European Journal of Cancer Care

WILEY

RESEARCH ARTICLE OPEN ACCESS

Suicide Ideation in Oncology: A Mixed-Methods Feasibility Study Exploring the Perspective of Affected Patients

Laura Pfannstiel[1,2] | Elisabeth Jentschke[2,3] | Saskia Ludwig[1] | Imad Maatouk[2,3] | Bianca Senf[1]

[1]Public Health, Protestant University of Applied Sciences Darmstadt, Darmstadt, Germany | [2]Chair of Integrated Psychosomatic Medicine and Psychotherapy, Department of Internal Medicine II, University Hospital Würzburg, Würzburg, Germany | [3]Comprehensive Cancer Center Mainfranken, University Hospital Würzburg, Würzburg, Germany

Correspondence: Laura Pfannstiel (pfannstiel_l@ukw.de)

Received: 10 March 2025 | **Revised:** 9 February 2026 | **Accepted:** 16 February 2026

Academic Editor: Weian Zhu

Keywords: communication | feasibility studies | oncology | oncology nursing | patients | psycho-oncology | suicidal ideation

ABSTRACT

Background/Aim: Cancer patients face a higher risk of suicide than the general population, yet suicidality in oncology remains underexplored. This feasibility study aimed to inform a larger mixed-methods project by testing quantitative assessment tools on suicidal ideation (SI) and related factors and piloting a qualitative interview guide. The study explored patients' experiences, sources of distress and SI, and interactions with healthcare professionals, while evaluating the practicality and acceptability of study procedures.

Methods: This convergent mixed-methods study combined validated questionnaires (e.g., Patient Health Questionnaire) with semistructured interviews analyzed using qualitative content analysis. Patients were recruited based on their level of distress, regardless of cancer type or stage. In order to evaluate feasibility, barriers, problems, and patient feedback were systematically documented.

Results: Ten patients completed questionnaires, and nine also participated in interviews. Questionnaires took an average of 20.5 min, interviews 32 min, indicating good feasibility and tolerance. Participants found discussing sensitive topics manageable and sometimes relieving. Minor assistance and flexible scheduling were occasionally required. Four patients reported thoughts of wanting to die on some days in the past 2 weeks, and seven interviewees described suicidality or life-weariness since diagnosis. The qualitative data suggest that the triggers of SI are highly individual and diverse. Patients also express a strong desire for open communication with healthcare professionals about mental health and challenging topics like suicidality or death.

Conclusion: The study provided valuable insights into the feasibility of assessing SI and related factors in cancer patients for a larger follow-up study. Participants were generally willing to engage in questionnaires and interviews and reported no increased distress from discussing these topics. Findings suggest that SI may be an important, under-recognized aspect of cancer care. Patients expressed a desire for open communication with healthcare professionals. Further research with larger, more representative samples is needed to expand these findings.

1 | Introduction

Patients diagnosed with cancer are nearly twice as likely to die by suicide compared to the general population [1]. Studies show that between 0.7% and 46.3% percent of cancer patients experience suicidal ideation (SI), depending on the population studied [2]. In studies conducted in Germany, prevalence rates of 14.2% [3], 15% [4], and 14.3% [5] were reported for SI. However, most studies that have investigated suicidality in cancer patients have used quantitative methods, assessing SI with only one questionnaire item, such as the suicidality item of the Patient Health Questionnaire (PHQ-9) or the Beck's Depression Inventory (BDI II) [2]. In everyday clinical practice, SI are usually not systematically recorded at all. Although cancer patients are at increased risk for suicide, their perspective has been underrepresented in research. The term suicidality includes: (a) weariness of life, that is, the desire to rest or take a break; (b) suicidal ideation, that is, the consideration of suicide as a possibility; (c) suicide planning and/or preparation, that is, the announcement, farewell, or procurement of methods; and (d) the suicidal act, that is, a deliberately planned or impulsively carried out suicide (attempt) [6]. Therefore, it does not seem sufficient to capture the entire spectrum of suicidality with a single questionnaire item [7]. Only a few studies have investigated the background of SI or wishes to hasten death in terminally ill cancer patients in palliative care with qualitative methods [8, 9]. While cancer patients at other stages of the disease have not yet been studied, evidence suggests that the risk of suicide is elevated across all stages compared with the general population [1]. In addition, healthcare professionals often feel overwhelmed or uncomfortable addressing SI [10], hence conversations about SI may be avoided and people who may be affected are at risk to be overlooked. Especially, qualitative methods are needed in addition to quantitative measures to explore the perspectives of affected patients in order to gain a more comprehensive picture of suicidality in the context of cancer. Consequently, there is a need for studies using a mixed-methods approach, combining quantitative and qualitative methods, to comprehensively assess SI in cancer patients across different disease stages and types. Because the assessment of SI in oncology is both complex and sensitive, a preliminary feasibility study was undertaken to optimize the assessment instruments and study procedures. Building on these findings, a subsequent main study is planned that will apply a mixed-methods design to explore the relationship between different psychosocial burden factors and SI in cancer patients across a variety of entities and disease stages in a larger population. One objective was to evaluate the feasibility of quantitative data collection using established screening instruments (e.g. Patient Health Questionnaire or Demoralization Scale). In addition, the study pretested a semistructured interview guide to ensure clarity, relevance, and acceptability. Another aim was to qualitatively explore patients' experiences of SI and to capture their needs and preferences in the context of treatment. The study included patients at various stages of cancer to examine differences in experiences across the disease trajectory.

