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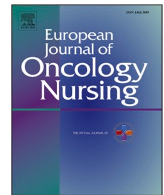

Prioritizing women's health: essential concerns before surgical intervention for gynecological cancer

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ABSTRACT

Purpose: To investigate women's health prior to surgical intervention for suspected or confirmed gynecological cancer, with a specific focus on sexual - and mental health.
Methods: A cross-sectional study including women scheduled for surgery due to gynecological cancer. Patient-reported outcomes were collected at a single time point upon admission to an oncological surgery ward using validated questionnaires (GAD-7, EORTC QLQ CX-24, EQ-5D-5L) and two open-ended questions: "Describe what concerns distress you the most right now?" and "What is most important to you right now?"
Results: Out of 206 eligible patients, 155 (median age 62, range 29–87) completed the questionnaires. All major gynecological cancer types were represented. Most women (76%) underwent minimally invasive surgery, and 31% had benign conditions. Additionally oncological treatment (chemotherapy and/or radiotherapy) was needed in 40% of cases. The mean EQ-5D-5L VAS score was 72 (SD 20), with 35% reporting low preoperative health status (<70). Women with suspected ovarian cancer reported the lowest health status, while those with suspected endometrial cancer reported the highest, though differences between groups were not statistically significant ($p = 0.101$). Uncertainty prior to diagnosis was a shared concern and affected women's physical, psychological, and sexual well-being. Responses to "What is most important to you right now?" reflected the need for personalized care.
Conclusion: Improved long-term survival in gynecological cancers increases the need to address health concerns already prior to surgery. The study highlights the need for a holistic, narrative-based approach in preoperative care to address not only physical symptoms but also emotional, social and existential needs.
The clinical trial registration number: researchweb.org/project/282380

1. Introduction

All individuals in Sweden in whom there is a suspicion of cancer, including gynecological cancer, are included in standardized cancer patient pathways (CPP). The CPP describes diagnostic investigations and initial primary treatments (often surgical) that should be carried out for each suspected diagnosis, as well as the time frame within which these should be completed. The CPP is to be followed from a well-founded suspicion through confirmed diagnosis and the initiation of the primary treatment (Regional Cancer Centres in Sweden (RCC), 2023a). When a diagnosis of gynecological cancer is confirmed, surgery is an important treatment strategy, often in combination with chemo- and radiotherapy (Swedish National Board of Health and Welfare, 2023).

Gynecological cancers consist of ovarian, endometrial, cervical and vulvar cancer and accounts for approximately 10% of all female cancer in Sweden (Swedish National Board of Health and Welfare, 2023). Endometrial cancer is the most common gynecological cancer and around 1500 women are diagnosed each year in Sweden. The endometrial cancer incidence is increasing worldwide, probably due to an increased prevalence of obesity and an aging population (Bray et al., 2024). Surgery is the primary treatment option, and the prognosis is generally favorable with a 5-year survival rate of around 84% (RCC, 2022). Ovarian cancer has the highest mortality rate of all gynecological

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cancers with only 48% 5-year survival rate and approximately 700 women are diagnosed annually in Sweden (Swedish National Board of Health and Welfare, 2023). The majority receive their diagnosis at an advanced stage of cancer and recurrences are common (Elattar et al., 2011; Bryant et al., 2022). Cervical cancer has decreased during the last decades, mainly due to the successful national screening program. As such, around 500 women are diagnosed in Sweden every year and approximately 25% are below the age of 40 at diagnosis. Primary treatment of cervical cancer is surgery and traditionally radical, with loss of the ability to bear a child. Fertility-sparing surgery options are only available if it is considered safe prognostically (Smith et al., 2020). Vulvar cancer on the other hand, is a rare disease and represents only 5% of gynecological malignancies. It is mainly diagnosed in elderly women, with a median age at diagnosis of 72 years (Alkatout et al., 2015).

Women with gynecological cancer report impact on mental health due to anxiety, depression, fear of changed body image and reduced sexual satisfaction for both them and their partners (Åkeflo et al., 2022; Rizzuto et al., 2021). Having gynecological cancer has also been described as a feeling of existential isolation and a sense of loss in both body and mind (Åkeflo et al., 2022). Many symptoms persist even after the oncological treatment is completed and originate primarily from the pelvic region, intestines, urinary tract, lymphatic system and genitals. Sexual dysfunction due to pain, changed anatomy and impact on sensation is also a common concern (Sekse et al., 2019; Gil-Ibanez et al., 2023).

