

No. 23-477

In the Supreme Court of the United States

UNITED STATES OF AMERICA, PETITIONER,

v.

JONATHAN THOMAS SKRMETTI, ATTORNEY GENERAL AND
REPORTER FOR TENNESSEE, ET AL., RESPONDENTS,

and

L.W., BY AND THROUGH HER PARENTS AND NEXT
FRIENDS, SAMANTHA WILLIAMS AND BRIAN WILLIAMS,
ET AL., RESPONDENTS IN SUPPORT OF PETITIONER

**On Writ of Certiorari to the
United States Court of Appeals for the Sixth Circuit**

**BRIEF OF EXPERTS ON GENDER AFFIRMING
CARE AS *AMICI CURIAE* IN SUPPORT OF
PETITIONER AND RESPONDENTS IN SUPPORT
OF PETITIONER**

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INTEREST OF THE AMICI CURIAE

*Amici curiae*¹ are experts on gender affirming care. While the term “gender affirming care” has come to refer to medical treatment for gender dysphoria, which is associated with transgender people, for purposes of this brief, *amici* use the term “gender affirming care” more broadly to refer to any medical care that affirms a person’s gender, whether for cisgender or transgender individuals.² *Amici* have provided, or examined the history, ethics, and policies of, gender affirming care, as it pertains to both cisgender and transgender individuals. They include pediatricians, bioethicists, historians, and health policy professionals. A list of the individual *amici* is appended to this brief as Appendix A.

SUMMARY OF ARGUMENT

Tennessee’s SB1 creates two classes of care for minors—one that is prohibited, and the other that is permitted.³ The distinction between the classes turns

¹ No counsel for a party authored this brief in whole or part, and no party other than *amici* or their counsel made a monetary contribution to the preparation or submission of the brief. *See* Supreme Court Rule 37.6.

² In other words, a cisgender male (that is, a person assigned male at birth who continues to identify as male) who develops certain female associated physical characteristics receives gender affirming treatment when he seeks to remove those characteristics.

³ *See* Tenn. Code Ann. § 68-33-103(b)(1)(A) and § 68-33-102(1) (prohibiting care that is “inconsistent” or “discordant” with “the minor’s sex”, but allowing treatment to aid “normal development” of the minor’s sex).

on the minor's sex assigned at birth.⁴ For example, if a minor seeks medication to reduce the buildup of breast tissue, the statute inquires into the individual's sex assigned at birth. If the minor is assigned male at birth, the statute allows the medication to be prescribed. It prohibits prescription of the same medication, however, to minors assigned female at birth. Similarly, if a minor seeks to take medication to address facial or body hair growth, permissibility once more turns on the sex assigned at birth. Under the statute, minors assigned female at birth may be prescribed the medication, but minors assigned male at birth may not. This discrimination based on sex holds true for a range of other conditions. *See* Part II.B and Appendix B; *see also* Pet'r's Br., *U.S. v. Skrmetti, et al.*, No. 23-477 (filed Aug. 27, 2024) 22-23.

The discrimination described in this brief is not simply hypothetical. Both cisgender and transgender minors require gender affirming care. Cisgender minors—that is, minors who identify with the sex they were assigned at birth—often find that their bodies do not conform to their internal sense of gender. For example, cisgender boys might find that they have an unwelcome buildup of breast tissue, or atypically high-pitched voices. Cisgender girls, in turn, might encounter the unwelcome growth of facial and body hair, problems with menstruation, and underdevelopment of breast tissue. Such conditions—which constitute medical diagnoses in their own right—can lead to significant psychological distress.

⁴ SB1 defines “sex” as “a person’s immutable characteristics of the reproductive system that define the individual as male or female, as determined by anatomy and genetics existing at the time of birth.” Tenn. Code Ann. § 68-33-102(9).

See Part II.A. To address this, medical professionals administer medication to produce outcomes that conform to the sex with which the cisgender minor identifies (and which they were assigned at birth).

In this respect, cisgender minors are similarly situated to transgender minors. The bodies of cisgender minors with conditions described in this brief do not conform to their internal sense of gender; so too for transgender minors. For some cisgender minors, this creates psychological distress; again, the same is true for some transgender minors. Some cisgender minors seek medication to allow their bodies to conform to their internal sense of gender; and, once more, some transgender minors do the same. See Appendix B. Indeed, many of the medications that transgender minors take to address many of the same issues that cisgender minors face—growth of breast tissue, hair, high-pitched voice, among others—were developed to treat gender non-conformity among *cisgender* minors.⁵ And physician *amici* engage in gender affirming care for cisgender people far more frequently than for transgender people.⁶

In other words, for most minors seeking gender affirming care approved by their parent(s) or guardian and healthcare provider, SB1 will have no effect—they will receive it, if the care they seek is deemed

⁵ See, e.g., T.E. Schall & J.D. Moses, *Gender-Affirming Care for Cisgender People*, 53 Hastings Ctr. Rep. 15 passim (2023); Susan Cohen & Christine Cosgrove, *Normal at Any Cost: Tall Girls, Short Boys, and the Medical Industry's Quest to Manipulate Height* (2009).

⁶ See Dannie Dai et al., *Prevalence of Gender-Affirming Surgical Procedures Among Minors and Adults in the US*, 7 JAMA Network Open, June 27, 2024 passim.

medically necessary and conforms to the gender they were assigned at birth. But for a disfavored small minority of minors—those who are transgender, and who seek care that does not conform to their sex assigned at birth—care will be forbidden. Thus, within the universe of gender affirming care, only one group loses out under SB1—and they do so because of their sex.

To avoid this straightforward conclusion, the Sixth Circuit incorrectly claimed that there is no general class of gender affirming care. Gender affirming care for cisgender and transgender individuals involves the same medication;⁷ is offered for the same purpose—conformity with one’s gender identity often to address psychological distress; and produces the same overall results (including analogous side-effects), *see* Part II.B *infra*. “[C]alibrating the level of generality” to avoid comparing gender affirming care for gender dysphoria to gender affirming care sought by cisgender youth, as the Sixth Circuit did, does not reflect reality. *Masterpiece Cakeshop v. Colo. C.R. Comm’n*, 584 U.S. 617, 652 (2018) (Gorsuch, J., concurring).

