



POSTER SESSION ABSTRACTS

Poster Session Abstracts

CNSA POSTER ABSTRACTS

1

PATIENT INFORMATION AND INFORMED CONSENT DOCUMENTS (PICFS) – HOW READABLE ARE THEY?

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Background: Obtaining informed consent from cancer patients prior to their entry into a chemotherapy clinical drug trial is an essential legal and ethical process for Good Clinical Practice. It is achieved by both face-to-face discussion with a Medical Oncologist and the provision of a written Patient Information and Informed Consent document (PICF). The PICF explains in detail the purpose, procedures, benefits, risks, inconveniences, discomforts and possible outcomes of participation. For the PICF to be readable to a patient considering a clinical drug trial, it should ideally be written at a Flesch-Kincaid Grade Level of 8.0 and with a Flesch Reading Ease score of 60–70. Currently, PICFs in the Medical Oncology Department contain lengthy explanations of trial procedures and treatments and sometimes exceed 15 pages. Therefore, how readable are these PICFs? And, are they understandable to someone with an average level of education.

Methods: 22 PICFs used in Medical Oncology clinical drug trials in the last 4 years were obtained and Flesch Reading Ease and Flesch-Kincaid Grade Level Scores of readability were calculated using an inbuilt feature of Microsoft™ Word. The wording of the hospital Ethics Committee (EC) application proforma PICF was also assessed.

Results: The Medical Oncology PICF had an average Flesch Reading Ease Score of 29.1 and a Flesch-Kincaid Grade Level Score of 11.35. The Alfred Hospital Ethics Committee (EC) suggested proforma for PICFs had a Flesch Score of 6.3 and a Flesch-Kincaid Score of 12.

Conclusion: None of the PICFs reviewed was written at or below the 8th grade education level. Consequently, it is our recommendation that the EC review the base content of the current EC PICF. Medical Oncology will review and improve the readability and understandability of the consent forms we prepare for Ethics submissions in the future.

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PATIENT EDUCATION – A REVIEW

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In the Oncology Day Therapy Unit at the Royal Brisbane Hospital all patients receiving chemotherapy have an education session prior to receiving their treatment. The session comprises of viewing a video, one-on-one discussion with a registered nurse outlining treatment side effects and management of these, all patients receive written information packs.

Recently, we conducted a survey to evaluate the effectiveness of our education sessions amongst our patient population. 50 patients were surveyed with 36 responses.

The patients were asked a series of 8 questions: Did you receive an information pack when starting treatment in ODTU? Did you receive enough written information? Have you used the information provided? Did you watch the video? Did you find the video helpful? Did you receive information/ education from the nurses?, Did you understand the information given to you by the nurse? Have you sought information from other sources?

The survey responses confirmed that the education provided was effective and met their information needs. Eighty percent of patients felt the education sessions were helpful and informative. Ninety five percent understood the information and used the information provided. Sixty percent of patients

still sought information from other sources such as Internet. A suggestion was to include more references and websites to safely access. Comments included positive feedback regarding staff and the need for additional staff.

The review demonstrated to staff the benefits of providing individualised education sessions and patients appreciation of the education provided.

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WHO CARES FOR THE CARER?

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We provide clinical, physical, spiritual and emotional support to our patients and their families on a daily basis, but who looks after us? It is widely published that Oncology Nurses leave this area of nursing due to 'Compassion Fatigue' which in turn leads to further stressors such as:- workloads and inadequate skill mix. 1. What if we cared for ourselves as we do our patients? 2. Would this impact on the number of nurses leaving Oncology? 3. How do we care for ourselves? During this presentation we will delve into the secrets of Self Care, complete a 'Compassion Fatigue Self-assessment' and explore strategies to avoid 'Compassion Fatigue' in our own lives. We will become our own 'Oncology Nurse', so please join me on this important journey into your future health and well being.

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EVALUATION OF 'PRE CHEMOTHERAPY EDUCATION SESSIONS' (PCES) IN A CHEMOTHERAPY DAY UNIT

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Introduction: With the increasing incidence of cancer and moving trend of treatment to ambulatory settings, patient education on coping with disease and treatment side effects poses a challenge for oncology nurses. As a result of this demand a structured pre chemotherapy education session (PCES) was introduced in August 2006 to streamline the new admission process, increase efficiency of patient throughput; facilitate pre-treatment investigations, reduce cancellations and delays; establish timely allied health referrals as well as empower patients and caregivers to cope with chemotherapy side effects.

Method: All new English speaking patients were encouraged to attend for a half day (usually 2–3 days before treatment commences). Verbal group education (3–4 patients) provided on general chemotherapy side effects; followed by a one-on-one session where detailed medical/nursing history obtained and specific side effects described on individualized regime; allied health referrals made. An evaluation form measuring patients' satisfaction was completed by each participant at conclusion of session. Data obtained to ensure allied health attended on their first treatment day and monthly assessment of throughput and cancellation data recorded.

Results: All patients (100%) were satisfied with the structure and information provided during PCES. Allied health attended to patients on their first treatment day 100% of time. To date the Chemotherapy Day Unit has seen an increase of patient throughput when compared to Aug-Feb 05/06 by 816 patients (16.7%) and cancellation data remains stable since introducing PCES.

Conclusion: Providing detailed education to patients before commencing therapy prepares them for treatment and long term may improve coping strategies when dealing with cancer. PCES has potential to streamline increased workloads anticipated for ambulatory settings as more cancer treatments become outpatient based.

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IMPROVING CLINICAL TRIAL PROCESSES BENEFITS ALL

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The NMMH Medical oncology trial department have engaged in a process of innovation to meet the increasing complexity of trials. Our team objective is to ensure optimal care for patients while also providing quality data and adherence to regulatory requirements in the conduct of trials. We currently have 75 studies (recruiting or in follow-up) and 369 patients receiving treatment or in follow-up. Numerous processes have been implemented to ensure a seamless service is provided to the patients, investigators and trial sponsor. These include:

- How to folders provide a reference tool in the absence of the primary trial coordinator.
- Weekly team meetings are held to discuss patient and operational issues.
- Investigators have dedicated trial time each week.
- Medical record stickers/adverse event stickers are utilised to ensure accurate source documentation of trial requirements
- Protocol review process to discuss scientific merit and operational issues of the proposed trial.
- Staff education
- Proactive identification of potential participants.
- Trial databases accurately record all trials being conducted and patients who are screened and recruited and provide a mechanism for quick and accurate reporting.
- Financial management The effect of these strategies has been demonstrated through.
- Enhanced provision of timely and consistent information to patients and their families.
- Improved number of patients offered participation in cancer clinical trials in line with the NSW Cancer Council (NSWCC) and NSW Cancer Institute (NSW CI) clinical trial program objectives. (Ref 1) In 2006 2280 patients were seen by the department and 208 (9 %) were offered the opportunity to participate in a trial.
- Improved team communication
- Improved staffing levels.
- Ease of reporting to the NSW CC and NSW CI and other regulatory bodies.
- Production of timely, accurate and comprehensive data

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ONLINE PEER SUPPORT FOR THE BREAST CANCER JOURNEY – THE STORY OF THE B-MAIL QUILT

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The NSW Breast Cancer Institute (BCI) developed B-Mail, an emailing list, in 1996 as a support mechanism for women experiencing breast cancer. It has grown to become an active group which communicates regularly, offering support and friendship. The objectives of B-mail include providing: a forum for contact with other women with breast cancer, an easy and convenient way to communicate, a system to receive messages in a personal mailbox rather than having to access a website. While it was expected that women would form relationships with other B-Mail members, the strength and longevity of these bonds was unforeseen. The creation of the B-Mail quilt is a testament to the success of the group. The quilt was conceptualised by Jenny L, a B-Mail subscriber from southern NSW, to promote the mailing list and thank the NSW BCI for providing an effective support mechanism for her. She and other B-Mailers from Australia and New Zealand each designed and created a square for the quilt. The women spoke of how essential their contact with others via B-Mail was during their treatment. A booklet telling the story behind each square of the quilt has also been developed. The benefits of on-line support in a vast country like Aus-

tralia are enormous. It is the purpose of this presentation to detail the development of B-Mail as an online support mechanism and to share the group member's experience of that peer support through the story of the Quilt

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DEVELOPING A CHEMOTHERAPY EDUCATION CHECKLIST

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As part of the Cancer Care Coordinator's Project Plan, September 2005, Nambour General Hospital a target of "Patients attending Oncology Out-patients will understand what may happen to them during active treatment" was set. A literature review was undertaken; the existing process was reviewed, including a survey of nursing staff on patient education, and criteria audit on patient education documentation.

