

# **Lessons Learned in 10+ Years of Experience Using Puberty Blockers At VUMC Amsterdam**

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# Transgender Care for Adults 1

Hirschfeld (1868 – 1935)

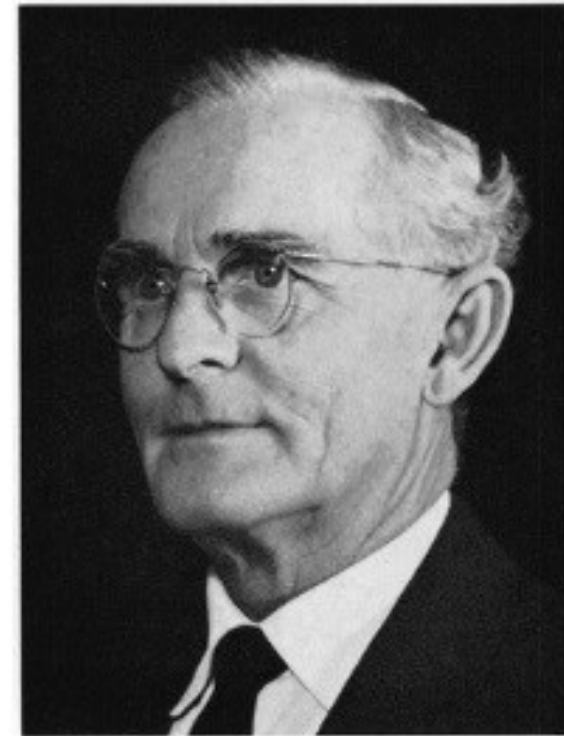
- Institut für Sexualwissenschaft



Lili Elbe (1886 – 1931)

# Transgender Care for Adults 2

- First hormone treatment by Christian Hamburger (Denmark)
- Christine Jorgensen  
“Classic treatment”



CHRISTIAN HAMBURGER



Omikron Omikron via Getty Images

# “Classical” Treatment

- Diagnostic phase
- Real life test /real life experience phase
- Cross-sex hormone treatment
- (Genital) surgery (SRS)
- Legal change

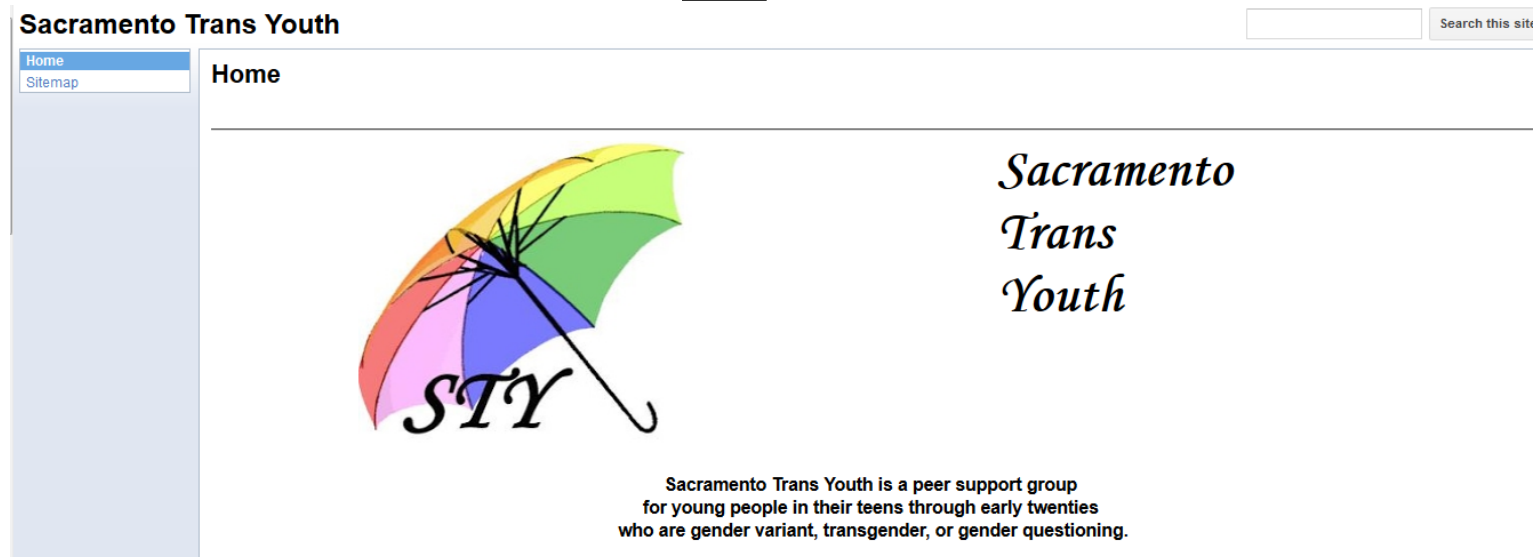


- Not before 18 (21; 23) years



# Situation Transgender Care Adolescents?

- Clinicians rejecting
- Mental health institutions no experience
- No place to go
- No subculture / Internet
- Waiting...



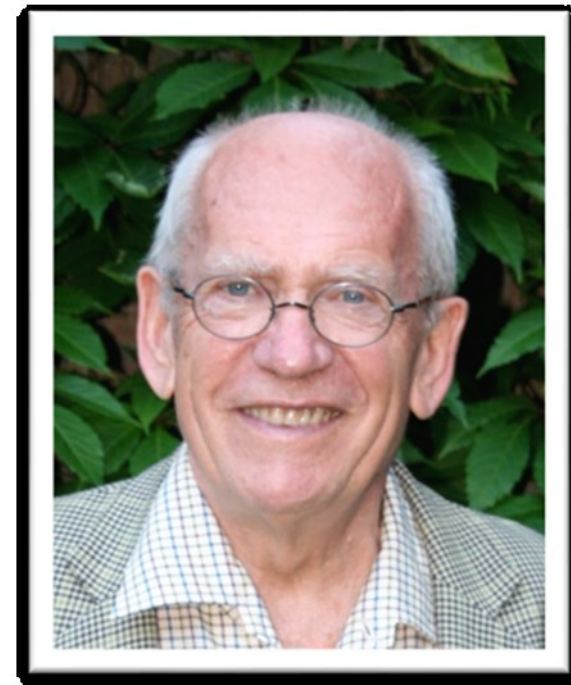
# Start Child & Adolescent Gender Identity Clinic (1987)

- Within department of child psychiatry → only mental health care
- Referrals mostly >16 years
- Follow-ups in adults: postoperative functioning better in persons, treated at younger ages
- Yet, nothing to offer but psychotherapy



# Development of the “Dutch Protocol”

- Two stages
  - First stage 1987 - 2000
  - Second stage since 2000
- Collaboration with prof Louis Gooren at Vumc Amsterdam



# First Stage

- > 16 years
- Hormonal treatment staged
  - First anti-androgens, later estrogens for trans girls
  - First progesterone, later androgens for trans boys
- Very closely monitored



# Clinical Protocol According to Adult Standards of Care of WPATH

- Diagnostic phase (more extensive)
  - Real life test /real life experience phase
  - Staged cross-sex hormone treatment
- }
- (Genital) surgery
  - Legal change

# Strict Eligibility Criteria

- Long lasting gender dysphoria
- Stability or exacerbation of GD at start puberty
- No interfering comorbidities
- Support from family / social network
- A good understanding of the effects of treatment

# Follow-up Studies

- Cohen-Kettenis, van Goozen  
J Am Ac Child Adolesc Psychiat, 1997
- Cohen-Kettenis & van Goozen  
Eur Child Adol Psychiat, 1998
- Smith, van Goozen, Cohen-Kettenis  
J Am Ac Child Adolesc Psychiat, 2001
- Smith, van Goozen, Kuiper  
Psychol Med, 2005

