were randomised to receive single doses of 3 (n = 57), 9 (n = 54) and 18 mg ITA (n = 53) or 32 mg OND (n = 55) by slow infusion (15 mins), 30 mins before the start of chemotherapy.

Results: The main efficacy results are tabulated below:

	ITA			OND
	3	9	18	32
Complete response (no emetic episode in 24 h)	56%	41%	43%	49%
Complete response at 7 days	77%	74%	66%	66%
No nausea; first 24 h	46%	43%	47%	47%
Use of "rescue" medication, first 24 h	26%	24%	21%	35%

Adverse events were similar across all groups and were those expected for this class. All treatments were well tolerated.

Conclusion: Intravenous doses ≥3 mg ITA have comparable efficacy and tolerability to 32 mg OND.

234 POSTER

Management of febrile neutropenia in 272 episodes in solid tumor patients with once daily administration of ceftriaxone

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Purpose: Evaluation of the efficacy of ceftriaxone in a multicenter non randomized trial as first line treatment in solid tumor patients with fever and neutropenia. Additional antibiotics were added as clinically indicated.

Methods: Pts were included with neutrophil count <1.000/μl, fever >38.5°C and/or C-reactive-protein (CRP) >1.0 mg/dl. 272 neutropenic febrile episodes were documented in 234 pts with solid tumors from 34 centers from Febr 92 to Jan 96. Mean maximum temperature 39.1°C (SD ± 0.6), mean neutrophil count 485/μl (SD ± 324). Median duration of neutropenia 8 days, mean treatment duration 6.6 days (SD ± 3.1). Initial treatment was ceftriaxone alone in 153 episodes, and combination therapy in 119 cases (aminoglycosides ± glycopeptides).

Results: Response to initial treatment was obtained in 197 episodes (72.4%). Nonresponders (n = 75) to initial treatment responded to an escalated or alternate antibiotic regimen in 93.3% (n = 70). There were no infection related deaths, 3 pts died during the observation period due to tumor progression. Positive microbiological cultures were documented in 55 episodes (20%).

Conclusion: Ceftriaxone can be considered as a safe and adequate first line treatment in febrile neutropenia in patients with solid tumors. The addition of glycopeptides or aminoglycosides should be considered in non response or suspected non sensitive microorganism.

235 POSTER

An audit of Hickman line complications in patients with solid tumours

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In this retrospective study the complications arising from the use of Hickman catheters in patients with solid tumours was assessed. Sixty-nine patients (50 female and 19 male) underwent insertion of 80 Hickman catheters between 1994 and 1996. Three were inserted surgically, and 77 under radiological guidance. Tumour types were: breast cancer (40), gastro-oesophageal (21), colonic cancer (4), others (4). Catheters remained in place for a total of 7242 days (median 101 days, range 1–278).

Complications occurred in 32 patients (46%) and 7 patients suffered more than one complication. Early complications occurred in 6 patients: 4 pneumathoraces, 1 arterial puncture, 1 failed placement. Twenty-eight (41%) of patients developed 38 late complications: superficial sepsis (9), systemic sepsis (11), thrombosis (9), haemorrhage due to overanticoajulation (1), catheter dislodgement (4) and blockage (1). There was no association between age, site of insertion or catheter gauge and development of pneumothorax, but 3 of 4 patients had a BMI < 22, and 2 a BMI < 20. 11 incidences of systemic sepsis occurred in 9 patients (sepsis rate 1.52/1000 catheter days). The majority (7/11) occurred during neutropenia but only three were preceded by superficial sepsis. Venous thrombosis occurred in 9 patients, and 4 of 9 lines required removal for resolution of the thrombus.

In summary, Hickman lines offer a generally safe and convenient method for the administration of infusional chemotherapeutics although the overall complication rate (46%) is high.

236 POSTER

Palliative treatment of accessible solid tumors with intratumoral cisplatin/epinephrine injectable gel

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Purpose: We are evaluating palliation of accessible solid tumors (e.g., malignant melanoma, metastatic breast & lung cancer, head & neck SCC) using intratumoral injection of IntraDose™ (cisplatin/epinephrine) Injectable Gel (CDDP/epi gel) that provides prolonged and high intratumoral drug concentrations.

Methods: Three separate multicenter studies include 103 patients with accessible, visible, or palpable solid tumors of various histologic types who refused, had failed, or were not otherwise candidates for conventional therapy. The open-label pilot, doseescalation trial of CDDP/epi gel (1–6 mg CDDP/cm^3 tumor volume) evaluated feasibility, safety, and efficacy; two other identical open-label Phase III trials used a dose of 2 mg CDDP/cm^3. CDDP/epi gel was injected intratumorally at weekly intervals for up to 6 weeks.

