

Male-to-female Sex Reassignment Surgery using the combined vaginoplasty Technique: Satisfaction of the Transgender Patients with Aesthetic, Functional, and Sexual Outcomes

Απο άρρεν-σε-θήλυ Επεμβάσεις Επιβεβαίωσης του Φύλου
χρησιμοποιώντας τη Συνδυαστική Τεχνική Πλαστικής Κόλπου:
Ικανοποίηση των Διαφυλικών Ασθενών
με τα Αισθητικά, Λειτουργικά και Σεξουαλικά Αποτελέσματα

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No Disclosure

PROFESSOR PAPADOPOULOS



Transsexualism - Transgenderism

Defined as personality disorder (ICD-10, F64.0):

Desire to belong to the opposite sex and to be considered as such by others

Therapeutical Possibilities (WPATH Standards of Care):

- Psychotherapy
- Hormone Replacement Therapy
- Sex Reassignment Surgeries

Germany: guidelines currently in development*

* „Geschlechtsdysphorie: Diagnostik, Beratung und Behandlung“

Dr. Timo Nieder und Prof. Dr. Bernhard Strauß, Deutsche Gesellschaft für Sexualforschung DGfS

24.09.2012 – 31.12.2016



MtF Sex Reassignment Procedures

• Genital Procedures

- Penile invagination (Burou 1956) **Most common worldwide!**
- Penile invagination with scrotal flap (von Noort 1993)
- Penile invagination with urethral flap (Perovic 2000)
- Intestinal transpositions: ileum, recto-sigmoid

• Other Body Shaping Procedures

- Facial feminization surgery
- Chondrolaryngoplasty
- Vocal cord reduction
- Breast augmentation
- etc.



Downsides of Penile Invagination

Technique demands high tension of penile skin

- Scarring and denting of the mons pubis
- Low consideration of nerve anatomy
- Risk of tip necrosis of penile skin
- Clitoral hood and small labia difficult to reconstruct
- Possible prolapse of internal soft tissue



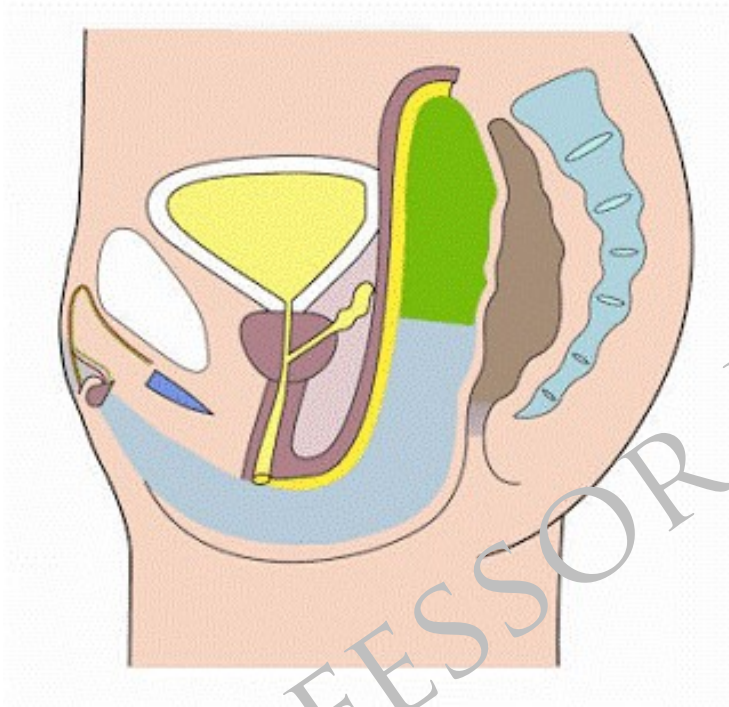
Aim of our Study

Assessing and analyzing prospectively the subjective Patients' Satisfaction with Aesthetic, Functional, and Sexual Outcomes after Male-to-Female Sex Reassignment Surgery using the Combined Technique

