

Extended pelvic lymphadenectomy in prostate cancer: Practice makes perfect

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See related article <http://dx.doi.org/10.5489/cuaj.2485>.

Cite as: *Can Urol Assoc J* 2015;9(3-4):E232-3. <http://dx.doi.org/10.5489/cuaj.2877>
Published online April 13, 2015.

In 2002 our group and the colleagues from Berne demonstrated the diagnostic benefit of extended pelvic lymphadenectomy (EPLND) in men with prostate cancer who undergo radical prostatectomy.^{1,2} Both groups reported not only a significant increase in lymph node yield (median number: 20–22), but they also demonstrated a significant 2-fold increase in the number positive lymph nodes. Although the therapeutic impact of EPLND remains controversial, EPLND is recommended for pelvic lymphadenectomy in intermediate- and high-risk prostate cancer.^{3,4} It has been shown in multiple retrospective analysis that an adequate EPLND principally can be performed with the open, laparoscopic or robot-assisted technique.^{5,6} However, it became evident that clinical reality varied extremely from guideline recommended practice in so far that most robotic surgeons either did not perform an EPLND although oncologically indicated or that the surgeons only performed some type of pick-up lymphadenectomy with less than 10 lymph nodes removed.^{7,8}

The manuscript published by Di Pierro and colleagues⁹ is noteworthy since it clearly describes the learning curve in terms of lymph node yield and complications of an experienced surgeon with the open surgical technique. Surgeons who are not well-trained in radical prostatectomy must be aware that they might experience a longer and more painful learning experience. Several aspects of the manuscript deserve a critical appraisal.

1) The mean time of EPLND was 79 minutes, which is still much longer compared to an open procedure.¹ On the other hand, these data demonstrate that a meticulous, anatomically adequate PLND needs time to achieve the best outcome for the patient, a highly reliable diagnostic information and a potentially oncological benefit.

- 2) The mean number of dissected lymph nodes was 15 with increasing numbers from 13 to 17 between groups 1, 3, and 4. The lymph node yield plateaued after 60 surgeries and although increasing numbers are reported, these numbers are still much lower when compared to the original series of EPLND with a mean number of 28 lymph nodes.¹ However, we know from autopsy series that there is a highly variable number of lymph nodes so that it is not the mere number of nodes which counts, but a complete dissection of the primary landing zones of the prostate which was respected by the authors and which covers about 95% of all potential lymph node metastases.¹⁰
- 3) Most interestingly, the percentage of positive lymph nodes decreased significantly, with increasing numbers of dissected lymph nodes. This contradicts initial studies and may reflect a suboptimal pathohistological workup which, however, is crucial to obtaining adequate staging information.^{1,2} According to the surgical technique described, lymph nodes from each side were dissected in one package only, which by itself not only reduces the lymph node yield but also the number of retrieved positive lymph nodes as has been shown for bladder cancer.¹¹ Dissected lymph nodes should be pathohistologically processed in 8 separate packages resembling the anatomic area of dissection. Thereby the number of positive nodes will increase and we will be able to discuss the option of adjuvant versus expectant management.
- 4) The authors found that 11% of patients experienced major perioperative complications, of which 21 (9%) were related to EPLND and which remained constant throughout the study period.⁹ These data underline that a properly performed EPLND needs surgical expertise, dedication, and training. Knowing the areas of complications, the data presented by Di Pierro and colleagues will help surgeons improve their technique.

In summary, the authors are to be congratulated for reporting such a detailed workup of the learning curve, which

basically always describes the suffering of the patient being confronted with a new surgical technique. The data might represent a landmark for beginners. However, surgeons still need to compare their results with the data of standard open surgical approaches of centres of excellence which still seem to be superior.

Competing interests: The authors declare no competing financial or personal interests.

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