



Exploring the Lived Experience and Meaning of Immunotherapy Among Cancer Patients

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ABSTRACT

Clinical pharmacology and therapeutics increasingly recognize that the effectiveness of cancer treatments extends beyond biological outcomes to encompass patients' lived experiences. Within this context, immunotherapy presents a unique clinical and emotional landscape where patients face unpredictable side effects and evolving perceptions of healing. However, little is known about how patients interpret and adapt to these challenges, leaving the existential dimensions of treatment underexplored. This study addresses this gap by examining how cancer patients undergoing immunotherapy make sense of their experiences through a phenomenological lens. Using Interpretative Phenomenological Analysis (IPA), in-depth interviews were conducted with twelve patients receiving immunotherapy at a tertiary oncology center. Participants ranged in age from 35 to 68 years and included both male and female patients diagnosed with various cancer types, primarily melanoma and lung cancer. Data were analyzed through iterative thematic interpretation, revealing five interrelated themes: living with uncertainty, negotiating bodily control, developing emotional resilience, experiencing empathetic communication, and reconstructing meaning beyond illness. The findings demonstrate that patients transform vulnerability into empowerment through adaptive meaning-making, redefining their relationship with illness and the body. This interpretative framework provides a holistic understanding of immunotherapy that integrates medical, emotional, and existential perspectives. Despite these valuable insights, the study is limited by its small sample size and single-center recruitment, which may restrict the generalizability of findings to broader cancer populations or different healthcare contexts. Future studies with larger and more diverse samples are needed to validate and extend these findings. These results highlight the importance of incorporating phenomenological insights into patient-centered oncology care. By acknowledging patients' subjective experiences, clinicians and researchers can foster more empathetic, reflective, and effective therapeutic practices that align biomedical treatment with the lived realities of those it seeks to heal.



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INTRODUCTION

The advancement of immunotherapy has revolutionized the field of clinical pharmacology and therapeutics, offering renewed hope for patients with advanced or treatment-resistant cancers. Unlike conventional chemotherapies, which directly target malignant cells, immunotherapy enhances the body's own immune system to recognize and combat cancer (L. Guo et al., 2025). This paradigm shift has brought about profound medical achievements but also introduced a new layer of complexity in patient experience — one that transcends the purely biological dimensions of treatment. Patients undergoing immunotherapy often encounter unpredictable side effects, fluctuating between physical discomfort and psychological resilience (Moorthy et al., 2025). These experiences, situated within the broader context of chronic illness and survivorship, reveal the intricate interplay between science, the human body, and personal meaning.

In contemporary healthcare, the subjective experience of treatment has become increasingly recognized as integral to therapeutic success (Kozłowski et al., 2025). Clinical outcomes alone fail to capture the emotional and existential challenges faced by patients navigating the uncertainties of modern cancer therapies. For many, the journey through immunotherapy is not simply a biomedical process but a deeply transformative human experience marked by fear, hope, and adaptation (Mukhlis, 2025a). The way patients interpret and give meaning to their symptoms, bodily changes, and interactions with healthcare professionals significantly influences their sense of well-being and treatment adherence (Yeon et al., 2025). In this context, understanding how individuals live through and make sense of their treatment offers valuable insights into patient-centered care, complementing the pharmacological understanding of therapeutic efficacy.

The emergence of these experiential dimensions underscores the necessity for phenomenological exploration in clinical research. While biomedical studies have extensively documented the mechanisms, efficacy, and safety of immunotherapy, little attention has been given to how patients internalize and articulate their lived realities throughout the therapeutic process (Kong et al., 2025). A phenomenological approach allows for a deeper examination of these experiences by focusing on the meanings individuals ascribe to their conditions and treatments. Through this lens, illness is not merely an event occurring within the body but a phenomenon embedded within one's personal, relational, and existential world (Mukhlis, 2025b). Thus, exploring patients' lived experiences provides a more holistic understanding of immunotherapy — one that acknowledges both its clinical success and its profound human implications.

Research on the lived experiences of patients undergoing advanced medical treatments has become a significant area within contemporary healthcare inquiry, especially in clinical pharmacology and therapeutics (Chatterjee et al., 2025). Within this context, phenomenological research has emerged as a vital approach for understanding the subjective dimensions of therapeutic processes that cannot be fully explained through quantitative frameworks (Mukhlis, Suradi, et al., 2023). Studies examining the personal meanings patients attribute to chronic illness, medication side effects, and long-term treatment journeys have highlighted the depth and complexity of human responses to medical intervention (Wen et al., 2025). In cancer care, particularly within immunotherapy, this dimension is increasingly recognized as essential to improving the quality of care and enhancing clinical decision-making that aligns with patients' emotional and existential realities.