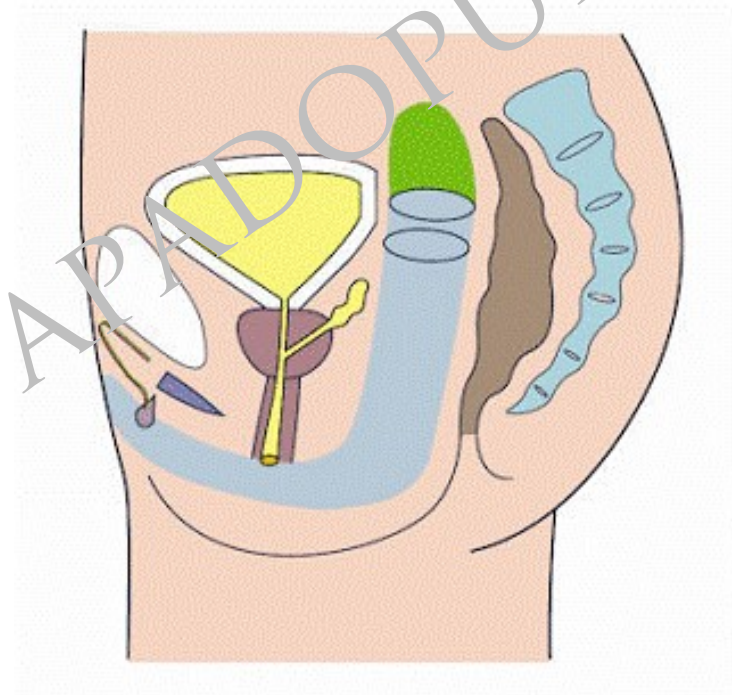
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Surgical Technique



Combined Technique



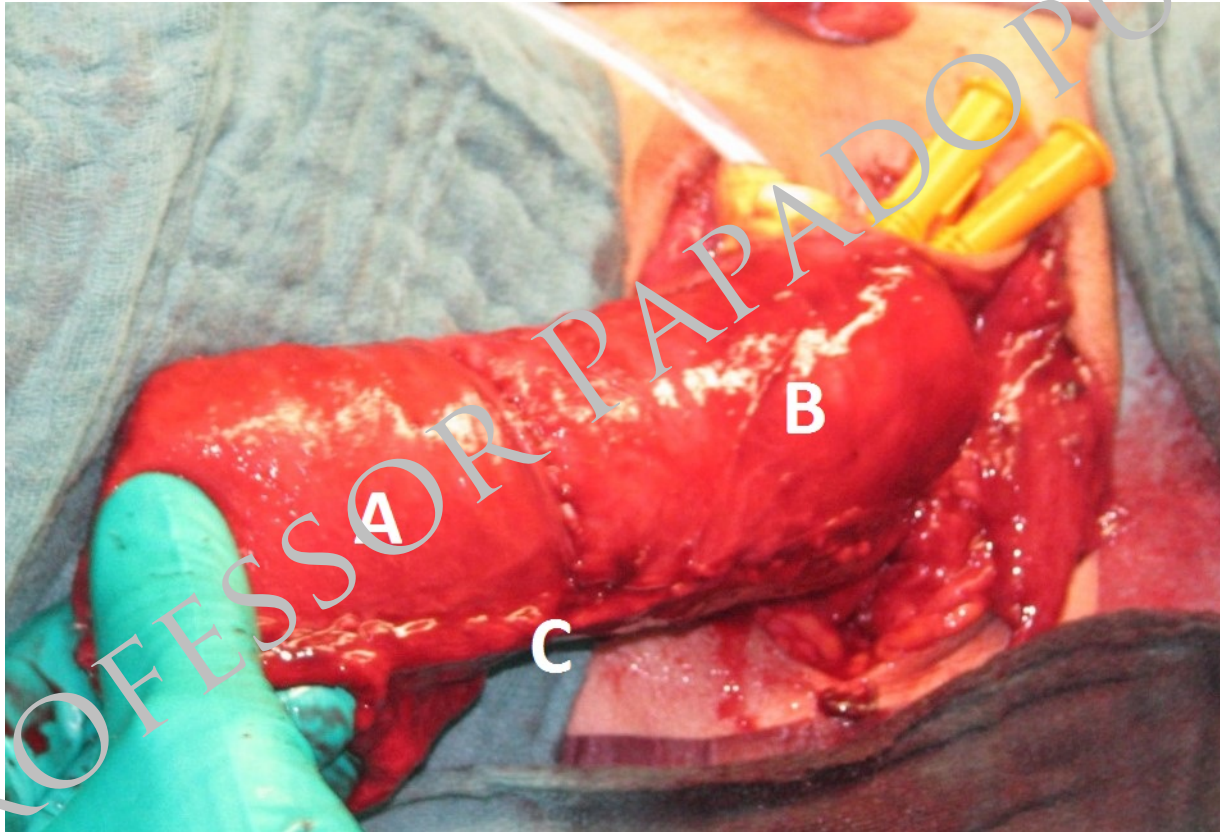
Penile Invagination

Scheme of the neovagina: penile skin (blue), urethra (yellow) and scrotal skin graft (green)