Taken together, surgical interventions are an essential part of the CPP both early on when a diagnostic evaluation is required due to a suspicion of cancer and as the primary treatment for confirmed gynecological cancers. Surgery can be curative but often requires the completion of oncological treatment for the best possible outcome. Each person's experience of undergoing diagnostic investigations for suspected cancer or receiving a cancer diagnosis and undergoing treatment is unique and involves different health challenges in relation to the person's daily life and personal resources (Ghodraty Jabloo et al., 2017; Alaloul et al., 2019; Gil-Ibanez et al., 2023). To promote women's health when undergoing surgery due to a suspected or confirmed cancer diagnosis, nurses should focus on the early identification of concerns, symptoms and support needs to initiate timely interventions, both in terms of further nursing care and medical treatment. The time point of surgery represents a critical opportunity for initiating person-centered nursing interventions early in the disease trajectory, allowing care to be aligned with the individual's specific needs, as well as which resources the patient already possesses. From a general point of view of cancer rehabilitation, a person-centered needs assessment based on patients' narratives, a care plan and a plan for follow-up should be initiated early in the care pathway. Person-centered care with a specific focus on health promotive interventions, wellbeing and continuity is therefore of utmost importance (Britten et al., 2017; Feldthusen et al., 2022). However, to initiate interventions at an early stage of the care pathway, more knowledge is needed on women's health and concerns prior to undergoing oncological surgery (Gil-Ibanez et al., 2023).

Gynecological cancer impacts women's health in several different ways. Currently, there is a lack of understanding of women's needs and concerns in the period leading up to surgical interventions, as research often focuses on surgical procedures and patient-reported outcomes after surgery. Increased understanding is needed to improve overall care in line with a person-centered approach. Based on this, this study aimed to investigate women's health prior to surgical treatment for suspected or confirmed gynecological cancer. We aimed to answer two research questions: What distressing concerns do women experience prior to surgical intervention, and how do they experience impact on self-image, sexual function and mental health?

2. Methods

2.1. Study design

The study was conducted as a cross-sectional study within a mixed -methods design (Creswell and Clark, 2017). Patient-reported outcomes were collected on one occasion in connection with pre-surgical care at an oncological surgery inpatient ward. The study was performed at a university hospital, a tertiary center, which serves about 2 million inhabitants, where approximately 1000 women annually undergo gynecological oncological surgery. The study was approved by The Swedish Ethical Review Authority (reg.nr 2023-06056-01) before any data collection was performed. Each study participant received verbal and written information about the study and gave written informed consent to participate in line with The Declaration of Helsinki (World Medical Association, 2025). The reporting of this study adheres to the STROBE checklist.

2.2. Participants

All women admitted to the inpatient ward were consecutively screened for inclusion during 3 months at the beginning of 2024. Participants eligible for inclusion in the study consisted of women over the age of 18 who were scheduled to undergo surgery for suspected or confirmed gynecological cancer (ovarian cancer, endometrial cancer, cervical cancer or vulvar cancer) at an oncological surgery ward. The purpose of the surgery was to either treat or verify a cancer diagnosis. Exclusion criteria were comorbidities that, according to the researcher or responsible physician, may have an impact on the conduct of the study, for example, dementia. Furthermore, limited understanding of the Swedish language would hinder informed consent and answering the questionnaires. It was considered reasonable to include 155 women during the pre-decided inclusion period of three months, including a small rate of dropouts.

2.3. Data collection

The women were asked to participate in the study by the admitting nurse. The women who consented to participation answered self-reported questionnaires before surgery in connection with their admission visit and placed all the questionnaires in a sealed envelope. Women reported their health on EQ-5D-5L which is a validated non-disease-specific questionnaire for assessing self-reported health status by a visual analogue scale from the worst (0) to the best (100) possible health today (EQ5D-5L VAS) (Herdman et al., 2011; Feng et al., 2021). The EQ-5D-5L also includes five specific dimensions of health: mobility, personal care, usual activities, pain/discomfort and anxiety/depression. Each dimension is answered from a rating of the person's discomfort on a 5- point scale from no problems to severe problems.

To assess abdominal pain, sexual function and body image specific items from EORTC QLQ CX-24 were used, Cronbach α ranged from 0.70 to 0.87 (Singer et al., 2010). The items used were 31 (abdominal pain), 45-47 (body image), 48 (sexual worry), 49 (sexual activity), 50-53 (sexual/vaginal functioning) and 54 (sexual enjoyment). Each item has alternatives rating the experience from not at all – very much. The General Anxiety Disorder Assessment (GAD-7) is a self-assessment questionnaire where women rated their perceived worry and anxiety using seven questions on a 0-3-point scale, with a total score of 21 and a Cronbach α of 0.92 (Spitzer et al., 2006; Esser et al., 2018). Two open-ended questions; “Describe what concerns distress you the most right now” and “What is most important to you right now?” were included to reflect the women's state of mind before undergoing surgery. Specifically, the question “What is most important to you right now?” is highlighted as being particularly important in Swedish cancer care and is used nationally in care plans to increase patient participation and promote early initiation of cancer rehabilitation based on

person-centered care (RCC, 2023b). Data related to suspected cancer diagnosis at admission and verified benign or malignant diagnosis, as well as surgical intervention and length of inpatient care were collected via the medical record.

