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Colorectal cancer is the third most common type of cancer in men and women. The American Cancer Society (ACS) estimated that 106,680 cases of colon and 41,930 cases of rectal cancer would be diagnosed in 2006 (ACS, 2006). Incidence and mortality rates of colorectal cancer are greatest in developed western nations (Van Cutsem and Costa, 2005). Peak incidence is in individuals older than 60, with more women the men developing colon cancer and more men then women acquiring rectal cancer (Wilkes, G; 2005) The good news is, 70% of patients present with localized disease and surgery can be curative in those individuals.

The ideal screening method for colorectal cancer has not yet been developed and the future may see more use of promising screening modalities. While there is growing public awareness of colorectal cancer, there has been little public discussion about the scientific pros and cons of screening compared to, for example, breast cancer screening.

Some would say, “Screening is good, prevention is better”. Eating a healthy diet and cutting down on fast foods, junk foods, and processed snack foods may be helpful in reducing the risk of cancer. It is important that patients, and nurses, are aware of their cancer risk factors and for all of us to take precautionary and preventative measures such as participating in screening programmes. Initiating changes where needed may help to reduce risk factors. In the case of colorectal cancer, diet may reduce the risk of developing this disease; however, research to date has not uncovered a definitive effect and there is still much to be discovered regarding the relationship between nutrition and lifestyle and the development of cancer. More about this can be read in the articles “The Challenges of Diet for Patients with Colorectal Cancer” by Orla Hynes and Jaonina Middlemis and “Diet and Cancer: Is there a relationship?” written by Carol Krcmar.

Whether printed in the daily newspaper, discussed on television, or flashed through the internet, reports of cancer research are plentiful. As the public becomes aware of research findings, oncology nurses may encounter patients who have questions regarding possible new options for treating colorectal cancer and should be prepared to discuss the choices. For example, research has shown that despite national guidelines recommending adjuvant chemotherapy for stage III and IV colon cancer, only 45%–55% of such patients actually receive the recommended treatment (Oliveria, Yood, Campbell, Yood, & Stang, 2004). Although patient refusal accounted for some of the disparity, many patients were not referred to an oncologist for treatment. The most common reason for lack of referral was patient comorbidity. On the other hand, predictors of receiving an oncology referral were younger age (younger than 70 years) and stage III disease at diagnosis (Oliveria et al, 2004). Adjuvant therapy for colon cancer can improve survival for patients by reducing mortality by as much as 30% and the rate may improve further with the addition of newer adjuvant therapies (Meyerhardt & Mayer, 2005). Oncology nurses can play an important role in helping to identify appropriate patients for adjuvant therapy. In this issue of the EONS Newsletter, Eric Van Cutsem provides you with an overview of the current treatment possibilities in colorectal cancer.

The journey of the patient with colorectal cancer is often stressful and worrying, leading to feelings of fear and anxiety. This may be a result of undergoing various tests and examinations before receiving a definitive diagnosis, waiting for treatment to commence, or feeling uncertain as to whether treatment will be successful. The provision of support and guidance by a colorectal nurse specialist, as described in the article by Roni Cummings, can make a positive difference in the way a patient experiences cancer.

EONS believes that education for European oncology nurses on colorectal cancer is needed and propose a joint partnership with patient representatives and medical colleagues to address this deficit. We have taken the first step which is the presentation of a nurse symposium at the 10th World Congress on Gastro Intestinal Cancer, to be held on 27 June 2006 in Barcelona. More information on this congress is available at www.worldgicancer.com.

The number of patients treated by EGFR-inhibitors is increasing rapidly in European oncology centres. In light of this development, it is essential that knowledge and clinical experience about managing both the systemic and non-systemic side effects of this new treatment modality are rapidly disseminated. Liesbeth Lemmens gives you an overview of the state of the art of EGFR-inhibitors in the article “How to deal with toxicity of targeted therapies – EGFR-inhibitors”.

Lynn Fauld Woods has written an article on patient needs and I think here the statement, “what we would like to have is not rocket science, information is key”, is appropriate. Although significant advancements in treatment options have occurred over the past few years, the evidence to support nursing care is lacking. Preoperative and postoperative care, communication, anticipating patients’ informal needs, symptom management, and existential concerns are areas that should be further explored in nursing research.

Coming up, the 6th EONS Spring Convention entitled “New ways of working: innovation in cancer nursing practice” to be held in Geneva. We look forward to meeting you at this exciting educational event!

Jan Foubert, Editor in Chief
The mission of the newly formed Oncology Nursing section is as follows:

- To create a forum for exchange of knowledge and information, where oncology nurses and experts who work in the area of oncology prevention, treatment and rehabilitation can cooperate;
- To increase the appreciation of the work of nurses, especially oncology nurses, with the help of education, research and practice, so that the work nurses perform is represented on a high professional level;
- To create an extensive cooperation among the various social classes, to collaborate to reduce the morbidity of oncology diseases.

Aims and goals of the Oncology Nursing section

Members of the Oncology Nursing section have established some very ambitious goals for their organisation:

- Support oncology professionals to effectively implement their theoretical knowledge through organizing scientific programs, conferences and continuing nurse education programmes;
- Further develop education in oncology in basic nurse training;
- Develop and start new special training;
- Develop standards of patient care aimed to help family members;
- Assist oncology professionals to conduct research according to international practice;
- Raise oncology nursing in the oncology team to a professional level;
- Educate oncology nurses about cancer diagnosis, treatment, rehabilitation and palliation;
- Create a network of communication and leisure time;
- Facilitate health promotion in the work environment;
- Build relationships and cooperation among national and international, professional and civil organizations, associations, and universities;
- Provide scholarships and grant professional awards in order to acknowledge the prominent and exemplary activities done in the field of oncology (including education, research and all areas of patient care);
- Provide assistance to members to take part in national and international scientific conferences;
- Publish in professional and non-professional national and international journals articles about cancer nursing to provide professional information with the help of the media;
- Introduce the members of the oncology team to the public in order to increase appreciation of oncology experts;
- Represent the professional and ethical interests of oncology professionals at the national and international level;
- Increase the number of members in the Oncology Nursing section to build unity, as well as professional and personal harmony in the different areas of oncology.

Future directions

In the future, we would like to increase awareness of the importance of cancer prevention and early detection among health professional in Hungary. We feel that cancer care should incorporate a holistic approach to helping patients and we plan to support this approach in education and practice. Health professionals working with cancer patients should themselves practice a healthy life style and be trained to help the general public to be aware of the benefits of cancer prevention and early detection: we plan to place emphasis on these issues in the future.
CALL FOR NOMINATIONS

For the third year running ESO is awarding a prize to promote excellence in cancer journalism.

There will be a top prize of €10,000 and two runners up prizes of €5,000. All winning articles will be published in ESO’s Cancer World magazine.

Would you like to nominate a journalist who deserves to be recognised for writing outstanding stories about cancer?

Do you think that you should be rewarded for your clear and accurate reporting on cancer?

Materials published in a newspaper, magazine or on a website between 25 April 2007 and 25 April 2008 will be accepted. The closing date for nomination is 25 April 2008.

For full details and a nomination form visit www.cancerworld.org/mediaservice
The first time that I heard about translating the EONS Newsletter, I asked myself: “Perhaps this is too complicated for us...”, but reality revealed the situation to be surprisingly different.

A year and a half ago, my colleague Roberto talked to me about his idea to translate the EONS Newsletter through AIIO (one of the Italian cancer nursing organisations). I hardly knew Roberto, knew little of the English language, and I knew no one who could be involved in this initiative.

In truth, the actual enterprise began in that way: we began to translate the most interesting articles from the latest EONS Newsletter, to publish on the AIIO website. A short time later our representative at EONS, Regina Ferrario, made an agreement with the Editor of the EONS Newsletter to begin an Italian translation of every issue of the EONS Newsletter. The first issue, which was translated during the summer 2006, arrived in Brussels ready to print after numerous telephone calls for last minute corrections and to finalise agreements.

In the meantime, the news of the translation initiative had spread and the project group assembled many different contributors identified through contacts with friends, the AIIO’s magazine, the AIIO website, and the annual congress.

Today, the ‘AIIO Translation Group’ has 20 working members and one impromptu contributor, and we manage in a smooth manner the translation of the entire newsletter.

How did we accomplish this task?

Let me describe the step-by-step procedure we follow for translating the articles. In the first step, the articles in English language (as they appear in the international edition) are sent via e-mail to the person in charge of the translation group between two and five weeks before the date of return agreed with the EONS Communication Team. The person in charge of the ‘AIIO Translation Group’ distributes the articles to the translators depending on the degree of difficulty, length of the article, and the time available to perform the translation. Normally all of the material is exchanged electronically, but in case of difficulty, brief articles and timely articles can be exchanged also via fax or by traditional mail.

All of the translated articles are returned to the person in charge of correcting the draft. He then sends the finished product to the EONS Communication Team, who format the Italian version of the EONS Newsletter to make it identical to the international version.

After some days, the person in charge of the Translation Group receives the preview of the Italian version and can advise EONS as soon as possible if any last minute corrections need to be made. The agreement between AIIO and EONS foresees that EONS, in successive translations of the EONS Newsletter, will print them also in Italian and send them to Italy, where AIIO will organise free distribution to its associates.

Surely two big obstacles to participation in this group are linguistic understanding and skill. In truth, many of us are wise to the fact it is sufficient to have a scholastic knowledge of English with some training in the English language since the original articles are intended for an international publication and not for devotees of classic English literature! Besides, some members of the group are more experienced and can help the others with the most difficult pieces.

Why did we take on this task?

So now you know how, but you might still be asking yourself “Why would busy nurses want to take on such a huge task?”

The members of AIIO have welcomed with great approval the translated version of the EONS Newsletter: this work allows all readers to have an international resource at hand. Moreover, this continuing agreement with the Association increases its international prestige and the tie of collaboration with EONS.

Further, the close collaboration between the various translators creates a connection between them although they have perhaps never seen each other and provides them with a closer connection with the AIIO. It is very stimulating to work in this group because you have the feeling that each translator looks to resolve – in real time – difficulties that can present in completion of the work.

Everyone offers their contribution as volunteer, but certainly to receive a standard of work so rich and fruitful, gives us great satisfaction. Besides, the hypothesis is also to involve students of the Degree in Nursing course in the translation in order to introduce them to AIIO and to provide them with a means of making new contacts.

Finally, we are aware that the commitment made by the members of the Translation Group is sustainable and that the results are worth the effort.

For further information, contact: info@aiio.it
Why research the value of nursing in cancer care?

An economists’ perspective

According to WHO, cancer is becoming an increasingly important factor in the global burden of disease. While there are currently approximately 24.6 million people living with cancer, this number is expected to rise to 30 million in 2020. Also the number of deaths from cancer is expected to rise from approximately 7 million per year today to 10 million in 2020 (1).

Considering values in the provision of cancer care across Europe, leads us to consider how we deal with the issues of equity, choice and access. In the area of health care provision in general and provision of cancer care in particular, we are faced with the trade-off between an increase in the availability and improvement of treatment options, increased expectations of patients and limited financial means available in health care systems to satisfy patients needs and expectations. Not only patients and their families confront the system with their needs and expectations, increasingly also staff in the health care sector react to the mounting pressure by moving around Europe or dropping out of the profession altogether. Demographic change will lead to smaller cohorts of potential nurses to fill demand in the years to come. The profession of nursing therefore needs to gain in status and develop financially attractive career opportunities.

To be able to demonstrate the value of nursing in general, and cancer nursing in particular, the current attempts at measuring performance and quality in nursing have to be pursued further. Needleman et al (2007) provide a detailed summary of the state of science in performance measurement of nursing care (2). They identify a set of goals/purposes, which can be pursued with the help of performance measurement in nursing:

- Quantify nursing’s influence on patient safety and health care outcomes
- Enable benchmarking and sharing of best practice
- Enhance clinical practice of nursing personnel and nursing-related quality projects
- Identify appropriate standards for levels in staffing
- Identify gaps where research, education, and training are needed in measuring nursing sensitive care,

They conclude that only effective performance measurement systems will enable health care stakeholders to better understand and monitor the degree to which nursing care influences patient safety and health care quality. Fewer complications result in better health care outcomes and imply fewer resources spent on care. It is here, where a professional organization like EONS can offer support to clinical and management research in cancer nursing. If the objective is to further the recognition of the cancer nurse in member countries, it will not suffice just to offer training and education courses that are accredited and transfer across countries. It is necessary to actively participate in the ongoing performance debate to establish the value of specialty nursing and superior nursing performance both with regard to quality and cost, and to communicate the value of specialized training to all relevant stakeholders.

Training nurses to be cancer nurses also increases the options of nurses to act in interdisciplinary cancer teams handling complex tasks. As Richards (2007) points out, we need to focus on the skills required to carry out different tasks rather than on job titles. We need to capitalize on the scope of highly skilled health professionals such as nurses for instance and making sure that doctors are doing tasks only a doctor can do (3). So far, the scope of nurse’s work differs across Europe as a consequence of very different education and training systems (4) and leaves nurses in different starting positions when it comes to their participation and roles within multidisciplinary cancer care teams.

