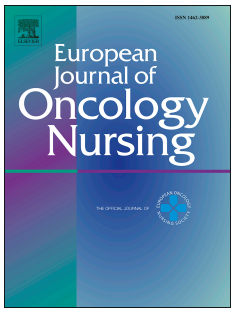


# Patients' and professionals' experiences with advanced practice nursing in cancer care: Qualitative study

M. Antònia Serra-Barril, Tarsila Ferro-Garcia, Anna Falco-Pegueroles, Pilar Delgado-Hito, Marta Romero-Garcia, Llúcia Benito-Aracil

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**Mª Antònia Serra Barril**: Conceptualization, Writing - Original Draft, Research, Investigation, Data Curation, Formal analysis, Funding acquisition; **Llúcia Benito Aracil**: Conceptualization, Writing - Original Draft, Investigation, Data Curation; **Marta Romero Garcia**: Conceptualization, Writing - Original Draft, Investigation, Data Curation, Formal analysis; **Anna Falcó Pegueroles**: Conceptualization, Visualization, Writing- Review & Editing; **Pilar Delgado Hito:** Conceptualization, Methodology, Writing-Review & Editing; **Tàrsila Ferro García:** Conceptualization , Project administration, Supervision, Resources, Review & Editing

**Title Page**

**1.Title:** Patients' and professionals' experiences with advanced practice nursing in cancer care: qualitative study

**2. Authors:**

M. Antònia Serra-Barril[1,2], RN, MSc, PhD student maserra@iconcologia.net

Tarsila Ferro-Garcia[1,2], RN, PhD tferro@iconcologia.net

Anna Falco-Pegueroles[2], RN, PhD annafalco@ub.edu

Pilar Delgado-Hito[2,3], RN, PhD pdelgado@ub.edu

Marta Romero-Garcia[2], RN, PhD martaromero@ub.edu

Llúcia Benito-Aracil[2,3], RN, PhD lbenito@ub.edu

***Institutional affiliations***

[1]Innovation and Quality Department, Catalan Institute of Oncology.

Granvia de L'Hospitalet 199-203, 08908 L'Hospitalet de Llobregat, Barcelona, Spain.

[2] Fundamental Care and Medical-Surgical Nursing Department, School of Nursing. University of Barcelona, Health Sciences Campus Bellvitge.

Feixa Llarga s/n., 08907 L'Hospitalet de Llobregat, Barcelona, Spain.

[3]IDIBELL, Institute of Biomedical Research.

Feixa Llarga s/n., 08907 L'Hospitalet de Llobregat, Barcelona, Spain

**3. Corresponding autor**

**Marta Romero**

Feixa Llarga s/n. 08907 L'Hospitalet de Llobregat, Barcelona, Spain.

Tel +34 934 024 225

martaromero@ub.edu

**4. Contributions each author**

**Mª Antònia Serra Barril**: Conceptualization, Writing - Original Draft, Research, Investigation, Data Curation, Formal analysis, Funding acquisition; **Llúcia Benito Aracil**: Conceptualization, Writing - Original Draft, Investigation, Data Curation; **Marta Romero Garcia**: Conceptualization, Writing - Original Draft, Investigation, Data Curation, Formal analysis; **Anna Falcó Pegueroles**: Conceptualization, Visualization, Writing- Review & Editing; **Pilar Delgado Hito:** Conceptualization, Methodology, Writing-Review & Editing; **Tàrsila Ferro García:** Conceptualization , Project administration, Supervision, Resources, Review & Editing

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**TITLE: Patients' and professionals' experiences with advanced practice nursing in cancer care: qualitative study**

**ABSTRACT**

**Purpose:** The growing complexity of cancer treatments requires changes in how care is organized and who provides it. The incorporation of advanced practice nursing roles within multidisciplinary teams can improve care in cancer patients. This study aims to understand the lived experience of cancer patients and multidisciplinary professionals in relation to the care provided by the advanced practice nurse.

**Methods:** Phenomenological qualitative study. Data were collected through in-depth interviews and a field diary. Participants were recruited through convenience sampling; until theoretical data saturation was achieved. An interpretative phenomenological analysis was performed, following Guba and Lincoln's criteria for trustworthiness.

**Results:** Interviews were performed with 18 professionals and 11 patients, from high-complexity public hospitals between March-December 2021. The main themes that emerged were: advanced practice nurse role and competencies, Benefits provided by the APN, and Relevant aspects of nursing care.

**Conclusion:** Advanced practice nurses play a fundamental role in cancer care, making positive contributions to the patient experience and to the multidisciplinary team's work. Elucidating the contribution of advanced practice nurses in oncology will facilitate the definition of their specific competencies and, in turn, the implementation of training and management strategies to consolidate this figure in specialized centers.

**Key words:** Advanced practice nursing, cancer, multidisciplinary team, oncology nursing, patient experience, qualitative research

**Main text**

## 1. INTRODUCTION

The growing complexity in the approaches taken to treat cancer patients, along with the paradigm shift towards person-centered care, has ushered in changes in healthcare organizations, prompting the emergence of new healthcare roles designed to provide efficient and effective care all along the care pathway (Borras et al., 2014; Winters et al., et al., 2021). Working in multidisciplinary teams (MDTs) allows for more specialized care and better coordination; facilitates communication among professionals and with patients; and contributes to improvements in the diagnostic process, treatment planning, and health outcomes (Muñoz et al., 2018; Prades et al., 2015; Selby et al., 2019).

Cancer care requires advanced nursing roles, with highly knowledgeable, expert professionals who can autonomously provide care and assume a broad scope of practice and competencies (Baileys et al., 2018; Coombs et al., 2020). Within MDTs, the advanced practice nurse (APN) is considered a professional of reference throughout the care process, coordinating clinical follow-up, psychosocial support, and patient education on self-care (Cook et al., 2017; Serena et al., 2018). APNs also guide the care team in managing toxicities and side effects related to cancer treatment, and they guarantee continuity of care and assist in the transitions around the cancer network, monitoring communication between the MDT and the patient (Dempsey et al., 2016; Prades et al., 2015).

