



Memorial Sloan Kettering
Cancer Center

Cancer Genetic Counseling for Transgender Patients: Evolving Roles and Changing Paradigms

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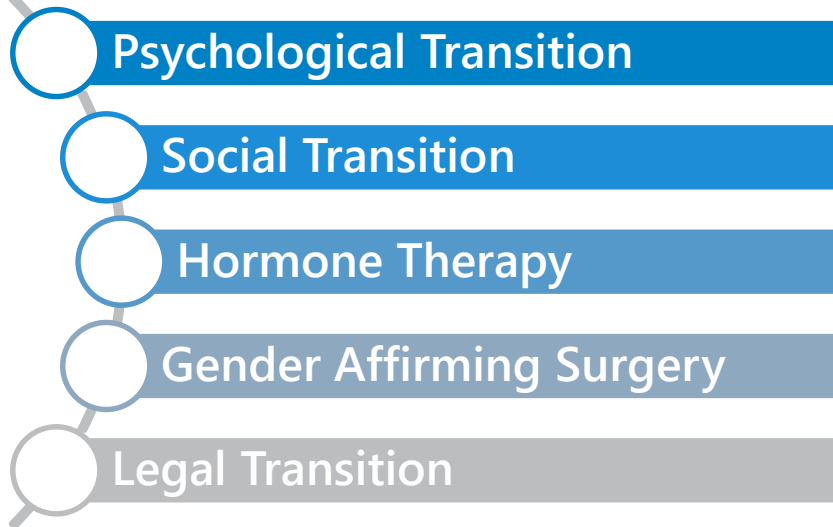


Conflict of Interest

- Rosalba Sacca, PhD, MS, LCGC- No COI to disclose



Gender Affirmation Basics



- None of these steps necessary to be transgender
- Transition may be “complete” after any, none, or all of these steps
- Used to be linear process, now there is high variability in order, extent, and timing of gender affirmation



Hormone Therapy

Trans Women

- **Goal:** Develop female secondary sex characteristics and suppress/minimize male secondary sex characteristics
- **Hormones:** Estrogen (typically estradiol) and antiandrogens
- **Outcomes:** Breast development (Tanner 2-3), redistribution of facial and body fat, reduction of muscle mass, reduction of body hair, change in sweat and odor patterns, etc.

Trans Men

- **Goal:** Develop male secondary sex characteristics and suppress/minimize female secondary sex characteristics
- **Hormone:** Testosterone
- **Outcomes:** Development of facial hair, changes in voice, redistribution of facial and body fat, increased muscle mass, increased body hair, change in sweat and odor patterns, cessation of menses, etc.



Breast Cancer : Does Long Term Use of Hormonal Therapy Increase Cancer Risk in Trans Men and Trans Women?

Very limited data

- Perception that long term use of hormones would increase risk for BC. Retrospective studies do not suggest increased risk
 - Asscheman H et al (2011) - ~1000 transgender individuals no difference in overall mortality rate due to cancer
 - Brown & Jones (2015), Gooren et al (2013)- study of 2,307 pts with exposure to hormone for 5-30 yrs: No increase compared to cisgender males and lower risk than cisgender females
 - de Block et al (2019) study of 2260 trans women and 1229 trans men showed trans women (hormone therapy ~18yrs) had increased risk of breast cancer higher than cisgender man (0.1% vs 4.6%) and trans men (hormone therapy ~ 15yrs) had risk of breast cancer lower than cisgender women.
- Breast cancer risk in both trans men and trans women is believed to be higher than cis male risk but lower than cis female risk
- Less known about risk of developing cancer in transgender individuals in the setting of a hereditary risk such as BRCA1/2 gene mutations
- No evidence to suggest hormones should be denied to a trans woman who has a higher risk of breast cancer





Gender Affirming Surgery for Transgender Women

- **Top Surgery:** Enhancement of size and shape of breasts
- **Bottom Surgery:** Varies among individuals
 - Prostate **NOT** typically removed