While each national health care system is faced with the question how best to manage the challenge in organizing and delivering care individually, we also have to increasingly consider the issue of patient and staff mobility in the context of the European Union as a whole. Particularly, because recent evidence seems to indicate that different health care systems are successful to differing degrees when it come to the treatment and diagnosis of cancer. In their analysis of the EUROCARE-4 data, Verdecchia et al (2007) arrive at the conclusion, that cancer-service infrastructure, prevention and screening programs, access to diagnostic and treatment facilities, tumor-site specific protocols, multidisciplinary management, application of evidence-based clinical guidelines and recruitment to clinical trials probably account for most of the notable differences (5). Berrino et al (2007) see the increase in survival rates as an indication of an improvement in the health care systems (6). The factors associated with improved survival rates should be researched more closely and results communicated quicker to the research and clinical community. From a nursing perspective, the impact of multidisciplinary management on survival, and the role of nurses in these teams, warrants more research.

If we agree on the provision of optimal care for the greatest possible number of patients as our ultimate goal in cancer care, each health care system has to address the financial implications of actions directed at the provision of cancer care, optimize the process of managing and organizing care itself, learn to address the needs of patients and their families, as well as start to identify the needs of nursing staff.

In their analysis of the “Europe for Patients Project”, the European Observatory (2006) concludes that patient mobility across Europe so far constitutes a marginal problem – this seems to be mainly the result of differences in the organization of health care systems and difficulties in reimbursing and organizing care across borders (7). Mobility of staff however is a different issue – while it seems to be increasing over time, Buchan and Sochalski (2004) point out in their analysis of nurse migration, that we do not only lack comparable data across Europe to analyze the inflow and outflow of nurses, but we also lack easy access to truly basic information, as for instance the annual number of nurses trained in each country or the nurse/population ratios (8). Even more difficult should be access and comparability of data on training when it comes to specialty nursing.
Mowinski Jennings (2003:248) stated: “The effect of nursing will not be detected if it is not investigated” (9). To strengthen the position of the specialty cancer nurse across Europe, EONS should bundle the competencies of its members and push for an education and research initiative in order to increase our knowledge on the economic and clinical value of specialty nursing, as well as broaden our data base on the qualifications and movements of nurses across Europe to support policy analysis and professional development.

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Letter from the EONS President
February 2008

Sarah Faithfull, EONS President

In this letter I would like to share my positive experiences of spending time with a newly formed patient group and describe the strength and courage their members have in trying to raise awareness and lobby for change. Recently I was invited to meet with the board members of the European Prostate Cancer Coalition (Europa Uomo) at the multi disciplinary urology conference in Barcelona which was focusing on urological cancers. Prostate cancer is the most frequently diagnosed cancer in men accounting for 24% of all cases and 10% of all deaths in men. Europa Uomo is a newly formed collective of prostate cancer survivors from around the world. These patient representatives put the spotlight on the needs of men suffering from prostate cancer and highlight the impact of cancer on the everyday lives of patients. There aim is to identify inequalities in health care provision and raise awareness amongst not only the medical fraternity but among policy makers and men themselves to help reduce over treatment and develop individual personalised patient care. Talking with the men who had travelled from around the globe to be at this event was very awe-inspiring. We think it’s difficult to get the value of nursing recognised but think about patient groups. They were frank about the challenges ahead in changing perceptions and were clear as to their scope.

With the number of people living with cancer increasing much more effort is needed to improve quality of life and include patient voices in the development of research and future health care services. Most of these men had a story to tell, from experiencing symptoms post treatment to the struggles through diagnosis and recurrence. Nurses played an important part in their support and survival and there was recognition of the expertise oncology and urology nurses brought to the care of men and their families. These men also had wives, children and busy jobs but still managed to be proactive in this other life as advocates for prostate cancer. These discussions with patients were a real contrast to the conference itself which like most multi disciplinary events pulled together surgeons, clinical and medical oncologists with no mention of nurses or other professions allied to medicine involved in patient care. The conference was interesting with presentations of state of the art techniques such a robotics, new radiotherapy developments and chemotherapy agents. There was little evidence of discussions of the complex decision making required for the provision of different treatments or how treatment impacted on men’s long term quality of life or the psychosocial or sexual health concerns of those affected by cancer treatment. The voice or the needs of the patient was under represented in the thrust forward of treatment progress. I reflected afterwards with the men that in breast cancer women have been more successful at voicing their concerns and influencing breast cancer agendas and this has included the role of the specialist cancer nurse. Why is it that men have not been so good at raising concerns? The men thought that this may be due to the fact that until only recently the debate over which therapy is best for prostate cancer has been a major focus of clinicians and researchers. Now the comparisons are more about which therapy provides better quality of life as well as survival and at what point. This has raised awareness of men’s continuing support needs. I also believe that men are less likely to use support groups than women making it harder to build the critical mass required by patient user groups to be taken seriously.

Patient groups are now asserting their rights to be consulted and the men of Europa Uomo are doing just that. The European Cancer Patients Coalition (ECPC) has been vital in lobbying at an EU level for the inclusion of patient representatives in research and cancer policy planning. Part of the important role of these societies is in needs analysis and in raising awareness of health care inequalities and difficulties in provision. These assessments highlight what matters most to people. Advocacy groups foster proactive training and maybe we should work more closely with patient groups to use their collective experiences to guide research and future
Matthew Thornton
Recipient of the EONS Excellence in Education Award

Matthew Thornton is a Senior Lecturer in Cancer Care Nursing at the University of Glamorgan, Wales. In his current position, he has lead the development and delivery of a distance learning BSc (Hons) Cancer Care degree. As a Registered Nurse (and Registered Mental Health Nurse) he has a clinical background in cancer care nursing and has worked in both surgical and chemotherapy/ radiotherapy environments. Matthew is also involved in a multidisciplinary research project exploring treatment orientated decision making in patients with advanced lung cancer.

Description of the project

It has now been five years since a group of health professionals from Velindre NHS Trust, Cardiff, Tenovus cancer charity and Macmillan Cancer Relief specialising in cancer care met with colleagues from the University of Glamorgan to plan an innovative educational programme for cancer care practitioners.

The outcome of their meeting was a plan to develop a work-based, modular course focussing on a variety of psycho-social, biological, legal, ethical and professional issues pertinent to contemporary cancer nursing. This group vision came to fruition in 2003 with the start of a BSc Cancer Care & BSc (Hons) Cancer Care degree delivered by distance learning and supported through e-learning.

This course targets both adult non-specialist and adult specialist cancer nurses who have successfully completed a pre-registration course. To be accepted into the course, the individual must have access to a personal computer, internet access, a H.E. Diploma or its equivalent, and work with individuals with a cancer diagnosis. This course is also open to allied health professionals.

The BSc (Hons) Cancer Care is an organic course. It has evolved over the last four years in response to strategic government documents, service need and students’ wishes. The five-year anniversary sees the course having been transformed since its inception with new modules being developed in response to student feedback and from requests from service providers.

Matthew has been fortunate to work with colleagues who have a passion for cancer nursing and a commitment to delivering the highest quality of learning to students. Students work hard to produce projects which are often exemplary and recommended for publication – not an easy accomplishment considering that most of the students have other personal and professional commitments. Projects produced by students often form the rationale for changes in service delivery or clinical practice which embodies the spirit of this course, which is fundamentally concerned with developing practice.

Meaning of the award for the recipient

Matthew acknowledges that he was delighted to receive the EONS Excellence in Education Award. Receipt of the award is recognition of the hard work and commitment that colleagues from within and outside of the University and students have invested over the last four years.

Because there has been an increase in international students applying for the course, the course directors will need to make revisions in the course content accordingly. Receipt of the EONS award will help tremendously to make needed changes. Matthew believes that nurses involved in cancer care have a unique and often diverse role to play. In this light, he invites experienced cancer practitioners to consider contributing the course through the addition of written work within or the development of an online community of cancer nurses.

Ergül Aslan
Recipient of the EONS Novice Researcher Award

Ergül works as an Assistant Professor in the Department of Obstetrics and Gynecologic Nursing at Istanbul University Florence Nightingale School of Nursing where she teaches and supervises students in the nursing care of gynecology and gynecology-oncology patients. Through her regular contact with patients, she is involved in educating women about the treatment of gynecologic cancers. To improve her knowledge in oncology nursing, especially in gynecologic oncology nursing, Ergül participated in the 1st Masterclass in Oncology Nursing that was held in March 2007 in Malta.
Description of the project
The title of Ergül’s research project is “Anxiety and Depression Levels in Hospitalized Gynecological Oncology Patients”. The diagnosis of cancer may lead to severe psychological distress in cancer patients. Many patients have difficulty adjusting to a diagnosis of cancer which may lead to anxiety and depression. Health professionals often focus only on the diagnosis and treatment processes involved in cancer and do not pay much attention to the feelings of patients and their relatives. In this study, Ergül and her colleagues aimed to establish the distress of gynecologic cancer patients objectively. She believes that more nurses and other health professionals will begin to think about the psychological adjustment problems of patients by implementing the findings of her research. Further, Ergül hopes to increase the quality of care provided to patients with gynecologic cancer through the research results. She feels strongly that the recognition of psychological problems experienced by cancer patients will help to contribute to the improvement of their quality of life.

Ergül plans to publish her study results in a scientific journal. In Turkey, the number of research studies related to patient care in gynecologic cancers is very limited. She believes that the results of her study will improve knowledge about the needs of gynecological cancer patients. She wants to teach nursing students that we can provide our patients with better care if we have better knowledge about them.

Meaning of the award for the recipient
Ergül stated that the recognition of her research and being awarded a research grant from EONS is important for her work, her professional career and, last but not least, her motivation to do further studies in the future.

Monica Bianchi
Recipient of the EONS Excellence in Management Award
Monica is the Nursing Officer at the European Institute of Oncology in Milan. Prior to this position, she worked in cardiac surgery, orthopaedic surgery, and then as a head nurse in the operating room.

Monica’s nomination for the Excellence in Management Award was supported by a group of nurses with whom she works at the European Institute of Oncology and who collaborated to establish a research nurse working group.

Description of the project
The role of the research nurse is new and almost unrecognised in Italy. In her work at the Institute, Monica supervises nurses who do research. Under her guidance, nurses developed a job description for the role of research nurse. Monica presented the job description to directors of the Institute and was successful in gaining their approval. In addition to guiding the development and implementation of the job description, Monica has established a performance appraisal system for research nurses. Research nurses at the Institute have successfully submitted two articles for publication, had an abstract accepted at an international meeting, and given three presentations at national meetings. Needless to say, these accomplishments have positively contributed to the enthusiasm shown by the nurses. Monica has developed three nursing research projects and several educational programs for nurses at the Institute.

Monica feels that her receipt of the EONS Excellence in Management Award has great importance for nurses working in Italy. Monica’s project is “a bit opposite” to current models of nursing education and activities in existence in Italy. With her project, Monica wanted to demonstrate that a nursing group can dedicate time to nursing research as well as to clinical trials. In doing so, research nurses can develop specific skills, knowledge and competencies which will help them not only perform better in their position as clinical trial nurse but also allow them to better collaborate with physicians and other health care professionals in the development and implementation of clinical trials. With their advanced knowledge and skills, the research nurses are a valuable resource for the nursing education department.

Meaning of the award for the recipient
The experience of developing this program and receiving the EONS award has taught Monica a valuable lesson: the importance of believing in “young” research nurses and providing them support to encourage their enthusiasm for nursing and research.

The receipt of the award also shows Monica that she is moving in the right direction and she is proud that her efforts have been recognised by EONS. The award does not represent an end point, but rather the beginning of the creation of improved organisational conditions which allow nurses to grow as professionals.

Monica’s goal for the future is to succeed in her role as a mentor and facilitator and to provide support for the continued professional growth of her colleagues.
Patients needs

What do patients want and need?

Lynn Faulds Wood, President European Cancer Patient Coalition

What do patients want and need? The European Cancer Patient Coalition knows one of the most important things on patients’ wish lists is nurses.

I’m President of ECPC, a colon cancer survivor and one of the partners developing the official colorectal cancer screening guidelines for Europe. ECPC now has over 250 member groups across Europe and beyond. We meet or talk to most of our groups at some time every year. Whenever we discuss what we as patients would like, nurses are always near the top of our agenda. Nurses need to be there at every stage of our journey, especially at the moment we are given the shocking diagnosis that we have colon cancer.

What we would like to have is not rocket science – information is the key. From diagnosis, good information, sensitively given, verbally and in writing is what we really want. There’s a tsunami of information out there – but a lack of appropriate, validated, understandable information and we need help to put what is happening to us in context, to find what is best for us in this frightening new world which we now inhabit.

Add to that health literacy challenges, which affect many European cancer patients - it’s estimated twenty to twenty five per cent of patients in European countries have difficulties in understanding the written word and details of their disease. The patient who never seems to have their reading glasses available may well not be able to read.