2.4. Data analysis

An analysis of the responses from the five health dimensions in the EQ-5D-5L as well as EQ-5D-5L VAS, sexual functioning, body image and anxiety was carried out by descriptive analysis on responses from all women. To further understand the impact on health, analyses were performed in groups divided by the different gynecological cancers. As data were not normally distributed, the Kruskal-Wallis test with a significance level set at $p < 0.05$ was used to compare health status across the groups. A cut-off value of <70 on the EQ-5D-5L VAS was used to identify women with low health status who may need additional support before or after surgery (Jakobsson et al., 2018; Sacanella et al., 2011). Suggested cut-offs for anxiety based on the GAD-7 were used, defining minimal anxiety (score 0-4), mild anxiety (5-9), moderate anxiety (10-14) and severe anxiety (15-21). Missing data in the questionnaires was negligible (1-5 responses per questionnaire). Statistical analyses were performed in SPSS software (Statistical Package for the Social Sciences), version 29.0. The two open-ended questions were analyzed separately according to Elo and Kyngäs (2008) inductive qualitative content analysis. All answers were considered as meaning units which were read through and then categorized by identifying similarities or differences. Open coding was performed, and tentative categories were discussed between two of the authors continuously (HB and SJ). Subcategories were abstracted, and main categories with subcategories were identified. Each main category that emerged has been named to create an overview of all the associated response data.

3. Results

3.1. Patient characteristics

A total of 206 women were screened for participation, and 155 women were included in the study (Fig. 1). All participants identified themselves as women, the median age was 62 (SD 15), the youngest woman included was 29 years old. Most of the participants were born in Sweden and the majority were cohabitating. The participants in the study represent all four groups of gynecological cancer, the most common diagnosis was endometrial cancer (Table 1). Most of the women (76%) underwent minimally invasive surgery. The range in length of stay on the ward was wide, with a minimum stay of a couple of hours,

Table 1
Patient characteristics included patients (n = 155).

	n (%)
Median age (SD, range), years	62 (15, 29–90)
Living arrangements	
Cohabitating	113 (73)
Living alone	42 (27)
Country of birth n (%)	
Sweden	128 (83)
Country within Europe	15 (10)
Country outside of Europe	11 (7)
Occupation n (%)	
Working/studying	67 (43)
Retired	72 (47)
Unemployment/sickness absence/parental leave	16 (10)
Education n (%)	
Elementary school	25 (17)
High school	57 (37)
University	71 (4)
Suspected diagnosis at admission	
Endometrial cancer	61 (39)
Ovarian cancer/borderline	39 (25)
Cervical-/vaginal cancer	29 (19)
Vulva cancer	22 (14)
Undefined gynecological cancer diagnosis	4 (3)

compared to one woman who was hospitalized for 44 days (Supplementary file 1). Several women (31%) received the post-surgical decision that they did not have cancer; their condition was benign. A total of 61 women (40%) needed additional oncological treatment such as chemotherapy and/or radiotherapy. A few women still needed further examinations after surgery to be able to decide on additional treatment according to national and international guidelines.

3.2. Distressing concerns and important aspects to consider before surgery

Prior to undergoing surgery, the women reported distressing concerns encompassing a range of physical symptoms. They additionally reported uncertainty and existential concerns, both due to the surgery and the recovery phase after surgery (Fig. 2). The women reported that undergoing surgery was important to them as it would provide an answer to the state of their condition, as well as more information about what to expect in the future and eventual additional treatment. Examples of distressing situations and important concerns reported in the open-ended questions are displayed in Table 2.

The most important aspect mentioned by many women was related to undergoing the upcoming surgical intervention, as the surgery would address their desire to get answers. Several women had undergone

