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The Strategic Role of the Clinical Pharmacist in Oncology: Medication Reconciliation, Active Pharmacovigilance, and Safety in the Handling of Antineoplastic Drugs

The Strategic Role of the Clinical Pharmacist in Oncology: Medication Reconciliation, Active Pharmacovigilance, and Safety in Antineoplastic Handling

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Summary

This scientific article examines the multifaceted role of the clinical pharmacist in the care of cancer patients, encompassing everything from technical safety in the handling of antineoplastic drugs to direct clinical interventions such as medication reconciliation and pharmacovigilance. The research is based on current regulatory standards, specifically ANVISA's RDC 220/2004, and on international guidelines from ASCO and NCCN to discuss the prevention of medication errors and the management of toxicities. The importance of integrating the pharmacist into the multidisciplinary team, as advocated by the concepts of Pharmaceutical Care by Hepler and Strand, for the optimization of pharmacotherapy is analyzed. The conclusion highlights the positive impact of these actions on survival, treatment adherence, and quality of life of cancer patients.
Keywords: Oncology. Clinical Pharmacy. Patient Safety. Antineoplastic Drug Handling. Pharmacovigilance. Medication Reconciliation.

Abstract

This scientific article examines the multifaceted role of the clinical pharmacist in oncology patient care, ranging from technical safety in antineoplastic handling to direct clinical interventions such as medication reconciliation and pharmacovigilance. The research is grounded in current regulatory standards, specifically ANVISA's RDC 220/2004, and international guidelines from ASCO and NCCN to discuss the prevention of medication errors and toxicity management. The importance of integrating the pharmacist into the multidisciplinary team, as advocated by Hepler and Strand's concepts of Pharmaceutical Care, is analyzed for pharmacotherapy optimization. The conclusion highlights the positive impact of these actions on survival, treatment adherence, and quality of life for oncology patients.
Keywords: Oncology. Clinical Pharmacy. Patient Safety. Antineoplastic Handling. Pharmacovigilance. Medication Reconciliation.

Introduction

Oncology represents one of the most complex and challenging frontiers of practice.

Contemporary pharmaceuticals demands a constant and delicate balance between aggressive efficacy.

of antineoplastic treatments and patient safety. According to Bonassa (2012), reference

A seminal area in cancer therapy in Brazil, the handling of cytotoxic agents requires rigorous...

The pharmacist is an absolute expert, given the narrow therapeutic margin of these drugs.

The context operates on two inseparable fronts: the technique, ensuring sterile and safe preparation in

Central Intravenous Mixing (CMI), and the clinic, monitoring the patient to maximize

Benefits and minimize harm. The concept of Pharmaceutical Care, consolidated by Hepler and Strand.

(1990) as the responsible provision of pharmacotherapy to achieve defined outcomes in

Quality of life finds its most critical field of application in oncology. The complexity of

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Modern protocols, coupled with the clinical fragility of patients, create high risks of adverse events.
adverse effects, as pointed out by the *Institute for Safe Medication Practices* (ISMP). In this scenario, the
Medication reconciliation and active pharmacovigilance form an indispensable safety net.
aligned with the World Health Organization's (WHO) global goals for patient safety.

1. Occupational safety and regulations in the handling of antineoplastic drugs.

The handling of antineoplastic drugs is a high-risk, regulated activity.
strictly in Brazil by ANVISA Resolution RDC No. 220 of 2004, which establishes the
Technical Regulations for the Operation of Antineoplastic Therapy Services (STA).
The pharmacist is legally and ethically responsible for ensuring that the infrastructure of the Central [of]
Intravenous Mixtures (IMC) meet international air quality standards, operating in
Class II B2 Biological Safety Cabinets (BSCs), which guarantee an aseptic environment (Class
ISO 5) and protect the handler and the environment. Studies by Soboll (2015) on risks
Occupational health experts emphasize that chronic exposure to cytotoxic aerosols can be...
mutagenic, teratogenic, and carcinogenic. Therefore, preventive maintenance of equipment and
Strict use of appropriate Personal Protective Equipment (PPE) is not just a matter of norms.
These are bureaucratic, but vital biosecurity measures that protect the health of the pharmacy staff.

