

incorporation of a VAS in the nursing file. In addition, it was shown that a pain protocol based on the guidelines of the World Health Organisation could be implemented in a controlled setting.

The aim of this project was to improve the attitudes towards pain control in cancer patients, hospitalized at the departments of Hemato-oncology, Pneumology and Internal medicine; and to implement the pain guidelines in the different departments. The project was funded by the "Vlaamse Liga tegen Kanker".

The project was developed in different phases, which consisted of a sensibilization of the professional health caregiver and patient and family, each followed by a registration period in the participating departments. The project ran from 1/07/2007 until 30/06/2009. The first part aiming at training the nurses to use the VAS consisted out of 2 interactive training sessions (26/02/2008; 04/03/2009). This session was attended by the head nurses of the 3 departments and 16 and 21 nurses respectively. The training on pain control for all professional health caregivers was given 2 times (19/03/2009, 09/04/2009) and was attended by 64 and 31 participants, respectively. A separate session for residents and physicians was attended by 25 participants. The information session for the patients and family were given once (25/10/2008) and was attended by 75 participants.

There were 3 registration periods at the different departments: registration period 1 run from 21/01/2008 until 15/02/2008 (25 days), registration period 2 from 1/04/2008 until 28/04/2008 (28 days) and registration period 3 from 1/02/2009 until 28/02/2009 (28 days).

The number of patients, patient characteristics and information on pain is given in Table 1.

Table 1.

	Period 1	Period 2	Period 3
Number of pts	43	41	61
Male/female	23/20	31/10	43/18
Age (years)			
eremsp;Median	73	71	70
eremsp;Range	25-92	36-84	20-90
Registered days per patient			
eremsp;Median	6	6	6
eremsp;Range	1-17	1-25	1-28
N° pts without pain (%)	18 (42)	25 (61)	18 (29.5)
N° patients with pain (%)			
eremsp;1-3	8 (19)	6 (14.6)	13 (21.3)
eremsp;4-6	9 (22)	8 (19.5)	19 (31.1)
eremsp;7-10	8 (19)	2 (4.9)	11 (18)

Pain is prevalent in hospitalized cancer patients and between 5-19% are experiencing severe pain. This project increased the awareness of pain among both patients and professional caregivers.

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POSTER

Evaluating the satisfaction of the Spanish online breast cancer consulting service

M. Garcia de Paredes¹, E. Bejar², F. Montesinos², J.A. Garcia-Saenz³, B. Gil de Antuñano², L. Paz Ares⁴. ¹Hospital Ramón y Cajal, Medical Oncology, Madrid, Spain; ²AECC, Psychologist, Madrid, Spain; ³H. Clínico San Carlos, Medical Oncologist, Madrid, Spain; ⁴H. Virgen del Rocío, Medical Oncologist, Sevilla, Spain

Background: Cancer information on Internet is an increasingly demanded service. There are few reliable qualified cancer information websites in Spanish. 4 years ago AECC launched www.muchoxvivir.org with the HONcode backing and offered consultancy *online* service for breast cancer patients, relatives or friends. Number of visitors and consultants has increased every year. Thus, in 2008, 1,095,743 visits and 714 consultations were registered. A survey of user satisfaction was conducted concerning the service provided in order to look for areas of improvement.

Methods: A link to an online anonymous questionnaire with 5 items, time to response, amount of information, information content, satisfaction and impact on overall quality of life, was e-mailed. Response were categorized into 5 degrees (1 = very dissatisfied to 5 = very satisfied). Other questions evaluated were as follows: age, sex, breast cancer diagnosed versus undiagnosed patients or relatives and, finally, type of query (medical, psychological, social resources, or other). Participants were also asked for suggestions to improve the service.

Results: In 2008, 621 questionnaires were e-mailed to users who gave their permission. 249 users (40%) answered within 2 weeks, most of them in only 1 to 3 days. Mean age was 39.9 (18 to 68). 94.4% of participants were women. Most of them were breast cancer patients (60.2%), followed

by relatives or friends (32.5%) and women not diagnosed (72%). Most questions were medical (84.3%) or psychological (17.7%) issues. 76.3% of users were satisfied or very satisfied with the response time; 70.3% were satisfied or very satisfied with amount of information; 71.5% were satisfied or very satisfied with information content; 70.7% got the answer they expected and 46.2% achieved a positive impact on their quality of life. Some important suggestions received were more detailed answers, some kind of follow-up and the possibility to organize "patient forums" or "group therapies".