Patient story

Iris from Ireland

“I was very happy with the way I was treated and the speed with which it all happened. I was given my own nurse who looked after me every time I had to go to hospital and she would take me aside each time and go through what the Doctor had said to make sure I understood it all. I was given all the information that I needed and nothing was too much trouble.

If I had any complaint it would be that after my operation and the fact that I didn’t need chemotherapy, I felt cast adrift. Other people like me are out there on their own but we still need some form of “club” to talk with like minded people.”

We want the right information at the right time - right for us, not a multi-page detailed booklet which might seem like an easy solution but can be scary in practice. One such widely used booklet has upset lots of patients by giving warning and side effects before we need to know them, like that our hair might fall out during chemotherapy when we haven’t been told that we are likely to require this form of treatment.

We want information about our particular cancer, how we are affected, what our survival chances are, what operation(s) we’ll have, how long we’ll take to recover, what we can eat, whether there is anything we can do to prevent recurrences or avoid cancer in the future ... Crucially, we want to be cared for by people who will encourage us to ask those questions.

Above all, we want medical professionals who see us, not our disease and who understand we need help through what, for most of us, is our first devastating experience with a complex, potentially lethal disease.

Increasingly patients want to be partners in their care. ECPC’s mantra is “Nothing About Us Without Us” and that means we want to be involved in decisions about our treatment, our choices, our future care. We want to discuss treatment plans and to have booked appointments - or at least to know what is going to happen next. Across Europe in one ECPC survey most of our members reported feeling they were not “allowed” to get as involved as they would have liked in their treatment.

We would love support after diagnosis, but often patients feel on their own, bewildered and lonely, once hospital treatment stops. Sharing experiences with others – putting us in touch with support groups, other patients who have been through the same journey - can be very comforting and means less worry for us. This could lead to possibly less use of GP and hospital resources as every worrying symptom can have us reaching for the telephone to make appointments. Knowing that other patients felt the same symptom, the same backache, the same insomnia can be very comforting.

Research has shown that we are more likely to comply with our treatment and take our medicine in time, if we have been involved in its planning. Improved compliance usually means we do better, use fewer resources, become less dependant on the system - ultimately cost less to treat.

Research has also shown one solution is to have a support nurse’s telephone number. Apparently we don’t often use it – just having the number and knowing we can call is comforting in itself.

How to find out what your patients need?

If you want to know what patients want – really want – try throwing a party. A patients’ party. That’s what we did in the UK a few years ago because we found colon cancer patients were reluctant to join committees and fora, to come forward and speak about their needs and any shortcomings in their care.

So with the help of nurses all around the country, we organised “patient feedback parties” in colon cancer units around the country – and huge numbers of patients came. Over 1500 patients, relatives and carers turned up and a fifth of units took part.

I attended nine of the “parties” – which ranged from 20 people to 350 – with medical professional and managers, even hospital chief executives, in attendance. For shy patients some of the organisers created anonymous notice boards where they could post nameless comments, giving everyone a chance to be heard.

The professionals reported finding the parties a great learning experience, discovering deficiencies in their systems which they never knew existed - from problems with getting prescriptions out
of the hospital pharmacy (easily fixed in one hospital by subtle changes in clinic times and pharmacy opening hours) to lack of toilets in critical places. Parking was frequently reported to be hard to find and costly for patients undergoing lengthy timed treatments like chemotherapy – and some hospitals had created special chemotherapy parking places in response to this issue following the event. Signposting in hospitals was also criticised as often a mystery and difficult to navigate around big institutions. The parties also threw up huge differences in the availability of best practice diagnostic facilities from hospital to hospital.

The parties also proved a great way to find patients who were then willing to join hospital committees, set up support groups and become involved in helping others to get through their cancer journey.

We prepared a template for the “parties” to capture the feedback, with suggested running orders and agendas, sample press releases to publicise the event in local newspapers and other useful information on planning a feedback party. Since the party launch for colon cancer patients, there has been great interest in running parties for other diseases and conditions with considerable success. If you would like a copy of the “patient feedback parties” planner, do send me an email.

Patients often get great comfort from doing their bit to raise awareness about colon cancer, to help prevent others from getting this common cancer. Indeed research shows that getting involved in this way can actually make us feel better. In the UK nurses and patients have organised local campaigns for colon cancer awareness month, which has helped to raise funding for support groups, buying specialist equipment and for improving patient facilities.

Lynn’s story
Looking back 17 years to when I was diagnosed, it seems like the dark ages. I was presenter of the BBC’s peak time investigative programme Watchdog yet I had never heard of colon cancer, the second biggest cancer killer in our countries. I was 40 years old with a 3 year old son.

My GPs thought my symptom – subtle rectal bleeding – “nothing to worry about at your age” and it was only my persistence which got me the devastating diagnosis – Stage C colon cancer.

I had no chemotherapy, just a wonderful surgeon whose audited results were twice as good as the average surgeon. However, in those days – no nurse specialist to support me through a truly dreadful experience.

Over the years I’ve spent most of my time helping to save lives from colon cancer and improve the quality of life for patients. I’ve helped to create official new symptoms’ advice for the UK (amazingly the world’s first research based advice), helped to set up formal training courses in colonoscopy, launched major awareness campaigns with Prince Charles and the Pope and produced a couple of a million eye catching leaflets, which are now being translated into several European languages.

If you would like to have any of our materials, our “patient’s parties” planner, do please contact me at lynn@ecpc-online.org or info@bowelcancer.tv

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Website: www.bowelcancer.tv
European Cancer Patient Coalition
Website: www.cancerworld.org/ecpc

Aims and Goals of the Newsletter

The aim of the EONS newsletter is to provide a written resource for European nurses working in a cancer setting. The content of the articles are intended to contribute to the growing body of knowledge concerning cancer care.

The newsletter is a platform for member nursing societies and individual members to share their experiences with one another whereby they have the opportunity to benefit from exchanging and sharing views and opinions on the cultural, political and clinical challenges of cancer nursing in Europe today. The EONS newsletter updates and informs members on EONS activities related to the CARE strategy, EONS meetings and conferences, EONS projects, board members activities, initiatives from other societies and other initiatives with benefit for the members.
How to deal with toxicity of targeted therapies

EGFR-inhibitors

Introduction
During the last decade, targeted therapies such as epidermal growth factor receptor (EGFR) inhibitors have shown their efficacy in the treatment of several types of cancer. The epidermal growth factor receptor is a transmembrane glycoprotein tyrosine kinase family of growth factors that is expressed in many normal human tissues. Its activity is finely regulated to control cell growth and proliferation. In many solid tumours, dysregulation of the EGFR gene results in its overexpression and increased production of EGFR – a condition correlated with increased metastasis, reduced survival, and a poor prognosis (Figure 1). The EGFR can be successfully blocked either by antibodies against the extracellular domain of the receptor (i.e., cetuximab, panitumumab) or by small-molecule tyrosine kinase inhibitors (i.e., erlotinib, gefitinib) which target the EGFR at the intracellular site (1). Blocking of the receptor in tumours leads to beneficial effects, in terms of reduced tumour growth, but in skin and appendages this action leads to undesirable reactions, including acne-like rash, hair growth disorders, periungual and nail plate abnormalities, xerosis and sometimes pruritus (2).

Figure 1: EGFR activation (Merck KGa)

Treatment with EGFR-inhibitors can also result in some systemic disorders such as hypersensitivity reactions (especially with monoclonal antibodies), gastrointestinal discomfort and metabolic disorders such as hypomagnesaemia and secondary hypocalcaemia. These side-effects need a special treatment approach. Although many of the suggested treatments and therapies are empirical and based on experience, our knowledge about the toxicity profile steadily increases.

Nurses are pioneers in tackling these toxicities. Nurses need to understand the mechanism of action of these new drugs not only to enrich their knowledge base, but also to have a strong foundation for patient education. They need to know about side effects and possible interventions, and to participate in research to identify effective interventions.

Systemic Side effects
Hypersensitivity reaction
A hypersensitivity reaction is a sign of ‘intolerance’ against the administered drug and is seen after treatment with monoclonal antibodies (incidence is 4.5%). Patients can react against the ‘mouse’ part of the chimeric drug. Nurses must be aware that this reaction can occur immediately after the start of the administration. The rates of occurrence are 2.5% in patients treated with cetuximab and irinotecan in combination and 1.8% in patients treated with cetuximab monotherapy. The symptoms in case of a severe reaction are: airway obstruction, dyspnoea, severe urticaria and hypertension (3). Should a severe reaction occur, the administration of the EGFR-inhibitor should be stopped at once and emergency treatment implemented. Patients who experience a severe hypersensitivity reaction should not be treated again with this monoclonal antibody.

Diarrhoea
The diarrhoea seen with EGFR inhibitors is usually mild and transient and varies in incidence depending on whether the EGFR inhibitor is taken orally (54% of patients treated with erlotinib and 40% to 57% with gefitinib) or is administered i.v..

Loperamide is the treatment of choice and nurses should advise patients to have loperamide on hand if they start to have diarrhoea. The recommended dosing of loperamide is 4mg initially, then 2mg after every loose bowel movement up to 10 tablets (2mg)/day for 24 to 48 hours until they are free of diarrhoea for 12 hours.

This gastrointestinal side effect can be managed easily. However in some patients, doses of EGFR inhibitors should be reduced or, although rare, dose cessation may be required for severe diarrhoea which is unresponsive to treatment with loperamide (5).

Hypomagnesaemia
Preliminary evidence suggests that magnesium wasting occurs in patients who are treated with EGFR-targeting monoclonal antibodies for colorectal cancer. The mechanism of this side effect is unknown and whether all or just a subset of patients is affected is unclear. Results from clinical trials using cetuximab in combination with irinotecan or oxaliplatin showed that 97% of the patients had a decreased serum magnesium concentration. Of course, not all hypomagnesaemia may be the result of treatment with an EGFR-inhibitor; patients with advanced cancer might have a pre-existing, sub-clinical hypomagnesaemia unrelated to treatment.

The symptoms of hypomagnesaemia are: fatigue, somnolence, mental alterations, seizures, QT changes, muscle cramps secondarily to hypocalcaemia and, in severe cases, arrhythmias. However, only a small proportion of patients have symptoms of hypomagnesaemia. Therefore, nurses should monitor patients by regular blood sampling (every two weeks) and, if indicated,
patients should undergo an ECG. The treatment of hypomagnesaemia consists of high doses of magnesium, approximately 9g orally. Treating patients with magnesium intravenously is not comfortable and requires hospitalisation every 36h (6).

**Non-systemic side effects: skin toxicity**

EGFR-inhibitors and tyrosine kinase-inhibitors are responsible for a number of class-specific side effects on the skin which occur in most patients (7-8). This is probably due to the abundant expression of EGFR in the epidermis and its appendages (hair follicles, sebaceous glands). The clinical pattern of skin toxicity is unique and consists of an acniform eruption, xerosis (skin dryness) sometimes leading to eczema and fissures, paronychia, hair changes (trichomegaly of the eyelashes, vellus (downy)hair, and frontal alopecia (9). The ocular, oral, nasal and vaginal mucosa can also be affected (10-12). Skin toxicity is graded according to the NCI-CTC criteria (version 3.0).

> Although skin toxicity is not life threatening and rarely requires the discontinuation of EGFR- inhibitor therapy, there is a clear need for supportive treatment and dermatological referral if severe. The rash usually affects the skin of the face and often has a dramatic impact on self-esteem and patients’ quality of life (13). The intensity of the acniform rash may be correlated with the clinical effectiveness of the EGFR-inhibitor therapy: more rash, means better tumour response. Nurses should be careful about using this information, because there are also patients who don’t develop the acne-like rash and have a good response to treatment.

Appropriate education of patients is needed and nurses again play a pivotal role in explaining skin problems and the general measures that can be taken, and the ‘do’s and don’t’s’ that help manage skin problems. A nurse is also the first person the patient should contact in case of concern. While mild to moderate cases of skin toxicity can be managed by standard treatment, patients with severe skin toxicity should be referred to a dermatologist (Table 1) (14-16).

**Table 1: Experience-based treatment of skin toxicity**

* Based on the NCI-CTC version 3.0

<table>
<thead>
<tr>
<th>Grade*</th>
<th>Recommended Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Acne-like rash</td>
</tr>
<tr>
<td>1-2</td>
<td>Septraicline: minocycline or doxycycline 100 mg/day</td>
</tr>
<tr>
<td>2</td>
<td>Septraicline: minocycline or doxycycline 200 mg/day</td>
</tr>
<tr>
<td>3</td>
<td>NaCl 0.9% compresses (15 minutes, 2 – 3x/day) plus methimazole cream Superinfection (5 aume) perclotin x 5 days</td>
</tr>
</tbody>
</table>

The management of side effects is multidisciplinary and all participants need proper education and training to help patients understand and cope with these toxicities. (Figure 2).

**Figure 2: Multidisciplinary approach to treating skin toxicities secondary to EGFR-inhibitors**

**Multidisciplinary approach**

- Education
- Oncologist
- Dermatologist
- Nurse
- Patient

**Skin toxicity**

Despite growing knowledge about the treatment of these toxicities, uncertainty about the extent of the burden of the toxicities related to EGFR-inhibition exists. Nurses should take an active role in providing education to patients that skin reactions can be effectively treated if treatment measures are properly followed.