Abundant literature confirms that the implementation of APN roles improves the care of cancer patients, especially with regard to information, coordination of care, accessibility of services, and patients' active participation in decision-making. These improvements translate to a decrease in anxiety among patients and families, reduced hospital visits, and better clinical outcomes (Alessy et al., 2021; Alotaibi & Al Anizi, 2020; Kerr et al., 2021; Stewart et al., 2021), which all have a positive influence on patients' quality of life and satisfaction. In short, evidence shows that APNs positively transform the patient experience (Kerr et al., 2021; Stahlke et al., 2017; Westman et al., 2019).

In terms of the perspectives of the agents involved in the care relationship, Kilpatrick (2016) found that patients and families perceived that the teams responsible for their care were more effective after the implementation of the APN figure. Specifically, this role helped improve communication, decision-making, cohesion, coordination of care, problem solving, and the focus on the needs of patients and families. Kerr et al.'s (2021) review showed that the APN has a versatile role in responding to variations in the clinical context and constitutes an essential and

valuable member of the MDT. In relation to the experience and perception of the APN role by MDT members caring for gynecological patients, specialists consider the APN a reference figure who provides support, information, and health education to patients, while also facilitating communication and access to the system and services, among other roles (Cook et al., 2019).

Worldwide, the APN role has been implemented in different countries, including the USA, Canada, Australia, and the UK. In European countries, implementation is uneven, and not all countries have certification or regulation systems (Wheeler et al., 2022). That said, Switzerland, Finland, and Sweden have already implemented advanced practice roles, with good results (Jokiniemi et al., 2021; Serena et al., 2018; Westman et al., 2019). The development and implementation of these roles depends on systemic aspects like the existence of regulatory mechanisms, the definition of competencies, and specialized training, but also on organizational factors such as institutional support and the maturity of care teams and settings, among others (Jean et al., 2019; Schirle et al., 2020).

In the case of Spain, studies show that the APN role has been incorporated into different settings (primary care, emergency services, acute hospitals) and medical specialties (mental health, oncology) (Gutiérrez-Rodríguez et al., 2022; Manzanares et al., 2021; Serra- Barril et al., 2022; Sevilla-Guerra, 2018; Sevilla Guerra et al., 2021). In the specific field of cancer care, there is no published evidence on the contribution of APNs to cancer care or their essential role within MDTs.

## 2. METHODOLOGY

### 2.1 Aim

The primary aim of this study was to understand the lived experience of cancer patients and multidisciplinary professionals with regard to the care provided by the advanced practice nurse.

### 2.2. Design

This phenomenological qualitative study through interviews, can be understood within Heidegger's hermeneutical school of thought (Heidegger, 1962; Rodriguez &Smith, 2018; Tuohy et al., 2013), since people's lived experiences and thoughts are used to discover the hidden meanings of phenomena. The experiences of professionals and patients in relation to APN care are elicited to gain a better understanding of this figure, as a basis for generating detailed knowledge on what it provides to patients, and how it fits into the team and healthcare institutions. The study is framed in a constructivist paradigm, in which reality is seen through different mental constructions, with subjective validity and in relation to the frames of reference. The constructions are interpreted using hermeneutical techniques and are compared

and contrasted through a dialectical exchange until achieving a more informed and sophisticated construction than the preceding ones (Guba & Lincoln, 1994).

**2.3. Study scope**

The study took place from March to December 2021 in four high-complexity public university hospitals (including one center dedicated exclusively to cancer care) in Catalonia (northeast Spain), which together provide care to about 40% of the adult cancer population in the region. These centers have different MDTs according to pathology, enabling coordinated, comprehensive care throughout the disease process, with the patient being visited by different professionals at the same time. APNs form part of these teams, performing advanced roles as specialist clinical nurses, with competencies in care, teaching, and research. They are reference nurses for each pathology, providing specialized care as well as monitoring and coordinating the entire patient care process, from diagnosis to completion of treatment.

**2.4 Sampling and selection procedure**

The study population consisted of specialist members of MDTs and patients who had received cancer treatment. Non-probabilistic convenience sampling was applied (Kleinman, 2004; Patton, 2001) until reaching the final sample, whose size was determined by data saturation, that is, when no more new themes emerged for the analysis.

Professional participants were selected from MDTs, which included APNs, gynecologists, oncologists, hematologists, surgeons, pulmonologists, radiation oncologists, psycho-oncologists, social workers, and nutritionists, with a minimum of two years' experience on the team. Eligible patients were adults diagnosed with oncological disease, who had received care from an APN during the health-disease process and had completed treatment two to eight months prior to the start of recruitment. We considered that this time period was sufficient for patients to distance themselves from their care experience while also being recent enough to maintain a good recall of their lived experience.

Professionals were contacted via email, as provided by the centers; they were informed of the study aims and methodological aspects and were invited to participate. If they were receptive to taking part, they were given more detailed information and asked to sign informed consent, after which the day and time of the interview were arranged. They were also informed that they were free to leave the study at any time.

Patients were recruited during their programmed follow-up visits to the center, when they were given information about the study and invited to participate. In case of accepting, they were

provided with written study information and asked to sign informed consent. The interview was organized to coincide with a scheduled appointment at the hospital.

**2.5 Data collection**

In-depth interviews were conducted following the recommendations of Kvale (1983), with the aim of obtaining an in-depth understanding of participants' experience (Brinkmann, 2018).

Due to the COVID pandemic, individual interviews with professionals (45 to 60 min each) were conducted online from March to May 2021 (Jackson et al., 2008), using the Microsoft Teams platform. From October to December 2021, patient interviews took place in person, in a quiet and comfortable hospital room (Brinkmann, 2018), and lasted approximately 30 to 45 min.