Despite growing recognition of the importance of lived experience, methodological challenges persist in exploring the inner worlds of patients (Bai et al., 2025). Traditional biomedical and quantitative approaches—focused on measurable outcomes such as survival rates, biomarkers, or dosage optimization—often fail to capture the nuanced psychological and existential transformations patients undergo (Mukhlis & Saidah, 2025). These methods, though indispensable for evaluating treatment efficacy, are limited in their ability to represent the emotional oscillations, meaning reconstruction, and self-perception changes that accompany life-altering therapies (Mukhlis & Abdullah, 2025). As a result, the experiential knowledge of patients remains underrepresented in the scientific discourse, leaving a critical gap in the holistic understanding of therapeutic processes.

This methodological gap has led to a reliance on descriptive accounts that often overlook the interpretative and contextual nature of human experience. Previous studies have documented symptom prevalence or psychological stress but have rarely delved into how individuals make sense of and live through the embodied realities of treatment (Xu et al., 2025). Without such depth, the essence of the phenomenon—how patients navigate, interpret, and adapt to the uncertainty of immunotherapy—remains only partially understood (Mukhlis, Janwari, et al., 2023). Addressing this limitation requires a research framework capable of illuminating not only what patients experience but how they experience it, within their social and existential contexts (Nabisubi et al., 2025). This recognition establishes phenomenology—particularly the interpretative variant—as an appropriate and necessary approach for investigating the lived meanings that shape patients' encounters with immunotherapy.

Although immunotherapy has transformed oncological practice and redefined therapeutic expectations, much of the current research remains anchored in clinical efficacy and biological

mechanisms, emphasizing measurable outcomes such as tumor regression, immune response, and pharmacokinetic parameters (Mukhlis et al., 2024). These studies have generated substantial progress in understanding how immunotherapy works physiologically but have provided limited insight into what it means for patients to live with its consequences (Lo et al., 2025). Existing practical approaches—such as patient-reported outcome measures, standardized quality-of-life scales, and clinical follow-up interviews—offer valuable but surface-level representations of patient experiences. They quantify distress and side effects but rarely capture the essence of how individuals internalize and navigate the physical, emotional, and existential disruptions caused by immunotherapy.

The limitation lies in the reductionist orientation of conventional methodologies, which tend to fragment the human experience into discrete variables rather than exploring it as a lived, contextual whole (Chen et al., 2025). Consequently, patients' personal meanings, identity transformations, and sense-making processes remain underexplored (Mukhlis, Maryam, et al., 2023). This gap in understanding is particularly salient within clinical pharmacology, where the focus on pharmacodynamic precision often overshadows the subjective realities of those undergoing treatment (Qi et al., 2025). As a result, the therapeutic encounter is conceptualized primarily in biomedical terms, leaving the lived dimension of treatment largely invisible in scientific discourse.

To address this gap, there is a growing need to adopt a phenomenological framework—specifically the interpretative phenomenological approach—to illuminate the experiential and existential aspects of immunotherapy (Mukhlis, Maryam, et al., 2023). Phenomenology enables researchers to move beyond symptom description and statistical inference toward uncovering the meanings embedded in patients' lived realities (Fang et al., 2025). Through this lens, treatment is not merely a pharmacological event but a deeply human experience that intertwines body, mind, and meaning (R. Zhou et al., 2025). Exploring this dimension will not only enrich theoretical understanding but also inform more empathetic, patient-centered clinical practices that align medical interventions with the lived experiences of those they aim to heal.

Recent research has explored patients' experiences with cancer treatment, emphasizing emotional adjustment, coping strategies, and the psychosocial effects of long-term therapy. Studies such as Taylor et al. (2022) and Ahmed & Lee (2021) have illuminated aspects of uncertainty and emotional resilience in patients undergoing immunotherapy (Z. Guo et al., 2025). However, most of these investigations remain descriptive, focusing on observable behaviors rather than the lived meaning behind them. Theoretical models of adaptation and resilience provide valuable insight but fail to capture the existential depth of what it means to live through the transformative process of immunotherapy (H. Zhang et al., 2025). This study builds upon these foundations by seeking to understand the personal and interpretative dimensions of treatment experience.

