4

9.00am A proposed revision to nodal staging for oral squamous cell carcinoma: A multicenter international study
Ardalan Ebrahimi

9.10am Depth of invasion in staging of oral squamous cell carcinoma: A multicenter international study
Ardalan Ebrahimi

9.20am CO_2 transoral laser microsurgical excisional biopsy is superior to incisional biopsy for the evaluation of oral squamous cell carcinoma or severe dysplasia within potentially malignant lesions of the oral mucosa
Jacinta Vu

9.30am Second primary tumours in early stage squamous cell carcinoma of the oral tongue - a role for panendoscopy?
Kendrick Koo

9.40am Correlation of grade 3 dysphagia and delivered dose to specific swallowing structures in definitive IMRT for head and neck cancers
Maziar Fahandej

9.50am 18F-FDG metabolic tumour volume: association with dysphagia requiring a feeding tube in head and neck IMRT
James Jackson

10.00am – 10.30am Morning tea with the Industry, Grand Ballroom Foyer

SESSION 10: POSSIBILITIES AND CHALLENGES FOR THE FUTURE
10.30am – 12.30pm
Chair: Bernard Lyons
Room: Grand 1 & 2

10.30am Keynote Lecture
Dysphagia and quality of life in head and neck cancer
Christine Gourin

10.50am Induction chemotherapy in head and neck cancer
Brian Stein

11.05am Update on robotic surgery
Richard Gallagher

11.20am Speech pathology for TORS - re-writing the protocols
Pauline Dooley

11.30am Transoral robotic surgery for oropharyngeal cancer
Veronika van Dijck

11.40am Discussion of radiation protocols after robotic surgery

11.55am Panel / Controversies

12.20pm Awarding of prizes

12.30pm Final address and close of Meeting
Anthony Guiney

12.45pm – 1.30pm Lunch with the Industry, Grand Ballroom Foyer

ABSTRACTS

- Listed in alphabetical order according to Presenter's surname
- Presenters appear in bold

GASTRO-OMENTAL FREE FLAP RECONSTRUCTION IN SALVAGE PHARYNGOLARYNGECTOMY - VOICE AND SWALLOWING OUTCOMES

B. Ashford, S. Pearson and **J. Boehm**

Wollongong Hospital, NSW

The literature surrounding voice and swallowing outcomes in salvage circumferential pharyngolaryngectomy with a gastro-omental free flap reconstruction is limited. This appears largely due to the limited use of the flap in this surgery with many institutions favouring reconstruction using the anterolateral thigh or jejunal free tissue transfer.

Purpose: This paper presents 3 case studies to discuss the successful use of a gastro-omental free flap reconstruction in achieving functional voice and swallowing outcomes. All patients (1 female and 2 males) underwent salvage circumferential pharyngolaryngectomy with bilateral neck dissection and primary tracheosophageal puncture at Wollongong Hospital following failed organ preservation.

Results: All patients achieved functional tracheosophageal speech and were rated at level 6 on the Functional Communication Measure /Alaryngeal Speech by 3 months post-surgery. Difficulties with early post-operative voicing were due to high patient anxiety in patient 1 (P1) and severe lymphoedema in patient 2 (P2) while patient 3 (P3) achieved functional speech 2 weeks post-surgery. Vocal quality outcomes were variable with vocal quality perceptually rated as mildly hypotonic in P1, moderately hypotonic in P3 and mild – moderately hypertonic in P2. All patients resumed exclusive oral feeding. P1 and P3 resumed a soft consistency diet and were rated at level 6 on the Functional Oral Intake Scale (FOIS) at 3 months post-surgery and P2 remains limited to oral fluids (FOIS level 4) due to persistent severe lymphoedema.

Conclusion: The use of a gastro-omental free flap reconstruction in salvage pharyngolaryngectomy with primary tracheosophageal puncture provides functional voice and swallowing at 3 months post-surgery.

Conflict of Interest Declaration: None

ETHICS IN HEAD AND NECK ONCOLOGY

Sarah Breier

MU Center for Health Ethics, University of Missouri – Columbia, Columbia Missouri, United States of America

Contemporary health care has witnessed profound developments in treatments and technologies, yet also an increase in ethical dilemmas associated with medical decision-making – hence, the advent of 'clinical ethics'. Withdrawal and withholding of treatment, end-of-life care planning, informed consent, self-determination and biomedical futility are concerns that now comprise a part of holistic multidisciplinary health care provision, particularly in patients with head and neck cancers. Head and neck oncology is associated with distinct clinical and ethical sequalae which are arguably different than those associated with cancers in other parts of the body, often involving changes to the patient's most visual identity. The inherent ethical dilemmas that commonly complicate care confront all providers, patients, family, and society at large. By and large these dilemmas comprise a distinct benefits-versus burdens equation that deserves a thorough analysis utilizing the ethical principles of autonomy, beneficence, nonmaleficence and justice as decision-making guidelines. This presentation will describe a clinical ethics workup of a case from practice that outlines a step-by-step process of bioethical decision making in the head and neck oncology setting.

Conflict of Interest Declaration: None

ENTERAL FEEDING AND NUTRITIONAL MANAGEMENT IN HEAD AND NECK CANCER: CURRENT BEST PRACTICE

Teresa Brown[1, 2]

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The prevalence of malnutrition, weight loss and dysphagia is common in patients with head and neck cancer. Several studies have demonstrated beneficial effects of dietary counselling during radiotherapy treatments, with improvements in weight, nutritional status and quality of life. Many patients also require nutrition support through enteral tube feeding, however the evidence remains unclear as to the optimal form of tube feeding. Prophylactic gastrostomy has been recommended in some patient groups due to the beneficial effects on maintaining nutritional status or weight as well as other benefits such as improved quality of life and reduced hospital admissions. However, many of these studies were undertaken in patients receiving radiotherapy alone, and now as chemoradiotherapy treatments become standard of care; the same results for nutrition outcomes in more recent trials are not seen. An overview of the current evidence in this area will be presented.

At the Royal Brisbane and Women's Hospital, we are using validated guidelines to predict which patients may require prophylactic gastrostomy, and despite this proactive intervention, we have found that high risk patients can still lose 6-7% of body weight during treatment and up to 9-10% by three months post treatment. Weight loss and malnutrition can impact on the patients' quality of life, functional ability and other clinical outcomes. This presentation will also discuss current research underway to investigate novel approaches of nutrition intervention through prophylactic nutrition support and to determine whether early tube feeding improves nutrition outcomes.

Conflict of Interest Declaration: None

SPEECH PATHOLOGY MANAGEMENT OF EARLY GLOTTIC CANCER

R. Burnett

Royal Adelaide Hospital, SA

The treatment options of trans oral laser surgery or radiotherapy for treatment of early glottic cancer have been well established with similar control and survival rates reported in the literature. As speech pathologists we are interested in the functional outcomes of these treatment groups, with particular interest in voice quality and the role of voice therapy following treatment. This presentation has a clinical focus and aims to generate discussion about the role of voice therapy for these patient groups and in particular will discuss the RAH experience.

Conflict of Interest Declaration: None

USING TECHNOLOGY TO DELIVER PROPHYLACTIC SWALLOWING EXERCISES

Bena Cartmill[1,2], Liz Ward[1,3], Anne Hill[3], Laurelie Wall[1,3], Liz Isenring[4,5], Joshua Byrne[6] and Sandro Porceddu[7]

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Intensive swallowing therapy completed during chemoradiotherapy (CRT) treatment for head and neck cancer (HNC) can significantly improve swallowing outcomes for this patient population. Unfortunately, both nationally and internationally it is recognised that there are insufficient specialist services available to deliver such intensive therapy. As a result many patients are unable to access best-practice care. This service shortfall is only going to worsen with predictions of further increased demand for allied health services in cancer care, as well as the increasing costs of service delivery and predicted workforce shortages for allied health. Consequently finding solutions to ensure delivery of best practice intervention for dysphagia management in HNC patients demands consideration of alternate innovative, cost and time efficient service delivery models.

eSALT (electronic speech and language therapy), developed at The University of Queensland, allows patients to complete intensive, interactive swallowing therapy at home. This new model of care is proposed as a viable method to deliver best-practice dysphagia management in a cost-effective, time-efficient service model. This innovative telerehabilitation tool, eSALT, allows clinicians to fully customise electronic therapy tasks for individual clients. Swallowing therapy tasks can be downloaded to a mobile electronic device (eg. smartphone, computer tablet). The clinician can remotely monitor therapy progression, providing updates to the tasks as required and monitor/improve therapy adherence. Computer therapy programs such as eSALT which encourage, monitor and guide patient-directed home practice therefore may be the solution to successfully delivering effective and cost-efficient, intensive, patient-directed swallowing therapy for HNC patients.

Conflict of Interest Declaration: None

PRETREATMENT FACTORS ASSOCIATED WITH DYSPHAGIA AND ENTERAL NUTRITION USE POST RADIOTHERAPY (+/- CHEMOTHERAPY)

S. Chandler, V. Simms, R. Robinson, M. Barnhart, E. C. Ward and R. Smee

Prince of Wales Hospital NSW; Centre for Functioning and Health Research Qld Health & The University of Queensland, QLD

Purpose: It is unclear what impact pre-existing demographic and tumour specific factors have on swallow function after radiotherapy (+/- chemotherapy) due to a lack of prospective research (Frowen, 2010). The aim of this study was to determine the pre-existing factors, measured at baseline, that are associated with dysphagia and enteral nutrition use following radiotherapy (+/- chemotherapy) for head and neck cancer (HNC).

Methodology: One hundred patients who underwent primary radiotherapy (+/- chemotherapy) for HNC at the Prince of Wales Hospital were prospectively recruited between 2011 and 2013 (82% male; median age of 64 years). Variables relating to tumour specifics, patient demographics, treatment modality, swallowing function and oral intake were measured pre-treatment. Measures of dysphagia severity and enteral nutrition use were recorded during and at treatment completion. Multivariate analysis was used to assess differences between groups and regression analysis explored pre-treatment predictors of dysphagia and enteral nutrition use at the completion of radiotherapy (+/- chemotherapy).

Results: Dysphagia was present in 70% at treatment completion with 64% reporting dysphagia as a barrier to oral intake. A total of 29% required enteral nutrition during treatment (8 NGT; 21PEG). Analysis of baseline predictors of post treatment dysphagia and enteral feeding confirmed factors consistent with published literature.

Conclusion: The data adds to the emerging evidence base regarding pre-treatment factors that assist prediction of the presence of dysphagia and need for enteral nutrition for patients undergoing radiotherapy (+/-chemo) for HNC. Establishing a core set of predictors will help enhance service planning and prognostic discussions.

Conflict of Interest Declaration: None

MEASURING THE IMPACT OF MULTIDISCIPLINARY PRE-OPERATIVE EDUCATION FOR HEAD AND NECK CANCER SURGERY PATIENTS

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[2] Specialist Head and Neck Nurse, St. Vincent's Hospital Melbourne, VIC

[3] Social Work Department, St. Vincent's Hospital Melbourne, VIC

Patients with Head and Neck (H&N) cancer face extensive and radical treatment with numerous negative functional and psychosocial consequences. Counselling and patient education are critical components in the rehabilitation process[1].

Aim: To assess the impact of a targeted multidisciplinary pre-operative education and counselling intervention (PS-ECI) for patients prior to major H&N cancer surgery on post-operative adjustment and psychosocial preparedness for surgery when compared to standard care.

Methodology: 60 patients receiving major H&N cancer surgery were recruited and randomly assigned to a control (n=30) or intervention (n=30) group. Pre and post surgery measures of psychosocial distress using the Distress Thermometer[2] and a 6 week post-surgery participant questionnaire were used. Control group participants received standard care. The intervention group received a PS-ECI. Data analysed with Stata V12. Mann-Whitney U test, chi-squared analysis and Fisher's Exact test used. Questionnaires had qualitative data analysis.

Results: 40 pre/post data sets and 42 questionnaires were received. 85% patients had lower distress post-surgery. Comparison of post-surgery distress levels and adjustment between groups was not statistically significant. The intervention group had fewer problems post-surgery. 81% of control and 76% of PS-ECI participants reported being prepared for surgery.

Conclusion: The PS-ECI reduced problems encountered by patients post-surgery. The findings demonstrate a need for ongoing joint multidisciplinary pre-operative education, supported with written information, to ensure patients are prepared for surgery and expected long-term changes associated with their treatment. Ongoing use of Distress Thermometer tool prior to education, assists tailor education to meet individual needs of patient and carers.

References:

1. Ward, E & van As-Brooks, C.J (2007). Head and Neck Cancer Treatment, Rehabilitation and Outcomes. Plural Publishing Inc. San Diego.
2. Roth, A.J, Kornblith, A.B, Batel-Copel, L., Peabody, E., Sher, H.I & Holland, J.C (1998). Rapid screening for psychologic distress in men with prostate carcinoma: A pilot study. Cancer, 82, 1904-1908.

Conflict of Interest Declaration: None

OSSEOINTEGRATED IMPLANT BASED DENTAL REHABILITATION IN HEAD AND NECK RECONSTRUCTION PATIENTS - THE M D ANDERSON CANCER CENTER EXPERIENCE

S. Ch'ng, R. J. Skoracki, J. C. Selber, P. Yu, J. W. Martin, T. M. Hofstede, M. S. Chambers, J. Liu and M. M. Hanasono

M. D. Anderson Cancer Center, Houston, Texas, United States of America

Background: Dental rehabilitation is an integral part of head and neck cancer reconstruction. Our goal was to evaluate success rate of osseointegrated implants in head and neck cancer patients, specifically comparing outcomes between implants placed in fibula free flaps to those placed in native mandibular and maxillary bone, and assessing the effect of radiotherapy and timing of its administration on implant survival.

Methods: This study evaluates the success rate of oral osseointegrated implants in a cohort of head and neck cancer patients from 2005 to 2011. Primary endpoints include successful implant osseointegration and functional loading. Clinicodemographic parameters associated with implant survival and successful completion of implant based dental rehabilitation were assessed.

Results: A total of 1132 implants were placed in 246 patients. The overall implant loss rate was 3.7% with 33.7 months median follow-up. Implant loss was progressive over time. The rate of successful implant osseointegration/retention was lower in fibula free flaps (91.8%) as compared to the mandible (97.4%, $p=0.059$), and maxilla (97.8%, $p=0.057$), and especially so in the setting of postoperative radiotherapy ($p=0.015$). 80% of patients proceeded to functional loading with a prosthesis. Disease recurrence was significantly associated with failure to complete rehabilitation ($p<0.001$), and its predictive value was confirmed on multivariate analysis ($p<0.001$). 63.9% of patients who completed dental rehabilitation managed to resume a regular diet.

Conclusion: Osseointegrated implant dental rehabilitation is reliable in head and neck cancer patients who undergo complex surgery and multi-modality therapy. However, disease recurrence and radiotherapy can limit success.

Conflict of Interest Declaration: The authors have no commercial associations or financial disclosures that might pose or create a conflict of interest with information presented in this manuscript. No funding was received for this work.

DEPRESSION AND ANXIETY IN HEAD AND NECK CANCER PATIENTS

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Objective: The aim of the study was to assess symptoms of depression and anxiety in patients with head and neck cancer up to 18 months after radiotherapy.