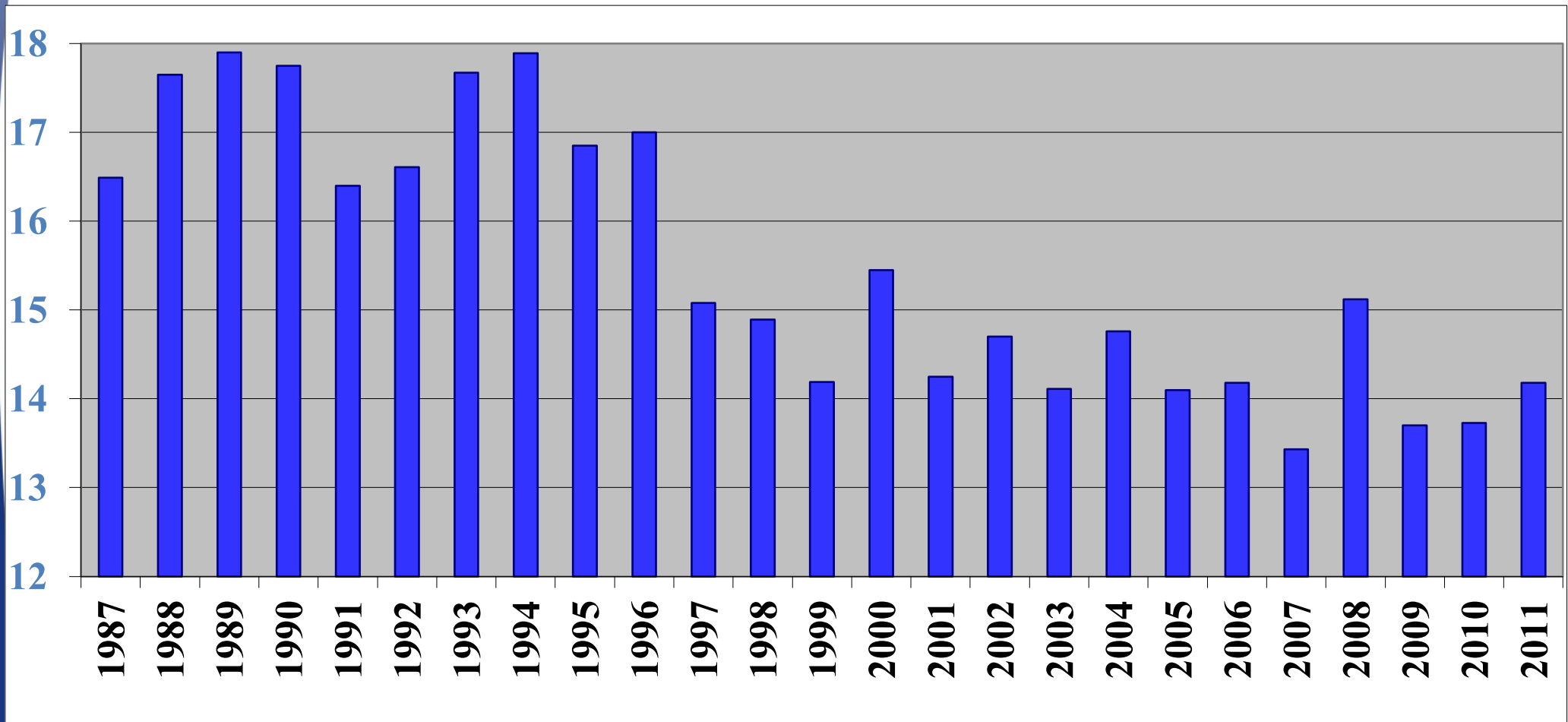
# Outcomes?

- Decrease of gender dysphoria
- Increase in body satisfaction
- Normal psychological / social functioning

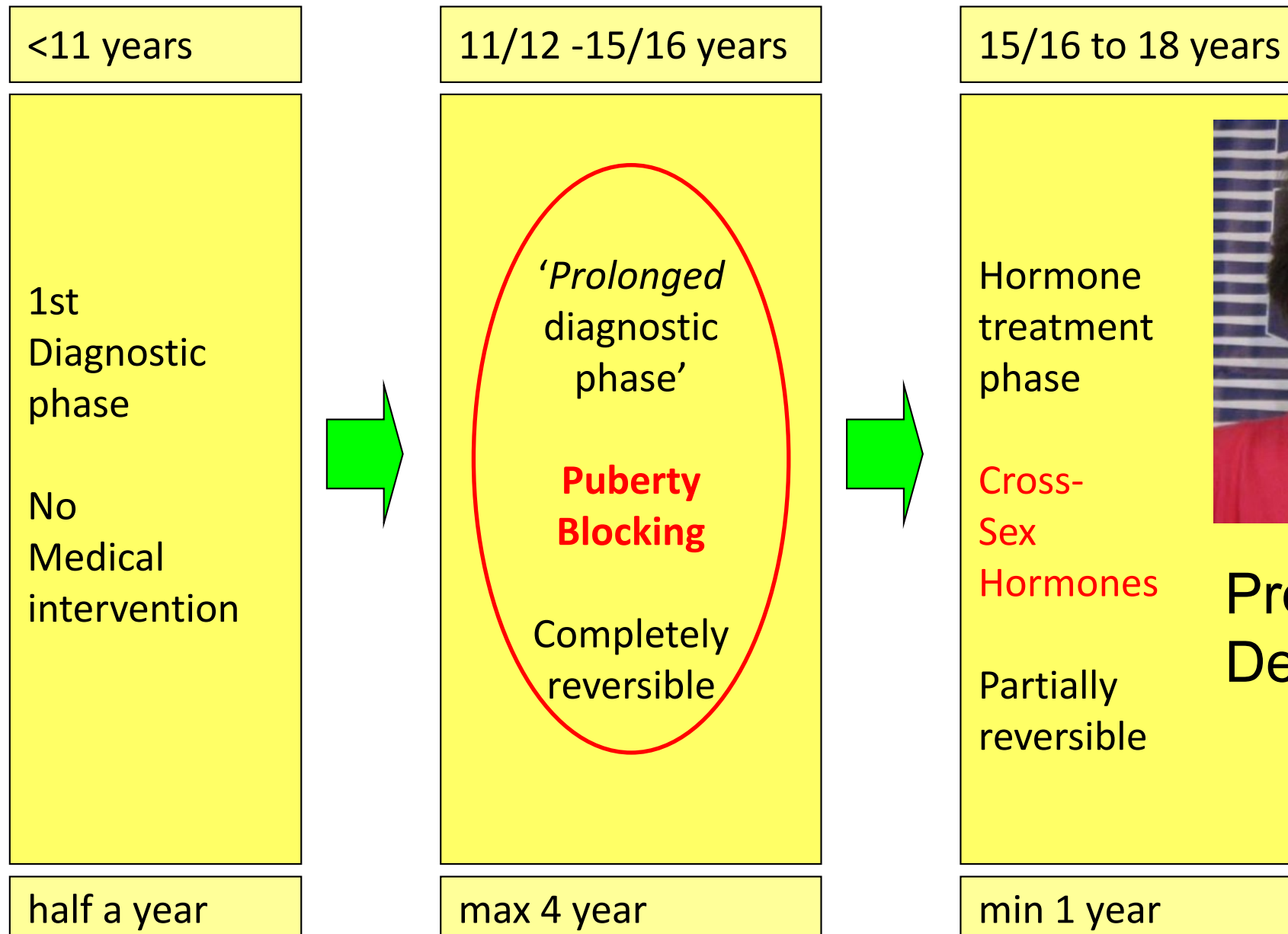
# Physical Appearance

- Treated in late Tanner stages (4 or 5)
  - Voice
  - Adam's apple
  - Beard growth
  - Facial bone structure →
  - Breasts