Issues identified in relation to the process were a lack of documented guidelines on patient education and thus is could not be guaranteed that each patient was provided with comprehensive evidence based education. There was no set standard of written information provided to patients. Current documentation on patient education was limited to a brief narrative describing the education and a series of tick boxes in relation to side effects of the drug therapy. There was no formal evaluation to determine whether the patient understood what may happen to them.

The checklist was based on checklists used at the Royal Brisbane & Women's Hospital and the Nepean Cancer Care Centre. Input was sought from allied health and nursing staff. It was anticipated that the Checklist would be used in collaboration with the guideline would assist RN's to ensure education was provided in a structured form, delivering a high standard of verbal and written information which was evidence based.

Implementation was followed by a criteria audit of the Chemotherapy Education Checklist and a nursing staff survey. Variations to checklist and guideline were made.

The Chemotherapy Education Checklist and Guideline has improved the standardisation of chemotherapy education sessions regardless of the nurse delivery. It also ensures areas of education not addressed at the initial education session are followed up at subsequent patient interactions.

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SUPPORT FOR CLINICAL NURSES AS FIRST TIME PRESENTERS IN SHORT COURSE PROGRAMS

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Within the Peter MacCallum Short Course Nursing Education Program, Clinical nurses provide approximately 30% of the lecturing requirement. Of these nurses, 7% have little or no previous lecturing or public speaking experience. For a number of these novice presenters, whose nursing roles in the clinical area do not require the use of lecturing/presentation skills, the thought of venturing into such unfamiliar territory incites fear and anxiety. This factor, combined with the disparity in participant satisfaction rates between the novice and the lecturer with greater experience (regular presentations in the short course program), led to the development of a training program aimed at supporting and developing nurses in public speaking roles. The program includes the development of a Presentation skills workshop and individual practice sessions.

Despite their lack of experience, initial evaluations for sessions provided by the novice presenters, using a five point Likert scale (1 = strongly disagree, 5 = strongly agree), revealed a participant satisfaction average of 84% (scoring 4 or 5 on the evaluation tool). This figure, though somewhat less than the satisfaction average achieved by more practiced speakers (91%) exceeds the Nursing Education Centre performance target of 80%, suggesting that the program is having a positive impact

The training program was further evaluated by comparing the participant ratings of novice presenters who have completed the presentation training program and those who have not. Results demonstrate novice presenters completing the training program achieved a significantly greater satisfaction average than those who did not.

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CASE STUDY: IMPLEMENTATION AND EVALUATION OF A MODEL OF PERSON-CENTRED CARE IN A RADIATION ONCOLOGY OUTPATIENT DEPARTMENT

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This case study utilised an instrumental, single case, multi method design to evaluate nursing practice redesign from a task-based to patient-centred model of care in a radiotherapy department through a Primary Nursing/ Collaborative Practice Model. The Interactional Model of Client Health Behaviour provided the framework for developing the nursing practice model. To evaluate the model, pre-post implementation data was collected to assess outcomes from the perspective of patients, clinicians, and services. In addition, evaluation data was collected through indepth interviews with these groups at key points during the implementation and post-implementation phase. Data from these indepth interviews are reported in this presentation. Thirteen interviews were conducted with clinical staff: nurses, managers, radiation oncologists, radiation therapists and allied health. Thematic analysis identified six broad themes which represented areas of change that occurred as a result of implementation of the model: collaboration, patient care, culture, professionalism, staffing/role, and change management. Overall, the changes reported in these areas reflected positive outcomes from the new model of care. Some negative perceptions of the impact of the model were identified by some groups, including gaps opening in patient care as the focus changed directly from tasks to the patient as the recipient of care. The findings of this study have implications for the development and implementation of professional model of nursing care within the context of radiation oncology. Results provide a blueprint for future practice development in similar ambulatory oncology practice areas.

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MOUTH CARE PRACTICE REVIEW

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The cancer patient is often faced with unavoidable chemotherapy-induced oral complications, often coexisting amidst an array of other side effects of therapy. Whilst the importance of good mouthcare management in such patients is undisputed, the literature informs us that it does not always occur (Honnor and Law (2002)).

A Mouthcare Project was instigated in a 16 bed Haematology/Oncology inpatient unit to improve clinical practice. The project consisted of conducting audits, staff education and introduction of assessment tool and a revised mouthcare management protocol. Results of the project are presented along with lessons learnt and future directions.

A Documentation Audit comprising questions addressing admission and daily assessment, nursing plan usage and subsequent nursing documentation was carried out. The results showed that documentation was not consistent. The Knowledge Survey comprised of questions concerning oral anatomy, ward protocol usage and management of oral complications. The initial results indicated knowledge deficits in all areas.

Survey and audit findings were presented to the staff in conjunction with intensive education sessions on basic oral anatomy, mucositis, and the current model of pathobiology of mucositis (Sonis, 1998).

The project has facilitated discussion amongst staff and generated interest from other medical specialties. The project has enabled staff to develop an understanding of evidence based practice as well as increased understand-

ing and knowledge of oral pathobiology and oral complication management, including consistent documentation.

References

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2. Sonis, S, Oral Mucositis in Cancer Therapy, *The Journal of Supportive Oncology*, 1998, Vol 2, Supplement 3, Nov/Dec, page 3-8.

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INTRODUCTION OF A NURSE LED CLINIC FOR MEN RECEIVING RADICAL RADIOTHERAPY FOR PROSTATE CANCER

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Prostate cancer is one of the most common malignant diseases for which health care intervention is sought. Radiotherapy plays an integral role in the treatment of cancer with 50% of individuals receiving radiation during the course of their disease. The increasing number of men requiring radiotherapy impacts on supportive services such as follow up care.

Aim: To evaluate the acceptability of a nurse led clinic (NLC) for men with early stage prostate cancer.

Method: The total number of participants across the two study cohort was 60, with 30 participating in cohort 1 and 30 in cohort 2. However due to increasing ill health or lack of desire to continue with completion of study questionnaires, complete data sets (i.e. at baseline and week 7) were available for 18 men from cohort 1 and 26 men from cohort 2.

Results: At baseline 52.2% of men were very happy or quite happy being followed up through the NLC. By week seven 65.9% reported to being happy to very happy. 17% of men said they were not at all happy to be followed up within a nurse led framework.

The pilot project demonstrates the acceptability of a NLC for men attending follow up for prostate cancer. However there continues to be a paucity of reliable and valid instruments to capture nurse sensitive outcomes, therefore further work is required in this area.

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CREST OF A WAVE

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Some people cope with their cancer diagnosis, the treatment and the side effects by facing the reality and others by denial. Although studies show that denial may prevent some people from finding constructive ways of dealing with their illness, they have also shown that for some it can be a positive coping strategy as it allows the cancer patient to gradually face reality without feeling overwhelmed.

A comprehensive review of recent literature also reveals that exercise enables cancer patients to cope with a range of quality of life issues. The research shows that exercise can alleviate a patient's fatigue, increase physical stamina as well as improve psychological well being. However the effectiveness of the exercise as a quality of life intervention for cancer patients depends largely on the participant's motivation and adherence.

As cancer nurses it is vital that we accept and respect each individual cancer patient's method of coping with their disease, the treatment and the subsequent side effects.

This is the story of John, a 31-year-old male diagnosed with poorly differentiated stage 4 gastric cancer. It demonstrates how he changed the attitudes and beliefs of the nurses who treated and cared for him. By utilising denial and exercise, John coped with his diagnosis, continuous chemotherapy treatment, as well as the side effects and lived the last 6 months of his life surfing the crest of a wave.

