



## Exploring Lived Experiences and Personal Meanings of Cancer-Related Fatigue Among Patients Undergoing Targeted Therapy for Advanced Solid Tumors

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### ABSTRACT

Cancer-related fatigue (CRF) is one of the most prevalent and distressing symptoms experienced by patients undergoing cancer treatment, significantly affecting physical, emotional, and social well-being. Despite advancements in targeted therapy as a modern oncology approach, there remains a critical research gap in understanding the subjective and lived meanings of fatigue specifically within the context of targeted therapy, as most prior studies have predominantly focused on biological mechanisms or pharmacological management. However, little is known about how patients interpret, experience, and manage CRF within the context of targeted therapy, leading to the central question: How do patients make sense of fatigue during treatment? Here, we adopt an interpretative phenomenological approach (IPA) to explore patients' lived experiences of CRF and uncover the underlying meanings associated with this phenomenon. Semi-structured, in-depth interviews were conducted with 12 cancer patients receiving targeted therapy, and data were analyzed through thematic interpretation using IPA techniques. Four central themes emerged: the overwhelming nature of fatigue, challenges in maintaining daily roles, coping strategies adopted to manage energy and emotions, and redefining quality of life through meaning-making processes. These findings reveal that fatigue is not merely a biological symptom but a multidimensional experience embedded within personal, emotional, and sociocultural contexts. The study offers a deeper understanding of how CRF reshapes patients' identities and daily lives, providing critical insights for designing patient-centered care models and supportive interventions. These findings also open opportunities for future research to explore cross-cultural perspectives and longitudinal changes in patients' narratives, ultimately advancing holistic oncology practices.



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### INTRODUCTION

Cancer remains one of the most significant global health challenges, affecting millions of individuals physically, psychologically, and socially. Advances in oncology have introduced targeted therapy as a transformative treatment modality, designed to improve clinical outcomes while minimizing systemic toxicity compared to conventional chemotherapy (Kaci & Daglioglu, 2024). Despite its therapeutic potential, targeted therapy often presents unanticipated side effects, among which cancer-related fatigue (CRF) emerges as one of the most prevalent and debilitating symptoms experienced by patients across treatment stages.

Cancer-related fatigue is widely recognized as a multidimensional phenomenon, encompassing physical, cognitive, emotional, and social dimensions that extend beyond mere physical exhaustion (Huang et al., 2021). Unlike ordinary tiredness, CRF persists despite adequate rest and profoundly disrupts patients' ability to perform daily activities, maintain relationships, and fulfill social roles. As patients undergo targeted therapy, this fatigue often intensifies, shaping their self-perception, autonomy, and quality of life.

Understanding CRF requires an exploration beyond biomedical parameters, as the phenomenon is deeply intertwined with subjective experience and contextual factors (Mukhlis, 2025a). Patients often describe fatigue not only as a physiological burden but also as a threat to their identity and social participation, influencing their roles within families, workplaces, and communities (Aurilio et al., 2025). This subjective complexity highlights the importance of situating the phenomenon within a broader sociocultural framework, where individual perceptions, coping strategies, and meaning-making processes are shaped by social norms and personal values.

Given this complexity, a phenomenological approach is essential to gain a deeper understanding of how patients interpret, experience, and respond to fatigue during targeted therapy. Quantitative studies have contributed valuable insights into the prevalence and clinical correlates of CRF, yet they often fail to capture the lived meanings embedded within patients' narratives (Khan et al., 2024). By focusing on subjective experiences, phenomenology offers an opportunity to illuminate the essence of fatigue as perceived by patients and provides insights into the social and personal implications of living with this condition.

Research focusing on patients' lived experiences during cancer treatment has increasingly become a critical area of inquiry, especially in understanding how targeted therapies influence not only physiological outcomes but also emotional, cognitive, and social well-being (Guan et al., 2025). Recent studies have acknowledged that the subjective experience of cancer-related fatigue (CRF) is complex and highly individualized, with significant variability in how patients perceive, manage, and make sense of this phenomenon (Deng et al., 2025). Despite this recognition, much of the existing literature has remained clinically oriented, prioritizing objective measures of treatment efficacy and biological markers over patients' personal narratives.