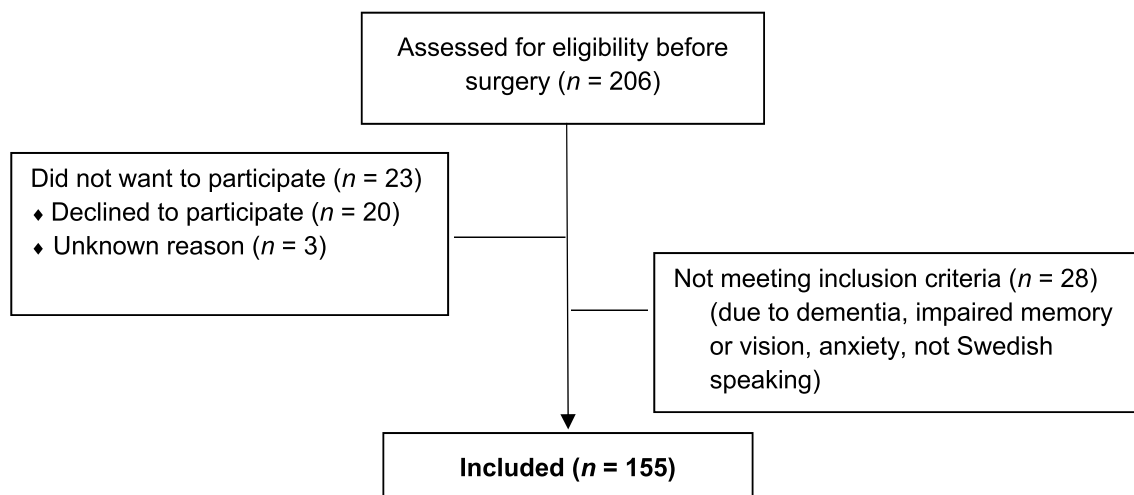

Fig. 1. The flowchart shows patient inclusion and exclusion in the study during 3 months of data collection.

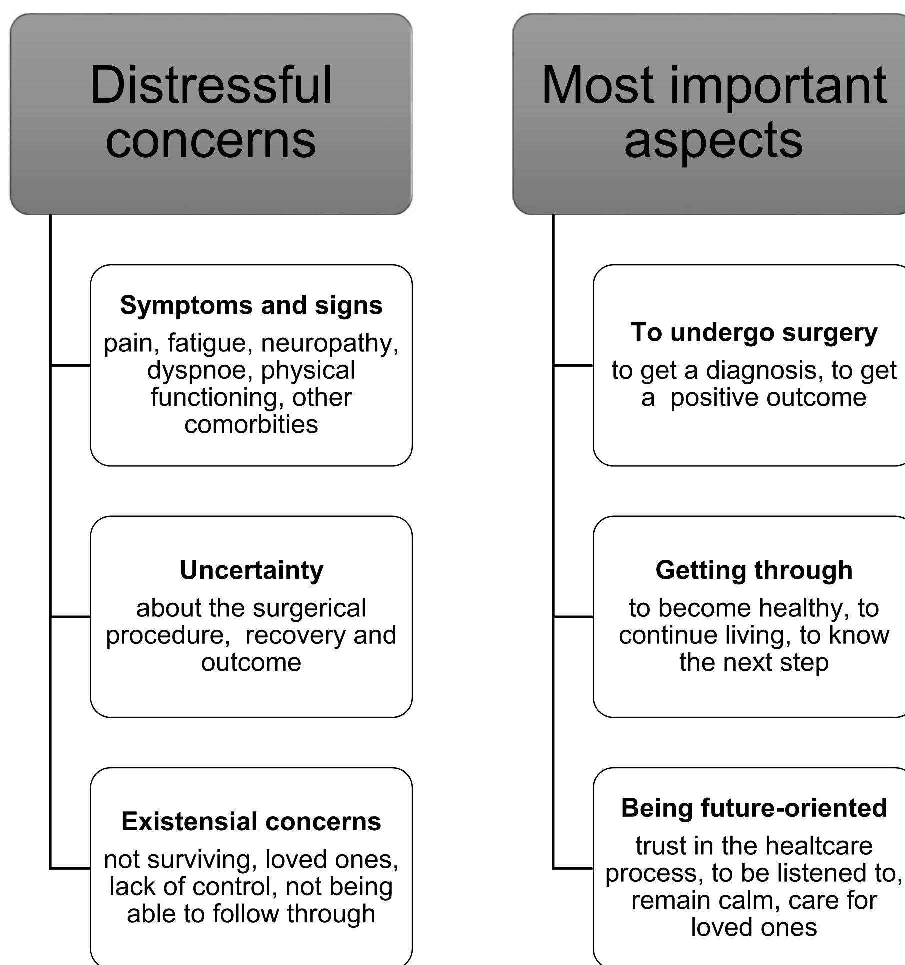

Fig. 2. Most distressful concerns (n = 142) and most important aspects (n = 141) at admission to an inpatient ward prior to surgical interventions for suspected or confirmed gynecological cancer.

various examinations prior to their actual admission, and the surgical procedure was the next step in their care pathway. They were motivated to undergo the surgery to find out the cause of their symptoms and to get answers as to whether they had cancer and what the next step after surgery might entail if the cancer diagnosis were confirmed. Other women reported a certain distance from what was coming closest in time by expressing worry about other things. Furthermore, the surgery was a way to get symptom alleviation (often pain relief), and hope was expressed that it would make them become healthier. Women reported different ways of getting through the situation of being admitted for surgery. They expressed that they were trying to accept their situation. Several women also did their best to remain calm to be able to get through. At the same time, women expressed future-oriented issues as important. For many, it was important to receive information about the upcoming surgery as well as the future procedures and thereby get a little more control over the situation. Numerous women pointed out that they wanted to make their voices heard and how important it was to be listened to, which allowed participation in their own care. It was important to feel cared for by the healthcare professionals and that there was mutual trust with time to talk. Worrying for loved ones was also commonly reported and the women expressed a need for support for them as well, the women also expressed a need to have their loved ones close. Many of the answers entailed a focus on getting healthy by the surgical intervention and thereby being cancer-free. The terminology “getting healthy” was found to be the most common answer to the question of what was most important. Women expressed a wish to survive and continue living. Many participants identified the surgery as a step they needed to get through in order to move on.

