



NURSING DIAGNOSES OF PATIENTS UNDERGOING RADIATION THERAPY
DIAGNÓSTICOS DE ENFERMAGEM DE PACIENTES EM TRATAMENTO RADIOTERÁPICO
DIAGNÓSTICOS DE ENFERMEIRA DE PACIENTES EN TRATAMENTO RADIOTERÁPICO

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ABSTRACT

Objective: to identify the incidence of nursing diagnoses, as well as defining characteristics, related factors and risk factors, based on the NANDA-I taxonomy of patients undergoing radiation therapy. **Method:** quantitative, cross-sectional, exploratory and descriptive study, performed with 60 patients in an outpatient clinic. **Results:** 23 Nursing Diagnoses were identified, of which the most prevalent were risk for impaired skin integrity (35%), impaired physical mobility (15%) and impaired urinary elimination (7%). The defining characteristics were limited transfer ability (15.3%), incontinence and impaired swallowing (7.2%). The related factors were pain (18.3%), discomfort (10.7%) and radiation (6%), and the risk factors are radiation (56%), skin color changes/alteration in skin turgor (26.3%) and imbalanced nutritional state (6.3%). **Conclusion:** The results of the present may study contribute to meet the health needs of patients undergoing radiation therapy and clinical decision making by the nurse. **Descriptors:** Nursing; Oncology; Radiotherapy; Nursing Process; Nursing Diagnosis; Nursing Research.

RESUMO

Objetivo: identificar a incidência dos diagnósticos de enfermagem, bem como características definidoras, fatores relacionados e fatores de risco, com base na taxonomia NANDA-I de pacientes em tratamento radioterápico. **Método:** trata-se de estudo quantitativo, transversal, exploratório-descritivo, realizado com 60 pacientes em um ambulatório. **Resultados:** identificou-se 23 Diagnósticos de Enfermagem, sendo os mais incidentes: risco de integridade da pele prejudicada (35%), mobilidade física prejudicada (15%) e eliminação urinária prejudicada (7%). As características definidoras evidenciadas foram amplitude limitada de movimentos (15,3%), incontinência e dificuldade para deglutir (7,2%). Dentre os fatores relacionados, estão dor (18,3%), desconforto (10,7%) e radiação (6%) e os fatores de risco radiação (56%), mudanças na pigmentação da pele/mudanças no turgor da pele (26,3%) e estado nutricional desequilibrado (6,3%). **Conclusão:** os resultados do estudo contribuem para atender às necessidades de saúde dos pacientes em tratamento radioterápico e na tomada de decisão clínica pelo enfermeiro. **Descritores:** Enfermagem; Oncologia; Radioterapia; Processos de Enfermagem; Diagnóstico de Enfermagem; Pesquisa em Enfermagem.

RESUMEN

Objetivo: identificar la incidencia de los diagnósticos de enfermería, así como características definidoras, factores relacionados y factores de riesgo, con base en la taxonomía NANDA-I de pacientes en tratamiento radioterápico. **Método:** estudio cuantitativo, transversal, exploratorio-descriptivo, realizado con 60 pacientes en un ambulatorio. **Resultados:** se identificaron 23 Diagnósticos de Enfermería, siendo los más incidentes: riesgo de integridad de la piel perjudicada (35%), movilidad física perjudicada (15%) y eliminación urinaria perjudicada (7%). Las características definidoras evidenciadas fueron amplitud limitada de movimientos (15,3%), incontinencia y dificultad para deglutir (7,2%). Dentro de los factores relacionados, están el dolor (18,3%), el malestar (10,7%) y la radiación (6%) y los factores de riesgo radiación (56%), cambios en la pigmentación de la piel/cambios en la turgencia de la piel (26,3%) y estado nutricional desequilibrado (6,3%). **Conclusión:** los resultados del estudio contribuyen para atender a las necesidades de salud de los pacientes en tratamiento radioterápico y en la tomada de decisión clínica por el enfermero. **Descritores:** Enfermería; Oncología Médica; Radioterapia; Proceso de Enfermería; Diagnóstico de Enfermería; Investigación en Enfermería.