2 | Methods

2.1 | Design and Participants

A convergent mixed-methods design, combining quantitative and qualitative data collected within the same study phase, was employed. Patients aged 18 years and older who were receiving outpatient or inpatient treatment at the University Hospital of Wuerzburg were recruited between December 2023 and February 2024. Participants were preselected according to known psychological stress either through short screenings that were completed during a routine appointment or based on referral from a treating physician or psycho-oncologist. This approach was chosen to ensure that the study included individuals with substantial burden, who were more likely to provide first-hand insights into reasons for SI, their experiences discussing these issues with healthcare providers, and the factors influencing such thoughts. In addition, this sample allowed for the practical testing of the semistructured interview guide, which was designed to address these core questions and to explore the underlying psychosocial and clinical contexts of SI. Patients at different stages of the disease were intentionally recruited to explore variations in their experiences and challenges throughout the disease trajectories. Tumor entity was not seen as selection criteria. Furthermore, patients with German as a native language or very good knowledge of German, cognitive, and physical ability to conduct the interview, and signed informed consent were included in the study.

2.2 | Measures and Procedure

The quantitative validated measurement instruments utilized were the Patient Health Questionnaire-9 (PHQ-9; 9 items, each item scored on a 4-point Likert scale [0–3]), the Generalized Anxiety Disorder Scale-7 (GAD-7, 7 items, each item scored on a 4-point Likert scale [0–3]), the Demoralization Scale-II (DS-II; 16 items, each item scored on a 3-point Likert scale [0–2]), the Cancer Patient Stress Questionnaire (FBK-10; 10 items, each item scored on a 6-point Likert Scale [0–5]), the Choice/Responsibility Scale from the Life-Attitude-Profile–revised (LAP-R; 8 items, each item scored on a 7-point Likert scale [1–7]), the Functional Assessment of Cancer Therapy–General (FACT-G; 27 items, each item scored on a 5-point Likert scale [0–4]; subscales for physical, social, emotional, and functional well-being; partly reverse-coded items), the Schedule of Attitudes Toward Hastened Death (SAHD; 20 items, each item scored on a dichotomous yes/no scale, total score calculated as the sum of "yes" responses; partly reverse-coded items), and the OPD Structure Questionnaire–Screening version (OPD-SQS; 12 items, each item scored on a 5-point Likert scale [0–4]; subscales for self-perception, relationship patterns, and social interaction) [11–17]. These instruments were chosen based on their relevance to the study objectives and their prior validation in oncology settings to capture a wide range of psychological stressors and attitudes related to SI. All instruments used were validated in German samples and demonstrated at least acceptable levels of validity and reliability (Cronbach's α ranging from 0.70 to 0.93) [11, 13–16, 18–20]. An overview of the questionnaires used can be found in the Supporting Information.

A semistructured interview script was designed based on clinical experiences and literature review. The following guiding questions were intended to be answered through the interviews:

1. Has the interviewed patient ever experienced SI since the cancer diagnosis?
2. Did healthcare professionals ask the patient about SI during treatment?

3. What reasons or causes did the patient cite for weariness of life or SI? (if applicable).
4. What are the expectations of the patient in relation to their interactions with healthcare professionals?

The interviews were audio-recorded and transcribed anonymously by a transcription service (Transkripto.de) in accordance with the transcription guidelines set by Dresing and Pehl [21].

After providing informed consent to participate in the study, patients completed self-report questionnaires on a tablet device. Following the completion of the questionnaires, face-to-face interviews were conducted by a trained interviewer at the patients' medical care facility, usually immediately afterward, meaning that quantitative data collection preceded the qualitative interviews. Before the interview, participants were briefly asked whether the questionnaires were understandable, whether any difficulties occurred, and whether completion was experienced as burdensome or tiring, and were invited to provide additional comments. If patients were too exhausted, the interview was conducted on the following day. The interviewer, who had no involvement in the patients' care or treatment, ensured an unbiased data collection process. Interview durations ranged from 14 to 47 min. Interviews were semistructured, starting with the Beck Scale for Suicide Ideation (BSS) to assess for acute suicidality. The BSS is a questionnaire designed to assess the severity of suicidal tendencies in adolescents and adults, which can be administered orally or as a self-assessment questionnaire [22]. Subsequently, the BSS was followed by open-ended questions regarding stressors experienced during the illness, the occurrence of SI, and the underlying reasons for such ideation. Additionally, participants were questioned regarding their desired course of treatment for psychological distress and SI. The interview was conducted in accordance with a predetermined interview guide, yet the interviewer was permitted to determine whether to pursue a topic in greater depth by posing follow-up questions. Upon completion of the interview, participants were assessed regarding their current emotional state to determine the necessity for further psycho-oncological assistance. In the preparatory phase of the study, an emergency plan was discussed, outlining the appropriate response of the interviewer in the event of the identification of acute suicidal tendencies during the course of the interview. Furthermore, feedback from both participants and study staff regarding their experiences with the study—such as perceived challenges, barriers, difficulties, and suggestions for improvement—was systematically documented to inform the feasibility assessment and guide future study planning.

2.3 | Feasibility Assessment

To evaluate the feasibility of the study, the completion times of the questionnaires and the duration of the interviews were systematically tracked and analyzed. In addition, qualitative feedback on the study was documented both from patients and from the study staff involved in data collection. Feedback from patients was recorded either when spontaneously expressed during the interviews or when provided at the end of the interview, and these remarks were later extracted from the interview transcripts. Moreover, the study staff noted brief written observations immediately after each interview, capturing any difficulties or relevant participant reactions. As no strict numerical feasibility thresholds were defined a priori, feasibility was primarily assessed based on participants' perceived burden, emotional strain, comprehensibility of the materials, and overall acceptability of the procedures. This approach is consistent with the exploratory nature of this pilot study. The quantitative indicators and qualitative feedback were subsequently reviewed and analyzed to identify potential barriers to participation, logistical challenges, and opportunities for improving the study procedures.