Conclusions: Our *online* breast cancer consultation service is highly appreciated by users, particularly in terms of short time to response and contents. To monitor every consultation and to offer *online* discussion boards or group therapy would be welcome.

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POSTER

Dolichol dependent hypersensitivity reactions to chemotherapy in breast cancer: the approach for prevention and management

I. Kuznecovs¹, S. Kuznecovs¹, G. Kuznecova¹. ¹Preventive Medicine Research Society, Cancer Research Laboratory, Riga, Latvia

Background: Skin reactions caused by chemotherapeutic agents are not rare. In breast cancer they can mimic metastases and infections. The recent results are in favour of the idea that N-glycoprotein synthesis is limited by Dolichyl Phosphate Cycle (DPC), which is a target for chemotherapy and essential in maintaining mucocutaneous resistance and immunity. This dual role is very important in prediction and prevention of chemotherapy-induced skin disorders. With focus on a risk group marker for cutaneous side effects of cancer chemotherapy, the present study was carried out to estimate Dolichol (Dol) metabolism in patients with breast cancer treated with cytostatic agents.

Materials and Methods: The samples obtained from 412 patients with breast cancer before and during treatment with cisplatin, cyclophosphamide, docetaxel, doxorubicin and trastuzumab. Dol in urine was assayed by HPLC method, dolichol phosphate N-acetyl-glucosamine-1 levels. phosphate transferase (GPT) activity was defined in dermal fibroblasts by metabolizing labeling (ML) method with [2-(3)H]-mannose.

Results: The normal amounts of Dol in healthy donors urine (n=250) are 6.0-10.0 mkg/mmol. During the period of observation 90 (21.9%) of cancer patients were presented with different skin reactions, including flushing, urticaria, dermatitis, erythema, pruritus and acne. From this group of patients 74 (82.6%) have had elevated urinal Dol excretion (>20.8 mkg/mmol) 2 weeks before chemotherapy and 85 (94.6%) during and 2 weeks after chemotherapy. ML of cultured dermal fibroblasts from these patients revealed lowered incorporation of radiolabel into full-length dolichol-linked allele oligosaccharides and glycoproteins. sGPT activity was reduced to approximately 85.4-98.4% of normal levels.

Conclusion: There is a reason to suggest that reduced GPT activity, lowered N-glycoprotein synthesis and elevated urinary Dol detected in this group of patients may evidence of the disorders of DPC and possible susceptibility to the development of chemotherapy-induced cutaneous reactions. Elevated urinary Dol is one of the first manifestations of this disorder which could be prevented by breast cancer patients selection and DPC regulation.

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POSTER

The patient-perception fatigue PERFORM questionnaire is able to detect improvements of ≥ 1 gr/dl in hemoglobin level, among cancer patients with anaemia

C. Rodríguez¹, P. Gascón², J. García-Mata³, R. Colomer⁴, J. Cassinello⁵, J. Carulla⁶, V. Valentin⁷, E. Baró⁸, on behalf of The Perform Study Group. ¹Hospital Universitario de Salamanca, Medical Oncology Service, Salamanca, Spain; ²Hospital Clínic i Provincial, Medical Oncology Service, Barcelona, Spain; ³Hospital Santa Maria Nai, Medical Oncology Service, Orense, Spain; ⁴Centro Oncológico MD Anderson, Medical Oncology Service, Madrid, Spain; ⁵Hospital Universitario de Guadalajara, Medical Oncology Service, Guadalajara, Spain; ⁶Hospital General Universitario Vall d'Hebron, Medical Oncology Service, Barcelona, Spain; ⁷Hospital 12 de Octubre, Medical Oncology Service, Madrid, Spain; ⁸3D Health Research, Barcelona, Spain

Background: Cancer-related fatigue (CRF) is one of the cancer symptoms with greatest impact in the patients' daily lives, and it is gaining importance as outcome measure. PERFORM Questionnaire is a recently developed and validated scale for the assessment of perceptions and beliefs about CRF (Rodríguez CA et al., ASCO 2007). This analysis has been carried out to better know the longitudinal association between the improvement in hemoglobin (Hb) level (≥ 1 gr/dl) and the self-perceived health-related quality of life (HRQoL), in anemic patients.