The most prominent aspect that was described as most bothersome by the women was uncertainty regarding their situation. Each woman reported an overall uncertainty which entailed different aspects. The uncertainty could encompass anxiety about the situation and having to undergo surgery. Furthermore, some women expressed worry about the eventual dissemination of the cancer and what the upcoming procedures would be based on the outcome of the surgery. Moreover, they worried about what would come after the surgery in the form of bodily responses and the ability to heal and recover.

Based on the open-ended questions, distressing symptoms mentioned included symptoms that could be directly related to the pelvic area. The most common physical symptom mentioned was pain. For some, pain was not only related to gynecological cancer but correlated to other medical conditions, such as pain in the shoulders and hips. Many participants reported distress due to fatigue. In addition to the previously mentioned symptoms, the descriptions included symptoms such as loss of appetite, swelling, peripheral neuropathies, and symptoms from the gastrointestinal tract. Many participants mentioned a feeling of not recognizing or not being able to trust their body and reported concerns about how the body would be affected by the planned procedure and the future consequences caused by surgical effects on hormone production and fertility. In several cases, other medical conditions bothered the participant in parallel with the current symptoms related to their upcoming surgery. Among the descriptions of distressing concerns many women reported having several existential concerns. They were troubled by concerns about not surviving, about dying due to their

Table 2
Examples of quotations from open-ended questions about the most distressful concerns and most important aspects reported by women before surgery for gynaecological cancer.

Category	Quotation	Respondent
Symptoms and signs	A sore (an ulcerous tumour) in my genital area makes sitting difficult, I have difficulty getting in and out of the car and pain when going to the toilet.	86
	Bleeding from my genital area.	45
	Pain in my genital area when going to the toilet	71
	Need a bit too much extra rest to feel at my best.	138
	Nausea, lack of appetite, swollen stomach.	100
	Problem with big tummy.	119
	Tingling in the feet and to some extent in the fingers.	94
	Sluggish digestion.	81
	Vestibulitis – pain in the genital area, making sitting and lying down difficult.	148
	Pain in my right hip for about a year. Pain-free for the previous 2 weeks.	138
	Feeling unable to trust my body and thereby" who I am".	109
	Worry about sexual life after healing.	7
	The feeling of being bloated, looking pregnant.	83
	Dejected, sad and anxious.	122
Uncertainty	My cancer process is extremely hard and challenging. I have not been informed about everything that has been done during this process.	122
	Uncertainty about how surgery will affect my "femininity" and how hormones will be affected by surgery.	109
	Not knowing what it is.	44
	Anxious about surgery.	15
	Worrying about the results of surgery, if everything can be removed, if I will need chemotherapy.	42
	Worrying that my cancer has spread.	55
	Worrying about the operation and of course the outcome.	113
	Worrying about my ovaries being removed while still young (infertility + menopause)	83
Existential concerns	Worry that I will die. Want to live longer with my daughter (17 years), my husband and others who are important to me.	52
	Being in a situation of great uncertainty with difficulty planning once again, which makes it more complicated o utilise my time in the best way possible in order to live and do what I want.	109
	Worrying how it will affect my daughter (born −13) if it proves to be cancer. Worrying about not living or being very ill during my daughter's upbringing.	149
	Worry, thoughts before the upcoming operation and about life afterwards.	43
	Concerns about what will happen after the op. – do I have cancer? – what will happen then?	52
	Grief at having my womb removed.	90
To undergo surgery	Having the surgery over and done with.	71
	Getting rid of the malignancy.	114
	Getting rid of the tumour and the pain.	135
	Getting to know, as soon as possible, whether or not it is cancer.	149
	The examination showing that I am healthy.	106
	The surgery being over and that everything has been removed.	47
	That my body responds well to the upcoming treatments.	137
Getting through	Trying to accept the fact that you cannot do all those things that you used to do when you were younger and healthier.	29
	Trusting that all will go well.	115
	Having trust in the process.	124
	Trying to think positively.	59
	Information makes me feel safe.	112
	Gaining a feeling of safety by knowing what is about to happen.	130
	Feeling that my anxiety is recognised. Receiving competent help.	17
	Being listened to. Being allowed to participate. My body – my life.	77
	That staff members provide time for questions and conversations. It creates a sense of security and time also becomes more meaningful if I can learn something.	109
	That my husband also receives support so that we can cope with the cancer together.	55
	Close family members are important.	111
Being future-oriented	That I will recover from my cancer.	122
	Getting rid of the cancer.	7
	Regaining health.	19
	Having my life back and feeling better.	24
	That I can go on living for a while yet.	52
	Being able to have a long life together with my family.	90
	I sometimes think that I might experience problems with distress and depression after surgery when my menopause starts.	132
	That my recovery will be smooth and that the test results are good so that I can continue living my life and tackle the next problem that arises.	63

gynecological cancer, about having to leave their loved ones, and about how the disease would affect them both now and in the future. There was also an overall concern about what the future might look like.