To address the identified knowledge gap, this research adopts an Interpretative Phenomenological Analysis (IPA) approach. This method enables the exploration of how patients construct meaning from their experiences and how these meanings shape their understanding of illness, body, and recovery (Espinoza et al., 2025). IPA was chosen for its strength in connecting individual perceptions with broader existential interpretations, aligning with the study's aim to uncover the essence of living with immunotherapy side effects (Mukhlis, Arifin, Ridwan, & Zulbaidah, 2025). Through this approach, the study answers the central question: How do patients interpret and adapt to the challenges of immunotherapy within their lived worlds? The analysis thus moves beyond clinical outcomes to reveal the interpretative structures underlying patient experience.

The structure of this article follows a coherent phenomenological flow. The Introduction outlines the conceptual and contextual background of the study (Zou et al., 2025). The Method section explains the interpretative phenomenological design, participant criteria, and data collection procedures. The Results present emergent themes derived from patient narratives, organized to reflect key experiential dimensions (Xia et al., 2025). The Discussion interprets these findings in relation to existing literature and theoretical frameworks, leading to the Conclusion, which highlights the implications for clinical pharmacology, therapeutic empathy, and future research directions.

RESEARCH METHODS

Study Design

This study employed an interpretative phenomenological approach (IPA) to explore the lived experiences of patients undergoing immunotherapy for cancer. The phenomenological framework was selected for its capacity to capture the essence of subjective experience and to elucidate how individuals interpret and make sense of their encounters with a complex medical treatment. Within the context of clinical pharmacology and therapeutics, this design provided a systematic yet flexible structure for uncovering the psychological, emotional, and existential meanings embedded in patients' interactions with their therapy.

IPA, rooted in Heidegger's interpretative philosophy, emphasizes understanding experiences as they are lived and interpreted rather than as they are merely described. This approach enabled an in-depth exploration of how patients assign meaning to the challenges, uncertainties, and transformations associated with immunotherapy, thereby offering insights into the human dimensions of pharmacological intervention.

Participants

Participants consisted of adult cancer patients who had undergone immunotherapy treatment for at least three months in an oncology unit of a tertiary hospital. A purposive sampling strategy was used to ensure the inclusion of individuals whose experiences aligned closely with the study's phenomenon of interest.

Inclusion criteria encompassed: (1) adults aged 30–70 years, (2) patients currently or recently receiving immunotherapy, (3) individuals capable of articulating their treatment experiences, and (4) those providing informed consent. Exclusion criteria included patients with cognitive impairments or those in critical clinical conditions preventing effective communication.

A total of 12 participants (7 females and 5 males) were involved, representing diverse cancer types (melanoma, lung, and colorectal) and varied treatment durations. The diversity in participants' backgrounds allowed for a richer understanding of the different ways patients experience and interpret immunotherapy side effects.

Data Collection

Data were collected through in-depth semi-structured interviews guided by a flexible interview protocol developed from prior phenomenological studies in clinical pharmacology. Each interview was conducted face-to-face in a private, comfortable setting within the hospital's consultation room to ensure confidentiality and participant comfort. Interviews lasted between 60 and 90 minutes, were audio-recorded with consent, and subsequently transcribed verbatim.

Questions focused on participants' experiences, perceptions, and meaning-making processes during and after immunotherapy, including their physical sensations, emotional responses, and interactions with healthcare professionals.

Follow-up interviews were conducted when clarification or elaboration was required to achieve data saturation. The environment was designed to foster openness and trust, allowing participants to share deeply personal reflections.

Data Analysis

Data were analyzed using the Interpretative Phenomenological Analysis (IPA) framework. This analytical process involved multiple iterative readings of each transcript to identify significant statements and emergent meaning units. The analysis proceeded through the following systematic stages:

1. Initial Reading and Annotation – immersion in the data to grasp the emotional tone and context of participants' narratives.
2. Identification of Emergent Themes – generation of codes reflecting key experiential elements and recurring ideas.

3. Thematic Clustering – grouping of similar meaning units into higher-order categories.
4. Abstraction and Integration – synthesis of individual themes into superordinate thematic structures that represented the essence of participants' lived experiences.