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INTRODUCTION

The World Health Organization (WHO) estimates that by the year 2030 about 27 million new cases of cancer will be registered worldwide and it is believed that 50% of these patients will require radiation therapy.¹

This estimate corroborates the need for a standardized approach for the management of patients undergoing radiation therapy. The use of care protocols has demonstrated an effective strategy for the standardization of nursing care, as well as to prevent, treat and monitor adverse effects related to radiation.²

Ionizing radiation produced by apparatus or that can be emitted by natural radioisotopes by means of various techniques to radiate areas of the human organism previously and carefully demarcated, usually carried out on an outpatient basis¹⁻³, is characterized as radiation therapy and is as one of the main modalities of treatment for cancer.

Radiation therapy is an effective treatment, capable of damaging cancer cells by altering their genetic material and their ability to reproduce. However, it causes harmful effects and acute and chronic clinical manifestations, called adverse effects. The most frequent clinical manifestations are skin reactions, nausea, diarrhea, xerostomia, osteoradionecrosis, anorexia and dysphagia.^{2-4,5}

In the face of adverse reactions arising from radiation therapy, the Nursing Process (NP) emerges as an assistive technology that requires organization, planning, coordination, administration and control of nursing interventions provided to individuals, families and communities. It stands out as a crucial device for the clinical reasoning of nursing professionals, which provides a systematic way to qualify the care to be provided.

The NP is composed of five stages (history, diagnosis, planning, implementation and evaluation of nursing). This manuscript emphasizes the second stage, namely the nursing diagnosis (ND), which is considered a process of interpretation and grouping of data collected that guides the nurse in the decision making about the diagnostic concepts that represent the responses of the person, family or community and constitutes the basis for the selection of actions or interventions to achieve the expected results.⁶⁻⁷⁻⁸

The description of NDs through the use of a Standardized Language System (SLS) gives the process greater scientific support, providing nurses with clinical judgment based on scientific evidence, which will result in better

quality and safety in patient care. Among the SLSs, the use of the Nanda International taxonomy (NANDA-I) stands out as it has been disseminated in several countries and contributed to the systematization of nursing care through the NP.⁸

Considering the affirmation that the NP and the SLSs can be scientific subsidies to qualify the care in radiation therapy and that the study of the NDs affecting patients undergoing radiation therapy will provide important evidence for the planning of care by nurses, the objective was to identify the incidence of nursing diagnoses based on the NANDA-I taxonomy of patients undergoing radiation therapy treatment.

OBJECTIVE

♦ To identify the incidence of nursing diagnoses, as well as defining characteristics, related factors and risk factors, based on the NANDA-I taxonomy of patients undergoing radiation therapy.

METHOD

This is a quantitative, cross-sectional, descriptive and exploratory study carried out at the radiation therapy outpatient clinic of a reference hospital in cancer for the west and midwest regions of the State of Santa Catarina (SC). In this hospital, the NP is in the implantation and implementation phase, and the radiation therapy sector is the pioneer.

Sixty patients undergoing radiation therapy treatment aged over 18 years, of both sexes, regardless of the city of origin, participated in this study. Patients with impaired mental conditions were excluded, which made it impossible to collect all items of the instrument or to implement the NP. For this, the verbal fluency test was applied⁹, which preceded the nursing consultation.

The data collection took place during the previously scheduled nursing consultation performed by the nurse responsible for the radiation therapy sector in the months of June and July 2015.

We used an instrument that guided the identification of the NDs, using the taxonomy NANDA-I (2015-2017)⁸, following the established norms for the use thereof. The ND were grouped according to the domains of the taxonomy, which is structured by 13 domains, 47 classes and 234 diagnoses. For data compilation and statistical analysis, the Microsoft Excel® 2010 program was used, followed by the EpiInfo™ 7 program.

