

Posterior, anterior and peri-urethral surgical reconstruction of urinary continence mechanisms in robot-assisted radical prostatectomy. A description and video compilation of commonly performed surgical techniques

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Vis A.N.¹, Van Der Poel H.G.², Ruiters A.E.C.¹, Hu J.C.³, Tewari A.K.⁴, Rocco B.⁵, Patel V.R.⁶, Razdan S.⁷, Nieuwenhuijzen J.A.¹

¹VU Medical Center, Dept. of Urology, Amsterdam, The Netherlands, ²Antoni van Leeuwenhoek Hospital, Dept. of Urology, Amsterdam, The Netherlands, ³New York Presbyterian/Weill Cornell, Dept. of Urology, New York, United States of America, ⁴Icahn School of Medicine of Mount Sinai, Dept. of Urology, New York, United States of America, ⁵University of Modena and Reggio Emilia, Dept. of Urology, Modena, Italy, ⁶Global Robotics Institute, Dept. of Urology, Orlando, United States of America, ⁷International Robotic Prostatectomy Institute, Dept. of Urology, Miami, United States of America

Introduction & Objectives: Robot-assisted radical prostatectomy (RARP) is hampered by side-effects that may have a serious impact on quality of life, particularly stress urinary incontinence (SUI). SUI rates may be improved by surgical reconstruction of the pelvic floor.

Materials & Methods: Video-illustrations of different surgical techniques may be particularly worthwhile for practicing urologists in understanding the pelvic-floor anatomy and in the training of residents and fellows-in-urology. We describe and video-illustrate the most frequently performed pelvic reconstructive techniques in RARP as performed by experts-in-the-field. Surgical techniques are described such as posterior musculofascial reconstruction, anterior reconstruction and peri-urethral suspension, preservation of membranous urethral lengthening, bladder-neck reconstruction, and combinations. An overview of SUI-rates of the different techniques is given.

Results: All reconstructive surgical techniques result in similar short-term SUI-rates, and good-to-excellent outcomes one-year after surgery. There are only few RCTs comparing a reconstructive technique to 'no-reconstruction' or to a different reconstructive technique, and outcomes are conflicting.

Conclusions: Although many of the procedures report a benefit with respect to early continence, the benefits seem to diminish with longer follow-up. Whether any of the reconstructive techniques is superior over one another is a matter of study.