Interviews followed a script based on the specific study objectives, allowing and encouraging the participant to express their ideas and thoughts on whatever they considered important as well as their meanings and definitions (Table 1).

Two people from the research team with experience in cancer care, who did not directly know the participants (Taylor et al., 2016), played the roles of interviewer and observer. Interviews were recorded and transcribed (Polit & Beck, 2010), ensuring the confidentiality and anonymity of the participants. The transcripts were returned to participants via email for validation.

In addition, a field diary was used to record researchers' observations and reflections during the study, based on theoretical, personal, descriptive, inferential, and methodological notes (Taylor et al., 2016).

**2.6 Data analysis**

Data were subjected to an interpretive, phenomenological analysis (Quinn & Clare, 2008; Pringle et al., 2011). The first phase began with a pre-analysis of the interviews, including a review of the transcripts to identify emerging themes by reading, rereading, and annotating initial ideas. Next, codes were generated and subsequently reviewed and agreed upon by two researchers. A cross-analysis was then carried out to examine the set of transcripts, which included the generation of a complete list of the codes identified in each of the interviews. Afterwards, a theme search was carried out, in which categories and subcategories were created and from which the central themes finally emerged. Finally, the themes were reviewed, defined, and named.

Two investigators independently undertook the analysis. Once the results were drafted, they were reviewed by subject experts (Birt et al., 2016). Data management and analysis were performed using the NVivo 12 program.

### 2.7 Rigor

Guba and Lincoln's criteria for quality, rigor, and authenticity (i.e., credibility, transferability, dependency, confirmability) were applied (Guba & Lincoln, 2018). The transcript was returned to the participants for validation. Data collection, interpretation, and systematization phases were carried out alternately during the study, and the analysis was conducted through triangulation among the researchers (Flick, 2018; Morse, 2018). The neutrality of the researcher was maintained during the interviews. All data collected were recorded, and transcripts were verbatim. Care was taken to arrange the interviews in a way that facilitated the participation of professionals and patients.

Researchers undertook a process of reflectivity from a position of conscious self-awareness (Langdridge, 2007). Regarding the researcher's positionality, hermeneutical phenomenology recognizes that the researcher cannot obviate their lived experiences and knowledge. The researchers were thus aware of and openly recognized their preconceived ideas and reflected on how their subjectivity was part of the analytical process, and how the knowledge originating in the study could affect their position as researcher (Moran, 2002).

### 2.8 Ethical considerations

The directors of participating hospitals and the XXX University Hospital ethics committee approved the protocol (PR277/18). The study complied with bioethical norms (Declaration of Helsinki, 2013) and applicable legislation, including Organic Law 3/2018 on Protection of Personal Data and Guarantee of Digital Rights, and EU Regulation 2016/679 on General Data Protection.

All participants received detailed information on the study aims, both orally and in writing, on the use and treatment of the data obtained. In addition, they signed informed consent prior to conducting the interview.

In compliance with current legislation, data confidentiality was ensured through encryption and storage in a file. Participants' personal data were encrypted to preserve their privacy and prevent their identification.

## 3. FINDINGS

### 3.1 Participant characteristics

Interviews were performed with 18 professionals, from eight different MDTs and four high-complexity public hospitals. The mean age of the participants was 45.3 years (range 33-57),

72.2% (n=13) were women, and on average they had over six years' experience on MDTs with an APN.

Fifty percent of the participating professionals were doctors with oncological specialties, 33.3% were doctors with non-oncological specialties and 16.6% were support care professionals. Table 2 shows the distribution of the professionals.

In addition, 11 patients were interviewed; the mean age of the patients was 55,9 years (range 32-70), 54,6% (n=11) were men, 45.4% of patients had a diagnosis of advanced disease. Their sociodemographic characteristics are shown in Table 3.

**3.2 Thematic findings**

In the interpretive phenomenological analysis, the main themes that emerged were: APN role and competencies, Benefits provided by the APN, and Relevant aspects of nursing care (Table 4).

***3.2.1 Theme 1: APN role and competencies***

Professional and patient participants reported roles and competencies for the APNs were; direct clinical practice, coordination, consulting, counseling and education, research, ethical decision-making and patient advocacy, leadership, and difficulties in role development.

**Direct clinical practice**

Professionals described nurses carrying out a holistic assessment of the patients and identifying their needs. Participant HCP_14 stated: "*APNs have the ability to detect things... beyond the purely medical, but rather social, economic and emotional problems*". In addition, both professionals and patients reported that APNs provided emotional support: "*We always say that nurses are the first emotional resource for the patient and the family*" (HCP_12); "*... that they give you this support … is very important*" (Pt_7). Accompaniment was one of the functions considered essential in nursing care: "*Apart from the emotional comfort for the patient, it is essential to feel accompanied by the APN*" (HCP_13); "*I am going through this process and with all this... I feel valued, and very grateful*" (Pt_9). Regarding the nurse's attention to patient needs, one patient affirmed, "*She was there for everything I needed*" (Pt_13).

Professionals and patients stated that the APN provided complex, specialized care: "*It was her [the APN] who told me...it looks like the wound is infected...we have to treat it with antibiotics and see how it goes...*" (Pt_08). This was also the case for managing the symptoms of the disease and the toxicity of the treatments: "*The nurse does the monitoring and control ... she is also*

*specialized in the management and follow-up of the toxicity of the treatment*" (HCP_09); "*During chemotherapy visits... she was the one who asked me more about what symptoms I had*" (Pt_06).

Moreover, the APN also oversees the continuum of care and the early detection of complications. Participant HCP_12 commented, "*The APN will answer the phone and decide if it's serious or not ... if the patient should come to the hospital,*" and participant HCP_13 added, "*The APN's anticipation of the difficulties that may arise is essential.*"

**Coordination**

The professionals stated that the APN's functions included coordination, control, and follow-up of the patient's care process: "*The nurse is very vigilant that everything follows its course... she also coordinates us...it is as if there were a timeline, and everything must happen at the right moment*" (HCP_11); "*[She] ensures that the entire process planned for the patient is completed within the set times*" (HCP_17).