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ACHIEVING A SAFER PATIENT OUTCOME FOR INPATIENT ADMINISTRATION OF 'DAY 1' CHEMOTHERAPY

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Achieving a safer patient outcome for Inpatient administration of 'Day 1' Chemotherapy Katherine Cox Nursing Unit Manager Medical And Radiation Oncology Unit Westmead Hospital Sydney, New South Wales Prior to administering chemotherapy there are numerous steps that need to be followed in order to minimise harm, while still obtaining a therapeutic chemotherapy dose for the patient. In a busy inpatient unit with a regular turn over of medical staff and new nursing staff still learning the intricate details of cancer nursing, there is high likelihood for error or an incomplete review of patient details. Prior to commencing each cycle of chemotherapy members of the team are required to determine that all relevant tests are completed and that the results are 'safe to proceed' with chemotherapy. The team includes medical, nursing and pharmacy staff. After two incidents of patients receiving chemotherapy with sub optimal blood results and a 16-year-old female developing a reduction in pulmonary function secondary to Bleomycin when a DLCO was not completed, I felt there needed to be a formal documented process. I developed a flowchart for 'Day 1' chemotherapy that works in conjunction with an 'authorisation' stamp. The flowchart states each team member's duties prior to chemotherapy administration. The stamp is used to remind staff of all relevant tests needed and a communal space to record all results. Chemotherapy is not administered until authorisation is received as a signature within the stamp from the senior registrar or the consultant. This process has received the approval and support of the medical staff and is used in both inpatient units, i.e. medical oncology and the haematology bone marrow transplant unit.

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IDENTIFYING DISEASE SPECIFIC FACTORS THAT PREDISPOSE CANCER PATIENTS TO FALLING WHILST IN HOSPITAL

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Falls prevention strategies to reduce the number of patient falls in hospitals is receiving increased attention in health care as organisations strive towards ensuring a safe clinical environment. The literature identifies many risk factors such as age, co-morbidities and functional ability that predispose patients to falling whilst in hospital, however there is limited research that explores cancer and the consequent disease process factors that increase a patients risk of falling. Peter MacCallum Cancer Centre reports approximately 140 patients falls per year and it has become increasingly evident that the majority of these falls can be credited to disease process such as metastatic spread. This presentation reports on the findings of an audit process where all patient falls (July 2005–2006) were investigated for disease specific causes. The results of this review will have several implications for our falls minimisation program at Peter Mac, including increased awareness of disease related influences on patients falling and a review of the screening tool to accommodate disease related factors. This data could also provide a new way forward to setting new definitions and benchmarking for falls in a cancer population.

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QUANTIFYING CLINICAL TRIALS

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The aim of this project was to quantify the workload involved in undertaking clinical trials in medical and radiation oncology.

Method: The team conducted time trials for each activity undertaken to establish and maintain a clinical trial over a six-month period. Once the time trials were completed it became obvious that our workload could be divided into three categories. The division related to the occasions of care with our patients, that is face-to-face or phone contact relating to the clinical trial. A basic study therefore, involved three monthly patient contact, minimal data collection, blood sampling and maintenance of a database. Medium trials involved Phase II and III trials with occasions of care weekly and more intense trials were Phase I trials involving hourly occasions of care.

Results: The benefit of this project was the recognition of time taken to accomplish certain tasks. We established that approximately 50% of the trial nurses time involved face to face contact while the other activities involved documenting CRF's, maintaining files, monitoring visits, sending specimens/samples and completing SAE's. We could also identify new trials and the workload required therefore improving our ability to plan for the future. Another benefit was a financial one where we could quantify and value our specific workload, which was beneficial when negotiating budgets.

Conclusion: We are constantly seeking more time and resources therefore this project highlighted the very basic concept of division of labour and has clarified our workload to us and the consultants. By quantifying our workload we can plan for the future.

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BENEFIT OF ENDOMETRIAL BIOPSY (EB) IN WOMEN RANDOMIZED TO TAMOXIFEN OR PLACEBO FOR BREAST CANCER PREVENTION

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Aim: Review the efficacy of EB in asymptomatic women with an intact uterus on the International Breast Cancer Intervention Study I (IBIS) at Royal Prince Alfred (RPAH) and Dubbo Hospitals.

Methods: RPAH was a unique centre for the IBIS trial as the Ethics Review Committee mandated that post menopausal women have an annual endometrial biopsy and premenopausal women should have at minimum an annual review by a gynaecologist. We reviewed the value of EP in asymptomatic women who had not undergone a hysterectomy randomized to this trial.

Results: Between March 1993 and March 2001 160 women were randomized to this study from RPAH and Dubbo. Fifty five women had undergone hysterectomy at trial entry and a further 5 patients had a hysterectomy during the course of the study medication. Of the 105 women with an intact uterus at trial entry 70 were pre/peri menopausal and 35 post menopausal women. 4 patients, all postmenopausal, signed waivers to exclude them from endometrial biopsies. In total 70 EBs were attempted on asymptomatic women. 52 endometrial pipelle biopsies and 18 other. Of these 31 were non-diagnostic due to inadequate material. No endometrial malignancies were diagnosed while women were on study medication. 1 endometrial cancer was diagnosed in a postmenopausal woman three years after trial therapy was completed.

Conclusions: There confirms is no role for routine EP in asymptomatic women on tamoxifen for breast cancer prevention. This is consistent with published data and is not recommended for women on tamoxifen.

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CANCER INSTITUTE NSW RURAL CANCER NURSING EDUCATION PILOT IN NSW

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The Cancer Institute NSW 2004 Nurse Education Review identified training and education obstacles for rural nurses working in oncology are access

to appropriate courses, course associated costs, post-graduate opportunities, backfilling and time. Creating flexible course delivery, increasing access and being more responsive to the personal needs of nurses are essential considerations.

The Cancer Institute NSW 2007 Rural Cancer Nursing Education Pilot, conducted in Albury and Queanbeyan NSW, was designed to provide opportunities for rural nurses to participate in face-to-face education in a nearby regional centre. The University of Sydney was commissioned to develop and deliver four modules of training. Topics covered included overview of cancer; therapeutic nursing; supporting resilience in recovery and supportive care. Thirty-two nurses attended. Senior regional cancer nurses and cancer specialists were invited to participate in the delivery to build links between local cancer service providers.

Assessment of learning was conducted for consenting participants. Attendance to all four modules and successful completion of assessments resulted in 24 credit points towards further post-graduate studies.

The greatest difficulty for nurses to attend was clinical release. Initial findings indicated participants highly appreciated local level delivery; content progressed in a logical sequence and provided evidence for treatment delivery; and opportunities to explore developments in cancer care and consolidate knowledge in the basic sciences was provided.

A mix of validated and new tools examined outcomes of learner satisfaction; knowledge, skills, attitude and practice change; and quality of service. Following the formal program review by the University of Sydney, the Cancer Institute NSW will determine the feasibility of program expansion.

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TRANSLATION FROM RESEARCH TO CLINICAL PRACTICE: MEETING THE SUPPORTIVE CARE NEEDS OF PEOPLE WITH LUNG CANCER

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Background: Given the short duration of survival of patients with lung cancer, ensuring that their needs are identified and addressed is of paramount importance to prevent unnecessary distress and improve patient outcomes. Evidence indicates that healthcare professionals consistently underestimate or overlook the needs of patients diagnosed with cancer. This high level of unmet needs indicates that research findings have not been translated into improving clinical practice.

Objective: To improve the coordination and provision of supportive care services to patients with lung cancer.

Method: This quality improvement project, which included the introduction of a lung nurse coordinator role, has sparked many changes that have resulted in an improved and coordinated approach to meeting the supportive care needs of patients with lung cancer at Peter Mac. The resultant changes that have occurred have been responsive to gaps in service provision and have been at the organisational, clinician and patient level.

Findings: The findings of this project include the implementation of a systematic approach to identifying patients supportive care needs; the identification of clear pathways for internal referral; improved links and communication with external hospitals and community services. Regular multidisciplinary meetings with nursing and allied health staff to address the supportive care needs of the patient ensure that the supportive care needs of lung patients consistently remain on the agenda of all clinicians including medical staff. These changes have become part of routine clinical practice with documentation to encourage sustainability of the changes. Ongoing review and evaluation as part of the quality cycle continues.