2.4 | Data Analysis

2.4.1 | Quantitative Analysis

Descriptive analyses of the sociodemographic questionnaire, PHQ-9, GAD-7, DS-II, FBK-10, LAP-R, FACT-G, SAHD, and OPD-SQS were performed using IBM SPSS Statistics, Version 29.0.0.0 (241). Due to the small sample size, no statistical tests were conducted. This aligns with the feasibility-oriented purpose of the study, in which the quantitative component served primarily to evaluate the practicality and acceptability of the selected instruments rather than to generate generalizable or statistically powered results. In feasibility research, small samples are appropriate for assessing recruitment processes, completion times, participant burden, and the overall workflow of data collection procedures [23].

2.4.2 | Qualitative Analysis

The interviews were analyzed using qualitative content analysis according to Mayring [24] using https://Qcamap.org [25]. The qualitative component followed a qualitative descriptive design and was conducted within a realist paradigm, assuming that participants' accounts reflect their lived experiences. Deductive categories were derived from previous research on suicidality in oncology (e.g., see, [8]), while additional inductive categories emerged from the material during the coding process. The interviews were systematically analyzed following the predefined guiding questions. In order to ensure methodological rigor, three of the nine interviews were first independently coded by two researchers (Saskia Ludwig and Laura Pfannstiel), after which the category system was discussed and refined. The same interviews were then recoded independently, followed by further discussion and adjustments. Subsequently, all interviews were analyzed with the revised coding frame, which was finalized in a consensus process within the research team (Saskia Ludwig, Imad Maatouk, Laura Pfannstiel, and Bianca Senf). A final round of coding was carried out using this definitive system. Intercoder reliability was not formally calculated; however, to ensure the quality of the analysis, coding ambiguities were thoroughly discussed by experienced researchers, and transcripts were recoded until full consensus on the category system was achieved.

2.4.3 | Mixed-Methods Integration

Within the convergent mixed-methods design, quantitative and qualitative analyses were conducted independently. Integration was performed during the interpretation phase in the discussion part, where findings from both strands were compared to identify areas of convergence, divergence, and complementary, particularly with respect to feasibility indicators and experiences of suicidal ideation.

2.5 | Ethics

All participants received written information about the study, including its objectives, procedures, and potential risks, in accordance with the Declaration of Helsinki. They were informed that participation was voluntary and that consent could be withdrawn at any time without consequences for their medical care. Patients were permitted to terminate their participation in the study at any point if they found the process distressing. The study procedures were explained verbally, and patients were given the opportunity to ask questions and discuss any concerns before deciding to participate. Written informed consent was obtained from all participants prior to any study-related procedures, including the completion of self-administered questionnaires and participation in a face-to-face interview. The consent form also covered the collection of sociodemographic and medical data from hospital records, as well as the audio recording of the interviews for transcription and analysis. After study participation, patients were asked if they required further psycho-oncological support. The study was approved by the Ethics Committee of the University of Wuerzburg (reference number: 32/23) on March 30, 2023.

3 | Results

3.1 | Sample

Ten patients were included in the study. All 10 patients provided answers to the questionnaires. One individual did not consent to the audio recording of the interview, resulting in the qualitative analysis of nine interviews. The sample characteristics are presented in Table 1. The type of cancer varied in the participant cohort, including one case of a tumor in the lumbar spine, one case of glioblastoma, one case of a tumor in the adrenal cortex, one case of prostate carcinoma, and six cases of malignant diseases of the hematopoietic system (e.g., multiple myeloma).

3.2 | Feasibility Outcomes

Participants completed the questionnaires in 7 to 36 min (rounded), with an average completion time of $M = 20.5$ min (SD = 8.61). Interviews lasted between 14 and 47 min (rounded), with an average duration of $M = 32.0$ min (SD = 11.12).

3.2.1 | Participant Feedback

Participants were asked after completing the questionnaires and the interview whether they had any comments regarding the study. One participant expressed skepticism about the questionnaires, suggesting that personal interviews yield richer insights and that questionnaire responses may be limited or unrepresentative of broader experiences. The participants generally considered the study to be important and valuable (e.g. male, 43: "If someone has suicidal thoughts, it is actually already too late. That means, in general, I believe that, also especially regarding your study, one (healthcare professionals) should be very alert and look very closely in the case of a cancer diagnosis, because depending on how much it personally burdens someone, and yes, how much people naturally think about it, it can be very, very distressing."). Patients indicated that they hoped participating in the study would help others and that discussing their experiences provided a sense of relief (e.g. female, 35: "Yes, but it is also a relief when you talk about it [suicidal ideation].").

3.2.2 | Research Staff Experiences

Patients generally responded openly to the invitation to participate. Participation was most feasible when assessments were scheduled immediately after a medical appointment or during free time in the inpatients' room. One patient declined the use of audio recording during the interview due to concerns that personal statements might unintentionally reach the treating physicians, despite the emphasis placed on anonymity. The time required to complete the self-report questionnaires varied considerably. Some patients completed them independently, while others required assistance from the study staff, particularly with operating the tablet. Interview duration also varied depending on patient communication style. Some patients were very open, shared information readily, and occasionally deviated from the original questions, which extended the interviews. Others were more reserved, requiring targeted follow-up questions to elicit responses. According to the study staff, the questionnaires and interviews were generally well tolerated. Flexibility in scheduling and attention to individual needs were frequently necessary during data collection.

3.3 | Quantitative Results

A sum score for the questionnaires was calculated for each participant. The more descriptive values of the questionnaire sum scores are presented in the Supporting Table A.

PHQ-9: Six of the 10 participants showed only minimal or mild depressive symptoms at the time of the study (Sum score < 9). Two participants showed moderate (sum score 10–14) and two participants showed severe depressive symptoms (sum score > 14) according to the PHQ-9. The question about SI on the PHQ-9 (item 9: "How often in the last 2 weeks have you felt affected by thoughts that you would rather be dead or want to harm yourself?") was answered "not at all" by six individuals, "on some days" by three individuals, and "more than half the days" by one individual. No one answered "almost every day".