Handling processes should be standardized through procedures.
Standard Operating Procedures (SOPs) validated and supervised by a pharmacist. The *American Society of*
The Health-System Pharmacists Association (ASHP) establishes rigorous guidelines (USP 800) for the handling of
Dangerous drugs, which must be handled with care to minimize contamination. The aseptic technique of
The manipulation must be validated periodically through simulations with culture media *(Media).*
(Fill Test), ensuring the technical competence of the operators. Any microbiological deviation
The detected problem requires an immediate production stoppage, retraining, and process review, because...
Administering a contaminated product to neutropenic and immunosuppressed patients may
triggering fatal sepsis episodes, irreversibly compromising the patient's prognosis.
Oncological.

The physicochemical stability of antineoplastic mixtures is a field of knowledge.
critical pharmacist. Trissel (2021), author of the world reference guide on injectable stability,
highlights the extreme sensitivity of drugs such as taxanes and monoclonal antibodies to factors
environmental factors. The pharmacist must develop and update stability tables that take into account these factors.
correct diluents and compatibility with container materials (e.g., incompatibility of
Paclitaxel with PVC bags due to leaching of plasticizers). Strict supply chain control
Maintaining a cold temperature (2°C to 8°C) during storage and internal transport is vital, as reinforced by the RDC (Brazilian Regulatory Standard).
430/2020. Ensure that pharmacological potency is fully maintained until the time of

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Infusion is a direct responsibility of the pharmacist, impacting the effectiveness of the treatment.

The management of hazardous chemical waste generated during handling follows the guidelines of the RDC (Brazilian Regulatory Standard).
ANVISA Resolution 222/2018. Improper disposal of cytotoxic waste poses a serious environmental risk.
Soil and groundwater contamination. The implementation of *Spill Kits* and
Ongoing training for the cleaning and transport team on how to proceed in case of accidents is essential.
Essential safety measures. A safety culture must permeate the entire chain, from the...
From the arrival of the vial to the final incineration of the waste. Traceability in handling,
Secured by computerized systems and precise labeling with barcodes, it allows linking
each bag prepared for the patient, the medication batch, and the handler, facilitating the
Investigation of deviations and technovigilance. Double gravimetric checking is an additional barrier.
to counteract errors in the dosage recommended by the ISMP.

The occupational health of the pharmacy team should be continuously monitored, as
It advocates the Regulatory Standard NR-32 and the guidelines of NIOSH *(National Institute for Health and Safety).*
Occupational Safety and Health). The pharmacist manager must promote a safe work environment.
safe, ensuring job rotation to minimize individual exposure time and the
Periodic biological monitoring. Protecting caregivers is a fundamental ethical principle in
oncology, allowing professionals to pursue their vocation of saving lives without putting their own lives at risk.
The company's own health is at risk. Strict compliance with RDC 220/2004 is, therefore, the legal and sanitary guarantee.
and ethics of oncology services.

2. Prescription assessment and prevention of medication errors

The pharmaceutical evaluation of oncology prescriptions constitutes the main barrier to
safety before the medication reaches the patient. According to the *American Society of*
Clinical Oncology (ASCO, 2019), a pharmacist's review of the chemotherapy order.
Qualified safety is considered the gold standard in oncology. This process involves...
thorough verification of the protocol's suitability to the stage of the disease, checking the calculations of
Body surface area (BSA) and validation of prescribed doses. Dosage errors in low-dose drugs.
The therapeutic index can have lethal consequences or cause irreversible toxicities. The pharmacist
It acts as a real-time clinical auditor, intercepting calculation, typing, or selection errors.
Administering medications before they cause harm, ensuring the safety of the therapeutic process.

A thorough analysis of laboratory tests is an integral and mandatory part of the validation of...
Prescription. Hematological parameters (such as absolute neutrophil and platelet counts), renal parameters.
(Creatinine clearance) and liver (transaminases and bilirubin) levels determine the safety of
Cycle management. The *National Comprehensive Cancer Network* (NCCN) provides guidelines.
Specific dosage adjustments are necessary in cases of organ dysfunction. The pharmacist should discuss these.

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promptly discuss with the oncologist the need for dose reduction or postponement of treatment. Identify critical laboratory abnormalities. This proactive intervention prevents hospitalizations due to severe toxicity, demonstrating the clinical and economic importance of pharmaceutical review.

Drug interactions in oncology are frequent and dangerous, given that... Patients often use polypharmacy to control symptoms and comorbidities.