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PUSH FOR A PROFILE: THE RADIOTHERAPY NURSE AT PETER MAC

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Radiotherapy is a major modality used in the treatment of people with cancer. At Peter Mac, approximately 70% of the patient population experience radiotherapy in either a curative or palliative capacity.

Historically radiotherapy nursing has had a low profile being overshadowed by both the technical aspects of therapy and also by the small population who identify themselves as radiotherapy nurses. In addition, the location of the radiotherapy units, often in basement levels, has distanced these nurses from their colleagues. In 2004, radiotherapy nurses and nurse educators responded to these concerns about lack of visibility and recognition by establishing a subcommittee of the Nursing Practice and Research Committee. Priority was given to activities that would raise the profile of the nurse within the organisation and reflect issues of similar concerns for radiotherapy nurses across Australia.

The subcommittee focused on the need for a radiotherapy nursing role definition, and the identification of specific education and training in the sub-specialty. Participating in a process of reviewing key literature on radiotherapy nursing roles, self reflection, and collaboration, the 12 nurses in the group met regularly over 3 months and documented role activities that enabled clarification of the required skill set for the sub-specialty role, as well as professional development needs. Over the following 12 months the following outcomes were achieved: role definitions for the entry level radiotherapy nurse, and radiotherapy nurse specialist in the Australian context and the designing of a model for a professional development pathway including an education and training program.

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CHANGING PARADIGM – HAEMATOLOGY PATIENTS BEING TREATED IN THE OUTPATIENT SETTING

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There has been a significant change in the treatment management for haematology patients over the last 20 years; as the treatments for acute haematology patients has moved from the inpatient to the outpatient setting. Significant pressures on bed management, has made different institutions re-evaluate the planned care for the acute haematology patient. Some factors influencing this move have included

- increase in incidence of some cancers (Lymphoma, Multiple Myeloma)
- the increased number of patients being diagnosed with a haematological malignancy as we live longer
- as more patients are diagnosed and treated – there will be a certain percentage who relapse and have more intensive treatment with higher acuity/complication risk
- increased use of Bone Marrow Transplantation (BMT) as a treatment option
- increased acuity of patients being treated and surviving
- health funding directed towards outpatient economics
- overseas models of care being incorporated into Australian health settings
- bed closures in some institutions and difficulty maintaining staff

To accommodate the change in practice we have seen an increased workload in Oncology Day Therapy Unit (ODTU) and a corresponding increase in clinic visits. Staff practices have needed to change:

- use of different infusion pumps/modalities
- complex scheduling of treatments and supportive therapies
- chemotherapy protocols reflecting area of delivery
- specialist knowledge

ODTU is integral with all treatments and developments – as treatments are commenced in one area and completed in another. All this has seen the outpatients department change as a very vibrant and ever evolving centre for haematology management creating diverse financial distribution.

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FOSTERING AN ENVIRONMENT OF CLINICAL INQUIRY

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Engaging staff in discussions about clinical issues and utilisation of evidence-based practice is a challenge familiar to many nurses. A recent survey conducted on the Surgical Oncology unit at Peter Mac indicated that the traditional in-service approach to education was not meeting staff needs. This opinion was reflected across the hospital by the general apathy surrounding in-service programs. A new Case Study format was introduced to facilitate pertinent discussions around clinical practice issues and to create an ideal learning culture. This format was recommended by the Director of Clinical Services, supported by Nurse Managers and implemented by the Practice Development Nurses across the inpatient setting. The program has quickly gained momentum and enthusiasm from all clinical staff resulting in a renewed interest in ongoing education. It has provided a forum for the introduction of evidence-based practice into the everyday, removing the ritualised approach to care delivery. It has also provided a forum to discuss the practical aspects of research and implementation of clinical practice guidelines. This paper describes the implementation process: how it has resulted in clinical staff owning the program; the recognition of common themes across units; how the information collected from the individual case studies has influenced hospital wide programs and quality improvement activities. This is an exciting format that can be easily translated into any clinical setting. The current challenges are to roll out the program into the outpatient setting and sustain the interest so it becomes part of the nursing culture at Peter Mac.

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FROM GOOD TO BETTER: IMPROVEMENTS TO THE PROVISION OF GENERAL ANAESTHESIA TO CHILDREN WITH CANCER WITHIN THE CHILDREN'S CANCER CENTRE AT SOUTHERN HEALTH

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The Victorian Paediatric Integrated Cancer Service (PICS) is a partnership between the Royal Children's Hospital, Southern Health and the Peter MacCallum Cancer Centre. PICS aims to ensure that all Victorian children and adolescents with cancer, and their families, have access to high quality, safe and effective clinical and psychosocial care that is well coordinated and provided in environments that are conducive to healing and coping, as close as to home as possible.

In July 2006 a custom built Children's Cancer Centre (CCC) was established at Monash Medical Centre in Clayton. This centre included a purpose built treatment room designed to support general anaesthesia (GA). Prior to this, children with cancer requiring bone marrow aspirates (BMA) and lumbar punctures (LP) had procedures performed within the main theatre complex. Difficulties identified by staff included frequent delays due to unforeseen theatre emergencies, extended fasting periods for children and inefficiencies in patient planning within the CCC.

A review of 36 patient attendances reinforced these concerns, demonstrating unacceptably long fasting times and delays to theatre commencement times. A retrospective audit of the new CCC based procedures demonstrated decreased waiting and fasting times, significant reduction in the length of hospital stay and increased CCC efficiency. Key benefits to theatre management department included elimination of portering time to the CCC and increased access to theatre sessions for other patients. Child, parent and staff surveys reinforced these benefits whilst highlighting increased parent satisfaction and reported decreased child and parent anxieties.

The introduction of general anesthesia within the CCC has improved the care provided to children requiring procedures, in a comfortable familiar environment by staff they know and trust.

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WHAT DOES IT REALLY COST TO TRANSFUSE YOUR PATIENT?

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Background: In haematology/oncology transfusion of blood components is often an essential part of treatment. ARCBS is funded to collect, process and supply blood components from voluntary blood donors. These components are provided without direct cost to patients or hospitals. However, substantial additional hospital related costs are involved in the transfusion process and these are unknown in Australia. Uncovering the real cost of transfusion' is a joint project between ARCBS, PMCC and FMC.

Aims: 1. To examine costs of all the laboratory/hospital processes involved in red cell transfusion. 2. To develop a model that can be applied to other blood components. **Process:** Each step of the transfusion process from receipt of blood by the laboratory, inventory management, laboratory investigations, equipment, infrastructure and clinical costs including follow-up and governance activities are being mapped in detail.

Results: Process maps are complex and include multiple interactions in the transfusion process with phlebotomy comprising at least 30 actions and red cell transfusion involving 30 major steps with 120 sub-processes. Cost calculations are based on the various process maps and these calculated costs will be added to the known ARCBS costs of providing blood components.

Conclusions: Understanding the real cost of the whole process will help focus blood transfusion support and/or use of appropriate alternatives. This information will help maximise use of precious components and optimise patient care while reducing exposures, risks and costs.

Cancer Institute

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NSW CHEMOTHERAPY AND PAIN MANAGEMENT CLINICAL UPDATE IN GREATER WESTERN AREA HEALTH SERVICE, NSW

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Community and hospital based generalist nurses play a key role in providing cancer patients with optimal care in rural areas. The professional development of rural nurses at the local level is considered crucial to maintaining and expanding a skilled and knowledgeable workforce to better support cancer patients in regional, rural and remote NSW.

Following an identified need by the Greater Western Area Health Service (GWAHS), the Cancer Institute NSW was approached to deliver a targeted training program for generalist nurses in hospitals; and community and aged care settings who work with cancer patients. The University of Sydney was contracted to develop and deliver the training workshops.

The Chemotherapy and Pain Management Clinical Update was a one day workshop that was offered in Orange, Dubbo and Broken Hill NSW. The workshop aimed to provide nurses caring for cancer patients an opportunity to further develop their skills, knowledge and understandings in the administration of non-intravenous chemotherapy and pain management. An interactive program that combined local and metropolitan facilitators was developed.

A formal evaluation was conducted using a pre and post survey. This focused on expectations and met/unmet needs in relation to knowledge and understanding of chemotherapy and pain management.