GAD-7: Nine of the 10 participants exhibited minimal to mild anxiety symptoms (sum score < 9) according to the GAD-7. One individual displayed severe anxiety symptoms (> 14) according to the GAD-7.

DS-II: One person scored low (sum score < 4), three people scored moderate (sum score 4–10), and six people scored high (sum score > 10) on the Demoralization Scale.

FBK10: The authors use a threshold of 15 on the questionnaire as a cut-off for increased distress [11]. Six of the 10 people scored above this threshold.

SAHD: Breitbart et al. [26] used a cut-off > 10 to identify patients with a strong desire for hastened death. None of the participants in the study had a total SAHD score above 10.

BSS: The results of the BSS did not indicate an acute risk of suicide in any of the 9 interview participants. One of the participants reported multiple suicide attempts in the past (before the current illness).

TABLE 1 | Characteristics of study participants.

		Full cohort ($N = 10$)
Age (years)		M/SD 57.20 ± 13.771 Min/Max 35/77
	N	***N* (%)**
Female		5 (50)
Highest school-leaving qualification	10	
Basic school-leaving certificate		5 (50)
Tenth grade		1 (10)
Twelfth/thirteenth grade		1 (10)
Bachelor's, master's, doctorate		2 (20)
Occupational status (current or before cancer diagnosis)	10	
Full-time employed		5 (50)
At least half-time employed		2 (20)
Retired		3 (30)
Marital status	10	
Unmarried		1 (10)
Married		7 (70)
Divorced/separated		2 (20)
Currently in partnership		9 (90)
Children	10	
Having children		10 (100)
Minor children		4 (40)
Psycho-oncology treatment	10	
Never		1 (10)
Yes, currently		7 (70)
Yes, in the past		2 (20)

As no specific cut-offs have been established for FACT-G, OPD-SQS, and LAP-R, no further analyses were calculated.

3.4 | Qualitative Results

The objective of the interviews was to gain insight into the underlying causes of SI and to understand the patients' perspectives on the matter. To this end, four guiding questions were formulated and addressed through a qualitative content analysis of the nine interviews. A table with all codes, definitions, and example quotations can be found in the Supporting Information (see Supporting Table B).

3.4.1 | Has the Interviewed Patient Ever Experienced SI Since the Cancer Diagnosis?

The categories for the deductive research question were derived from the existing literature, as adapted by Wolfersdorf [6]. Of the nine individuals who were interviewed, three reported experiencing a weariness of life. Additionally, three individuals reported SI, with one person having specific thoughts about the method they would use to end their life. One person had attempted suicide during the course of their illness, and two individuals reported never experiencing SI or a sense of weariness during the course of their cancer.

3.4.2 | Did Healthcare Professionals Ask the Patient About SI During Treatment?

The questions about whether the interviewed patients were asked about SI during the course of treatment were analyzed using deductive category formation. Two individuals were assigned to the category "Absence of healthcare professional-initiated conversations", indicating that SI had not been addressed by healthcare professionals. Seven participants were assigned to the category "Unclear or non-salient communication about SI", as they reported no clear information or were unable to recall whether such conversations had taken place.

3.4.3 | What Reasons or Causes Did the Patient Cite for Weariness of Life or SI?

The research question was analyzed using inductive category formation. Four main categories were identified: emotional burden, therapy-related reasons, (threatened) loss of autonomy, and lack of information.

Emotional burden: The most commonly reported reasons for SI or feelings of life-weariness were the emotional burdens associated with cancer and its treatment. Patients cited feelings of loneliness, overwhelm, hopelessness, and despair, as well as

a sense of injustice and the emotional burden of knowing that the disease would ultimately lead to death.

Feelings of loneliness were reported, for example, during inpatient hospital therapy or due to isolation caused by increased risk of infection.

Some patients reported feelings of being overwhelmed and unable to cope with the situation, which led them to feel uncertain about how to proceed. This sense of being overwhelmed was triggered, for example, by the diagnosis or by burdensome treatments.

The individual who attempted suicide reported being desperate and acting with high emotionality and impulsivity. Another person described feelings of despair and hopelessness due to a belief in a limited lifespan.

Additionally, feelings of frustration at the perceived unfairness of the diagnosis or the course of the disease were identified as contributing to SI, leading to thoughts of giving up the fight and ending one's own life.

Another trigger for SI was the confrontation with death and the constant thoughts of dying (in the near future).

Therapy-related reasons: In this category, causes and reasons for SI were summarized that were related to the effects of therapy or reactions to therapy for cancer.

Failure of therapy was mentioned as a reason for weariness of life, combined with thoughts of how exhausting and restrictive further therapy will be.

Another therapy-related reason was the physical burden, physical discomfort, and performance limitations caused by the therapy.

In general, stressful and strenuous therapy was also identified as a potential trigger for SI, particularly in the context of stem cell transplantation, which is associated with significant risks, side effects, and restrictions.

(Threatened) loss of autonomy: Another category of reasons for SI was fear of an impending or actual loss of autonomy. A further distinction was made between two subcategories.

Some said they considered suicide because they did not want to be a burden on their families, for example, if they were dependent on care.

The other subcategory was not wanting to be dependent on help or not wanting to be dependent on others.

Lack of information: Another reason given for suicidal thoughts was a lack of information about the disease and its treatment, for example, because physicians did not provide enough information about the disease or because patients sought information on the internet. These false assumptions led to hopelessness and despair, which in turn led to SI.

In some cases, however, patients were unable to give a concrete reason for their weariness of life or thoughts of taking their own life.