By targeting gender affirming care based on the legislature’s definition of a minor’s sex, SB1 engages in unconstitutional sex discrimination.

ARGUMENT

I. SB1 DISCRIMINATES BASED ON SEX BY TARGETING ONLY GENDER AFFIRMING CARE THAT TRANSGENDER PEOPLE SEEK

1. SB1 discriminates based on sex. On one hand,

⁷ *See infra* Appendix B.

the bill prohibits providers from administering “a medical procedure” or “treatment” that “[e]nabl[es] a minor to identify with. . . a purported identity” that is “inconsistent” or “discordant” with “the minor’s sex.” *See* Tenn. Code Ann. § 68-33-103(b)(1)(A) and § 68-33-102(1). On the other hand, SB1 allows treatment to aid “normal development” of the minor’s sex. *Id.* Thus, for example, the state prohibits “a transgender person who was identified as a male at birth” from receiving a particular treatment but “retains [these treatment options for] an otherwise identical [individual] who was identified as female at birth.” *Bostock v. Clayton Cnty.*, 590 U.S. 644, 660 (2020). “The . . . [state thus] intentionally penalizes a person identified as male at birth for traits or actions that it tolerates in [a person] . . . identified as female at birth.” *Id.* By classifying identical medical procedures based on whether they are—in the view of the legislature—“inconsistent” or “discordan[t]” with an individual’s sex assigned at birth, the state engages in sex discrimination.⁸

2. Following the logic of *Bostock*, lower courts, including the district court below, have repeatedly held that laws similar to Tennessee’s SB1 engage in facial discrimination by excluding *only* gender affirming care treatments for a single diagnosis—gender dysphoria, a diagnosis received only by individuals requiring treatment the state deems inconsistent with their sex assigned at birth—that is, transgender people.⁹

⁸ *See generally* Br. for Yale Philosophers as Amici Curiae Supporting Pet’r., *U.S. v. Skrametti, et al.*, No. 23-477 (filed Nov. 6, 2023), at 4 (“[O]ne cannot determine whether a minor is seeking a prohibited medical procedure without Tennessee first classifying the minor by sex”).

⁹ *See L.W. by and through Williams v. Skrametti*, 679 F.Supp.3d

The Sixth Circuit held otherwise, characterizing gender affirming care for gender dysphoria as a “medical procedure that only one sex can undergo.” *L.W. by and through Williams v. Skrmetti*, 83 F.4th 460, 481 (6th Cir. 2023) (quoting *Dobbs v. Jackson Women’s Health Org.*, 597 U.S. 215, 236 (2022)). On the Sixth Circuit’s reading, the medication that a *cisgender* boy receives to reduce breast tissue, which is often prescribed to alleviate physical and psychological distress, is somehow different from the identical medication that a *transgender* boy with gender dysphoria receives for the same reason—

668, 693 (M.D. Tenn. 2023); *see also Kadel v. Folwell*, 100 F.4th 122, 153 (4th Cir. 2024) (“Certain gender affirming surgeries that could be provided to people assigned male at birth and people assigned female at birth are provided to only one group under the policy.”); *Brandt v. Rutledge*, 47 F.4th 661, 669-70 (8th Cir. 2022) (“[t]he biological sex of the minor patient is the basis on which the law distinguishes between those who may receive certain types of medical care and those who may not”); *Doe v. Ladapo*, 676 F.Supp.3d 1205, 1217-18 (N.D. Fla. 2023) (To know whether a treatment is legal or illegal “one must know the adolescent’s sex [assigned at birth].” “This is a line drawn on the basis of sex, plain and simple.”); *Flack v. Wis. Dep’t of Health Servs.*, 328 F.Supp.3d 931, 948 (W.D. Wis. 2018) (“[I]f plaintiffs’ natively assigned sexes had *matched* their gender identities, their requested, medically necessary surgeries to reconstruct their genitalia or breasts would be covered by Wisconsin Medicaid. Here, plaintiffs have instead been denied coverage because of their natal sex, which would appear to be a straightforward case of sex discrimination.”); *Fletcher v. Alaska*, 443 F.Supp.3d 1024, 1030 (D. Alaska 2020) (holding that exclusion of gender affirming surgery is discrimination on the basis of sex because “defendant’s policy of excluding coverage for medically necessary surgery such a vaginoplasty and mammoplasty for employees, such as plaintiff, whose natal sex is male while providing coverage for such medically necessary surgery for employees whose natal sex is female is discriminatory on its face and is direct evidence of sex discrimination”).

because the latter’s sex was assigned female at birth. Not only does this “conflate[] the classifications drawn by the law with the state’s justification for it,” *Brandt v. Rutledge*, 47 F.4th 661, 670 (8th Cir. 2022), it mischaracterizes the care at issue.¹⁰ *See also* Pet’r’s Br. 27.

As *amici* explain below, minors regularly receive medical care to affirm the sex with which they identify, whether they are cisgender or transgender. Cisgender minors identify with the sex they were assigned at birth. Yet, their bodies sometimes exhibit characteristics that do not conform to the sex with which they identify. To address this, and to alleviate the often significant psychological distress that results, the statute allows cisgender minors to obtain gender affirming care.¹¹ Indeed, the majority of gender affirming care that providers deliver to minors is for those who are *cisgender*, and many gender affirming treatments for gender dysphoria were initially developed for cisgender patients.¹²

Within the universe of minors receiving gender affirming care, SB1 targets only minors receiving care that does not align with the Tennessee’s legislature’s characterization of sex, thus engaging in sex discrimination.¹³

¹⁰ *See also* Br. for Yale Philosophers, *supra* note 8 at 20 (“Tennessee defines the traits that are ‘naturally occurring’ for a given minor as the traits that are ‘statistically typical’ *based on the minor’s sex.*”) (emphasis in original).

¹¹ *See infra* Part II.A.

¹² *See, e.g.*, Dai et al., *supra* note 6 passim; Schall & Moses, *supra* note 5 passim.