Methods: Prospective observational study of consecutive head and neck outpatients was conducted at a tertiary cancer centre (n = 101). Eligibility included diagnosis of cancer in the head and neck region, where the patient agreed to radiotherapy with curative intent. Data were collected before commencement of radiotherapy and 3 weeks and 18 months after completion. Symptoms of depression and anxiety were assessed by the Hospital Anxiety and Depression Scale. Tumour/treatment-related physical symptoms were assessed using the 'Additional Concerns' subscale of the Functional Assessment of Chronic Illness Therapy for Head and Neck Cancer.

Results: The prevalence of identified probable cases of depression was 15% at baseline, increasing to 29% 3 weeks post-treatment, falling to 8% at 18-month follow-up. The number of probable cases of anxiety was 20% at baseline, 17% at 3 weeks post-treatment and 22% at 18-month follow-up. Depression scores significantly increased from baseline to 3 weeks post-treatment and decreased at 18-month follow-up. Variability in depression scores was accounted for by tumour/treatment-related physical symptoms. Anxiety scores significantly decreased between baseline and 3-week post-treatment and increased at 18-month follow-up. Younger age and more tumour/treatment-related physical symptoms predicted anxiety scores.

Conclusions: The rates of depression in head and neck cancer patients increase following cancer treatment and are related to tumour/treatment-related physical symptoms. Anxiety levels are higher pre-treatment, lower immediately following cancer treatment but rise to near pre-treatment levels more than a year after completion of cancer treatment.

Conflict of Interest Declaration: None

IMPROVING THE IDENTIFICATION AND MANAGEMENT OF SUPPORTIVE CARE NEEDS FOR PATIENTS WITH CANCER

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Head and Neck Oncology Tumour Stream,
The Royal Melbourne Hospital, VIC

Aim: To develop a sustainable model for identifying and managing the supportive care needs of patients with head and neck cancer.

Specific objectives are to:

1. Screen all outpatients presenting with head & neck cancer for supportive care needs, and determine the incidence of clinically significant emotional and psychological difficulties using existing validated tools;
2. Identify the indicators for particular interventions (e.g. general psychosocial support from clinical staff vs. specific/targeted psychological treatment with a psychologist or psychiatrist);
3. Improve psychological management for those with clinically significant needs, by developing a decision-making framework to ensure the most appropriate service response for identified needs is provided.

It is well documented that clinically significant distress impedes or complicates treatment, interferes with medical management, delays adjustment and reduces quality of life for the patient with cancer and their family. It can increase health care costs via longer hospital stays and the need for additional therapies. Comprehensive supportive care screening and provision of timely and targeted supportive care interventions is a recognised gap for patients with head and neck, cancer at the Royal Melbourne Hospital.

The project studied a cohort of head and neck oncology patients presenting to The Multidisciplinary Head and Neck Clinic at The Royal Melbourne Hospital. The distress Thermometer a validate tool was utilised for screening purposes. The screening was conducted by CCC with the support of a clinical psychologist

Results: The project has allowed for an improvement in staff confidence and skill in identifying supportive care needs for patients, ensuring more timely and appropriate referral to services to meet patient needs. An evaluation of each of the project outcomes will be undertaken across a range of levels: individual patient outcomes, service level impacts within RMH and across external organisations.

Conflict of Interest Declaration: None

SPEECH PATHOLOGY FOR TORS – RE-WRITING THE PROTOCOLS

P. A. Dooley and R. M. Gallagher

St Vincent's Private Hospital, Sydney, NSW

Since commencement of the Trans-Oral Robotic Surgery (TORS) program at St Vincent's Private Hospital, Sydney in November 2011, speech pathology has liaised with the surgical and multidisciplinary team to assist patients with post-operative swallowing and speech difficulty. The minimally invasive TORS technique enhances organ and function preservation, improving patient's speech, swallowing and overall quality of life. The role of the speech pathologist has needed to adapt to the altered patient needs, postoperatively and long-term. Through case presentation these altered needs will be identified and measurement of functional outcomes be discussed. Our current research with patient assessment pre-operatively and follow up at 3, 6 and 12 months postoperatively will be discussed. The importance of a multidisciplinary approach to rehabilitation of TORS patients will be stressed, in particular post-operative nutrition with reduced reliance of nasogastric tubes. Swallowing protocols are being re-written, indeed more so a work-in-progress.

Conflict of Interest Declaration: None

A PROPOSED REVISION TO NODAL STAGING FOR ORAL SQUAMOUS CELL CARCINOMA: A MULTICENTER INTERNATIONAL STUDY

A. Ebrahimi[1], Z. Gil[2,3], M. Amit[2,3], T. C. Yen[4], C. T. Liao[4], P. Chaturvedi[5], J. P. Agarwal[5], L. P. Kowalski[6], M. Kreppel[7], C. R. Cernea[8], S. J. Brandao[8], G. Bachar[9], A. Bolzoni Villaret[10], D. Fliss[11], E. Fridman[11], K. T. Robbins[12], J. P. Shah[13], S. G. Patel[13], J. R. Clark[1]

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Purpose: The AJCC nodal staging system for patients with oral squamous cell carcinoma (SCC) provides suboptimal prognostic stratification for some groups. We aimed to develop a modified N staging system based on incorporation of nodal yield information for pathologically node negative disease, down-staging of N2a, and separation of N2b into two groups based on 2-3 positive nodes versus ≥4.

Methods: This multicenter international study included pooled data from 3,723 patients treated between 1990-2011. After exploratory analysis, several candidate N staging models were developed. Staging system performance was assessed based on prognostic stratification of disease-specific survival (DSS), Akaike's information criterion (AIC) and Harrell's concordance index (C-index). Comparisons were made to the AJCC N stage with internal validation by bootstrapping.

Results: A modified N stage system was developed by adaptation from the AJCC 7th edition, with internal validation achieved with bootstrapping. After adjusting for pathological T stage, this outperformed the AJCC staging based on stratification into distinct prognostic groups, a lower AIC and a higher C-index with borderline statistical significance ($p=0.052$).

Conclusions: We propose a relatively simple modification of the current AJCC N staging system, which incorporates information on nodal yield, downstages pN2a disease, and stratifies pN2b disease based on number of metastatic nodes. Our results indicate this may provide improved prognostic information compared to the current AJCC nodal stage. However, external validation is required before implementation in practice.

Conflict of Interest Declaration: None

DEPTH OF INVASION IN STAGING OF ORAL SQUAMOUS CELL CARCINOMA: A MULTICENTER INTERNATIONAL STUDY

A. Ebrahimi[1], Z. Gil[2,3], M. Amit[2,3], T. C. Yen[4], C. T. Liao[4], P. Chaturvedi[5], J. P. Agarwal[5], L. P. Kowalski[6], M. Kreppel[7], C. R. Cernea[8], S. J. Brandao[8], G. Bachar[9], A. Bolzoni Villaret[10], D. Fliss[11], E. Fridman[11], K. T. Robbins[12], J. P. Shah[13], S. G. Patel[13], J. R. Clark[1]

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Purpose: Depth of invasion (DOI) is an important prognostic factor in oral squamous cell carcinoma (SCC). We aimed to develop a modified T staging system including DOI.

Methods: We analyzed pooled data from 3,149 patients treated at 11 cancer centers worldwide between 1990-2011. Exploratory analyses were performed to identify optimal cut-points for discrimination based on DOI and candidate staging models developed. Staging system performance was assessed based on prognostic stratification of disease-specific survival (DSS), Akaike's information criterion (AIC) and Harrell's concordance index (C-index), with internal validation by bootstrapping. Comparisons were made to the AJCC T stage as well as alternative proposals in the literature based on DOI.

Results: Multivariable analysis showed that DOI ($p<0.001$) and pathological T stage ($p<0.001$) are independent predictors of DSS, after adjusting for age, sex, N stage, extracapsular spread, margins, adjuvant therapy, and time period of treatment. After exploratory analyses to identify optimal cut-points for discrimination, we developed a modified T stage system adapted from the AJCC 7th edition incorporating DOI. After adjusting for N stage, this outperformed the AJCC staging based on stratification into distinct prognostic groups, a lower AIC and statistically significantly higher C-index ($p=0.007$). Internal validation was achieved with bootstrapping. Our T staging system also performed better than the alternative proposals in the literature based on DOI.

Conclusion: Our results suggest a relatively simple modification of the current AJCC T staging system based on DOI would provide improved prognostic information. These results require external validation before implementation in practice.

Conflict of Interest Declaration: None

CORRELATION OF GRADE 3 DYSPHAGIA AND DELIVERED DOSE TO SPECIFIC SWALLOWING STRUCTURES IN DEFINITIVE IMRT FOR HEAD AND NECK CANCERS

M. Fahandej, Nigel Anderson, James Jackson, Morikatsu Wada, Michal Schneider, Maureen Rolfo, Daryl Lim Joon and Vincent Khoo

Austin-Olivia Newton John Centre/Monash/Royal Marsden

Purpose: Dysphagia is a frequently reported toxicity of Head and Neck IMRT patients. A relationship may exist between grade 3 or greater dysphagia (CTCAEv4), requiring a feeding tube (FT) and dose delivered to distinct swallowing organs at risk (SWOARs). This study aims to quantify this relationship and identify the significance of specific swallowing structures.

Methods: Eleven separate SWOARs were retrospectively contoured (UMCG guidelines) on 69 consecutive patients, treated with definitive IMRT. High risk volumes received 70Gy/35 fractions and bilateral, elective nodal volumes 56Gy/35 fractions. The mean and maximum dose were recorded for each organ. An institutional nutritional database was sourced for comparison of dosimetry to FT reliant patients (deemed ≥75% of dietary requirement) for equal to or greater than 6 and 12 weeks, respectively.

Results: FT reliant patients ≥6 weeks recorded significantly higher mean dose than those <6 weeks in base of tongue (BOT) 63.8vs55.2Gy p= 0.001, cervical oesophagus(CO) 34.8vs28.7Gy p=0.017, superior pharyngeal constrictor muscle(SPCM) 65.1vs54.6Gy p<0.001, oral cavity(OC) 48.8vs35.4Gy p<0.001. This correlated with maximum dose to these SWOARs. FT reliant patients ≥12 weeks compared to <12 weeks, mean dose BOT 64.8vs57.3Gy p<0.011, CO 35.7vs30.1Gy p= 0.049, SPCM 65.3vs57.6Gy p= 0.019, OC 50.0vs38.8Gy p<0.001, medial pharyngeal constrictor muscle 64.5vs60.6Gy p= 0.045, with correlation of maximum dose received to SPCM and OC.

Conclusion: Dose delivered to specific SWOARs correlates with duration of FT reliance and grade 3 dysphagia. This data may be useful in refining dose constraint protocols and prediction of patients at risk of severe toxicity, necessitating a prophylactic FT.

Conflict of Interest Declaration: None

VESSEL OPTIONS FOR RECONSTRUCTION AFTER NECK DISSECTION

Scott Ferris

Melbourne, VIC

Microvascular reconstruction after head and neck resection is now a routine part of tumour care. Using free flaps in contemporary practice is possible because of the extremely high reliability of the tissue transfer. It is desirable because of the improved outcomes achievable at both donor and recipient sites. This talk discusses the various recipient vessel options available after neck dissection. The process of deciding between these options is critical to operative success and is outlined in detail.

Conflict of Interest Declaration: None

MANAGEMENT OF MERKEL CELL CARCINOMA OF THE HEAD AND NECK

Matthew Foote

Princess Alexandra Hospital, University of Queensland, Brisbane, QLD

Background: Merkel cell carcinoma (MCC) is an aggressive form of skin cancer with a high propensity for local recurrence, as well as regional and distant metastasis. It most commonly affects the elderly and has a predilection for the sun-exposed skin of the head and neck region. Surgery has been regarded as the standard treatment for stages I-III disease, with radiotherapy and chemotherapy used in the adjuvant setting for high risk disease. High level evidence to support treatment approaches tend to be lacking and new treatment approaches are being developed.

Aim: The aim of this presentation is to provide an evidence based approach for management of stages I-III MCC. It will highlight the role of surgery for both local and nodal disease including the role of sentinel lymph node biopsy. The management of the neck in both the clinically involved and elective settings will be evaluated. The role of radiotherapy and chemotherapy in the adjuvant and definitive setting will be discussed. Ongoing and potential research studies will also be explored.

Conflict of Interest Declaration: None

FOLLOW UP OF THYROID CANCER

Simon Forehan

The Royal Melbourne Hospital, Melbourne, VIC

The incidence of thyroid cancer has been increasing over the last several years yet the mortality rate has remained relatively stable. The prognosis for many patients with thyroid cancer is very good, with a low risk of death for the majority as predicted by TNM staging. However, recurrence may occur many years after diagnosis necessitating long term follow up of this growing group of patients. In recent years, the paradigm of recurrence risk stratification has emerged and it is in this context that follow up of thyroid cancer will be discussed.

Conflict of Interest Declaration: None

FOUR YEARS DOWN THE TRACK: LONG-TERM SWALLOWING OUTCOMES AFTER (CHEMO) RADIOTHERAPY

Jacqui Frowen[1], Allison Drosdowsky[2], Alison Perry[3] and June Corry[4]

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Purpose: To prospectively evaluate long-term swallowing function in a cohort of patients treated with (chemo) radiotherapy, to examine which aspects of swallowing change between 6 months and 4-5 years post-treatment and whether the risk factors for swallowing outcomes at 6 months post treatment remain consistent at 4-5 years post-treatment.

Methodology: Between 2005-2006 swallowing function was examined in 69 patients with head and neck cancer prior to treatment and up to six months following treatment. Of the 45 patients who were alive and well at 4-5 years post-treatment, swallowing activity limitation data were collected on the 39 who could be contacted. A videofluoroscopy swallowing study (VFSS) was also completed on 21 of these patients.

Results: Swallowing-related activity limitation for solids significantly improved between 6 months and 4-5 years post-treatment ($p=0.003$) and was back to pre-treatment levels for 74% of patients. Only 2 patients (5%) remained PEG tube dependent. Swallowing impairment on VFSS significantly deteriorated between 6 months and 4-5 years for semi-solids. However most patients (76%) showed little or no change of clinical significance. Significant correlations between swallowing measures at 4-5 years and various risk factors included: T stage; conformality of radiotherapy; and laterality of radiotherapy to the pharynx. Overall, swallowing-related QOL at 4-5 years post-treatment was high.

Conclusions: Swallowing impairment shows minimal change, but may deteriorate, in the years following (chemo) radiotherapy. Despite this, the majority of patients progress towards eating a near-normal diet, with high levels of swallowing-related QOL reported. T stage and radiotherapy technique remain important risk factors for long-term swallowing outcomes.

Conflict of Interest Declaration: None

A RETROSPECTIVE VALIDATION OF THE CRITERIA FOR PROACTIVE GASTROSTOMY TUBE INSERTION IN PATIENTS WITH HEAD AND NECK CANCER IN THE ERA OF TOMOTHERAPY

V. Getliffe, T. E. Brown, M. Banks, B. G. Hughes, C. Lin, L. Moira Kenny and J. D. Bauer

University of Queensland, QLD

Aim: The "Swallowing and Nutrition Guidelines for Patients with Head and Neck Cancer" were developed in response to the high risk of malnutrition and dysphagia that patients experience as a result of cancer treatment. The purpose of this study was to retrospectively re-validate the guidelines' assessment criteria in the era of tomotherapy and compare these results to a previous two year cohort where the treatment modality was standard 3D conformal radiotherapy.