This paper will provide an overview of the training program, the outcomes of the formal evaluation and the lessons learnt in delivering this model for ongoing professional development for rural nurses.

Following the formal program review by the University of Sydney, the Cancer Institute NSW will determine the feasibility of program expansion.

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ASCITES FOLLOWING SELECTIVE INTERNAL RADIATION THERAPY AND FOLFOX CHEMOTHERAPY NOT ALWAYS DUE TO PROGRESSIVE DISEASE

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Background: Selective Internal Radiation Therapy (SIRT) enables the delivery of high dose radiation to the liver in the setting of primary or secondary malignancy. It has been carried out on 6500 people world-wide. Nevertheless, its place in the therapeutic algorithm for metastatic colorectal cancer awaits the outcome of current phase III clinical trials. As clinical experience with this mode of therapy increases so does understanding of the possible effects of high dose irradiation to the liver. Here we describe the onset and management of non-malignant ascites 16 months following SIRT plus FOLFOX chemotherapy in a patient who remains progression free 28 months post administration. This patient was one of 20 with metastatic colorectal cancer to liver enrolled in a phase I dose escalation study of FOLFOX plus SIRT. The study examined 3 dose levels of oxaliplatin; 30, 60 and 85 mg/m², our patient receiving the highest dose level. A partial response was achieved by RECIST criteria, and a complete response by marker study. 16 months post implantation ascites developed and was initially suspected to be of malignant origin. However the ascites settled quickly with diuretic therapy and tests for disease progression were negative. A liver biopsy showed microspheres lodged within hepatic arterial branches, as expected, and expansion of portal tracts by mild fibrosis and inflammatory infiltrate.

Conclusion: Selective Internal Radiation Therapy delivers high dose radiation to the liver. When combined with radiation sensitisers such as oxaliplatin, portal tract inflammation and fibrosis can result, leading to delayed onset non-malignant ascites. The natural history of this occurrence is unknown but simple measures can be effective in its management, and patient quality of life maintained.

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PATIENT-REPORTED BURDEN OF MUCOSAL INJURY (MUI): COMPARISON OF CLINICIAN-RATED MUI AND PATIENT-REPORTED OUTCOMES

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Background: Patient (pt) reported outcome (PROs) tools identify MUI and its impact on functional and subjective outcomes. Among outpts, PRO tools are attractive because opportunities for direct assessment are limited, but agreement between PRO tools and objective MUI measures has not been uniform. We prospectively compared an objective MUI score and 3 previously validated PRO tools.

Method: The Triad Burden of Illness study is an international, 41-centre, prospective study of the risk and outcomes of radiation and chemotherapy-induced MUI. At baseline and during chemoradiation therapy (CRT), pts with larynx (L), hypopharynx (H), or non-small cell lung cancers (NSCLC) completed a daily MUI symptom tool (OMDQ) and 2 weekly PRO tools (FACT-E quality of life, FACIT-Fatigue). Clinicians examined pts twice weekly and scored MUI (WHO scale). In this interim analysis, we used random effects linear regression to compare clinician and pt ratings and t-tests to compare PRO scores in pts with and without severe MUI.

Result: To date, 29 pts have completed ≥ 2 paired assessments; 23 (79%) had L or H cancers. Ulcerative MUI (WHO ≥ 2) was more common among

L/H than NSCLC pts (39% vs 17%). Pt-rated MUI predicted clinician-rated MUI (p = 0.001). FACT-E and FACIT-F scores were significantly lower (worse) among pts with clinician-rated ulcerative MUI than pts without and among pts with pt-rated severe MUI symptoms (OMDQ ≥ 2) than pts without. Differences were largest in the subscales for physical and functional wellbeing and esophageal symptom special concerns.

Conclusion: PRO tools estimate the burden of CRT-induced MUI in outpts with L/H or NSCLC cancers. MUI appears to be associated with significantly poorer quality of life, functional status, and symptom scores.

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ECSA/DPPA2 IS AN IMMUNOGENIC EMBRYO-CANCER ANTIGEN THAT IS CO-EXPRESSED WITH CANCER-TESTIS ANTIGENS IN NON-SMALL-CELL LUNG CANCER

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Purpose: Cancer cells recapitulate many behaviors of pluripotent embryonic cells such as unlimited proliferation, the capacity to self renew and to migrate. Embryo-Cancer Sequence A (ECSA), later named Developmental Pluripotency Associated-2 (DPPA2), is an embryonic gene initially isolated from pluripotent human pre-implantation embryos. We hypothesized that ECSA/DPPA2 would be quiescent in most normal tissues but expressed in cancers and may therefore be a useful target for immunotherapy.

Experimental Design: ECSA/DPPA2 expression was examined in a panel of normal and tumor tissue by reverse transcription Polymerase Chain Reaction (PCR), quantitative real time PCR (qPCR) and immunohistochemistry (IHC). A panel of 110 non-small cell lung cancers (NSCLC) were further investigated for the presence of ECSA/DPPA2 transcripts and several Cancer Testis antigens (CTAs). Sera from 104 patients were analyzed for spontaneous ECSA/DPPA2 antibody production by ELISA and Western Blot.

Results: ECSA/DPPA2 transcripts were limited to normal testis, placenta, bone marrow, thymus and kidney but expressed in a variety of tumors most notably in 30% of NSCLC. Enrichment for CTAs in ECSA/DPPA2 positive NSCLC was observed. IHC confirmed nuclear localization in subpopulations of basally located cells with co-expression of the CTA NY-ESO-1. Antibodies to recombinant ECSA/DPPA2 protein were detected in the sera of 4% of patients with NSCLC, but not in healthy controls.

Conclusions: The restricted expression in normal tissues, expression in tumors with co-expression of CTAs and spontaneous immunogenicity, indicate that ECSA/DPPA2 is a promising target for antigen specific immunotherapy in NSCLC.

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ACCELERATED BEP FOR ADVANCED GERM CELL TUMOURS – A CURRENT PHASE I/II TRIAL OF THE ANZ GERM CELL TRIALS GROUP AND ANZGOG

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Background: The standard chemotherapy for advanced germ cell tumours is Indinaba-BEP. While 5-year survival is high in good risk disease (>90%), there is substantial room for improvement in intermediate risk (~75%) and poor risk disease (~50%). Accelerated (dose-dense) versions of standard regimens have proven more effective in other malignancies. We aim to pilot an accelerated version of Indinaba-BEP.

Methods: Single arm, multi-centre, phase I/II trial (n = 25) to determine feasibility (proportion of subjects able to start a 4th cycle of cisplatin and

etoposide without more than 1 week delay), tolerability and activity. The target population includes all intermediate and poor risk patients, and selected good risk patients. Treatment consists of Cisplatin 20 mg/m² and Etoposide 100 mg/m² on days 1–5, and pegylated G-CSF 6 mg on day 6, all repeated every 2 weeks for 4 cycles (3 cycles for good risk). Bleomycin is given at 30kIU weekly to a total 12 doses (9 doses for good risk).

Results: The protocol was developed at the 2006 ACORD Research Development Workshop. It has been approved by the University of Sydney Human Research Ethics Committee, NSW Health Shared Scientific Advisory Committee, and Cancer Trials NSW. Accrual will start in mid-2007, and is planned to take 2 years. 14 ANZ sites are participating in the study, and additional sites are invited to participate.

Implications: Encouraging results from this trial, and a similar one being done in the UK, would provide the rationale for an international phase III trial comparing accelerated versus standard versions of Indiana-BEP.

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PHASE II STUDY OF PACLITAXEL AND EPIRUBICIN AS NEOADJUVANT TREATMENT FOR LOCALLY ADVANCED BREAST CANCER

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Purpose: Neoadjuvant chemotherapy for locally advanced breast cancer [LABC] improves the rate of breast conserving surgery[1], and patients with a complete pathological response have an improved overall survival [OS][2]. This phase II study was designed to assess the pathological response rate [RR] of neoadjuvant epirubicin and paclitaxel [ET] and the tolerability of this regimen. Disease free survival [DFS] and OS will also be assessed. This is a planned preliminary analysis of the first 10 patients assessing RR and toxicity.

