2 years of the follow-up period. Meanwhile, the prevalence of RI increased, reaching 62.9% and 17.5% for a GFR <90 and <60, respectively at T24 (table). Among the 641 patients with a SCR available at T0 and at T24, the GFR decreased from 89.7 to 83.7 ml/min/1.73m^2 ($p < 0.001$) over the 2 years of the follow-up period (table). Furthermore, 41.6% of those with a GFR $\geqslant 90$ at T0 had a GFR <90 at T24. Furthermore, 17.7% of patients with mild renal insufficiency (60 to 90) at T0 had a GFR >60 at T24.

Conclusion: IRMA-2 shows that renal function decreases rapidly in cancer patients with a loss in GFR of 3−3.5 mL/min/1.73m^2 per year. This suggests that cancer patients are more exposed to a deterioration of renal function and that it should be closely monitored with at least a regular estimation of renal function, for instance every 6 months. So far, such a follow-up is not performed in clinical practice. Furthermore, drug therapy should be reevaluated, dosages adjusted when necessary, and some potentially nephrotoxic drugs changed for less or non-nephrotoxic drugs if possible.

Table. Renal function among the 641 patients with an available SCR at T0 and T24

GFR (mL/min/1.73m^2)	T0	T24	Delta (T24 − T0)	p-value (between T24−T0)
Mean GFR	89.7	83.7	− 6.0	$p < 0.001$
GFR <90	55.7%	62.9%	+7.2%	$p < 0.001$
GFR >60	11.5%	17.5%	+6.0%	$p = 0.001$

3009 POSTER DISCUSSION

Evaluation of psycho-social distress in patients treated in a community based oncology group practice in Germany

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Background: Systematic evaluation of psycho-social distress in oncology outpatients is an important issue. Therefore we assessed feasibility and benefit of standardized routine screening using the Distress Thermometer (DT) and the Problem List (PL) in daily practice.

Materials and Methods: All patients attending the practice between July and September 2008 were administered the DT and the PL. Patients were classified into the disease groups solid tumors, hematological neoplasms, benign hematological diseases and other non-malignant diseases. The individual treatment phase was evaluated additionally. Participants in a mammography screening programme were assessed as a control group. 500 randomly selected patients were sent a feedback-form to describe how they experienced the DT's influence on the doctor-patient-communication.

Results: 1446 patients were included and reported an average distress level of 4.7. 37% indicated a distress level >5. The highest average distress level of 5.2 was seen in patients with other non-malignant diseases (81% autoimmune diseases or hereditary hemochromatosis). Concerning the treatment phases, the most distressed patients were patients who just learned about their diagnosis of relapsed or metastatic disease (6.4), patients receiving Best Supportive Care (5.4) and patients receiving adjuvant anti-hormonal therapy (5.4). The most frequently indicated problems causing distress were exhaustion/fatigue (49%), pain (44%), impaired mobility (41%) and sleep disorders (39%) respectively. A significant correlation existed between the distress score and the total number of stated problems as well as between the number of emotional problems and the number of physical problems. Breast cancer patients stated a distress level of 5.2. The average distress level in mammography screening participants was 3.3. 97% of patients who returned the feedback-form indicated that they appreciated to speak to their doctor about their distress. 56% of distressed patients felt better than usual after this consultation.

Conclusions: The study shows that cancer patients do not necessarily show higher distress than patients with severe non-malignant diseases. The problems patients most frequently indicate as distressing are somatic disorders. DT and PL are applicable for routine screening in an outpatient setting. Physicians as well as patients stated that the use of the DT improved the quality of their communication.

3010 POSTER DISCUSSION

Prevalence and causes of burnout syndrome among oncology residents in France: a comprehensive cross sectional study

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Background: Burnout syndrome is frequent among oncology healthcare workers. It leads to deterioration of physicians' health and quality of life. It also probably discourages vocations for oncology and has a detrimental effect on patient-physician relationship. Little is known, however, about the prevalence and causes of burnout among oncology junior doctors.

Materiel and Methods: A questionnaire was sent out to every medical or radiation oncology resident in France ($n = 215$). The survey was anonymous and confidential. It was divided into seven parts: demographical data, burnout level (Maslach Burnout Inventory, MBI), type of stressors, emotional work, sense of equity at work, type of support, general health level and alcohol/drug intake. Validated scales were used when available. Two reminder e-mails were sent out to increase response rate.