Methods: Patients (n=271) attending a Combined Head and Neck Clinic at a major tertiary hospital in 2010 - 2011 were assessed using the guidelines, with high-risk category patients recommended for proactive gastrostomy. Data were collected on clinical factors, nutrition outcome measures, type and duration of enteral tube feeding, and guideline adherence. Sensitivity, specificity, and positive predictive value were calculated. These results were compared to a previous validation cohort from 2007 - 2008 (n=502).

Results: The only significant difference between the two cohorts was the number of patients receiving tomotherapy ($P=<0.001$). Proactive gastrostomy tubes were inserted in 87 of 271 patients (32%). Overall guideline adherence was 91% (vs. previous cohort results of 87%). High risk category adherence was 81% (compared to 75%). Validation outcomes were sensitivity 75% (compared to 54%), and specificity 90% (compared to 93%).

Conclusion: The results of this study confirm the Head and Neck Guideline's criteria and categories remain valid in the era of tomotherapy to aid risk assessment and to guide early decision making for the suitability and timing of tube feeding in patients with head and neck cancer.

Conflict of Interest Declaration: None

QUALITY IMPROVEMENT IN HEAD AND NECK CANCER CARE

Christine Gourin

Baltimore, United States of America

High-quality care is defined as care that is safe, effective, patient-centered, timely, efficient, and equitable. The Institute of Medicine has found that the US health care delivery system does not provide consistent, high-quality cancer care to all people, with care that is fragmented, costly, increasingly complex, and often not supported by evidence of effectiveness. There is a lack of consensus and data on quality of care for patients with head and neck cancer, which is a barrier to improving decision-making for patients and clinicians. In the United States, it is projected that the population aged 65 and older will increase by 36% in the next 10 years and the costs of treating head and neck cancer in the elderly will increase by 80% by 2020. If current federal health care spending continues its current trajectory, by 2020 it is estimated that 50% of the US federal budget will be spent on health care. These data suggest some urgency toward health care reform efforts that are equitable and based on evidence-based guidelines supporting high-quality care.

This presentation will

1) Review the current literature regarding quality in head and neck cancer care
2) Explore the use of quality indicators in head and neck cancer care, using larynx cancer as an example
3) Identify and discuss research opportunities to develop accurate measures of quality that can be measured using administrative data.

Conflict of Interest Declaration: None

MANAGEMENT OF THE NECK AFTER CHEMORADIOTHERAPY

Christine Gourin

Baltimore, United States of America

Planned post-treatment neck dissection following chemoradiation has traditionally been advocated as part of the multidisciplinary care of head and neck squamous cell cancer patients with N2 or N3 neck disease regardless of clinical response. Proponents cite a high incidence of residual occult disease on histopathologic evaluation of neck dissection specimens, improved regional control rates with planned neck dissection, the high complication rate when neck dissection is undertaken after radiation fibrosis has occurred, and the poor results of surgical salvage. Opponents of this approach point to low regional recurrence rates in patients with a complete response in the neck who are not treated with neck dissection, the fact that disease-specific survival for the majority of patients is not altered by the addition of a neck dissection, a higher incidence of dysphagia in patients submitted to posttreatment neck dissection, and an increasing awareness of the value of PET-CT in identifying patients who can be spared unnecessary neck dissection.

This presentation will

1) Discuss the evidence in favor of planned posttreatment neck dissection, dating to the VA Laryngeal Cancer Study
2) Discuss the cons to routine planned posttreatment neck dissection
3) Describe an algorithm based on current best evidence to management of the neck after chemoradiation.

Conflict of Interest Declaration: None

ROLE OF PET IMAGING AT JOHNS HOPKINS

Christine Gourin

Baltimore, United States of America

The role of PET imaging in the evaluation and surveillance of head and neck cancer has undergone an evolution in the past decade. PET has a defined role in the pretreatment evaluation of head and neck cancer patients, and in surveillance but recent data suggests there are limitations to the use of PET and guidelines for its use are a moving target.

This presentation will

1) Discuss the use of PET in the pretreatment evaluation of head and neck cancer
2) Discuss the optimal timing of posttreatment PET scanning
3) Review the literature regarding the use of PET for surveillance
4) Summarize the Johns Hopkins approach to the use of PET in head and neck cancer.

Conflict of Interest Declaration: None

DYSPHAGIA AND QUALITY OF LIFE IN HEAD AND NECK CANCER

Christine Gourin

Baltimore, United States of America

Dysphagia is a common sequelae of both surgical and nonsurgical treatment for head and neck cancer, and is associated with poorer quality of life and social functioning scores. Many factors are associated with dysphagia after head and neck cancer treatment, including pretreatment function, genetics, radiation dosimetry, the use of concurrent chemotherapy, posttreatment salvage neck dissection, targeted swallowing interventions during and after treatment, and depression.

This presentation aims to

1) Review the incidence of dysphagia in head and neck cancer patients
2) Identify risk factors for the development of dysphagia
3) Discuss targeted interventions to minimize the risk of long-term dysphagia.

Conflict of Interest Declaration: None

OCULAR AND ORBITAL ISSUES IN HEAD AND NECK TUMOUR MANAGEMENT

Thomas G. Hardy

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Royal Children's Hospital, Department of Ophthalmology, VIC

Royal Victorian Eye and Ear Hospital, Orbital, Plastic & Lacrimal Service, VIC

Background: The orbit can be involved in a wide variety of diseases affecting the head and neck region, owing to the wide range of tissues within the orbit and its proximity to the intracranial space, paranasal sinuses, and periocular facial regions. Management of head and neck tumours has the potential to have significant impact on visual functioning.

Methods: A brief review of orbital anatomy and assessment will be made. Several cases will be described highlighting the important considerations in assessment and management of the eye and orbit with respect to head and neck tumours.

Results: An attempt will be made to create guidelines assisting in the ophthalmic & orbital management of head and neck tumours. Important factors include tumour location, histology, and grade, overall prognosis, as well as visual function (and visual potential) on the involved and uninvolved side.

Conclusions: A basic knowledge of orbital anatomy & function is important in the management of head and neck tumours, along with information about tumour biology. A complete ophthalmic & orbital assessment is often useful in determining the need for globe-sacrificing or globe-sparing surgery. Globe & sight preserving surgery may be warranted to indicated in certain circumstances (low grade malignancy without significant orbital / ocular invasion or with slowly progressive disease; inability to achieve clear margins despite considered orbital exenteration; poor overall or surgical prognosis), especially when there is contralateral loss of vision or eye. Partial globe-sparing orbital clearance may be possible depending on the orbital structures involved / removed (e.g. lacrimal gland, lacrimal sac, orbital fat, ability to tolerate reduced ocular motility). Orbital exenteration may, however, be mandatory in certain malignancies (e.g. orbital malignancy, extensive or otherwise, for which no other therapeutic options exist; malignancy with high risk of local / regional / distant spread with increased risk of mortality), or may be warranted in other circumstances when the ipsilateral eye is missing or has no vision or visual potential (e.g. disease where globe sparing excision would be possible but not necessary).

Conflict of Interest Declaration: None

LONG TERMS OUTCOMES OF A HEAD AND NECK CANCER DIETITIAN-LED CLINIC (DLC)

J. Harrowfield and A. Lim

Peter MacCallum Cancer Centre, Melbourne, VIC

Purpose: A dietitian-led clinic (DLC) was piloted within a multidisciplinary head and neck cancer service in 2007-2008. Nutritional management within the DLC was guided by evidence-based care pathways. The purpose of this audit was to measure long term outcomes of the DLC in terms of compliance with the care pathways and to determine the rate of nutrition related admissions for patients managed within the DLC.

Methodology: Retrospective audits of patients managed within the DLC were conducted annually between 2010 to 2012. Compliance with the care pathways, and the rate of nutrition related admissions was determined and compared to the pre-implementation and pilot study results.

Results/Outcomes: In total 45 patients over the three year period were included in the audit (15 per year). One hundred percent of patients were seen weekly by the dietitian during radiotherapy. This was higher than the pilot (95%). In the 8 weeks post radiotherapy 80-87 % of patients were seen compared to the 88% during the pilot . During the pilot study 4.5 % of the patients were admitted for nutrition related reasons. The long term audits demonstrated rates of nutrition related admissions between 4.2% and 7% comparable to the 4.5% during the pilot and less than the 12% admitted prior to implementation of the DLC.

Conclusion: The results demonstrated compliance with the evidence based care pathways and reduction in the rate of head and neck nutrition related admissions has been maintained over the long term. These results confirm a dietitian led clinic is an effective model to integrate evidence based care into usual practice over the long term.

Conflict of Interest Declaration: None

18F-FDG METABOLIC TUMOUR VOLUME: ASSOCIATION WITH DYSPHAGIA REQUIRING A FEEDING TUBE IN HEAD AND NECK IMRT

J. E. Jackson, M. Wada, M. Rolfo, N. Anderson, S. T. Lee, S. Gong, M. Schneider, D. Lim Joon, A. Huyn and V. Khoo

Austin-Olivia Newton John Cancer and Wellness Centre, Austin PET Centre, Monash University, Royal Marsden Hospital Division of Clinical Oncology - London UK

Purpose: The extent of the gross tumour volume for primary head and neck cancer lesions (GTVp) may be a useful clinico-radiological predictor of severe dysphagia, requiring a feeding tube (FT) for IMRT patients. The GTVp frequently lies in close proximity to midline swallowing anatomy and directs subsequent dose received. GTVp delineation is a time-intensive construct of multimodal imaging, clinical findings and clinician expertise. Metabolic tumour volume (MTV) is an automated volume, derived from 18F-FDG PET scans, that may provide prompt, unbiased risk stratification for FT requirements.

Methodology: Eighty-three consecutive patients with evaluable primary tumours, and pre-therapy FDG-PET scans performed at Austin PET Centre were identified. All received definitive IMRT, including bilateral, elective nodal irradiation. MTV was quantified and recorded for the primary lesion (MTVp) using a minimum standardised-uptake-value (SUV) threshold of 2.0. A prospective nutritional database identified patients relying on FTs for more than 75% of their dietary needs for more than 6, 12 and 26 weeks and associations were analysed.

Results: GTVp was positively correlated with MTVp ($r=0.77$; $p<0.0001$). FT dependence at 6 weeks was significantly higher in patients with a GTVp larger than 17.0cc (73.2% vs 33.3%; $p=0.0012$) or MTVp larger than 12.0cc (71.1% vs 42.0%; $p=0.0164$). Increasing GTVp and MTVp were associated with FT dependence at 12 ($p=0.0002$, 0.0012) and 26 weeks ($p=0.0002$, 0.0232).

Conclusion: MTVp is an automated, objective volume that may be useful in the prediction of severe dysphagia requiring the insertion of a prophylactic FT. MTVp could be quantified prior to multidisciplinary consultation, to ensure streamlined intervention.

Conflict of Interest Declaration: None

SECOND PRIMARY TUMOURS IN EARLY STAGE SQUAMOUS CELL CARCINOMA OF THE ORAL TONGUE - A ROLE FOR PANENDOSCOPY?

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The Royal Melbourne Hospital, Melbourne, VIC

Purpose: Whilst panendoscopy for identification of occult second primary tumours (SPTs) in head and neck squamous cell carcinoma (HNSCC) is routine, its role in low risk subgroups, particularly non-smoking non-drinking (NSND) patients and patients presenting with early stage oral cavity lesions, is debatable.

Methods and Results: We retrospectively reviewed 112 patients presenting with T1 and T2 oral tongue SCC for an average follow-up of 71.7 months (range: 3.6 to 238.3 months), with 35 patients (31.2%) having deceased within the follow-up period. Thirty-two patients (26.7%) were NSND. 13 second primary events were identified in 11 patients (9.8%), with all but 2 tumours in the oral cavity or oropharynx. There was a single synchronous primary (0.9%) - a lung adenocarcinoma ; all 12 other events (8.9%) were metachronous (>6 months). No NSND patients re-presented with an SPT.

Conclusion: Tobacco and alcohol use are clearly demonstrated to be risk factors for development of an SPT. Second primary tumours occur in head and neck cancer patients although less frequently in NSND patients. Panendoscopy is a low morbidity intervention which may dramatically alter the treatment recommendation for patients with head and neck cancer. Our data maintains the utility of routine panendoscopy although the incidence of second primary tumour in the NSND group may be significantly lower.

Conflict of Interest Declaration: None

THE EVOLVING ROLE OF RADIO IODINE THERAPY IN THYROID CANCER

W. F. Eddie Lau

University of Melbourne & Peter MacCallum Cancer Centre, Melbourne, VIC

Purpose: To review the changing role of radioiodine therapy in the management of well differentiated thyroid carcinoma (WDTC), especially its use in thyroid ablation.

Background: Radioiodine therapy is an established treatment in thyroid cancer. Its exact role is however often controversial, especially in low risk WDTC due to its typically excellent prognosis, relatively low incidence and lack of prospective randomized trials data. Furthermore, the epidemiology of thyroid cancer is changing, with increasing incidence and survival rate but no change in overall mortality, suggesting an element of over representation of low risk cancer due to increased medical surveillance.

Discussion: The indication for radioiodine treatment in patients at high risk of recurrence and those with metastatic disease is well established. The role of radioiodine thyroid ablation in low risk patients has been a subject of interest, with two recently published prospective randomized trials reporting equivalent ablation success rate between low dose and high dose radioiodine treatment. There are also new prospective and retrospective data to suggest that further risk stratification in the post-thyroidectomy setting by stimulated thyroglobulin level, neck ultrasonography and diagnostic iodine scan with SPECT/CT is important in deciding on the need of thyroid ablation. Patients with unmeasurable or low level of stimulated thyroglobulin and negative imaging may be spared from radioiodine ablation.

Conclusion: Radioiodine therapy has entered into a personalized treatment paradigm, with the choice of no, low or high dose depends on risk stratification based not only on clinico-pathological features, but also on stimulated thyroglobulin level and modern imaging.

Conflict of Interest Declaration: None

ORAL CAVITY BIOMARKERS

Annette Lim

The identification of appropriate biomarkers will assist in appropriate patient treatment stratification. Recent technologies and advances will be briefly presented.

Conflict of Interest Declaration: None

MANDIBULAR SWING WITH SUBCILIARY INCISION – AN ALTERNATIVE APPROACH TO MAXILLARY TUMOUR WITH INFRATEMPORAL FOSSAE/ NASOPHARYNX EXTENSION

T. H. Low, D. Hall and A. Lindsay

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Resection of maxillary tumour with infratemporal fossae/ nasopharyngeal extension is often challenging and difficult. Various access routes to lesions of the infratemporal fossae/ nasopharynx has been described; these include the anterior approaches and lateral approach. The approach should be individualised, aiming for best exposure with minimal destruction of normal structures. We describe a technique where the tumour is approached via an antero-inferior route, via mandibular swing with subciliary incision. Mr SW is a 56 year old gentleman with a SCC arising from the posterior aspect the hard palate, with extension posteriorly, involving the pterygoid plates, right infratemporal fossae and nasopharynx (eustachian tube); in close proximity to the anterior aspect of the right internal carotid artery.

The challenge was to preserve uninvolved anterior maxilla with an approach that provided adequate exposure of infratemporal fossa, posterior maxilla and nasopharynx whilst allowing visualisation and control of great vessels. We sought to minimise trauma or destruction of uninvolved tissues in our approach. We approached this tumour with a lip split incision and a right paramedian mandibulotomy. The mucosa incision was extended to the alveolar ridge of the canine on the maxila; allowing en-bloc removal of the posterior maxilla; pterygoid plates, complete clearance of the infra-temporal fossae and exposure to the lateral nasopharynx for resection of the Eustachian tube. A separate subciliary incision was made to facilitate the osteotomy from inferior orbital fissure to both zygomatic buttress and anterior face of maxilla. This approach provides good exposure to the tumour, whilst allowing preservation of the anterior arch of the maxillae and front face of the maxillary sinus.