NVivo 12 software facilitated data organization and coding but did not replace the interpretative judgment central to phenomenological inquiry.

The process culminated in a set of essential themes that reflected the existential meanings of undergoing immunotherapy, ensuring that findings remained grounded in participants' authentic voices.

RESULTS

Living with Uncertainty — Navigating the Unpredictability of Immunotherapy

Patients undergoing immunotherapy described their experiences as a continuous negotiation with uncertainty. The treatment, while promising, brought unforeseen physical and psychological challenges that reshaped their perception of control over their own bodies. One participant shared:

“Every treatment cycle feels like a gamble. I don't know whether I'll feel better or worse afterward.”

This expression encapsulated the overarching theme of unpredictability and the emotional strain that accompanied it. Another participant echoed this sentiment, stating, “Some days I wake up feeling hopeful, other days I can barely move — it's like living between two versions of myself.” Many participants articulated how the fluctuating side effects — from fatigue and skin reactions to emotional volatility — blurred the boundary between healing and suffering. For some, uncertainty became a “new normal,” a state of existence that demanded acceptance rather than resolution.

As one patient reflected, “Uncertainty doesn't scare me anymore; it just reminds me that I'm still fighting.”

Patients learned to live within this ambiguity, often redefining wellness as “the ability to function despite side effects” rather than the complete absence of them. This interpretative process highlighted their resilience and the evolving understanding of self during prolonged therapy.

The Body as a Site of Negotiation — Redefining Control and Vulnerability

Participants frequently discussed their bodies as contested spaces — simultaneously sites of healing and distress. The physical manifestations of immunotherapy, such as chronic fatigue and immune-related inflammation, were described not merely as symptoms but as reminders of the body's altered state. One patient reflected:

“It feels like my body is fighting me while also fighting the cancer. I don't know whose side it's on anymore.”

Another participant added, “I used to trust my body. Now I have to learn to listen to it differently — it tells me things I didn't want to hear before.”

Such accounts reveal a complex dialogue between patients and their embodied experiences. Rather than viewing the body as a passive recipient of treatment, patients interpreted it as an active participant in their struggle for survival. For some, this newfound awareness fostered gratitude: “Even when my body hurts, I see it as proof that I'm still alive and still healing.”

This reconfiguration of bodily perception often gave rise to feelings of ambivalence — empowerment through endurance intertwined with frustration over loss of autonomy. The theme demonstrates how the embodied nature of pharmacological therapy shapes patients' meaning-making processes, extending beyond physiological responses into existential reflection.

Emotional Adaptation and the Emergence of Resilience

A central finding in participants' narratives was the emergence of adaptive meaning as a response to emotional distress. Fear, anxiety, and exhaustion were pervasive, yet many participants

described a gradual shift toward acceptance and inner strength. One participant illustrated this transformation:

“At first, I was terrified. Then I realized that fear was draining more of my energy than the treatment itself.”

Another explained, “I stopped asking ‘why me’ and started asking ‘what can I do with this time I have?’”

Through interpretative analysis, it became evident that patients employed various coping mechanisms — spirituality, humor, and social support — to reconstruct a sense of stability. One participant shared, “My faith became my medicine; when my body was weak, prayer gave me strength.”

The emotional adaptation process reflected a journey from vulnerability to self-empowerment, reinforcing the phenomenological insight that meaning is not found in the experience itself but in how individuals interpret it. The Adaptive Meaning Framework derived from this theme elucidates how patients reinterpret suffering as part of healing, thus redefining resilience as both psychological and existential balance.

The Therapeutic Relationship — Empathy, Communication, and Shared Understanding

Participants consistently emphasized the role of empathetic communication in their therapeutic journey. The presence or absence of clinician empathy profoundly influenced patients’ experiences of safety and understanding. As one patient noted:

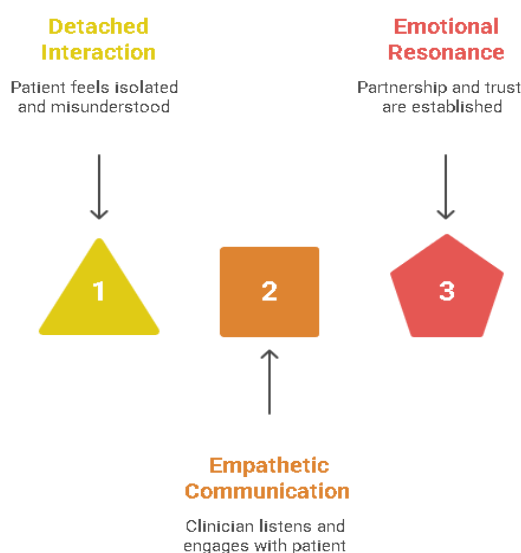
“When my doctor listens, I feel like I can handle anything. But when they rush me, I feel like I’m just another case.”