Results: Questionnaires were sent on March 1st 2009 and collected until April 20th. One hundred and fifty four questionnaires were returned and analyzed. The response rate is 72% (154/215). Emotional exhaustion (EE) and Depersonalisation (DP), the major components of burnout syndrome, were reported respectively by 25% ($n = 39$, CI95% = [0.19, 0.33]) and 38% ($n = 59$, CI95% = [0.31, 0.46]) of the residents. Burnout prevalence was 42% ($n = 64$, CI95% = [0.34, 0.50]), defined by a severely abnormal level of either EE or DP scores. Twenty percent of the residents ($n = 31$ CI95% = [0.14, 0.28]) had severely abnormal levels of both EE and DP. Burnout was associated with a lower perception of one's general health status (good/very good versus average/poor, $p = 0.0006$). Burnout level is higher among residents who don't feel adequately rewarded for their work and commitment ($OR = 2.5$; $p < 0.01$). No demographical characteristics (age, sex, marital status, length of service) were predictive of burnout. Prevalence of burnout was not significantly different between radiation and medical oncology residents ($p = 0.55$).

Conclusion: Burnout level is high among oncology residents. Multiple factors can be involved: young age, lack of experience, work overload, and the fact that residents mostly face seriously ill patients or end of life situations. Interventions are needed to improve this situation, such as support groups, more intense coaching by senior physicians, training programs on "breaking bad news" and teaching of stress management skills.

3011 POSTER DISCUSSION

Service patterns of integrated oncology and palliative care, focused on interdisciplinary outpatient clinics

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Background: Palliative Cancer Care (PCC) delivers multidimensional symptom staging and control, sequential decision making processes fostering patient-priority and goal-directed interventions including anti-cancer therapies, communication interventions, family care, and support networks of in- and outpatient clinics and community. We aim to test the hypothesis, that distinct service patterns can be identified in a setting of an ESMO-designated center of integrated oncology and palliative care.

Methods: All service contacts following the first outpatient PCC clinic visit (including 1. interdisciplinary clinic focused on nutrition and fatigue, 2. Supportive-palliative nurse-physician-clinic, 3. physician-based clinic) were tracked for date and type (emergency unit, inpatient palliative care unit, inpatient oncology clinic, hospital palliative care mobile team, palliative care bridge service, home care nurses and general practitioners [GP]). The time and location of death was identified through charts and GPs. Patterns of integration of oncology and PCC (Pa-IOP) where characterized in calibration sample of patients, definitions where refined until consensus was reached. Then the whole sample was analyzed.

Results: The PCC outpatient clinic included 373 patients (230 male, 143 female; median age 63.5; with mixed tumor types (16% lung, 15% colorectal, 7% prostate, 12% ovarian, 50% other) having over 2000 consultations (1 visit: 113; 2−5: 134; 5−10: 46; >10: 60). The time range from first contact until death ranged from 320 days (prostate) to 72 days (urothel), for lung cancer 138 days, for colorectal 204 days. The time from stage IV to first PCC outpatient contact was 310 days for lung, 492 for colorectal cancer. The time from first contact with palliative care of patients seen first in the palliative care inpatient unit, or the hospital mobile team was substantial shorter time.

Identified Pa-IOP include a) focused one time visit in the outpatient unit, b) a PCC staging based on a standard situation (e.g., new stage IV, progression), c) shared care with alternating visits by oncologists and the PCC outpatient clinic, d) taking over care by the PCC team. Patient characteristics and outcomes of patients cared for by the four Pa-IOP are currently analyzed.

Conclusion: Identification of different service patterns of integrated oncology and palliative care and associated patient characteristics and outcomes, including defined palliative cancer care interventions, may support development of tailored and efficacious services and improve patient care.

3012 POSTER DISCUSSION

Cancer rehabilitation programme – finding a new balance

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Cancer and its treatment can give rise to long-term consequences such as fatigue, lack of energy, or changes in self image. A cancer rehabilitation program may help patients finding a new balance in their life once anticancer treatment has been completed. Due to the impact on quality of life but also on survival rates rehabilitation programs are becoming more important.

A multidisciplinary rehabilitation program, based on the 'Herstel and Balans' Program consisted was offered to adult cancer patients who finished an anticancer treatment with curative intent. The 12-week group program combines physical training and psychological support. Twice weekly participants are trained to improve their physical abilities by fitness, group sports and hydrotherapy under supervision by physiotherapists. The psychological support includes psycho-educative group sessions on several aspects (e.g. fatigue, diet, intimacy, stress and coping) and individual support, if indicated. All psychological sessions are under guidance of psychologists. The outcome was measured by physical tests, by the EORTC QL and FACT questionnaires and by a qualitative analysis. Since 2004, 228 people participated in the revalidation program organized by the "Ziekenhuisnetwerk Antwerpen (ZNA)-Middelheim". Repeated measures showed an improvement in physical ability, an increased quality of life and a decreased fatigue. The program had a satisfaction index of 95%. Qualitative analysis show that participants regained confidence and tried to pick up work and other interests.

Our results support the integration of a rehabilitation program in the daily care of cancer patients treated with curative intent.