3.3. Self-reported health before surgery

Based on the EQ-5D-5L VAS the mean score of reported health status was 72 (SD20, range 10–100), with a median score of 75 (IQR 60-90). Women admitted for suspected or confirmed endometrial cancer reported highest health status, whereas those being treated for suspected ovarian cancer reported the lowest health status; however, there was a nonsignificant difference across the four different groups ($p = 0.101$). A total of 35% of all women reported low health status before surgery (<70 EQ-5D-5L VAS). Based on the suspected diagnosis at admission, a higher percentage of the women with other diagnosis than endometrial cancer reported low health status. For example, 43% of women with ovarian cancer reported low health status whereas it was 26% women with endometrial cancer (Table 3).

3.4. Distressing symptoms

Based on different health dimensions only a minority of women reported any difficulty with mobility, self-care and doing usual activities. Pain and discomfort were the highest-rated complaint in all women, and the severity of pain was more evident among women with ovarian, cervical and vulvar cancer. A total of 45% of the women with vulvar

Table 3
Self-reported health status (EQ-5D-5L VAS) prior to surgical intervention, presented by groups of suspected gynecological cancer diagnoses at admission.

Suspected gynecological cancer diagnosis	Median [range]	Low health status* (%)
Endometrial cancer (n = 61)	86 [20–100]	26
Ovarian cancer/borderline (n = 39)	68 [30–100]	43
Cervical-/vaginal cancer (n = 29)	71 [10–100]	38
Vulvar cancer (n = 22)	65 [10–95]	41

Based on EQ-5D-5L self-rated health on a vertical visual analogue scale (0 = the worst health you can imagine, 100 = the best health you can imagine). * Low health status=<70 EQ-5D-5L VAS. Kruskal- Wallis Test showed no significant difference across the groups.

cancer reported moderate to extreme pain at admission (Table 4). Moderate to intense abdominal pain and cramps were reported by 10% of all women. Pain during intercourse was present in 50% of those women who had had intercourse within the past four weeks (n = 38) (Fig. 3). Based on the GAD-7 assessment of anxiety from most of the women (65%), reported minimal to mild anxiety (<10), while 35% reported moderate to severe anxiety (≥10). GAD-7 scores revealed the lowest median scores for women with a suspected or confirmed diagnosis of ovarian cancer/borderline (Table 5). Approximately 2/3 of all women reported that they had not been sexually active during the past 4 weeks (Fig. 3). Fifty percent of the remaining 33% that had been sexually active reported experiences of vaginal dryness; fewer women reported a tight or short vagina. Of all women 25% reported feeling quite a bit or highly unattractive, and 21% experienced quite a bit or high dissatisfaction with their bodies.

Table 4
Severity of problems before surgery based on health dimensions in EQ-5D-5L, showed across groups of suspected gynecological cancer diagnosis at admission.

	Endometrial cancer (n = 61)	Ovarian cancer/ borderline (n = 39)	Cervical-/ Vaginal cancer (n = 29)	Vulvar cancer (n = 22)
Mobility				
1 = no problems walking about	50 (83)	28 (72)	22 (76)	12 (54)
2 = slight problems walking about	5 (8)	7 (18)	5 (17)	9 (41)
3 = moderate problems walking about	4 (7)	4 (10)	1 (3)	-
4 = severe problems walking about	-	-	1 (3)	1 (4.5)
5 = unable to walk about	1 (2)	-	-	-
Pain/discomfort				
1 = no pain or discomfort	32 (52)	10 (26)	12 (41)	7 32)
2 = slight pain or discomfort	20 (33)	13 (33)	6 (21)	5 (23)
3 = moderate pain or discomfort	6 (10)	15 (38)	10 (34)	6 (27)
4 = severe pain or discomfort	2 (3)	1 (3)	1 (3)	3 (14)
5 = extreme pain or discomfort	1 (2)	-	-	1 (4.5)
Self-care (dressing or washing myself)				
1 = no problems	59 (96)	35 (90)	26 (90)	20 (91)
2 = slight problems	1 (2)	3 (8)	2 (7)	-
3 = moderate problems	1 (2)	1 (3)	-	-
4 = severe problems	-	-	1 (3)	1 (4)
5 = unable to dress or wash myself	-	-	1 (3)	1 (4)
Usual Activities				
1 = no problems doing usual activities	51 (84)	22 (56)	21 (72)	11 (50)
2 = slight problems doing usual activities	7 (11)	13 (33)	5 (17)	9 (41)
3 = moderate problems doing usual activities	2 (3)	4 (10)	1 (3.5)	1 (4.5)
4 = severe problems doing usual activities	1 (2)	-	1 (3.5)	1 (4.5)
5 = not able to do my usual activities	-	-	1 (3.5)	-
Anxiety/depression				
1 = not anxious or depressed	15 (26)	9 (24)	10 (36)	7 (33)
2 = slightly anxious or depressed	29 (51)	23 (60)	9 (32)	9 (43)
3 = moderately anxious or depressed	13 (23)	4 (10)	4 (14)	3 (14)
4 = severely anxious or depressed	-	1 (3)	2 (7)	2 (9)
5 = extremely anxious or depressed	-	1 (3)	3 (11)	-