N. A. Papadopoulos et al.. J Sexual Medicine 2017;14:721-30.



Surgical Technique



Intraoperative view: A: scrotal skin transplant, B: penile skin flap, C: spatulated urethral flap.

N. A. Papadopoulos et al.. JPRAS 2017;70:1483-92.



Study Development

Design: Prospective Cohort Study

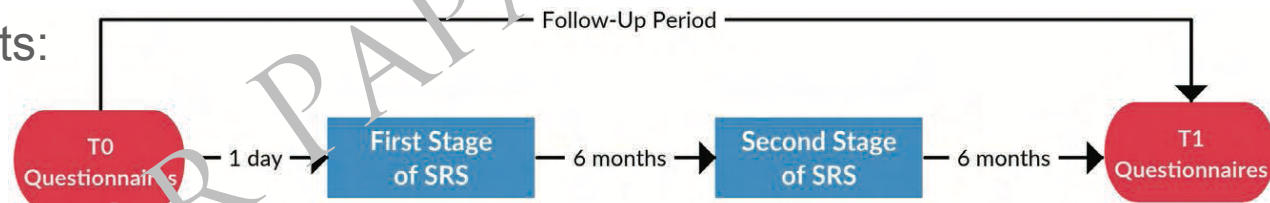
49 patients fit criteria between Oct 2012 and Jan 2014

39 patients (80%) filled out T0 and T1

23 patients (59%) physically examined postoperatively

Two Questionnaire Sets:

- T0: pre-op
- T1: 6 m. post-op



Inclusion Criteria:

- Diagnosed MtF Gender Dysphoria
- In-patient stay for first genital sex reassignment surgery

Exclusion Criteria:

- Previously operated genitals
- Missing consent to participate
- Lacking skills of German language



Self-Developed Indication-Specific Questionnaire

Klinikum rechts der Isar der Technischen Universität München Klinik und Poliklinik für Plastische Chirurgie	T0 ARIPC
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ID-Nr: _____

Datum: _____

Bitte beantworten Sie alle Fragen zu Ihrer Person sowie zu Ihrer geschlechtsangleichenden Operation vollständig. Ihre Angaben werden selbstverständlich streng vertraulich behandelt.

Angaben zu Ihrer Person

1. Wie alt sind Sie? Jahre
2. Wie schwer sind Sie? kg
3. Wie groß sind Sie? cm
4. Wie ist Ihr jetziger Familienstand?
 - ☐ ledig
 - ☐ verheiratet
 - ☐ verwitwet
 - ☐ getrennt lebend
 - ☐ geschieden
5. Mit wem leben Sie jetzt zusammen?
(Mehrfachnennungen sind möglich)
 - ☐ allein
 - ☐ mit Ehemann / Ehefrau / Partner
 - ☐ mit Kind (ern)
 - ☐ mit Eltern
 - ☐ mit anderen Angehörigen
 - ☐ mit anderen (nicht Verwandten)
6. Haben Sie Kinder?
 - ☐ nein
 - ☐ ja, nämlich (Anzahl)
7. Sind Sie Raucher?