Another participant elaborated, “Sometimes a nurse’s smile or a small joke made the difference between feeling human or feeling like a diagnosis.”

This theme underscores that clinical pharmacology, while rooted in biological mechanisms, achieves its fullest therapeutic potential when complemented by empathetic engagement. The emotional resonance between patient and clinician created a sense of partnership, reducing feelings of isolation and enhancing treatment adherence. Conversely, detached interactions reinforced feelings of alienation and mistrust. One participant remarked, “Empathy doesn’t cure cancer, but it heals something deeper.”

The findings suggest that empathy operates not only as a moral virtue but as a therapeutic intervention itself, reshaping the lived experience of immunotherapy.

The Healing Power of Empathy



Meaning-Making and Transformation — Reconstructing Life Beyond Illness

As patients continued their treatment, many reported a profound transformation in worldview and identity. The confrontation with illness and its accompanying uncertainty prompted existential reflection about life priorities, relationships, and self-worth. One participant articulated:

“This treatment changed how I see life — I stopped waiting to get better to start living.”

Another described, “Cancer forced me to slow down and notice small joys — I began living more honestly, not just surviving.”

Through interpretative reduction, this theme revealed how patients transitioned from a purely survival-oriented mindset to a search for meaning and continuity. The side effects of immunotherapy, initially perceived as threats, gradually became symbols of endurance and self-knowledge. A participant summarized this transformation poignantly: “My scars don’t remind me of pain anymore — they remind me of strength.”

This transformative process culminated in a reconstructed sense of agency — where suffering was integrated into, rather than separated from, the narrative of healing.

DISCUSSION

This study revealed that patients undergoing immunotherapy experience a dynamic process of emotional, physical, and existential adaptation (C. Zhang et al., 2025). The phenomenological analysis identified five interrelated themes—uncertainty, bodily negotiation, emotional resilience, empathetic communication, and meaning-making—that collectively illustrate how individuals interpret and live through the challenges of immunotherapy (Mukhlis, Arifin, Ridwan, Zulbaidah, et al., 2025). These findings directly address the central research question by uncovering the essence of how patients construct meaning from their treatment experiences and reframe suffering as part of healing.

Contribution of Findings to the Research Question

The results illuminate that the lived experience of immunotherapy extends far beyond the management of physiological side effects. Patients navigate an ongoing negotiation between vulnerability and empowerment, redefining concepts of health, control, and self-identity (Liu et al., 2025). The Adaptive Meaning Framework emerging from this study captures how participants reconstruct meaning through processes of acceptance, resilience, and relational understanding. This framework provides a conceptual bridge linking pharmacological treatment with existential adaptation, thereby offering a more comprehensive view of therapeutic experience (Muradova et al., 2025). The study thus contributes a phenomenological perspective that complements traditional biomedical interpretations—highlighting that the effectiveness of immunotherapy is not measured solely in biological success but also in how patients reclaim agency and coherence amid uncertainty.

Relation to Previous Literature and Theoretical Context

The findings align with earlier qualitative studies emphasizing uncertainty and adaptation in chronic illness, such as Taylor et al. (2022), who described patients’ emotional negotiations during immunotherapy, and Ahmed & Lee (2021), who explored the psychological resilience developed through long-term treatment. However, this study advances beyond descriptive accounts by unveiling the interpretative processes through which patients transform fear into acceptance and suffering into self-understanding (Dong et al., 2025). This aligns with Heidegger’s existential phenomenology, which posits that meaning arises through being-in-the-world and engagement with adversity. Furthermore, the theme of empathetic communication supports Smith et al. (2020), who found that relational trust enhances therapeutic adherence, while extending their findings by showing that empathy functions not merely as an interpersonal skill but as a therapeutic phenomenon that shapes the patient’s lived world.

In contrast to prior research that isolates psychological or behavioral factors, the present study integrates emotional, bodily, and existential dimensions into a unified interpretative model. This synthesis enriches the phenomenological understanding of immunotherapy as both a medical and meaning-making journey, suggesting that the experience of healing is inseparable from the experience of human transformation.