4. Discussion

The most important aspect for the women prior to surgery related to the upcoming surgical procedure itself. Many women focused on strategies to stick to the “here and now" and getting through this specific step in their cancer trajectory. At the same time, the women experienced a prevailing uncertainty surrounding concerns of an existential, emotional and social nature. Several of the participating women reported an affected health status, and the most prominent symptom was pain.

The experience of health is subjective; the reported severity of symptoms of the disease does not always reflect the person's perceived ill health. A substantial proportion of the women, depending on the type of gynecological cancer, reported low health status (<70 on EQ-5D-5L VAS). This finding emphasizes the value of identifying the specific nature of low health status through the patient's narrative (Feldthusen et al., 2022). Through engagement with the person's narrative, insights can be gained into what affects health for each person (Ekman et al., 2011; Britten et al., 2017). The diversity of women's most distressing concerns revealed in our findings underscores the importance of attentive listening, to create time and space for integrating the numerous dimensions of health and thereby meet needs before they remain unmet (Siao et al., 2024).

As several other studies have shown, the women in this study reported negative self-image and affected sexuality, which implies the importance of paying attention to these aspects (Sekse et al., 2019; Cleary and Hegarty, 2011; Rizzuto et al., 2021). For many women, initiating dialogue about sexuality early in the patient's care pathway following a suspected cancer diagnosis can be beneficial. Doing so may facilitate future discussions, enabling patients to raise concerns about their sexual health when they feel ready (Cathcart-Rake et al., 2020; Sheppard et al., 2024).

The result shows that pain is a prominent symptom in all different gynecological cancer types but is most prominent for women with ovarian, cervical and vulvar cancer. Regarding pain, the prevalent reported symptom raises questions about why pain has not been alleviated earlier than before the time point of surgery. The Swedish national guideline for pelvic cancer rehabilitation (RCC, 2025), emphasize structured assessment of symptoms by using validated tools to be able to identify, chart and optimize symptom alleviation as soon as possible in the cancer trajectory. It is essential for nurses to recognize that these symptoms are both common and treatable and that the symptoms can be alleviated, if not fully cured. Symptom management involves both medical treatment as well as openness through dialogues containing basic counseling and suggestions for self-care to enable alleviated symptoms. European guidelines on recovery after surgery emphasize the need to address patient information and education prior to surgery (Fotopoulou et al., 2021). This might not only address the need for collaboration and support from various members of the healthcare team but also increase the likelihood of same-day discharge by mitigating risk factors such as pain, which could otherwise prolong the hospital stay (Fotopoulou et al., 2021; Nelson et al., 2023).

The design of the study, combining a quantitative component (validated standardized questionnaires) with a qualitative component (open-ended questions) within a mixed-methods design was a strength of this study as it provided a deeper understanding of women's focus and distress before planned surgery. The open-ended questions “What is most important to you right now?” and “Describe what concerns distress you the most right now” revealed several other prominent areas of

