

Assessing Non-adherence in South African Women on Tamoxifen Treatment for Breast Cancer



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This research study focused on understanding whether female breast cancer patients from Tygerberg Hospital (Western Cape, South Africa) were taking their tamoxifen medication properly. Tamoxifen is a crucial hormone therapy drug used to treat hormone receptor-positive breast cancer.

The Problem

Many breast cancer patients struggle to take tamoxifen consistently, which can significantly impact their treatment outcomes. Asking patients if they're taking their medication (self-reported adherence) doesn't always give an accurate picture of their actual adherence, i.e. if patients are taking their medication properly as prescribed.

The Study

Twenty South African women with breast cancer who were prescribed tamoxifen were studied. The study's principal investigator:

- Asked patients about their medication-taking habits through questionnaires
- Collected blood samples to measure actual levels (quantities/concentrations) of tamoxifen and its active breakdown product (endoxifen) in the plasma (plasma is a component of blood)
- Developed a laboratory (analytical pharmacological) method to accurately measure these drug levels in human plasma

Key Findings

The study revealed a striking disconnect between what patients reported and what their blood tests showed:

- **Self-reported adherence:** Only 45% of patients admitted to missing doses
- **Blood test results:** Only 5% showed low drug levels indicating non- adherence

This study's findings suggest that when patients self-report their medication adherence, they may not always provide accurate information - possibly due to forgetfulness, embarrassment, or wanting to please their healthcare providers.

Why This Matters

The research demonstrates that measuring actual drug levels in blood provides a more reliable way to assess whether patients are taking their medication properly. This objective approach could help doctors:

- Identify patients who need additional encouragement and support with medication adherence
- Optimize treatment plans based on actual drug levels rather than assumptions
- Improve overall treatment outcomes for breast cancer patients

The Bottom Line

The study successfully developed a reliable method for measuring tamoxifen levels in human plasma and highlighted the importance of using such a measure rather than just asking patients about their medication habits. This approach could lead to better personalized treatment and improved outcomes for breast cancer patients.