**Conclusions**

Treatment of solid tumours with EGFR-inhibitors offers a clear benefit and these drugs have a generally tolerable safety profile. It is known that specific adverse skin reactions occur in a large percentage of patients but these are usually mild and can be managed effectively. As the number of patients treated by EGFR-inhibitors is increasing rapidly in European oncology centres, it is essential that existing knowledge and experience about managing both the systemic and non-systemic side effects is rapidly disseminated. Nurses administering these agents should take available opportunities to increase their knowledge about mechanism of action, safe administration, and side effects.

**References**

Extravasation Guidelines

Yvonne Wengström
Professor in Cancer Care Research at the University of Stirling, Scotland and Head of Nursing at Karolinska Institutet, Stockholm, Sweden

A group of EONS members has worked hard to consolidate much of the existing knowledge on extravasation of cancer therapies in order to develop a new guideline for the web-based toolkit. This module is a practical guide to extravasation management which provides advice on how to deal with extravasations and how to implement the new guidelines in day-to-day clinical practice. The Extravasation Guideline is in the same interactive format as the previous modules in the EONS Guidelines Implementation Toolkit.

The goal of the guideline is to help nurses understand and recognise extravasation and improve the prevention and overall management of extravasations in cancer patients. The more specific targets and aims are to:

• increase nurses’ knowledge of specific elements of extravasation including early recognition;
• implement appropriate interventions;
• update and inform nurses of the current management standards from guidelines and protocols;
• encourage adoption of procedures for extravasation that fit with the current guidelines

The toolkit has six sections. Below is a brief description of the content of each of these sections.

What is extravasation?
Extravasation refers to the process by which one substance (e.g., fluid, drug) leaks into the surrounding tissue (1). In terms of cancer therapy, extravasation is defined as the accidental leakage of chemotherapy from its intended compartment (the vein) into the surrounding tissue (2). A broader definition of extravasation includes the injury which occurs following extravasation. The degree of injury can range from a very mild skin reaction to severe necrosis depending on the type of substance which has extravasated (1-4). The types of extravasation are explained in the guidelines.

When does extravasation occur?
Extravasation is not as rare as some people may think. In cancer therapy experts estimate that it accounts for 0.5% to 6.0% of all adverse events associated with treatment (4). But, when you consider that adverse events with cancer therapy are quite common, the absolute number of extravasations which take place is significant (5).

Some extravasations are caused by an error in the intravenous (i.v.) procedure (4, 6). Cancer patients receiving chemotherapy may have multiple risk factors that make i.v. infusion difficult. For example, patients with a tendency for thin, fragile and mobile veins are at risk of extravasation (4). In addition to factors relating to the procedure and to the patient, factors associated with the equipment and material used, concomitant medications and the treatments themselves can also increase the likelihood of extravasation. The most common factors known to increase the risk of extravasation are listed in the guidelines.

What are the implications of extravasation?
Extravasation is to be avoided. Although not all extravasation incidences result in ulcerative and necrotic tissue damage, patients may still experience pain and discomfort as well as indirect consequences such as disruption of treatment and prolonged hospitalisation for the management of extravasation (3, 4). The specific symptoms of extravasation, as well as their wider consequences, are discussed in this section of the guidelines and these include the initial symptoms, tissue damage, surgery, impact on cancer therapy, and other consequences.

How is extravasation recognized?
It is critical that an extravasation is recognised and diagnosed early. The most effective way to assess extravasation in its early stages is to be aware of and act on all relevant signs and symptoms. Signs and symptoms can be gathered from simple visual assessment of the injection site and careful observation of the i.v. device. Once an extravasation is suspected to have occurred, it is important to rule out other possible conditions, such as flare reaction or phlebitis (4, 6). The quality of the nursing assessment during administration of cytotoxic drugs plays a key role in minimising frequency and severity of extravasations, since delays in the recognition and treatment of vesicant extravasation increase the likelihood of developing tissue damage and necrosis (4, 7). If there is any doubt as to whether or not an extravasation has occurred, stop the infusion and ask for advice. Early detection of an extravasation is often based on the following factors: patient reporting, visual assessment, checking the infusion line, and distinguishing extravasation vs. other conditions.

How is extravasation prevented?
The most important approach to minimising the consequences of extravasation is prevention (8). Healthcare professionals involved in the handling and administration of i.v. cancer therapies should become familiar with their local procedures and protocols. Healthcare professionals should develop an understanding of the important precautionary steps that should be taken to avoid extravasations and their resulting injuries. This section in the guidelines provides advice for good practice in order to help prevent extravasation and minimise injury.

How is extravasation managed?
The management of extravasation includes detection, analysis and action. The first course of action is to stop the infusion, aspirate as much of the infusate as possible, mark the affected area and then remove the cannula (while continuing to aspirate from the extravasation site). Elevate the affected limb if required. If possible take a photo of the extravasated area. Then, depending on the drug being infused, the correct protocol should be followed to determine the next steps.

If the drug is a non-vesicant, application of a simple cold compress and elevation of the limb may be sufficient to limit the adverse effects (9). In contrast, the extravasation of a vesicant requires several steps and differs for the various classes of drug. There are two main approaches to limiting the damage caused by extravasation: localisation and neutralisation or dispersion and dilution (9).

The localise and neutralise strategy involves the use of cold compresses to limit the spread of the extravasation. Antidotes such
as Savene™ for anthracycline extravasations may be used to counteract vesicant actions. The disperse and dilute strategy involves the initiation of appropriate measures for the extravasation of vinca alkaloids, the use of warm compresses to prompt vasodilation and encourage blood flow in the tissues which helps to spread the extravasation and use of hyaluronidase to dilute the infusate.

Antidotes are agents applied or injected to the extravasated area to counteract the effects of the infiltrated agent. They form an important part of the “localise and neutralise” and the “disperse and dilute” strategies. The table below (adapted from the Extravasation Guidelines) provides a quick reference for antidote use after extravasation:

Even if extravasation is identified early, progressive extravasation can give rise to ulcerated and necrotic tissue over time. Early steps to prevent and manage extravasation such as using antidotes may help to limit the need for surgery (10). About one-third of extravasations due to anthracyclines result in ulcerations. In these cases, surgery should not be considered as the initial primary treatment of choice (4). Surgery to excise damaged tissue is indicated when there is ulceration or continued pain.

Summary
Managing extravasation in accordance with the latest scientific understanding and medical consensus allows for optimal treatment of the patient. By following the example set out in these guidelines, which include the latest information on extravasation and a selection of current protocols and policies from prominent centres (9), nurses can contribute to improving the standard of care in cancer therapy.

By learning how to effectively recognise extravasation and by becoming familiar with local protocols for dealing with it, including the use of antidotes, nurses can help to minimise the incidence of this complication of cancer treatment and, subsequently, play a crucial role in expanding the use of best practice. By implementing the Extravasation Guidelines in their practice setting, nurses can provide best practice based on clinical evidence.

<table>
<thead>
<tr>
<th>Extravasated drug</th>
<th>Suggested antidote</th>
<th>Level of evidence</th>
<th>Advice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthracyclines</td>
<td>Savene™ (dexrazoxane)</td>
<td>Efficacy in biopsy-verified anthracycline extravasation has been confirmed in clinical trials</td>
<td>3 day course of Savene™ treatment: 1000 mg/m² IV as soon as possible (no later than 6 hours) after extravasation on day 1; 1000 mg/m² on day 2; and 500 mg/m² on day 3 See Appendix 4 for full details</td>
</tr>
<tr>
<td>Anthracyclines</td>
<td>Topical DMSO (99%)</td>
<td>Suggested as a possible antidote in many literature sources. Due to lack of evidence it is recommended that this is further studied</td>
<td>Apply locally as soon as possible. Repeat every 8 hours for 7 days See Appendix 5 for full details</td>
</tr>
<tr>
<td>Mitomycin C</td>
<td>Topical DMSO (99%)</td>
<td>Suggested as a possible antidote in many literature sources. Due to lack of evidence it is recommended that this is further studied</td>
<td>Apply locally as soon as possible. Repeat every 8 hours for 7 days See Appendix 5 for full details</td>
</tr>
<tr>
<td>Mechlorethamine</td>
<td>Sodium thiosulfate</td>
<td>Due to lack of evidence, this antidote is not recommended</td>
<td>2 mL of a solution made from 4 mL sodium thiosulfate + 6 mL sterile water for subcutaneous injection</td>
</tr>
<tr>
<td>Vinca alkaloids</td>
<td>Hyaluronidase</td>
<td>Suggested as a possible antidote in many literature sources. Due to lack of evidence it is recommended that this is further studied</td>
<td>150-1500 IU subcutaneously around the area of extravasation See Appendix 6 for full details</td>
</tr>
<tr>
<td>Taxanes</td>
<td>Hyaluronidase</td>
<td>Suggested as a possible antidote in many literature sources. Due to lack of evidence it is recommended that this is further studied</td>
<td>150-1500 IU subcutaneously around the area of extravasation See Appendix 6 for full details</td>
</tr>
</tbody>
</table>

References
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25–28 JUNE 2008
BARCELONA, SPAIN

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* mCRC: metastatic colorectal cancer

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EONS News and Updates

From the EONS Communications Team

EONS is pleased to announce that yet again a number of cancer related organizations have become members of the society. The first is the Maltese Oncology Nursing Association (MONA) which has become a full member of the EONS. We also look forward collaborating with the MDS Foundation (European Office), the Semmelweis University, Faculty of Health Sciences (Hungary) and TAWAM Hospital (Abu Dhabi) who have become Associate members.

Mrs. Kristin Wolden is the new president of the Norwegian Society of Nurses in Cancer Care. On behalf of the EONS Board, we would like to welcome her to the EONS and look forward to a close collaboration. We say goodbye to Mrs. Ingrid Lotsberg Noras, the previous president and we thank her for her contribution and support to EONS.

The European Association for NeuroOncology (EANO) will be organising its 8th conference, 12-14 September, Barcelona, Spain. There will be a nurse’s session on Friday 12th September 2008. More information on the conference and the programme can be found on www.eano.eu

TITAN 2008 updated courses are up and running! The highly successful TITAN course continues to grow and develop further. TITAN 2008 course materials have been updated in response to course organiser and participant feedback and according to the latest information. Updates made include:

• All course material now contained on a single DVD
• Presentations updated with current literature reviews
• Selected multiple choice questions (MCQs)
• Case studies relevant to local practice
• Simplified and smoother application process

So, don’t hesitate if you want to take part in this innovative programme, supported by an unrestricted educational grant from Amgen (Europe) GmbH, which aims to improve the prevention, detection and management of haematological toxicities in Europe.

For more information about TITAN and about organising (or participating in) a TITAN 2008 course, please contact Mr. Rudi Briké at eons.secretariat@skynet.be or visit the TITAN zone on the EONS website www.cancerworld.org/EONS.

Accreditation:
Salzburger Landeskliniken Betriebsgesellschaft mbH: Weiterbildung Onkologische Pflege, longer course: www.salk.at
König & May GbR: Weiterbildungslehrgang für Pflegekrafte in der ambulanten onkologische Pflege*, education programme of study: www.km-potsdam.de
ESO/EONS, European School of Oncology: 2nd Masterclass in Oncology Nursing, educational event, Sofia, Bulgaria, March 2008: www.cancerworld.org
TITAN Training Initiative (update material) 2008: www.cancerworld.org/eons

Call for nominations 2008

EONS’s Excellence in Patient Education Award aims to encourage creative and novel approaches to the development of patient education materials. This award honours individual nurses or organizations that have excelled in enlightening cancer patients about the disease and its treatment.

The award winner will receive:
A commemorative certificate and cash award of 2000 Euro
Winners will also have the right to print the EONS Excellence in Patient Education logo on the winning patient materials.
The award is supported by an unrestricted grant from Amgen (Europe) GmbH

Nomination deadline is June 2nd 2008.

For further information about the Award, please contact EONS at Ph: +32 2 7799923/ Email: eons.secretariat@skynet.be
Nominations forms can be downloaded
The Treatment of Metastatic Colorectal Cancer

Eric Van Cutsem, MD, PhD, Digestive Oncology Unit, University Hospital Gasthuisberg, Leuven, Belgium

Introduction
Colorectal cancer (CRC) is one of the most common causes of cancer world-wide and is in the Western world one of the most frequent causes of cancer related mortality (1). Approximately 50% of patients with CRC will develop metastases. Most patients with metastatic CRC will die of their disease. Chemotherapy is the basis of the therapy for patients with metastatic CRC. Surgical resection of resectable liver or lung metastases leads to prolonged disease free survival and a 5 year survival of ± 30%. Surgery of metastases is unfortunately possible in only a small number of patients.