A major methodological challenge arises from the dominance of quantitative approaches in prior research. While quantitative studies provide valuable insights into the prevalence, severity, and predictors of CRF, they often fail to capture the deeply personal meanings embedded in patients' day-to-day experiences (Tan et al., 2025). As a result, essential dimensions of fatigue—such as its impact on self-identity, role functioning, and quality of life—remain underexplored (Mukhlis & Saidah, 2025). Patients' voices are frequently reduced to numerical scales and clinical endpoints, leaving the lived essence of fatigue inadequately understood.

Moreover, the few qualitative studies available tend to rely on surface-level thematic descriptions rather than engaging with the interpretive depth required to understand how patients construct meaning around their experiences (Brannon et al., 2022). These studies often lack methodological rigor in linking personal narratives to broader sociocultural contexts, limiting their ability to generate insights that are relevant for personalized care (Mukhlis & Abdullah, 2025). Consequently, the fragmented understanding produced by existing methodologies fails to inform clinical practice comprehensively, particularly in designing supportive interventions tailored to patients' subjective needs.

This underscores the necessity of phenomenological inquiry to explore the intricate interplay between treatment-related fatigue, personal meaning-making, and social participation (Mukhlis, Janwari, et al., 2023). By privileging patients' narratives and focusing on how they experience and interpret fatigue within their sociocultural realities, phenomenology offers a pathway to understanding the essence of the phenomenon beyond biomedical parameters (Lim et al., 2025). Such an approach aligns with the increasing demand for patient-centered care models in oncology, where acknowledging subjective experiences is essential for improving therapeutic outcomes and enhancing quality of life.

Although numerous studies have examined cancer-related fatigue (CRF) within the context of targeted therapy, most have relied on practical and clinical approaches that primarily focus on measurable biological parameters, treatment efficacy, and symptom management strategies (Harrison et al., 2022). These approaches have contributed valuable insights into understanding fatigue as a clinical symptom, yet they remain limited in capturing the subjective meanings and lived realities associated with patients' experiences. By reducing fatigue to quantifiable outcomes, such studies often overlook the personal, emotional, and social dimensions of living with this condition.

Despite advances in supportive care, the essence of fatigue during targeted therapy remains poorly understood (Guo et al., 2022). For example, current clinical guidelines primarily recommend practical management strategies such as energy conservation, medication adjustments, or psychosocial counseling. While these interventions may alleviate physical symptoms, they fail to address how patients interpret and internalize fatigue within their daily lives, identities, and social contexts (He et al., 2025). As a result, existing solutions provide only partial relief and lack a comprehensive understanding of how fatigue reshapes patients' sense of self and participation in everyday roles.

This highlights the need for an alternative approach that moves beyond symptom-based frameworks and instead focuses on exploring the lived experiences of patients (Zhai et al., 2025). A phenomenological methodology offers a unique pathway to uncovering the deeper meanings and personal interpretations of fatigue as experienced during targeted therapy (Mukhlis et al., 2024). By privileging participants' narratives, this approach allows researchers to understand how individuals construct, negotiate, and assign meaning to their fatigue, providing insights that cannot be captured through traditional quantitative or protocol-driven models (Liu et al., 2021). Such understanding is critical for informing patient-centered interventions, improving therapeutic relationships, and ultimately enhancing quality of life.

Recent studies have highlighted the significance of understanding patients' lived experiences during cancer treatment, particularly regarding cancer-related fatigue (CRF) in targeted therapy. While several investigations have examined fatigue as a clinical symptom, most have remained focused on biological measures and treatment outcomes, overlooking how patients personally interpret and cope with this phenomenon (Mukhlis, Maryam, et al., 2023). A few qualitative studies have attempted to address this gap but often provide only surface-level descriptions without exploring the deeper meanings underlying patient narratives (Zhang et al., 2025). This limitation reinforces the need for a phenomenological perspective that considers fatigue not only as a clinical symptom but also as a subjective experience embedded within social and personal contexts. Such an approach allows for a richer understanding of how fatigue affects patients' identities, relationships, and quality of life.