3.4.4 | What Are the Expectations of the Patient in Relation to Their Interactions With Healthcare Professionals?

The last research question was analyzed using inductive category formation. Seven main categories were identified:

Calm and attentive communication: Some patients wished that the attending physician would express calmness and attentiveness during the consultation, so that they could be reassured in what is usually a very alarming and anxiety-provoking situation (e.g., reporting a finding).

Sensitive and empathetic communication: Patients also want sensitive and empathetic communication, not only from their physicians but also from nursing staff, for example, when communicating diagnoses, findings, or prognoses.

Transparency and openness about errors: Another wish with regard to communication is transparency and admitting mistakes.

Holistic view of the patient: There was also a desire to take a holistic view of the patient, looking not only at laboratory values but also at symptoms and how the patient feels.

Addressing mental health and difficult topics: Patients also expressed a desire to talk more about their mental health and to address perceived taboos such as death and suicide. The patients who were interviewed did not express any disapproval at being openly asked about SI. The question was subsequently rated as helpful. Talking about death and the risk of dying was also mentioned as a wish. This topic also reflects the desire for open and transparent communication.

Informing patients about support options: Patients received support as part of inpatient or outpatient care at the university hospital, but a lack of services for outpatient appointments or even during the diagnostic process was mentioned.

Informing about illness and treatment: They also wanted to receive clear information about the disease and its treatment. In addition, there should be as little time as possible between the examination and the consultation with the physician. These wishes fit in with the point made above that a lack of information or false assumptions can lead to SI.

4 | Discussion

4.1 | Feasibility Considerations

The main aim of the study was to test the feasibility of the study on a small sample in order to select questionnaires to assess various factors influencing SI in cancer patients and pretested a semistructured interview guide to ensure clarity, relevance, and acceptability for a more extensive survey in a follow-up study. The average time required to complete the questionnaires was 20.5 min, which is consistent with previous research suggesting that 10–20 min is generally feasible for physically ill patients [27]. Although this duration seems acceptable, individual differences in completion time and the occasional need for assistance indicate that participant burden should be considered when designing self-report questionnaires. Overall, these findings support the feasibility of using the selected questionnaires in this patient population, provided that flexible scheduling and assistance during completion are available. Interview duration also varied considerably, with an average duration of 32 min. Some patients were very open, shared information readily, and occasionally deviated from the original questions, which extended the interviews. Others were more reserved, requiring targeted follow-up questions to elicit responses. It is therefore important

for the interviewer to adapt to the individual patient: talkative patients needed gentle guidance to keep the conversation focused, while more reserved patients required targeted prompts. These observations suggest that the interview guide should be revised to include sufficient follow-up questions, and interviewers should receive training in conversational guidance.

Patients generally reported that study participation was not burdensome; in some cases, discussing personal distress and SI was even described as relieving. However, it cannot be ruled out that some participants may have experienced discomfort that was not reported. Also, it remains unclear whether completing the questionnaires alone, without the accompanying personal interview, would have elicited distress, as questionnaire completion was always embedded within a supportive conversational setting. Therefore, it cannot be excluded that the questionnaires by themselves might trigger distressing feelings or thoughts in some participants. In the present study, participants did not indicate that specific (suicide-related) items were experienced as particularly distressing. However, engaging with questionnaire items addressing the personal impact of cancer, psychological well-being, functional limitations, or future-related concerns may nevertheless be emotionally demanding for some individuals, especially if such aspects are otherwise avoided in everyday life. In the present study, however, participants did not report increased burden when the questionnaires were combined with a face-to-face interview, suggesting that the overall study procedure—including both questionnaire assessment and personal conversation—was feasible and acceptable for this patient group. For the follow-up study, it will nevertheless be important to remain attentive to potential signs of participant distress and to actively check in on participants' well-being during data collection. Patients considered the study topic to be important, and their feedback suggested that the study procedures were feasible overall. Quantitative feasibility indicators (completion time of the questionnaires and duration of the interviews) were interpreted alongside qualitative feedback on perceived burden, openness during interviews, and participants' reactions to discussing SI. This integration helps to understand not only how long the procedures took, but also why certain variations occurred and how patients subjectively experienced the procedures. Overall, the convergence of quantitative and qualitative findings supports the feasibility of the study procedures. One participant declined audio recording of the interview, highlighting the importance of providing clear and detailed information in both the consent process and study information materials regarding data use and participants' rights, in order to reduce potential concerns.

4.2 | Quantitative Measurements

Another central aim of the present study was to assess the feasibility and suitability of various measurement instruments for the planned main study. Overall, patient inquiries about individual items were rare, suggesting a good comprehensibility and acceptability of the instruments. However, given the small and selective study sample, these observations should be interpreted with caution, as they do not allow firm conclusions regarding the instruments' performance in more heterogeneous samples. The study team discussed the necessity and utility of the questionnaires in relation to the planned investigation of psychosocial stressors and SI in the following study.

In the planned study, the focus will be on the relationships between psychosocial stressors and SI. The instruments used in the pilot study to assess depression (PHQ-9), anxiety (GAD-7), demoralization (DS-II), distress (FBK-10), and perceived loss of control (LAP-R) proved practicable and will therefore also be employed in the following study. In addition, the FACT-G, assessing health-related quality of life, and the OPD-SQS, assessing general structural limitations of personality, will be used as control variables regarding the factors contributing to SI. Furthermore, the main study will include assessment of childhood traumatic experiences using the Childhood Trauma Screener (CTS) [28].

The SAHD, originally developed for patients with advanced, incurable illness to assess attitudes toward hastened death, but not the psychological, social, or physical causes underlying these attitudes, was excluded from the main study. Its results were deemed difficult to interpret in relation to the study question. Instead, other measures of suicidality will be employed, namely the suicidality item from the Beck Depression Inventory (BDI) [29] and the Paykel Suicide Scale (PSS) [30]. The BSS proved to be of limited sensitivity for SI and life weariness in the present study but was useful for the standardized assessment of acute suicidality and will continue to serve this purpose in the main study.