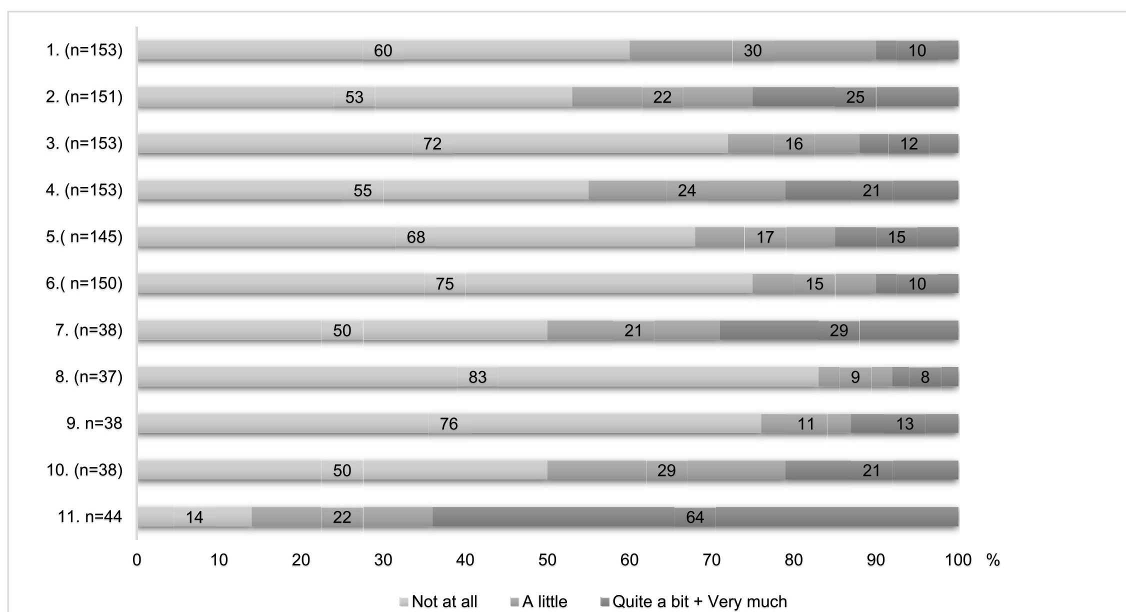

Fig. 3. Percentage of women who reported different severity of distress due to sexual and vaginal functioning and body image at admission before surgery for gynecological cancer, based on items from EORTC QLQ CX-24.
1. Have you had cramps in your abdomen? **2.** Have you felt physically less attractive as a result of your disease or treatment? **3.** Have you felt less feminine as a result of your disease or treatment? **4.** Have you felt dissatisfied with your body? During the past 4 weeks: **5.** Have you worried that sex would be painful? and **6.** Have you been sexually active? If you have been sexually active during the past 4 weeks: **7.** Has your vagina felt dry during sexual activity? **8.** Has your vagina felt short? **9.** Has your vagina felt tight? **10.** Have you had pain during sexual intercourse or other sexual activity? **11.** Was sexual activity enjoyable for you.?.

Table 5
Perceived worry and anxiety reported by all women prior to surgical intervention, presented by groups of suspected gynecological cancer diagnoses at admission (n = 149).

Gynecological cancer diagnosis[a]	Median [range]
Endometrial cancer (n = 56)	8[0–20]
Ovarian cancer/borderline (n = 39)	5[0–16]
Cervical-/vaginal cancer (n = 29)	8[0–19]
Vulvar cancer (n = 21)	7[0–21]

[a] Suspected or confirmed diagnosis. Based on GAD The General Anxiety Disorder Assessment with rating of perceived worry and anxiety from seven questions on a 0-3-point scale, sum score 21.

health beyond the objective signs of health which typically dominate the focus of healthcare professionals. Given that the study aimed to assess women's distress prior to surgical intervention, a heterogeneous group of patients was included. While this heterogeneity limits the generalizability to a wider population, the study identifies concerns and distress experienced by women regardless of suspected or confirmed cancer in the preoperative encounters with nurses. These findings provide implications for the focus of nursing care and the development of targeted nursing interventions. However, a larger population is needed to further investigate women's health before surgery. Future studies should comprise longitudinal follow-ups to evaluate changes in women's health over time, for example, by measuring both before the surgical procedure and after the period of care in order to implement the most appropriate nursing interventions in a timely manner. It is possible that the women who were excluded from the study due to the need for an interpreter could have provided insight into other cultural contexts, which was unfortunately not possible in this study.

5. Conclusion

This study highlights the essential role of a woman's personal narrative in uncovering distress and concerns prior to surgery and diagnosis. Engaging in dialogue enables person-centered care, offering tailored support during a time of uncertainty and contributing to the preservation of health and well-being. The presence of significant anxiety and pain among women indicates vulnerability before surgery, underscoring the need for early identification and intervention. As hospital stays decrease and survival rates for gynecological cancers continue to improve, healthcare professionals must take responsibility for ensuring good health for each person early on in the care process. These findings call for a holistic, narrative-based approach in preoperative care to address not only physical symptoms but also emotional and existential needs.

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Data statement

The raw data being recorded from interviews cannot be publicly available due to confidentiality and sensitive personal information from patients.

CRediT authorship contribution statement

Hanna Brännlund: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Software, Validation, Visualization, Writing – original draft, Writing – review & editing. **Pernilla Dahm Kähler:** Conceptualization, Data curation, Funding acquisition, Investigation, Methodology, Supervision, Validation, Writing – review & editing. **Sofie Jakobsson:** Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Software, Supervision, Validation, Visualization, Writing – review & editing.

Declaration of competing interest

All authors declare that no conflicts of interest regarding the work presented in this article exist.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.ejon.2026.103214.

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