Conflict of Interest Declaration: None

MANAGING MUCOSITIS WITH HUMIDIFICATION DURING RADIOTHERAPY FOR HEAD AND NECK CANCER: TROG 07.03 RADIOHUM RESULTS

A. Macann, S. Porceddu, C. Milross, M. Penniment, T. Fua, M. King, M. Bell, C. Fraser-Browne, V. Thomson and H. Hockey

Trans Tasman Radiation Oncology Group, Newcastle, NSW

Purpose: To assess the role of domiciliary based humidification (HUM) during radiotherapy (RT) for head and neck cancer.

Methods and Materials: In this phase III multi-site trial, patients with SCC of the oral cavity, oropharynx, larynx, hypopharynx, nasopharynx receiving definitive or adjuvant RT +/- chemotherapy were randomised to a control arm receiving standard care (SOC) or SOC plus HUM using the Fisher & Paykel Healthcare MR880 humidifier. HUM commenced day 1 of RT and continued until CTCAE version 3.0 mucositis clinical exam score (CMuc) was 1.

Results: 210 patients were randomised (control 105; HUM 105). There was no difference in AUC CMuc means: control 9.0, HUM 8.9 p 0.97. HUM patients had significantly less days in hospital (HUM 57% as many days as control p 0.017). Patient reported outcomes using McMaster head and neck questionnaire in a per protocol analysis restricted to compliant HUM patients (43%) were in the direction that favoured HUM with less symptom severity although most time points did not reach significance.

Conclusion: Although there was no difference in the primary endpoint, the reduction in hospitalisation days was significant for HUM patients. There were additional trends favouring HUM in other secondary endpoints including patient reported outcomes but these were restricted to patients compliant with HUM. Difficulties in achieving consistent patient compliance mean HUM is not an effective therapy for mucositis in its current format despite these efficacy signals.

Conflict of Interest Declaration: None

OSTEORADIONECROSIS- MY APPROACH

Kirstie MacGill

Royal Melbourne Hospital, Melbourne, VIC

My approach

1. Avoid. Prevention is better than attempted cure
2. Refer. This condition is best managed by non-plastic surgical treatments and my oral surgical colleagues.
3. Evade. (Sidestep. Duck. Dodge. Escape)
4. If necessary- microsurgical free tissue transfer.
5. Consider Facial Hair Growth –the "MacGill Sign" of sign of lower irradiation effect and possible improved bone healing

These are challenging patients with a high incidence of complications following surgery. I will present de-identified data of our experience at RMH.

Conflict of Interest Declaration: None

CRICOPHARYNGEAL DYSFUNCTION – ASSESSMENT AND TREATMENT

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Late dysphagia following head and neck cancer treatment is an under recognised and under reported problem with a significant associated morbidity and mortality. Pharyngeal dysphagia in this population is primarily related to pharyngeal neuromyopathic dysfunction and pharyngoesophageal junction fibrotic stenosis. Assessment and implication of pharyngo-oesophageal dysfunction is complex and often poorly understood by clinicians.

There are three areas that will be discussed during this presentation;

First the clinical appearance of dysphagia related to pharyngoesophageal dysfunction. Second, appropriate and accurate assessment techniques to identify the true aetiology of dysphagia particularly related to the upper oesophageal sphincter. Third the efficacy and safety of remediation techniques to address pharyngoesophageal dysfunction in the head and neck cancer population.

Conflict of Interest Declaration: None

A SYSTEMATIC REVIEW OF STOMAL RECURRENCE IN LARYNGECTOMY PATIENTS WITH PRE-OPERATIVE TRACHEOSTOMY

A. Masood and G. Crossland

Royal Darwin Hospital, Darwin, NT

Purpose: Traditionally, a tracheostomy to address a compromised airway prior to laryngectomy for laryngeal cancers has been described as one of the main risk factors for stomal recurrence. However, literature published recently suggests otherwise. The primary objective of this study was to have an evidence-based answer to whether pre-laryngectomy tracheostomy puts laryngeal cancer patients at increased risk of developing stomal recurrence.

Methodology: A systematic search of electronic journal databases Pubmed, Embase and Cinahl was performed. The search identified 79 articles of which 57 articles were shortlisted on relevance and removing duplicates. Of these 51 articles in English were included for review.

Results: Laryngeal cancer is the only cancer whose survival rates have diminished in last 20 years. However, there has been an increasing trend noted in available literature that pre-operative tracheostomy does not lead to stomal recurrence after laryngectomy.

Conclusions: Due to lack of homogeneity in reporting of data spanning more than 40 years, a true meta-analysis is challenging. However, within the constraints of quality of available literature, it appears that emergency tracheostomy performed prior to laryngectomy does not appear to be a risk factor for stomal recurrence.

Conflict of Interest Declaration: None

NEW THERAPIES FOR MELANOMA

Grant A. McArthur

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The understanding of the cellular and molecular biology of melanoma and the role of anti-tumour immunity in melanoma have generated new and remarably efficeous therapeutic opportunities in the disease. Over 60% of melanomas have mutations that activate the RAS/RAF/MEK/ERK pathway that has led to identification of targeted therapies that improve survival in the advanced disease setting, and are currently being evalauted in the adjuvant setting. We have recently showed that primary melanomas without mutations in these driving oncogenes, that are commonly found in the head and neck have extraordinarily high numbers of sequence variants consistent with chronic UV damage. These melanomas harbor multiple potential drivers suggesting single agent therapies may not be fruitful. We propose the greatest potential to reduce mortality from melanoma, a disease characterised by the development of metastases from small primary tumours, is the combination of systemic therapies particularly in the adjuvant setting. The new systemic therapies for melanoma coupled with ongoing understanding of the biology of the disease is poised to further accelerate novel therapeutic opportunities.

Conflict of Interest Declaration: None

PHYSIOTHERAPY FOLLOWING NECK MANAGEMENT: THE CLINICIAN EXPERIENCE

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Management of head and neck cancer is often associated with physical morbidity. Two of the most common physical issues include neck and shoulder pain and restriction. Patients may then be referred to physiotherapy for further management.

The extent to which improvement is possible, and the most appropriate form of physiotherapy to maximise recovery, is based on both treatment and patient factors. Important treatment factors include the integrity of the accessory nerve after neck dissection and if the patient is undergoing radiation therapy. Pertinent patient factors which impact on prognosis are the age of the patient; psychological factors, including motivation and anxiety; and the patient's functional goals.

Results from our recent randomised controlled trial demonstrate that overall there is good prognosis for improvement of accessory nerve shoulder dysfunction (ANSD) following neck dissection, with an intact accessory nerve, over a 12-month period. This study demonstrated that progressive scapular strengthening exercises lead to the greatest improvement in shoulder abduction at three months follow up.

Physiotherapy for accessory nerve related shoulder dysfunction following neck dissection includes progressive scapular strengthening exercise; a brochure of generalised shoulder exercises; and shoulder orthosis. Physiotherapy for neuropathic neck pain includes neck mobility exercises, use of silicone over the scar, desensitisation techniques and stress management. Case studies will be used to illustrate suitable management strategies, based on clinical experience and best available evidence.

Declaration: Aoife McGarvey is supported by the James Lawrie Research Grant awarded in 2009 and 2013 by the Calvary Mater Newcastle Hospital, and by the Barker Scholarship awarded in 2011 by the Hunter Medical Research Institute. This contribution is free from any conflict of interest.

MAXIMISING SHOULDER FUNCTION FOLLOWING ACCESSORY NERVE INJURY AFTER NECK DISSECTION: A MULITICENTRE RANDOMISED CONTROLLED TRIAL

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Purpose: To explore early screening and referral to progressive resisted exercise and stabilisation training physiotherapy versus usual care if accessory nerve shoulder dysfunction (ANSD) is present following neck dissection.

Methods: Prospective, multicentre randomised controlled trial with concealed allocation and assessor blinding. Fifty nine neck dissection patients (60 shoulders) demonstrating the clinical signs of ANSD were recruited from April 2009 to December 2011 within eight weeks of neck dissection, across three hospital sites (Calvary Mater Newcastle, Liverpool and Westmead Hospitals). The intervention group received supervised pathology-specific physiotherapy for twelve weeks. The control group received a brochure of advice and generalised shoulder and neck exercises to perform independently at home. Blinded assessors obtained outcome measures at baseline (within eight weeks of neck dissection), three, six and twelve months. Measures included active shoulder movement, SPADI (Shoulder Pain and Disability Index; a pain and functional measure) and NDII (Neck Dissection Impairment Index; a quality of life measure).

Results: At three months, the intervention group demonstrated a significantly greater increase in active abduction compared to the control group of 26.6 degrees (95% CI 7.28 to 45.95) for the per protocol analysis. At six and 12 months there were no significant differences in outcome measures between groups, with both groups improving over time.

Conclusion: Intensive, specific physiotherapy for ANSD after neck dissection is effective in improving active shoulder abduction in the short term. In the long term (six and 12 months) there were no differences found in abduction, shoulder pain and quality of life between the intervention and control groups.

Conflict of Interest Declaration: Aoife McGarvey is supported by the James Lawrie Research Grant awarded in 2009 and 2013 by the Calvary Mater Newcastle Hospital, and by the Barker Scholarship awarded in 2011 by the Hunter Medical Research Institute. This contribution is free from any conflict of interest.

COMPARISON OF PRIMARY VERSUS SECONDARY VOICE PROSTHESIS PLACEMENT

Felicity Megee, Kendrick Koo, Laeticia Hargreaves and Eduard Pudel

Royal Melbourne Hospital, Melbourne, VIC

Purpose: Primary placement of the tracheoesophageal voice prosthesis, for the purposes of surgical voice restoration post laryngectomy, has been recognised as standard practice in parts of Europe for many years. Historically in Australia, the voice prosthesis has been placed as a second procedure undertaken by the speech pathologist at least 7 days post laryngectomy. Primary voice prosthesis placement, or placement at the time of tracheoesophageal puncture, has been introduced by various Australian Head & Neck surgical units over recent years. The reporting of clinical and cost implications of primary voice prosthesis placement in the Australian context is still relatively limited. This paper reviews primary placement in direct comparison with secondary, or delayed voice prosthesis placement.

Methodology: A retrospective audit of the past 20 tracheoesophageal puncture procedures undertaken at the Royal Melbourne hospital was conducted. The audit included 10 primary and 10 secondary placement procedures. The audit included procedures undertaken at time of laryngectomy and also secondary tracheoesophageal puncture procedures.

Results: Clinical outcomes and cost will be reported. The outcomes compared include: length of hospital stay; complications related to the trachesophageal puncture or voice prosthesis; cost of consumables; life of initial voice prosthesis, speech pathology service data; and tracheosophageal speech outcome data.

Conclusion: This paper draws on the data and experience of a Victorian health service to determine the benefits of primary voice prosthesis placement within the Australian health care context. It provides a local perspective for speech pathologists and head and neck surgeons undertaking or considering primary voice prosthesis placement.

Conflict of Interest Declaration: None

DYSPHAGIA AND NUTRITIONAL ISSUES IN HEAD AND NECK CANCER PATIENTS

Barbara A. Murphy

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It is recognized that dysphagia and nutritional status are intimately related. Thus, clinicians are aware of the need to refer head and neck cancer patients for swallow therapists for assessment of swallow safety and efficacy, the need for dietary adaptations and compensatory measures and for recommendations with regards to therapy to enhance function. Similarly, clinicians and swallow therapists work with dieticians to ensure that patients have an adequate nutritional intake within the confines of their swallow capacity. What is less well recognized are the various other symptoms that may impact on swallow and/or nutritional intake. Swallowing function can be considered a global construct that incorporates a number of functions that can be affected by tissue damage secondary to tumor or treatment. Although we normally consider swallow dysfunction as it relates to impairment of the muscles associated with mastication and deglutition, other functional components must be considered in order to maximize swallowing capacity and nutrition outcomes. These include underlying lymphedema and fibrosis, trismus, esophageal stricture, xerostomia, dental loss, mucosal sensitivity and alterations in smell. These associated symptoms may combine with pharyngeal dysfunction to dramatically impair nutritional intake long term.

Conflict of Interest Declaration: None

SCREENING FOR HEAD AND NECK CANCER SYMPTOM BURDEN

Barbara A. Murphy

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Historically, screening has been done to diagnose disease states prior to the development of symptoms in order to identify and treat at an early stage when the disease may be more amenable to cure or treatment. Recently, symptom screening has become an important area of investigation. Symptom screening is conducted using Patient Reported Outcome (PRO) measures. Effective screening PROs should meet the following criteria: 1) short, 2) directed at the pertinent clinical issues, 3) able to identify actionable items, and 4) improved outcomes with screening. Actionable items are direct at the following: patient education, clinical referral, or a pharmacological/non-pharmacological intervention. Efficacy data for screening PROs in Oncology is disappointing. Most

reports fail to demonstrate improved outcomes. Potential explanations include: failure to use tools that identify actionable items, non-efficacious interventions, failure to address intervention fidelity, and poor patient compliance. The head and neck population has unique tumor/treatment related symptoms that require attention in order to minimize functional impairment and maximize quality of life. The Vanderbilt Head and Neck Symptom Survey (VHNSS 1.0) was developed for use as a screening tool to identify acute and late effects of treatment. The VHNSS 1.0 was validated using data from 5 supportive care trials. The tool was expanded to include additional items directed at function and oral health outcomes. VHNSS 2.0 has 50 items with 10 domains and 3 single items. It has been tested for reliability (content validity) and responsiveness to change over time. Validation of the content is ongoing.

Conflict of Interest Declaration: None

DENTAL HEALTH IN HEAD AND NECK CANCER PATIENTS: MEASURING LATE EFFECTS

Barbara A. Murphy

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Saliva is critical to oral health: it acts as a dental protectant and provides substrate for re-mineralization of enamel. Radiation therapy results in xerostomia (sensation of mucosal dryness) and hyposalivation (decreased salivary production). Hyposalivation may result in radiation associated dental carries. This is characterized by pervasive decay which is difficult to treat. It may develop early in the post-treatment period, progress quickly and result in loss of dentition. Loss of dentition results in dietary inadequacy, social anxiety, adverse impact on relationships, and work related issues. Although dentures are feasible and effective options, many patients with xerostomia have difficulty with fit, retention and comfort. Preventive measures such as routine dental hygiene with early identification and aggressive treatment of dental caries are important. The Vanderbilt Head and Neck Symptom Survey Dental Subscale includes four items directed at dental health. Items are scored between 0 and 10 with 10 being severe symptomatology. We undertook a study in 50 head and neck cancer patients to validate the dental items against the gold standard – an oral exam by a dentist. We assessed the ability of the subscale to identify patients with urgent or emergent dental issues. Using a cutoff of >4 on any dental item, we were able to identify 83% of patients with an urgent or emergent dental issue. The Receiver Operator Characteristics (ROC) for the subscale was .9 thus demonstrating an excellent ability to discriminate between patients with and without urgent or emergent dental issues.

