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Case Report

Primary Cutaneous Melanoma Among Transgender Individuals in a Health Maintenance Organization: A Case Series

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Abstract

Transgender and Gender Diverse (TGD) individuals face unique healthcare challenges, including increased cancer burden, systemic barriers to care and limited reported data in scientific literature. In dermatology and particularly in dermato-oncology, TGD populations remain notably underrepresented. This case series aims to contribute to the limited body of literature by describing melanoma incidence and treatment patterns among TGD individuals within a large, integrated health system. We conducted a retrospective review of the Kaiser Permanente Northern California Regional Cancer Registry to identify TGD patients diagnosed with cutaneous melanoma between January 1, 2018 and December 31, 2022. Medical records were reviewed for demographic data, gender identity, Gender-Affirming Hormone Therapy (GAHT) use, melanoma features and treatment timelines. Among 6,456 identified TGD individuals, only six (four transfeminine, two transmasculine) were diagnosed with a total of eight melanomas (four in situ, four pT1a). All were Stage Ia or lower, with no evidence of regional or distant spread. Five patients had a history of GAHT, with an average estradiol duration of 13.75 years. Notably, a transfeminine patient on long-term estradiol and progesterone developed three melanomas over four years. Time to surgical excision ranged from 11 to 49 days (mean 24), aligning with institutional averages for cisgender patients. This study offers an early contribution to understanding melanoma in TGD populations and highlights the importance of documenting care patterns in a group with historically limited representation. Our findings suggest that, within an insured and integrated care system, TGD patients may receive timely, guideline-concordant melanoma treatment. Still, further work is urgently needed to evaluate risk factors, explore the role of GAHT and amplify TGD voices to inform inclusive dermatologic oncology care.

Keywords: Melanoma; Transgender; Sexual and Gender Minorities; Gender-Affirming Hormone Therapy (GAHT); Sexual and Gender Minorities (SGM); Transgender and Gender Diverse (TGD); Dermatology

Abbreviations:

TGD: Transgender or Gender Diverse; SGM: Sexual and Gender Minority; GAHT: Gender-Affirming Hormone Therapy; GAS: Gender-Affirming Surgeries; IRB: Institutional Review Board; IM: Intramuscular; F: Female; M: Male; N/A: Not Applicable; KP-Kaiser Permanente

Introduction

Transgender or Gender Diverse (TGD) individuals are those whose gender identity is incongruent with their sex assigned at birth [1]. A growing body of research indicates that Sexual and Gender Minorities (SGM), including TGD patients, experience a more significant cancer burden than their heterosexual cisgender peers [2]. While segments of the SGM community have been studied concerning melanoma, dermatologists' understanding of melanoma in TGD populations remains limited by the paucity of research on this subject.

A retrospective review of 6,456 TGD patients identified only six with melanoma, with adjusted hazard ratios of 0.9 and 1.0 compared to age-matched cisgender men and women, respectively [3]. A Veterans Affairs study reported higher melanoma rates in transgender women compared to cisgender individuals, while rates for transgender men were similar to their cisgender peers [4]. Qualitative studies highlight discrimination in oncologic care, leading to avoidance of follow-up care and cancer screening, which poses significant barriers to quality care and improved outcomes for TGD patients [5,6]. Compared to cisgender patients, TGD individuals report feeling less trust in healthcare providers, which can result in delayed or unmet medical needs [5]. TGD individuals often face misgendering, inadequate provider knowledge and the emotional burden of self-advocacy, which creates significant barriers that increase the risk of prolonged care timelines in this patient population [5,6].

This study aimed to deepen our understanding of a population historically underrepresented in cancer research, focusing on identifying factors that may contribute to differences in cancer incidence compared to other groups. Additionally, we sought to evaluate whether individuals in this cohort received guideline-concordant care for their melanoma treatment within a similar timespan as cisgender patients.

Ethical Approval

Institutional Review Board (IRB) approval was not required because organizational policies allow case series publications of six or fewer individuals without IRB involvement.

Methods

The Regional Cancer Registry of Kaiser Permanente in Northern California was reviewed for all cases of cutaneous melanoma diagnosed in TGD individuals between 01/01/2018 (the implementation date for the 8th edition of the American Joint Commission on Cancer) and 12/31/2022 (the most recent calendar year with verified 97% completeness of reporting in the registry). TGD status was ascertained through patient self-identification. New instances of cutaneous melanoma are regularly added to the Registry from pathology reports, using International Classification of Diseases-0-3 histology codes 8720-8799 with *in-situ* or malignant behavior codes and primary sites C44.0-C44.9. The medical record of each TGD individual diagnosed with melanoma was manually reviewed for the following information: age, race, assigned gender at birth, gender identity, use of Gender-Affirming Hormone Therapy (GAHT), history of Gender-Affirming Surgeries (GAS), melanoma diagnosis date, melanoma stage (including Breslow depth, presence of ulceration and regional or distant metastases) and surgical excision date. Institutional Review Board (IRB) approval was not required because organizational policies allow case series publications of six or fewer individuals without IRB involvement.