This article adopts an interpretative phenomenological approach (IPA) to explore how patients experience and assign meaning to fatigue during targeted therapy (Wu et al., 2025). This approach was chosen because it focuses on how individuals perceive and interpret significant events in their lives, making it well-suited to answer the questions raised in the Knowledge Gap section. By privileging patients' narratives, IPA provides insights into the multidimensional nature of fatigue and reveals how personal interpretations intersect with social and emotional realities (Bartunek et al., 2020). The findings are expected to illuminate new perspectives on how patients construct meaning around fatigue and how these insights can inform patient-centered interventions. In doing so, the study responds directly to the need for a more holistic understanding of the phenomenon beyond biomedical frameworks.

The structure of this article is designed to guide readers through a comprehensive exploration of the phenomenon. The Introduction presents the broader context, highlights relevant literature, and establishes the research gap (MacLochlainn et al., 2025). The Method section details the interpretative phenomenological approach, participant selection, data collection procedures, and analytic strategies. The Results section presents findings organized into themes that capture the essence of participants' experiences (Mukhlis, Arifin, Ridwan, Zulbaidah, et al., 2025). The Discussion integrates these findings with existing literature, interprets their implications, and outlines contributions to both theory and practice. Finally, the Conclusion summarizes the study's significance, highlights its contributions, and suggests directions for future research.

## **RESEARCH METHODS**

### **Study Design**

This study employed an interpretative phenomenological approach (IPA) to explore the lived experiences of patients undergoing targeted therapy and their perceptions of cancer-related fatigue. Phenomenology was selected because it emphasizes understanding the subjective meaning of participants' experiences rather than measuring variables quantitatively (Yang et al., 2022). IPA, as a specific phenomenological framework, focuses on how individuals interpret and make sense of significant life events within their personal and social contexts. This approach was particularly suited to uncovering the complex, multidimensional nature of fatigue as perceived by patients, enabling an in-depth exploration of their thoughts, emotions, and coping strategies.

### **Participants**

Participants were selected using purposive sampling to ensure that only individuals who had direct, relevant experiences with the phenomenon under study were included. The inclusion criteria comprised:

1. Diagnosed with cancer and currently undergoing targeted therapy for at least three months.
2. Aged between 25 and 70 years.
3. Experiencing moderate to severe fatigue as reported during treatment follow-ups.
4. Able to communicate effectively and provide rich, reflective descriptions of personal experiences.

Exclusion criteria involved patients with significant cognitive impairments, severe psychiatric conditions, or concurrent medical complications unrelated to cancer treatment that might confound fatigue-related experiences.

A total of 12 participants were included in the study: 7 females and 5 males, with a mean age of 48.5 years (SD = 8.2). Participants represented diverse social and occupational backgrounds, adding richness to the exploration of varied perspectives on fatigue and quality of life.

### **Data Collection**

Data were collected using semi-structured, in-depth interviews guided by an interview protocol developed from prior literature and pilot-tested for clarity and relevance. Interviews were conducted face-to-face in a private consultation room within the oncology unit to ensure a comfortable and confidential environment.

Each session lasted between 45 and 75 minutes, depending on the participant's comfort and willingness to elaborate on personal experiences. Open-ended questions encouraged participants to describe their perceptions, feelings, and meaning-making processes related to fatigue during targeted therapy.

All interviews were audio-recorded with participants' consent and subsequently transcribed verbatim for analysis. Field notes were taken to capture non-verbal cues, contextual observations, and emotional expressions. To maintain trust and rapport, participants were assured that there were no right or wrong answers and were encouraged to express their thoughts freely.

### **Data Analysis**

Data were analyzed using the Interpretative Phenomenological Analysis (IPA) framework as outlined by Smith, Flowers, and Larkin (2009). The process followed a series of systematic steps:

1. Familiarization: Interview transcripts were read repeatedly to gain a holistic understanding of participants' narratives.
2. Initial Coding: Meaning units were identified and annotated to capture significant statements relevant to the phenomenon.
3. Theme Development: Codes were clustered into emergent themes based on conceptual similarities.

4. Cross-Case Analysis: Themes were compared across participants to identify convergences, divergences, and shared patterns of meaning.
5. Synthesis of Essential Findings: Final themes were refined to represent the essence of participants' experiences without imposing external assumptions.