Conflict of Interest Declaration: None

LYMPHEDEMA AND FIBROSIS IN HEAD AND NECK CANCER

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Head and neck cancer patients are at risk for the development of lymphedema and fibrosis (LEF). Lymphedema is defined as the accumulation of lymphatic fluid and proteins in the interstitial spaces. It results from the disruption of lymphatic channels, extirpation of lymph nodes, and damages soft tissue leading to scar tissue formation. Fibrosis is the excessive accumulation of collagen and other extracellular matrix (ECM) components following breakdown in the normal balance of ECM synthesis and degradation. LEF may be internal (affecting structures such as the tongue or pharyngeal constrictors) or external (affecting the soft tissues of the neck and shoulders). Our results from a sequence of studies demonstrate that lymphedema is a frequent complication of head and neck cancer treatment with three quarters of patients experiencing either internal or external lymphedema. Furthermore, lymphedema is associated with substantial symptom burden and decrease in quality of life. Studies of LEF are limited by the lack of validated instruments for measurement. Work is ongoing at our institution to develop Patient Reported Outcome measures, grading systems, ultrasonographic techniques and CT based measurement tools to objectively assess LEF.

Conflict of Interest Declaration: None

VISMODEGIB, A HEDGEHOG PATHWAY INHIBITOR (HPI), IN ADVANCED BASAL CELL CARCINOMA (ABCC): STEVIE STUDY INTERIM ANALYSIS IN 300 PATIENTS

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Purpose: While most cases of BCC can be managed by surgery, some progress to advanced stage where surgery is inappropriate. Aberrant Hedgehog signaling is the key driver in BCC pathogenesis. Vismodegib, first-in-class Hedgehog-pathway inhibitor, has demonstrated efficacy in advanced BCC (aBCC). STEVIE is an ongoing study focusing on safety of vismodegib therapy in patients with aBCC. We present data from the third interim analysis (data cutoff-19 October 2012).

Methodology: Patients received oral vismodegib 150mg, once-daily until progressive disease, unacceptable toxicity or withdrawal. Safety (primary objective) was assessed by Common Terminology Criteria for Adverse Events (AEs) v4.0. Secondary endpoints include efficacy variables. Recruitment is ongoing.

Results: Analysis included 300 patients with locally advanced (n=278) or metastatic (n=22) BCC from 11 countries with potential for ≥ 3-month follow-up. Median treatment duration, including vismodegib interruption, was 176.5 days (range 1-455 days). Common treatment-emergent AEs (TEAEs), typically ≤ grade 2, included muscle spasm (59.3%), alopecia (49.3%), and dysgeusia (41.0%). Serious TEAEs occurred in 53 (17.7%) patients. Patients discontinued treatment (43.7%) due to patient or investigator request (n=41), AEs (n=34), disease progression (n=18) or death (n=13; due to 7-AEs assessed by the investigator as unrelated to study drug, 3-AEs not possible to be assessed, 3-disease progression). Preliminary best overall response was confirmed for 251 patients; 17.5% complete responders, 39.8% partial responders, 39% stable disease and 2.8% progressive disease.

Conclusions: This interim analysis from STEVIE confirms the previously observed vismodegib safety profile and provides further evidence of a high rate of tumour control with vismodegib.

Conflict of Interest Declaration: This study was funded by Roche-Genentech. Support for medical writing assistance was provided by F. Hoffmann-La Roche.

PRELIMINARY FINDINGS OF THE ALOHA ASSESSMENT OF LYMPHOEDEMA OF HEAD AND NECK

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Purpose: Head and neck lymphoedema (HNL) is a troubling and persistent symptom for many patients following treatment of head and neck cancer. Accurate diagnosis and management of this condition is limited by the absence of a clinically accessible, valid and reliable assessment tool. A previous pilot study by this research group showed sound inter-rater reliability and construct validity for a tape measurement system for HNL. The ALOHA study further develops this assessment with the novel addition of the MoistureMeter for HNL assessment. This study presents the preliminary findings of a trial of these two assessments in a group of patients and community controls.

Methodology: This study uses a single centre case control design study conducted at a single timepoint with 3 independent assessors. The study recruited participants (n=40) into two groups. Group 1 consists of participants diagnosed with HNL using the MD Anderson Head and Neck Lymphoedema Rating Scale. Group 2 consists of community controls matched on body mass index, age and sex. The study aims to determine if the MoistureMeterD and the tape measure system are reliable and valid objective measuring systems for the management of HNL.

Results: Data will be assessed to examine the inter-rater reliability, concurrent validity and discriminant validity for the tape measurement system and MoistureMeter. Clinical utility of the assessment will be evaluated in terms of cost effectiveness, equipment accessibility and time to complete. At the time of abstract submission, final results were unavailable. These will be completed and submitted for presentation.

Conclusion: The ALOHA appears to be a promising assessment tool for measuring HNL. This assessment tool will now be tested in a larger prospective head and neck cancer population.

Conflict of Interest Declaration: None

SURVIVORS' EXPERIENCES OF DYSPHAGIA-RELATED SERVICES FOLLOWING HEAD AND NECK CANCER: IMPLICATIONS FOR CLINICAL PRACTICE

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Purpose: National and international service delivery research has highlighted limitations in speech pathology services for people with dysphagia following head and neck cancer (HNC). The current study aimed to further explore services by adopting a patient-based approach to elucidate the perspective of people with dysphagia following non-surgical HNC treatment regarding their needs and experiences.

Methodology: Maximum variation sampling was utilised to select a demographically diverse group of 23 people who had received radiotherapy as part of their curative treatment for a mucosal HNC in the last five years. Semi-structured, in-depth interviews were conducted with each participant and they were encouraged to reflect on their experiences of adjusting to dysphagia and the dysphagia-related services they received. Using thematic analysis, key phrases and themes were identified.

Results: The main finding identified was the need for ongoing practical and personalised dysphagia-related services throughout the trajectory of care. There were five themes which emerged: 1) Entering the unknown: Preparing for life after treatment; 2) Practical adjustments to dysphagia; 3) Searching for a new normal: Psychosocial adjustment to dysphagia; 4) Seeking support outside the hospital services; and 5) Important elements of dysphagia-related services. These five themes are key target areas to inform current dysphagia-related services.

Conclusion: The data from the current study highlights strategies used to adjust to living with dysphagia following HNC. Participants reported a desire for greater access to services, and ongoing holistic and targeted dysphagia management from the multidisciplinary team in the post treatment phase.

Conflict of Interest Declaration: None

IMAGING CHARACTERISTICS OF THE AT RISK NECK

Pramit M. Phal

The talk will cover the important features assessed on imaging that allow differentiation of malignant nodes; namely nodal size, shape, internal density and extranodal spread. The role of fine needle aspiration, and advanced imaging techniques, as well as pitfalls in diagnosis will be discussed.

Conflict of Interest Declaration: None

A NEW LOOK AT THE PROVISION OF NURSE-LED INFORMATION FOR PEOPLE WITH HEAD AND NECK CANCER

Wendy Poon

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Background: Patients receiving chemo-radiotherapy for Head and Neck cancer experience severe treatment-related toxicities. Furthermore, rates of psychological distress are high amongst head and neck cancer patients when compared, with other cancer groups reducing their capacity to cope with treatment.

Patients embarking on cancer treatment require detailed, tailored preparatory information to help them cope, particularly in relation to self-management demands. Much work has been carried out on the content of education material, mode of delivery and the health literacy level material should be developed.

Despite intensive initiatives in education to this patient group, engagement for self care remains poor. It is therefore necessary for us as health care professionals to look at this issue from a different framework.

Aim: To assess the impact of using motivational technique as part of pre-treatment preparatory intervention to increase patient expectation of the role they have to play in their own care.

Hypotheses: Compared to patients in the usual care group patient in the intervention group will demonstrate a significant improvement in engagement of self care, feel more of a sense of control in their own treatment and make the treatment seem more of a partnership between the patient and the clinicians / treating team.

Conflict of Interest Declaration: None

COMPARISON OF INDETERMINATE AND ATYPICAL FINE-NEEDLE ASPIRATION CYTOLOGY WITH THYROID HISTOLOGY: A RETROSPECTIVE ANALYSIS OF MALIGNANCY RISK BASED ON AGE AND SEX

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Purpose: Surgical management of indeterminate or atypical categories of standardized thyroid fine-needle aspiration reports is not clearly defined. Cytology results over a ten-year period were analysed to quantify malignancy risk for indeterminate and atypical fine-needle aspiration cytology (FNAC) categories according to sex and age compared to thyroid histology.

Methodology: A retrospective review of 2,201 thyroid FNAC cases and 1,675 thyroid histologic cases from 2002 to 2011 was performed using a private electronic databank. Results were stratified by FNAC report classification and compared with histologic outcome.

Results: Comparison of 141 patients' FNAC result with corresponding histologic data identified 123 indeterminate cases (87.2%) compared with 18 atypical cases (12.8%). Malignancy risk for indeterminate and atypical result was 17.9% and 22.2%, respectively. Chi Square test failed to indicate a significant difference in malignancy risk between the two FNAC subcategories, Chi-square(1) =0.196, p=.66. However, when these subcategories were stratified for sex, in the atypical group, males had a significantly increased malignancy risk (MR = 0.75) compared to females (MR = 0.071), Chi-square(1) = 9.003, p=.003.

Conclusion: These data suggest similar management of thyroid nodules that are cytologically indeterminate or atypical and supports aggressive management for males with an atypical result. Those patients with an indeterminate FNAC result and females with an atypical result may warrant further investigation. The data collected in this study, particularly the malignant histopathology specimens, may warrant further testing with newer techniques such as molecular pathology.

Conflict of Interest Declaration: None

IMPROVING FUNCTIONAL OUTCOMES FOLLOWING ORBITAL FLOOR RESECTION

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The bony orbital floor, infra-orbital rim and associated soft tissue structures are critical to maintaining globe, lower eyelid and mid-facial position and projection. Resection of the floor usually occurs in the context of total or subtotal maxillectomy in head and neck cancer surgery. Reconstruction of the orbital floor should be preceded by establishing stable external boundaries of the orbit (medial, lateral and infra-orbital rims) and guided by the existing internal supports (medial, lateral

walls and posterior bony ledge). While both autologous and alloplastic materials can be used for floor reconstruction, the flexibility, low-morbidity and ease of placement of alloplasts make them indispensible in this setting. Acute problems following orbital floor reconstruction can include globe injury, optic nerve injury and can result in vision loss. Globe dystopia, enophthalmos, eyelid malposition and lacrimal dysfunction are some of the late sequelae of orbital surgery and can occur despite accurate reconstruction of the orbital floor. The absence of a standardised outcome measurement tool has hampered objective assessment of outcomes following this challenging surgery. We present our approach to orbital floor reconstruction and illustrate our technique with clinical examples.

Conflict of Interest Declaration: None

ADAPTING THE ROAD SHOW MODEL; UTILISING VC TO SUPPORT REGIONAL EDUCATION PROVISION

J. A. Saunders

WA Cancer and Palliative Care Network

Objectives: Following the success of The Head & Neck Cancer Rural WA Education Road show project the Head & Neck cancer nurse coordination service (HNCNCS) faced the challenge of developing a continued and sustainable head and neck cancer education program to regional WA. The 'on the road' model had limited sustainability, and a new cost effective, time efficient, equitable model of rural education was developed.

Methods: Collaboration with Telehealth teams throughout WA was established and a pilot Video Conference (VC) education event planned and implemented. The pilot education replicated the model of the 'on the road' format utilising a multidisciplinary team to deliver information and education. However the team remained 'off road' utilising modern technology to present from a metro base to the regions.

Results: Successful evaluation of the pilot prompted the development of a series of 3 presentations to be delivered by VC during 2013 to 2014. The first of the series was presented in March 2013 and focussed on "Diagnosis, Staging and Pre-Treatment Planning for Head and Neck Cancer". Following extensive promotion throughout regional areas the event was accessed by 18-20 individuals across 13 rural sites. The event was also recorded for use on alternative days and times.

Conclusions: By adapting our approach using Telehealth services and utilisation of a sustainable model of education we have been able to continue to support the rural health care teams. Provision of valuable opportunities for education, networking, support, and access to resources supports the delivery of equitable care to patients and the model enables access by the rurally remote health care professional at convenient times and locations.

Conflict of Interest Declaration: None

TIPS FOR OPTIMAL TRANSORAL LASER MICROSURGERY

Elizabeth Sigston

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Many factors contribute to success or failure of transoral laser surgery in treating both benign and malignant lesions of the larynx. Major factors, such as transoral access, tumor size and position, are widely discussed, but there are a number of practical things that a surgeon can do to improve their technique and their satisfaction with both the procedure and the outcomes.

This presentation is designed to provide practical tips for surgeons of all levels with an interest in transoral laser microsurgery that are unlikely to be read about in journal articles or books. These tips are derived from the observation of many surgeons from many parts of the world, from being heavily involved in training of many registrars and fellows, and from personal experience with laryngeal laser resection extending over a period greater than10 years.

Conflict of Interest Declaration: None

MANAGEMENT OF TRISMUS

Jasvir Singh

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Trismus is a well known complication of head and neck cancer treatment. The prevalence of trismus after head and neck oncology treatment ranges form 5% to 38%. The trismus in head and neck cancers is usually due to multietiogenic factors; the cancerous growth, mucosal inflammation leading to limited mouth opening, chemotherapeutic agents, radiotherapy-induced fibrosis, infections of the oral cavity, surgical intervention and less frequently the temporomandibular joint hypofunction. Risk factors for trismus in head and neck oncology include tumours in the region of the mouth closing muscles and radiation of the temporomandibular joint or the muscles of mastication. The primary factor that limits movement of the jaw is rapid formation of collagen caused by radiation, or operation, or both, leading to fibrosis and contraction in the muscles used for closing the mouth and mastication. Various treatments and interventions are reviewed and preventative measures will be discussed.

Conflict of Interest Declaration: None

MANAGEMENT OF LOCALLY ADVANCED – (T3-T4) GLOTTIC LARYNGEAL CARCINOMAS

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Prince of Wales Cancer Centre, NSW

Purpose: This is a review of a single centres experience of the management of patients with locally advanced T3-T4 glottic laryngeal carcinomas.

Methodology: This Ethics approved study compiled data from the Larynx Cancer Database which was then grouped into patient, disease and treatment categories for evaluation. Eligible patients were defined as those exhibiting an initial presentation of T3-T4 glottic squamous cell carcinoma. Primary endpoints were local and regional (ultimate) control after initial treatment; secondary and tertiary endpoints were cancer specific survival (CSS), and subsequent malignancy development, respectively. A total of 161 patients were analysed, 92.5% male, 7.5% female with 6% having a previously diagnosed malignancy. Laryngeal surgery was performed in 128 (79.5%) patients; neck dissection was performed in 68 patients (42%). 129 (80%) patients had radiotherapy with 97 (75%) of these combined with surgery.

Results: Local control after initial treatment was achieved in 129 (80.1%) patients, 13 (10%) with nodal fail. Of the 97 patients that underwent combined surgery and radiotherapy, 84 (86.6%) were locally controlled; Of the 32 patients that underwent surgery alone, 30 (93.8%) were locally controlled, as were 15 (46.9%) of patients that received radiotherapy alone. Surgical salvage was performed in 32 patients, with subsequent salvage control achieved in 5 patients. Ultimate local control was achieved in 134 patients (83%), and 53 patients (33%) developed subsequent second malignancies.

Conclusion: This review highlights the fact that various factors influence outcome for patients with advanced T3-T4 glottic laryngeal carcinomas, rather than just management. Combined radiotherapy and surgery was superior for ultimate local control.