Case Report

Six TGD patients (four transfeminine, two transmasculine) were collectively diagnosed with eight new cutaneous melanomas (four pT1a and four in-situ) between 2018-2022, whose age at the time of first diagnosis ranged from 40-80 years old (mean 64, median 67.5 years). All six patients were Caucasian. All eight melanomas were pathological stage Ia or lower; there was no evidence of regional or distant metastases. Six melanomas occurred in transfeminine patients and two in transmasculine patients, one of whom had not undergone GAHT. The average duration of GAHT prior to melanoma diagnosis was 13.75 years for estradiol. All cases were treated with wide local excision only, which resulted in clear margins histologically. The time to treatment ranged from 11-49 days (mean 24, median 21 days), which fell within one standard deviation of the mean for age-matched cisgender patients at our institution (Table 1).

Case #, birth sex	Gender identity	Age (years) GAHT started, agents used	Age at melanoma diagnosis	Melanoma location	Clinical stage	Breslow depth (mm)	Pathological stage	Days to treatment
1, M	F	63, IM estradiol	74	Upper extremity	pT1a	0.2	Ia (CN0 CM0)	49
2, F	M	N/A, none used	55	Face	pTis	0	0 (CN0 CM0)	33
3, F	M	30,	40	Lower	pT1a	0.3	Ia (PNX CM0)	24

		topical and subcutaneous testosterone		extremity				
4, M	F	67, estradiol patch	80	Face	pT1a	0.4	Ia (PNX CM0)	16
5, M	F	49,	68	Back	pTis	0	0 (PNX CM0)	11
		oral estradiol and progesterone	68	Shoulder	pTis	0	0 (PNX CM0)	11
			72	Neck	pT1a	0.3	Ia (CN0 CM0)	28
6, M	F	63, IM estradiol	67	Upper extremity	pTis	0	0 (PNX CM0)	18
GAHT: Gender Affirming Hormonal Therapy; IM: Intramuscular; F: Female; M: Male; N/A: Not Applicable								

Table 1: Transgender patients diagnosed with new cutaneous melanomas between 2018-2022.

Discussion

This study suggests that insured TGD individuals with cutaneous melanoma receive care consistent with clinical guidelines, within a similar timespan as their cisgender peers. Misgendering and the absence of inclusive gender options or pronoun requests on intake forms can make TGD patients feel their healthcare providers are uncomfortable with their identity or uninterested in their care [5-7]. This study, however, suggests that within this small cohort, melanoma treatment was not measurably affected by these barriers.

Previous hypotheses posited an elevated risk of melanoma among Transgender and Gender-Diverse (TGD) populations [4,8]. However, our findings reveal no significant increase in melanoma cases compared to prior analyses using the Kaiser Permanente (KP) database. This cohort's melanoma demographics align with the six cases identified between 2006 and 2014 within the KP database, indicating no marked changes in melanoma occurrence among TGD individuals [3]. Moreover, the equivalent time to treatment underscores that the patients in this study received appropriate and timely care, unaffected by their gender identity.

The strength of this study is the detailed documentation of time to surgical excision and comprehensive pathologic data, enabling multifactorial comparisons of factors such as race, age, melanoma stage, Gender-Affirming Hormone Therapy (GAHT) and treatment timelines. However, this study is limited by its small cohort size and the absence of qualitative data capturing patients' experiences with dermatologic care, as well as the omission of Fitzpatrick skin type classification. Additionally, the study lacks information on potential cofactors influencing melanoma development, such as patterns of sunscreen use.

Future research utilizing these strategies would provide a clearer understanding of whether patients are receiving proper care and not facing discrimination or other barriers to their health.

Future research should focus on larger cohorts of TGD individuals to confirm these findings and further investigate any potential link between GAHT and melanoma risk. While prior studies found no association between GAHT and melanomas, our study observed an intriguing case where the patient with the most prolonged estradiol therapy duration developed three melanomas within four years [9]. This patient was also the only one on progesterone therapy, highlighting a potential avenue for further exploration. While causality cannot be inferred from a single case, this reflects patterns discussed in current literature exploring the potential effects of GAHT on melanocyte behavior and melanoma risk [10]. Recent literature has identified the presence of estrogen receptor beta and progesterone receptors in melanoma cells, suggesting that hormone signaling may influence melanoma biology, although the exact role in tumor proliferation remains controversial [11]. Larger studies in transgender populations are needed to assess whether long-term exposure to estradiol and/or progesterone could act as a cofactor in melanoma development.

Additionally, both this study and previous research identified a higher proportion of transgender females than transgender males with melanoma. More extensive studies are needed to explore potential contributing factors, such as hormone therapies, behavioral risks or other variables influencing incidence disparities between these populations and to draw meaningful conclusions at the population level regarding the TGD population.

Conclusion

Providing Transgender and Gender-Diverse (TGD) patients with an inclusive, affirming medical environment where they feel heard and respected is essential to delivering equitable care. Dermatologists and other healthcare providers should receive targeted training to address the unique needs of TGD patients and ensure guideline-concordant management. While this study suggests that melanoma incidence and time to treatment among TGD patients are comparable to those observed in cisgender populations, these findings are limited by the small cohort size. Future research with larger samples is necessary to validate these results and further explore melanoma incidence, risk factors and treatment outcomes in TGD populations. Expanding the evidence base will enhance our understanding and contribute to more comprehensive and inclusive care practices for this underserved community.

Conflicts of Interest

The authors declare no conflict of interest in this paper.

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Patient Consent

Informed consent was obtained from the patient for publication of this case report and any accompanying images.

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