Cytotoxic agents in metastatic colorectal cancer

Benefit of palliative chemotherapy
Untreated, patients with metastatic CRC have a median survival of 5 to 6 months. It has been shown in randomized studies that chemotherapy for metastatic colorectal cancer prolongs the survival and maintains or improves the quality of life (2-4). In these trials old 5-FU-based chemotherapy regimens were used. The median survival of the patients treated with chemotherapy was about 12 months compared to 5 to 6 months for the best supportive care groups (2). A Nordic multicentre study randomised asymptomatic patients with advanced CRC to initial chemotherapy with methotrexate, 5-FU and folinic acid rescue for six months or to primary expectancy with chemotherapy only after the appearance of symptoms. Overall survival was significantly longer in the primary chemotherapy group, however observation intervals were relatively long, and more than a third of the observation group never received chemotherapy (3).

Regimens of 5-fluorouracil/folinic acid
5-fluorouracil has been the therapeutic mainstay for colorectal cancer for over 40 years. The major dose-limiting toxicities of the common regimens are mucositis, diarrhoea, plantar-palmar erythema and mild myelosuppression. The standard treatment for CRC for many years was a bolus 5-FU regimen. Several clinical trials, using rigorous definitions of response, suggested that response rate to single agent bolus administration of 5-FU is approximately 10%. Biomodulation of 5-FU with folinic acid (FA), has been shown to increase the activity of 5-FU. Currently, infusional regimens are a better way of administering 5-FU/FA because the response rate is higher, the time to tumour progression is longer, and toxicities are less pronounced (less mucositis, leucopenia, and neutropenia). Median survival rates for infusional regimens are not longer compared to bolus regimens.

New cytotoxic agents
CPT-11 or irinotecan is a camptothecin analogue that inhibits DNA topoisomerase I and induces single strand DNA breaks and replication arrest. Oxaliplatin is a third generation platinum analogue that induces DNA cross linkages and apoptotic cell death. Studies of irinotecan and oxaliplatin in patients refractory to 5-FU have demonstrated the activity of these drugs in second line treatment (4, 5). Two pivotal studies of irinotecan versus best supportive care and of irinotecan versus infusional 5-FU/FA demonstrated a survival benefit for irinotecan in the second line treatment of patients with 5-FU resistant metastatic colorectal cancer (6, 7). The quality of life of patients treated with irinotecan was superior compared to best supportive care and was comparable to the quality of life of patients treated with 5-FU/FA given per infusion.

Studies which compared the combination of 5-FU/FA plus irinotecan and of 5-FU/FA plus oxaliplatin have shown that combination chemotherapy is more active than 5-FU/FA in patients with advanced CRC. In several randomized studies a higher response rate and a longer time to tumour progression or progression free survival were demonstrated for patients treated with 5-FU/FA/irinotecan compared to patients treated with 5-FU/FA only.

The results of clinical studies have demonstrated that combination treatment is more active than 5-FU/FA alone and it is therefore accepted that combination treatment is the standard option in the first line treatment of advanced colorectal cancer. However, these studies don’t answer the question whether all patients should be treated first with a combination regimen of 5-FU/FA/irinotecan or 5-FU/FA/oxaliplatin or with 5-FU/FA only. Further, these studies also showed that although the number of side effects was higher for combination treatment, the side effect pattern was acceptable and manageable and did not influence the patient’s quality of life.

Oral fluoropyrimidines
It has been shown that the oral fluoropyrimidines are at least as active as intravenous 5-FU (9-13). Three oral fluoropyrimidines have been extensively investigated in colorectal cancer: UFT, eniluracil and capecitabine. UFT is a combination of uracil and tegafur (a prodrug of 5-FU). Uraclil is a normal substrate for dihydropyrimidine dehydrogenase (DPD) and blocks the actions of this enzyme allowing tegafur absorption and the availability of biologically active plasma concentrations of 5-FU. UFT has usually been administered with oral leucovorin (LV = folinic acid). Eniluracil is a direct inhibitor of DPD and is given orally with oral 5-FU; it has, however, been withdrawn from the market due to unacceptable adverse events. Capecitabine is a 5-FU prodrug that can be absorbed through the intestinal mucosa and is converted to 5-FU. Oral fluoropyrimidines are similar in activity to bolus IV 5-FU/FA but are less toxic.
Summary: cytotoxic agents
The summary points on cytotoxic agents as used in the treatment of colorectal cancer are as follows:
- The infused regimens of 5-FU/FA are a more optimal way of administering 5-FU/FA than the bolus regimen.
- Combining two cytotoxic agents is more active in the first line of metastatic CRC than 5-FU/FA alone. The combination of a triple cytotoxic regimen cannot be supported by clinical findings.
- The combination of 5-FU/FA/irinotecan and 5-FU/FA/oxaliplatin have shown similar efficacy in the treatment of metastatic CRC, but with a different safety profile.
- The oral fluoropyrimidines are at least as active as IV 5-FU/FA. Studies have shown similar efficacy of the combination capecitabine and oxaliplatin compared to IV 5-FU/LV/oxaliplatin. The optimal regimen of capecitabine plus irinotecan is still under investigation.
- Secondary treatment is indicated in patients with progressive disease who are in a relatively good state of health. In patients who show a poor response to oxaliplatin, irinotecan or the combination of 5-FU/FA/irinotecan are options. In patients who show a poor response to irinotecan, 5-FU/FA/oxaliplatin is a reasonable option.
- In patients with metastatic CRC, the three available cytotoxic agents (fluoropyrimidines, irinotecan and oxaliplatin) have been shown to increase overall survival.

Targeted Therapies for Metastatic Colorectal Cancer
Newer biologic agents have entered the clinical arena for the treatment of colorectal cancer. Two targeted therapies have been used in CRC: the epidermal growth factor receptor (EGFR) and vascular endothelial growth factor (VEGF).

Angiogenesis inhibitors
Bevacizumab
Bevacizumab is a humanized monoclonal antibody that targets and binds to vascular endothelial growth factor (VEGF), thereby inactivating this growth factor before it can bind to its intended receptor. VEGF is a central component in the process of angiogenesis, or the development of new blood vessels. Randomised trials have shown that bevacizumab, when combined with irinotecan plus bolus 5-FU/LV (IFL) in the first-line treatment of metastatic CRC and FOLFOX in second-line treatment, lead to increases in survival, progression-free survival (PFS) and response rate compared to cytotoxic chemotherapy alone (14, 15).

Other studies have shown that bevacizumab enhances efficacy of an active treatment in the first line treatment of metastatic CRC. Treatment with bevacizumab can be continued until disease progression and it can be administered after cytotoxic agents have been discontinued.

The toxicities more commonly associated with chemotherapy, such as nausea, vomiting, diarrhea, cytopenia and asthenia, do not occur as severely with bevacizumab. It should be noted, however, that bevacizumab has no demonstrated activity as a single agent in colorectal cancer. Adverse events associated with bevacizumab are: hypertension, proteinuria, arterial thrombosis, mucosal bleeding (mainly epistaxis), and impaired wound healing. The risk of arterial thrombosis is increased especially in patients over 65 years and in patients with a history of arterial thrombosis (16).

There is currently no evidence to support the use of bevacizumab in the adjuvant setting. Results of studies thus far suggest that the identification of patients who would benefit from a bevacizumab-containing regimen should rely on individual assessment of the likelihood of a patient developing toxicities and on the potential for positive efficacy results.

EGFR inhibitors
Cetuximab
Cetuximab is a chimeric monoclonal antibody that binds selectively to the epidermal growth factor receptor (EGFR). Preclinical studies have indicated that cetuximab had modest in vitro and in vivo single agent activity but had more significant activity when combined with cytotoxic agents.

The BOND trial provided strong confirmatory evidence of the activity of cetuximab in colorectal cancer (17). The response rates were 23% for cetuximab/irinotecan and 11% for cetuximab alone. Because patients in both arms received cetuximab, this trial is in no way an assessment of whether or not cetuximab treatment confers a survival advantage. That question was answered by a trial of the Canadian and Australian groups. These groups showed
that in chemoradiotherapy CRC, cetuximab plus best supportive care (BSC) improves survival compared to BSC alone (18).

**Panitumumab and other EGFR-targeting agents**

Panitumumab, formally known as ABX-EGF, is a fully humanized monoclonal antibody that also targets the EGFR. A randomized phase III trial of panitumumab plus BSC compared with BSC alone in patients with EGFR-expressing oxaliplatin- and irinotecan-refractory patients showed a significantly longer progression free survival for patients treated with panitumumab (19).

The efficacy and safety of two other EGFR-targeting agents, matuzumab (EMD 72000) and gefitinib, in the treatment of colorectal cancer are currently being investigated in clinical trials.

**Challenges with anti-EGFR antibodies**

A crucial challenge facing clinicians and researchers is to demonstrate which patients are most likely to respond to bevaczumab-containing regimens and to the anti-EGFR antibodies cetuximab and panitumumab.

**A second important challenge for the future is to find an answer to the strategic questions: what is the best combination of agents, what is the best sequence of administering these agents, and what is the optimal use of the different cytotoxic agents in combination with various biologicals in CRC.**

In terms of treating all types of cancer, an important challenge is to understand more about why tumors that initially respond to a combination of cytotoxics and biologicals may become resistant to this combination. In order to unravel the underlying causes, sequential tumour biopsies and serum and plasma sampling done before, during and after treatment need to be examined for molecular markers that can explain the cause of acquired resistance to the treatment.

The only option to cure patients with metastatic colorectal cancer is the possibility of resection of metastatic disease. Resection of liver-only metastases has become standard practice with long-term survival in 25% to 35% of selected patients. Patients with initially unresectable metastases that are downsized to resectable metastases by systemic treatment have a similar chance of long-term survival after resection (20, 21). For these patients, it is unclear what the impact of angiogenesis inhibitors will be on postoperative complications and wound healing.

A final challenge is faced by society in general and health economists to discover ways to cope with the rapidly increasing costs of the treatment of metastatic colorectal cancer. Here, identifying which patients will best benefit from which treatment option is crucial.

In conclusion, biologicals have clearly increased the therapeutic options of patients with metastatic colorectal cancer and offer the possibility to prolong survival. The major challenge is now to implement strategies in which patients can be selected, based on molecular characteristics and/or pharmacogenomic profiles, so that the new drugs and the resources available can be used optimally for our patients with metastatic colorectal cancer.

**References**


It is probably no longer appropriate to ask the membership of EONS if they visit the EONS website or even how often they visit the site. We know that the site is used regularly by cancer nurses not only in Europe but from all over the world to access information. But, how many of you knew that our website will be celebrating its 8th year of existence this year? For those of us who have been with the website since its inception in 2000, it is rewarding to know that the web pages of EONS have developed to their present level of sophistication and that we are able to offer our visitors state-of-the-art information at the touch of a button.

Some of you may remember what the EONS pages looked like eight years ago and some of you may even remember a time when the site was not nearly as user-friendly as it is in its current format. We’ve worked with at least three different technical support agencies to arrive at the product you now see. The collaboration with these agencies hasn’t always been easy: imagine receiving technical advice from an IT expert whose primary language is Italian and your mother tongue is a Dutch dialect and you’re an oncology nurse specialist with hobby-level knowledge of computer technology! The fact that EONS has an internet presence is due to the generosity of the European School of Oncology (ESO) who hosts the cancereurope portal. Without the support of ESO during those early years, we would not be where we are today.

The EONS website offers lots of information with an easy to use site navigation. For example, the Home page carries a News Bulletin section. If your internet time is limited, then reading this section should be your first and perhaps only stop. Here you will find brief information on EONS activities and events, important information about deadlines for conference registrations or application submissions, and an alert which calls attention to new features at the site. At the Home page you can also access the latest version of the EONS Newsletter or obtain information about the European Journal of Oncology Nursing (EJON), the official journal of EONS.

For those of you who are history buffs, or if you want to tell a colleague about EONS, then the About EONS pages are what you’re looking for. On the other hand, if you want help to develop post-basic education in cancer nursing, then you will want to turn to the Education and Accreditation Information pages where you will find the most popular feature on the EONS website, the Post-basic Core Curriculum. Are you looking for funding for your research project or do you want a colleague to be recognised for outstanding achievements in cancer nursing? Then head for the Awards pages where you’ll find everything you need to know about EONS grants and recognition awards. Last, but certainly not least, you’ll find membership information and links to national cancer nursing organisations and cancer resources at the EONS website.

We, the members of the EONS Communication Team, are quite pleased with the progress we’ve made in developing the website to meet the needs of members. At the age of 8, however, the website still has some growing-up ahead of it. For example, the Research section is still under development. And, for several years now, we have been discussing the idea of a members-only section which would be accessible via password. There are pros and cons to having a section available only to members and we welcome input from the membership about this initiative.