The study was approved by the Research Ethics Committee (CEP) of the State University

of Santa Catarina (UDESC), under no. 1,087,561, of 05/29/2015, in agreement with the Approval Certificate, considering that all the directives and regulatory norms of Resolution n. 466/12 of the National Health Council.¹⁰

RESULTS

Of the 60 patients interviewed, 34 (57%) were women and 26 (43%) were men, and the age group ranged from 20 to 99 years, with a predominance of the age range 60 to 69 years, with 18 patients. Of the 60, 39 (65%) were married and 28 (47%) had between one and three children. Regarding schooling, 27 (45%) had completed elementary education and 13 (22%) had incomplete elementary education.

From the evaluation of the patients, 23 ND were identified, which were related to the following domains: activity/rest (seven); safety/protection (six); elimination and exchange (five); perception/cognition (two); coping/stress tolerance (one); nutrition (one) and sexuality (one). No NDs were identified related to the domains health promotion; self-perception; roles relationships; life principles;

comfort; and growth/development. The NDs were identified in 153 different moments/situations for the 60 participants of the research. Each patient presented more than one diagnosis, which justifies the quantity being greater than the total number of the sample. Of the 23 priority NDs, 18 were classified with focus on the problem and five of risk; no ND were linked to health promotion.

The NDs can relate to a problem, to a health promotion status, but also to potential risk. The one based on the focus of the problem concerns an undesirable human response to a health condition/life process existing in a person, family, group and/or society. The risk diagnosis addresses the vulnerability of the individual, family, group or society for the development of an undesirable human response to health conditions/life processes. And the health promotion diagnoses are those related to the motivation and desire to increase well-being and reach the human health potential.⁸

Table 1 shows the incidence of NDs distributed in the NANDA-I domains.

Table 1. Incidence of Nursing Diagnoses identified in patients undergoing radiation therapy. Chapecó (SC), Brazil, 2015.

| Domain | Nursing diagnosis | f | % |
|--------------------------|----------------------------------|-----|------|
| Activity/rest | Impaired physical mobility | 23 | 15% |
| | Impaired walking | 6 | 4% |
| | Fatigue | 6 | 4% |
| | Insomnia | 4 | 3% |
| | Feeding self-care deficit | 2 | 1% |
| | Impaired transfer ability | 1 | 1% |
| | Ineffective breathing pattern | 1 | 1% |
| Safety/protection | Risk for impaired skin integrity | 54 | 35% |
| | Impaired oral mucous membrane | 5 | 3% |
| | Risk for infection | 4 | 3% |
| | Risk for falls | 3 | 2% |
| | Impaired skin integrity | 1 | 1% |
| Elimination and exchange | Risk for contamination | 1 | 1% |
| | Impaired urinary elimination | 10 | 7% |
| | Diarrhea | 7 | 5% |
| | Constipation | 3 | 2% |
| | Stress urinary incontinence | 3 | 2% |
| Perception/cognition | Impaired gas exchange | 3 | 2% |
| | Impaired verbal communication | 3 | 2% |
| Coping/stress tolerance | Risk for acute confusion | 1 | 1% |
| | Anxiety | 1 | 1% |
| Nutrition | Impaired swallowing | 9 | 6% |
| Sexuality | Sexual dysfunction | 2 | 1% |
| Total | | 153 | 100% |

The defining characteristics (DC) (Table 2) are the signs and symptoms manifested or reported by individuals, families, communities or groups that give support and accuracy to the ND.⁸ It is emphasized that a ND can present one or more DC; the more DCs, the greater the evidence of diagnostic accuracy.