Gender Affirming Surgery for Transgender Men

- **Top Surgery:** Removal of breast tissue from both breasts
 - **NOT** the same as a risk-reducing bilateral mastectomy
- **Bottom Surgery:** Varies and may or may not include hysterectomy, bilateral salpingo-oophorectomy



Monstrey et al., 2011



Transgender Cancer Screening: Individual Assessment Critical

Trans Women

- Breast cancer screening if >50y and exposed to cross-gender hormones for 5+ years
 - Weyers et al. 2010 showed trans women more likely to have dense breast tissue which is an independent risk factor for breast cancer
- Prostate cancer screening
- Colon cancer screening
- Skin cancer screening

Trans Men

- Breast cancer screening (if there is residual breast tissue)
- Cervical cancer screening (if they have a cervix)
- Colon cancer screening
- Skin cancer screening



Organs* ≠ Gender: Don't neglect, get them checked.

To **prevent** and **detect cancer** early we recommend that if you have them you get the following organs checked:

Cervix:

For individuals that are HPV negative:

- PAP smear from age 21 to 29 every 3 years
- PAP smear and HPV test from age 30 to 65 every 3 years

For individuals that are HPV positive:

- Yearly PAP smear and follow your PCP's recommendation

Prostate:

For individuals who are not African-American AND with no family history of prostate cancer

- Initial prostate cancer screen at age 50

For individuals who are African-American AND/OR those who have a first-degree relative with prostate cancer under 65

- Initial prostate cancer screen aged 45

For individuals who have more than one relative with prostate cancer or a mutation in a BRCA gene

- Initial prostate cancer screen aged 40

Breast:

For individuals with breast tissue and no family history of breast and ovarian cancer:

- Discuss annual mammograms from age 50 with your PCP

For individuals with breast tissue and a family history of breast and/or ovarian cancer:

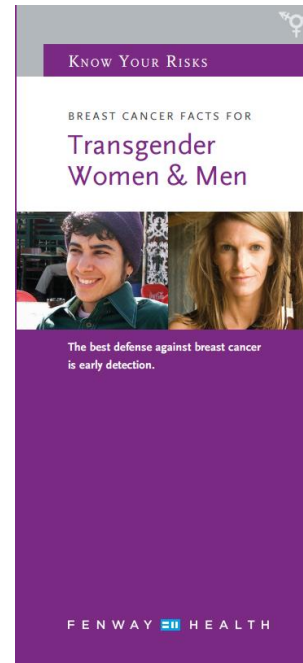
- Discuss the onset of mammograms or breast MRI with your PCP at any age

For individuals with breast tissue and a mutation in a BRCA gene:

- Annual breast MRIs from age 25, then annual MRIs and mammograms from age 30


For all ages – regular self-examinations of breast and chest tissue are recommended.

* Medical terms are used in this flyer to describe all organs.




KNOW YOUR RISKS

BREAST CANCER FACTS FOR
Transgender
Women & Men



The best defense against breast cancer
is early detection.