A visit to www.cancerworld.org/eons is always rewarding. Our advice: visit often, we’re sure you’ll discover something new at the EONS website.
The Role of the Colorectal Nurse Specialist

Roni Cummings Colorectal Nurse Specialist. Guys & St Thomas Hospital Foundation Trust, London, England

Colorectal cancer is the second most common cancer death in England and Wales, with nearly 35,000 new cases a year and a 5-year survival rate of less than 40% (Association of Coloproctology of Great Britain and Ireland (ACPGBI) 2001; Centre for Reviews and Dissemination (CRD), 2004). Almost 21,000 of these 35,000 colorectal cancers are in the colon and the remaining 14,000 are in the rectum. (Cancer research UK 2006). Although the incidence of colorectal cancer appears to be on the increase, improvements in surgical technique and adjuvant treatments have contributed to the decline in mortality rates that the UK now experiences (Dunlop, 2001).

The journey of the patient with colorectal cancer is often stressful and worrying, leading to feelings of fear and anxiety. This may be a result of undergoing various investigations before receiving a definitive diagnosis, waiting for treatment to commence or concern as to whether the treatment will be a success.

The Clinical Nurse Specialist (CNS) is usually present at the time a patient is informed of the diagnosis of colorectal cancer. He or she supports and communicates with the patient throughout their care, explaining the diagnosis and the treatment options. Patients newly diagnosed with cancer will require support to deal with the many fears and anxieties they experience. The support offered by the CNS is invaluable in helping patients feel in control, leading to a greater understanding and participation in treatment plans (Sawyer 2000).

In line with the 10 Key Roles set out by the Chief Nurse in the NHS plan (DOH 2000), nurses are developing and extending their role in practice. Research has demonstrated that patients value the opportunity to discuss their anxieties with an expert in their disease and strongly value continuity of care and the reassurance offered at the outpatient consultation (Cox and Wilson 2003, Taylor and Cardy 2003).

This is a complex patient pathway and it is the aim and objective of the nurse specialist to ensure the patient completes this pathway that accommodates their particular needs and requirements.

At Guys and St Thomas’s (GSTFT) NHS Foundation Trust the Colorectal Nurse Specialist provides a diverse service to colorectal cancer (CRC) patients seen and treated in the Trust. The key elements of this service include:

1. Co-ordination of the patient’s journey
In 2007 Guys & St. Thomas’s performed approximately 187 resections for new colonic cancers. As such, an enormous amount of co-ordination is required to ensure these patients are treated in a timely fashion and they fulfil the treatment goals set out in the cancer collaborative guidelines. Key roles of the CNS in this process include:

- Assisting in the co-ordination of the weekly multi-disciplinary meeting (MDT). The MDT ensures that all patients are discussed and that treatment plans are formulated.
- Communicating treatment plans after the meeting to the patient and any other disciplines involved.

- Using clinical judgement to ensure a patient is re-discussed if further discussion is warranted.
- Management of a sizeable patient caseload.

Within the multi-disciplinary team the CNS is a valuable resource in colorectal services, enhancing the quality of care provided. With adequate training and development of appropriate protocols, independent nurse-led clinics could help to significantly reduce waiting times for newly referred patients and follow-up patients (Lewis M et al 2006).

2. Advice and Support
Although hard to quantify, the colorectal CNS spends a large part of their time providing support to patients and their families. Support includes giving patients and relatives time to express their worries and fears. This can happen at any time during the patient’s cancer journey – from diagnosis to end of life care. It requires clinical judgement to know when to refer on to other disciplines such as The Palliative Care Team, Counselling and Social Services.

Patients’ feedback suggests that they would find it extremely difficult to cope with a cancer diagnosis without the support of the CNS to guide them through what is invariably an extremely difficult time.

3. Information giving
All new referrals are seen in the outpatient clinic by their Consultant surgeon and CNS. This is an opportunity for the patient and their relatives to ask questions of the team and for the team to inform the patient of future plans and treatments. In addition the CNS visits in-patients on a regular basis. The purpose of these visits is:

- To provide support and encouragement to patients
- To liaise with ward staff re histopathology results and MDT plans
- To provide specialist information re colorectal cancer and evidence-based teaching
- To provide written information for patients, relatives and staff as required
- To act as a role model, resource and senior nurse when required

4. Teaching
A fundamental element of the CNS’s responsibility is teaching other professionals. This role is achieved by:

- Informal teaching on the ward to staff and patients
- Teaching and supporting new members of staff on induction programmes
- Teaching medical students on an informal basis
- Teaching other members of the multidisciplinary health care team

It is important as Clinical Nurse Specialists (CNSs) that we provide good, evidence-based, quality care to our patients. In order for us to do this effectively and to fulfil our teaching obligations as above it is vital that we have access to on-going education, both generally and also within our own specialist sphere of nursing.
5. Research and audit
It is essential that the CNS regularly audits her work. For example, in the summer of 2007, I performed a survey by means of a questionnaire to assess the service of the colorectal team. The patient satisfaction survey revealed that:

- 95% of patients were given CNS contact details (the rest were unsure)
- 100% of these patients had had contact with their CNS
- 100% of patients found this contact helpful
- 62% of patients contacted the CNS directly to discuss worries and concerns
- 100% of these patients found this helpful

6. Nurse-Led Clinic
Murray (1997) and Shaw (2000) state that patients view nurses as more empathetic to their needs, have more time to listen to them and perceive them to be better at imparting information and communicating than doctors.

The follow-up of post-operative cancer patients has until recently traditionally been undertaken by the doctor in the out-patient clinic setting. An increasing number of colorectal nurse specialists are now running follow-up clinics based upon a patient-centred supportive model Taylor K, Cardy C (2003), although this continues to be a subject of debate. Follow-up is criticised as being costly with little evidence to support survival benefits, however one study concludes that the benefit of regular surveillance including blood tests, colonoscopies and radiological investigations does have a positive impact on survival rates (Jeffery GM et al 2002).

The Nurse-Led Clinic provides this continuity of care, symptom management, surveillance of disease and psychological support. Follow up protocols for investigations are followed to facilitate early detection of recurrent or metastatic disease.

Out-patient clinics form a large and enjoyable part of my role. Post-operative patients are seen initially four weeks post-operatively, then six monthly in the first year, then yearly for the next four years. During these consultations if necessary I will order investigations as outlined below.

7. Requesting investigations
The colorectal CNS is able to order investigations under the supervision and support of the lead clinician. These include:

- Staging CT of the chest, abdomen and pelvis
- Staging MRI
- Diagnostic colonoscopy, flexible sigmoidoscopy and barium enema
- Staging carcinoembryonic antigen (CEA) levels.

In conclusion
Colorectal Nurse Specialists are an example of patient-based expert practitioners (UKCC, 1994) who are ideally suited and located to develop and enhance nursing services in the area of colorectal disease. It holds great challenges and opportunities for the nurse wishing to expand their knowledge and skills. Swan E (2005) states that within the new proposed health care reforms, nurses are in a good position to respond and embrace their specialist roles.

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Nutritional Status of colorectal cancer patients

De Wys et al reported the incidence of weight loss in colorectal cancer patients to be 54% (6). Malnutrition is observed in up to 80% of patients with advanced colorectal cancer and is associated with longer hospital stay, reduced response and increased complications to anticancer therapy, increased overall cost of care and poor survival (7). Early detection of nutritional problems and timely intervention is important whether the goal of cancer treatment is cure or palliation.

Diet for Patients with Colorectal Cancer

The Challenges

Orla Hynes and Joanne Middlemiss, Specialist Gastrointestinal Surgery Dieticians, Guys and St Thomas’ NHS Foundation Trust, London.

Introduction

In the UK in 2004 36,000 people were diagnosed with colorectal cancer and it accounted for 16,000 deaths (1). Between the 1970’s and mid 1990’s there was an increase in the incidence for colorectal cancer but a decline in mortality rates (2). The increased incidence could be explained by increased awareness and earlier diagnosis of colorectal cancer.

People with cancer are at high risk of nutritional depletion because of the physical and psychological effects of both the treatment and disease. Quite often, patients have endeavoured to follow a healthy diet prior to their diagnosis, particularly if they have conditions such as cardiovascular disease or diabetes, and are confused when told to have high calorie foods, advice which contradicts public health messages.

Alternative and complementary diets and their role in cancer gains a lot of media attention and these messages can conflict with those given by health professionals. Patients with cancer view nutrition as an important component of their cancer therapy (3) and therefore it is imperative for individuals working in cancer services to have an appreciation of issues which relate to this.

Dietary Risk Factors for Colorectal Cancer

In the case of colorectal cancer, diet may reduce the risk of developing this disease; however, research to date has not uncovered a definitive effect and has left areas of uncertainty. There is evidence that dietary fibre may play a preventative role against the development of colorectal cancer. A good intake of fibre, defined in the UK as 18g a day, is recognised as beneficial for health (4). Fibre obtained from fruit and vegetables have the added benefit of providing protective antioxidants (5). High intakes of red and processed meats may be linked to an increased risk of developing colorectal cancer. This is thought to be due to cooking the meat at high temperatures resulting in the formation of carcinogenic compounds. Preserved meat is regarded as more detrimental than fresh meats due to high nitrite levels which may be converted in the colon to carcinogenic N-nitroso compounds (5).

Increased body weight could be a risk factor for colorectal cancer and therefore it is recommended to maintain weight within a healthy body mass index (BMI) range of 18.5 to 25kg/m² (5). Physical activity is a protective factor in colorectal cancer. This could be explained by the effect of physical activity on maintaining a healthy body weight. A varied diet using a variety of protein sources and a good supply of fruit and vegetables (400g a day) is probably protective against colorectal cancer (5).

Nutritional Status of colorectal cancer patients

De Wys et al reported the incidence of weight loss in colorectal cancer patients to be 54% (6). Malnutrition is observed in up to 80% of patients with advanced colorectal cancer and is associated with longer hospital stay, reduced response and increased complications to anticancer therapy, increased overall cost of care and poor survival (7). Early detection of nutritional problems and timely intervention is important whether the goal of cancer treatment is cure or palliation. There are multiple factors involved in the development of malnutrition in cancer. Weight loss may be due to physiological abnormalities associated with the tumour, such as malabsorption, obstruction, diarrhoea and vomiting. Cancer cachexia, an extreme continuum of weight loss in cancer, can be defined as a complex, multifactorial syndrome characterised by anorexia, generalised host tissue wasting, skeletal muscle wasting, immune dysfunction and tumour induced metabolic aberrations (8). Psychosocial factors such as depression, anxiety and learned taste aversions also contribute to difficulty with eating and to weight loss. Anticancer treatments can negatively impact on nutritional status. Patients with colorectal cancer may require more than one treatment (multi modality treatment) lasting for a number of months. It is important to remember that patients treated in this way will have the combined side effects from each of the treatments and this can put them at even greater risk of weight loss and malnutrition.

Surgery

St Thomas’ Hospital is running an Enhanced Recovery Programme (ERP) for elective colorectal surgery as outlined by Fearon et al (9). Enhanced Recovery after Surgery (ERAS) refers to a number of strategies that when initiated together can improve recovery and reduce length of hospital stay. These include changes to operative environment, surgical technique, analgesia and post operative rehab.

Nutrition used within the ERP aim to reduce post operative metabolic stress, leading to a reduction in postoperative insulin resistance and hyperglycaemia and allows for better nitrogen balance. ERP incorporates nutritional screening into the patient’s pre-operative assessment allowing early dietician intervention for patients with malnutrition or patients that are at risk of developing malnutrition. All patients, regardless of nutritional status, are given oral nutritional supplements drinks by the enhanced recovery nurse, to be taken the day before surgery. Two hours prior to surgery, patients take Nutricia preOp® (manufactured by Nutricia Clinical Care) to provide 50g carbohydrate in an iso-osmolar solution. The formulation is designed to empty from the stomach within two hours. This carbohydrate loading means surgery is carried out with the patient in the fed state as opposed to the traditional fasted state.

Post operatively nutrition support in the form of additional high calorie snacks and oral nutritional supplement drinks are given to every patient on the ERP to help meet the increased nutritional needs post surgery. To increase compliance, advice is tailored to individual patient needs and preferences. Oral nutrition post-operatively is introduced early; patients are encouraged to take oral fluids while still in recovery. Dietary intake is commenced on the day of surgery as opposed to traditional care where patients were nil by mouth with naso-gastric tubes for drainage. Patients, who have had a stoma formed, receive dietary counselling from stoma care nurses or the Dietician. Specific written dietary information is available for patients with colostomies and ileostomies.
Chemotherapy
Chemotherapy may be used before surgery (neoadjuvant), post surgery (adjuvant) or on its own as palliative treatment. Chemotherapy can sometimes be given in combination with Radiotherapy (Chemoradiotherapy). The main chemotherapy drugs used in colorectal cancer are Oxaliplatin, Irinotecan and 5-fluorouracil (5FU).
Side effects of chemotherapy which may contribute to weight loss and impaired nutritional status include; sore mouth and ulcers, taste changes, diarrhoea, lowered resistance to infection, nausea and vomiting, tiredness and anaemia.
Research has demonstrated that patients presenting with weight loss before starting chemotherapy have an increased risk of developing treatment related toxicity compared to patients with no weight loss. As a consequence, these patients with weight loss may receive less chemotherapy, have decreased treatment response and a shorter overall survival (10).