¹³ Tennessee seeks to characterize cisgender affirming care as an exception to its broad prohibition on gender affirming care for

II. THOUGH CISGENDER PEOPLE RECEIVE THE MAJORITY OF GENDER AFFIRMING CARE, SB1 TARGETS ONLY TRANSGENDER PEOPLE

A. Cisgender People Often Exhibit Biological Characteristics that Depart from their Sex Assigned at Birth

1. Various biological characteristics are correlated with being considered male or female.¹⁴ So-called “primary” biological characteristics include sex chromosomes (among cisgender people, XX is generally a factor in being considered female; XY for male);¹⁵ internal and external genitalia (ovaries, vagina, uterus, and clitoris, traditionally associated with females; testes, prostate and penis traditionally

transgender minors. *See* Tenn. Code Ann. § 68-33-103(b)(1)(A) (excluding from the prohibition medical care carried out to treat “congenital defect, precocious puberty, disease, or physical injury”). But SB1 permits all kinds of gender affirming care—except care provided that Tennessee deems inconsistent with an adolescent’s sex assigned at birth. Indeed, the law says as much. After affirming practitioners’ ability to provide care for “disease,” it proceeds to carve out “gender dysphoria, gender identity disorder, [and] gender incongruence” from its definition of disease. Characterizing the vast majority of permitted activity as an exception does not disguise Tennessee’s hostility to its true target. *See Church of the Lukumi Babalu Aye, Inc. v. City of Hialeah*, 508 U.S. 520, 527-28 (1993) (“[T]he texts of the ordinances were gerrymandered with care to proscribe religious killings of animals but to exclude almost all secular killings.”).

¹⁴ Aditi Bhargava et al., *Considering Sex as a Biological Variable in Basic and Clinical Studies: An Endocrine Society Scientific Statement*, 42 *Endocrine Revs.* 219 passim (2021).

¹⁵ *Id.* at 221. Various other patterns of chromosomes may be a factor in someone being considered intersex. *See* Br. for Amicus Curiae Interact *supra* passim.

associated with males);¹⁶ sex hormones (high levels of estrogen and low levels of testosterone traditionally associated with females; and the inverse for males).¹⁷ Secondary sex characteristics in those assigned female at birth include increased breast/chest development, increased fat distribution around the hips, and menstruation. For those assigned male at birth, secondary sex characteristics include greater height, increased body and facial hair, development of laryngeal prominence of the thyroid cartilage (Adam's apple), and deeper vocal pitch.¹⁸ These secondary sexual characteristics are generally attributable to the release, concentration of, and response to various sex hormones. Finally, evidence exists that individuals' internal sense of gender identity may have a biological basis, including through brain differentiation.¹⁹

Sex is usually assigned at birth based on external genitalia.²⁰ Other characteristics that might differ from sex assigned at birth may not become apparent until puberty or beyond. And both cisgender and transgender individuals may exhibit

¹⁶ Bhargava et al., *supra* note 14 at 221.

¹⁷ R. Lauretta et al., *Gender in Endocrine Diseases: Role of Sex Gonadal Hormones*. *Int. J. Endocrinology*, Oct. 21, 2018.

¹⁸ Bhargava et al., *supra* note 14 at 221.

¹⁹ See, e.g., R. Fernández et al., *The Biological Basis of Gender Incongruence, Human Sexuality* 3 (Dhastagir Sheriff, ed. 2022); Melissa Hines, *Neuroscience and Sex/Gender: Looking Back and Forward*, 40 *J. Neuroscience* 37, 40 (2020); C.E. Roselli, *Neurobiology of Gender Identity and Sexual Orientation*, *J. Neuroendocrinology*, July 2018, at 2-3.

²⁰ Lyne Chiniara, *Gender Identity*, *Medscape* (Jun. 26, 2023) <https://emedicine.medscape.com/article/917990-overview>.

characteristics that differ from their sex assigned at birth. Since ancient Greek physician Galen of Pergamon,²¹ scientists have observed that individuals exhibit significant variation and ambiguity around these characteristics, including in height,²² vocal pitch,²³ external genitalia,²⁴ muscularity,²⁵ and body hair distribution and density.²⁶ Along with these variations, transgender individuals' gender identity does not align with their sex assigned at birth while cisgender individuals continue to identify with their sex assigned at birth despite some of them having characteristics that do not align with those typical of their sex assigned at birth.²⁷

²¹ See Sophia M. Connell, *Aristotle and Galen on Sex Difference and Reproduction: A New Approach to an Ancient Rivalry*, 31 *Stud. in Hist. & Phil. Sci.* 405 passim (2000).

²² NCD Risk Factor Collaboration (NCD-RisC), *A Century of Trends in Adult Human Height*, *eLife* (Jul. 26, 2016) <https://elifesciences.org/articles/13410>.

²³ Meddy Fouquet et al., *Seven and Up: Individual Differences in Male Voice Fundamental Frequency Emerge Before Puberty and Remain Stable Throughout Adulthood*, *Royal Soc. Open Sci.*, Oct. 1, 2016.

²⁴ See, e.g., Mihaela Pavlicev et al., *Female Genital Variation Far Exceeds that of Male Genitalia: A Review of Comparative Anatomy of Clitoris and the Female Lower Reproductive Tract in Theria*, 62 *Integrative & Comparative Biology* 581 (2022); Evangelos Spyropoulos et al., *Size of External Genital Organs and Somatometric Parameters among Physically Normal Men Younger Than 40 Years Old*, 60 *Urology* 485 (2002).

²⁵ Steven B. Heymsfield et al., *Phenotypic Differences Between People Varying in Muscularity*, 13 *J. Cachexia, Sarcopenia & Muscle* 1100, 1104-06 (2022).

²⁶ See, e.g., Kursad Unluhizarci, *The Evaluation and Treatment of Hirsute Women*, 1 *Women's Health* 429, 429-30 (2005).