Depending on the patients' needs, the APN makes referrals to other professionals or levels of care: "*They are the ones in charge of keeping track of patients' needs, of how visits are managed with other professionals*" (HCP_12); "*The APN serves as a link to connect two specialties*" (HCP_2); "*They coordinate the response, decide whether to send the patient to an emergency department ...*" (HCP_10).

**Consulting**

The professionals described the APN as the professional of reference for the patient, the members of the MDT, and other health professionals: "*The radiologists already know her, that is, they sometimes call the APN directly... because she is the MDT's focal point for other specialists, for the team, and also for the patients*" (HCP_17); "*Because they also know [the APNs], you know? In other words, they put a face on them... so, this personal relationship ...*" (HCP_7); "*The patient sees many professionals, but the APN is always the same*" (HCP_14). In the same line, the patients described this role and its importance for their consultations. Participant Pt_12 stated, "*This is who I should call if I have any questions ... and you know that this person knows you*" while participant Pt_08 stated, "*You have a person that at any given time you can consult if something worries you or you need to talk... it's very important.*"

**Counseling and education**

The professionals considered that APNs reinforced the information provided by the doctors regarding the disease or the treatment and made it understandable to patients. Participant PR08 expressed this as follows: "*From the moment when the patient is first received, the nurse does*

*the job of adapting the information so the patient understands, that they are situated in relation to the disease they have, and what treatment they will receive*." The patients echoed this idea: "*Later... with the nurse, during the visit she explained to me how everything would go...*" (Pt_12).

According to the professionals, one of the main functions of the APN is to educate the patient and family: "*I think that one of the APN's main interventions is to provide the patient with health education about the process they are going through ... warning symptoms, care, the catheter, how to deal with mucositis ...*" (HCP_13). The APN also provides guidance and advice: "*The APN guides the patient, directs them regardless of whether the problem is medical or non-medical.*" (HCP_06).

The patients also described this intervention: "*The APN informed me about the most common symptoms related to chemotherapy, especially the issue of fever, I remember well that she underlined that for me*" (Pt_13). Recognizing that it was the APN who advised them and guided them during the disease process, participant Pt_12 said, "*It was very clear to me that this was the person who explained things to me ... and you are in unknown territory, but you have a guide who knows it.*"

**Research**

The professionals reported that nurses participated in clinical trials but conducted little research of their own, and it was necessary to promote this aspect: "*I think that nursing research should be greatly promoted ... there is potential to do things ...*" (HCP_8); "*... try in the projects that the APNs take part in their own nursing research ... the research must converge at the clinical and scientific level*" (HCP_9).

**Ethical decision-making and patient advocacy**

From the perspective of professional ethics, MDT members considered that APNs maintained a high level of professional involvement and were committed to their responsibilities as caregivers.

Participant Pt_6 commented: "*When I entered, I spoke with the nurse and afterwards, days later, she expressed concern about how I was doing*." They also described the role of the APN as a mediator: "*The ability to mediate is appreciated...in a conflict that doctors can sometimes have with the patient*" (HCP_11).

The professionals reported that the APNs acted as the patient's advocates, giving them voice in decision-making and taking responsibility for them: "*The APNs care a lot about the patient...the biggest dispute I've ever had is the excessive zeal of the APN for the patient and the family*

*member...*" (HCP_5); "*They're like the voice of the patient... it's like having the voice of the patient and the family there with the rest of the professionals*" (HCP_10).

**Leadership**

The professionals recognized that the nurses had autonomy in decision-making, which was justified by their expert knowledge of the disease and care process, generating trust among members of the MDT. One participants stated: "*The advanced knowledge that APNs have allows them to make decisions without the need to consult the doctor at all times, and you have the confidence that [the issue] will be resolved, for example, toxicity in a patient*" (HCP_9); "*It is important that the APNs maintain their trust and their authority with the rest of the team*" (HCP_10); "*They know the entire disease process very well; it allows them to be autonomous in decision-making..., for example, referring patients to the emergency room...*" (HCP_14).

The medical professionals stated that the APN had an established position within the teams, professional respect, certain functions, and were one more member of the team. Participant HCP_16 stated: "*In the multidisciplinary team the hierarchy is diluted, and we're all equal, the nurse has a role at the same level*," while participant HCP_6 reported: "*She presents the cases on the tumor board ... in complex cases such as a patient with social needs, or one who is very shocked, the nurse knows them, and her opinion is important*." Professionals agreed that they did not feel that the APN was encroaching on their role.

**Difficulties in APN role development**

Most of the professionals interviewed stated that they had no formal knowledge of the role and competencies that APNs should have. Participant HCP_4 reported: "*Well... when a new professional joins the team, the functions of the APN are not precisely explained. Of course, we go about telling them, those of us who have been there the longest. Because there is no one who's described the specific functions of the APNs.*"

Professionals and patients felt that the APNs were generally overloaded with care duties, while also carrying out administrative tasks and others that were not their own. This had an impact on the performance of their activities and functions. "*They are overloaded ... perhaps we would need another nurse for the long-term control of the patients,*" stated one professional (HCP_18), while a patient recounted, "*Because she has to manage a lot of people and the phone kept ringing, constantly...every time I had an appointment with her, she couldn't handle everything*" (Pt_13).

Another difficulty the professionals described, in addition to the care overload, was that the APN did not have time within the working day for research: "*They carry out less research than they might like... they are with the patient full time and the healthcare demand is very high*" (HCP_14).