Radiotherapy
Radiotherapy can cause nausea, anorexia, fatigue and emotional stress, all of which can contribute to reduced dietary intake. Radiation specifically to the pelvic area can cause acute inflammation in areas of the bowel which lie in the path of the radiotherapy beam, causing gastrointestinal symptoms including diarrhoea and abdominal pain. A large proportion of patients undergoing this treatment can lose weight (11). These symptoms can start during the second or third week of radical radiotherapy and may resolve after completion of treatment. Dietary counseling positively influences overall dietary intake, morbidity and quality of life in patients with colorectal cancer undergoing radiotherapy (12).

Chronic bowel damage (radiation enteropathy) is mainly due to loss of function because of fibrosis. The incidence of chronic bowel damage is difficult to assess, as patients may be lost to follow-up or may not report any changes to their clinician (11). Severe consequences of this include bowel obstruction, fistulation, intractable bleeding or secondary cancers. Less severe symptoms include urgency, frequency, faecal incontinence, diarrhoea, steatorrhoea, pain, constipation and weight loss and can impact on quality of life. Andreyev (13) recently reported on the causes and management of these symptoms. He outlined the potential role of pro and pre biotics, and dietary advice to avoid specific sugars that may be malabsorbed (e.g. lactose) in the management of loose stool-diarrhoea type symptoms. In addition, modification of fat in the diet may help alleviate steatorrhoea and adjusting fibre in the diet may help with subacute bowel obstruction. The potential benefits of these dietary modifications warrant well designed randomised studies to substantiate these benefits (11).

Alternative and Complementary Diets
It is understandable why patients with cancer are drawn to diets which claim to make a cancer shrink, increase chance of survival or cure the disease. However, alternative and complementary diets have not as yet been subjected to rigorous trials and therefore their benefits remain undetermined. Such diets often advocate the exclusion of whole foods groups, or promote high intake of bulky fibrous foods and low intake of fat and carbohydrate. These diets could potentially worsen nutritional status and hinder the efficacy of anticancer treatments. Patients may have many questions about alternative and complementary therapies. Rather then be discouraging, health professionals should talk through the perceived rational, evidence available, and pros and cons of the recommendations and enable them to make an informed decision. Where a patient chooses to follow an unconventional diet, support from a Dietitian could help minimise any detrimental impact on nutritional status.

Nutritional Screening
‘Nutritional Screening’ refers to a rapid, general, often initial evaluation undertaken by nurses, medical or other staff, to detect significant risk of malnutrition and need for referral to a Dietician for advice. A variety of screening tools to detect malnutrition exist, however none of these are specific to cancer. The European Society of Parenteral and Enteral Nutrition (ESPEN) have made recommendations on available tools (14). Nurses play a crucial role in facilitating screening of patients across the cancer care settings to ensure that patients get timely referral for nutritional assessment and dietetic support.

Role of the Dietician
National Institute for Clinical Excellence (NICE) published ‘Improving Outcomes in Colorectal Cancers Manual Update’ in 2004 (15). This document makes recommendations on aspects of services in England and Wales that are likely to have significant impact on health outcomes. It highlights the importance of nutrition throughout the treatment pathway and includes the Dietitian within the extended multidisciplinary team. The guidance makes particular reference to the need for dietetic support in the weeks after surgery for colorectal cancer. It also recommends patients with stomas should have access to specialist dietary support and advice.

The Dietician has an expert knowledge of nutritional assessment techniques, a sound understanding of the treatment pathways and associated nutritional problems of this patient group. The delivery of advice must be tailored to the patient’s disease, treatment plan and symptoms to ensure compliance. Close liaison with medical, nursing and pharmacy staff to ensure optimal symptom management is essential. Dietary advice and counselling are aimed at increasing both the frequency and the energy/nutrient density of foods and beverages. Dietary strategies to help alleviate symptoms are also provided. Artificial nutrition support by means of enteral tube feeding or parenteral nutrition may be recommended for some patients. Decisions about this type of nutrition support require a multidisciplinary approach. The aim of any advice and nutrition support provided is to maximise nutritional intake to preserve weight and nutritional status in order to optimise treatment outcomes.
References


Diet and Cancer
Is there a relationship?

Carol Krcmar, EONS Communications Team

Research on diet and cancer is beginning to provide evidence that dietary patterns, foods, nutrients, and other dietary constituents are closely associated with the risk for several types of cancer. While a direct cause and effect relationship has not yet been proven, it is estimated that 35% of cancer deaths may be related to dietary factors. Results of recent research studies have shown that a diet low in fat and high in fiber, fruits, vegetables, and grain products is associated with a reduced risk for many types of cancer. Conclusive evidence of the benefit of any particular type of diet on cancer risk or recurrence is not yet available. However, evidence that a well-balanced low-fat diet contributes to general health and well-being.

A high fat diet has been linked to an increased risk of breast, colon, prostate, and possibly pancreatic, ovarian and endometrial cancers. Higher incidences and mortality rates for breast, colon, and prostate cancers have been found in populations in countries with high fat diets compared to those with low-fat diets. However, because a high-fat diet is also highly correlated with calorie intake, it is unclear whether fat intake or calorie intake is the major dietary factor affecting cancer risk.

In contrast, evidence suggests that a diet high in fiber-containing foods is associated with a reduced risk for cancer, especially cancer of the colon. It is difficult to draw a conclusion that a high-fiber diet reduces cancer risk because foods high in fiber are those that are rich in fruits and vegetables and are therefore high in important nutrients and usually lower in fat.

Populations with a diet high in fruits and vegetables tend to have a lower cancer risk. Evidence has been found on the protective effect of fruits, vegetables, and grains on the risk of lung, colon and rectum, breast, oral cavity, oesophageal, stomach, pancreatic, uterine cervix, and ovarian cancers.

Evidence exists that foods rich in carotenoids may reduce the risk of some cancers, particularly lung cancer. Most studies on the effect of carotene-rich foods (dark yellow/orange vegetables and fruits, deep green leafy vegetables) found that persons with higher levels had reduced risk of lung cancer.

Other vitamins and nutrients have been found to have a protective effect against cancer. There is consistent evidence which supports the protective role of vitamin C against cancers of the oesophagus, oral cavity, and stomach. Vitamin E has been linked to reduced risks of oral, stomach, and other cancers in epidemiologic studies. Evidence of the benefit of vitamin and mineral supplements on reducing cancer risk is, however, inconclusive.

Several recent studies have indicated that a relationship exists between dietary habits and the incidence and recurrence of some of the most common types of cancer. To date, data derived from large, randomized, controlled, longer term studies which provide conclusive evidence of a relationship between diet and cancer are lacking.

Diet may influence clinical outcomes in breast cancer

Women with breast cancer who eat a low-fat diet may have a lower risk of their cancer returning. Medical researchers recruited nearly 2,500 postmenopausal women who had been treated for early-stage breast cancer and randomized 975 to a low-fat diet consisting of 33 grams of fat per day (1). The remaining 1,462 women followed their normal diet and on average consumed 51 grams of fat daily.

After a median of 5 years of follow up, recurrence of breast cancer was found in 9.8% of women on the low-fat diet and 12.4%
of those on the standard diet. This amounted to a 24% reduction in the risk of recurrence for the women on the low-fat diet. A low-fat diet had lowered the risk of recurrence by 42% in women with estrogen-negative (ER-negative) tumours. This is of clinical interest because ER-negative tumours don’t respond to hormonal treatments like tamoxifen or aromatase inhibitors and they are therefore more difficult to treat than hormone-sensitive tumours.

However, the investigators cannot be certain that the low-fat diet was responsible for the lower rate of recurrence in the women assigned to that group. Other factors, such as the modest weight loss seen in the low-fat group or increased consumption of fruit and vegetables, may have contributed to the outcome. Nevertheless, the results of this study indicate that a low-fat diet may influence the risk of breast cancer recurrence in some patients. The study results need to be confirmed in larger clinical trials.

**Diet could influence stage of prostate cancer**

A study conducted at the Fred Hutchinson Cancer Research Center in Seattle and reported in the literature in 2002 (2) found a link between the total amount of calories and the risk of developing either localized or advanced prostate cancer. The researchers examined the links between diet and prostate cancer in 1,197 men aged 40 to 64 living in the Seattle area. About half of the men in the study had been diagnosed with prostate cancer. Their results showed that compared to men who ate the fewest calories, those who ate the most calories had more than double the chance of being diagnosed with localized prostate cancer and were almost twice as likely to be diagnosed with advanced prostate cancer.

In terms of what the men in the study were eating, the researchers found that a high fat intake and higher calcium intake raised the risk of advanced disease in the population studied. Men whose intake of fat was less than one-third of their total calories had half the risk of advanced prostate cancer. Similarly, the researchers found that men who consumed more than 1,200 mg of calcium daily (the amount found in about 1 litre of milk) had twice the risk of being diagnosed with advanced prostate cancer compared to those who consumed 500 mg of calcium per day.

The results of this study are interesting because the authors concluded that while a high energy diet increases prostate cancer risk overall a diet high in fat and calcium increases the risk of advanced stages of prostate cancer. Possible explanations for these study findings include the following: too many calories may raise blood levels of insulin-like growth factors that promote rapid cell growth thereby raising the chances of a random error in DNA replication that could lead to cancer; a diet high in fat may raise levels of hormones that may also affect the replication of prostate cells; some studies have shown that too much calcium may lower blood levels of vitamin D which has an anti-cancer effect.

![Weel-blanced, low-fat diet may help prevent colon cancer.](image)

**A well-balanced, low-fat diet may help prevent colon cancer**

Several studies have shown that a high red meat consumption (beef, pork, and lamb) increases the risk of colon cancer. The reasons for this relationship are not well understood but it is suspected that carcinogens found in additives to processed meat (nitrates and nitrites) as well as chemicals which are produced when meat is cooked (heterocyclic amines) are the causative agents. Results of one study showed that calcium in very low levels appears to increase the risk of colon cancer but in the reverse, there is no evidence of a benefit of increased intake of calcium on reducing colon cancer risk. The benefit of long term multivitamin use in providing protection against colon cancer was shown in two follow up studies of health professionals and nurses. Folate (folic acid) is likely to be one of the main protective factors in multivitamins because it is known to affect DNA synthesis.

Eating a healthy diet and cutting down on fast foods, junk foods, and processed snack foods may be helpful in reducing the risk of cancer. It is important that patients, and nurses, are aware of their cancer risk factors and for all of us to take precautionary and preventative measures such as participating in screening programmes. Initiating changes where needed may help to reduce risk factors.

**References**

The European Healthcare Training and Accreditation Network (EHTAN) Project

Dr David Thomas Cowan, London South Bank University, UK

Background
Due to global shortages of nurses, the deployment and mobility of the international nurse workforce remains high on the agenda of global health issues, the shortages perceived as an obstacle to realising the Millennium Development Goal (MDG) of improving global health and well being (Buchan and Calman 2004). These issues prompted an examination of the deployment and mobility of the nurse workforce within the European Union (EU). Despite a longstanding agreement on the reciprocal recognition of nursing qualifications among EU countries, as stated in Directive 77/453/EEC (European Commission 1977), there had been no significant increase in migration of nurses within the EU. Instead of recruiting nurses from developing countries, which has ethical implications of draining these countries of a valuable resource, it was decided that those EU countries with a shortage of nurses may recruit nurses from those EU countries with a surplus. This would take place in harmony with the policy initiative to develop the EU into the world’s most dynamic, competitive economy, capable of sustaining economic growth, affording greater social cohesion and offering improved employment opportunities. (Lisbon, European Council, 2000).

Indeed, following the 2004 accession of 10 new countries, previous barriers to nurse migration within the EU may not be so relevant as there are more ‘push/pull’ factors, including low pay and poor employment prospects in some of the new countries, factors powerful enough to override traditional barriers such as having to learn a new language (Aiken et al 2004). Unfortunately, knowledge of differences in qualifications, competence, culture, skills and working practices of nursing staff throughout EU countries is not fully documented, there being no detailed or tangible method for comparison available.

The Simpler Legislation for the Internal Market (SLIM) project findings determined that EU Directives on minimum education and standards for trained nurses were out of date and that there was an urgent need for amendment (SLIM 1997). The European Commission’s (EC) Advisory Committee on Training in Nursing (ACTN) reiterated this and determined that the Directives should be redrafted, encompassing certain competencies (ACTN 1998). This was conducive with the SLIM (1997) team’s conclusion that the competency approach, with greater emphasis on the end result of nurse preparation for practice as opposed to the inflexible rules covering course content was the correct approach. In response to the above, the European Healthcare Training and Accreditation Network (EHTAN) project was instigated, the purpose being to address issues regarding EU nursing qualifications and competence, with the intention of facilitating nurse workforce mobility through development of a nurse competency matrix based on data collected from a self-assessment questionnaire tool. The project, funded by the Leonardo da Vinci organisation (Leonardo da Vinci 2005), comprised a partnership led by the Florence Nightingale School of Nursing and Midwifery, King’s College, London and operated in collaboration with nursing and other academics from institutions in Belgium, Germany, Greece and Spain (EHTAN 2005).