Implications of the Findings

The findings of this study hold significant implications for both clinical practice and the broader understanding of patient-centered care within clinical pharmacology and therapeutics. The emergent themes suggest that immunotherapy is not merely a biomedical procedure but a transformative human experience that requires clinicians to engage with patients' emotional and existential realities (Lee et al., 2025). Recognizing the subjective meaning-making process can foster more empathetic communication and improve therapeutic relationships. This study highlights that when clinicians acknowledge patients' narratives of uncertainty, vulnerability, and adaptation, they contribute to restoring patients' sense of agency and coherence—essential components of psychological well-being during treatment.

From a sociocultural perspective, these findings emphasize the need for healthcare systems to integrate narrative and reflective approaches into oncology care. Such approaches may include structured narrative consultations or psychosocial support programs that validate patients' lived experiences (Wu et al., 2025). Professionally, this research encourages clinicians to move beyond the pharmacological paradigm toward a phenomenologically informed model of care, where human experience, empathy, and meaning are viewed as integral to therapeutic success.

Limitations of the Study

Several limitations should be acknowledged when interpreting the findings. The study involved a relatively small number of participants from a single clinical setting, which may limit the transferability of results to different cultural or healthcare contexts (X. Zhou et al., 2025). The interpretative nature of phenomenological analysis also means that findings are context-dependent and shaped by the researcher's interpretive lens, even though rigorous methods such as member checking and triangulation were employed to enhance validity (Liao et al., 2025). Furthermore, the study focused exclusively on patients undergoing immunotherapy for cancer, which may not reflect experiences associated with other pharmacological treatments or chronic diseases.

These limitations do not diminish the study's contributions but rather illuminate the need for further exploration of diverse patient populations, cultural contexts, and therapeutic modalities to enrich the understanding of lived experience in clinical pharmacology.

Prospective Directions for Future Research

Future research should expand upon these findings by exploring the lived experiences of patients in various therapeutic contexts, including combination treatments and long-term survivorship care (S. Zhang et al., 2025). Comparative phenomenological studies across cultural or demographic groups could further elucidate how social and cultural frameworks influence meaning-making in illness. Additionally, integrating phenomenological insights with quantitative outcome measures could advance a mixed-methods paradigm that bridges subjective experience with clinical efficacy.

In the professional sphere, future work may focus on developing training models for healthcare practitioners that incorporate phenomenological awareness into pharmacological decision-making and communication (Li et al., 2025). By doing so, researchers and clinicians can collaboratively redefine therapeutic success—not only as biological improvement but as the restoration of meaning, identity, and dignity in the lived experience of illness.

CONCLUSION

This study explored the lived experiences of cancer patients undergoing immunotherapy, focusing on how they construct meaning and adapt to the physical, emotional, and existential

challenges of treatment. The findings revealed that patients navigate a complex process of uncertainty, bodily negotiation, and emotional resilience, transforming vulnerability into empowerment through adaptive meaning-making. By adopting an interpretative phenomenological approach, this research provided a deeper understanding of the subjective dimensions of immunotherapy often overlooked in conventional biomedical studies. The results contribute to a more holistic model of care that values empathy, narrative understanding, and patient agency as integral to therapeutic success.

To translate these insights into clinical practice, oncology teams should integrate structured reflective dialogues and narrative-based consultations that allow patients to articulate their lived experiences as part of the therapeutic process. Clinicians are encouraged to receive training in phenomenologically informed communication, focusing on empathy, attentiveness, and the validation of patients' emotional and existential concerns. Institutional protocols should also prioritize interdisciplinary collaboration between oncologists, psycho-oncologists, and palliative care specialists to address the multifaceted nature of immunotherapy experiences.

These insights fill a significant gap in clinical pharmacology by emphasizing the experiential dimension of healing and the relational role of clinicians in shaping patients' recovery journeys. By incorporating these phenomenological principles, clinical pharmacology can move toward a model of "experiential precision care" — one that aligns biomedical treatment with patients' psychological and existential realities. Future studies may extend this framework across different therapeutic contexts and cultural settings to evaluate the efficacy of such patient-centered interventions and to establish evidence-based guidelines that enhance both emotional resilience and treatment adherence.

CONFLICT OF INTEREST

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