²⁷ Intersex individuals are often identified as an additional

2. Variation in primary and secondary sex characteristics can be significant enough to constitute medical diagnoses. Those born with or who develop inconsistent sex characteristics are commonly referred to as intersex individuals. These differences in sexual development (DSD) include variations in chromosomes, hormones, and related enzymes. Individuals with DSD diagnoses are generally phenotypically characterized by an atypical presentation of primary (e.g., the testes, penis, ovaries, and vagina)²⁸ and secondary (e.g., short stature; amenorrhea) sex characteristics.²⁹ There are a variety of DSDs experienced by numerous individuals. *See generally* Br. for Amicus Curiae Interact: Advocates for Intersex Youth in Support of Pet'r, *U.S. v. Skrmetti, et al.*, No. 23-477 (filed Sept. 3, 2024), *passim* (describing conditions and prevalence).

A *cisgender* individual can experience deviations from the physical characteristics typically associated with their specific sex assigned at birth that are significant enough to constitute a medical diagnosis and for which treatment is available. But under SB1, transgender individuals receiving a gender dysphoria diagnosis may be ineligible for similar treatments.

category. *See generally* I.A. Hughes et al., *Consensus Statement on Management of Intersex Disorders*, 2 J. Pediatric Urology 148 *passim* (2006).

²⁸ *Id.* (identifying the genetic and hormonal factors involved in DSD).

²⁹ *See* N.S. Kikkeri, *Turner Syndrome*, StatPearls, (Aug. 8, 2023), <https://www.ncbi.nlm.nih.gov/books/NBK554621/>; Karine Morcel et al., *Mayer-Rokitansky-Küster-Hauser (MRKH) Syndrome*, Orphanet J. Rare Diseases, March 14, 2007.

Some examples of diagnoses of cisgender individuals include:

- Gynecomastia (ICD 10: N62): atypical increase in the breast gland tissue among people assigned male at birth. By mid-puberty, there is a 50% prevalence rate, though this usually resolves without intervention.³⁰
- Hirsutism (ICD 10: L68.0): growth of dark or coarse hair in typically male-like patterns (e.g., face, thighs, buttocks, chest, back, etc.) after puberty in people assigned female at birth. Estimates of prevalence range from 10% to higher than 50%.³¹
- Puberphonia (ICD 10: R49.8): Voice disorder characterized by the persistence of high vocal pitch after puberty among adolescents assigned male at birth.³²
- Breast Hypoplasia (ICD 10: N64.82): underdevelopment of breast tissue.³³ Prevalence of breast hypoplasia is unknown, but it is related to another condition, tubular breast deformity, which may occur in as many as 47% of individuals assigned female at birth seeking breast

³⁰ G. A. Kanakis et al., *EAA Clinical Practice Guidelines-Gynecomastia Evaluation and Management*, 7 *Andrology* 778, 779-80 (2019).

³¹ Wissem Hafsi & Jasleen Kaur, *Hirsutism*, StatPearls, (May 3, 2023), <https://www.ncbi.nlm.nih.gov/books/NBK470417/>.

³² Vrushali Desai & Prasun Mishra, *Voice Therapy Outcome in Puberphonia*, 2 *J. Laryngology & Voice* 26, 26 (2012).

³³ Sebastian Winocour & Valerie Lemaine, *Hypoplastic Breast Anomalies in the Female Adolescent Breast*, 27 *Seminars in Plastic Surgery* 42 (2013).

- augmentation or reduction surgery and 27.6% of the general population assigned female at birth.³⁴
- Menorrhagia (ICD 10: N92.0): heavy menstrual bleeding (HMB), is a common gynecological problem that is usually defined as menstrual blood loss of 80 ml or greater during a period cycle. While this condition only affects people assigned female at birth, it constitutes atypical presentation of a secondary sex characteristic (menstruation). Up to 30% of gynecological visits can be attributed to HMB.³⁵
 - Amenorrhea (ICD 10: N91.2): lack of menstruation in an individual who is of reproductive age (~age 15). This occurs in approximately 2% of adolescents assigned female at birth.³⁶
 - Primary Ovarian Insufficiency (ICD 10: E28.3): loss of normal ovarian function, resulting in amenorrhea and decreased estradiol levels, before age 40. This occurs before age 40 in less than 2% of individuals assigned female at birth.³⁷

³⁴ Marco Klinger et al., *The Prevalence of Tuberos/Constricted Breast Deformity in Population and in Breast Augmentation and Reduction Mammoplasty Patients*, 40 *Aesthetic Plastic Surgery* 492 (2016); see also Renee L. Kam et al., *Breast Hypoplasia Markers Among Women Who Report Insufficient Milk Production: A Retrospective Online Survey*, *PLOS One* 9 (Feb. 29, 2024) (identifying prevalence of individuals with markers suggestive of breast hypoplasia).

³⁵ Intira Sriprasert et al., *Heavy Menstrual Bleeding Diagnosis and Medical Management*, *Contraception & Reproductive Med.* July 24, 2017.

³⁶ Gul Nawaz, *Amenorrhea*, *StatPearls*, (Feb. 25, 2024), <https://www.ncbi.nlm.nih.gov/books/NBK482168/>.

³⁷ Natalia Sopiarcz & Paul B. Sparzak, *Primary Ovarian Insufficiency*, *StatPearls*, (March 6, 2023),

- Short Stature Child (ICD 10: R62.52): child's height is at or below the third percentile of mean height. Youth assigned male at birth are more likely to be evaluated and treated for short stature than those assigned female at birth, as maleness is associated with taller stature.³⁸
- Tall Stature Child (ICD 10: E34.4): child's height is above the 97.7th percentile of mean height. Assessment and treatment is becoming less frequent, suggesting general societal acceptance of tall stature. However chromosomal, genetic, and endocrinological comorbidities are also associated with this diagnosis.³⁹
- Delayed Puberty (ICD 10: E30.0): delayed development of secondary sex characteristics, including a lack of breast development by age 13 and lack of menstruation by age 16 in individuals assigned female at birth and a lack of testicular enlargement by age 14 in individuals assigned male at birth. Delayed puberty affects approximately five percent of children.⁴⁰
- Precocious Puberty (ICD 10: E30.1): development of secondary sex characteristics before age eight in individuals assigned female at birth and before age

<https://www.ncbi.nlm.nih.gov/books/NBK589674/>.