4.3 | Interpretation of Suicidal Ideation Findings, Patient Experiences, and Support Needs

A second aim of the study was to report initial results on SI in a small oncology sample, and using interviews and qualitative content analysis to explore potential triggers and underlying reasons for such thoughts. In the quantitative assessment, four of the 10 participants reported having been affected by thoughts of being better off dead or harming themselves on at least some days in the past 2 weeks. During the interviews, seven out of the nine patients stated that they experienced SI or feelings of weariness during their illness, whereas none of the patients interviewed could recall being asked about SI by a healthcare professional. This is consistent with findings from a mixed-methods study conducted in Germany that examined practitioners' perspectives, in which 19 out of 20 interviewed healthcare professionals reported that they did not routinely ask patients about SI [31]. Taken together, these findings may indicate that the occurrence of SI and weariness of life is a relevant complication in the context of cancer, but is still underestimated and at times overlooked in routine clinical practice. The reasons or triggers for SI or life-weariness, as cited by the patients, varied between individuals. Reasons given included emotional burden, therapy-related reasons (threatened) loss of autonomy, and a lack of knowledge about the disease and treatment. In some cases, no clear cause or triggers for SI or weariness could be determined. In the present study, a variety of subjective triggers or reasons for SI were identified. Some of these reasons for SI are comparable to those previously described in studies with predominantly terminally ill cancer patients in palliative care [8, 9, 32, 33]. However, to the authors' knowledge, some factors, such as lack of or incorrect information about the disease and its treatability, have not yet been identified as triggers for SI. It is important to investigate the reasons and triggers for SI in order to be able to respond to them with appropriate interventions and support options. In the follow-up study, a main focus will be to better

understand the triggers and underlying causes of SI through qualitative interviews.

Another focus in the qualitative interviews was to determine what patients want from healthcare professionals to reduce the burden and improve the management of SI. Communication between clinicians and patients emerged as the most important aspect in the present study. Elements such as calmness during conversations, sensitivity, empathy, and transparency played an important role in the nature of this communication. In terms of content, patients expressed a desire for discussions about mental health and the ability to address difficult topics such as death or SI. However, healthcare professionals seem to struggle with addressing these issues. Granek et al. [34] interviewed oncologists about how they would recognize mental health distress in their patients. It was frequently reported that oncologists received little or no training in recognizing mental health distress. Similarly, in a study by Senf et al. [10], a large proportion of the health professionals surveyed expressed a desire for further training in dealing with suicidality in oncology. Patients' desire to discuss mental health and difficult topics such as death or SI on the one hand and healthcare professionals' lack of training in these areas on the other highlight the need for specific training.

Furthermore, patients expressed a desire for more information about both the illness and treatment, as well as additional support options. König et al. [35] conducted a study examining the wishes of patients with advanced lung cancer. Their findings align with those of the present study, indicating that patients desire clear and open communication about the illness and treatment, as well as an empathetic and respectful interaction between healthcare professionals and patients.

4.4 | Strengths and Limitations

This study was conducted as a feasibility pilot for a larger investigation into psychosocial factors and SI among cancer patients. A key strength is its mixed-methods design, which allowed simultaneous evaluation of the practicality and acceptability of study instruments while providing first qualitative insights into patients' experiences. Direct patient feedback on questionnaire clarity and emotional burden provided important guidance for adapting and refining the instruments for the planned follow-up study.

However, several limitations should be noted. The small and selective sample restricts generalizability. The participants were preselected based on prior indications of psychological distress, which increased the likelihood of recruiting individuals with SI but may have excluded patients with unrecognized or different types of distress. Although the study procedures and aims were discussed in detail with the responsible physicians to facilitate the recruitment of suitable participants, it cannot be fully ruled out that some patients were not approached due to concerns about excessive burden or acute suicidality. As none of the participating patients were acutely suicidal at the time of study participation, no conclusions can be drawn regarding how the study procedures might affect individuals with acute suicidality. Moreover, as participation was voluntary, self-selection bias cannot be ruled out. Because all participants were recruited from a single institution and within a specific cultural context, findings may not be fully transferable to other clinical settings or populations. Furthermore, self-report data and qualitative interviews are subject to recall and social desirability biases, especially when addressing sensitive issues such as suicidality.

5 | Conclusion

Valuable experience was gained in terms of checking the feasibility of the study for a larger and more representative follow-up study. Patients were mostly open and willing to take part in the study and supported it. The participants surveyed did not state that dealing with the topic of psychological stress and in particular SI contributed to increased distress. The usefulness of the questionnaires included was discussed in the study team after the study had been carried out and adapted for the follow-up. The results suggest that SI is a relevant complication of cancer and may be under-recognized in clinical practice. The interviews indicated that multiple, highly individual factors could contribute to the development of SI. At the same time, participants expressed a desire to discuss these issues openly with healthcare professionals. These findings may highlight the need to train oncology staff to recognize distressed patients and those experiencing SI, for example through routine screening, and to engage in open conversations about these difficult topics (mental health, death, and suicidality), while offering targeted support when needed. Further studies with more representative samples are needed to deepen these findings and to identify differences between tumor stages and entities.

Author Contributions

Laura Pfannstiel: design of the study questionnaire and interview guidelines, patient recruitment, data collection, statistical analyses, qualitative analysis, and writing and editing of the manuscript.

Elisabeth Jentschke: editing the final article.

Saskia Ludwig: design of the study questionnaire, qualitative analysis, and editing the final article.

Imad Maatouk: design of the study questionnaire and interview guidelines, supervision of data analysis and data interpretation, and editing the final article.