Methods: Women with T3-4N_x or TxN2-3 breast cancer, received four cycles of neoadjuvant E [90 mg slash m²] and T [175 mg slash m²] given three weekly with G-CSF support, followed by definitive surgical resection. Post surgery patients receive CMF [day 1 and 8] X 4, and radiotherapy and adjuvant hormonal therapy as appropriate.

Results: At the time of the preliminary analysis 10 women had completed neoadjuvant chemotherapy and 9 had undergone definitive resection. Median age 50 [range 31–69]. Tumour stage at enrollment was [n]. T3N0 [2], T3N1 [3], T4N0 [2], T4N1 [2], and T4N2 [1]. Grade 3 slash 4 toxicities of ET were as follows [n]. diarrhoea [1], mucositis [1], febrile neutropaenia [1], and neutropaenia [1]. 6 patients had grade 2 alopecia. There was 1 infusion reaction. Clinical response was 90percent with 8 partial responses and 1 complete response. 2 patients underwent breast conserving surgery. There was a 33percent complete pathological RR.

Conclusion: ET is well tolerated with a high RR in LABC. Ongoing analysis will determine the long term outcome of this regimen on DFS and OS.

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TRASTUZUMAB CAUSES ADVERSE GASTROINTESTINAL SIDE EFFECTS IN PATIENTS UNDERGOING TREATMENT FOR HER 2-OVEREXPRESSION BREAST CANCER

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Introduction: The purpose of the current study is to describe the specific toxicities associated with the targeted anti-cancer drug trastuzumab. Clinical studies have demonstrated the effectiveness of trastuzumab in improving disease free survival in patients with HER2-overexpressing breast cancer. However, trastuzumab administration has been associated with adverse gastrointestinal side effects including diarrhoea and vomiting. Moreover, the specific toxicities have not been well characterised thus posing a challenge for the management of such symptoms in the clinic. This study hypothesises that trastuzumab administration is associated with mucosal layer damage related toxicities which are characteristic of alimentary tract mucositis.

Materials and Methods: A retrospective analysis of 43 patient case notes was conducted. All patients who received trastuzumab as a single agent or in conjunction with cytotoxic chemotherapy within the Royal Adelaide Hospital Cancer Centre from 2002–2007 were identified and included in this study. Characteristics such as nausea and vomiting, diarrhoea and lung symptoms were recorded. All patients were de-identified.

Results: Single agent trastuzumab induced mucosal and non-mucosal toxicities in 20percent of administrations. Furthermore, the most prevalent toxicities associated with trastuzumab administration [as a percentage of total administrations] were nausea and vomiting [7.6percent], non-mucosal [6.9percent] and lung symptoms [2.24percent]. There also appeared to be an age dependent susceptibility to trastuzumab toxicity where patients aged above 60 experienced the highest frequency of toxicity.

Conclusions: Trastuzumab administration is associated with mucosal and non-mucosal toxicities that are specific and separate to those caused by concurrent chemotherapy treatment. A larger prospective study is now warranted.

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PHASE II STUDY OF GEMCITABINE AND DOCETAXEL IN COMBINATION FOR THE TREATMENT OF LOCALLY ADVANCED OR METASTATIC BREAST CANCER

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Background: Gemcitabine [G] and docetaxel [D] have both shown activity in the treatment of anthracycline-pretreated patients with metastatic breast cancer. These agents have different mechanisms of action and toxicity profiles and therefore this phase II study was designed to evaluate the safety and efficacy of the GD combination.

Methods: Patients with measurable locally advanced or metastatic breast cancer who had previously received anthracycline based therapy were eligible for the study. Subjects received docetaxel 40 mg slash m² followed by gemcitabine 800 mg slash m² IV on days 1 and 8 every 3 weeks for a maximum of 8 cycles.

Results: Thirty patients were enrolled and received a median of 5 cycles [range 0–8]. Twenty-four patients were evaluable for efficacy, with an overall response rate of 29.2percent [95percent CI, 12.6percent–51.1percent]. An additional 36.7percent had stable disease. The median

duration of response was 2.1 months [95percent CI, 2.0–3.6 months] and median time to disease progression was 5.5 months [95percent CI, 2.0–8.9 months]. Median survival time was 16.7 months [95percent CI, 7.3–32.0 months]. Myelosuppression was the major toxicity, with grade 3 slash 4 neutropenia in 73.3percent of patients.

Conclusion: Weekly gemcitabine and docetaxel is an active and safe regimen in treating metastatic breast cancer. The response rate was lower than that previously reported for this drug combination which may relate to the lower doses used and the weekly docetaxel schedule. It may be worthwhile to further explore this combination to determine the optimal dosing schedule.

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FLT3L TREATMENT INCREASE THE NUMBER OF REGULATORY T LYMPHOCYTES IN MELANOMA PATIENTS

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Background: Flt3 Ligand [Flt3L] is a cytokine which is important for the development of several hematopoietic lineages including dendritic cells. Animal studies have shown that Flt3L enhances immune responses against different antigens by increasing the number of dendritic cells. This has also been demonstrated in tumour models. The application of Flt3L to healthy human individuals showed a dramatic increase of different subsets of dendritic cells and monocytes in peripheral blood. As a result of these findings clinical trials with Flt3L were performed at our institution in patients with advanced melanoma. In most of these trials the immunological responses were weak and the clinical outcome was poor. Hypothesis. Although Flt3L increases the overall number of dendritic cells, it might also induce a tolerogenic mechanism by increasing the number of regulatory T lymphocytes, which counteract effective immune responses.

Methods: Determination of regulatory T lymphocytes in melanoma patients before and after Flt3L treatment by flow cytometry and investigation of their regulatory properties in proliferation slash suppression assays.

Results: Flt3L treatment increases the number of CD4+CD25+FoxP3+ regulatory T lymphocytes in the blood of melanoma patients.

Conclusion: Flt3L is not sufficient to generate effective immune responses in cancer patients although it increases dramatically the number of dendritic cells in the peripheral blood of these patients. At the same time Flt3L causes an increased number of regulatory T lymphocytes which might inhibit effective immune responses. Treatment protocols with Flt3L should be combined with agents that deplete regulatory T lymphocytes to enhance the effects of this approach.

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UNEXPECTED COMPLICATIONS FROM SUNITINIB USE IN RENAL CELL CARCINOMA

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The VEGF receptor pathway and related signaling molecules provide important targets in the treatment of metastatic renal cell carcinoma. A number

of agents active against these targets are now registered and available for use. Sunitinib is an orally available multitargeted tyrosine kinase inhibitor which has been shown to be highly effective in RCC. Sunitinib is now approved and available through an access program in Australia. These effective new treatments have also brought new challenges in identification and management of previously unseen adverse events, related to the efficacy of the treatments as well as their toxicities. We present two cases of patients who had an early and dramatic response to sunitinib. One patient developed tumour lysis syndrome shortly after commencing sunitinib therapy and was successfully treated with Rasburicase. The second patient developed sepsis less than two weeks after commencing Sunitinib. The septic source was a colonocutaneous fistula due to massive necrosis within the tumour mass. We then present a case series of five patients who developed thyrotoxicosis whilst on Sunitinib, one of whom had biopsy evidence of lymphocytic thyroiditis without antithyroid antibodies. These cases highlight the activity of targeted therapies in some patients with renal cell cancer and illustrate serious side effects due to efficacy as well as toxicity which can develop in the early stage of treatment.