Self-Developed Indication-Specific Questionnaire

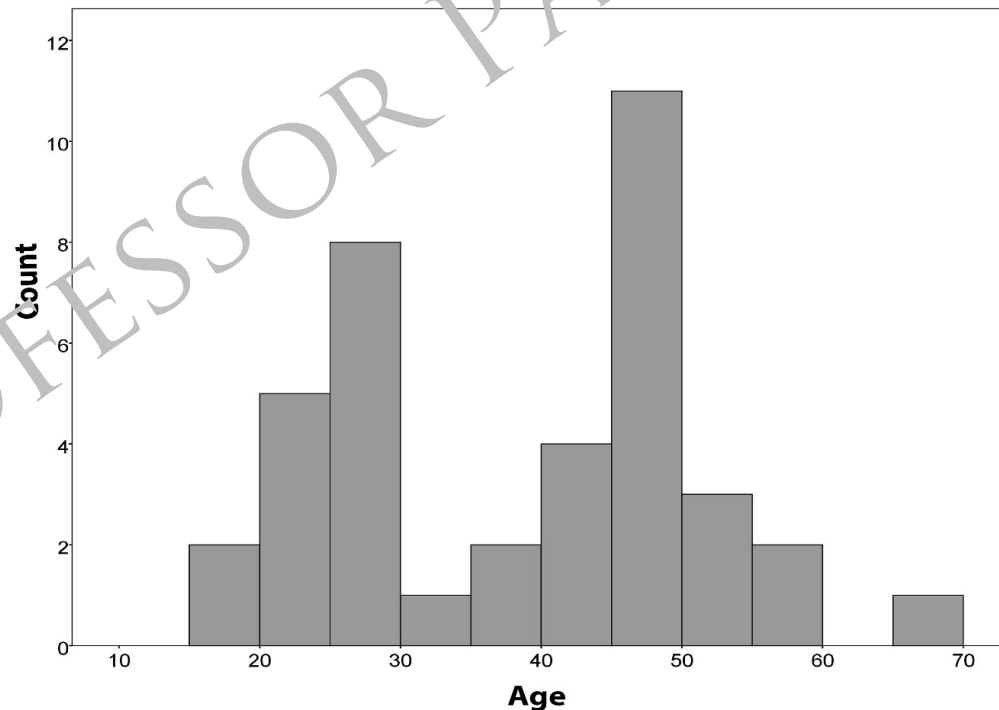
Questionnaire included:

- Personal data
- Conducted procedures and hospital stays
- Wishes and hopes of surgery
- Postoperative satisfaction
- Sexuality and intercourse
- Others' views on patients' surgery



Patient Data

Questionnaire Interval: 11.3 months
Age T0: 38.6 years [19 - 66]
Weight: 77.9 kg
Size: 1.79 m
BMI: 24.3





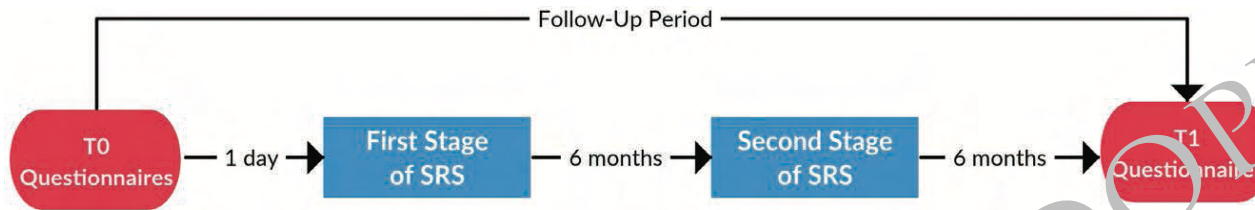
Physical Examination

- Gathering of some personal data
- Inspection and assessment of the breasts
- Inspection and assessment of the outer and inner genitals





Surgical Overview I



Total patients

39

First genital sex reassignment surgery 39 (100%)

Second genital sex reassignment surgery* 34 (87%)

Surgeries due to complications** 2 (5%)

Further elective surgeries in other clinics 8 (21%)

* 6.6 ± 1.2 months after first genital SRS

** inguinal abscess (1), colon injury(1)

Average in-patient stay: 27.0 ± 7.5 days [15 - 53]



Surgical Overview II

Non-genital plastic procedures

Breast augmentation	13 (49%)
Facial lipofilling	3 (8%)
Chondrolaryngoplasty	1 (3%)
Vocal cord reduction	1 (3%)
Abdominoplasty	1 (3%)

n = 39



Patient Desires

	preop T0	postop T1	T1/T0 ratio
Being more satisfied with body	35 (90%)	39 (100%)	111%
Feeling more feminine	31 (80%)	34 (87%)	110%
Feeling better adjusted	25 (64%)	35 (90%)	140%
Looking into a mirror easier	16 (41%)	31 (80%)	194%
Being more flexible with clothing	24 (62%)	28 (72%)	117%
Appealing better to my partner	12 (31%)	12 (31%)	100%
Going to the pool without restraints	34 (87%)	31 (80%)	91%

n = 39



Sexuality I

- Patients felt more feminine postop
Improvement from 7.54 to 8.99 ($p < 0.01$)
- Patients appeared more feminine to others postop
Improvement from 7.23 to 7.72 ($p = 0.08$)