Bianca Senf: project development and initiation of the study, design of the study questionnaire and interview guidelines, supervision of data analysis and data interpretation, and editing the final article.

Acknowledgments

We would like to thank all participants for taking part in this study.

Statement on Artificial Intelligence Generated Content. The authors confirm that this submission adheres to Wiley's policy on the use of Artificial Intelligence Generated Content. Portions of the manuscript were developed with the assistance of *ChatGPT (OpenAI, GPT-5, 2025 version)*, which was used exclusively for language editing and improving readability. The authors reviewed and verified all AI-assisted content for accuracy and take full responsibility for the final manuscript. No AI tools were credited as authors or contributed independently to the intellectual content of this work.

Funding

This work was supported by the H.W.&J. Hector Foundation, Am Schloßberg 2, 69469 Weinheim, Germany; info@hector-stiftung.de [M2111].

Disclosure

All the authors approved the final article.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

References

1. M. Heinrich, L. Hofmann, H. Baurecht, et al., "Suicide Risk and Mortality Among Patients with Cancer," *Nature Medicine* 28, no. 4 (2022): 852–859, https://doi.org/10.1038/s41591-022-01745-y.

2. E. Kolva, L. Hoffecker, and E. Cox-Martin, "Suicidal Ideation in Patients with Cancer: a Systematic Review of Prevalence, Risk Factors, Intervention and Assessment," *Palliative & Supportive Care* 18, no. 2 (2020): 206–219, https://doi.org/10.1017/s1478951519000610.

3. C. Reimer, *Suizidalität Bei Krebspatienten Und Ihre Korrelate* (Universität Würzburg, 2015).

4. C. Sauer, M. Grapp, T. J. Bugaj, and I. Maatouk, "Suicidal Ideation in Patients with Cancer: Its Prevalence and Results of Structural Equation Modelling," *European Journal of Cancer Care* 31, no. 6 (2022): https://doi.org/10.1111/ecc.13650.

5. B. Senf, B. Bender, and J. Fettel, "Suicidal Ideation, Distress, and Related Factors in a Population of Cancer Patients Treated in a General Acute Hospital," *Supportive Care in Cancer* 30, no. 1 (2022): 487–496, https://doi.org/10.1007/s00520-021-06429-w.

6. M. Wolfersdorf and C. Franke, "Suizidalität-Suizid Und Suizidprävention," *Fortschritte der Neurologie-Psychiatrie* 74, no. 07 (2006): 400–419, https://doi.org/10.1055/s-2005-915640.

7. E. S. Zhou, J. C. Hu, P. W. Kantoff, and C. J. Recklitis, "Identifying Suicidal Symptoms in Prostate Cancer Survivors Using Brief self-report," *Journal of Cancer Survivorship* 9, no. 1 (2015): 59–67, https://doi.org/10.1007/s11764-014-0385-z.

8. K. Ohnsorge, H. Gudat, and C. Rehmann-Sutter, "What a Wish to Die Can Mean: Reasons, Meanings and Functions of Wishes to Die, Reported from 30 Qualitative Case Studies of Terminally Ill Cancer Patients in Palliative Care," *BMC Palliative Care* 13, no. 1 (2014): 1–14, https://doi.org/10.1186/1472-684x-13-38.

9. A. Rodríguez-Prat, A. Balaguer, A. Booth, and C. Monforte-Royo, "Understanding Patients' Experiences of the Wish to Hasten Death: an Updated and Expanded Systematic Review and meta-ethnography," *BMJ Open* 7, no. 9 (2017): e016659, https://doi.org/10.1136/bmjopen-2017-016659.

10. B. Senf, P. Maiwurm, and J. Fettel, "Exposure to Suicidality in Professionals Working with Oncology Patients: an Online Survey," *Psycho-Oncology* 29, no. 10 (2020): 1620–1629, https://doi.org/10.1002/pon.5479.

11. K. Book, B. Marten-Mittag, G. Henrich, et al., "Distress Screening in Oncology—Evaluation of the Questionnaire on Distress in Cancer Patients—Short Form (QSC-R10) in a German Sample," *Psycho-Oncology* 20, no. 3 (2011): 287–293, https://doi.org/10.1002/pon.1821.

12. B. Löwe, R. L. Spitzer, S. Zipfel, and W. Herzog, "PHQ-D. Gesundheitsfragebogen Für Patienten," *Zeitschrift für Medizinische Psychologie* 12, no. 2 (2002): 90–93.

13. S. Koranyi, A. Hinz, J. M. Hufeld, et al., "Psychometric Evaluation of the German Version of the Demoralization Scale-II and the Association Between Demoralization, Sociodemographic, Disease- and Treatment-Related Factors in Patients with Cancer," *Frontiers in Psychology* 12 (2021): 789–793, https://doi.org/10.3389/fpsyg.2021.789793.

14. A. Mehnert and U. Koch, "Psychometric Evaluation of the German Version of the Life Attitude Profile-Revised (LAP-R) in Prostate Cancer Patients," *Palliative & Supportive Care* 6, no. 2 (2008): 119–124, https://doi.org/10.1017/s1478951508000199.

15. J. C. Ehrenthal, U. Dinger, H. Schauenburg, L. Horsch, R. W. Dahlbender, and B. Gierk, "Entwicklung Einer Zwölf-Item-Version Des OPD-Strukturfragebogens (OPD-SFK)," *Zeitschrift für Psychosomatische Medizin und Psychotherapie* 61, no. 3 (2015): 262–274, https://doi.org/10.13109/zptm.2015.61.3.262.

16. M. Galushko, J. Strupp, J. Walisko-Waniek, et al., "Validation of the German Version of the Schedule of Attitudes Toward Hastened Death (SAHD–D) with Patients in Palliative Care," *Palliative & Supportive Care* 13, no. 3 (2015): 713–723, https://doi.org/10.1017/s1478951514000492.