³⁸ Deepika Rani et al., *Short Stature*, StatPearls, (March 13, 2023), <https://www.ncbi.nlm.nih.gov/books/NBK556031/>.

³⁹ V. Sada, *Tall Stature and Gigantism in Transitioning Age: Clinical and Genetic Aspects—A Literature Review and Recommendations*, 47 J. Endocrinological Investigation 777, 778 (2024).

⁴⁰ Sasha R. Howard & Leo Dunkel, *Delayed Puberty—Phenotypic Diversity, Molecular Genetic Mechanisms, and Recent Discoveries*, 40 Endocrine Reviews 1285, 1285-86 (2009).

nine in individuals assigned male at birth. Occurrence is rare with approximately 0.2% of individuals assigned female at birth and less than 0.05% of individuals assigned male demonstrating some form of precocious puberty.⁴¹

3. Variations in sex characteristics among cisgender people arise from a range of causes, from relatively uncommon congenital conditions to everyday medical conditions, medications and medical treatments, and accidents. Chromosomal abnormalities like Klinefelter syndrome results in reduced testosterone receptor responsiveness and sensitivity among people assigned male at birth, leading to variation in primary and secondary sex characteristics.⁴² However, there are many other causes for variations in secondary sex characteristics including side effects of common medical interventions. For example, spironolactone, used to treat hypertension, is known to cause gynecomastia in individuals assigned male at birth.⁴³ Other drugs linked with gynecomastia include anabolic steroids and androgens (used to treat muscle loss and delayed puberty); amphetamines (including those prescribed for attention deficit hyperactivity disorder (ADHD)); tricyclic antidepressants (used to treat major depressive disorder); heart medicines such as digoxin (commonly used to treat heart arrhythmia and improve

⁴¹ A.S. Kota & S. Ejaz, *Precocious Puberty*, StatPearls, (July 4, 2023), <https://www.ncbi.nlm.nih.gov/books/NBK544313/>.

⁴² Evan Los et al., *Klinefelter Syndrome*, StatPearls, (November 12, 2023), <https://www.ncbi.nlm.nih.gov/books/NBK482314/>.

⁴³ Glenn D. Braunstein & Bradley D. Anawalt, *Management of Gynecomastia*, UpToDate (last updated June 27, 2024), <https://www.uptodate.com/contents/management-of-gynecomastia>.

blood circulation); calcium channel blockers (used to decrease blood pressure); and certain chemotherapy drugs. Even non-prescription over-the-counter heartburn medications such as cimetidine and omeprazole may cause gynecomastia. In fact, an estimated 20% of all gynecomastia cases are caused by medications.⁴⁴ Finally, various medical conditions like enzyme deficiencies, testicular tumors, end-stage renal disease, and spinal cord disorders affect sex hormones and can give rise to gynecomastia.⁴⁵

Medications and treatments used to treat seizure disorders can affect the secondary sex characteristics of individuals assigned female at birth, sometimes resulting in hirsutism.⁴⁶ Other examples of conditions where pharmaceutical treatments may cause hirsutism include chronic inflammatory conditions (glucocorticoids), menopause or contraceptives (progestin); osteoporosis and breast cancer (clomiphene, tamoxifen), alopecia (minoxidil), immunosuppression after organ transplant (cyclosporine), endometriosis (danazol), low blood sugar (diazoxide), seizures (phenytoin), Wilson's disease (D-penicillamine), and viral infections, cancer and autoimmune diseases (interferon).⁴⁷ Other

⁴⁴ Ronald S. Swerdloff & Jason C. M. Ng, *Gynecomastia: Etiology, Diagnosis, and Treatment*, Endotext, (Jan. 6, 2023), <https://www.ncbi.nlm.nih.gov/books/NBK279105>.

⁴⁵ See *Id.*; Nat'l Libr. Med., *Aromatase Excess Syndrome*, MedlinePlus (April 1, 2024), <https://medlineplus.gov/genetics/condition/aromatase-excess-syndrome/>.

⁴⁶ See, e.g., Pankaj Singhania et al., *Phenytoin-induced Hypertrichosis and Gingival Hyperplasia*, 1 *Annals Med. Sci & Research* 87, 87-88 (2002).

⁴⁷ See Wissem Hafsi & Jasleen Kaur, *Hirsutism*, StatPearls,

medical conditions that affect hormonal pathways and produce similar effects on body hair growth include polycystic ovarian syndrome (PCOS), ovarian and adrenal tumors, Cushing disease/syndrome, hyperprolactinemia, and acromegaly.⁴⁸ And radiation and genetic conditions can result in undeveloped breasts in individuals assigned female at birth.⁴⁹

Outside the world of medicine, quotidian life events can result in a loss of secondary sex characteristics. Sport accidents have resulted in the loss of testicles⁵⁰ and motor accidents are a common cause of breast deformities.⁵¹ Normal biological processes can also affect secondary characteristics, including pregnancy (acne, hirsutism, balding,

(May 3, 2023), <https://www.ncbi.nlm.nih.gov/books/NBK470417/>.

⁴⁸ *Id.*

⁴⁹ See Deborah P. Merke & Richard J. Auchus, *Clinical Manifestations and Diagnosis of Classic Congenital Adrenal Hyperplasia Due to 21-Hydroxylase Deficiency in Infants and Children*, UpToDate (Oct. 14, 2022), <https://www.uptodate.com/contents/clinical-manifestations-and-diagnosis-of-classic-congenital-adrenal-hyperplasia-due-to-21-hydroxylase-deficiency-in-infants-and-children>; Andrea C. Lo et al., *Breast Hypoplasia and Decreased Lactation from Radiation Therapy in Survivors of Pediatric Malignancy: A PENTEC Comprehensive Review*, 119 Int'l J. Radiation Oncology, Biology, Physics 549, 549-59 (2024).

⁵⁰ Naser Parizad et al., *Orchiectomy After Testicular Trauma in a 45-Year-Old Man: A Case Report*, Trauma Case Reports, June 1, 2023.

