

occurred 17.8 days after treatment. All but 1 patient (93%) were neutropenic and neutropenia lasted 20.4 days before bacteremia. Twenty-six patients (83.9%) had central venous catheters (CVC). All patients received antibiotics. Twenty-five patients (80.6%) received carbapenems for a mean of 10.2 days (range 2–31 days) before onset of SM bacteremia. Almost all patients (93%) manifest infection with fever ranging from 37.6 to 40.2°C. Hypotension occurred in 5 patients (16.7%). Eighteen patients (58.1%) had symptoms related to: respiratory system (25.8%), skin (12.9%), CVC (6%) and gastrointestinal tract (16.1%); but SM was isolated only from the sputum of 4 patients and soft tissue of one. Complications were uncommon: 3 patients (9.7%) had renal failure and 3 had respiratory compromise. The mean Apache-II score on day of bacteremia was 18.7. Twelve patients (38.7%) required admission to ICU. CVC was removed in 13 patients (41.9%). Twenty-four patients (77.4%) were treated with Bactrim and 2 (6.5%) had quinolones. Five patients (16.1%) received inappropriate antibiotics and all died. Mortality rate was 35.5% (11 patients) but 3 deaths were deemed unrelated to SM infection.

Conclusions: In hematology patients with prolonged hospitalization and neutropenia, SM bacteremia should be considered when fever occurs despite broad-spectrum antibiotics.

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Risk Factors for Febrile Neutropenia among Older Patients with Diffuse Large B-Cell Non-Hodgkin's Lymphoma (DLBCL) Treated with Anthracycline-Based Chemotherapy

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Background: Therapy-related myelosuppression is more common in older patients (pts) with DLBCL who are treated with regimens such as cyclophosphamide, doxorubicin, vincristine, prednisone (CHOP), with or without rituximab (R). Febrile neutropenia (FN) may subsequently complicate the course of these patients. We examined the occurrence of FN among a large series of older pts with DLBCL treated with either CHOP or R-CHOP on an oncology intergroup trial. Risk factors for the occurrence of FN were identified among these pts. **Objectives:** To determine: (1) the incidence of FN in this pt population, and (2) risk factors that are predictive for the occurrence of FN in these pts.

Methods: Pts >60 years of age with previously untreated DLBCL enrolled on a US oncology cooperative group trial (CALGB 9793/ECOG-SWOG 4494) were randomized to initial therapy with either (CHOP) or (R-CHOP). Data regarding the nadir neutrophil counts and complications of FN were collected. The incidence of FN was ascertained, and baseline demographic features that were predictive for the occurrence of FN were identified.

Results: Of the 632 pts enrolled on this trial, data was available for 520 pts with regard to nadir counts and the occurrence of FN. Among these 520 pts, 212 (41%) had at least one episode of FN complicating their treatment course. Overall, FN occurred in 261/3216 cycles of therapy (8%). The median time to FN was Day 11, with 38% of all FN episodes occurring in cycle one of therapy. Of these 520 patients, 141 had at least one hospitalization for FN, with a median period of hospitalization of five (range, 1–121) days. The occurrence of FN in cycle 1 of therapy was assessed by the study entry demographics, to identify risk factors for this complication. Analysis of only cycle 1 was undertaken in order to minimize the impact of dose reduction, dose delay, and myeloid growth factor usage. Factors found to be predictive for cycle 1 FN included advancing age (evaluated as a continuous variable, $p=0.001$), a less favorable performance status (PS 2, 3) ($p=0.02$), baseline hemoglobin of <12 g/dl ($p=0.0001$), an elevated LDH ($p=0.02$), and a high-intermediate/high risk International Prognostic Index (IPI) score ($p=0.02$). The presence of marrow involvement had no impact on the occurrence of FN.

Conclusions: FN is a common occurrence among older pts with DLBCL receiving anthracycline-based chemotherapy regimens. This complication tends to occur early in the treatment course. Risk factors for the subsequent occurrence of FN include advancing age, poor PS, anemia, elevated LDH, and high-intermediate/high risk IPI score. Using these predictive factors, pt subgroups may be identified at baseline that will most benefit from myeloid growth factor support with their therapy.

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Septicaemia due to *Ewingella americana* in a Cancer Patient: A Case Report

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Introduction: Septicaemia due to unusual bacteria may be difficult to establish and often difficult to

treat. We describe a case of *E. americana* septicemia in a cancer patient successfully treated with antibiotics.