3013 POSTER DISCUSSION

Performance of medical oncologists on end-of-life care for Taiwanese cancer decedents, 2001–2006

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Background: Oncologists play a significant role in cancer care throughout the cancer trajectory and have traditionally emphasized underuse of procedures or treatments with well-established effectiveness as the source of poor care quality with little attention to the overuse of end-of-life (EOL) care. The purpose of this population-based study was to compare EOL care practices in Taiwan between medical oncologists and other physician specialists.

Methods: This retrospective cohort study compared indicators of poor quality EOL care by examining administrative data for a cohort of 204,850 cancer decedents in 2001–2006.

Results: Taiwanese cancer patients whose primary physician was a medical oncologist were significantly more likely than patients with a non-oncologist primary physician to receive chemotherapy (AOR: 3.45, 95% CI: 3.03−4.00) and to spend more than 14 days in a hospital (AOR: 1.11, 95% CI: 1.04−1.19) in the last month of life. However, they were significantly less likely than patients with a non-oncologist primary physician to visit the ER more than once (AOR: 0.88, 95% CI: 0.81−0.96), and to use ICU care (AOR: 0.32, 95% CI: 0.22−0.48), cardiopulmonary resuscitation (CPR) (AOR: 0.71, 95% CI: 0.64−0.80), intubation (AOR: 0.60, 95% CI: 0.51−0.70), and mechanical ventilation (AOR: 0.46, 95% CI: 0.39−0.54) in the last month of life.

Conclusion: Cancer decedents cared for by medical oncologists had a greater likelihood of receiving chemotherapy and prolonged hospitalization but a lower propensity for multiple ER visits, ICU care, and undergoing CPR, intubation, and mechanical ventilation in the last month of life than patients with other types of physicians.

3014 POSTER DISCUSSION

Symptoms, care needs and type of cancer diagnosis in palliative cancer patients in acute care hospitals

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Background and Aim: Palliative cancer in acute hospitals is scarcely studied. We therefore explored the symptoms and care needs of palliative cancer patients and the relationship between diagnosis and symptom related reasons for care during hospitalization.

Material and Methods: Two acute care hospitals in a county with no advanced palliative home care service 24/7. One-day-inventories on 16 occasions in 14 different hospital wards during 2007. On each ward every patient day was classified as "palliative" or "not-palliative" and symptoms were registered according to a check-list. Multiple logistic regression models were used to check associations between symptoms and type of cancer.

Results: Out of 4364 patient days 613 (14%) were classified as palliative; 453 (10%) as cancer palliative days, and 160 (4%) non- cancer days. Of the 453 cancer patient days, 358 were for individual patients; 200 (56%) were men and 158 (44%) were women. Mean age 74 years. The seven most common cancers were prostate 14%, colon/rectum 13%, lung 12%, pancreas/gallbladder 12%, hematological 12%, urinary tract 8% and unknown primary 7%. The seven most common symptoms and needs were detoriation (43%), pain (42%), infection (25%), nausea (18%), social problems (16%), infusion (15%) and blood transfusion (12%).

In men, pain was associated with prostate cancer (OR 2.8 95%CI 1.4−5.7), nausea with pancreas/gallbladder (OR 3.2 95%CI 1.4−7.1) and gastric cancer (OR 5.6 95%CI 1.9−16.7). Infusion/nutrition was associated with gastric cancer (OR 8.2 95%CI 1.6−41.9), hematological malignancies (OR 7.5 95% I 2.3−24.3) and pancreas/gallbladder cancer (OR 6.0 95%CI 1.7−20.8). Infection was associated with hematological malignancies, both for men (OR 11.8 95%CI 4.4−31.6) and women (OR 8.8 95%CI 2.9−26.7). In women, pain was associated with cancer of the urinary tract (OR 12.4 95%CI 1.8−86.0), pancreas/gallbladder (OR 4.2 95%CI1.5−11.9) and colon/rectum (OR 3.1 95%CI 1.2−8.6). Social problems were associated with breast cancer (OR 4.1 95%CI 1.3−12.6) and unknown primary (OR 4.9 95%CI 1.4−17.5).

Discussion: Although we do not know all the causes of the hospital care this study indicates that focus should be on the symptoms instead of the specific cancer diagnosis. The study also indicates that many palliative cancer patients' problems are suitable for advanced palliative home care instead of acute care hospitals.

Poster presentations (Tue, 22 Sep, 14:00−17:00)
Symptom science

3015 POSTER

"Pain gets you down" – a project to control pain in cancer patients

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In the Ziekenhuisnetwerk Antwerpen (ZNA)-Middelheim, a pilot project showed that pain was prevalent in both oncologic ($n = 60$) and non-oncologic patients ($n = 43$) with pain scores as measured by visual analogue scale (VAS) (range 0−10) of 1−3 in 33% and 14%; of 4−7 in 17% and 19%; and 7−10 in 1% and 7% respectively. It was also demonstrated that the nursing staff could evaluate pain by VAS and this led to the