⁵¹ See Horacio F. Mayer et al., *Breast Reconstruction after Blunt Breast Trauma: Systematic Review and Case Report Using the Ribeiro Technique*, 50 Archives Plastic Surgery 550, 550-56 (2023).

clitoromegaly, and voice deepening,) ⁵² menopause, and aging.⁵³

B. Like Many Transgender Individuals, Many Cisgender Individuals Experience Distress and Seek the Same Medical Care to Align their Bodies with their Gender Identities that SB1 Forbids for Transgender People

1. Many transgender individuals experience gender dysphoria, characterized by distress, depression, and body image issues, because their bodies do not align with their gender identity.⁵⁴ Cisgender people can also have bodies that do not align with their gender identity. Many of them have the same feelings of distress as transgender individuals.

Among cisgender boys, gynecomastia “can be a source of great distress and discomfort especially during” delicate times like adolescence, with more severe gynecomastia causing greater distress.⁵⁵ Puberphonia, although rare, is correlated with emotional stress and psychological issues during one’s

⁵² Christopher Hakim et al., *Gestational Hyperandrogenism in Developmental Programming*, 158 *Endocrinology* 199, 200 (2017).

⁵³ Macarena Alpañés et al., *Management of Postmenopausal Virilization*, 97 *J. Clinical Endocrinology & Metabolism* 2584, 2585-88 (2012).

⁵⁴ Am. Psychiatric Ass’n, *Diagnostic and Statistical Manual of Mental Disorders* 451-459 (5th. ed. 2013).

⁵⁵ Ori Berger et al., *Gynecomastia: A Systematic Review of Pharmacological Treatments*, *Frontiers in Pediatrics*, Oct. 31, 2022, at 5.

adolescence.⁵⁶ Among cisgender females, breast hypoplasia during adolescence can cause depression, anxiety, low self-esteem, rejection by peers, and even psychosexual dysfunction.⁵⁷ Hirsutism, especially among cisgender adolescent females with polycystic ovarian syndrome (PCOS), creates anxiety and depression, body-image issues, self-esteem issues and emotional stress.⁵⁸ Indeed, some diagnoses like menorrhagia, delayed puberty, and precocious puberty take into account physical, emotional, social and material quality of life interferences.⁵⁹

2. Like many transgender individuals, many cisgender individuals need medical interventions to align their biology with their experienced gender and seek the same treatments as individuals with gender dysphoria. A subset of treatments offered to align individuals—both cisgender and transgender—with their gender identities are identical. Moreover, every treatment provided for gender dysphoria has an

⁵⁶ K. Navin Bharath & M. Kumaresan, *Psycho-Cybernetics of Puberphonia Boys: Few Devastating And Remedy*, 22 J. Dental & Med. Sci. 7 passim (2023).

⁵⁷ Sebastian Winocour & Valerie Lemaine, *Hypoplastic Breast Anomalies in the Female Adolescent Breast*, 27 Seminars in Plastic Surgery 42 passim (2013).

⁵⁸ Michelle G. Lipton et al., *Women Living with Facial Hair: the Psychological and Behavioral Burden*, 61 J. Psychosomatic Research 161 passim (2006); *see also* T. Cantelmi et al., *Inositol Treatment of Psychological Symptoms in Polycystic Ovary Syndrome Woman*, 25 European Rev. Med. Pharm. Sci. 2383 passim (2021).

⁵⁹ Sriprasert et al., *supra* note 35 at 1-2; Jeffrey P. Winer et al., *Interactive Effects of Psychosocial Stress and Early Puberty Timing on Youth Depression and Anxiety: Contextual Amplification in Family and Peer Environments*, 25 J. Child & Family Studies 1375 passim (2016).

analog in the context of cisgender gender affirming care.

As described in more detail in Appendix B, both cisgender and transgender individuals experience clinical benefits from hormone suppression and hormone replacement. Both cisgender and transgender individuals opt for non-surgical cosmetic treatments to improve their sense of self. Both cisgender and transgender individuals may require mental health treatment. Both groups of individuals seek voice training. And both cisgender and transgender individuals may employ strategies to prevent pregnancy or preserve their reproductive options. In addition to the procedures listed at Appendix B, transgender and cisgender adults often receive comparable surgical treatments to affirm their gender identity. In fact, gender affirming treatment for cisgender individuals far outnumbers treatment for transgender individuals.⁶⁰

3. Of course different medical conditions, how the condition manifests, and the psychological and physiological particularities of the patient may require different treatment options and varying dosages, and may give rise to different side-effects. Further, just as not all transgender people experience gender dysphoria or seek to undergo treatment,⁶¹ not all cisgender patients experience distress or undergo treatment.

⁶⁰ See Schall & Moses, *supra* note 5 at 20-21; Dai et al., *supra* note 6 passim.

⁶¹ William Byne et al., *Gender Dysphoria in Adults: An Overview and Primer for Psychiatrists*, 3 *Transgender Health* 57, 60 (2018).

Yet, the overall effects for many treatments remain the same. As with transgender individuals, cisgender patients who opt for treatment to align their biology with their gender identity experience significant benefits, especially an increase in mental health and psychological functioning among minors, thereby increasing their overall quality of life.⁶² In all cases, whatever the diagnosis or the identity of the patient, the decision to receive treatment, the type of treatment to pursue, and whether to proceed with a treatment deemed medically necessary is an individual decision made between each patient (and, if the patient is a minor, their parent(s) or legal guardian) and the patient's medical provider.

Physiologically these treatments produce analogous side effects, no matter the sex assigned at birth. For example, puberty blockers present risks, including loss of bone density, sterile abscesses, leg pain, headache, mood swings, weight gain, etc.—regardless of the condition being treated.⁶³ Providers

⁶² See, e.g., Luke R. Allen et al., *Well-Being and Suicidality Among Transgender Youth After Gender affirming Hormones*, 7 *Am. Psych. Assoc.* 302 passim (2019) (gender dysphoria); Lipton et al *supra* note 58 passim (hirsutism); Berger et al., *supra* note 55 at 5 (gynecomastia).