# Drop in Mean Age at Referral



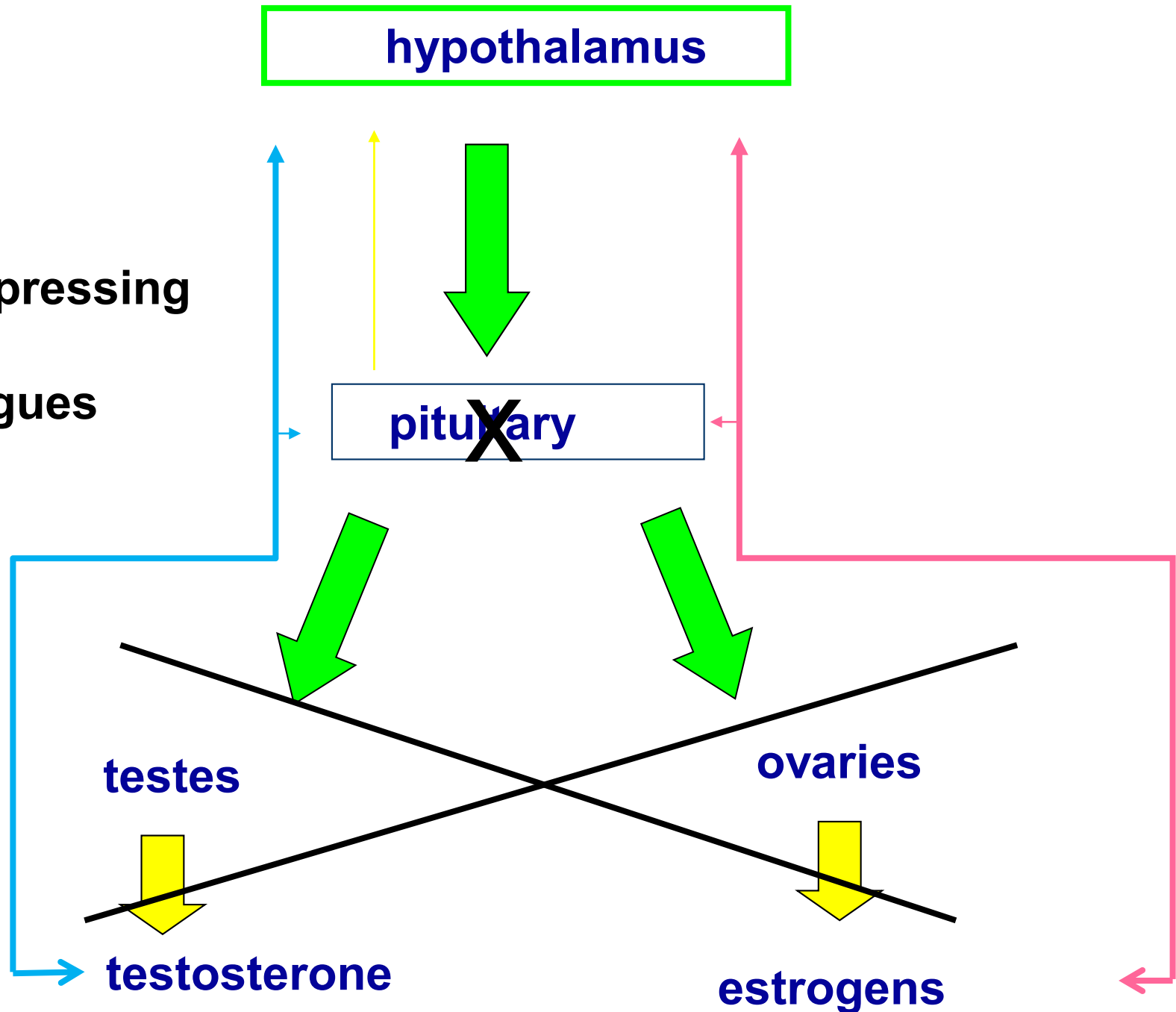
## Second Step



Prof Henriette  
Delemare



Puberty-suppressing  
hormones:  
GnRH analogues



# GnRH analogues

- Much experience in children with precocious puberty
- Reversible

# Multidisciplinary C & A Team

- Child & adolescent psychologists
  - Child & adolescent psychiatrists
  - Psychometrist
  - Pediatric endocrinologist
  - Pediatric nurse
- > 18 years endocrinologists, plastic surgeons, gynecologists

# Center of Expertise on Gender Dysphoria of the VU University Medical Center in Amsterdam



# Child & Adolescent Services

- Latin America (Brazil)
- South-Africa
- Asia (Japan; Psychiatria et Neurologia Japonica, 2012)
- Australia
- New Zealand
- US 35 providers (Hsieh & Leininger, 2014)
- Canada
- Europe → Survey by Kaltiala-Heino (Finland)

# Youth Specialized GI Services: European Survey

1. Belgium (1)
2. Finland (2)
3. Germany (3)
4. Italy (4)
5. Netherlands (2)
6. Northern Ireland (1)
7. Serbia ( >16 years) (1)
8. Spain (3)
9. Sweden (2)
10. Switzerland (2)
11. UK (2)

12. Austria (1)

- Croatia (0)
- Denmark (planning)
- France (0)

**Total = 24 services**

# First Criticism

At first:

Too progressive

- “Abuse of medical science”
- “Today’s hype is tomorrow’s scandal”
- Nazi’s experimenting with children

- Data base from the start of puberty blocking
- Monitoring the adolescents clinically
- Follow-up studies



# Recent Criticism

Now:

- Too conservative
  - Age limits puberty blockers
  - Age limits cross-sex hormones
  - Age limits surgery (Milrod: How young is too young? JSM 2014)
- Too much involvement of mental health practitioners

# Wise decision?

# Main Clinical Concerns

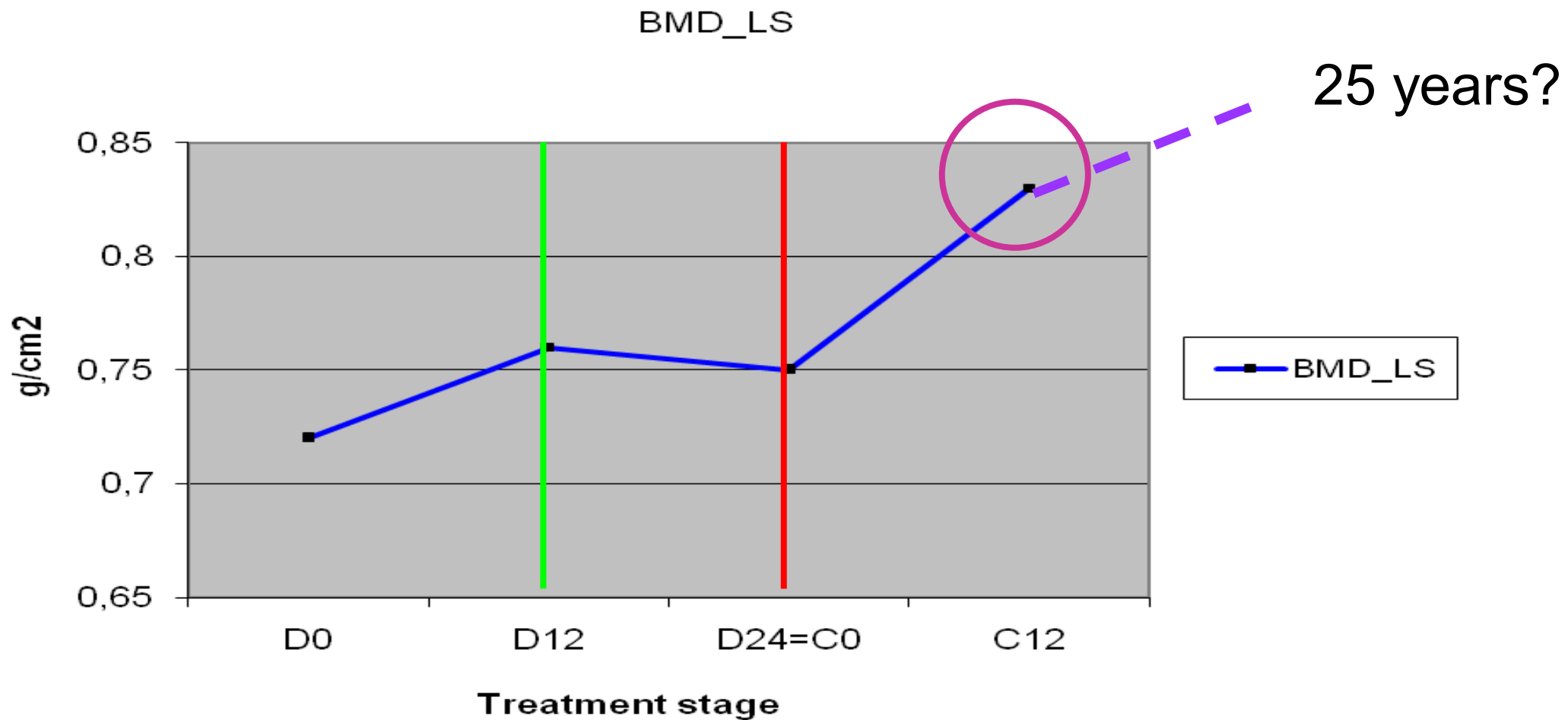
- Are GnRH analogues effective in transgender adolescents?
- Does a treatment starting with GnRH analogues at a young age result in good outcome?
  - Physically
  - Appearance
  - Mentally

# Is Treatment Starting With Puberty Blockers Effective?

# Report Schagen et al, 2016

- Gonadotropins and sex steroids were suppressed within 3 months
- Testicular volume decreased in transgirls
- Breast size reduction in some trans boys (only when in Tanner 2/3)
- No abnormalities of liver enzymes and creatinine
- Frequent routine monitoring of gonadotropins and sex steroids of liver enzymes and creatinine not necessary