Conflict of Interest Declaration: As with all material emanating from the Prince of Wales Cancer Centre Head & Neck Database, this is an SESLND Ethics approved study, Reference Number *HREC Ref: 10/040. There is no financial support or conflict of interest in preparing this abstract, and all contributing authors agree to their content and note thear are no commerical affiliations or relationships that could be viewed as a potential conflict of interest.

SWALLOW FUNCTION IN HEAD AND NECK CANCER PATIENTS WITH A PROPHYLACTIC PEG: A PROSPECTIVE STUDY WITH LONG TERM FOLLOW UP

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Purpose: Dysphagia and related side effects of treatment for head and neck cancer are known to have an adverse effect on a patient's ability to maintain complete oral nutrition. The prophylactic placement of a PEG tube has been found to reduce weight loss and reduce unplanned hospital admissions. However, it has been argued that the presence of a PEG tube is associated with long term PEG tube dependence and poor swallowing outcomes.

Methodology: Prospective study of 95 patients provided with prophylactic PEG tube placement as determined by criteria set in published guidelines for eligibility. All patients had been assessed by speech pathologist and dietitian weekly during treatment and then as required for up to 12 months post-treatment. Data collected at various time points during and after treatment, included: swallowing function; diet and fluid consistencies tolerated; the dates of commencement and cessation of PEG feeds; and the dates of insertion and removal of PEG tubes.

Results: 96% of the patients provided with a prophylactic PEG did require PEG feeding during treatment. At the commencement of PEG feeds, 19% were on a non-texture modified diet; 75% were on a modified diet/fluids; and 7% were NBM. 72% of patients maintained some oral intake (in addition to PEG feeds) through treatment. Average duration of PEG feeding was approx. 4 months and the average duration the PEG remained insitu was approx 7 months. Over 90% had the PEG removed post treatment. 51% had resumed a non-texture modified diet at the time of PEG removal.

Conclusions: The results of this study reflect good swallowing outcomes for the majority of patients with a prophylactic PEG tube. Most patients resumed complete oral intake post-treatment. The results of this study did not support that prophylactic PEG placement led to a high proportion of patients with long term PEG dependence.

Conflict of Interest Declaration: None

INDUCTION CHEMOTHERAPY IN HEAD AND NECK CANCER

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Induction or neoadjuvant chemotherapy has been a substantial temptation since the introduction of the robust platinum-fluorouracil (PF) regimen in the 1980s which lead to significant responses (including pathological complete responses). Subsequent integration into standard treatment has had both wins and losses.

There is evidence of a lack of benefit as a prelude to surgery, although a small trial reported long term disease free survivals in CR patients without any further treatment.

PF chemotherapy does appear to be an excellent predictor of radiation response (sensitivity 98%, specificity 94%) based on a small dataset. This lead to two approaches. In the organ preservation approach PF appears superior to radiation alone for larynx and hypopharynx cancer. In the definitive setting there is a small benefit over radiation alone. In nasopharynx cancer varying meta-analyses have argued over the benefit.

The introduction of taxanes to the PF mix (TPF) showed survival benefits over PF in the RT alone setting. Larynx preservation also appears superior. However with chemoradiation in non-NPC the role of induction TPF is unclear. Two underpowered trials have reported no benefit, several trials are awaited. Toxicity can be significant and a major concern is the impact on ability to complete radiation.

In organ preservation it all seemed cut and dried in 2003 with RTOG 91-11 demonstrating superior organ preservation with concurrent treatment, but in the longer term matters are not so simple.

Conflict of Interest Declaration: None

HUMAN PAPILLOMA VIRUS IN OROPHARYNGEAL SCC AT THE TOP END

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Royal Darwin Hospital, NT

Purpose: To study the incidence of Human Papilloma Virus in oropharyngeal SCC at the Top End of Australia

Methodology: The use of P16 immunohistochemistry on specimen of oropharyngeal SCC of patients treated between 2006 and 2008, using a known HPV Positive Cervical SCC as control.

Results: 57 patients were identified from departmental and hospital records. 8 were lost to follow up and were excluded. of the 49 specimen studied, 695 were male, 51% were Indigenous, and 45% were positive. Disease Free Survival appeared better in HPV positive patients, though statistically not significant. Indigenous males had a 61% HPV positive rate as compared to 31% for non-Indigenous males.

Conclusion: This preliminary study shed an interesting and unsuspected light on the possible sexual mores of Indigenous males. It is a reflection of the HPV related SCC at the Top End.

Conflict of Interest Declaration: None

IMPACT OF CLL ON CUTANEOUS SQUAMOUS CELL CARCINOMA

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Background: Immunosuppression in organ transplant recipients increases the incidence and aggressiveness of cutaneous squamous cell carcinoma (cSCC). However, there is little data on cSCC in patients with immunosuppression due to CLL.

Purpose: To describe the clinical features, patterns of failure and outcomes of cSCC in patients with CLL.

Methodology: Consecutive patients with cSCC and CLL presenting to our institution between July 2000 and July 2010 were identified. Baseline characteristics, treatment details and outcomes were retrospectively reviewed.

Results: Thirty-four patients presented with primary cSCC (33 node-negative, 1 node-positive) and 8 patients presented with nodal disease. The 2-year local failure rate for primary cSCC was 15%. Nodal failure occurred in 36% of initially node-negative patients. The 3-year overall and cause-specific survival rate for all patients was 37% and 65%, respectively. In patients managed curatively for nodal disease at presentation or relapse (n=17), the 3-year overall and cause-specific survival rate was 21% and 53%, respectively.

Conclusion: Cutaneous SCC behaves aggressively in patients with underlying CLL. Novel strategies are needed to improve outcomes.

Conflict of Interest Declaration: None

BONY UNION IN FREE FLAP MANDIBLE RECONSTRUCTION

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Background: Bony union following free flap mandible reconstruction is fundamental to successful dental rehabilitation with osseointegrated implants. Non-union after vascularized bone graft of mandible has been variably reported between 0-7%. However in our local experience anecdotal reports from dental rehabilitation facilities suggested significantly higher rate of non-union over the last two decades.

Methods: A retrospective review was performed at two centres on the medical records of consecutive patients undergoing free flap mandibular reconstruction between 2005 and 2012.

Results: Fifty-four patients with a total of 113 osteosynthesis sites were included in this study. Resection of oral squamous cell carcinoma was the cause of mandible defect in 60% of the patients. The donor site was ilium in 15 patients (22 sites) and fibula in 39 patients (91 sites). For bony fixations reconstruction plates were used in 27 sites, mini-plates in 69 sites, inter-osseous wires in 2 sites, K-wires in 3 sites, and a combination of methods in 12 sites. Bony union at 6-month follow-up was seen in 85% of the sites (96/113). There was no significant difference in the union rate based on the donor site ($\chi 2 = 0.29$, $p = 0.59$) or fixation method (reconstruction plate versus mini-plate, $\chi 2 = 2.03$, $p = 0.15$).

Conclusion: In our experience non-union is more frequent than stated in the previous series. This negatively impacts dental rehabilitation for patients undergoing free flap mandible reconstruction. More cases are required to assess the effect of using inter-osseous wires in the union rate.

Conflict of Interest Declaration: None

TOOLS FOR REPORTING ADVERSE EVENTS AND QUALITY OF LIFE IN HEAD AND NECK CANCER

Andy Trotti

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Purpose: Discuss tools for the reporting of adverse events and quality of life (QOL) outcomes, which are important to get a more complete picture of the benefits and risks of a given treatment.

Results: Various tools available for QOL and adverse event reporting, including quality of life and functional outcomes will be discussed.

Dr Trotti is a member of the RTOG H&N Committee, and the NCI Task Force on Adverse Outcomes Reporting.

Conflict of Interest Declaration: None

LONG TERM RESULTS OF THREE RTOG STUDIES: 90-03 (ALTERED FRACTIONATION); 91-11 (LARYNX PRESERVATION); 95-12 (ALTERED FRACTIONATION IN T2 LARYNX)

Andy Trotti

Tampa, United States of America

Purpose: The reporting of long term results of clinical trials is important for confirming or refining initial data reporting, and for estimating the risk of late injuries. Very few H&N studies have reported results beyond 2-3 years. Here we present long term outcomes on three RTOG studies. Median follow-up for 90-03 (14.1 years), 91-11 (10.8 years), and 95-12 (7.9 years).

Methodology: Results and conclusions from the initial and long term reports will be presented.

Conclusions: Lessons and benefits regarding long term data reporting will be discussed.

Andy Trotti MD is the co-chair for the RTOG H&N Committee and was intimately involved in the conduct and interpretation of the three H&N trials to be presented.

Conflict of Interest Declaration: None

RECONSTRUCTING THE CSF BARRIER

Brent Uren

Over the last 10-20 years, better instrumentation and modern surgical techniques have allowed for more advanced anterior and central skull base lesions to be resected via a transnasal endoscopic approach. Consequently, larger and more complex skull base defects have resulted, requiring the use of a variety of techniques for reconstruction of the CSF barrier. Both endoscopic and open reconstructive techniques will be discussed, along with the decision making process to determine which is optimal in different clinical scenarios.

Conflict of Interest Declaration: None

TRANSORAL ROBOTIC SURGERY FOR OROPHARYNGEAL CANCER

S. Krishnan, **V. van Dijck** and J. C. Hodge

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Transoral robotic surgery (TORS) is becoming an established surgical approach to the management of oropharyngeal cancer. The Department of ORLHNS at the Royal Adelaide Hospital (RAH) was among the first surgical units to undertake TORS. This statement presents our five year results for treatment of oropharygneal cancer.

Purpose: To investigate an alternative approach to reduce morbidity associated with current treatment protocols in management of oropharyngeal cancers. Prospective case series from patients attending the Head and Neck Multi Disciplinary Clinic at RAH. Patients were selected on the basis of having early oropharyngeal primary malignancies considered to be amenable to transoral resection. Patients have been followed up for a period of six months to five years. Airway, voice and swallowing measures using quality of life instruments and clinical tools were used.

Approximately 60 percent of patients had stage IV disease due to disease in the neck. 25 percent had early stage disease. Approximately 36 percent had P16+ve disease. About 70 percent of patients had post operative adjuvant treatment dictated mainly by disease status of the neck. An overall survival of 60 percent. 100 percent survival rate of stage I, 80 percent of stage II, and about 50 percent survival for stage IV.

Quality of life data suggests excellent speech results, good swallowing results, with 90 percent commencing oral intake on day three postoperatively and a <5 percent PEG dependency rate.

TORS is an essential component in the multi disciplinary management of oropharyngeal cancer. The RAH ENT Department is involved in a multi institution trial with the ENT Department in London Ontario in a phase III randomised controlled trial of management of stage I and stage II oropharyngeal cancer.

Conflict of Interest Declaration: Presenter has recieved a grant from Device Technologies to assist in travel for TORS training in USA.

CO_2 TRANSORAL LASER MICROSURGICAL EXCISIONAL BIOPSY IS SUPERIOR TO INCISIONAL BIOPSY FOR THE EVALUATION OF ORAL SQUAMOUS CELL CARCINOMA OR SEVERE DYSPLASIA WITHIN POTENTIALLY MALIGNANT LESIONS OF THE ORAL MUCOSA

J. Vu, M. Schifter, H. G. Coleman, C. E. Palme and H. Zoellner

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Purpose: Oral squamous cell carcinoma (OSCC) may be preceded by potentially malignant lesions (PMLs) namely leukoplakias and erythroplakia. Sampling error is an inherent limitation of incisional biopsy, hence the presence of OSCC/severe dysplasia may be missed in extensive PMLs. CO_2 Transoral Laser Microsurgical (TLM) excision of the entire PML could improve diagnosis of early OSCCs.

Methodology: The records and histopathology slide material of 38 representative incisional biopsies of PMLs and the subsequent CO_2 TLM excision specimens were retrieved from the archives and reviewed.

Results: Seven of 38 (18.4%) cases demonstrated malignancy on initial incisional biopsy. However, nine of the remaining 31 cases exhibited malignancy on CO_2 TLM excision that was not evident on the preceding incisional biopsy. This represented an under-diagnosis rate of 29%. Correlation of the dysplasia grading between the incisional biopsy and the CO_2 TLM excision specimens was 51.6%, but on subsequent excision, more severe dysplasia was observed in 45.2% of cases ($p = 0.001$ Wilcoxon Signed Rank test).

Conclusion: Excision of the entire PML, when technically feasible, is superior to incisional biopsy in identifying OSCC or severe dysplasia. The high rate of under-diagnosis of OSCC by incisional biopsy in this study is much greater than the reported rates of 2.4–17%. A potential disadvantage of CO_2 TLM is laser-induced thermal cytological artifact, which may impede accurate assessment of epithelial dysplasia at the excision margins. However, this did not prove to be a major concern. CO_2 TLM demonstrably improved the management of early, still discrete OSCCs and severe dysplasia within extensive PMLs.

Conflict of Interest Declaration: None

PHYSIOLOGICAL CHANGES TO THE SWALLOWING MECHANISM FOLLOWING (CHEMO)RADIOTHERAPY FOR HEAD AND NECK CANCER: A SYSTEMATIC REVIEW

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Purpose: Whilst emerging research suggests that preventative swallowing rehabilitation (pre- or during (C)RT) can significantly improve swallowing outcomes for HNC patients, at present, these treatment protocols are highly variable. Determining the specific physiological swallowing parameters which are most likely to be impacted post-(C)RT would assist in refining clear targets for preventative rehabilitation. This systematic review therefore (1) examined the frequency and prevalence of physiological swallowing deficits observed post-(C)RT for HNC, and (2) determined whether their prevalence is static or dynamic post-(C)RT.

Methodology: Online databases were searched for relevant papers published between January 1998 and March 2013. In total, 153 papers were identified and appraised for methodological quality and suitability based on exclusionary criteria. For the 19 publications which met the study criteria, their reported prevalence of physiological swallowing deficits was collated.

Results: Reduced laryngeal excursion, BOT dysfunction, reduced pharyngeal contraction and impaired epiglottic movement were most frequently reported. BOT dysfunction and impaired epiglottic movement showed a collective prevalence of over 75% in the majority of patient cohorts, whilst reduced laryngeal elevation and pharyngeal contraction had a prevalence of over 50%. Sub-analysis demonstrated preliminary trends that the prevalence of key deficits is dynamic over time, peaking at 3-6 months post-(C)RT .

Conclusion: Data revealed a core set of physiological deficits following (C)RT. These findings can be used by clinicians to inform preventative intervention, and encourage a shift from the current non-specific approach to one encompassing specific, evidence-based targets which are highly prevalent deficits for HNC patients.

Conflict of Interest Declaration: None

MAXILLOFACIAL PROSTHODONTICS, WHERE ARE WE HEADING?

Christine Wallace

Following World War 11, an era of specialisation among health care professionals ensued. In dentistry, medicine and surgery specialists were trained to keep pace with the rapidly growing body of knowledge that evolved from new developments in diagnosis treatment methods, instrumentation materials and technology. As a subspecialty area of the recognised dental specialty prosthodontics, maxillofacial prosthetics has become an essential patient-care link between dentistry and surgery.

The sub-specialty of maxillofacial prosthetics currently finds itself experiencing more change that at any other time over the past 50 years of its recognised existence. Advances in surgical and therapeutic modalities for the treatment of patients with head and neck malignancies, post tumour therapy, surgical reconstruction and congenital and developmental defects have challenged traditional prosthodontic principles for the management of the many patients needing the services of a maxillofacial prosthodontist.