The related factors (RF) (Table 2) contextualize the DCs and are components that

integrate all the NDs. They are characterized by presenting the etiologies, circumstances, facts or influences to the ND. When the history (anamnesis and physical examination) of the patient is carried out, the RF is usually identified, and whenever possible, the nursing interventions should be directed to the identified FR, seeking to remove or minimize the cause of the diagnosis.⁸

Table 2. Incidence of Definitive Characteristics and Related Factors Found in Patients undergoing Radiation Therapy. Chapecó (SC), Brazil, 2015.

| Real nursing diagnoses | Defining characteristic (n) % | Related Factor (n) % |
|-------------------------------|--|---|
| Impaired physical mobility | Verbal report of pain (n=1) 1 | Pain (n= 17) 13 |
| | Decrease in range of motion (n= 17) 15.3 | Alteration in bone structure integrity (n= 2) 1.5 |
| | Postural instability (n=3) 2.7 | Musculoskeletal impairment (n=6) 4.5 |
| | Alteration in gait (n=2) 1.8 | Decrease in muscle strength (n=3) 2.2 |
| | Exertional dyspnea (n=1) 1 | Discomfort (n=11) 8.3 |
| Impaired walking | Impaired ability to walk required distance (n=6) 5.4 | Fear of falling (n=2) 1.5 |
| | | Pain (n=3) 2.2 |
| | | Impaired balance (n=2) 1.5 |
| | | Musculoskeletal impairment (n=1) 0.7 |
| | | Insufficient muscle strength (n=1) 0.7 |
| Fatigue | Increase in physical symptoms (n=1) 1 Tiredness (n=6) 5.4 | Physical deconditioning (n=4) 3 |
| | | Anxiety (n=1) 0.7 Illness (n=3) 2.2 |
| Insomnia | Difficulty initiating sleep (n=4) 3.6 | Depression (n=2) 1.5 |
| | | Anxiety (n=3) 2.2 |
| | | Fear (n=1) 0.7 |
| | | Sleep deprivation (n=1) 0.7 |
| Feeding self-care deficit | Impaired ability to swallow food (n=1) 1 Impaired ability to manipulate food in mouth (n=1) 1 | Discomfort (n=2) 1.5 |
| | | Pain (n=1) 0.7 |
| Impaired transfer ability | Limitation of independent movement between two nearby surfaces (n=1) 1 | Pain (n=1) 0.7 |
| | | Musculoskeletal impairment (n=1) 0.7 |
| Ineffective breathing pattern | Dyspnea (n=1) 1 | Anxiety (n=2) 1.5 |
| | | Pain (n=1) 0.7 |
| Impaired oral mucous membrane | Difficulty swallowing (n=4) 3.6 Difficulty speaking (n=2) 1.8 Coated tongue (n=3) 2.7 Xerostomia (n=4) 3.6 Halitosis (n=1) 1 Oral ulcer (n=1) 1 Gingival hyperplasia (n=1) 1 | Treatment-related side effects (n=2) 1.5 |
| | | Decrease in salivation (n=5) 3.8 |
| | | Infection (n=1) 0.7 |
| | | Mechanical factors (n=1) 0.7 |
| | | Discomfort (n=1) 0.7 |
| | | Pain (n=1) 0.7 |
| | | Radiation (n=1) 0.7 |
| Impaired skin integrity | Altered epidermis and/or dermis (n=1) 1 | Radiation (n=1) 0.7 |
| | | Urinary tract infection (n=1) 0.7 |
| Impaired urinary elimination | Incontinence (n=8) 7.2 Urinary urgency (n=3) 2.7 | Anatomic obstruction (n=6) 4.5 |
| | | Multiple causes (n=3) 2.2 |
| Diarrhea | Loose liquid stools > 3 in 24 hours (n=4) 3.6 Bowel urgency (n=4) 3.6 | Radiation (n=7) 5.3 |
| | | |
| Constipation | Change in bowel pattern (n=3) 2.7 | Decrease in gastrointestinal motility (n=2) 1.5 |
| | | Prostate enlargement (n=1) 0.7 |
| | | Insufficient fiber intake (n=2) 1.5 |
| | | Insufficient dietary habits (n=1) 0.7 |
| | | Musculoskeletal impairment (n=1) |
| Stress urinary incontinence | Involuntary leakage of small volume of urine (e.g., with coughing, laughing, sneezing, on exertion) (n=3) 2.7 | Weak pelvic muscles (n=3) 2.2 |
| Impaired gas exchange | Dyspnea (n=3) 2.7 Dyspnea on exertion (n=1) 1 Decrease in oxygen saturation (n=1) 1 Abnormal skin color (n=1) 1 | Ventilation-perfusion imbalance (n=3) 2.2 |
| | | |
| | | |
| | | |
| Impaired communication | Difficulty verbalizing (n=4) 3.6 | Treatment-related side effects (n=2) 1.5 |
| | | Stress (n=1) 0.7 |
| Anxiety | Decrease in oxygen saturation (n=1) 1 Preoccupation (n=1) 1 | Change in health status (n=1) 0.7 |
| | | Anticipation of pain and suffering (n=1) 0.7 |
| | | Suffering (n=1) 0.7 |
| | | Uncertainty of prognosis (n=1) 0.7 |
| | | |
| Impaired swallowing | Odynophagia (n=3) 2.7 Difficulty swallowing (n=4) 3.6 Reports "something stuck" (n=1) 1 Abnormal esophageal phase of swallow study (n=1) 1 Volume limiting (n=1) 1 | Mechanical obstruction (n=2) 1.5 |
| | | Laryngeal abnormality (n=5) 3.8 |
| | | Oropharynx abnormality (n=1) 0.7 |
| | | Nasal defect (n=1) 0.7 |
| | | |