Furthermore, professionals saw a need for specialized training for APNs: "*It would be nice if there was specialized training like in other countries, right?*" (HCP_15); "*The APN requires training that may not be standardized*" (HCP_18). The APNs used medical training resources to learn about the pathology and treatments: "*They participate in the service sessions because it is a way to learn*" (HCP_17); "*The APN must be continuously trained given the evolution of the different treatments*" (HCP_15). Similarly, regarding drug prescriptions, the professionals thought that nurses were qualified to prescribe medication: "*I believe the APNs can perfectly adjust symptomatic treatments and yes, they make decisions*" (HCP_16).

Some professionals also stated that the difficulties APNs faced in developing their role could affect their job satisfaction: "*Much of their frustration can come from this lack of time, excessive work or difficulties in training*" (HCP_11).

Other professionals stated that the APNs had insufficient institutional, economic, and academic recognition for the competencies and responsibilities they had. One stated: "*They should find a way to dignify the APN role with the recognition of this figure*" (HCP11); "*The recognition of the APN is very important, the value it brings to the patient, the family and also to the team, as a key element*" (HCP12).

### *3.2.2 Theme 2: Benefits provided by the APN*

Regarding the APN's contributions, the following subcategories emerged from participant interviews: Accessibility, Feeling of security and peace of mind, Quality of care, and Linkage and multidisciplinary teamwork.

#### Accessibility

The professionals described the nurse as the first point of contact in the hospital, while patients found the nurses easy to locate, as they had a direct line to telephone assistance for resolving doubts, reporting problems, and managing symptoms. Patients considered that this function provided an added value: "*If I had any questions, I could call ... at times that had a lot of added value. When there were doubts about the medication or a worsening condition, [the telephone assistance] is a way for the family to quickly get access*" (Pt_12).

**Perception of security and peace of mind**

Professionals and patients stated that the APN gave them a sense of security and peace of mind. Participant HCP_7 commented, "*I think that the benefit of having an APN is that the patient can feel safe; the direct support gives them a sense of security.*" In this line, the APN also ensures better patient follow-up, as HCP_16 commented, "*The APN will answer the phone and give advice to the patient, and really, it gives me huge peace of mind.*"

Some nursing interventions also conferred peace of mind: "*Communication with the patient, health education, information on the steps to follow, validation of the information provided by the physician or resolution of doubts make the patient calmer,*" stated participant HCP_13, conveying a sense of control. Patients described something similar: "*They knew how to convey to me that the situation was under control ... the APN was able to anticipate problems*" (Pt_7); "*The relationship I have had with the nurse is one of the things that gave me more peace of mind*" (Pt_10).

**Quality of care**

The professionals considered that the APN had a positive impact on the satisfaction of professionals and patients. "*The APN has a big impact on efficacy and ... on satisfaction, right? Of the patient and of the families, and I believe of the entire medical team... it's clear*" (HCP_8), and this represented a win for the patient: "*It is an added value that you offer to the patient*" (HCP_1); "*I think the fundamental thing... well, it is the extra mile that they give to care*" (HCP_8).

Regarding improved outcomes, professionals considered that the APN favored better patient adherence to treatment, ensured continuity of care, and reduced medication errors. Participant HCP_13 expressed: "*Fewer medication errors, non-adherence to treatment, early detection of complications. The APN reinforces adherence to treatment and facilitates compliance with adequate timing, so that patients have the chance to be cured.*" Participant HCP_7 stated that: "*They are very hard treatments ... there are moments that the patient would throw in the towel, and … I think the presence of the APN motivates them and supports them so they can continue*."

Another aspect that emerged was a perception of decreased clinical complications in patients due to the APN's role in early detection and intervention. Participants stated: "*With the APN, the patients are better managed, the postoperative period works better with the surgical care*" (HCP_15); "*The problems are less serious when the patient gets worse ... they quickly contact the APN ... avoiding a visit to the emergency room, an admission, and the complications that this entails*" (HCP_16). In this line and in relation to the management of toxicity, one patient said,

"*As soon as I had problems ... with the chemotherapy, she told me how I could do it ... that I had to rinse... everything. She helped me a lot*" (Pt_8).

Aspects such as well-being or quality of life were also associated with APN care: "*One of the benefits derived from the APN intervention, from her actions, is the patient's well-being and quality of life*" (HCP_11).

For their part, the patients expressed having had a good experience of the disease process from the diagnosis to the end of the treatment and were satisfied with the care received from the APN, whom they considered efficient, and from the larger team: "*As far as care is concerned, it is excellent...it has been perfect."* (Pt_12)*; "At all times they are very attentive... I am very happy*" (Pt_3).

**Linkage and multidisciplinary teamwork**

The professionals and the patients agreed that the APN figure served as a link between the patients, the hospital and the other professionals: "*It is the only link, this or the switchboard, and that's is very cold… right? It's much better… of course, to have someone you know and who has a name*" (Pt13); "*They're also like the link to the hospital, right?*" (HCP08); "*The APNs serve as a link between us, right? And then they serve as a link with different support specialists*" (HCP_4).

Another contribution of the APN figure was the facilitation of communication between professionals. Participant PR08 reported: "*They are also very important at the level of communication, sometimes between professionals, and they allow us to coordinate better.*" Likewise, they contribute to the organization and the processes: "*APNs ensure that the entire process planned for the patient is completed... without this help we would be lost*" (HCP_17); "*They make sure what we are doing is integrated*" (HCP_14).

Within the APN team, the professionals stated that the APN supported the professionals, complementing them and reducing the workloads of MDT members: "*The APN helps you, complements ... allows you to organize the visits at the widest possible intervals*" (HCP_9); "*They allow tasks to be distributed, and everything is also more efficient*" (HCP_13).