⁶³ Wylie C. Hembree et al., *Endocrine Treatment of Gender-Dysphoric/Gender-Incongruent Persons: An Endocrine Society Clinical Practice Guide*, 102 *J. Clinical Endocrinology & Metabolism* 3869, 3882 (2017) (hereinafter *Endocrine Soc'y Guidelines*); see also Jia Zhu & Yee-Ming Chan, *Adult Consequences of Self-Limited Delayed Puberty*, *Pediatrics*, June 2017, at 3–7; Chad Terhune et al., *As More Transgender Children Seek Medical Care, Families Confront Many Unknowns*, *Reuters* (Oct. 6, 2022, 11:00 AM), <https://www.reuters.com/investigates/special-report/usa-transyouth-care/>.

seek to address these risks whether the treatment is for cisgender or transgender minors.⁶⁴ Cardiovascular risk, thromboembolism, osteoporosis, cancer, increased triglycerides, and higher cholesterol levels have been theorized as risks associated with long-term use of gender affirming hormonal therapy for both cisgender and transgender individuals, though some of these claims are debated.⁶⁵ Despite potential risks, hormone therapy remains a treatment option for a variety of conditions experienced by cisgender individuals, including gynecomastia, menorrhagia, amenorrhea, primary ovarian insufficiency, hirsutism, short stature, tall stature, delayed puberty, and precocious puberty.⁶⁶ While gender affirming care for gender dysphoria can result in side-effects, such as

⁶⁴ Providers have strategies for mitigating these risks for patients, including prescribing supplements to maintain bone mineral density, assessing bone mineral density every 1-2 years, testing the volume of LH and FSH in a patient's blood every 6-12 months, and assessing a patient's anthropometry (i.e., height, weight, and stage of puberty) every 3-6 months. Endocrine Soc'y Guidelines, *supra* note 63 at 3881–83.

⁶⁵ Compare Spyridoula Maraka et al., *Sex Steroids and Cardiovascular Outcomes in Transgender Individuals: A Systematic Review and Meta-Analysis*, 102 J. Clinical Endocrinology & Metabolism 3914, 3919 (2017) (concluding that evidence from 29 studies demonstrates an association between sex steroid therapy and an increase in cholesterol, which can increase the risk of cardiovascular disease) with Paul J. Connelly, *Gender affirming Hormone Therapy, Vascular Health and Cardiovascular Disease in Transgender Adults*, 74 Hypertension 1266, 1268–70 (2019) (highlighting the low-quality evidence in Maraka's meta-analysis, including confounding factors and alternative explanations).

⁶⁶ See *supra* Section II.A.2.

temporary infertility or reduced fertility,⁶⁷ birth control pills, when used for treatment of menstrual disorders or to regulate fertility, testosterone and other adjuvant medications used (with or without a prescription) by cisgender men for strength training and muscle building, and many cancer treatments can also deleteriously affect a patient's fertility.⁶⁸ As a result, fertility preservation is often available for both cisgender and transgender patients when a treatment could compromise fertility.⁶⁹

4. Treatments for gender dysphoria do differ from other gender affirming treatments in one

⁶⁷ See, e.g., Philip J. Cheng et al., *Fertility Concerns of the Transgender Patient*, 8 *Translational Andrology & Urology* 209 passim (2019). As mentioned, before prescribing GnRHAs and HRT, providers are recommended to discuss fertility preservation with youth who want to transition. See Endocrine Soc'y Guidelines, *supra* note 63 at 3878.

⁶⁸ Megan Torve & Keith Hansen, *Preventing Unintended Pregnancies: A Review of Long-Acting Reversible Contraception*, 76 *S.D. Med.* 132, 132 (2023); Maria A. Christou et al., *Effects of Anabolic Androgenic Steroids on the Reproductive System of Athletes and Recreational Users: A Systematic Review and Meta-Analysis*, 47 *Sports Med.* 1869 passim (2017); Lisa Campo-Engelstein et al., *Pub. H. Methodology, Envtl. & Systems Issues* (Jay Maddock, ed.) (2012) at 419-432.

⁶⁹ See, e.g., Lin Chen, et al., *Fertility preservation in pediatric healthcare: a review*, 14 *Frontiers in Endocrinology*, May 2023, at 3-5 (2023); Moira A. Kyweluk, et al., *Fertility Preservation Legislation in the United States: Potential Implications for Transgender Individuals*, 6 *LGBT Health* 331 (2019). In 2024, Tennessee lawmakers referred House Bill 2549 to the House Insurance Subcommittee where it died. This Bill, the Tennessee Strong Families Act, would have required insurance companies to include standard fertility preservation services when an enrollee is diagnosed with a type of cancer that may directly or indirectly cause infertility. See H.B. 2549, 113th Gen. Assemb., Reg. Sess. (Tenn. 2024).

respect: criteria for administering treatments for gender dysphoria are generally *more restrictive* than when administering identical treatments for cisgender gender affirming care. For example, when prescribing hormone blockers to a minor with gender dysphoria who wishes to mitigate the development of secondary sex characteristics, the Endocrine Society advises that a minor’s provider must confirm that the minor meets certain eligibility criteria.⁷⁰ The adolescent in question has to have begun puberty as confirmed by a pediatric endocrinologist or other clinician experienced in pubertal assessment and must have “demonstrated a long-lasting and intense pattern of gender nonconformity;” or “gender dysphoria worsened with the onset of puberty.”⁷¹ Further, “any coexisting psychological, medical, or social problems that could interfere with treatment have [to] be[] addressed” and “the adolescent [must] ha[ve] sufficient mental capacity to give informed consent to this treatment.”⁷² No such gating requirements are advised by the same experts before prescribing hormone blockers to treat precocious puberty.⁷³ Despite being similarly situated to all other kinds of gender affirming care, care for gender dysphoria is thus already subjected to rigorous standards recommended by medical experts.

* * *

Within this universe of gender affirming care that minors regularly and pervasively utilize,

⁷⁰ Endocrine Soc’y Guidelines, *supra* note 63 at 3878.

