Introduction:
Creating the neovaginal canal is one of the most delicate
details of gender affirming surgery (GAS). The anatomically
correct location is between the rectum and the prostate.
We describe a novel spacing technique (NST) that
simplifies this part of surgery. Secondly, clinical outcomes
of patients with NST were retrospectively compared to
those receiving standard vaginoplasty (SV).

Material and methods:
In the NST group a TSK-Supra-Needle (20 Gauge, 120
mm length) was placed under direct transrectal ultrasound
guided visual control between the fascia of Denonvillier
and the anterior rectal wall. Injection of 40 – 60 ml normal
saline pushes the structures apart and positions the
anterior rectal wall temporarily away from the prostate. For
better intraoperative visualization we dyed the
hydrodistensed space with a few drops of methyleneblue.
Between June 2018 and October 2019 in total 43
transwomen received GAS with NST. The SV group
comprised 50 transwomen who were operated on between
May 2017 and June 2018. Otherwise there were no
differences in the peri- and postoperative treatment
between these two groups. All 93 surgeries have been
performed by the same surgeon.

Results:
NST was performed immediately prior to GAS. Patients in
both groups did not differ in age (SV 37.58 ± 13.94, range
16 - 67 years vs. NST 37.47 ± 13.70, range 19 - 65 years,
p=0.97) or BMI (SV 25.7 ± 5.1 vs. NST 28.3 ± 12.6 kg/m²;
p=0.18). Vaginal depth and width were larger in NST
patients compared to SV patients (14.5 ± 0.7 cm vs. 13.2 ±
2.2 cm; p=0.001; 4.0 ± 0.2 cm vs. 3.7 ± 0.4 cm; p<0.001).
There was no statistically significant difference in
occurrence of intraoperative rectal perforation (SV: n= 1,
NST: n=0; p=0.357). Total OR-time could be reduced when
hydrodistension was performed before vaginoplasty (SV
224.3 ± 33.3 min. vs. NST 200.8 ± 30.8 min.; p=0.001).

Conclusion:
The novel "spacing technique" is a promising and
easy to perform technique, which simplifies the
preparation of the neovaginal canal during GAS and
may facilitate preparation of neovaginal canal during
male to female gender affirming surgery.