| | | |
|--------------------|---|--|
| Sexual dysfunction | Perceived sexual limitation imposed by the disease/therapy (n=1) 1 Actual sexual limitation imposed by the disease/therapy (n=1) 1 | Alteration in body structure/function (e.g., disease, radiation) (n=2) 1.5 |
| Total | N=111 | N=131 |

Risk factors (RF) are characterized by influences that increase the vulnerability of individuals, families, groups and the community to one or more unhealthy events or elements that may cause a health problem.

Each patient may have more than one risk factor, depending on the problem. Interventions in these cases ensure that the risk for a ND does not become a real ND⁸.

Table 3. Incidence of the Risk Factors found in patients undergoing radiotherapy. Chapecó (SC), Brazil, 2015.

| Risk Nursing Diagnosis | Risk factor |
|----------------------------------|--|
| Risk for impaired skin integrity | Radiation (n=53) 56 Impaired circulation (n=1) 1 Alteration in skin color/turgor (n=25) 26.3 Imbalanced nutritional state (n=6) 6.3 |
| Risk for infection | Inadequate primary defenses (n=4) 4.2 |
| Risk for falls | Postoperative conditions (n=1) 1 Difficulty with gait (n=1) 1 Impaired balance (n=1) 1 Orthostatic hypotension (n=1) 1 |
| Risk for acute confusion | Radiation therapy (n=1) 1 |
| Risk for contamination | Exposure to radiation (n=1) 1 |
| Total | n = 95 |

DISCUSSION

Considering the results, the prevalent ND was the risk of impaired skin integrity, present in 54 patients (35%), and is directly related to the adverse effects caused by radiation therapy. Radiodermatitis or radiodermatitis is the most frequent change in patients and occurs after exposure to radiation. It is characterized by causing erythema, edema, hyperchromia, dry peeling of the skin, as well as ulcerations, depending on the dose of radiation¹. Because it is a vulnerability to changes in the epidermis or dermis⁸, in order to avoid complications, the patient diagnosed with impaired skin integrity should receive from the nurse, even before starting radiation therapy treatment, guidelines aimed at minimizing or avoiding adverse reactions of this nature.