NVivo 14 software was used to support data management and thematic organization, but interpretation relied on the iterative, reflective process central to IPA.

### Ethical Considerations

Ethical approval was obtained from the Institutional Review Board (IRB) of the hosting institution (Approval No.: IRB/ONC/2025/041). All participants provided written informed consent before participation, and their rights to autonomy, privacy, and voluntary withdrawal were fully respected throughout the study. To ensure confidentiality, personal identifiers were removed from transcripts, and pseudonyms were assigned to participants.

The study complied with the principles of the Declaration of Helsinki (2013) and adhered to relevant national and institutional guidelines for research involving human subjects. Participants were informed that their contributions would remain anonymous and that findings would be used solely for academic and clinical purposes.

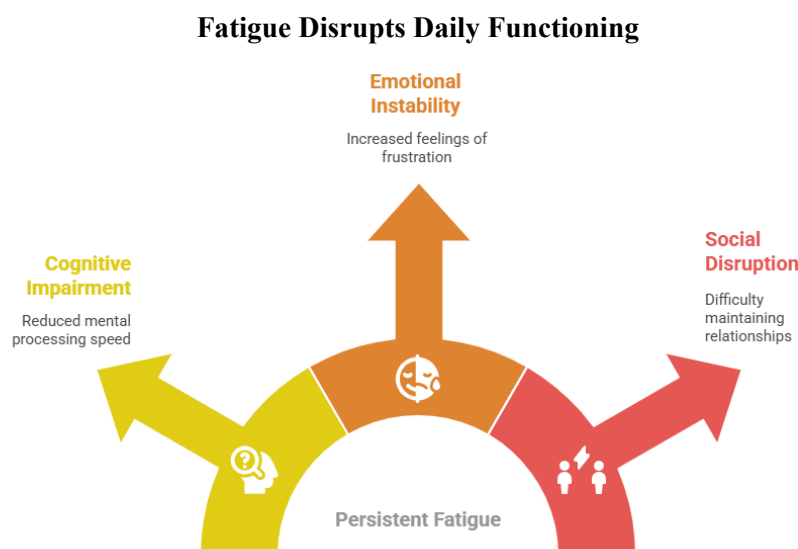
## RESULTS

### The Overwhelming Nature of Fatigue

Participants consistently described fatigue as an uncontrollable and persistent burden that disrupted their daily functioning and emotional stability. The fatigue was perceived not merely as physical exhaustion but as a multidimensional phenomenon encompassing cognitive, emotional, and social dimensions.

“It feels like my body is no longer mine. Even after resting for hours, the tiredness remains. It’s not just being sleepy it’s like my strength has been stolen.” (Participant 3)

Several participants expressed frustration over their inability to perform routine tasks that were once effortless, leading to feelings of dependency and diminished self-worth. This theme reflects the pervasive impact of fatigue, shaping both participants' perceptions of self and their overall quality of life.



### **Struggling to Maintain Daily Roles and Responsibilities**

A central narrative among participants was the conflict between their desire to fulfill personal and social roles and the physical limitations imposed by fatigue. Many reported difficulties balancing treatment demands with familial, occupational, and social obligations.

“I used to work eight hours a day, cook dinner, and still have energy to play with my children. Now, even taking a shower feels like climbing a mountain.” (Participant 6)

For some, the inability to contribute actively to household and community roles triggered feelings of guilt and frustration, while others reported withdrawal from social interactions to conserve energy. These experiences demonstrate how targeted therapy-induced fatigue extends beyond personal discomfort, affecting relational dynamics and social identity.

### **Coping Mechanisms and Adaptive Strategies**

Despite the overwhelming challenges, participants developed personalized coping strategies to manage fatigue and sustain a sense of control over their lives. These strategies ranged from structured rest routines to mindfulness practices and seeking emotional support from family members.

“I started keeping a diary to track my energy levels. On my low-energy days, I plan everything around rest. It helps me accept my limitations and avoid pushing myself too hard.” (Participant 1)

Some participants highlighted the importance of spiritual practices and peer support groups, which provided emotional relief and helped them navigate uncertainty:

“Praying every morning gives me peace. When I talk to other patients, I feel understood. We share tips and remind each other that we’re not alone.” (Participant 5)

This theme underscores the resilience and adaptability of participants when confronted with treatment-related fatigue, highlighting the value of integrative and patient-centered interventions.