# Bone Mass Density (BMD)



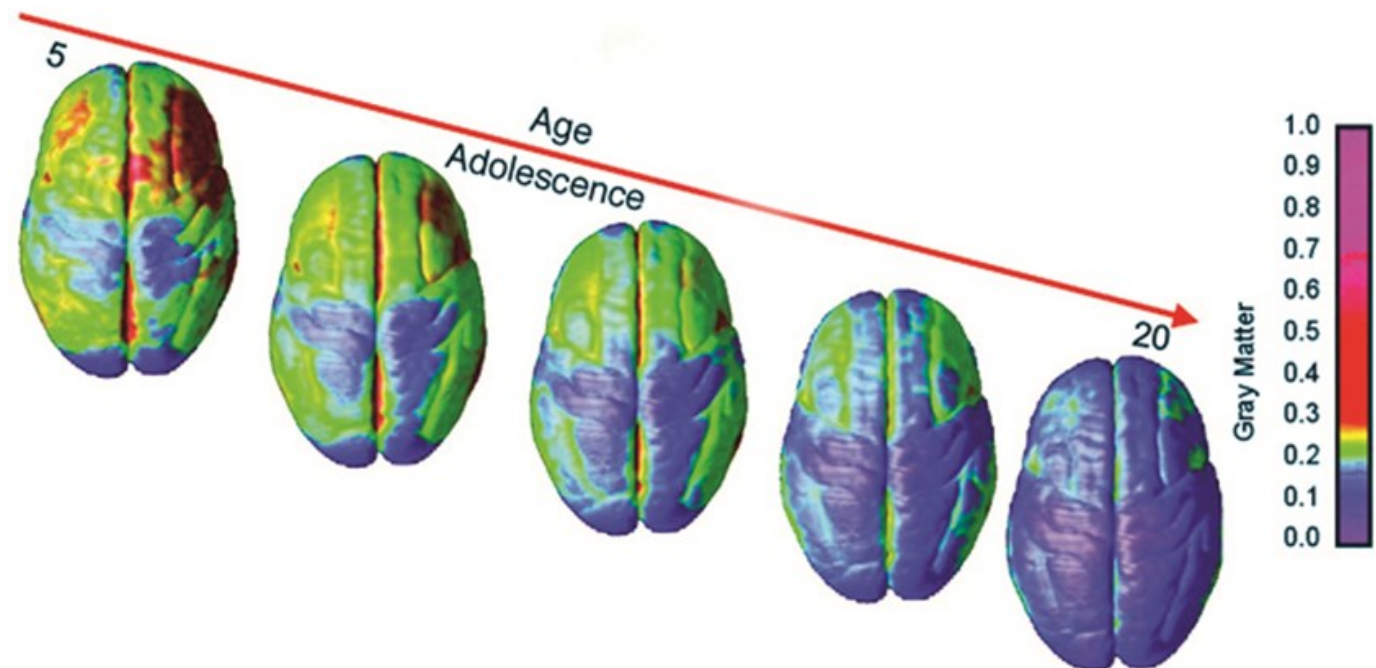
Delemarre van de Waal et al., 2004, 2006

Klink et al, 2015

Schagen et al, submitted

# Brain Effects?

- No effects on executive function (Staphorsius et al, 2015)

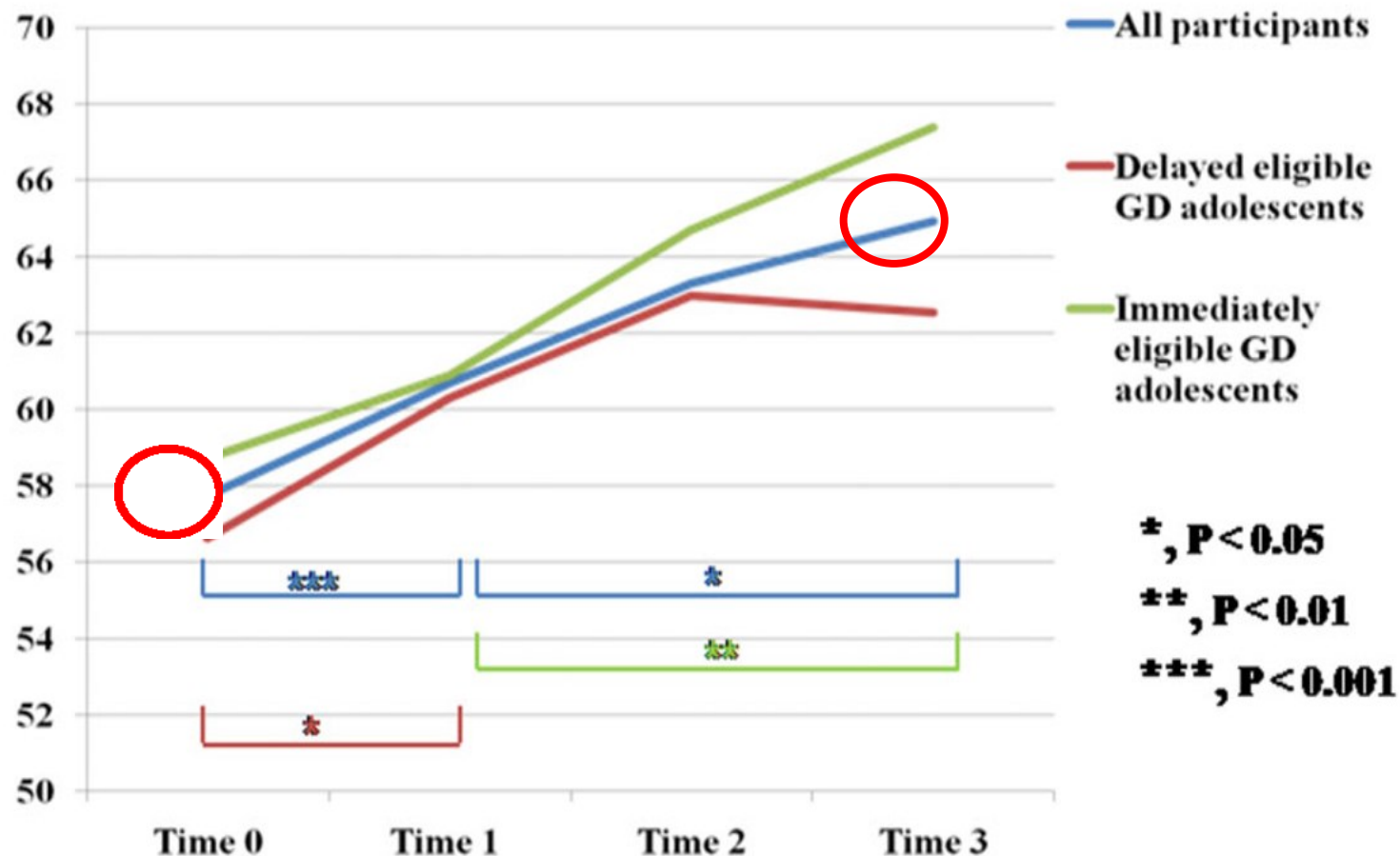




# Summary Physical Effects

- GnRH analogues are effective
- Generally good outcome: no serious negative side effects
- Appearance in line with experienced gender

# Psychological support, puberty suppression and psychological functioning (N=201)



**Figure 2** Gender dysphoria adolescents' psychosocial functioning (CGAS) at baseline, after psychological support, and after puberty suppression

(Costa et al, 2015)

# Emotional and Behavioral Functioning

Measures (Achenbach):

Teacher Report Form

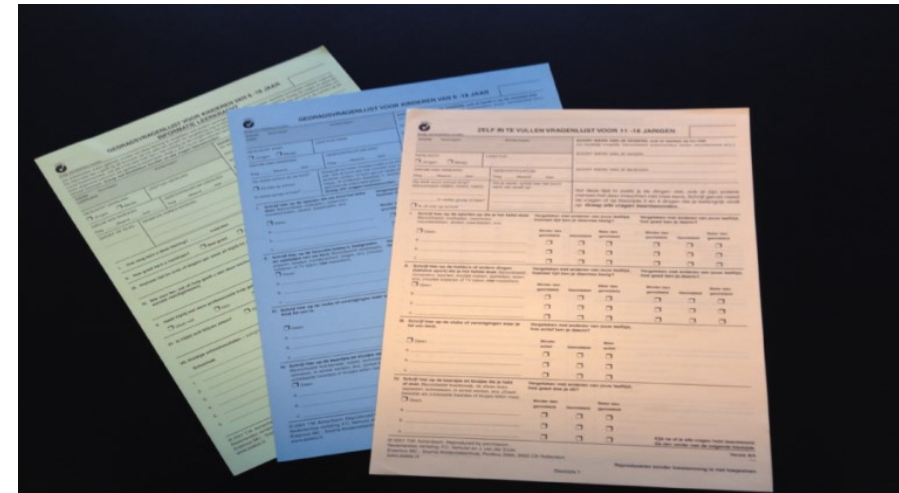
TRF

Child Behavior Checklist

CBCL

Youth Self Report

YSR



(Steensma et al, 2013, De Vries, et al., 2016)

# Emotional and Behavioral Functioning

(Achenbach, 1991)