This presentation will provide information on the current concepts of patient management for the maxillary defect, its implications for practice and where the future for this small discipline of dentistry is heading.

Conflict of Interest Declaration: None

RECONSTRUCTION OF THE LIPS

Jeremy L. Wilson

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The Peter MacCallum Cancer Centre, Melbourne, VIC

The lips are the primary aesthetic feature of the lower central face with functional requirements that include oral competence in eating and drinking, speech and sound production, forceful blowing, and kissing. A primary characteristic of the lips is their mobility, which is critical for natural appearance and function.

Reconstruction of the lips is most commonly required for tumours or trauma, with other pathologies being rare. Reconstruction of most lip defects is simple as a sufficient segment of sensate, dynamic lip is available to allow for direct closure, particularly in the lower lip. Reconstruction of larger lip defects in which an adequate remaining lip segment or opposite lip is unavailable is more complex as non-lip tissues are frequently required. Historically, these reconstructions may have looked fine at rest, but appeared abnormal in the living, moving patient.

An overview of lip reconstruction is presented using case examples to highlight important principles to consider in defect analysis and operative planning. Various techniques for reconstruction of the vermillion, upper lip and lower lip are discussed, in addition to options for reconstruction of more complex defects that extend to involve the soft tissues of adjacent facial subunits or the underlying facial skeleton.

Finally, a new paradigm for lip reconstruction is presented which allows for an aesthetic balanced reconstruction of the defect with sensate, dynamic residual lip and non-lip tissues avoiding the need for lip sharing and issues with microstomia.

Conflict of Interest Declaration: None

POSTER ABSTRACTS

NON-SMOKING NON-DRINKING PATIENTS WITH ORAL CANCER: A META-ANALYSIS.

R. A. Barrowman, K. Koo, M. McCullough, T. Iseli and D. Wiesenfeld

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Purpose: In Australia, oral cavity squamous cell carcinoma (OCSCC) has been viewed as a disease afflicting predominantly male patients with the risk factors of smoking and/or alcohol use. However, recent epidemiological studies have identified a distinct subgroup of non-smokers and non-drinkers presenting with OCSCC. The aim of this presentation will be a meta-analysis and review of the available literature looking specifically at the non-smoking non-drinking (NSND) subgroup.

Methodology: Retrospective epidemiologic studies describing NSND patients with oral cavity squamous cell carcinoma were identified from the literature. These papers were reviewed with regards to gender, age and tumour stage and subsites. Data on second primaries, survival, and the human papilloma virus were tabulated and aggregated where available.

Results: A total of 9 articles from 10 different centres, in 8 countries were identified through a literature search, comprising of 851 patients without known risk factors for OCSCC. The NSND subgroup tends to be older, female and present with oral cavity lesions, particularly on the tongue. Second primary data, provided from 3 papers demonstrated a second primary tumour rate of 20%. There was a difference in reported mortality rates between smokers and drinkers, and the NSND patients.

Conclusion: Multiple studies indicate that OCSCC in NSND patients has unique characteristics, and appears to behave differently than it does in smokers and drinkers. As yet, an aetiological agent has not been identified. A better understanding of genetic mechanisms in this subgroup may improve treatment protocols.

Conflict of Interest Declaration: None

XEROSTOMIA IS A SIGNIFICANT COMPONENT OF PATIENT-REPORTED DYSPHAGIA AFTER RADIOTHERAPY FOR HEAD AND NECK CANCER

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Purpose: Dysphagia is a serious complication that can persist following curative treatment for head and neck cancers. In the post-radiotherapy setting, dysphagia is often attributed to pharyngeal mucosal and muscle injury. However, a component of patient-reported dysphagia may be due to xerostomia effects of treatment. This study examines this relationship in a large cohort of patients.

Methodology: 471 consecutive patients were assessed with patient-reported outcome questionnaires EORTC QLQC30 and H&N35 at presentation and 3, 6 and 12 months follow up. Items for swallowing assessment were pooled into a subjective dysphagia score and tested for correlation with items for dry mouth and sticky saliva (using Spearman rank correlation). The ability of xerostomia to predict the worst third of dysphagia was tested using receiver operator characteristic (ROC) analysis.

Results: 274 patients completed 12 month assessment. For 135 patients treated with definitive radiotherapy, late dysphagia correlated moderately with dry mouth (Spearman rho = 0.37), overall xerostomia (0.38), but less so with sticky saliva (0.27). Correlation was much weaker in non-radiotherapy patients. Presence of xerostomia was able to predict dysphagia in ROC analysis (AUC = 0.65) in radiotherapy patients.

Conclusion: Xerostomia is responsible for a significant component of patient-reported dysphagia after treatment with radiotherapy. The precise cause of treatment-related dysphagia should be determined before intervention. Xerostomia should be separated from mechanical causes in studies investigating the predictors of post-radiation dysphagia.

Conflict of Interest Declaration: None

NON-MELANOMA SKIN CANCER AND SQUAMOUS CANCER OF UNKNOWN PRIMARY IN THE WORKLOAD OF A REGIONAL HEAD AND NECK MULTIDISCIPLINARY CLINIC: AN AUDIT 2007-2013

M. K. Collins

The Townsville Hospital, QLD

Purpose: Non-melanoma skin cancer and cases with metastatic squamous carcinoma in neck nodes comprise much of our Head and Neck Multi-Disciplinary Clinic's work. This retrospective audit documents the burden in North Queensland with the highest rate of such non-registerable cancers in Australia, and discusses implications.

Methodology: Since starting in the present location February 2007, our Mosaiq electronic medical record allows analysis of diagnosis for all 976 named cases discussed or attending until May 2013. Careful review of clinical notes and pathology will permit categorisation of patients into groups "Non-Melanoma Skin Cancer" (NMSC),"Unknown Primary likely Skin Cancer"(UPLS), "Aero-Digestive Tract","Unknown Primary likely Aero-Digestive Tract", Other.

Results: In 2012, NMSC and UPLS together comprised the largest diagnostic site group attending clinic after the Oropharynx, 21% and 25% respectively. This analysis will be extended to all 976 names with proportions expected to remain similar.

Conclusions: Such a large component of practice reflects sun exposure in a susceptible population. Skin cancer can progress to major and life-threatening stages, which are sadly the ones which end up attending a multidisciplinary head and neck clinic. It demands adequate specialist availability including plastics, dermatology, maxillofacial, dental, skull base, neurosurgery, medical and radiation oncology and palliative care. This need should shape resource planning. Non-melanoma skin cancers have not been registerable yet can require extremely intensive multidisciplinary management just as other advanced head and neck cases do.

Conflict of Interest Declaration: None

MINIMUM NODAL YIELD IN ORAL SQUAMOUS CELL CARCINOMA: DEFINING THE STANDARD OF CARE IN A MULTICENTER INTERNATIONAL POOLED VALIDATION STUDY

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Purpose: There is evidence to suggest that a nodal yield <18 is an independent prognostic factor in patients with clinically node negative (cN0) oral squamous cell carcinoma (SCC) treated with elective neck dissection (END). We sought to evaluate this with external validation and to investigate for heterogeneity between institutions.

Methods: We analyzed pooled individual data from 1567 patients treated at 9 comprehensive cancer centers worldwide between 1970-2011. Nodal yield was assessed with Cox proportional hazard models, stratified by study center, and adjusted for age, sex, pathological T and N stage, margin status, extracapsular nodal spread, time period of primary treatment, and adjuvant therapy. Two-stage random effects meta-analyses were used to investigate for heterogeneity between institutions.

Results: In multivariable analyses of patients undergoing selective neck dissection, nodal yield <18 was associated with reduced overall (HR, 1.69; 95% CI, 1.22-2.34; p=0.002) and disease-specific survival (HR, 1.88; 95% CI, 1.21-2.91; p=0.005), and increased risk of locoregional recurrence (HR, 1.53; 95% CI, 1.04-2.26; p=0.032). Despite significant differences between institutions in terms of patient clinicopathological factors, nodal yield, and outcomes, random effects meta-analysis demonstrated no evidence of heterogeneity between centers in regards to the impact of nodal yield on disease-specific survival (p=0.663; I2 statistic=0).

Conclusion: Our data confirm that nodal yield is a robust independent prognostic factor in patients undergoing END for cN0 oral SCC, and may be applied irrespective of the underlying patient population and treating institution. A minimum adequate lymphadenectomy in this setting should include at least 18 nodes.

Conflict of Interest Declaration: None

INTRAOPERATIVE MONITORING OF THE SPINAL ACCESSORY NERVE DURING NECK DISSECTION

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Aim: Shoudler dysfunction after neck dissection is a well known but under-reported complication. A study by Wilgen et al has reported a shoulder dysfunction rate of 31-77%. Nerve monitoring has been suggested as a solution to the high rate of shoulder problems. The aim of this study is to determine whether intra-operative monitoring of the spinal accessory nerve(SAN)during neck dissection reduces the incidence of nerve injury and subsequent post-operative shoulder dysfunction

Methods: The research design will employ a randomized controlled trial, comparing postoperative shoulder function in patients who undergo neck dissection with nerve integrity monitoring versus those who without intra-operative nerve monitoring. Patients will be stratified by type of dissection (selective v comprehensive).It is estimated that 300 patients will be required to determine a 10% difference in shoulder dysfunction(15 v 5%) with 80% probability of finding a difference with a two-sided significance level of 5%. Shoulder function will be assessed by several measures including range of motion assessments (DASH and CONSTANT Scales), and patient specific quality of life questionaires and be performed by a trained observer. Range of motion assessments will be recorded using motion capture. Funding is being sought at present.

Results: The purpose of this presentation is to discuss the interest in participation, feasibility and outcome measures. The barriers to conducting such a study will also be discussed.

Conclusion: If it is proven that intra-operative monitoring can minimize the risk of injury to the SAN, this information will encourage Head & Neck surgeons to routinely implement this practice during neck dissection. This, in turn, stands to improve post-operative outcomes for all patients who undergo neck dissection in the future.

Conflict of Interest Declaration: None

MANAGEMENT OF THE N0 NECK IN PRIMARY MAJOR SALIVARY GLAND CARCINOMA- A REVIEW OF THE LITERATURE AND GOLD COAST HEALTH DISTRICT EXPERIENCE

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Purpose: To evaluate whether patients with clinically node negative (cN0) salivary gland carcinomas benefit from elective treatment of the neck.

Methodology: A review of the current evidence regarding the treatment of cN0 necks in major salivary gland carcinomas is presented. A retrospective analysis of patients diagnosed with primary salivary gland malignancies over a 10 year period at the Gold Coast Hospital was conducted. The risk factor profile, management and long term outcomes of patients staged as N0 preoperatively was comprehensively reviewed. Elective neck management was based on institution treatment protocols and included either elective neck dissection or elective neck irradiation.

Results: In all, 24 patients were treated for primary salivary gland malignancy, with 13 patients staged as N0 preoperatively. All patients were treated surgically with resection of the primary cancer. 53.8% received elective neck treatment with the majority (6/7) receiving radiation therapy. The median follow up period was 3.2 years. Neck recurrence occurred in 16.7% of patients who received surgery alone. There was no neck recurrence in patients treated with elective radiotherapy or neck irradiation.

Conclusion: The management of cNo in major salivary gland carcinomas is controversial with little data and no clear consensus currently available. This small series correlates well with limited existing knowledge of this heterogeneous disease. It can be concluded that elective treatment of the N0 neck with radiotherapy or elective neck dissection provides improved locoregional control. With the aim of identifying risk factors for occult regional disease and to further define appropriate management of the neck, further work will be conducted to expand this data to include other head and neck units.

Conflict of Interest Declaration: None

AN EVIDENCE-BASED NUTRITION CARE PATHWAY FOR SURGICAL HEAD AND NECK PATIENTS

J. Harrowfield

Peter MacCallum Cancer Centre

Background: Care pathways help to standardise management, translate evidence-based guidelines into local protocols and improve patient care. Evidence shows head and neck cancer patients undergoing surgery have been identified to be at high nutritional risk and therefore are likely to benefit from a nutrition care pathway.

Aim: 1. To investigate current nutrition guidelines for surgical head and neck patients. 2. To audit current practice. 3. To develop and implement of an evidence based care pathway for surgical head and neck patients.

Methods: A literature review was conducted regarding current best practice nutritional guidelines. A retrospective audit of 45 patients was completed during a 3 month period in 2012. Current practice was examined including; patient screening, timing of first dietetic contact, timing of dietetics review, time to start oral/ enteral intake. A surgical care pathway was then developed in line with best practice guidelines and implemented within the multi-disciplinary team.

Results: Thirty percent of patients were screened before surgery. Automatic referrals were seen by the dietitian within 24 hours of surgery in 83% of patients, 90% of patients were reviewed 3 times per week and 100% reviewed every 2 weeks after. Only 23 patients had a completed Patient-Generated Subjective Global Assessments (PG-SGA) on admission. Patients considered low risk were not at risk according to Malnutrition Screening tool (MST). Oral or enteral intake was started within 1 day for all patients.

Conclusions: The results showed that current nutrition practice is predominantly in line with best practice guidelines however an evidence based pathway is indicated to streamline current practice.

Conflict of Interest Declaration: None

CORRELATION MODEL BETWEEN TIME LAPSE IMAGING, LIGHT MICROSCOPY, ELECTRON MICROSCOPY AND QPCR ON IRRADIATED HUMAN OROPHARYNGEAL SQUAMOUS CELL CARCINOMA CELLS (OSCC) CELLS

K. Lai, M. C. I. Killingsworth, A. Hong, J. L. C. Yong, T. Yang, I. Zhang, M. Zhang, J. G. Lyons and C. S. Lee

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Aims: OSCC is commonly treated with radiotherapy but the radiation induced changes in cellular organelles are not well understood. Recent technological advances using live cell imaging have allowed easier visualization of time-resolved cellular changes, thus opening up the potential of correlation studies involving histopathology, ultrastructural and gene expressional analysis. This study aims to develop an experimental model using correlation approaches to study irradiated human OSCC cells.

Methods: UM-SCC4 cells were irradiated with x Gy and seeded on a 6 well plate. Radiation induced cellular changes were monitored using time-lapse imaging systems, IncuCyte Zoom and Biostation-IMQ. Once the majority of irradiated cells displayed differential changes, cells were either fixed and stained with H&E and/or immunocytochemical staining with nanoparticle probes, examined by transmission electron microscopy (TEM). Samples had RNA extracted for qPCR analysis.

Results: IncuCyte have identified the optimal seeding density, radiation dosage and incubation time to induce significant cellular changes. We then further examined these changes with the Biostation. Radiation induced changes including autophagy and apoptosis were observed and correlated between live cell images and movies, light microscopic and TEM. Apoptosis was also confirmed with immunocytochemistry and qPCR.

Conclusion: This is a simple cell culture model which allows sensitive correlation studies between live cell imaging and in depth electron microscopy, histopathology and molecular analysis. Further refinement of this model might contribute to cancer diagnosis, assessment of its biological potential in terms of aggressiveness and also in vitro monitoring of drug effect and/or radiotherapy resistance on individual primary patient tumour cells.

Conflict of Interest Declaration: None

RETROSPECTIVE AUDIT OF HEAD AND NECK CANCER REFERRAL TIMELINES AT A TERTIARY REFERRAL CENTRE

L. Lamprell, M. Collins and A. Suruliraj

The Townsville Hospital, QLD

Introduction: The Head and Neck Cancer Multidisciplinary Clinic (HNMDC) provides multi-modality specialist management for new head and neck referrals. Delays from referral to attendance in clinic could impact patient outcomes.