### *3.2.3 Theme 3: Relevant aspects of nursing care*

One relevant aspect of nursing care was the human factor: "*[The APN] greatly humanizes clinical practice, they work at the level of the patient and family. They are more capable than the doctor of understanding patients' needs*" (HCP_11). In addition to the kindness of the nurses and the nurse-patient relationship that is established, participants mentioned aspects such as empathy

and proximity: "*Patients establish a link with the APN*" (HCP_13); "*The APN for the patient, above all, is closeness, which is a very important thing ... Patients will ask them questions, that maybe they don't dare ask us, you know?*" (HCP_8); "*Surely, many things about the APN can be highlighted, the close relationship ... I could never have imagined it*" (Pt_10). "*Besides the care ... I found the people I needed*" (Pt_3).

The professionals expressed the APN's capacity to provide care, mentioning aspects such as her expertise in care: "*Without a doubt, she is a nurse who knows the treatments very well, the associated toxicities, chemotherapy, and radiotherapy ... The APN knows how to treat nausea and diarrhea better than I do ... I mean ... they are knowledgeable, they know a lot*" (HCP_17); "*APNs are nurses who already have a lot of experience ... they have a maturity and a background that other types of nurses do not have*" (HCP_10). Other aspects reported were the communication, management, and containment skills that the APNs show. Participant HCP_12 stated: "*APNs have communication skills, eh? Assertiveness, empathy, support …*" Other participants listed additional attributes: "*Well, their knowledge, their attention, their professionalism, the management capacity, the containment capacity, and the resolution capacity*" (HCP_12); "*I would highlight about the APN ... the knowledge, versatility, adaptability, obviously, I think this is linked to the nature of the nurse, I would add empathy*" (HCP_11).

Professionals recognized that the role of the APN was basic and essential to cancer care: "*The APN has a key role in patient care and treatment*" (HCP_13); "*[APNs] carry weight within the teams, and they have become indispensable*" (HCP_10); "*It is the fundamental piece, in managing everything involved in the functioning of the patient*" (HCP_8).

## 4. DISCUSSION

Regarding the lived experience of cancer patients and multidisciplinary professionals in relation to the care provided by APNs, the participants widely agreed on the key interventions performed, as well as the knowledge, skills and specific attributes held by the APNs. In concordance with other studies, the APN responds directly or indirectly to the needs of the patient by coordinating and monitoring the care process, making referrals to other professionals, managing the toxicity of treatments and symptoms, dispensing accurate information on the disease process, counseling, and educating patients on dealing with side effects (Cook et al., 2017; Cook et al., 2019; Kerr et al., 2021; Serena et al., 2018).

Our results underline that in addition to encompassing the biological, psychological, social, and existential spheres of holistic patient care, as described by van Dusseldorp et al. (2019), the APN role is fundamental for supporting the patient and family throughout the disease process.

Accompaniment, together with emotional support and support in coping, is essential, helping patients and their families to better adapt to the disease process and have a better care experience.

Moreover, this accompaniment and support to the patient during the provision of care strengthens the therapeutic relationship created between the patient and the APN. How this relationship is established is a relevant aspect of nursing care: the proximity perceived by patients and professionals (Cook et al., 2017; Serena et al., 2018), the reported experience of care as human and empathic, and the trust that is generated all make it easier for the patient to go to the APN to share problems or doubts, as well as to feel heard and cared for in their needs (Cook et al., 2017; Stahlke et al., 2017).

Within the MDTs, the role of the APN was perceived as crucial, facilitating the care process by coordinating the different stages of care, in line with Cook's review (2017). This function is carried out according to patients' needs and involves referrals to other professionals and management of different healthcare resources, favoring the efficiency of processes and care provision. In contrast, Cook et al. (2019) found that not all APNs carried out this coordination role, but most professionals believed that the APN should be involved in the different stages of the process, as in our study.

Another notable finding of the study was that the APN was the most knowledgeable professional with regard to the patient and their care process, intervening throughout the entire course of the patient's disease, whereas professionals did so in a fragmented manner. This made the APN a reference figure both for other professionals (Cook et al., 2017) and for patients (van Dusseldorp et al., 2019). For the patients especially, having this figure was essential and highly valued.

From the perspective of the professionals, the APN was highly involved and committed to patient care. Moreover, they were seen as assuming the role of defenders of the patients' interests (Kerr et al., 2021; van Dusseldorp et al., 2019), giving voice to the patient during interprofessional exchanges and so influencing decision-making.

The APN's nursing care also stood out for the nurse's demonstrated capacity, expertise, and knowledge (Cook et al., 2017), which were recognized by both professionals and patients. Notably, professionals recognized the APN's specialized, extensive knowledge, reflected by their degree of autonomy in making complex decisions with patients and managing pharmacological treatments. This recognition was closely linked to the fact that physicians trusted APNs for their proven ability to provide care. Some doctors commented that in practice, the nurses indicated

certain medications or adjusted their doses based on the symptoms; however, legally they were not allowed to make these decisions, although the doctors saw it as viable with more solid and specialized training. Therefore, the lack of regulation for these roles determines to some extent the APN's scope of competencies, as in other settings.

Professionals taking part in our study considered that the APN was an equal member of the multidisciplinary team, unlike the participants in the study by Hurlock-Chrorostecki (2016). At no time did the professionals mention any perception that their role was being usurped by the APN. Other studies, such as Cook et al.'s (2019), assessed the presence of an overlap in functions, but the professionals in our study saw the APN as having a complementary role (Serena et al., 2018).

The high care burdens reported (Serena 2018), especially when it comes to performing administrative tasks (Cook et al., 2019), can make it difficult for APNs to perform other relevant advanced practice functions, for example research or other specific interventions considered necessary in cancer care. This challenge is related to how institutions implement and define these jobs (Casey et al., 2018)

One of the difficulties in the development and implementation of advanced practice nursing is the lack of clarity around the specific competencies, which leads to confusion about the role that APNs should play (Casey et al, 2018). In our study, some professionals stated that they were unaware of the specific functions of the APN. On the other hand, MDT professionals participating in Serena et al.'s (2018) study highlighted that the role of lung oncology APNs and the scope of practice were clearly defined.