Results: Pilot Study: 45 patients with 82 evaluable tumors (<0.1–109 cm^3) completed study; mean total cumulative doses of 0.49–46 mg of CDDP administered in 1–4 treatments with CDDP/epi gel. No dose-limiting side effects occurred. Objective tumor responses (CR + PR) occurred in 50% of tumors of which 40% were complete responses; median CR duration was 160 days (range 28–469 days). Phase III Studies: 68 patients are enrolled in ongoing studies in Europe and the U.S. Evaluations include tumor responses, palliation of symptoms (pain, obstruction), and quality of life.

Conclusions: Treatment with CDDP/epi gel was feasible and well-tolerated. No nephrotoxicity, neurotoxicity, or ototoxicity has been identified to date. This intratumoral chemotherapy may prove useful for local primary or adjunctive palliative therapy in selected patients with accessible tumors.

237 POSTER

Incidence and sonographic features of hepatosplenic candidiaisis in patients with febrile neutropenia

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Purpose: Hepatosplenic candidiasis is a well known complication of patients treated with high-dose chemotherapy. Febrile neutropenia is a major risk factor for the onset of systemic fungal infections. Early detection and long lasting antifungal therapy are important prognostic factors. Therefore evaluation of incidences and sonographic features in hepatosplenic candidiasis is required.

Methods: Pts undergoing high-dose chemotherapy were examined by routine abdominal ultrasound scan. Whenever clinical signs of infection occurred, i.e. fever >38.5 °C, the pts were reevaluated. Within a two-months period from Dec 96 to Jan 97, 90 consecutive pts were examined with a 3.5 MHz-convex-phased-array (Kranzbühler Logiq 500).

Results: In 3 pts hepatic and/or splenic microabscesses were detected, 2 pts showed a typical "wheel in wheel sign", 1 pt had multiple dicrete hypoechoic lesions in the liver and spleen. A changed structural pattern, showing inhomogeneity of liver and spleen, was documented in 2 further pts, which was highly suspicious for an evolving systemic hepatosplenic candidiasis.

Conclusion: Ultrasound is a sensitive and easily accessable method to detect microabscesses and other typical morphological changes allowing early detection of hepatosplenic candidiasis. The incidence in our patient sample was 3.3%. Therefore we would recommend abdominal ultrasound screening for all patients with febrile neutropenia to improve antimycotic treatment strategies.

238 POSTER

Correlation between weight loss and appetite profile in cancer patients

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Purpose: It is not known whether nutritional preferences change with progression of tumor disease. We studied extent and direction of appetite in 30 subjects with solid tumors in 3 groups: A: N = 9 patients after curative

therapy, B: 10 patients with loss of <10%, C [N = 11]: >10% body weight since diagnosis.

Methods: All patients were followed for 4 days, general appetite and appetite towards specific foods (using foto cards) were recorded before meals (VAS 1–10), nutrient intake was weighed. Appetite towards protein/carbohydrate/fat (appetite composition) was calculated from composition of scored foods. Resting heart rate and plasma IL-6 levels were measured.

Results: Changes in body weight were A: +3, B: −2, C: −17%; heart rates were (X ± SD) 75 ± 7, 83 ± 12 and 90 ± 23/min; IL-6: 0.9 ± 2.5, 7.3 ± 9.8, 7.6 ± 9.1 pg/l. General appetite was A: 8.6 ± 1.1, B: 6.8 ± 2.2, C: 5.9 ± 1.3; energy intake was A: 2145 ± 593, B: 2126 ± 739, C: 1501 ± 503 kcal/day. General appetite and energy intake correlated with weight loss, heart rate and IL-6, however, composition of appetite (protein:carbohydrate:fat 16:39:44, 17:40:44, 16:39:45) and nutrient intake (16:37:47, 13:39:47, 13:38:48) were similar in all groups.

Conclusion: Progressive weight loss and activation of inflammatory responses correlate with a general decrease in appetite but not with a change in nutritional preferences.

239 POSTER

IT – Actions to improve the quality of chemotherapy for patients receiving cancer treatment

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In the Finsencenter department of oncology we are treating patients in 35 different protocols. We conduct as well standard treatments, as phase I–III trials. The Clinical IT Coordinator along with other fellow-workers are responsible for the administration and control of data handling. During the last 2 years we have been engaged in developing computerprograms optimise the flow of patients through out the organisation.

The outcome of the project has been implementation of several computerprograms designed to deal with different treatment aspects both in the administration- and clinical departments.

A Protokol module takes care of the creation and maintenance of treatment templates associated with one or more specific diagnose(s). An Elucidation module handles all what is needed to make an investigationplan for a specific patient. Patienttreatmentplan and datacollection module gives doctors and nurses the opportunity to create individual patienttreatmentplanes and to enter data directly into patients dataflowsheets.

The lecture contains a brief introduction to the IT project. In addition the knowledge of how to do and the effect of implementing these new computerprograms in the organisation will be discussed.

240 POSTER

Study of two intravenous schedules of clodronate (CL) in patients with bone metastases

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Purpose: Comparison of the effectiveness of two i.v. schedules of Cl as a palliative treatment of pts with painful lytic bone metastases of solid tumors.