0 - very unfeminine
10 - very feminine

	T0	T1	p
Sexual orientation towards			
- men	13 (41%)	15 (39%)	0.32
- women	10 (26%)	10 (26%)	
- both	12 (31%)	14 (36%)	
- neither	1 (3%)	0 (0%)	
Sexually active ?	7 (18%)	23 (56%)	<0.01
Satisfied with intercourse ?	3.29	6.68	<0.01

0 - very unsatisfied
10 - very satisfied

n = 39



Sexuality II

	n	postop T1	
Satisfied with orgasm?	38	8.21	0 - very unsatisfied 10 - very satisfied
Frequency of orgasm			
- during masturbation	39	6.73	0 - never 10 - always
- during sexual intercourse	22	6.52	
Pain with masturbation or intercourse?	39	7.67	0 - severe 10 - none



Satisfaction I

Satisfied with...	n	T1
Genital hair	39	7.26
Vaginal depth	39	8.87
Vaginal width	39	8.46
Vaginal lubrication	39	6.74
Clitoral sensation	39	8.49
Clitoral erogenous sensation	39	8.44
Looks of outer genital	39	7.77
Looks of large labia	39	7.59
Looks of small labia	39	7.56
Looks of clitoral hood	39	7.79
Looks of clitoris	39	7.74
Looks of breasts*		
- without surgical breast augmentation	15	6.20
- with surgical breast augmentation	18	9.06

0 - very unsatisfied
10 - very satisfied

* $p < 0.01$



Satisfaction II

Satisfied with...	n	T1
Vaginal scarring	39	8.22
Large labia scarring	39	8.06
Small labia scarring	39	8.64
Clitoral scarring	39	8.92
Breast scarring	37	7.88
Facial feminine appearance	36	7.33
Sound of voice	39	6.41
Aesthetic overall results	39	8.36
Functional overall results	39	8.28

0 - very unsatisfied
10 - very satisfied



Postoperative I

Overall burden was rated 6.03 of 10 points

Burden was:

- Less than expected: 16 (41%)
- As expected: 15 (39%)
- Greater than expected: 8 (20%)

Would choose surgery again:

- Definitely: 34 (87%)
- Rather yes: 5 (13%)
- Probably: 0 (0%)
- Rather no: 0 (0%)
- No: 0 (0%)

Recommendation to other MtF transgenders:

- Definitely: 24 (62%)
- Rather yes: 13 (33%)
- Probably: 2 (5%)
- Rather no: 0 (0%)
- No: 0 (0%)

n = 39



Postoperative II

Surgery acceptance by others:	n	T1
Family	39	8.53
Friends	39	9.28
Colleagues at work	34	7.97
Partner	25	8.84
Children	13	8.00

0 - full rejection
10 - full acceptance

Surgery regrets?

- Never: 38 (97%)
- Sometimes: 1 (3%)
- Yes: 0 (0%)

Quality of Life improved? 9.09 of 10 points

n = 39



Physical Examination - Breast

Breast Augmentation	n	Cup Size
Yes	10	C
No	13	AA

Breast augmentation on average 15,6 months prior to the physical exam
Implants inserted by sub-mammarian access in all 10 cases (100%)
Average implant volume: 327 ± 49 ml [240 - 400 ml]



Physical Examination - Genitals

Hair Growth	None	Little	Plenty
Large Labia	3	18	2
Small Labia	22	1	0
Clitoris	-	-	-
Vagina	21	2	0

Assessed objectively
by physician

Sensitivity	None	Little	Normal	Strong
Large Labia	0	1	22	0
Small Labia	0	0	18	5
Clitoris	0	1	12	10
Vagina	0	2	18	3