Impaired physical mobility was identified in 23 (15%) individuals, present in 15 patients with breast cancer in whom there is a high incidence of surgical procedures, such as partial or radical mastectomy, as well as the removal of lymph nodes from the axillary and cervical region, which justifies the relation of these procedures with the ND impaired physical mobility.¹¹

The third most incident ND was impaired urinary elimination, identified in 10 (7%) patients, mostly related to cases of cancer in the pelvic region, of which, five were listed in patients with prostate cancer and three in

patients with cervical cancer. Increased prostate causes problems such as difficulty urinating, need of urinating more often during the day and at night and, in more severe cases, infection or kidney failure associated with these factors, justifying the need for early diagnosis so that these complications do not worsen the patient's clinical situation.¹² Corroborating with this data, a study of 50 patients in the immediate postoperative period submitted to prostatectomy revealed that impaired urinary elimination is among the most common NDs.¹³

Impaired deglutition was present in nine (6%) patients. Its presence was noticed in cases of cancer related to tongue, tongue base, larynx, esophagus, pancreas, oropharynx, head/neck and skin. The most common alterations found in patients with these types of cancers are: xerostomia, painful swallowing, decreased salivary flow, inflammatory process of the salivary glands and mucositis. These occur due to radiation doses in these regions, which causes changes in taste, lubrication and liquefaction^{1,14,15}. This ND, when early identified, enables nurses to guide and prescribe measures to minimize and/or treat the adverse effects caused by radiation therapy.

The ND diarrhea was present in seven (5%) patients. It was mainly identified in the cases of cervical cancer (five patients), since diarrhea is an adverse effect that affects many patients in radiation therapy, which may limit

the treatment and even lead to the need of interrupting it¹. In this way, it is possible to intervene with actions to minimize the occurrence of diarrhea, reducing the effects of discomfort.

The ND impaired walking was identified in six (4%) patients. It did not present incidence in individuals with a certain type of cancer, but was present in cases of breast, prostate, rectum, skin, lung cancer and cancer in more than one region of the body. The relationship between this ND and the variable age group is highlighted, since the patients were aged between 60 and 69 years, characterizing them as elderly and relating to pain and depression.¹⁶

There were six (4%) cases of the ND fatigue, all in patients with lung cancer. This symptom is common in individuals with this type of cancer and is mainly associated to radiation therapy. The pathogenesis of this symptom, when related to cancer, is not well defined. However, the effects of cancer and its treatment stand out as mechanisms that may contribute to the development of fatigue, especially on the central nervous system, muscular energy metabolism, sleep, circadian rhythm, stress and inflammatory mediators. Fatigue when related to cancer is characterized by being a persistent symptom of physical and emotional fatigue and exhaustion, since it interferes with the patient's usual functional capacity.¹⁷ When this ND is identified in the patient, it is necessary to intervene to improve the quality of life, even seeking support services, such as physiotherapy.

Impaired oral mucosa prevailed in five (3%) cases, mainly associated with larynx (two cases), oropharynx, cervical and head/neck cancers. The oral cavity is a sensitive site, common for the appearance of complications related to radiation therapy. The patients refer mainly to pain, discomfort and dysphagia, symptoms that can be diminished from the early diagnosis, and it is possible to intervene effectively, considering the care related to this adverse effect, such as feeding with pasty to liquid nutrients and in warm temperature.¹⁸

The ND insomnia was identified in four (3%) cases, in individuals with prostate, rectum, lung and skin cancer. Insomnia may be present in the majority of patients diagnosed with cancer and is mainly related to concerns, fear, anxiety and depression.¹⁸ It is up to the nurse, besides guiding and intervening to calm the patient in the best possible way, to identify the need for referral to social and psychological support.

The risk for infection was present in four (3%) patients, two with skin cancer, one with bladder cancer and one with cervical cancer. The relationship between risk for infection and cancer may be associated with skin exposure and the appearance of contaminated and/or infected wounds caused by radiation therapy itself. As for bladder cancer, the risk of infection may be related to urinary changes, such as the need to urinate more times a day, as well as difficulty urinating. In relation to cervical cancer, this ND is barely related to sexual intercourse, since that during the treatment women are recommended not to have sexual intercourse, since there may be a decrease in vaginal lubrication, as well as vaginal stenosis and atrophy.²⁰ In these cases, it is important to guide the changes that may occur during radiation therapy and to alert the patient to report any changes to the nurse.