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AN ADIT OF TOXICITY OF INTRAPERITONEAL CHEMOTHERAPY FOR OPTIMALLY DEBULKED STAGE III EPITHELIAL OVARIAN CANCER

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Intraperitoneal chemotherapy with cisplatin and paclitaxel has been shown to improve progression free survival and overall survival in patients with newly diagnosed optimally debulked stage III epithelial ovarian cancer. In May 2006 we implemented a modified version of the GOG172 protocol [paclitaxel 135 mg slash m2 IVI over 3 hours day 1, cisplatin 75 mg slash m2 via intraperitoneal catheter [IP] day 2, and paclitaxel 60 mg slash m2 IP day 8, three-weekly for six cycles]. All patients had stage III epithelial ovarian cancer following optimal debulking [residual tumour [1 cm³], with an intraperitoneal port inserted. Data was prospectively collected and an audit of this data was performed in June 2007. The primary objective was to determine the toxicity of the new protocol. The results were as follows. To date, ten patients have completed treatment. 3 patients had Grade 3 abdominal pain slash gastrointestinal toxicity, one patient had grade 3 peripheral neuropathy, one patient had grade 3 neutropenia and one patient required dose reduction for paclitaxel hypersensitivity. 1 patient had recurrent port blockages. 50percent of patients completed all 6 cycles, 100 percent completed at least 3 cycles. In summary, the modified IP protocol was associated with significant gastrointestinal toxicity in a small number of patients in addition to expected toxicity of IV protocols. Local intraperitoneal port complications were uncommon. Updated data will be presented. We plan to continue with IP therapy in this group of patients.

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THE EXPERIENCE OF CONCORD REPATRIATION GENERAL HOSPITAL [CRGH] WITH PERI-OPERATIVE CHEMOTHERAPY FOR GASTRIC AND OESOPHAGEAL CANCERS

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Background: Peri-operative chemotherapy for gastro-oesophageal adenocarcinoma significantly improves progression-free survival and overall survival. Data also supports neoadjuvant chemotherapy for squamous cell carcinomas [SCC] of the oesophagus although the survival benefit is less clear.

Aim: To determine the feasibility of neoadjuvant chemotherapy for adenocarcinoma and SCC of the stomach and oesophagus with respect to amount of treatment delivered and toxicity at CRGH.

Method: All patients given neoadjuvant chemotherapy for gastro-oesophageal cancers were identified from 1st September, 2004 to 1st May, 2007. Data was retrospectively evaluated using medical oncology subfiles.

Results: Twenty patients were identified of which 5 [25percent] had gastric cancer, 4 [20percent] had gastro-oesophageal junction cancer and 11 [55percent] had oesophageal cancer. Sixteen patients [80percent] had adenocarcinoma and received epirubicin, cisplatin and 5-fluorouracil. 4 patients [20percent] had SCC and were treated with cisplatin and 5-fluorouracil. Of a planned 60 neoadjuvant chemotherapy cycles, 54 [90percent] were delivered. Fifteen patients [75percent] proceeded to an oesophagectomy. 5 [25percent] patients had a gastrectomy. Seven patients [35percent] received adjuvant chemotherapy and, of these, 11 cycles of a planned 21 [52percent] were delivered. Five [20percent] and 3 [15percent] patients developed grade 3 and 4 haematological toxicities respectively but no febrile neutropenia. Eight patients [40percent] developed grade 3 non-haematological toxicities but there were no grade 4 non-haematological toxicities. There have been 3 deaths [15percent] and an additional 2 patients [10percent] have developed progressive disease since treatment was completed.

Conclusion: Most patients received the anticipated cycles of neoadjuvant chemotherapy but not adjuvant chemotherapy with an acceptable toxicity profile.

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CLINICAL OUTCOMES OF PATIENTS WITH METASTATIC COLORECTAL CANCER ON CHEMOTHERAPY TRIALS – THE SYDNEY CANCER CENTRE EXPERIENCE

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There have been significant advances in chemotherapy treatment for metastatic colorectal cancer in the last 10 years. We report the demographics, clinical outcomes and toxicity data of 165 patients enrolled in 10 chemotherapy clinical trials for metastatic colorectal cancer from 1999 to 2005 at our institution. Clinical trials included phase I to III trials, single and combination chemotherapy regimens as well as both first and non first-line chemotherapy trials. The median age of patients was 63 [range 33–84], predominantly male [66percent] with ECOG performance status 0 or 1 [95percent]. First line response rates were 27percent for single agent and 63percent for multi-agent treatment. The median overall survival [OS] of patients starting with single agent chemotherapy as first-line treatment was 11 months with progression free survival [PFS] of 4 months. Patients who started first line treatment with combination regimen chemotherapy had a significantly better median OS [p<0.05] and PFS [p<0.0001] of 16 months and 6 months respectively. Ninety percent of patients experienced at least grade 1 haematological, neurological or gastrointestinal toxicity with 24percent having grade 3 or 4 toxicity. There were no toxic deaths related to chemotherapy. The overall outcomes and acceptable rates of serious toxicity from this cohort are encouraging. Identification of outcomes for an individual institution is useful for informing prospective patients and referring doctors about potential results.

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SYDNEY CANCER CENTRE EXPERIENCE OF COMBINATION CARBOPLATIN AND PEGYLATED LIPOSOMAL DOXORUBICIN IN WOMEN WITH ADVANCED OVARIAN CANCER WHO HAVE DISEASE PROGRESSION FOLLOWING FIRST LINE CHEMOTHERAPY

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Introduction: There are a number of second line treatment options available for patients with advanced ovarian cancer. A phase II trial showed overall response rates of 63percent using carboplatin and pegylated liposomal doxorubicin as second-line chemotherapy in patients with advanced ovarian cancer in late relapse and a phase III trial is ongoing.

Methods: We retrospectively analysed our experience of carboplatin and pegylated liposomal doxorubicin in women with relapsed ovarian cancer. The patients received carboplatin dose [area under curve 5–6] with pegylated liposomal doxorubicin 30mg/m² on a 4 week cycle.

Results: Thirteen women were identified with a median age at diagnosis of 51 years [range 37 to 65]. Nine patients [69percent] had stage III disease and four [31percent] had stage IV disease at time of diagnosis. Nine patients [69percent] had serous carcinoma, two [15percent] patients had mullerian tumours, one [8percent] had adenocarcinoma and one [8percent] had mucinous endometrioid carcinoma. All were managed with surgery and received adjuvant chemotherapy. Median treatment free interval prior to initial disease progression was 10 months [range 0–48]. Median number of cycles given was six. Four patients [31percent] experienced Grade 3 slash 4 myelosuppression, seven patients [54percent] required dose reduction and four patients [31percent] had treatment delays. Response rate was 69percent. At time of analysis, five patients [36percent] have not yet developed progressive disease [1–9 months post treatment].

Conclusion: The combination of carboplatin and pegylated liposomal doxorubicin for women with advanced ovarian cancer who progress after first-line chemotherapy appears to be an effective option.

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CARBOPLATIN AND GEMCITABINE FOR ADVANCED NON-SMALL CELL LUNG CANCER CAN A COMORBIDITY SCORE PREDICT OUTCOMES?

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Introduction: Chemotherapy improves survival, and symptoms in patients with advanced non-small-cell lung cancer. First line platinum doublets report a median survival of 10 months and 1 year survival of 35–40 percent. We retrospectively reviewed patients from Macarthur and Liverpool Cancer Centres to quantify our local experience. We sought to validate a comorbidity score to predict for response rate and survival.

Methods: Information was recorded for patients with unresectable stage III and IV NSCLC receiving first line standard carboplatin slash gemcitabine chemotherapy between November 2004 and April 2007. Response rates, toxicities, overall and progression free survival were calculated. A comorbidity score stratified for smoking, diabetes, alcohol and other organ function was determined [ref 1].

Results: Of 94 patients, 83percent had stage IV disease, 42percent had adenocarcinomas. Median age was 60 years. 58percent were men, 18percent

were lifelong non-smokers. ECOG performance status was 0 or 1 in 92percent. A median of 4 chemotherapy cycles were delivered. Grade 3 and 4 hematological toxicities were. neutropaenia 46percent, thrombocytopenia 21percent and anaemia 13percent. 15percent required hospital admission for infection. 15percent had grade 3 and 4 non-hematological toxicities. 32percent had a complete or partial response to chemotherapy. 27percent received 2nd line therapy. Median overall survival was 9.3 months and median progression free survival was 3.9 months. 1 year survival was 34percent.

Conclusion: Our results for treatment of advanced NSCLC are comparable to those expected. Results of the comorbidity scores will be presented. *British Journal of Cancer* [2005] 93, 1098–1105.