The pharmaceutical company uses specialized databases, such as the Online Package Insert Platform, to screen the... Prescription. Pharmacokinetic interactions involving the induction or inhibition of enzymes in Cytochrome P450 can dramatically alter the effectiveness or toxicity of chemotherapy.

A pharmacist identifies critical risks, such as the interaction between Tamoxifen and antidepressants. CYP2D6 inhibitors, which may negate the effectiveness of breast cancer treatment. The guidance Information regarding food-drug interactions, especially for oral antineoplastic agents, is crucial for safety. of home treatment.

Error prevention also involves standardizing procedures and using prescriptions. electronics. Bates et al. (1998) demonstrated in classic studies that computerized systems They significantly reduce medication errors. The pharmacist actively participates in... Building protocols within the system, incorporating safety barriers such as maximum dose alerts. accumulated and blockages due to incorrect administration routes (e.g., fatal alert for vincristine). (intrathecal). Double-checking by a pharmacist before dispensing a prescription is a recommended practice. ISMP Brazil works to ensure that no error goes unnoticed by both human and technological scrutiny.

The readability and completeness of the prescription are fundamental aspects verified by Pharmacists must reject prescriptions with ambiguous abbreviations, erasures, or missing information.

Essential details such as infusion time and diluent are crucial. Clear and prompt communication with the medical team is vital. To resolve doubts without delaying treatment. The pharmacist acts as a guardian of the quality of clinical information, ensuring that therapeutic instruction is unambiguous. The Code of Ethics

Pharmaceutical company supports the professional's autonomy to intervene in prescriptions that place [the patient at risk]. The patient is at risk. Each documented intervention generates quality indicators that prove the... added value of clinical pharmacy services.

In conclusion, prescription evaluation is the moment where pharmaceutical knowledge translates directly into safety. It is the critical point for intercepting systemic and individual errors. The clinical pharmacist's role validates the proposed therapy, ensuring that the patient receives the Right *drug,* right dose , by the correct route, and at the right time. appropriate, complying with the global precepts of safe medication advocated by the WHO.

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3. Medication reconciliation: continuity of care and safety

Medication reconciliation in oncology is recognized by the World Health Organization. Health (WHO) and the *Joint Commission International* (JCI) have recognized this as an international safety goal. of the patient. The WHO's *High 5s* project highlights reconciliation as a key strategy for To prevent medication errors at points of transition in care (admission, transfer, and discharge). Cancer patients, often elderly and with multiple comorbidities, are extremely vulnerable to medication discrepancies. The clinical pharmacist performs the Detailed pharmaceutical history to compile an accurate list of medications in use *(Best Possible) Medication History),* including herbal remedies and supplements, which are often omitted by patients, but they have a high potential for interaction.

Identifying unintentional discrepancies, such as omissions, duplications, or dosages. Incorrect answers are the central objective of this process. Studies by Cornish et al. (2005) indicate that up to 67% Hospital admissions show some type of discrepancy in their medication history. in oncology, the inadvertent omission of medications for chronic comorbidities (such as anti- antihypertensives, hypoglycemic agents, or anticonvulsants) can lead to clinical decompensation of The patient, complicating the oncological condition and prolonging hospitalization. The pharmacist acts to To ensure continuity of necessary chronic therapy, adjusting pharmaceutical forms if needed. dysphagia or mucositis, avoiding iatrogenic consequences through omission.

The use of Complementary and Alternative Medicine (CAM) is prevalent among patients with Cancer patients often seek "natural" therapies without the knowledge of an oncologist. A clinical pharmacist has the expertise to identify dangerous interactions, such as the use concomitant use of St. John's wort *(Hypericum perforatum)* with irinotecan, which drastically reduces The plasma levels of the chemotherapy drug can decrease, compromising the effectiveness of the treatment. The guidance Evidence-based analysis is essential. The pharmacist should address the use of supplements. In an empathetic and technically sound manner, ensuring that the patient's cancer treatment is not compromised. due to a lack of knowledge about drug interactions.

At hospital discharge, medication reconciliation plays a crucial educational role for Preventing errors at home. Pharmaceutical discharge instructions clarify the situation for the patient and their caregivers. regarding the new therapeutic regimen, providing an updated list and verbally explaining what This intervention reduces... the risk of early hospital readmissions caused by adverse events or confusion medication, a quality indicator monitored by the *Agency for Healthcare Research and* Quality (AHRQ). Patient empowerment at discharge is essential for safety in the environment. home.