CBCL, TRF, YSR

withdrawn

somatic complaints

anxious/depressed

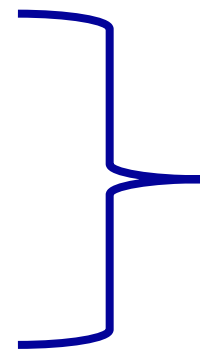
social problems

thought problems

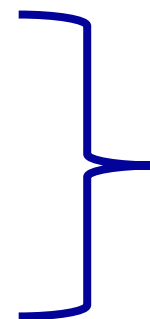
attention problems

delinquent behavior

aggressive behavior

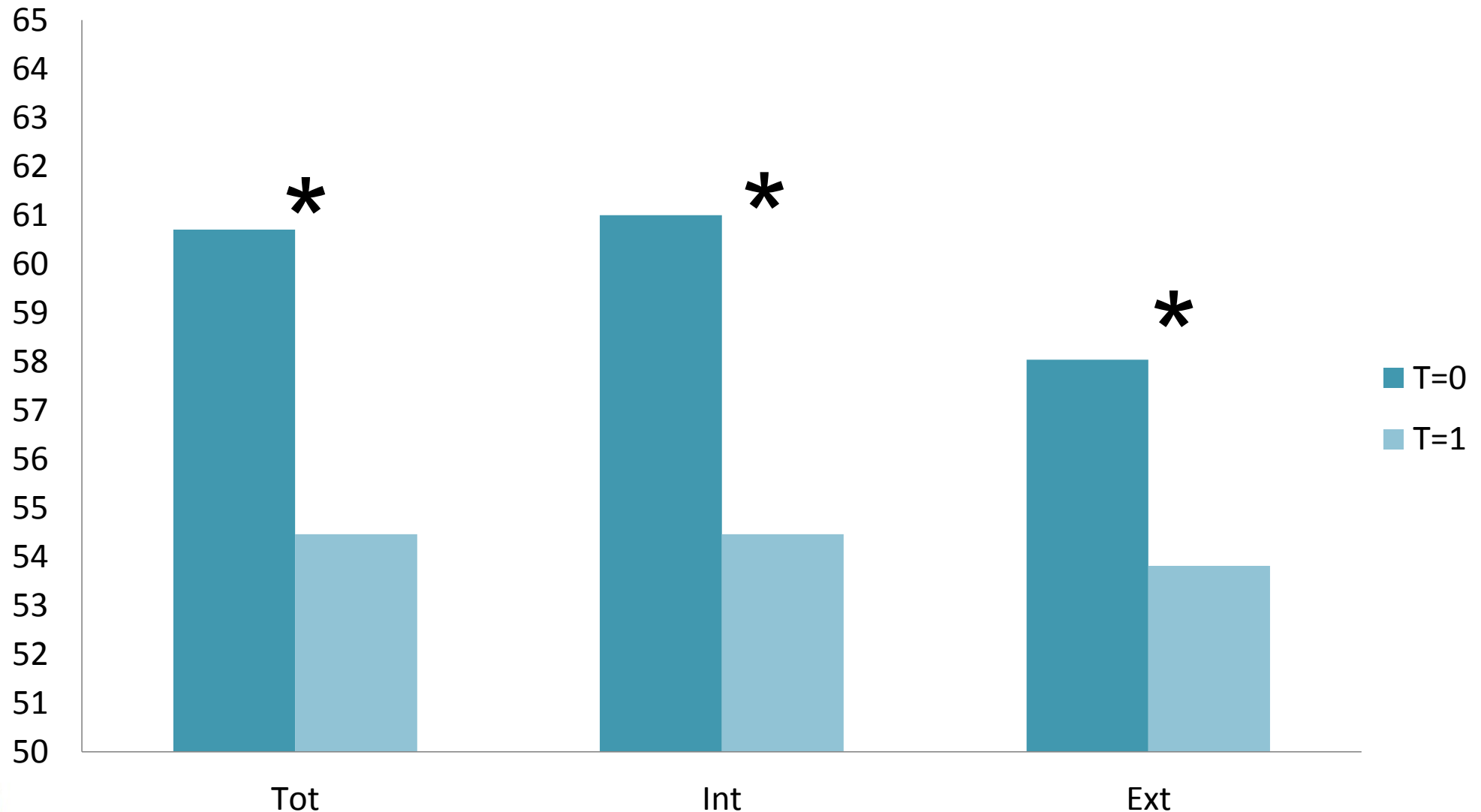


Internalizing



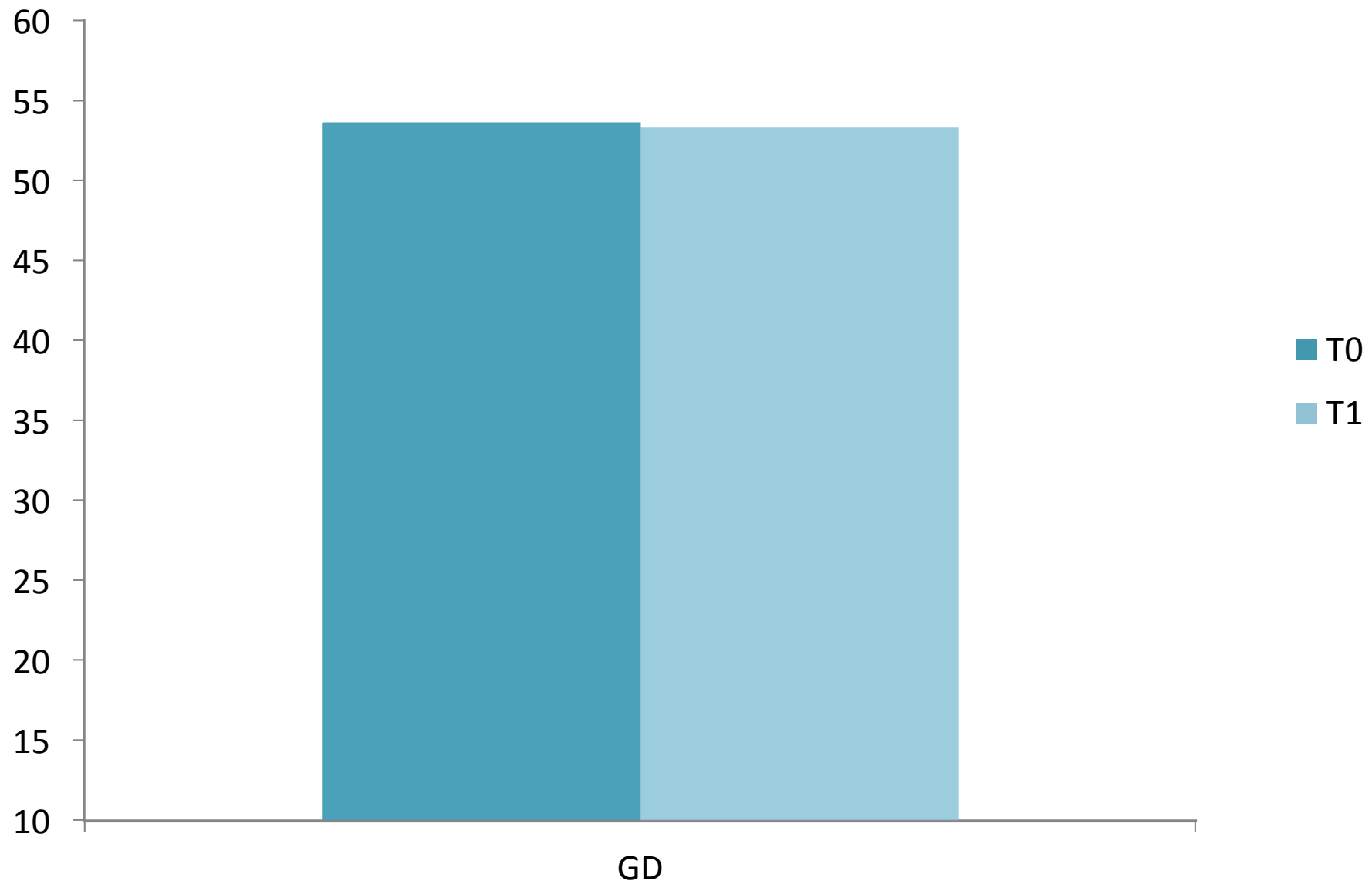
Externalizing

# Psychological Functioning Before and After Puberty Suppression (CBCL = parent report)



# But

## No Change in Gender Dysphoria

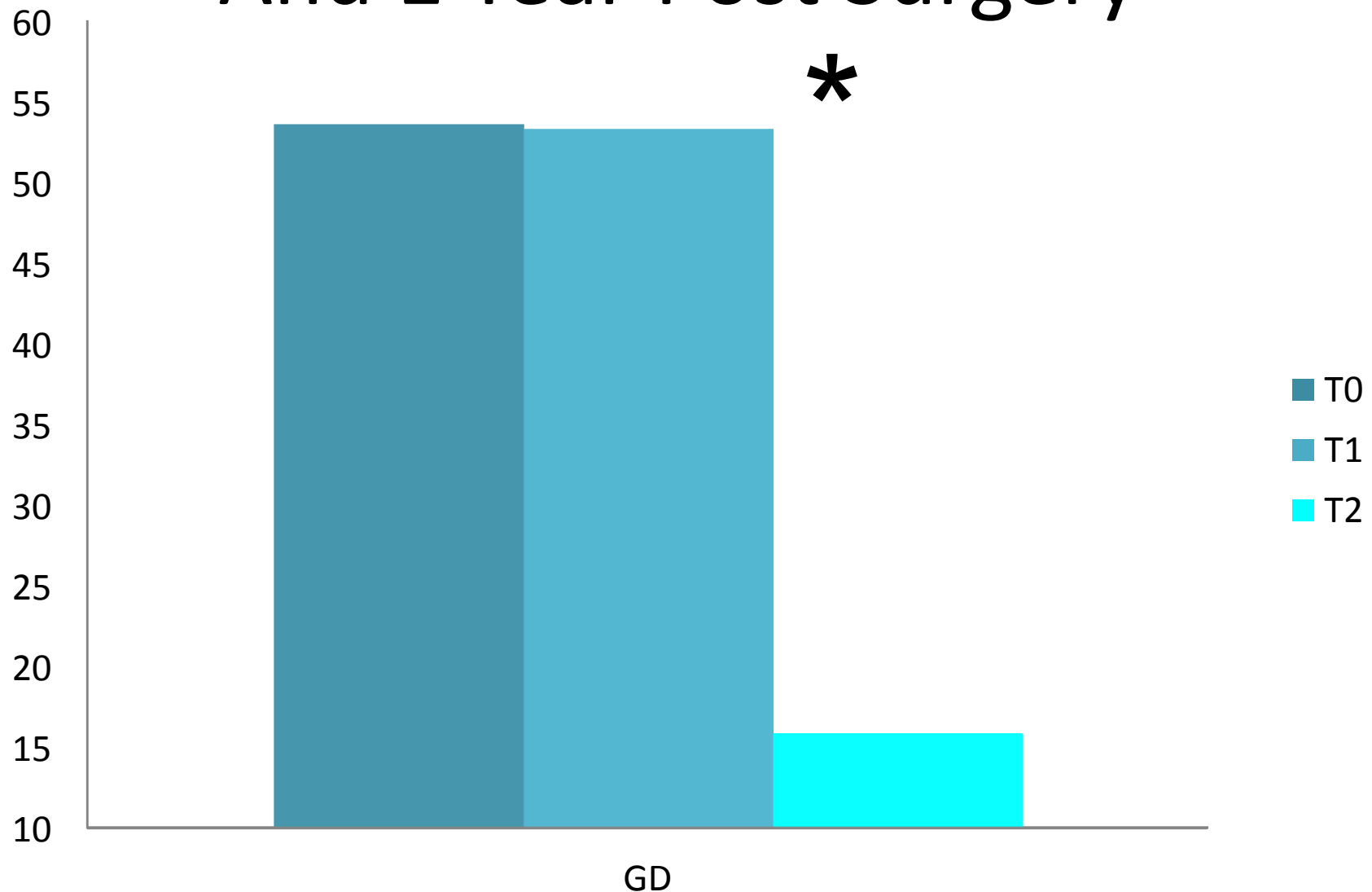


→ 2<sup>nd</sup> Follow-up after 'gender affirming treatment' (puberty suppression, cross-sex hormones and at least 1 year post surgery)

(de Vries et al, 2014)