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POSTOPERATIVE CHEMO RADIATION FOR GLIOBLASTOMA MULTIFORME, A SINGLE INSTITUTION RETROSPECTIVE REVIEW

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Background: Glioblastoma multiforme [GBM slash grade 4 glioma] is the most common malignant primary brain tumour in adults. Despite aggressive surgical debulking and radiotherapy these tumours uniformly progress with poor survival. The EORTC slash NCIC phase III randomised trial of radiotherapy [RT] with concurrent and sequential temozolomide [TMZ] in GBM demonstrated a significant survival advantage when compared to RT alone postoperatively and hash61489. We report our single institution experience in treating patients with this regimen in a general oncology setting.

Methods: A retrospective review of all patients who initiated postoperative chemoradiation for GBM after June 2005 at The Canberra Hospital. We also assessed recursive partitioning analysis [RPA] classification, which is prognostic in GBM.

Results: Eighteen patients have been treated with this regimen. The median age was 58 yo. Only three patients [17percent] had an RPA class of 3, carrying a more favourable prognosis. These patients are all still alive without progressive disease. Ten patients have died, with a median survival of 7.5 months. In general the treatment regimen has been well tolerated with minimal gastrointestinal or haematologic toxicity. Three patients did not complete concurrent chemoradiation due to neurological deterioration, two of whom had radiologically confirmed tumour progression.

Conclusion: GBM remains a highly aggressive CNS neoplasm and despite recent advances in treatment, survival remains poor. We found postoperative chemoradiation with concurrent and sequential temozolomide is generally well tolerated. The RPA is a useful prognostic tool in GBM, and patients of RPA class V may be less likely to benefit from this regimen.

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STABLE DISEASE AS A SURROGATE ENDPOINT OF OVERALL SURVIVAL IN ADVANCED NON-SMALL CELL LUNG CANCER [NSCLC] AND METASTATIC COLORECTAL CANCER [CRC]

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Background: The use of surrogate outcomes in measuring treatment effectiveness could reduce the duration, size, and expense of clinical trials. Although showing some promise as a surrogate endpoint, stable disease [SD]

was rarely considered until the emergence of novel non-cytotoxic treatments. Disease control rate [DCR], a measure of those achieving an objective response [OR] or stabilisation of disease [SD], has recently been reported to be a powerful predictor of overall survival in studies of advanced non-small cell lung cancer [NSCLC].

Methods: Summary data on median overall survival and the proportion of patients achieving an OR or SD, for each treatment arm, were extracted from randomised trials of first-line treatment in metastatic colorectal cancer [CRC] and advanced non-small cell lung cancer [NSCLC] published between 1977 and 2005. The association between the difference in overall survival and disease control rate was examined using linear regression.

Results: 91 trials of CRC [nEQUAL 20,357] and 118 trials of NSCLC [nEQUAL 26,188] were identified. DCR ranged from 11.7percent to 98.7percent in colorectal studies and from 15.4percent to 98percent in lung studies. While DCR was correlated with survival in both lung and colorectal studies [p 0.001 for both], much less than half the variability in survival difference was explained by the difference in DCR [R-squaredEQUAL 0.30 for CRC, R-squaredEQUAL 0.13 for NSCLC].

Conclusions: Our study indicates that SD is not a reliable predictor of overall survival. therefore, it should not be used as surrogate endpoint in clinical trials until further validation.

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SUNITINIB IN METASTATIC RENAL CELL CARINOMA; THE HUNTER REGION EXPERIENCE

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Purpose: The orally active small molecule tyrosine kinase inhibitor sunitinib malate has been shown to produce objective response rates in metastatic renal cell carcinoma. A recent published Phase III trial reports prolonged progression-free survival and improved quality of life in patients treated with sunitinib in comparison to interferon alfa. We examine the efficacy and tolerability of sunitinib in our local patient cohort.

Methods: A retrospective chart review was performed of all Hunter region patients with metastatic renal cell carcinoma treated with sunitinib as part of the Sutent® Special Access Program opened in September 2006. Prospective recording of data for patients continuing to receive treatment from May 2007 onwards is ongoing.

Results: To date 18 patients have been registered for sunitinib, of which 16 began treatment. 2 patients have demonstrated objective responses to date. 3 patients have experienced grade 3/4 toxicity attributed to sunitinib. The majority of patients have experienced grade 1/2 side effects impairing quality of life; most commonly fatigue, anorexia, nausea and/or vomiting, oral discomfort, headaches and gastroesophageal reflux symptoms. Most patients are in their first or second cycle of treatment without yet documented progression of disease.

Conclusions: In contrast to the toxicity profiles of other biological agents, local experience would suggest that treatment with sunitinib is associated with a high rate of grade 1/2 side effects and significant risk of higher grade adverse events. Updated data regarding toxicity and efficacy will be presented at the meeting.

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CLINICO-PATHOLOGIC AND GENOTYPIC FEATURES OF LONG TERM RESPONDERS TO IMATINIB WITH METASTATIC GASTROINTESTINAL STROMAL TUMOURS – A MULTI-INSTITUTIONAL COHORT STUDY

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Imatinib has revolutionized treatment of metastatic gastrointestinal stromal tumours [GIST]. Characteristic C-kit mutations result in constitutive activation of critical signalling pathways. Recent research correlates genotype with imatinib response and resistance and clinico-pathologic variables with prognostic/predictive value have been identified. This study aims to identify common clinical, laboratory and genetic features in patients with long term disease control receiving imatinib.

Methods: Retrospective analysis in patients receiving imatinib with disease control at 48 months was undertaken. Variables assessed were primary disease site, site of metastatic disease, tumour burden on CT and pretreatment genotype analysis. Epidemiologic and laboratory parameters, histopathology, performance status and imatinib dose were reviewed. CT response and toxicities analysed. Common clinical and laboratory features in the cohort were quantified.

Results: Between February 2001 and June 2007, 12 patients were identified. Age range was 44–70, male/female ratio 10.12, ECOG PS 0-2. Primary disease. gastric in 5/12, small intestinal 5/12. Hepatic metastases occurred in 8/12, definite lung metastases in 1/12. Largest lesion size and hash8804. 12 cm in 11/12, laboratory parameters normal in all with granulocytes] 5 in 7/12. Exon 11 mutations were seen in all tested patients [one with insufficient tissue availability]. Response was complete [CR] in 2 12, partial [PR] in 7/12. CT response [RECIST] correlated poorly with PET response. Imatinib dose in 8/12 was 400 mg/day.

Conclusions: Predictors of long term response to imatinib may be identifiable at diagnosis. Common clinico-pathologic features of long term responders should be tested in larger series, with comparisons made to early treatment failure. Future studies correlating predictive clinical factors, genotype mutation and response may assist in individualization of therapy. Please

note that in August, an update with inclusion of data for two further patients [assuming ongoing disease control] will be available. Exon 11 mutations have been identified in both patients.

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A REVIEW OF THE INCIDENCE AND TREATMENT OF DIFFUSE LARGE B CELL NON-HODGKINS LYMPHOMA IN THE WELLINGTON REGION BETWEEN 1995 AND 2005

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Introduction: Diffuse large B cell Non Hodgkins lymphoma is a common disease that is uniformly fatal without treatment. Combination chemotherapy has led to a significant proportion of patients being cured of this disease. Hypotheses. 1] That the number of new cases of DLBC NHL is rising. 2] That a higher proportion of older patients are being treated with curative intent. 3] That changes in treatment patterns have significant resource implications.

Methods: All cases of lymphoma diagnosed within the Wellington region are entered into a central database at the Capital and Coast DHB pathology department. This database was used to identify cases. The notes of cases were reviewed for treatment information.

Results: 254 cases of DLBC NHL were identified between 1995 and 2005. Data was available on 225 of these. The number of cases increased from 5 in 1995 to 32 in 2005. The proportion of patients aged andhash8805.65 remained steady at approximately 60percent. The proportion of patients aged andhash8805.65 treated with curative intent increased from 0percent in 1995 to 79percent in 2005. CHOP was used in 75percent of patients treated prior to 2004. R-CHOP was used in 75percent of patients from 2004 onward.

Conclusions: The total number of patients diagnosed with DLBC NHL has risen since 1995. Older patients were much more likely to be treated with aggressive chemotherapy, aimed at cure, in 2005 than in 1995. The more aggressive treatment of older patients, and the routine use of rituximab, have increased the resources required to treat DLBC NHL.