Integrating medication reconciliation into the electronic health record ensures that...

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The information collected by the pharmacist should be available to the entire multidisciplinary team, preventing Repeating questions and ensuring that clinical decisions are based on the patient's actual history. The patient. The pharmacist becomes the manager of pharmacotherapeutic information within the institution. Effective interprofessional communication prevents fragmentation of care by connecting the different [professionals/teams]. Levels of care and ensuring that the cancer patient has their comorbidities managed. properly, which positively impacts their overall survival and ability to tolerate the antineoplastic treatment.

In short, medication reconciliation is a continuity strategy that prevents harm caused by misinformation. For the oncology pharmacist, it is an opportunity to learn about and care for... The patient is considered in their entirety, validating the concept of Patient-Centered Care advocated. by the *Institute of Medicine* (IoM). Medication reconciliation is not just a process bureaucratic, but an indispensable clinical practice in modern oncology to ensure that the cancer treatment should not be compromised by inadequate management of other health conditions. patient.

4. Active pharmacovigilance and management of toxicities

Pharmacovigilance in oncology must transcend passive reporting and become a... Active and preventive risk management. The WHO defines pharmacovigilance as the science and activities relating to the detection, assessment, understanding, and prevention of adverse effects. The clinical pharmacist. monitors patients daily for signs and symptoms of adverse reactions to Drugs (ADRs), classifying them according to the standardized CTCAE criteria *(Common Terminology Criteria for Adverse Events)* from the *National Cancer Institute.* Early recognition of hematological, gastrointestinal, or neurological toxicities allows for the rapid implementation of supportive measures or dose adjustments, avoiding unnecessary interruption of treatment and maintaining the planned dose intensity.

The management of chemotherapy-induced nausea and vomiting (CINV) is an area of expertise. Essential principles of clinical pharmacy. International guidelines from ASCO and the *Multinational Association of Supportive Care in Cancer* (MASCC) guidelines recommend antiemetic prophylaxis according to the potential The emetogenic component of the protocol. The pharmacist optimizes supportive therapy, ensuring the association Correct use of 5-HT3 antagonists, NK1 inhibitors, and corticosteroids. Effective prevention of CINV. It significantly improves treatment adherence and patient quality of life, while failure Failure to control the condition can lead to dehydration, malnutrition, and a worsening of the prognosis. Pharmaceutical intervention This support is clinically relevant and measurable.

Infusion reactions and hypersensitivity reactions to monoclonal antibodies and taxanes require... Constant vigilance and readiness of the team. The pharmacist guides the nursing staff on the speed.

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Correct infusion, the use of premedications (antihistamines, corticosteroids), and observation of signs are crucial.
Early warning systems. Active surveillance prevents severe anaphylaxis. Reporting of adverse events.
The Notivisa system from ANVISA contributes to the overall safety of medicines by generating data.
Real-life scenarios that may lead to changes in package inserts and the issuance of safety alerts, fulfilling the
The public health role of the pharmacist.

Monitoring for cumulative and late toxicities, such as cardiotoxicity from
Anthracycline-induced neurotoxicity, or platinum-based neurotoxicity, requires longitudinal monitoring of the patient.
The pharmacist records the cumulative doses administered throughout the cycles and alerts the medical team when the...
Safety limits are approaching, suggesting cardiac monitoring or switching to other formulations.
Less toxic (e.g., liposomal). Early detection of peripheral neuropathy allows for dose adjustment.
Before the damage becomes irreversible. This long-term approach protects the patient from lasting damage.
permanent, using pharmacotherapeutic follow-up (Dáder Methodology) to structure the
Careful.

Notification and causality analysis, using tools such as the Algorithm of
Naranjo, these are the pharmacist's technical responsibilities. Transforming the individual experience of
Toxicity management in clinical intelligence and epidemiological data is crucial. Event management
Sentinel monitoring is an integral part of hospital accreditation processes. Active pharmacovigilance
This demonstrates the institution's commitment to patient safety. Pharmaceutical care in
Symptom management restores control and dignity to the patient during aggressive treatment.
allowing him to go through the cancer journey with as little suffering as possible.