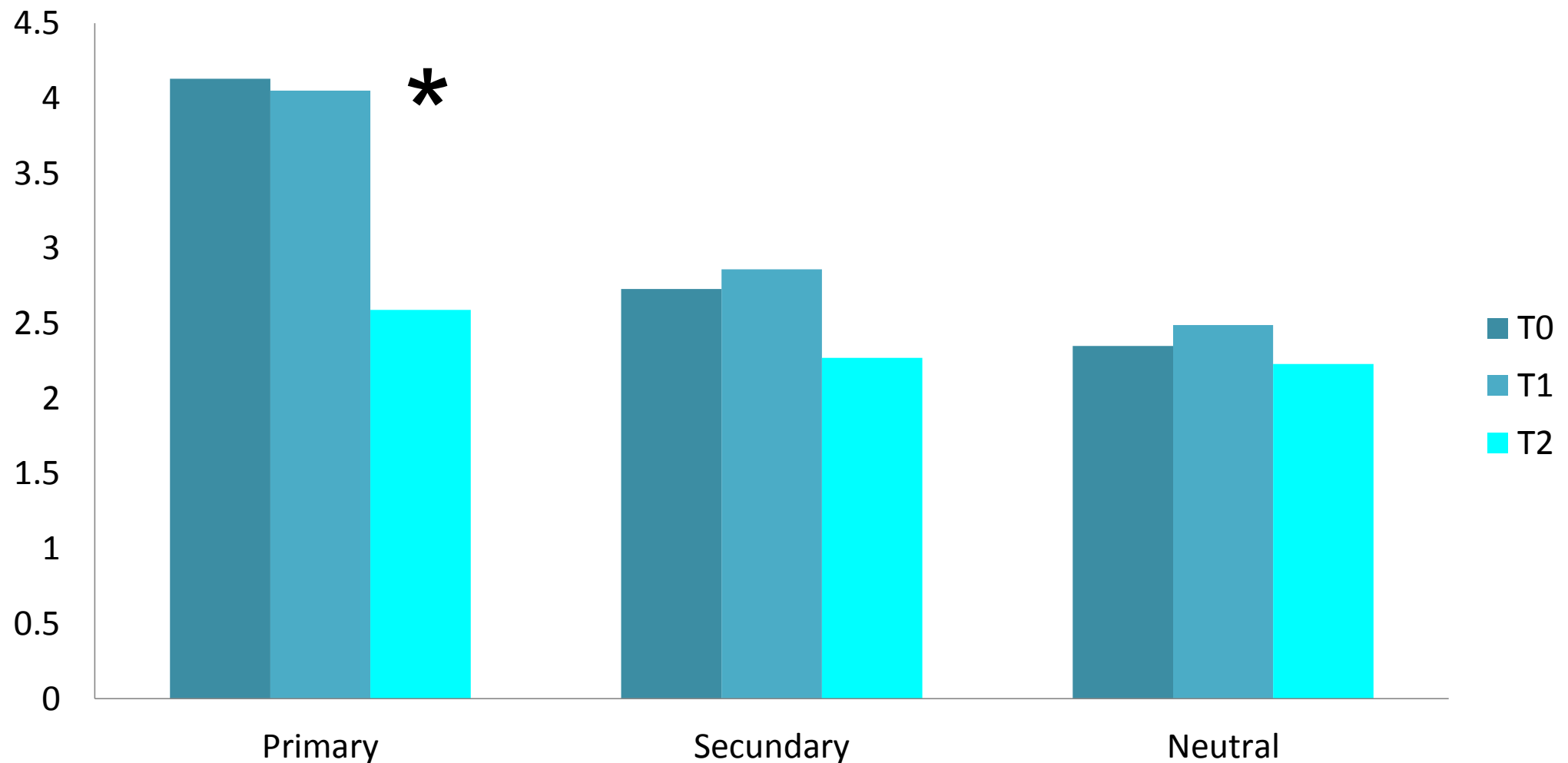


# GD Before And after Puberty Suppression And 1 Year Post Surgery



GD only drops after cross-sex hormones and surgery

# Body Dissatisfaction Before and After Puberty Suppression and 1 Year Post Surgery (T0, T1, T2)



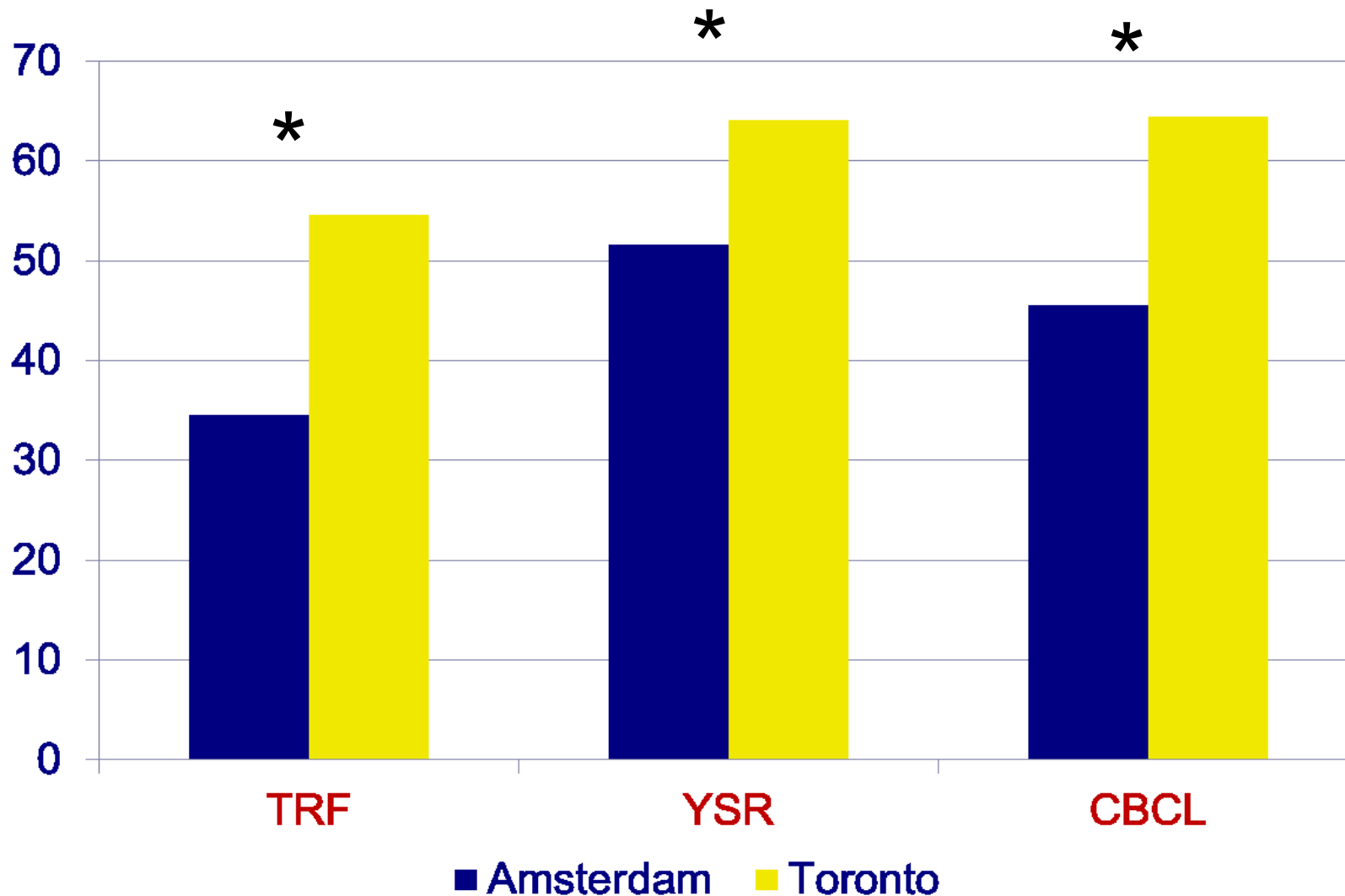
# Post-operative follow-up

- No gender dysphoria
- Satisfaction with body improved
- Psychological functioning improved
- → Subjective well-being comparable to general population of young adults

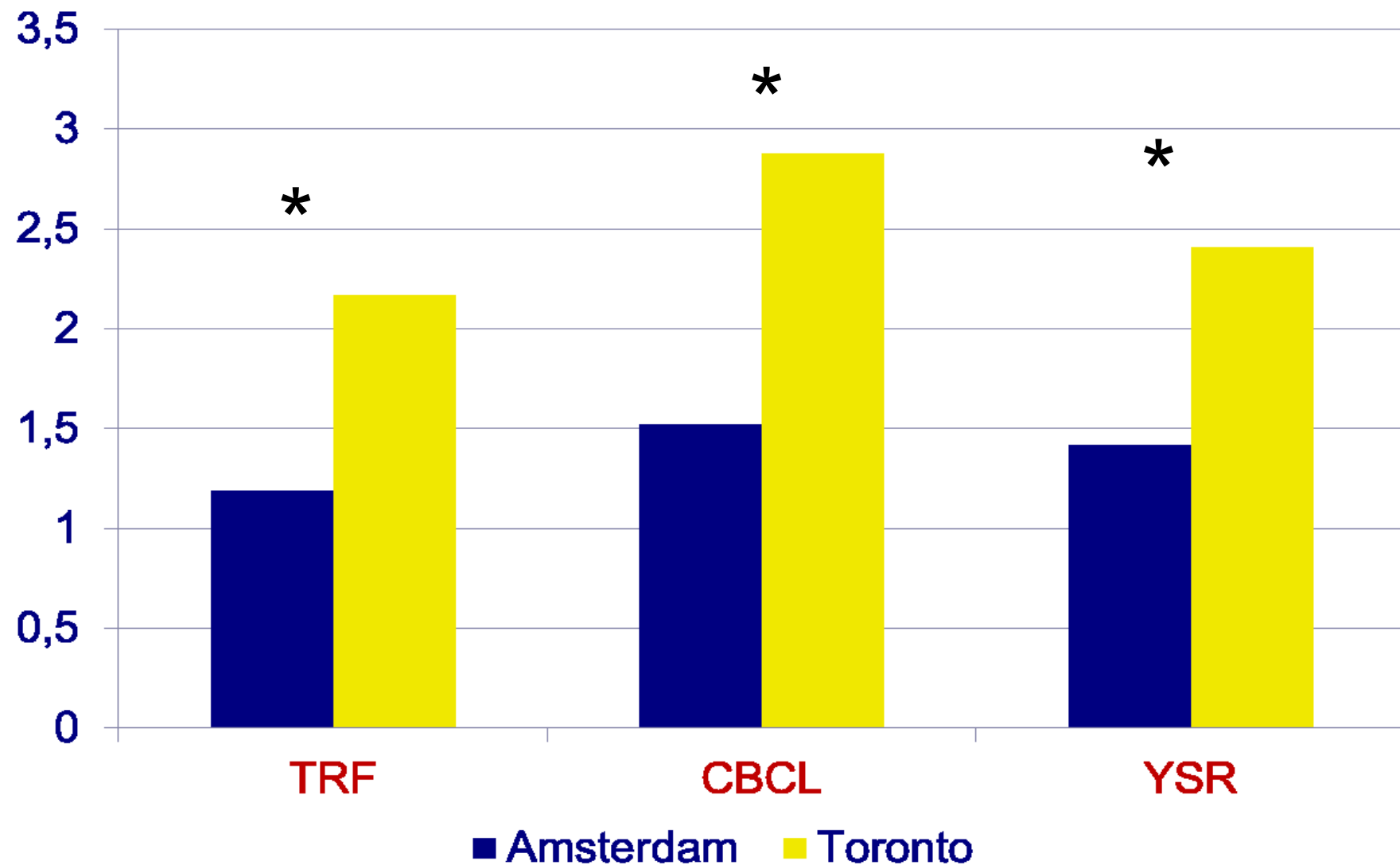
(de Vries et al, 2014)