The specific objectives of the EHTAN project and how they were addressed are listed in Table 1.

### EHTAN Project Objectives

1. Assess the content of nursing qualifications across the EU.
2. Identify cultural and experiential differences in training and working across the EU.
3. Establish an assessment and evaluation methodology.
4. Outline issues associated with undertaking employment in different EU states.
5. Assess the clinical risks and management issues raised by disparity between EU states.
6. Describe migrant nurses perception of their competence in:
   a) the country where they trained and qualified,
   b) the new country in which they are working.
7. Explain differences in ratings of competence across former and new countries.
8. Compare between different EU states, non-migrant nurses perception of their competence.
9. Identify the areas of training that would ensure nurses from one state can be recruited and up-skilled in response to the recruiting states' needs and expectations.
10. Inform EU regulatory bodies of the issues reflected in a competence matrix.

### Table 1.

| Method | A review of competence indicators, derived from documents on required competencies for nursing practice in EU countries, culminated in the development of a competence framework comprising 108 competence indicators spread across eight practice domains, which combined all of the items from the documents reviewed. As some of the identified practice domains had similarities reflected in a degree of overlap, the competence indicators were reassigned to eight new domains which incorporated what were felt to be the relevant competence indicators (Cowan et al 2007).

The reconstruction of the new domains took place during the course of several trans-national meetings and the final format was agreed upon by all partners. The draft framework of the EHTAN Questionnaire Tool (EQT), was variously assessed, discussed, reviewed and re-reviewed by five professors of nursing, five senior nurse educators, four senior nurse managers, six senior researchers and other academics within the project partnership institutions, who all evaluated the scale’s relevance to the measurement of nurse competence. During this process the scale... |
was deemed to be relevant to the characteristic (nurse competence) intended for measurement, thus attesting to a degree of content validity (Cowan et al 2007).

The EQT was then translated into the languages of the partner countries (Flemish, German, Greek and Spanish) and then back translated into English, following which no significant changes to the meaning of the questions was detected. Subsequently, two versions of the EQT were developed. As with the Bartlett tool (Bartlett et al 2000), nurse competence was rated by asking respondents to state how frequently they performed each of the listed competencies on a four point scale where 1=never, 2=occasionally, 3=usually and 4=always. EQT One (EQT1 Appendix 1) is intended for migrant nurses to compare through the graded responses to 108 items, self-assessment of their competence in the EU country where they trained and qualified with self-assessment of their competence in the EU country where they are now employed. This will capture information regarding the similarities and differences in work requirements and experiences for nurses in different EU countries. EQT Two (EQT2 Appendix 2) is intended for nurses who still work in the country where they trained and qualified, to elicit data on self-assessment of their competence (Cowan et al 2007).

Appropriate regulatory approval was acquired prior to data collection in the five EHTAN project partner countries. EQT1 and EQT2 were then distributed via nurse managers and senior nurses in hospitals which had partnership arrangements with the participating organisations in the EHTAN project (usually universities). Following this, a total sample of 79 nurses from acute general hospitals in the partner countries (UK n=30, Belgium n=30 Greece n=19) completed EQT1 and a total sample of 588 nurses (UK n=100, Belgium n=113, Greece n=95, Germany n=150, Spain n=130) completed EQT2 (Cowan et al 2007).

Inclusion criteria for subjects for the EQT1 survey was that they had trained within the previous five years, in a country within the EU other than the one in which they were currently working, and were currently working in acute hospital nursing. These individuals were located through consultation with personnel officers within hospitals, which had partnership arrangements with the participating organisations in the EHTAN project (usually universities). The questionnaires were distributed and collected by hand via nurse managers and senior nurses in these hospitals. Response rates varied across countries, but 90% of all potential subjects who were approached completed and returned the questionnaire (Cowan et al 2007).

The EQT2 was distributed in a similar fashion, but this time to acute hospital nurses who had trained during the previous five years in the country within which they were working. Calculating a precise response rate for this survey is difficult because nurses were not approached individually; questionnaires were made available to all nurses working in acute hospital wards and completed by those who agreed to do so. We estimate that between 50% and 60% of all nurses who were eligible to participate, did so (Cowan et al 2007).

Results

Summarising responses to EQT1, Table 2 (Cowan et al 2007) shows the difference between the self-assessed mean competence scores of migrant nurses employed in UK, Belgian and Greek hospitals compared to scores for the EU country where they trained and qualified. There is a statistically significant difference between own country and new country competence scores of migrant nurses working in the UK and Belgium, but not those working in Greece.

Table 2.

Comparison of Mean Competence Scores:
Migrant Nurses Employed in the UK, Belgium and Greece

<table>
<thead>
<tr>
<th>Country</th>
<th>Response</th>
<th>Mean, (SD)</th>
<th>Significance, Wilcoxon’s Matched Pairs Test, p&lt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK (n=30)</td>
<td>Own Country</td>
<td>2.92, (0.75)</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>New Country</td>
<td>3.11, (0.76)</td>
<td></td>
</tr>
<tr>
<td>Belgium (n=30)</td>
<td>Own Country</td>
<td>3.08, (0.34)</td>
<td>0.03</td>
</tr>
<tr>
<td></td>
<td>New Country</td>
<td>2.98, (0.38)</td>
<td></td>
</tr>
<tr>
<td>Greece (n=19)</td>
<td>Own Country</td>
<td>3.08, (0.36)</td>
<td>0.16</td>
</tr>
<tr>
<td></td>
<td>New Country</td>
<td>3.01, (0.29)</td>
<td></td>
</tr>
</tbody>
</table>

Table 3 (Cowan et al 2007) shows responses to the EQT2 on self-assessed mean competence scores of nurses in the EHTAN EU partner countries, as completed by nurses who still work in the country where they trained and qualified. There is a statistically significant difference across the scores of nurses from these five countries.

Table 3.

Comparison of Mean Competence Scores

<table>
<thead>
<tr>
<th>Country</th>
<th>Mean Competence Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK (n=100)</td>
<td>3.33</td>
</tr>
<tr>
<td>Spain (n=130)</td>
<td>3.13</td>
</tr>
<tr>
<td>Belgium (n=113)</td>
<td>3.01</td>
</tr>
<tr>
<td>Germany (n=150)</td>
<td>2.92</td>
</tr>
<tr>
<td>Greece (n=95)</td>
<td>2.76</td>
</tr>
</tbody>
</table>

Table 4 (Cowan et al 2007) shows the mean competency scores by nursing domains across the five countries. Means vary across domains with Research and Development receiving the lowest means overall and the domains such as Care Delivery and Communication receiving the highest competency scores.
Discussion
The findings from this study demonstrate migrant nurses’ self-assessment of competence (based on how they think they function) varies between country of origin and the country in which they are employed.

The data on competence scores in the practice domains for nurses in different countries informs the EHTAN competence matrix with regard to variations in competence that need to be addressed in order to facilitate nurse mobility throughout the EU.

Thus, the matrix will enable a nurse wishing to migrate to a given EU country to self-assess his or her competence and then compare their mean competence scores with pre-defined scores for their country of origin (or country where they already work) and the one to which they intend to migrate. This would highlight areas where more experience is needed. The matrix could also provide guidance for employers engaging migrant nurses through enabling awareness of different competence levels. However, more work is needed to increase the pool of available data from across the EU but the potential is clear. Nurses will be able to make a more informed judgement about the match between their own competencies and those of a possible destination country (Cowan et al 2007).

Conclusion
The results of this study suggest that the EQT can detect differences in competence. These data provide a useful foundation for the EHTAN matrix. However, further development of the matrix, with regard to future psychometric testing is necessary and this will require data collection from considerable numbers of nurses, both migrant and non-migrant, across the whole of the ever-expanding EU. Thus, there needs to be further commitment, time and resources invested and a EU regulatory body to administer and continually update the matrix (Cowan et al 2007).

References

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A few tips on how to cite.

Please remember to use the full name of the journal - European Journal of Oncology Nursing or Eur J Oncol Nursing - to cite articles published in EJON.

You must also include the year of publication, the volume number and the pages of the article that you wish to cite.

Here is an example of how to cite an article:

Involve is a new initiative to engage oncology nurses in better prevention and treatment decision making by sharing cancer therapy management practices.
AMGEN
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Amgen recognizes and values the role of the oncology nurse in their commitment to improve outcomes for the person with cancer. Amgen is committed to collaborating with oncology nurses on multiple fronts to advance the science and knowledge in the field of oncology and ultimately improve the care and experiences of persons with cancer. Through the TITAN program and other projects, we have reached thousands of nurses in multiple languages, with the intention to advance knowledge and improve care. We commend and support the mission and objectives of EONS and look forward to working with oncology nurses throughout Europe and abroad.

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Partnering with EONS
AstraZeneca are the second biggest Oncology Company in the world, with major objectives of developing innovative new medicines with aims of benefiting cancer patients in terms of treatment outcome, quality of life and improvement in survival. Treatment of cancer clearly requires a multidisciplinary approach, requiring close collaboration and teamwork between all health case professionals involved with treating the patients, and the pharmaceutical industry. AstraZeneca recognises the great importance of Oncology Nurses in the treatment of cancer and their role in ensuring cancer patients get the best treatment and care that they deserve. AstraZeneca are very pleased to be partnering with the European Oncology Nursing Society (EONS) and look forward to working closely with the organisation in the future, to assist in the advancement of nurse education and the continued growth of the organisation.

MERCK KGaA
Merck KGaA focuses its oncology research on the development of novel therapies that specifically target cancer cells. The monoclonal antibody Erbitux® (cetuximab), Merck’s first oncology product, specifically blocks the epidermal growth factor receptor (EGFR). Erbitux enhances the effect of chemotherapy and radiotherapy. Merck has also acquired the rights for the oral cancer treatment UFT® (tegafur-uracil).

Merck’s oncology research activities focus on identifying compounds that specifically interfere with one or more of the key cellular processes or pathways which influence the growth and spread of cancer cells. The resulting range of new compounds, including the humanized EGFR targeting monoclonal antibody matuzumab, the cancer vaccine Stimuvax® (formerly referred to as L-BLP25), the angiogenesis inhibitor cilengitide and several immunocytokines, are currently undergoing clinical development.

MUNDIPHARMA
Mundipharma is one of the Purdue/Mundipharma/Napp independent associated companies and is dedicated to bringing to patients with severe and debilitating diseases the benefits of novel treatment options in fields such as severe pain, haemato-oncology and respiratory disease.
NOVARTIS
Novartis Oncology is committed to developing and advancing the education of nurses engaged in caring for patients with cancer and to co-ordinate top level nursing educational programmes. As such, Novartis considers the concept of sustaining partnerships an optimal vehicle to express our willingness and desire to commit to oncology nursing excellence and to recognize the impact oncology nursing has on the quality of patient care. Novartis envisions our sustaining partnership will enable EONS to develop the projects, education and understanding that will ensure the value of collaborative relationships between industry, nurses and the healthcare community.
Novartis thanks you in advance and looks forward co-operating with you.

ROCHE
Roche Partnership with EONS
One of Roche's key priorities is the discovery of novel and effective therapeutic agents that provide the best possible treatment for cancer patients. Throughout our range of oncology products, which include Avastin, Herceptin, MabThera, Tarceva, Xeloda, Kytril, Bondronat and NeoRecomron, we are dedicated to improving patient's quality of life. Cancer nurses are a vital component of healthcare services and Roche is committed to supporting further developments in the profession, through sponsoring the research grant to nurses in cancer care. We provide educational materials for use by nurses and complementary information for patients. We are delighted to be partnering with EONS, an organisation that shares our goal of 'improving the care of individuals with cancer by supporting and enhancing cancer nurses throughout Europe.'

SANOFI AVENTIS
Sanofi Aventis is the worlds third largest Pharmaceutical organization and the largest in Europe. We are committed to innovation and a commitment to meet unmet medical needs particularly in Oncology. We seek to build a sustained, enduring partnership with EONS and through this partnership, a continued education of Nurses engaged in the treatment of Cancer patients. We believe that the continuing education is critical to the advancement of Nursing excellence and the eventual quality of patient care. Through our partnership we will jointly identify the education needs of the Nursing community and address these needs through symposia, workshops and other means under the auspices of EONS in Europe and in parallel partner with other Nursing organizations on a global basis. We look forward to working closely with you and in supporting you.

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TopoTarget is a research-based international biopharmaceutical company dedicated to finding practical answers for cancer. TopoTarget is founded and run by clinical cancer specialists and combines years of hands-on clinical experience with in-depth understanding of the molecular mechanisms of cancer.
TopoTarget is committed to ease the burden and improve the efficacy of cancer therapies for both patients and healthcare professionals.
TopoTarget is pleased to support the goals of the European Oncology Nursing Society by being a partner of EONS.
TopoTarget recognizes the role of the oncology nurse and look forward to work with EONS on various projects such as development of clinical guidelines, supporting educational programs and provide sponsorships for research.
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**MA:** EU/1/06/350/001. **Price:** 9,750 EURO. Date of Preparation: January 2008. TopoTarget A/S, Fruebjergvej 3, DK

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