In conclusion, active pharmacovigilance allows for the monitoring of inherently toxic treatments.
feasible and tolerable. The pharmacist's role is not only to record the harm, but to act to prevent it.
or mitigate it. Proactive management of toxicities ensures that the benefit of treatment outweighs the risks.
risks. The clinical pharmacist in oncology is the professional qualified to balance this equation.
delicate, ensuring patient safety in each treatment cycle and contributing to the
overall therapeutic success.

5. Welcoming, humanization and palliative care

Oncological care requires a profoundly humanized approach that goes beyond...
technique. Cicely Saunders, a pioneer of the modern palliative care movement, introduced the
The concept of "Total Pain" encompasses the physical, emotional, social, and spiritual aspects of suffering.
The pharmacist plays a role in patient education and support, translating the technical complexities of the patient's condition.
Treatment in accessible and welcoming language. The pharmaceutical consultation is a space for listening and
Clarification reduces anxiety and fear of the unknown. A welcoming environment improves adherence.
This reinforces treatment and strengthens trust in the healthcare team, which are central elements of the Therapeutic Alliance.

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In the context of palliative care, the focus shifts from cure to quality of life and...
Relief of suffering. The pharmacist plays a crucial role in managing complex symptoms.
symptoms such as pain, dyspnea, and delirium. The rational use of opioids requires pharmacological expertise.
Balancing pain relief with side effects (constipation, sedation). The WHO considers access
Opioids for pain relief are a fundamental human right. The pharmacist demystifies their use.
Morphine administration within the family, combating opioid phobia and cultural barriers. Calculation of rescue doses.
Opioid rotation and management are essential skills for ensuring patient comfort at the end of treatment.
life.

Deprescribing *is* a refined clinical practice in palliative care.
Studies by Scott et al. (2015) define protocols for the discontinuation of medications considered
futile or inappropriate for a limited life expectancy (e.g., statins, vitamins). This "cleansing"
"Therapeutic" reduces the pill burden *and* decreases the risk of interactions.
The pharmacist leads this process by administering medications and focusing strictly on symptomatic relief.
Therapeutic review in conjunction with the medical team, respecting the finiteness of life and avoiding...
dysthanasia.

Guidance on the disposal of medications and materials at home is part of...
The pharmacist's social, environmental, and health responsibility. Patients in palliative care.
Households often accumulate large quantities of controlled medications and waste.
Biological waste. RDC 222/2018 regulates the management of this waste. The pharmacist should provide guidance.
informing the family about the safe storage and proper return of leftovers after death or suspension.
of its use, preventing domestic accidents and environmental contamination. This guidance completes the cycle of
Medicine with safety and responsibility.

Active listening and empathy are therapeutic tools that are just as important as...
pharmacological knowledge. The National Humanization Policy (HumanizaSUS) values
Welcoming as an ethical guideline. The pharmacist who is willing to listen to the patient's anxieties.
It establishes a powerful bond of trust. Understanding the patient as a biopsychosocial being.
It allows for individualized care. Humanization is not opposed to technique; on the contrary, it integrates it.
Scientific expertise combined with compassion to offer the best possible care in moments of extreme need.
vulnerability.

To conclude this topic, the presence of a pharmacist in palliative care provides safety.
Technique and dignity in the dying process. The relief of physical suffering through pharmacotherapy.
Optimized care allows the patient to experience their final moments with lucidity and comfort alongside their caregivers.
their loved ones. The pharmacist's ethical commitment to life extends to its end.
ensuring that pharmaceutical care is present at all stages of the oncology journey,
always defending the dignity of the human person.

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Conclusion

An in-depth analysis of the clinical pharmacist's role in oncology, conducted over the course of This article unequivocally demonstrates its indispensability for safety, effectiveness, and Humanizing cancer treatment. Integrating technical and clinical skills. based on robust regulatory standards such as RDC 220/2004 and international guidelines. From ASCO and NCCN, it solidifies the pharmacist as a vital safety barrier in the complex Oncology ecosystem. Aseptic handling and control of the physicochemical stability of Antineoplastic mixtures constitute the technical foundation that guarantees the viability of the therapy. Without them Pharmaceutical rigor in the Intravenous Mixing Center, as highlighted by Bonassa and by According to ASHP guidelines, the risk of therapeutic failure due to underdosing, drug degradation, or infection is high. Iatrogenic consequences would be unacceptable, jeopardizing all medical and care efforts.