Case report: A sixty-five yr-old Belgian woman was hospitalised with a recent diagnosis of colon adenocarcinoma, massive hepatic metastases and right pleural effusion. She was referred to our institution one week after the diagnosis. Previous medical history was unremarkable. The diagnosis was made after development of tenderness of right hypochondrium. On admission, the patient presented an important jaundice, a right pleural effusion and a flapping tremor. Two days after the admission, we decided to start quickly chemotherapy because of exponential alteration of liver tests. Five days after the beginning of chemotherapy, she developed fever with chills. There was no clinical site of infection but angiocholitis was suspected because of progressive alteration of liver enzymes. After microbiological documentation (blood, urine), we empirically started cefuroxime (1.5 g tid) and ornidazole (1 g a qd). She responded well to antibiotics, became afebrile and decreased CRP and WBC count. Urine culture was negative but blood cultures yielded Gram-negative bacilli which was identified as *E. americana* by the VITEK® identification system.

The antimicrobial susceptibility test carried out by disk diffusion method showed resistance against cefuroxime; curiously the patient became afebrile under cefuroxime/ornidazole. However, we shifted antibiotics to ciprofloxacin (500 mg bid) and maintained ornidazole. An improvement of liver tests was also observed, probably due to chemotherapy. **Conclusion:** *E. americana* is a Gram-negative bacillus belonging to the family of *Enterobacteriaceae*; the reservoir and the clinical significance of this germ are not precisely established. *E. americana* infection in immunocompromised patients such as cancer patients is uncommon; to our knowledge this is the first case of septicemia in a cancer patient undergoing chemotherapy.

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Moulds in Hospital Air: Data from a Single Oncohematological Institution in Argentina

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Background: Invasive mould infections (IMI) are a major cause of morbidity and mortality among

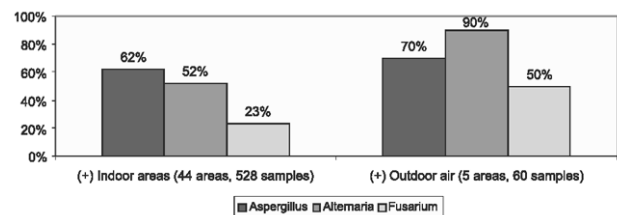
patients with hematological malignancies. Different institutions have different epidemiology of IMI. Hospital air can be a reservoir for moulds. In our institution, *Aspergillus* spp. are the most frequent cause of IMI followed by *Alternaria* spp.

Objectives: We conducted a one-year prospective study to evaluate the epidemiology of moulds in our hospital air.

Methods: The air of 44 indoor (16 rooms [4 wall-HEPA, 6 portable HEPA], 13 bathrooms, 15 common areas) and 5 outdoor areas were tested 3 times a day (morning, noon, afternoon) once a month, four months a year (spring 2004, summer, fall, and winter 2005) using a portable volumetric air sampler (SAS SUPER 90, pbi International, Milano, Italy). Malt extract agar added with cloramphenicol (250 mg/l) was used as medium culture. Plates were incubated for 3–5 days at 25°C. Colony counts were done by conventional methods. Moulds identification was made by culturing them on potato dextrose agar. Colony counts were enumerated as colony-forming units per m³ of air (CFU/m³).

Results: 660 indoor and 75 outdoor air samples were obtained. The airborne concentrations of moulds are shown in the table.

Area (n samples)	Airborne concentrations of moulds, median (range)				
	Spring 2004 November	Summer 2005 February	Fall 2005 May	Winter 2005 August	Spring 2005 November
Rooms (240)	78 (5–267)	263 (5–827)	167 (0–352)	81 (0–390)	91 (0–388)
Bathrooms (195)	35 (3–283)	167 (37–368)	122 (0–328)	30 (3–107)	38 (0–230)
Common areas (225)	103 (8–450)	250 (30–928)	160 (50–262)	132 (18–262)	75 (53–172)
Outdoor air (75)	272 (217–298)	587 (493–773)	348 (253–430)	213 (128–252)	677 (538–1368)



Distribution of airborne moulds (4 samplings, 1 per season)

The distribution of genera is shown in the figure. The most frequent opportunistic fungi found in indoor and outdoor air were *Aspergillus* spp. followed by *Alternaria* and *Fusarium* spp.

Conclusions: We found a high load of moulds in hospital air with a median that ranged from 78 to 263 CFU/m³. The highest counts were observed in summer. The most prevalent genera in indoor air were *Aspergillus* followed by *Alternaria* and *Fusarium* spp. This distribution of genera matches our local epidemiology of IMI.