### **Redefining Quality of Life and Future Expectations**

For many participants, the experience of chronic fatigue prompted a re-evaluation of life priorities and future aspirations. While some expressed anxiety and uncertainty about their prognosis, others described developing a renewed sense of meaning through acceptance and lifestyle adjustments.

“I’ve stopped chasing big dreams for now. My focus is on enjoying simple things having dinner with my family, hearing my grandchildren laugh, waking up without pain.” (Participant 2)

Interestingly, a few participants reported a paradoxical sense of empowerment, recognizing that acknowledging their limitations allowed them to reclaim agency over their lives. This redefinition of well-being demonstrates the transformative potential of meaning-making in the face of prolonged illness.

### **Essential Synthesis**

Across all themes, participants’ narratives revealed that fatigue during targeted therapy is not merely a physical symptom but a deeply embodied and socially embedded experience. It affects personal identity, relational roles, emotional well-being, and perceptions of life quality. Importantly, participants demonstrated adaptive resilience through personalized coping strategies and meaning-making processes, emphasizing the need for integrative and patient-centered clinical approaches.

## **DISCUSSION**

### **Summary of Key Findings**

This study explored the lived experiences of patients undergoing targeted therapy and revealed that cancer-related fatigue (CRF) is a deeply multidimensional phenomenon that extends beyond its physical manifestation (Ono & Iwasaki, 2023). Through interpretative phenomenological analysis, the findings demonstrate how patients construct personal meaning around fatigue, reshaping

their self-identity, social roles, and overall quality of life, thus answering the central research question raised in the Introduction.

### **Contribution of Findings to the Research Question**

The findings provide a comprehensive understanding of how patients experience, interpret, and adapt to cancer-related fatigue during targeted therapy (Kate & Basu, 2024). Unlike traditional clinical perspectives that treat fatigue as a quantifiable symptom, this study emphasizes the subjective meaning of fatigue as narrated by participants. The results demonstrate that fatigue is experienced not simply as physical exhaustion but as a profound disruption of self-concept, affecting autonomy, social participation, and emotional well-being.

The study further highlights patients' adaptive strategies, such as personal energy management, emotional coping mechanisms, spiritual practices, and reliance on social support networks, which reveal their resilience in confronting treatment-related challenges. By illuminating these narratives, the study advances the understanding of fatigue as an integrated biopsychosocial experience rather than an isolated clinical symptom (Mukhlis, Arifin, Ridwan, & Zulbaidah, 2025). This unique contribution addresses the knowledge gap identified earlier by providing insights into how patients make sense of fatigue, thereby offering a foundation for designing patient-centered interventions and improving supportive care in oncology.

### **Relationship to Previous Literature and Theoretical Perspectives**

The findings resonate with and extend previous studies on cancer-related fatigue while offering new interpretive depth. Consistent with (Shen et al., 2025) and (Inal-Gultekin et al., 2022), this study affirms that CRF significantly impairs daily functioning and social engagement. However, unlike earlier research focused primarily on biological markers and clinical outcomes, the current study reveals the existential dimension of fatigue, demonstrating its influence on patients' perceptions of identity, purpose, and life meaning.

Furthermore, the results support the arguments of (Mo et al., 2025), who emphasized the need to explore subjective illness experiences within broader social and cultural contexts. However, this study goes beyond surface-level thematic descriptions by employing an interpretative phenomenological approach (IPA), allowing for a deeper exploration of meaning-making processes. For instance, patients' narratives in this study demonstrate how fatigue shapes their self-understanding and relationships, complementing theoretical perspectives on embodiment and illness narratives within phenomenological frameworks.

By integrating patients' voices within a phenomenological paradigm, this research enriches the current body of knowledge and provides a theoretically grounded explanation of how fatigue emerges as both a physical and existential challenge (Mukhlis, Suradi, et al., 2023). These findings therefore advance oncology research toward more holistic, patient-centered models of care, where treatment plans are informed by both clinical indicators and patients' lived realities.