Regarding the DCs, limited range of motion was identified in 17 patients, followed by incontinence and difficulty in swallowing, in eight patients. The DCs impaired ability to walk required distances and report of fatigue were found in six individuals. The DCs xerostomia, difficulty speaking, at least three liquid stool eliminations per day, dyspnea, report of difficulty initiating sleep and urgency to evacuate were identified, each of these, in four patients. The DCs postural instability, change in bowel pattern, odynophagia, coated tongue, involuntary leakage of small volume of urine with coughing, laughing, sneezing or on exertion and urinary urgency were identified in three patients, each. The DCs dyspnea on exertion, alteration in gait, and difficulty speaking were observed in two patients. Finally, each of the following DCs was found in only one patient in the sample: increased in physical complaints, decrease in oxygen saturation, abnormal skin color, altered epidermis and/or dermis, Impaired ability to swallow food, Abnormal esophageal phase, abnormal esophageal phase of swallow study, impaired ability to manipulate food in mouth, limitation of independent movement between two nearby surfaces, perceived sexual limitation imposed by the disease/therapy, actual sexual limitation imposed by the disease/therapy, volume limiting, Decrease in oxygen saturation, preoccupation, report that "something stuck", verbal report of pain and oral ulcers. The total frequency of the DCs was 111 times, and each patient may have had more than one DC.

The most prominent RF was pain, in 24 patients; discomfort was identified in 14 patients; and radiation was identified in eight patients. Anatomic obstruction and anxiety

were identified in six patients, each; laryngeal abnormality was found in five patients. The RF decreased salivation was also present in five patients. Decrease in muscle strength, treatment-related side effects and impaired physical condition were identified in four patients, each. Each of the following RFs was found in three patients: musculoskeletal impairment, multiple causes, weak pelvic muscles, ventilation-perfusion imbalance and disease state. Insufficient fiber and/or fluid intake, decrease in gastrointestinal motility, depression, fear of falling, alteration in bone structure integrity and alteration in body structure/function were identified in only two patients, each. And finally, the RFs identified in only one patient are the following: fear, oropharynx abnormalities, nasal defects, urinary tract infection, insufficient dietary habits, prostate enlargement, sleep deprivation, stress, change in health status, anticipation of pain and suffering, uncertainty of prognosis and mechanical factors. The total frequency of RFs was 131 times, and each patient may have more than one type of RF.

The most incident IRF was radiation, identified in 53 patients, followed by alteration in skin color/turgor, present in 25 subjects of the sample. Imbalanced nutritional state was found in six patients. Inadequate primary defenses was a risk factor found in four patients. The remaining IRF, namely impaired circulation, postoperative conditions, difficulty with gait, impaired balance, exposure to radiation and orthostatic hypotension were present in only one patient, each. The total frequency of IRF in this sample was 91 times.

The NCs, RFs and IRFs are useful indicators for nurses when selecting or not a given diagnosis. They are allies in the clinical reasoning for the choice of accurate ND to patients. By understanding the importance of a ND and identifying it correctly for each patient, it is possible to establish the necessary and appropriate interventions, allowing nursing professionals to perform individualized and collective care, according to the real and identified risk demands.

CONCLUSION

The NDs were identified from seven NANDA-I domains, of which the majority were located in the domain activity/rest. Of the 23 NDs identified, the one with the highest incidence was risk for impaired skin integrity, the RF was pain, the DC was the limited range of motion and the IRF was the radiation. It should be noted that the NDs, RFs, DCs and IRFs are

directly related to the types of cancers diagnosed in each evaluated patient.

In this sense, the diagnostic accuracy makes it possible to carry out interventions, guidelines and referrals to other areas of professional activity and services. The identification of the ND facilitates the achievement of the expected results, provides patient and professional safety and maintains a organized, efficient and quality work process.

It is worth noting the incipience of studies published in the area of radiation therapy related to SNC and NP, making it difficult to discuss the issue. We hope that this study will stimulate further research.

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