⁷¹ *Id.*

⁷² *Id.*

⁷³ Erica A. Eugster, *Treatment of Central Precocious Puberty*, 3 J. Endocrine Soc’y 965, 967–68 (2019).

Tennessee zeroes in—and places a blanket prohibition upon—*only* one set of treatments: those that do not affirm an individual’s sex assigned at birth. Recognizing this, the Sixth Circuit tries to “calibrate[] the level of generality” to avoid comparing gender affirming care for gender dysphoria to gender affirming care sought by cisgender youth. *Masterpiece Cakeshop*, 584 U.S. at 652. That simply does not work. Gender affirming treatment for gender dysphoria is a subset of gender affirming treatment more generally. Gender affirming care for cisgender and transgender individuals comprise the same treatments;⁷⁴ are offered for the same purpose—conformity with one’s gender identity often to address psychological distress; and produce the same overall results (including analogous side-effects). Research suggests that such gender affirming treatments are more prevalent among cisgender people than transgender people.⁷⁵ Nor can treatment for gender dysphoria be set apart from other kinds of gender affirming treatment based on limited variations. Indeed, Tennessee’s own expert noted that for conditions *not* associated with gender dysphoria, the “use and outcome” of various treatments “can be very different for different applications.”⁷⁶ Apart from being subject to more stringent controls from providers than those

⁷⁴ See *infra* Appendix B.

⁷⁵ See, e.g., Am. Acad. Pediatrics, *Policy Statement: Off-Label Use of Drugs in Children*, 133 Pediatrics 563 passim (2014); Dai et al., *supra* note 6 passim; Schall & Moses, *supra* note 5 passim (noting hormone replacement therapies, hormone blockers, acne treatments, birth control, fertility preservation, and hair removal are all treatments developed for cisgender persons for use in gender affirming care).

⁷⁶ Expert Decl. of Michael Laidlaw, M.D. ¶ 71, ECF No. 47-10.

for similar treatments available to cisgender peers, treatment for gender dysphoria is no different. Accordingly, targeting such treatment constitutes sex discrimination.

* * *

CONCLUSION

This Court should vacate the decision below and remand for the application of heightened scrutiny, or reverse the judgment.

Respectfully submitted.

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APPENDIX

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APPENDIX A

Amici curiae, whose affiliations are listed for identification purposes only and do not necessarily represent the views of the institutions with which the signatories are affiliated, are as follows.

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APPENDIX B**Comparison of Common Cisgender and Gender Dysphoric Therapies**

TREATMENT/ ALTERATION	INTENDED OUTCOME	USE FOR CISGENDER PEOPLE	USE FOR GENDER DYSPHORIA
Hormone Treatments			
Gonadotropin-Releasing Hormone Agonists or GnRHAs	Prevents the pituitary gland from producing hormones like follicle-stimulating hormone (FSH) and luteinizing hormone (LH) resulting in inhibition of estrogen and testosterone synthesis	Treats certain cancers Treats precocious puberty Treats endometriosis Manages menorrhagia Treats infertility	Reversibly suppresses pubertal development
Testosterone Suppressors	Blocks the action of androgens	Treats certain cancers Used off-label for acne, hirsutism, PCOS, and hair loss in individuals assigned female at birth	Block the effects of androgens made by testes and thus block the resultant secondary sex characteristics associated with the youth's sex assigned at birth Alleviates gender

TREATMENT/ ALTERATION	INTENDED OUTCOME	USE FOR CISGENDER PEOPLE	USE FOR GENDER DYSPHORIA
			dysphoria; reduces the need for other medications
Estrogen and Progesterone Suppressors (including aromatase inhibitors)	Blocks enzyme (aromatase) from changing other hormones into estrogen Stops ovaries from producing hormones before menopause	Treats certain cancers Treats gynecomastia Treats short stature Stimulates ovulation in patients with PCOS Reduces discomfort associated with menstruation	Prevents ovaries from making estrogen and progesterone and the resultant secondary sex characteristics associated with the youth's sex assigned at birth Alleviates gender dysphoria; reduces the need for other medications
Testosterone Replacement Therapy	Increases concentration of androgens in the body.	In cisgender males used when natural testosterone levels are low, to treat delayed-onset puberty to allow development on the same timeline as	Administered to allow transgender males to develop typically masculine secondary sex characteristics. Alleviates gender dysphoria,

TREATMENT/ ALTERATION	INTENDED OUTCOME	USE FOR CISGENDER PEOPLE	USE FOR GENDER DYSPHORIA
		<p>cisgender male peers</p> <p>Used in adult cisgender males to treat sexual dysfunction</p> <p>In cisgender females used to treat symptoms of menopause</p>	<p>improves mental health, improves self-esteem, reduces physical discomfort</p>
Estrogen Replacement Therapy	Increases the concentration of estrogen in the body	<p>In cisgender females administered to treat delayed onset puberty</p> <p>Used with cisgender adult females after menopause when the body stops producing the same levels of estrogen</p> <p>Treats menorrhagia</p> <p>Treats amenorrhea</p>	<p>Administered to allow transgender females to develop typically feminine secondary sex characteristics, including development of breasts</p> <p>Alleviates gender dysphoria, improves mental health, improves self-esteem</p>

TREATMENT/ ALTERATION	INTENDED OUTCOME	USE FOR CISGENDER PEOPLE	USE FOR GENDER DYSPHORIA
Cosmetic Procedures			
Hirsutism Reduction	Removes excess or unwanted hair.	Enhances physical appearance, boosts self-esteem	Alleviates gender dysphoria, enhances physical appearance
Counseling and Therapy			
Vocal Therapies	Trains techniques to improve vocal function	Improves voice disorders including puberphonia Addresses speech impediments Improves physical presence, boosts self-esteem	Improves physical presence, boosts self-esteem Trains individuals how to raise or lower the pitch and tone of their voice
Counseling Familial and Social Support	Addresses mental health concerns	Improves mental health, boosts self-esteem	Alleviates mental health issues, improves coping skills
Reproductive Considerations			
Fertility preservation	Ensures future reproductive options		
Contraception	Prevents unwanted pregnancies, regulates menstrual cycles		