### **Implications of the Findings**

The findings of this study hold significant scientific and practical implications for oncology care and patient support strategies. From a clinical perspective, the results highlight the necessity of adopting a patient-centered approach that integrates the subjective experiences of fatigue into treatment planning and supportive care interventions. Recognizing fatigue as a multidimensional phenomenon encompassing physical, emotional, cognitive, and social dimensions underscores the importance of tailoring therapeutic strategies to address patients' individual needs rather than relying solely on standardized clinical protocols.

From a broader sociocultural perspective, the findings reveal how targeted therapy-related fatigue influences patients' social roles, identity, and participation within their families and communities (Meena et al., 2025). This insight suggests that effective interventions should extend beyond symptom management to consider cultural norms, social expectations, and psychological

meaning-making processes. Additionally, the study's insights provide a foundation for developing holistic care models that integrate clinical management with counseling, peer-support programs, and spiritual care to enhance overall quality of life. By emphasizing the lived realities of patients, this research contributes to shaping oncology practices that respect human experiences while improving therapeutic outcomes.

### **Study Limitations**

Despite its contributions, this study has several limitations that warrant consideration. First, the sample size was relatively small and limited to 12 participants from a single oncology center, which may restrict the transferability of findings to broader patient populations. Second, the study relied on self-reported experiences, which, while essential to phenomenological inquiry, may introduce recall bias or subjective framing of events (Mukhlis, 2025b). Third, the cultural and institutional context in which the study was conducted may influence the way participants experience and describe fatigue, potentially limiting the applicability of results in different sociocultural settings.

Furthermore, the use of interpretative phenomenological analysis (IPA) inherently emphasizes depth over breadth, prioritizing rich, context-specific understanding rather than generalizable conclusions. These limitations should not be viewed as weaknesses but rather as natural consequences of the qualitative and interpretive nature of the research. Future studies can address these limitations by incorporating larger, more diverse samples and cross-cultural comparisons to enhance the robustness and transferability of findings.

### **Directions for Future Research**

Building on these findings, future research should explore cross-contextual experiences of cancer-related fatigue by examining how sociocultural, environmental, and institutional factors shape patients' meaning-making processes during targeted therapy. Investigating diverse populations across different cultural settings would allow researchers to better understand variations in how fatigue is perceived and managed, providing a comparative lens for oncology care strategies.

Additionally, longitudinal studies could examine how patients' narratives evolve over time, particularly as targeted therapies progress and treatment-related fatigue interacts with other psychosocial factors. Future research may also integrate mixed-methods designs to combine the subjective richness of phenomenological inquiry with quantitative measures, thereby enhancing the validity and applicability of findings in clinical settings. Ultimately, such efforts could contribute to the development of comprehensive, patient-centered care frameworks that align treatment goals with patients' lived experiences, promoting improved quality of life and more responsive oncology practices.

## **CONCLUSION**

This study explored the lived experiences of cancer patients undergoing targeted therapy, focusing on how they perceive, interpret, and manage cancer-related fatigue. The findings revealed that fatigue is a multidimensional phenomenon affecting not only physical functioning but also emotional well-being, self-identity, and social participation. By adopting an interpretative phenomenological approach (IPA), this research addressed gaps in previous studies that largely relied on clinical measures and overlooked the subjective meanings embedded in patients' narratives. Theoretically, this study advances the understanding of cancer-related fatigue by demonstrating that CRF within the context of targeted therapy is not solely a biomedical symptom but a complex existential experience that reshapes patients' sense of identity and meaning in life. This extends phenomenological inquiry in oncology by situating fatigue as both a lived and meaning-making process. Practically, the findings underline the urgency of designing patient-centered care models that move beyond pharmacological interventions to incorporate psychological counseling, social support systems, and culturally sensitive strategies. Specifically, oncology practitioners can utilize these insights to develop interventions that help patients sustain daily roles, manage emotional burdens, and reconstruct quality of life amid treatment. Future research should deepen this contribution by examining cross-cultural variations, conducting longitudinal studies to track evolving narratives, and

integrating qualitative findings with quantitative outcomes to enhance clinical decision-making and policy formulation in supportive cancer care.

### CONFLICT OF INTEREST

The authors declare no conflict of interest regarding the research, authorship, and publication of this article.

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