# Do Transgender Adolescents Only Need Medical Treatment?

# Total problem score



# Peer Relations Scale



- Peer relations were the main predictor of total problem score
- Peer relations should be addressed during counseling

(de Vries et al, 2016)

# Other Types of Care

## External factors

- Hostile environment → internalized transphobia; suicidality
- Binders for breasts resulting in broken ribs

## Internal factors

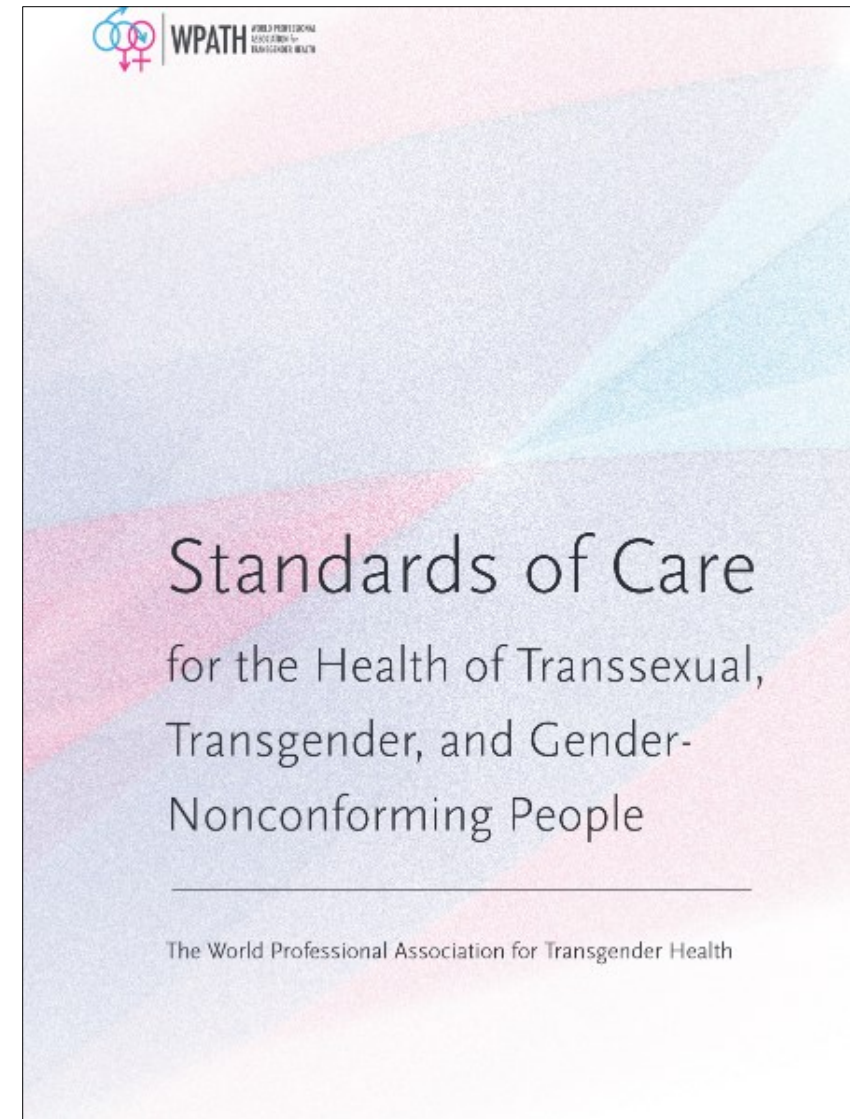
- Co-occurring psychological problems
  - Autism Spectrum Disorders (ASD) (guidelines by Strang et al, 2016)
  - ADHD