17. A. Bonomi, D. Cella, E. Hahn, et al., "Multilingual Translation of the Functional Assessment of Cancer Therapy (FACT) Quality of Life Measurement System," *Quality of Life Research* 5, no. 3 (1996): 309–320, https://doi.org/10.1007/bf00433915.

18. B. Holzner, G. Kemmler, D. Cella, et al., "Normative Data for Functional Assessment of Cancer Therapy General Scale and Its Use for the Interpretation of Quality of Life Scores in Cancer Survivors," *Acta Oncologica* 43, no. 2 (2004): 153–160, https://doi.org/10.1080/02841860310023453.

19. A. Hinz, A. Mehnert, R.-D. Kocalevent, et al., "Assessment of Depression Severity with the PHQ-9 in Cancer Patients and in the General Population," *BMC Psychiatry* 16, no. 1 (2016): 22, https://doi.org/10.1186/s12888-016-0728-6.

20. A. Hinz, A. M. Klein, E. Brähler, et al., "Psychometric Evaluation of the Generalized Anxiety Disorder Screener GAD-7, Based on a Large German General Population Sample," *Journal of Affective Disorders* 210 (2017): 338–344, https://doi.org/10.1016/j.jad.2016.12.012.

21. T. Dresing and T. Pehl, *Praxisbuch Interview, Transkription & Analyse. Anleitungen Und Regelsysteme Für Qualitativ Forschende. 8. Auflage* (Eigenverlag. Online, 2018).

22. S. Kliem, A. Lohmann, T. Mößle, and E. Brähler, "German Beck Scale for Suicide Ideation (BSS): Psychometric Properties from a Representative Population Survey," *BMC Psychiatry* 17 (2017): 1–8, https://doi.org/10.1186/s12888-017-1559-9.

23. A. C. Leon, L. L. Davis, and H. C. Kraemer, "The Role and Interpretation of Pilot Studies in Clinical Research," *Journal of Psychiatric Research* 45, no. 5 (2011): 626–629, https://doi.org/10.1016/j.jpsychires.2010.10.008.

24. P. Mayring, *Qualitative Inhaltsanalyse-Grundladen Und Techniken* (Beltz Verlag, 2015).

25. T. Fenzl and P. Mayring, *Qcamap: Eine Interaktive Webapplikation Für Qualitative Inhaltsanalyse* (2017).

26. W. Breitbart, B. Rosenfeld, H. Pessin, et al., "Depression, Hopelessness, and Desire for Hastened Death in Terminally Ill Patients with Cancer," *JAMA* 284, no. 22 (2000): 2907–2911, https://doi.org/10.1001/jama.284.22.2907.

27. O. L. Aiyegbusi, J. Roydhouse, S. C. Rivera, et al., "Key Considerations to Reduce or Address Respondent Burden in patient-reported Outcome (PRO) Data Collection," *Nature Communications* 13, no. 1 (2022): 6026, https://doi.org/10.1038/s41467-022-33826-4.

28. H. J. Grabe, A. Schulz, C. O. Schmidt, et al., "Ein Screeninginstrument Für Missbrauch Und Vernachlässigung in Der Kindheit: Der Childhood Trauma Screener (CTS)," *Psychiatrische Praxis* 39, no. 03 (2012): 109–115, https://doi.org/10.1055/s-0031-1298984.

29. M. Hautzinger, F. Keller, and C. Kühner, "Beck depressions-inventar (BDI-II)," *Harcourt Test Services* (2006).

30. E. S. Paykel, J. K. Myers, J. J. Lindenthal, and J. Tanner, "Suicidal Feelings in the General Population: a Prevalence Study," *The British Journal of Psychiatry* 124, no. 582 (1974): 460–469, https://doi.org/10.1192/bjp.124.5.460.

31. T. Schwinn, J. Hirschmiller, J. Wiltink, et al., "Practitioners' Perspective: a mixed-methods Study on Dealing with Suicidality from the Perspective of Oncological Healthcare Professionals," *Journal of Cancer*

Research and Clinical Oncology 151, no. 2 (2025): 54, https://doi.org/10.1007/s00432-025-06106-z.

32. K. Ohnsorge, H. Gudat, and C. Rehmann-Sutter, "Intentions in Wishes to Die: Analysis and a typology–a Report of 30 Qualitative Case Studies of Terminally Ill Cancer Patients in Palliative Care," *Psycho-Oncology* 23, no. 9 (2014): 1021–1026, https://doi.org/10.1002/pon.3524.

33. R. Nissim, L. Gagliese, and G. Rodin, "The Desire for Hastened Death in Individuals with Advanced Cancer: a Longitudinal Qualitative Study," *Social Science & Medicine* 69, no. 2 (2009): 165–171, https://doi.org/10.1016/j.socscimed.2009.04.021.

34. L. Granek, O. Nakash, S. Ariad, S. Shapira, and M. Ben-David, "Oncologists' Identification of Mental Health Distress in Cancer Patients: Strategies and Barriers," *European Journal of Cancer Care* 27, no. 3 (2018): e12835, https://doi.org/10.1111/ecc.12835.

35. M. König, A. Siegle, L. Unsöld, et al., "Personal Values, Wishes, and Goals of Patients with Advanced Lung Cancer: a Qualitative Study," *European Journal of Cancer Care* 2024, no. 1 (2024): https://doi.org/10.1155/2024/9987322.

Supporting Information

Additional supporting information can be found online in the Supporting Information section. *(Supporting Information)*

Overview of questionnaires used in the study.

Semi-structured Interview Guideline.

Additional Quantitative results.

Results of the Qualitative Content Analysis: Coding System and Example Quotes.