The validation of the medical prescription was consolidated, through the evidence presented, as a critical point for quality control of care *(Safety Checkpoint).* The intervention pharmaceutical role in dose adjustment for organ dysfunction, protocol verification, and in Preventing serious drug interactions saves lives daily by avoiding fatal toxicities. Systematic documentation of these actions and close collaboration with the medical team prove The effectiveness of clinical pharmacy in reducing medication errors, aligning with global objectives. from the *Institute for Healthcare Improvement* (IHI) and ISMP. Pharmaceutical review transforms the Prescribing using a safe and accurate instrument, protecting the patient from variability and error. The human element inherent in complex processes.

Medication reconciliation, as recommended by the WHO and JCI, has proven essential for To ensure continuity of care in a fragmented healthcare system. The management of polypharmacy and Managing comorbidities in cancer patients requires a holistic approach, which the clinical pharmacist is essential for. capable of providing. Prevention of iatrogenic events at transition points (admission and discharge), ensuring that If underlying diseases are treated adequately without compromising cancer therapy, it is a An invaluable contribution to the patient's clinical stability. Pharmaceutical discharge guidance. It reduces readmission rates and empowers the patient and their caregivers for self-care at home. reflecting the quality of care and social responsibility of the institution.

Active pharmacovigilance has proven to be key to the tolerability and success of treatment. Antineoplastic. Daily monitoring for adverse reactions and proactive supportive management. especially in the prevention of nausea and vomiting (CINV), they allow the patient to complete their treatment with the best possible quality of life. Reporting adverse events contributes to science and public health, generating new knowledge about drug safety. The pharmacist transforms the management of toxicities into personalized care, adjusting the therapy. tailored to the physiological and individual reality of each patient, ensuring that the benefit of the treatment outweighs the individual needs of each patient.

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always with its risks.

The inclusion of pharmacists in palliative care and the practice of deprescribing reflect the Ethical and humanistic maturity of the profession. The focus on alleviating suffering, controlling pain, and... Human dignity, aligned with the principles of Cicely Saunders, demonstrates that clinical pharmacy will far beyond curing the disease. The rational use of medication at the end of life avoids dysthanasia and It promotes comfort, respecting the patient's biography and values. Humanization permeates all aspects of the process. pharmaceutical actions, strengthening the relationship of trust and transforming the technique into a An instrument of compassion and care.

The profile of the modern oncology pharmacist demands constant updating in the face of... dizzying therapeutic innovations, such as immunotherapy, targeted therapies, and CAR-T cells. A Technical competence must be combined with communication skills *(soft skills)* and emotional intelligence. To deal with the complexity of cancer, continuing education is mandatory. Scientific evolution. Healthcare institutions that invest in structuring pharmacy services. Oncology clinics are achieving better clinical and economic outcomes, as demonstrated by various studies. Pharmacoeconomic studies that link pharmaceutical intervention to cost reduction and adverse events. adverse.

The future of the profession points to an increasingly central role in oncology. precision and pharmacogenomics. The pharmacist will play a key role in the interpretation of Biomarkers for individualized therapeutic selection. Telepharmacy and remote monitoring. These measures will allow for the monitoring of patients using oral antineoplastic drugs at home. Expanding the boundaries of the hospital. Technology will broaden the reach of pharmaceutical care, but Human, ethical, and technical validation will continue to be the irreplaceable core of the profession. The pharmacist will be the manager of pharmacotherapeutic care throughout the patient's journey.

It can be concluded, therefore, that clinical oncology pharmacy is a high-impact discipline and social relevance. The pharmacist is not just a dispenser of medicines, but the guardian of Medication safety in the most complex scenario of medicine. Reconciliation strategies, Pharmacovigilance, prescription validation, and safe handling are the daily tools of this process. Noble work of protecting life. Commitment to technical excellence, ethics, and humanization. This defines the role of this essential professional within the multidisciplinary oncology team.

Finally, this study reaffirms that safe and effective cancer treatment is the result of a collective effort. By ensuring the rational and safe use of medications, the pharmacist fulfills their role. The social and scientific mission of promoting health and alleviating suffering. The fight against cancer requires... The best science and the best care; clinical oncology pharmacy delivers both, ensuring that... Each patient receives the treatment they need with the safety and dignity they deserve. The presence of a clinical pharmacist on the oncology team is, today, an indispensable indicator of...

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Quality and humanization in cancer care.

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