# International Guidelines 1

## Standards of Care (7th), World Professional Association for Transgender Health (WPATH)

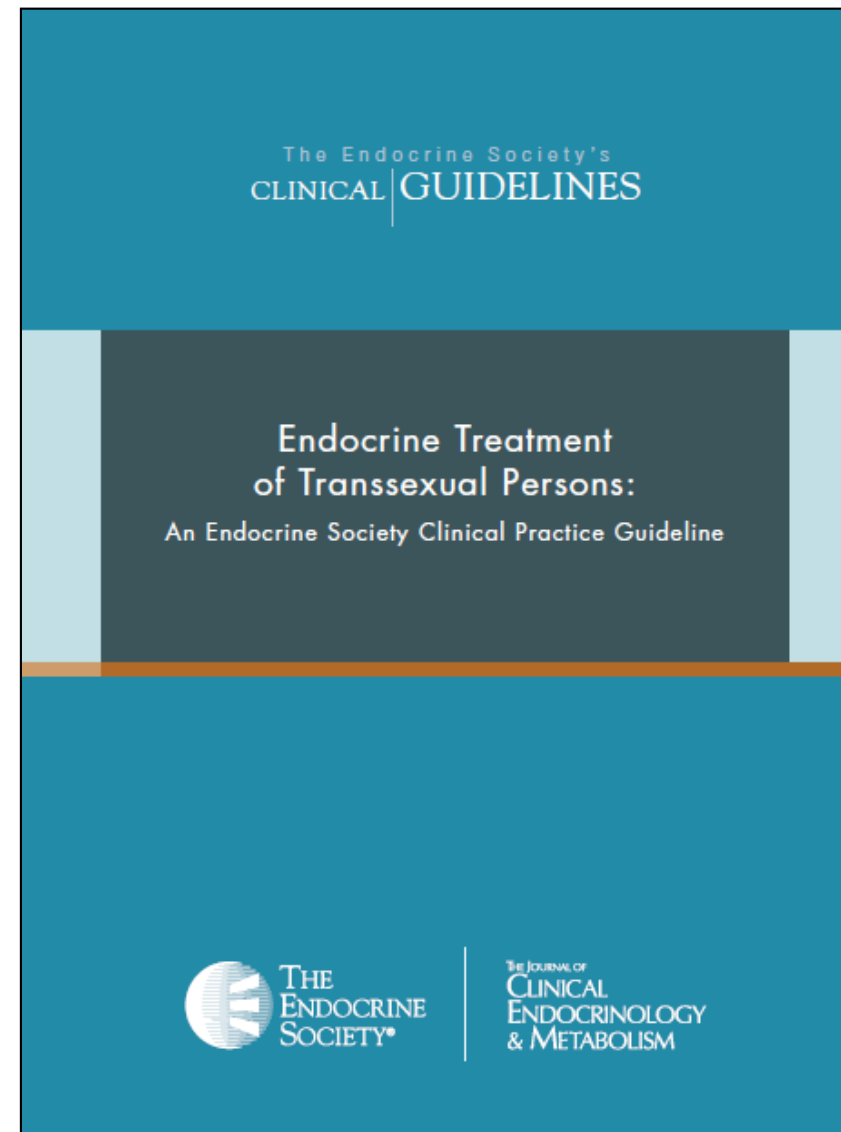
- 15 languages
- 120 pages
- Educational



(Meyer et al, 2001; [http://www.wpath.org/publications\\_standards.cfm](http://www.wpath.org/publications_standards.cfm))

# International Guidelines 2

- Clinical practice guidelines of the Endocrine Society (Hembree et al., JCEM, 2009)
  - Currently under revision



# Other Recommendations and Guidelines

- Report of **American Psychiatric Association** (2012)
- **American Academy of Child and Adolescent Psychiatry** (2012)
- Report of the **American Psychological Association's** (2009)
- Focus on Human Rights & Social Position

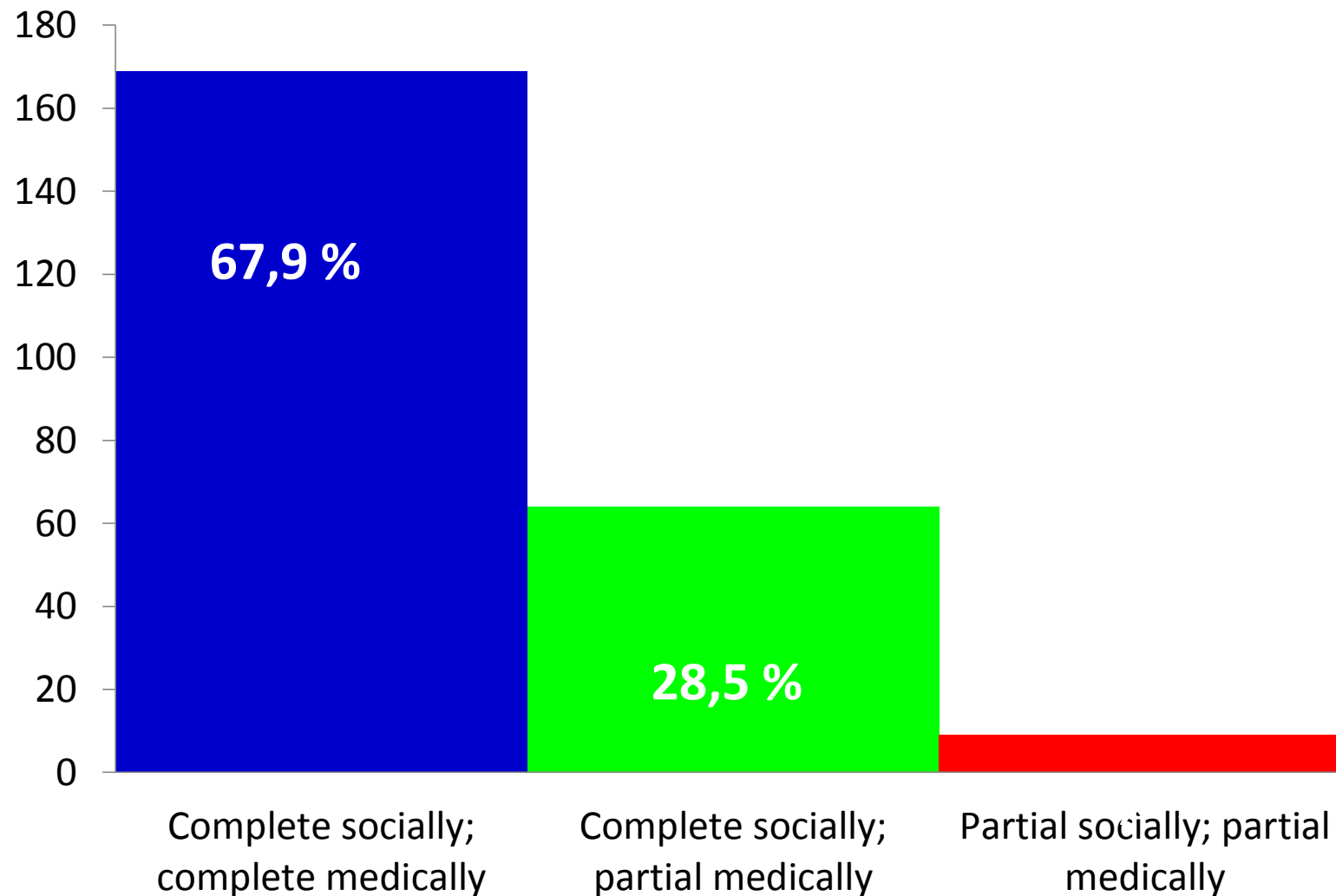
# Resolution of the World Medical Association, 2015

- The WMA urges that **every effort be made** to make individualized, multi-professional, interdisciplinary and affordable transgender healthcare available to all people who experience gender incongruence in order to reduce or to prevent pronounced gender dysphoria.

# Future Challenges

- Fertility issues
- Effects of legal changes
- Atypical treatment requests

# Desire for Type of Treatment in 2013 (adults; N=249)



Beek et al, 2015

# Do we know enough?

- First results look promising

CAUTION

ACHTUNG!

CUIDADO

UWAGA!

POZOR!

VIGYÁZAT!

注意

ВНИМАНИЕ!

FORSIGTIG

# What is Needed?

- More long-term research about
  - Gender development
  - Quality of life (social, psychological)
  - Physical development (growth, bones, brains)
- Preservation of fertility
- Eligibility criteria (age?)



# What is Needed? (2)

- Cross-clinic, cross-national studies
- Networks of researchers (Adolescent Gender Identity Research Group; AGIR)
- Fundamental research AND clinical research

# Find The Right Balance Between Caution And Willingness To Move Forward