Assessed subjectively
by patient

n = 23



Physical Examination - Genitals

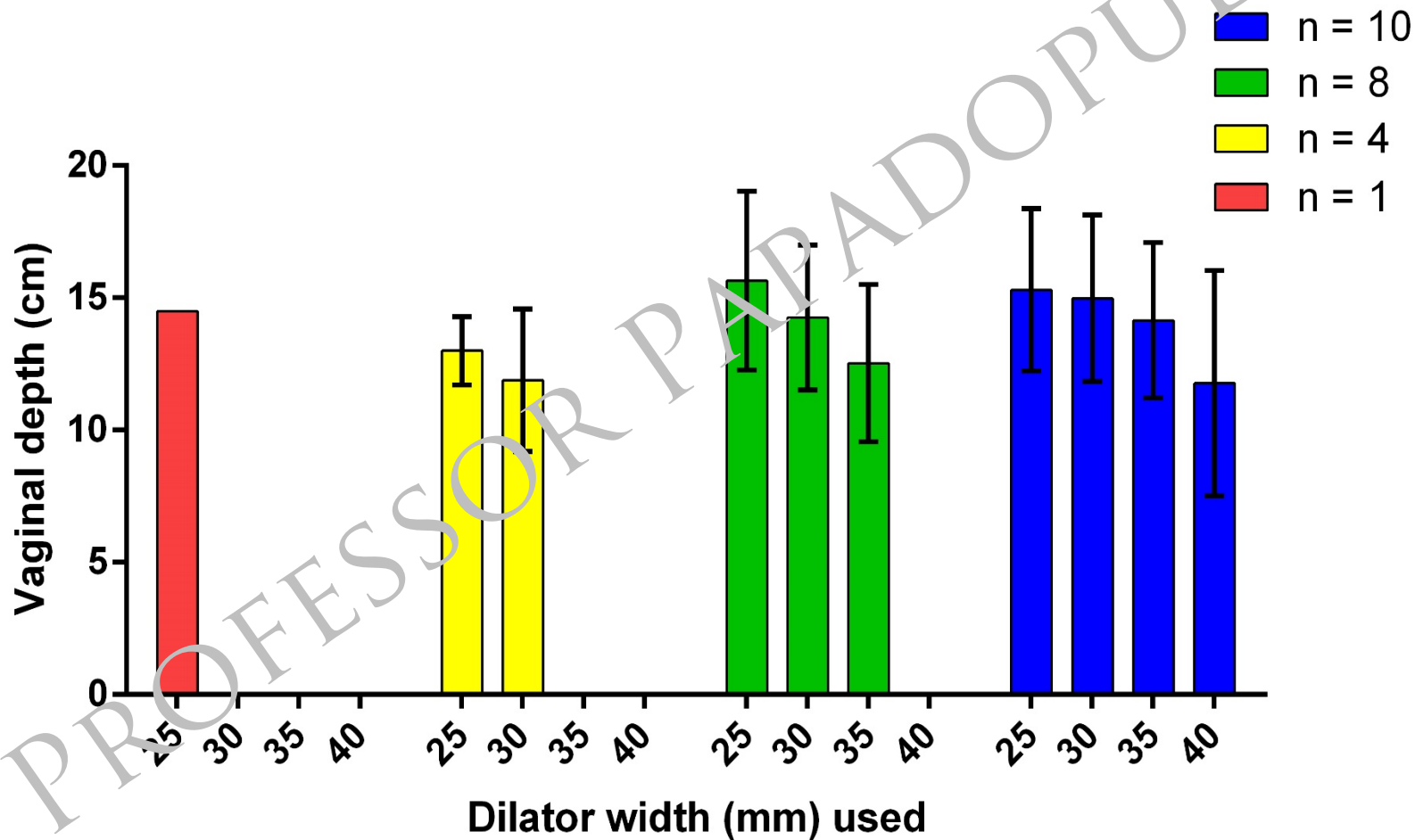


Visual depth measurement

N. A. Papadopoulos et al.. JPRAS 2017;70:1483-92.



Physical Examination - Genitals





Physical Examination - Genitals



Representative Results:

13 months after first, 6 months after second sex reassignment surgery



Conclusion

Satisfaction with the cosmetic outcome,
as well as the functional and sexual outcomes
reveal positive effects of SRS
using the combined technique on transgender patient lives.

Nevertheless, standardized and validated SRS-specific
questionnaires are lacking.