Cancer patients have been treated with internal irradiation or brachytherapy since early in the past century. Radium treatment, initiated by Marie Curie, paved the way for the afterloading technique in the 1980s that used high/low dose brachytherapy for the treatment of gynaecological cancers. During the 1990s, the implantation technique and pulse-dose-rate (PDR)-brachytherapy allowed radical radiation treatment of a series of other cancers, including anal and oesophageal cancers. Brachytherapy is often administered in addition to external radiation/chemotherapy, and applies a high level of radiation directly to the tumour site while protecting the surrounding tissue. Its aim is to optimise irradiation and to minimise side-effects.

But while diagnosis, response and survival rates, as well as the side-effects of radiation therapy, are well described in the literature little attention has been paid to the reactions and behaviors of cancer patients during stressful irradiation and the nurse’s role. Cancer nurses lack guidelines on best clinical nursing practice in relation to brachytherapy.

Nursing care of cancer patients undergoing brachytherapy is a balancing act between technical, intensive and psychological support tasks. Throughout what is only one component of a more complex treatment process, the nurse should be able to assess where the task lies, and whether it is providing comfort and security, advice or guidance. Before offering implantation, a doctor and a nurse evaluate whether the patient is physically and psychologically able to cope with the treatment.

A research project entitled “Brachytherapy’s influence on cancer patients” aimed at investigating the nurse’s role was carried out in the ward and in the out-patient clinic of the Finsen Center at Copenhagen University Hospital, Rigshospitalet in Denmark.
THE STUDY
The study aimed at understanding the PDR-brachytherapy process and the patient’s experience so as to improve nursing care and prevent psychosocial problems for patients when they receive this type of irradiation. The study, designed to be prospective, descriptive and explorative, involved 40 cancer patients (19 with anal cancer and 21 with gynecological cancers), with a median age of 56 years, and combined questionnaires, interviews and observation.

The patient’s experience with brachytherapy is described in the box below:

FINDINGS

The questionnaires
Patients were surveyed on admission, during treatment and at discharge, and at three- and six-months following treatment. The nurses involved with their care completed two questionnaires, evaluating their own work, one focusing on side-effects and the other on information. A high proportion, 85% of the patients, evaluated theirown work, one focusing on side-effects and the other on information. A high proportion, 85% of the patients, proved know ledgeable about PDR-brachytherapy and its side-effects. The results show that 74% were immobilised while 60% were confined to their beds while under treatment. No significant correlation was shown between frequency and degree of side-effects, diagnosis and length of stay.

The interview
Ten patients participated in the interview process six to eight months following internal irradiation. Semi-structured interviews highlighted the patients’ views on their nursing care and provided suggestions for improvements. Agreement between treatment expectations and actual experiences varied from patient to patient, and common concerns emerged regarding having needles implanted internally, and the long hours of treatment requiring bed confinement. One man with anal cancer said “I thought that it [brachytherapy] would be horrifying when it wasn’t at all”. A woman with cervical cancer stated: “I experienced a lot of pain … and was really afraid; really, really afraid”.

Observation
The study combined pure observation with participant observation, and the main focus areas were time and communication. A total of 172 hours were video-recorded involving six patients and 21 nurses, including complete internal irradiation of five patients, of which 42 hours were studied for time and communication. The latter comprised seven categories, including somatic, technical, social, existential and psychological communication as well as small talk and silent presence. The nurses remained with the patients 27% of the total time available for performing tasks between treatment intervals. The majority of the nurses’ communication with the patients concerned physical care (e.g. treatment, side-effects, nursing tasks). Despite the stress, the patients did not express any expectations of receiving psychological support. The video-recordings showed individual patterns of behaviour and coping.

THE WAY FORWARD
The potential of brachytherapy is internationally recognised and, although this study was a major step, further evidence-based studies are needed.

Communication between a nurse and a patient centers on psychological support, involving relaying information, communicating with patients, observing symptoms and side-effects, and leading rehabilitation courses. It is further suggested that:

- a brachytherapy team follows the patient throughout the treatment to enhance the patient’s sense of security;
- international / national brachytherapy courses are given to develop quality treatment and care of the patient;
- an international brachytherapy network be set up to identify where and how brachytherapy is administered in European countries and influence quality and competence development of nursing in brachytherapy. This network can create a forum for evaluation including experts from nursing practice, management, education and research in brachytherapy.

One patient’s experience
During summer 2009, Sara was diagnosed with cervical cancer. She was a social worker and single mother to her 14-year old son. Two weeks following termination of external irradiation, Sara was admitted for implantation. In addition to fatigue, she experienced diarrhea, and soreness in the genital area. She felt nervous during the many hours of PDR-brachytherapy, when the observation and nursing care can only be performed during pauses in the treatment and she is partially isolated and immobilised, positioned on her side. Sixteen needles were implanted internally and she was to undergo 42 hours of treatment, during which there were 34-minute pauses after each hour. While being treated, Sara watched television, spoke on the phone and had several visits from her son and sister. The brachytherapy went well but Sara experienced physical discomfort. She was thirsty, often requested ice-water and required massage to her legs and lumbar region due to leg swelling. On removing the needles, Sara experienced profuse bleeding at the injection sites and to avoid further bleeding, she was bedridden for another 24 hours.

Details of the references cited in this article can be accessed at www.cancernurse.eu/communication/eons_newsletter.html