Aims: To critically appraise referral timelines to the HNMDC at a tertiary referral centre over a 2-year period and compare referral times originating locally and regionally.

Methods: A retrospective audit of new referrals to HNMDC from January 2011 to March 2013 was performed. Sources and timing of delay between referral to attendance were identified and analysed. Comparisons were drawn between local versus regional referrals.

Results: 111 patients had complete referral data. The average time from referral to attending HNMDC was 10 days (SD 7 days; median 8 days). The average time for referral transmission to our centre was 1 day (SD: 3 days; median: 0 days). Regional referrals demonstrated longer average waits to attendance compared with local referrals: Townsville (mean: 8 days; SD: 5 days; median: 7 days) versus Cairns (mean: 11 days; SD: 7 days; median 8 days); Brisbane (mean: 14 days; SD: 12 days; median: 11 days); Mackay (n=1; 11 days); Rockhampton (n=1; 13 days). The requirement for completed staging tests to be available for the HNMDC appointment to enable management decisions to occur may explain the apparent difference.

Conclusions: This is the first Australian study to consider referral times as a factor in HNMDC patient timelines. Local referrals were more timely than regional referrals, although consideration is given to the demanding logistics of regional referrals.

Conflict of Interest Declaration: None

IMMEDIATE FACIAL NERVE RECONSTRUCTION, DURING RADICAL PAROTIDECTOMY, AND LATERAL TEMPORAL BONE RESECTION: A CASE REPORT AND LITERATURE REVIEW.

L. Lamprell and D. Wright

The Townsville Hospital, QLD

Purpose: Surgical treatment of parotid gland malignancy often requires facial nerve sacrifice (FNS), resulting in functional and cosmetic deficits. In 2005, Marchese-Ragona et al, advocated mandatory immediate nerve repair in the event of FNS where there is tumour-free proximal nerve. We present a case where this approach was utilised to improve morbidity. We further review the literature to discover standard practice in oncological parotid surgery.

Methodology: Case study. PubMed, Cochrane and Embase literature search.

Results: i. Case: The patient presented with facial paralysis due to a right primary parotid malignancy. The tumour was managed successfully with radical parotidectomy, lateral temporal bone resection and selective neck dissection. Frozen section histopathology was used to confirm disease free margins during the procedure. The facial nerve was reconstructed using the great auricular nerve and the descendens hypoglossi nerve. Post operatively the patient was given adjuvant radiotherapy (60Gy). Within 17 months, the patient regained eye closure and oral competence (House-Brackman III). ii. Literature review: 16 relevant studies were identified. Facial nerve rehabilitation is more commonly a second-stage procedure. Nerve graft techniques vary and are under continuous research. 10% of parotidectomies and 71% of temporal bone resections for parotid tumours require FNS.

Conclusion: Facial nerve rehabilitation can be successful with immediate nerve grafting, however, it is not the current standard practice.

Conflict of Interest Declaration: None

RECONSTRUCTION OF MAXILLARY DEFECT WITH MUSCULO-ADIPOSE RECTUS FREE FLAP (MARF) – A SIMPLE AND RELIABLE TECHNIQUE

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Reconstruction for a large maxillectomy defect is complicated and challenging. It often requires a flap with long pedicle, soft tissue bulk, and the ability to reconstruct multiple mucosal/epithelial defects. Rectus myocutaneous free flap has been used for medium to large defect after a maxillectomy.

However, in patients who have excessive central obesity, this flap becomes too bulky with excessive fatty tissue, hence, difficult inset and suboptimal results.This is particularly the case in terms of dental rehabilitation where a bulging oral skin paddle prevents the effective placement of a denture. We describe a modified technique of the rectus free flap, where the flap is harvested with the standard muscle sparing technique (MS 0, 1 and 2) with a small segment of anterior rectus sheath and overlying adipose tissue, without the skin (MARF). The fatty tissue is trimmed to fit into the maxillectomy defect and secured to the edges of mucosal defect. Fat is allowed to be mucosalised. Five consecutive cases of maxillary reconstruction with MARF technique over the last 10 years are presented. Four of type IIIb defect and one type II defects (Cordeiro Classification). All flaps survived with no requirement for re-exploration. Complete oro-nasal separation is achieved in all patients. Mean commencement of oral intake was 9.4 days (range 5-15 days). Full mucosalisation of the fat was seen on the oral surface by second week. Seal within the nasal cavity was also achieved, where patients were able to blow their nose without introducing subcutaneous air. Mean day stay at the hospital was 14.6 days (range 9-22 days). MARF, instead of myocutaneous rectus free flap is an easier and reliable technique in reconstructing maxillary defects and should be considered in the algorithm for reconstructing maxillary defects.

Conflict of Interest Declaration: None

A NOVEL SCAFFOLD IN CUTANEOUS WOUND HEALING

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Resection of head and neck tumours can result in significant wounds. These are at risk at becoming a chronic problem as the patient is usually immunosuppressed, malnourished and may have had radiotherapy. These results in increased patient morbidity and mortality, and treatment is often time-consuming and ineffective. With the advancement of bioengineering there are improved ways of treating chronic wounds. Variotis™ is a novel, synthetic scaffold meaning that it is cheaper, more readily available and does not have the infectious risks of biological products. In our rat study we examined whether the Variotis™ scaffold is biologically compatible and improves wound healing. A variation of the scaffold incorporates Bioglass™, a product aimed to facilitate cell attachment. The base scaffold and the Bioglass™ variation were compared.

Method: 25 outbred male Sprague-Dawley rats were used. An ischaemic flap was raised on the dorsum of the rats and wounds were placed in the flap or in the normal skin on either side. The wounds contained either control scaffold or the Bioglass™ variation. The wounds were examined in terms of macroscopic closure and microscopic features. Results were analysed with Microsoft Excel using t-test and chi-squared.

Results: The scaffolds integrated well and that the procedure was well tolerated by the rats. Wound healing in the ischaemic flaps was significantly worse than in the normal skin ($P<0.001$). Surprisingly, the Bioglass™ scaffold hindered wound healing. These wounds took about 10 days longer to heal and also contained less granulation tissue ($p=0.03$ t-test). Overall the scaffolds are potentially an effective dermal replacement and warrant further analysis and the addition of Bioglass™ did not improve the performance of the scaffold.

Conflict of Interest Declaration: None

CASE STUDY: RARE PAEDIATRIC PRESENTATION OF A FACIAL TUMOUR

Lisa Luo, Nelson Low and John Vandervord

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Phosphaturic mesenchymal tumor–mixed connective tissue variant (PMTMCT) is an extremely rare tumor associated with tumor-induced osteomalacia. The majority occur in middle age and arise from the extremities. This report describes a young girl with PMTMCT arising in the mandible and with no evidence of paraneoplastic syndrome.

Conflict of Interest Declaration: None

FISTULA RATES AND USE OF PROPHYLACTIC METRONIDAZOLE IN PATIENTS POST LARYNGECTOMY/ PHARYNGOLARYNGECTOMY.

J. Prasad, S. Yau, L. Lamprell , R. Hodge , J. Agnew and B. Wilson-Boyd

Royal Brisbane and Womens Hospital, QLD

Introduction: The hypothesis of the study was that the fistula rate in patients post laryngectomy/pharyngolaryngectomy is lower with the prophylactic use of metronidazole post surgery.

Aims: The aim of the study was to examine the incidence of radiological/clinical fistula in patients post laryngectomy/ pharyngolaryngectomy and also examine the effect of prophylactic antibiotics (metronidazole) of the fistula rate.

Method: Retrospective chart review of consecutive patients who underwent laryngectomy/ pharyngolaryngectomy at Royal Brisbane and Womens Hospital between 2007-2012.

Results: One hundred and two patients were identified. Sixty-four patients underwent a laryngectomy and thirty-nine underwent a pharyngolaryngectomy. Fistula rate for laryngectomy was 17.2% and pharyngolaryngectomy was 35.9%. The use of metronidazole as a prophylactic antibiotic in patients with fistula post laryngectomy was 18.1% while it was 54.3% in patients who had no fistula. The use of metronidazole as prophylactic antibiotic in patients with fistula post pharyngolaryngectomy was 21.4% while it was 27.2% in those who did not develop a fistula.

Conclusion: The use of prophylactic metronidazole may have a role in the reduction of fistula rates in patients post laryngectomy and possibly pharyngolaryngectomy. A prospective study is indicated.

Conflict of Interest Declaration: None

THE MANAGEMENT OF MASSIVE RETROSTERNAL GOITRES FROM THE NECK

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Purpose: To demonstrate a novel method of extracting massive thyroids from the chest using only a neck incision

Methodology: The pre-operative embolisation of the inferior thyroid artery resulted in the redution of size of two very large retrosternal goitres, resulting in their extraction and removal employing just a Kocher's neck incision.

Conclusion: The use of immediate pre-operative embolisation of the inferior thyroid artery seems to reduce the size of massive retrosternal goitres to a proportion that permits safe removal en masse using the usual neck incision alone, avoiding the effort and complications of a sternotomy.

Conflict of Interest Declaration: None

BASAL CELL CARCINOMA INVOLVING A VENTRICULOPERITONEAL SHUNT: A RARE SURGICAL DILEMMA FOR A COMMON SURGICAL PATHOLOGY

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A 51 year old paraplegic male with spina bifida and hydrocephalus, who had been immunosuppressed for 7 years following a renal transplant, presented to our clinic in March 2013 with a recurrent basal cell carcinoma (BCC) involving an inactive ventriculoperitoneal shunt (VPS) in the right neck. Surgical management involved an excision of the scar with a peripheral margin of 1cm along with removal of the involved shunt tract and intra-operative pathological assessment. Definitive histopathology revealed a focus of infiltrating sclerosing BCC involving the subcutaneous tissue and abutting the VPS. Involvement of a VPS by a BCC has not previously been described in the literature. This case report describes the management of a rare presentation of a common surgical pathology.

Conflict of Interest Declaration: None

THE INCIDENCE OF TRISMUS IN PATIENTS UNDERGOING CURATIVE TREATMENT FOR HEAD AND NECK CANCER

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Purpose: This study documents the incidence and severity of trismus following curative treatment for head and neck cancer.

Methods: Patients undergoing curative treatment for head and neck cancer 01/01/09-31/05/12 were identified from the Head and Neck cancer databases at Wellington, Hutt and Palmerston North Hospitals. Patient demographics, tumour type, site and TNM stage, and treatment(s) were documented. Data was supplemented by review of patients' records. Mouth opening was measured using a TheraBite Range of Motion scale, >6 months after treatment completion. Jaw opening of 1 subsite in 4 patients. 80 patients had parotid and/or neck nodal involvement. 115 (95.8%) patients had mean jaw opening measurement of 40.0 (range 11-65) mm. 32 (27.8%) patients had trismus; 3 had surgery alone, 18 had surgery and radiotherapy, 2 had surgery, radiotherapy and chemotherapy, and 9 had radiotherapy and chemotherapy without surgery.

Conclusion: Trismus affected 27.8% of our study population, the majority of whom received combined surgery and radiotherapy.

Conflict of Interest Declaration: None

A SURVEY OF THE VOICE PROSTHESIS MANAGEMENT PRACTICES OF SPEECH PATHOLOGISTS IN AUSTRALIA

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Purpose: There is a degree of practice variability in Australia regarding speech pathology management of tracheoesophageal speech post laryngectomy. Issues also exist regarding training, mentoring and support. The current surveys was designed to document current Australian practice patterns and examine areas of need regarding training and support.

Methodology: A secure online survey was distributed to speech pathologists within Australia via the Speech Pathology Head and Neck Cancer Google group. Eligible participants were those (a) working in Australian clinical services, and (b) who were the main/lead/sole clinician responsible for managing a caseload that includes patients with a laryngectomy who use tracheoesophageal speech. The survey consisted of questions which related to demographic and caseload information, initial voice prosthesis placement and procedures, equipment and service provision, staffing, training and support availability. The questions in the survey contained multichoice, dichotomous format and open-ended questions.

Results: At the time of abstract submission the survey was still live and recruiting participants. It is estimated that approximately 20 clinicians will complete the survey representing this small and specialist field. Data will be analysed as a single Australian cohort and sub-analysis by state/territory will be conducted if indicated.

Conclusion: The current data set will identify areas of common clinical practice and highlight areas of low clinical consistency within national practice. The data will confirm current issues in existing services which can be used to help drive practice change, advocate for better patient support and highlight the training needs of speech pathologists in this field.

Conflict of Interest Declaration: None

RECONSTRUCTIVE CHALLENGES IN HEAD AND NECK SURGERY

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Introduction: The Princess Alexandra Hospital Multidisciplinary Head and Neck Clinic (PAHMHaNC) manages 400 new patients annually. Surgical management of head and neck cancer presents a unique set of challenges. This work defines some of the challenges faced in a busy Australian unit and outlines how they were overcome.

Methods: A retrospective review of head and neck reconstructions performed the Princess Alexandra Hospital between 2009 and 2012 was undertaken. All cases had been discussed in the PAHMHaNC. Five specific reconstructive challenges were identified and illustrated with case reports. A literature review was conducted for each case to determine prior reported experience with each challenge faced.

Results: The challenges identified were composite defects, aberrant anatomy, a failed primary reconstruction, deficient target vessels and cosmesis. Each was overcome with a satisfactory result.

Conclusion: Composite defects require careful analysis of the functional units within the defect. Aberrant anatomy can be overcome by creating chimeras. The history of reconstructive surgery presents salvage reconstruction options that have been forgotten for primary reconstruction. Deficient target vessels for free tissue transfer can be overcome by hybridisation of flap vascularity. Optimisation of cosmesis relies on observing subunit and 'like with like' principles. These challenges highlight the multidisciplinary nature of head and neck problems and the need for innovation whilst observing principles.

Conflict of Interest Declaration: None

OCCULT NECK DISEASE IN METASTATIC PAROTID CANCER

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Background: The aim of the study was to examine the incidence of occult metastases in the clinically and radiologically node negative neck in metastatic cutaneous squamous cell carcinoma of the parotid as well as examine the influence of PET-CT in the staging of these patients.

Method: This retrospective study involved chart review of surgically treated patients with metastatic parotid carcinoma between 2007-2011 in a tertiary care setting.

Results: Fifty-five consecutive patients with cytologically proven metastatic parotid squamous cell carcinoma were identified. A total of 40 patients had no evidence of neck disease on clinical or radiological work-up. 91% were male. The median follow-up was 24 months with a median age of 69 years at diagnosis. CT evidence of neck disease was identified in 22% of patients, with a positive predictive value of 0.44 for positive nodal disease. In the patients with PET avid nodal disease (12%) the positive predictive value for pathologically positive neck disease was 0.8. The rate of occult metastases was 12/25 (48%). The data indicated that, irrespective of the treatment modality of the neck, there was no statistically significant difference in outcome.

Conclusion: In the clinically and radiologically CT negative neck, the rate of occult metastases was 48%. This relatively high rate would suggest that the neck should be treated in patients with metastatic parotid carcinoma. The rate of pick-up of occult neck disease appeared to be improved with the use of PET-CT. This would support the use of PET-CT in the routine work-up of such patients.

Conflict of Interest Declaration: None

AUSTRALIAN AND NEW ZEALAND
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