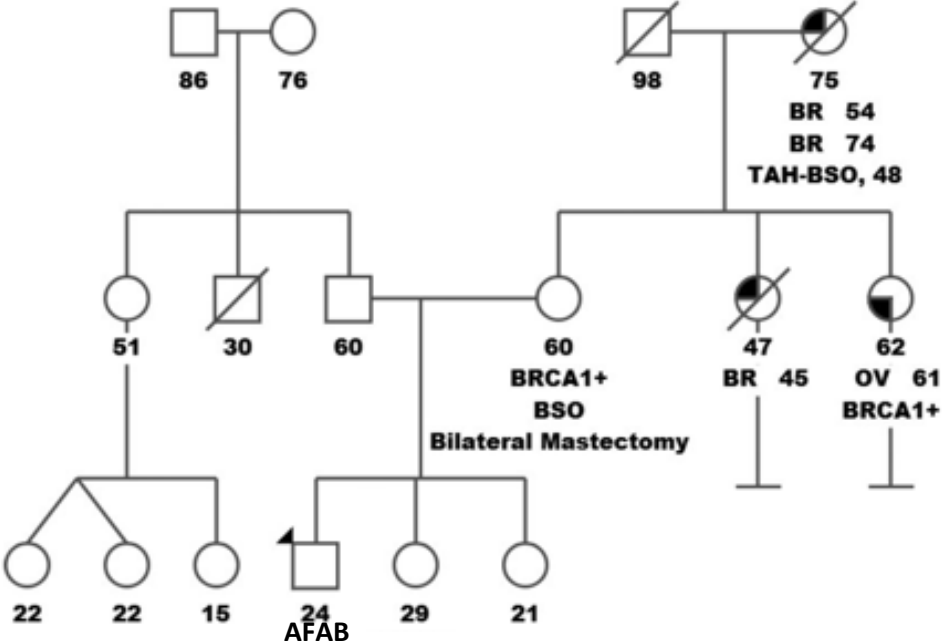
FENWAY  HEALTH



Genetic Counseling Considerations for Trans Individuals with Hereditary Risk Factors: Case Studies



Case 1: BRCA1+ Trans Man-Post Top Surgery



Case 1: Trans Man Post Top Surgery

- 24 year-old tested positive for familial BRCA1 gene mutation
- Post gender affirming surgery including mastectomy and adjuvant androgen therapy.
- Top surgery vs. RRM
 - Residual tissue susceptible to cancer (nipple/fat tissue)
 - Screening by MRI showed residual breast parenchyma (annual screening or completion surgery recommended).
- Timing of risk-reducing BSO
 - Implications on bone and cardiovascular health-(amenorrhoeic)
 - TAH/BSO in near term (may help reduce breast cancer risk).
- Coordination of medical management
- Does not want biological children, no interest in reproductive technologies or oocyte preservation.
- Compliance



Recommendations for BRCA+ Patients

Trans Men

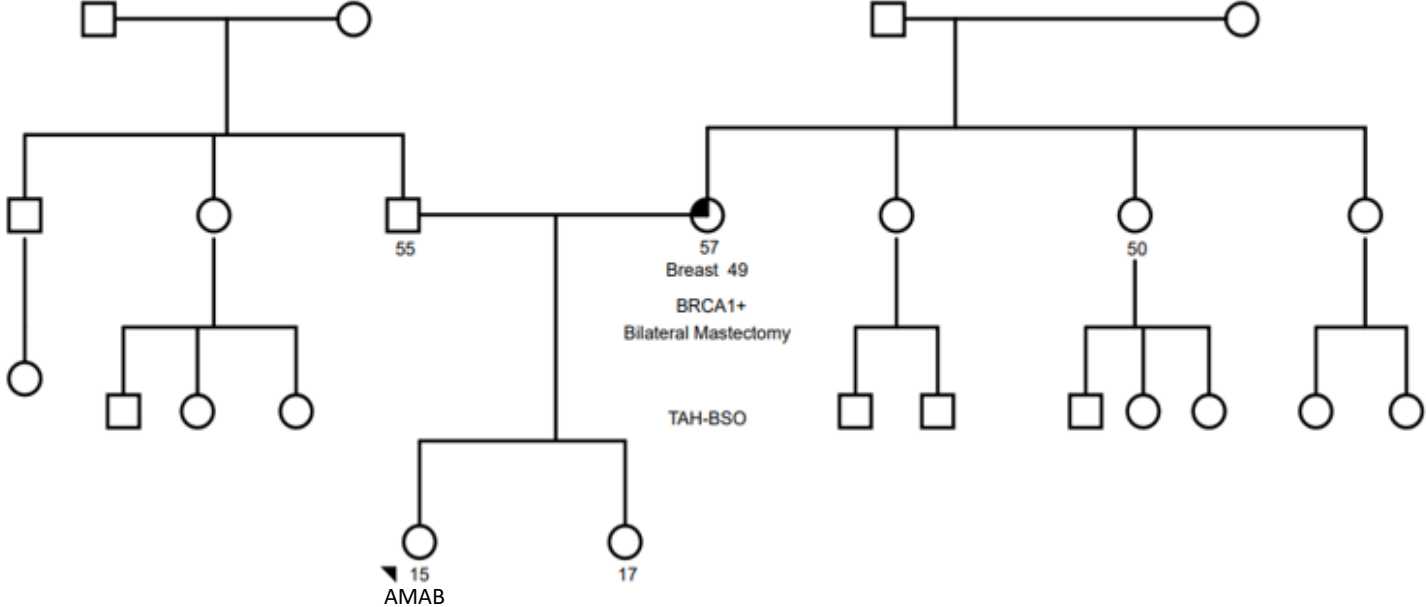
- Risk-reducing mastectomy rather than top surgery
- Bilateral Salpingo-Oophorectomy
 - Timing given implications on bone and cardiovascular health

