

- [11] Lee SE, Hong SK, Han JH, et al. Significance of neurovascular bundle formation observed on preoperative magnetic resonance imaging regarding postoperative erectile function after nerve-sparing radical retropubic prostatectomy. *Urology* 2007;69:510–4.
- [12] Kiyoshima K, Yokomizo A, Yoshida T, et al. Anatomical features of periprostatic tissue and its surroundings: a histological analysis of 79 radical retropubic prostatectomy specimens. *Jpn J Clin Oncol* 2004;34:463–8.
- [13] Graefen M, Walz J, Huland H. Open retropubic nerve-sparing radical prostatectomy. *Eur Urol* 2006;49:38–48.
- [14] Menon M, Shrivastava A, Kaul S, et al. Vattikuti Institute prostatectomy: contemporary technique and analysis of results. *Eur Urol* 2007;51:648–58 (discussion 657–8).
- [15] Stolzenburg J-U, Rabenalt R, Do M, et al. Intrafascial nerve-sparing endoscopic extraperitoneal radical prostatectomy. *Eur Urol* 2008;53:931–40.
- [16] Stolzenburg J-U, Schwalenberg T, Horn L-C, Neuhaus J, Constantinides C, Liatsikos EN. Anatomical landmarks of radical prostatectomy. *Eur Urol* 2007;51:629–39.
- [17] Saveria AT, Kaul S, Badani K, Stark AT, Shah NL, Menon M. Robotic radical prostatectomy with the “Veil of Aphrodite” technique: histologic evidence of enhanced nerve sparing. *Eur Urol* 2006;49:1065–74 (discussion 1073–4).
- [18] Takenaka A, Tewari A, Hara R, et al. Pelvic autonomic nerve mapping around the prostate by intraoperative electrical stimulation with simultaneous measurement of intracavernous and intraurethral pressure. *J Urol* 2007;177:225–9, discussion 229.
- [19] Nelson CP, Montie JE, McGuire EJ, Wedemeyer G, Wei JT. Intraoperative nerve stimulation with measurement of urethral sphincter pressure changes during radical retropubic prostatectomy: a feasibility study. *J Urol* 2003;169:2225–8.
- [20] Namiki S, Terai A, Nakagawa H, et al. Intraoperative electrophysiological confirmation of neurovascular bundle preservation during radical prostatectomy: long-term assessment of urinary and sexual function. *Jpn J Clin Oncol* 2005;35:660–6.

### Editorial Comment on: Nerves at the Ventral Prostatic Capsule Contribute to Erectile Function: Initial Electrophysiological Assessment in Humans

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Ever since the introduction of radical prostatectomy for prostate cancer, the so-called functional results were of major importance with regard to outcome and quality of life. As we have learned over the years, both the patient's and his spouse's quality of life are affected by various forms of treatment for prostate cancer [1]. Thus, achieving the optimal functional outcome is a paramount interest of everyone trying to treat prostate cancer. Since the introduction of Patrick Walsh's technique to preserve the neurovascular bundle, numerous modifications have been reported [2–7]. Initially, the urologic community believed that preserving the dorsolateral neurovascular bundle meant preserving potency. Due to novel data obtained from different groups, we have started to learn that the periprostatic nerve distribution is variable and that up to 25% of nerves can be found along the ventral circumference of the prostatic capsule [8–10]. It is obvious that the operation techniques in appropriate cases, in terms of oncologic safety—which, above all, is the most important trigger for all

treatment options—must be modified to achieve optimal functional results. None of the studies, however, answer the question of whether these nerves contribute to erectile functioning.

In the study by Kaiho et al, electrophysiologic testing is used to confirm whether or not nerves at the ventral circumference of the prostate capsule and the periprostatic nerve network contribute to erection [11]. As shown in the figures, the stimulation at all positions between 1 and 5 o'clock evoked urethral pressure responses leading to an increased cavernosal pressure; thus, the authors conclude that the periprostatic nerve network contributes to the erection.

It will be interesting to see whether other studies can corroborate these findings. Once these results have been verified, we must learn how to decide whether it is worth preserving these non-neurovascular bundle nerves and not compromising the oncologic outcome of radical prostatectomy.

### References

- [1] Sanda MG, Dunn RL, Michalski J, et al. Quality of life and satisfaction with outcome among prostate-cancer survivors. *N Engl J Med* 2008;358:1250–61.
- [2] Walsh PC, Lepor H, Eggleston JC. Radical prostatectomy with preservation of sexual function: anatomical and pathological considerations. *Prostate* 1983;4:473–85.
- [3] Montorsi F, Salonia A, Suardi N, et al. Improving the preservation of the urethral sphincter and neurovascular bundles during open radical retropubic prostatectomy. *Eur Urol* 2005;48:938–45.

- [4] Walsh PC, Donker PJ. Impotence following radical prostatectomy: insight into etiology and prevention. *J Urol* 1982;128:492–7.
- [5] Stolzenburg J-U, Schwalenberg T, Horn L-C, Neuhaus J, Constantinides C, Liatsikos EN. Anatomical landmarks of radical prostatectomy. *Eur Urol* 2007;51:629–39.
- [6] Graefen M, Walz J, Huland H. Open retropubic nerve-sparing radical prostatectomy. *Eur Urol* 2006;49:38–48.
- [7] Kessler TM, Burkhard FC, Studer UE. Nerve-sparing open radical retropubic prostatectomy. *Eur Urol* 2007;51:90–7.
- [8] Eichelberg C, Erbersdobler A, Michl U, et al. Nerve distribution along the prostatic capsule. *Eur Urol* 2007;51:105–11 (discussion 110–1).
- [9] Ganzer R, Blana A, Gaumann A, et al. Topographical anatomy of periprostatic and capsular nerves: quantification and computerised planimetry. *Eur Urol* 2008;54:353–61.
- [10] Lee SE, Hong SK, Han JH, et al. Significance of neurovascular bundle formation observed on preoperative magnetic resonance imaging regarding postoperative erectile function after nerve-sparing radical retropubic prostatectomy. *Urology* 2007;69:510–4.
- [11] Kaiho Y, Nakagawa H, Saito H, et al. Nerves at the ventral prostatic capsule contribute to erectile function: initial electrophysiological assessment in humans. *Eur Urol* 2009;55:148–55.

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