The lack of clarity on the role and the job description as well as the lack of recognition of APN practice roles at an institutional, economic, and professional level (Jean et al., 2019; Schirle et al., 2020) are not negligible aspects. Indeed, this ambiguity could have consequences for APNs' job satisfaction (Geese et al., 2022).

Despite the identification of competencies performed by APNs that are typical of advanced practice (Hamric, 2014), there is a perception that these roles are not developed to their full potential. Our findings show a broad scope of APN competencies, especially in direct clinical practice, coordination, consultancy and counseling, and education.

In our study, both professionals and patients described the benefits provided by the APNs as a reference figure for the patient. The provision of telephone assistance facilitates access to the system and provides a rapid response to patients' problems and needs. At the same time, the APN is also accessible to the different professionals involved in the patient care process. The

APN's accessibility is key, ensuring continuity of care, early detection of complications, and a prompt response to resolve and manage problems (Serena 2018). This attribute is very important both to patients and MDT professionals, conferring a sense of security and peace of mind (Cook et al., 2017).

Within the MDT, both patients and professionals see the APN as the nexus, facilitating communication with and among professionals; this vision is similar to other studies (Cook et al., 2019; Hurlock-Chrorostecki et al., 2016). In addition, the APN complements the work of other professionals, with a scope of practice that encompasses areas not covered by other professionals. The APN reduces the team's workload and facilitates their tasks and multidisciplinary work (Alotaibi & Al Anizi, 2020; Kerr et al., 2021; Serena et al., 2018). However, what could be an asset for the team as a whole could potentially have a negative impact on the development of APN functions. In this sense, it may be necessary to assess whether all the functions carried out by the APN should correspond to them, and to evaluate the impact of these tasks on the care overload perceived by patients and professionals alike.

Keer et al.'s (2021) review established the role of APN as an essential, valuable, and cost-effective member of the MDT, from the point of view of patients and team members, reporting beneficial outcomes associated with their contribution in the provision of care. Along these lines, the professionals considered that nurses provided high-quality care, helping to improve safety, providing efficient and specialized care, and improving monitoring of the patient and the care process (Cook et al., 2019). For patients, the APN has a positive impact on well-being (van Dusseldorp et al., 2019), and in our study the patients felt satisfied with the care received, describing the experience of the disease process as good. Therefore, the contribution of this advanced practice role to the overall patient experience and its impacts on the quality of the care process should be considered (Alotaibi & Al Anizi, 2020; Stankle et al., 2017).

Our results also show that the MDT professionals recognized the APN as an asset due to their professionalism and capacity for complex problem-solving, management, containment, adaptation, and versatility (Kerr et al., 2021). The acceptance of the APN role among MDT members is a fact: they consider it essential and fully recognize the role of advanced practice. Good communication, the maturity of the teams, and the way the APNs have been positioned may have facilitated their implementation.

All in all, the perception of the APN's role is very positive due to their contributions in the care provided, so institutions and managers should be attentive to strengthening this figure,

promoting and facilitating the development of competencies in order to optimize the performance of these roles.

### 4.1 Strengths and Limitations of the Work

The pandemic context meant that interviews with professionals had to be carried out by videoconference, which facilitated participation. This choice was supported by the fact that the professionals were used to this modality, so it should not be considered a limitation (Jackson et al., 2008). With the patients, we waited for the incidence of COVID-19 to decrease in order to be able to carry out the interviews under the conditions required by the study. The sample was conditioned by the fact that the interviews had to coincide with a patient's appointment at the hospital, and despite the low variability of patients in relation to the pathology, their experiences were similar and consistent throughout the sample.

The interviews allowed an in-depth exploration of individuals' perceptions and experiences, and data saturation was achieved. Returning the transcribed interviews to the participants and the involvement of all the authors in the analysis strengthened the reliability of the study with respect to the credibility, reliability, and transferability of the results to other contexts.

The study was carried out in a specific context, with some possible heterogeneity in the implementation of the different professional roles, as advanced practice in our setting is not regulated.

## 5. CONCLUSION

The experience of the care provided by the APN is positive, and this figure is considered essential to cancer care, providing quality health care all along the patient pathway.

Within the multidisciplinary teams, APNs are considered experts in their care area—an equal member of the team, and they have an important role coordinating the patient's care process, serving as a point of reference for both patients and professionals.

There is evidence that advanced practice nursing roles and functions are being performed in similar ways to other countries that also have not regulated these roles, although APN practice still falls short of their full scope of competencies.

APNs exercise clinical leadership in terms of their ability to influence teams and make complex decisions autonomously, although this role is limited by the lack of regulation.

## 6. RELEVANCE TO CLINICAL PRACTICE

The inclusion of the APN on the multidisciplinary team will make it possible to specifically define their competencies in oncology and, in turn, to implement training and management strategies to consolidate this figure in specialized centers. More research is needed to understand the role played by the APN from other perspectives, as well as to clarify their roles and contributions. Moreover, research into the contexts where APNs practice and the difficulties associated with developing the role would facilitate its wider implementation.