Trans Women

- Individualized breast screening
 - Yearly clinical breast exam
 - Mammogram/MRI after 5+ years of hormone therapy
- Prostate screening
 - Age 40-45



Case 2: Genetic Testing of Minors



Case 2: Genetic Testing of Minors

- Interest in Puberty Blockers
 - Delay irreversible secondary sex characteristics
 - Effects fully reversible
 - Allow time for teen to mature & make decisions, and for parent & social support to develop
- Endocrinologist concern regarding hormone therapy and breast cancer risk requested GT prior to initiating hormone therapy.
- No evidence hormone therapy increases risk of BC
- Genetic counseling considerations:
 - Patient and parents' expectations
 - Impact of a positive result (label, discrimination, actionable)
- No testing



Genetic Testing Summary

- Genetic testing results should not have an impact on hormone therapy
 - There is concern that some providers may deny hormones to trans women with a hereditary breast cancer risk
- Genetic testing may have surgical implications
 - Timing of surgery
 - Type of surgery
 - Insurance coverage of surgery
- Genetic testing of minors may be appropriate depending on their planned age of surgeries
- Breast and gyn panel may be most appropriate



Conclusions

- The transgender population is small but growing and we can expect to see an increase in transgender patient volume across all GC specialties
 - Patient demographic- younger
 - Flexibility in testing required
- Coordination of care is important
 - Endocrinologist
 - Surgeon
- Reproductive Considerations
 - Oocyte/sperm banking
- There is very limited data on cancer risks faced by the transgender population, especially those with hereditary cancer syndromes
 - Recommend RRSO in trans men
 - Prostate screening in trans women
- Being transgender is highly stigmatized and the medical community has work to do in building trust with this patient population (at the institutional and individual level)



ADVOCATE

TRANSGENDER ▶

This Test Could Change How You Transition



SHUTTERSTOCK

Trans people need to be evaluated for BRCA genes. Here's why.

BY JACOB ANDERSON-MINSHALL
JANUARY 05 2018 6:33 AM EST

622 SHARES



teenVOGUE

SEXUAL HEALTH + IDENTITY

Testing for BRCA Gene Might Change How Some Transgender People Transition

They can make important choices if they know.



Brittney McNamara

JAN 5, 2018 5:10PM EST



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LGBTQ+ Healthcare @ MSK

If you've been diagnosed with cancer, you shouldn't have to worry whether you or your loved ones will be treated with respect during your care. At Memorial Sloan Kettering, we take the concerns of the lesbian, gay, bisexual, transgender, and queer communities very seriously and work hard to create an environment in which everyone who walks through our doors feels welcome.

LGBTQ+ people treated at MSK can expect culturally sensitive, medically competent care from all of our healthcare practitioners. Read our [nondiscrimination statement](#) and [visitor policy](#).

Chasity Walters, Director of Patient and Caregiver Engagement, is an advocate for our transgender patients and is specifically trained to respond to concerns affecting the transgender community. She is a valuable resource for MSK patients and caregivers who have questions or concerns about the healthcare needs of trans individuals. Please contact our [staff](#) for more information.

LGBTQ+ -friendly Providers

Meet a few of our providers who may be knowledgeable about the healthcare needs of LGBTQ+ people. [Read bios.](#)



Koshy
Alexander



Philip A.
Bialer



Kathleen
N.S. Cathcart



Penelope
Damaskos



Acknowledgements

- Our patients and colleagues at MSKCC
- MSKCC LGBTQ Advisory Committee



Resources

- UCSF <https://prevention.ucsf.edu/transhealth>
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Thank You!

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