



# Breast Cancer in Transgender Individuals: Challenges and Perspectives

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## Dear Editor,

Breast cancer is a complex and multidimensional disease affecting millions globally. While breast cancer is traditionally associated with cisgender women, it can also occur in transgender individuals (1). Hormone therapy, including estrogen and testosterone administration, might be a component of gender transition among transgender individuals and may, therefore, impact the risk of developing breast cancer (2).

To date, insufficient information has been provided to transgenders regarding breast cancer, and it is hypothesized that the awareness of transgender people regarding breast cancer is low (3). Furthermore, financial problems, lack of access to care, discrimination, and fear of acceptance by society and medical staff might be barriers to breast cancer screening and diagnosis in the transgender population (4-6). Therefore, understanding the unique challenges faced by transgender individuals with breast cancer is crucial for providing appropriate care and developing comprehensive screening and management guidelines.

This scientific letter aims to explore the current state of knowledge regarding breast cancer in transgender individuals, highlighting the challenges, perspectives, and the need for further research in this area.

### 1- Hormone Therapy and Breast Cancer Risk:

Hormone therapy, as part of the gender transition process, can be considered an important factor that is related to breast cancer in transgender individuals. Estrogen therapy is commonly used by transgender women, while transgender men utilize testosterone therapy (7). Hormone therapy may modulate breast

tissue characteristics and affect the risk of developing breast cancer (8). Estrogen and testosterone play vital roles in developing and maintaining secondary sexual characteristics, and their administration can impact the breast tissue (7).

There is limited data on the risk of breast cancer in transgender individuals. Still, current study findings have shown that the risk of breast cancer is lower among transgender individuals than among cisgender women (9). Therefore, there is a need for further studies to understand the long-term effects of hormone therapy on breast cancer risk in this population.

### 2- Diagnosis and Screening Challenges:

Transgender individuals face unique challenges in diagnosing and screening for breast cancer. Although breast cancer is more common at a younger age in transgenders compared to cisgender women, the screening recommendations for transgender individuals are currently similar to those of cisgender women (10). The lack of transgender-specific guidelines can be a significant barrier to providing optimal care for this population.

Moreover, it is not yet fully understood whether hormone therapy can affect breast cancer screening in transgender individuals. However, due to the changes in breast tissue density, there is a possibility of false-positive or false-negative mammography results (2, 11). This highlights the urgent need to develop effective and appropriate breast cancer screening and detection protocols for transgender individuals.

Genetic predisposition might still be significant in developing breast cancer in transgender individuals. For instance, a case report described breast cancer in a

transgender woman of Ashkenazi Jewish descent with a BRCA2 mutation (12). Therefore, genetic testing and counseling might be essential for transgender individuals based on their genetic predisposition to breast cancer.

Furthermore, the evaluation of breast tissue of transgender patients who underwent a gender-affirming mastectomy reported that most of the breast samples were normal. Still, benign changes were observed in a small proportion of the samples, and malignant changes were observed in a few cases (8, 13). These findings indicate the need for comprehensive post-mastectomy breast cancer screening guidelines for transgender individuals.

These challenges indicate the need for further studies on breast cancer in transgender individuals to determine the role of hormone therapy in the risk of breast cancer, to develop transgender-specific guidelines for screening and management, and to improve access to genetic evaluation and counseling.

### 3- Comprehensive Care and Inclusive Guidelines:

Breast cancer screening and management in transgender individuals requires a multidisciplinary, inclusive, and patient-centered approach by healthcare providers to ensure the appropriateness of care and support for this population concerning breast cancer issues. The multidisciplinary team should include endocrinologists, oncologists, surgeons, mental health professionals, and other relevant specialists.

Furthermore, transgender-specific guidelines should be developed for screening, diagnosis, and management of breast cancer based on the specific needs and characteristics of transgender individuals and considering the impact of hormone therapy on breast tissue. To efficiently compare the findings of studies on breast cancer in transgender individuals, standardized terminology and data collection methods should also be developed.

**4- The Path Forward: Further Research and Improved Care:** While there is a growing body of literature regarding breast cancer in transgender individuals, the currently available literature is limited and might not be sufficient to draw a definite conclusion. There is a critical need for extensive studies, especially on the long-term effects of hormone therapy on the risk of breast cancer and its impact on breast cancer screening methods. Furthermore, more studies should be conducted to help develop transgender-specific evidence-based guidelines. These guidelines can be used to prioritize individualized decision-making and comprehensive care for transgender individuals. Addressing the unique challenges related to breast cancer among transgender individuals can improve healthcare outcomes and ensure the equitable access of transgender individuals to

inclusive care throughout their breast cancer journey.

In conclusion, breast cancer in transgender individuals is complex and understudied. Hormone therapy during gender transition challenges breast cancer risk determination, diagnosis, and screening. The lack of transgender-specific guidelines complicates optimal care for breast cancer in this population. Therefore, there is a need for further research to determine the long-term effects of hormone therapy on breast cancer and to develop comprehensive transgender-specific guidelines. The findings of these studies will improve our knowledge and approaches to breast cancer care and ensure equitable and inclusive healthcare for all in society. Due to the differences in the acceptance of transgenders and health and medical procedure coverage by insurance companies between nations, combining the findings of studies from different countries was a challenge. Therefore, more regional and national studies should be conducted regarding breast cancer diagnosis and health burden in the future.

### Footnotes

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