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**Table 1**. Interview guides

| Questions for professionals |
| --- |
| 1. Could you explain to me what your experience has been like in relation to working with an APN in the multidisciplinary team in cancer care? |

| |
|---|
| 2. Regarding the role played by the APN, what competencies do you think the APN has? What functions do you think are most relevant? From your point of view, tell me about other functions that the APN should perform.<br>3. From your perspective, what benefits do you think APN brings to cancer patient care?<br>4. What aspects do you think have been most relevant in relation to the care provided by the APN in cancer patients? |
| Questions for patients |
| 1. How would you describe your experience in relation to your disease process and the nursing care provided by your reference nurse?<br>2. From your perspective, could you explain to me what nursing care you received, and what helped you during treatment?<br>3. What has the nurse meant to you? What benefits has having a nurse brought you?<br>4. What characteristics of the nurse figure have you valued most? |

**Table 2**. Multidisciplinary team (MDT) participants (N=18)

| ID | Gender | Speciality | Pathology | Years experience with APN/MDT |
|---|---|---|---|---|
| HCP_1 | Female | Plastic surgery | Breast | 13 |
| HCP_2 | Male | Plastic surgery | Head and neck | 15 |
| HCP_3 | Female | Gynecology | Breast | 20 |
| HCP_4 | Female | Radiation Oncology | Breast | 11 |
| HCP_5 | Male | Clinical psycho-oncology | Others | 21 |
| HCP_6 | Female | Medical oncology | Breast | 16 |
| HCP_7 | Female | Radiation Oncology | Head and neck | 15 |
| HCP_8 | Female | Medical oncology | Colorectal | 7 |
| HCP_9 | Male | Medical oncology | Colorectal | 7 |
| HCP_10 | Female | Clinical nutrition | Others | 16 |
| HCP_11 | Male | Medical oncology | Lung | 15 |
| HCP_12 | Female | Social work | Others | 15 |
| HCP_13 | Female | Clinical hematology | Bone marrow trasplant | 14 |
| HCP_14 | Female | Pneumology | Lung | 15 |
| HCP_15 | Male | Plastic surgery | Head and neck | 8 |
| HCP_16 | Female | Neurology | Central nervous system | 10 |
| HCP_17 | Female | Clinical hematology | Lymphoma/myeloma | 8 |
| HCP_18 | Female | Medical oncology | Gynecological tumors | 12 |

**Table 3**. Patients' demographic characteristics (N = 11)

| ID | Gender | Diagnosis | Educational level | Civil Status | Children | Employment |
|---|---|---|---|---|---|---|
| Pt_1 | Male | Lung | Primary school | Married | Yes | Disability |
| Pt_2 | Female | Colorectal | Primary school | Widowed | Yes | Retired |
| Pt_3 | Female | Colorectal | Primary school | Married | No | Temporary Disability |
| Pt_4 | Female | Colorectal | Primary school | Married | Yes | Temporary Disability |
| Pt_6 | Female | Colorectal | Primary school | Married | Yes | Retired |
| Pt_7 | Male | Lung | Primary school | Married | Yes | Retired |
| Pt_8 | Female | Breast | University | Married | Yes | Temporary Disability |
| Pt_9 | Male | Colorectal | Secundary school | Single | No | Temporary Disability |
| Pt_10 | Male | Colorectal | University | Single | No | Working |
| Pt_12 | Male | Hodgkin's lymphoma | University | Married | Yes | Working |
| Pt_13 | Male | Hodgkin's lymphoma | Secundary school | Married | Yes | Working |

**Table 4**. Map of themes, subthemes, and emerging codes

| Themes | Subthemes | Codes |
|---|---|---|
| **APN role and competencies** | Direct clinical practice | Holistic patient evaluation<br>Detection of needs<br>Emotional support<br>Accompaniment to the patient<br>Attending to needs<br>Specialized complex care<br>Control and management of symptoms and toxicity<br>Provision of care continuity<br>Early detection of complications |
| | Coordination | Control and monitoring of the patient process<br>Referral to other professionals and existing resources |
| | Consulting | Reference professional<br>Response to and resolution of patient queries<br>Response to professional and patient inquiries<br>Get to know the patient in depth |
| | Counseling and education | Reinforces the information<br>Helps patient adjust to the disease process<br>Gives recommendations for managing side effects and treatments |

| | | |
|---|---|---|
| | | Ensures a better understanding of the treatment<br>Guides patient through the care process |
| | Research | Participates in clinical trials<br>Performs little of their own research<br>Promotes nursing research |
| | Ethical decision-making and patient advocacy | Involvement<br>Professional commitment<br>Patient's voice<br>Concern for the interests and needs of the patient |
| | Leadership | Autonomy in decision making<br>Knowledge, expertise, and authority<br>Professionals trust APN<br>Equal member of the team<br>Committee participation<br>APN position on the team |
| | Difficulties in APN role development | Ignorance of the role of the APN<br>High workloads<br>Non-role tasks<br>Not having time for own functions<br>Difficulties in training<br>Feelings of frustration<br>Lack of recognition |
| **Benefits provided by the APN** | Accessibility | First point of entry to the hospital |

| | | |
|---|---|---|
| | | Easy to locate<br>Telephone assistance |
| | Perception of security and peace of mind | Better patient follow-up<br>Resource to consult<br>Stress reduction<br>Feeling of control<br>Nurse-patient relationship |
| | Quality of care | Satisfaction<br>Added value<br>Better adherence<br>Error reduction<br>Reduction of complications in patients<br>Quality of life<br>Experience of the disease process |
| | Linkage and multidisciplinary teamwork | Point of union between the patient, professionals and hospital<br>Facilitates communication between professionals<br>Integration<br>Reduces workloads<br>Facilitates processes<br>Complements the team |
| **Relevant aspects of nursing care** | Human | Humanizes care<br>Empathy<br>Kindness<br>Bond with the patient |

| | | |
|---|---|---|
| | Expert care | Specialized care knowledge<br>Experience in care |
| | Proximity | Relationship of trust<br>Linkage with patient and family |
| | APN capacity | Resolution of complex problems<br>Communication and assertive skills<br>Support<br>Management<br>Containment<br>Resolution<br>Versatility<br>Professionalism |
| | Recognition | Key role<br>Fundamental<br>Indispensable |

**Highlights**

- The APN is essential providing quality health care all along the patient pathway.
- Within the multidisciplinary teams, APNs as a point of reference for both patients and professionals.
- APNs have an important role coordinating the patient's care process
- APNs exercise clinical leadership in terms of their ability to influence teams and make complex decisions autonomously

**Declaration of interests**

☒ The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

☐The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: