



The role of salvage lymph node dissection and PSMA-PET in recurrent prostate cancer

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Although up to 50% of the patients undergoing radical prostatectomy (RP) for clinically localized prostate cancer (PCa) are expected to experience biochemical recurrence sometime in their life (1), the introduction of novel techniques like the PSMA PET/CT can improve the diagnosis at the stage of lymph nodes-only recurrence (2-4). As we recently showed, the combination of PSMA PET with extended lymph node dissection has 94% accuracy for nodal staging in primary diagnosed intermediate- and high-risk PCa, while adding sentinel node biopsy in negative PSMA PET/CT increased the combined sensitivity to 100% (5). While the mainstay of treatment for these patients has traditionally been the administration of androgen deprivation therapy (ADT) (6), new approaches such as salvage lymph node dissection (SLND) have started coming to the front aiming to delay palliative ADT or improve survival in carefully selected patients (7,8).

In fact, SLND has been recently introduced in EAU guidelines (6) as a possible treatment option for patients with lymph node-confined recurrence, although it is clearly stated that both its efficacy and its impact on survival remain to be proven (9). In an effort to assess the real oncological benefit of SLND and the accuracy of PSMA PET/CT, Hanske *et al.* published recently a single-institution retrospective study comprising 43 hormone-naïve patients who underwent SLND over a period of 6 years (10). Interestingly, they reported a disappointing percentage of

biochemical response after SLND (namely 18.6% of the patients), while sensitivity and PPV of PSMA PET/CT were found to be 32% and 44% respectively. According to the authors, the aforementioned findings could be attributed to the fact that, unlike previous studies, their cohort was devoid of cases with hormone manipulation after RP.

Can it be concluded, then, that the introduction of elective SLND is about to reach a dead end? Probably not. Although we should have in mind that Hanske's study was the first to include only hormone-naïve patients, we should certainly not ignore the results of previous studies like the systematic review conducted by Ploussard *et al.* (11), which reported that SLND was associated with a non-negligible percentage of early biochemical response in patients with node-only recurrence. While outcomes of current studies seem to be contradictory, it is of utmost importance that we focus our efforts on finding those patients that could benefit the most from this novel approach. Towards this direction, Fossati *et al.* (12) developed a risk stratification model estimating the risk of early failure after SLND. As expected, they concluded that SLND should be avoided in patients with high risk for early biochemical recurrence. They also suggest that the patients should definitely be informed of the experimental nature of the procedure.

In conclusion, before widely accepting or rejecting the role of SLND, we should await the results of large randomized controlled trials lacking heterogeneity in

terms of patient selection, use of adjuvant therapies and surgical template. Moreover, these studies should obviously interpret their results by using common end-points, so that we can safely reach a consensus about the efficacy of this new therapeutic approach.

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Footnote

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References

- Porter CR, Kodama K, Gibbons RP, et al. 25-year prostate cancer control and survival outcomes: a 40-year radical prostatectomy single institution series. *J Urol* 2006;176:569-74.
- van Leeuwen PJ, Stricker P, Hruby G, et al. (68) Ga-PSMA has a high detection rate of prostate cancer recurrence outside the prostatic fossa in patients being considered for salvage radiation treatment. *BJU Int* 2016;117:732-9.
- Eiber M, Maurer T, Souvatzoglou M, et al. Evaluation of Hybrid ⁶⁸Ga-PSMA Ligand PET/CT in 248 Patients with Biochemical Recurrence After Radical Prostatectomy. *J Nucl Med* 2015;56:668-74.
- Kimura S, Abufaraj M, Janisch F, et al. Performance of [68Ga] Ga-PSMA 11 PET for detecting prostate cancer in the lymph nodes before salvage lymph node dissection: a systematic review and meta-analysis. *Prostate Cancer Prostatic Dis* 2020;23:1-0.
- Hinsenveld FJ, Wit EMK, van Leeuwen PJ, et al. Prostate-Specific Membrane Antigen PET/CT Combined with Sentinel Node Biopsy for Primary Lymph Node Staging in Prostate Cancer. *J Nucl Med* 2020;61:540-5.
- Cornford P, Bellmunt J, Bolla M, et al. EAU-ESTRO-SIOG Guidelines on Prostate Cancer. Part II: Treatment of Relapsing, Metastatic, and Castration-Resistant Prostate Cancer. *Eur Urol* 2017;71:630-42.
- Tilki D, Mandel P, Seeliger F, et al. Salvage lymph node dissection for nodal recurrence of prostate cancer after radical prostatectomy. *J Urol* 2015;193:484-90.
- Karnes RJ, Murphy CR, Bergstralh EJ, et al. Salvage lymph node dissection for prostate cancer nodal recurrence detected by 11C-choline positron emission tomography/computerized tomography. *J Urol* 2015;193:111-6.
- Ploussard G, Almeras C, Briganti A, et al. Management of Node Only Recurrence after Primary Local Treatment for Prostate Cancer: A Systematic Review of the Literature. *J Urol* 2015;194:983-8.
- Hanske J, Ostholt J, Roghmann F, et al. Salvage lymph node dissection in hormone-naïve men: How effective is surgery? *Urol Oncol* 2019;37:812.e17-812.e24.
- Ploussard G, Gandaglia G, Borgmann H, et al. Salvage Lymph Node Dissection for Nodal Recurrent Prostate Cancer: A Systematic Review. *Eur Urol* 2019;76:493-504.
- Fossati N, Suardi N, Gandaglia G, et al. Identifying the Optimal Candidate for Salvage Lymph Node Dissection for Nodal Recurrence of Prostate Cancer: Results from a Large, Multi-institutional Analysis. *Eur Urol* 2019;75:176-83.

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