Methods: Randomized open-label study with arm A (Cl 300 mg i.v. 2 h infusion during 5 consecutive days) and arm B (Cl 1500 mg i.v. 4 h. infusion on day 1). Bone pains has been assessed with a Questionnaire and Visual Analogue Scale (VAS) before Cl infusion (baseline) and 2 weeks after. Eligible pts had painful bone metastases of solid tumors, absence of sufficient analgetic effect of antineoplastic treatment (chemotherapy, hormonotherapy, immunotherapy) during at least 8 weeks, adequate organ function and hematologic parameters, ECOG performance status 0–3. Fifty nine pts have been entered in both arms and 51 of them were evaluable (arm A-24 pts: M-6, F-18; arm B-27 pts: M-6, F-21). The median age was 52 (range, 34 to 73 years) in arm A; 56 (range, 35 to 68 years) in arm B. 31 from 51 pts (60.8%) were breast cancer pts. (Other: lung cancer pts, renal cancer pts, endometrial carcinoma pts.).

Results: According to VAS mean pain intensity decreased in arm A from 65.2 mm to 54.3 mm (−10.9 mm) and in arm B from 58.9 to 35.5 (−23.4) ($P > 0.05$). The mean analgetic effect of Cl for arm A was 31.5% and 59.9% for arm B ($P < 0.05$). The advantages of arm B schedule have been seen also in changes of pain score (arm A: before-6.3, after-5.7 ($P > 0.05$); arm B: before-6.4, after-3.8 ($P < 0.01$)) and narcotic score (arm A: before-3.5, after-3 ($P > 0.05$); armB: before-2.6, after-1.3 ($P < 0.01$)).

Conclusion: Single 4 h. infusion of 1500 mg of Cl has higher efficacy than standard infusion of 300 mg within 5 days and may be preferable in the treatment of painful lytic bone metastases.

241 POSTER

Clinical importance of digital thorax X-rays for detection of lung infiltrations of bone marrow transplanted patients – A prospective study

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Purpose: Pulmonary pathologies remain a serious complication of patients with bone marrow transplantation in aplasia. Clinical importance of digital thorax X-rays for detection of infectious or non infectious lung infiltrations was verified.

Methods: 40 patients with bone marrow transplantation in aplasia, age ≥18, fever of unknown origin and normal thorax X-ray before transplantation were evaluated prospectively concerning manifestation of lung infiltrations in correlation to clinical findings (temperature, blood, microbiology, auscultation, bronchoscopy).

Results: 27.5% (n = 11) developed lung infiltrations in digital thorax X-ray, microbiological findings indicated infectious lung infiltrations in 10% (n = 4; 3 fungoid, 1 bacterial). Clinical findings such as increase of temperature, CRP, antibody titer occurred in average 6 d before lung infiltration in digital thorax X-ray. Antibiotics were changed according to thorax X-ray findings in 10% (n = 4), important additive information as pleural effusion, pneumothorax, catheter placement etc. was gained in 55% (n = 22).

Conclusion: Thorax X-rays remain an indispensable additive diagnostic parameter for evaluation of the development of pulmonary complications after bone marrow transplantation. Thorax X-rays are not a dependable method for primary detection of infectious lung infiltrations after bone marrow transplantation due to an average latency of 6 d for manifestation compared to clinical findings such as CRP, temperature and antibody/antigen titer increase.

242 POSTER

Itasetron hydrochloride (DAU 6215Cl): A pharmacokinetically unique 5-HT_3 antagonist

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Purpose: Itasetron hydrochloride (ITA) is being developed for the prophylactic control of acute chemotherapy-induced emesis. In order to develop both oral and i.v. forms, the pharmacokinetic characteristics were established in healthy volunteers.

Methods: In blinded placebo-controlled studies, single i.v. (0.5 h infusion) doses between 0.112–11.2 mg and single oral doses between 0.5 and 60.0 mg were investigated in male volunteers. Drug concentrations were determined in plasma and urine.

Results: ITA was described by linear kinetics; extrapolated $AUC_{0-\infty}$ increased proportionally with dose up to 11.2 mg i.v. or 30 mg orally. C_{max} was also linear across the dose-range. Elimination half-life was long ($t_{1/2}$ i.v. 10.6 h ± 2.4, oral 12.4 h ± 2.8) compared with other 5-HT_3A ($t_{1/2}$ i.v. ondansetron ~3 h; granisetron ~9 h). In contrast to current 5-HT_3A, renal clearance exceeded glomerular excretion rate suggesting active excretion. Total systemic clearance (Cl_{tot}) of i.v. and oral doses was similar (403–740 ml/min and 530–991 ml/min, respectively) with 42–81% of ITA excreted unchanged. This suggests ITA undergoes little metabolic biotransformation before elimination in contrast to other 5-HT_3A which are extensively hepatically metabolised. In common with this class, volume of distribution was large (5.8–8.31/kg) indicating that ITA is widely distributed in tissues.

Conclusion: In contrast to current 5-HT_3A, ITA is quantitatively absorbed, undergoes little metabolic biotransformation, has a long half-life and active renal excretion.