

The importance of an adequate surgical template during salvage lymph node dissection for node-recurrent prostate cancer

Carlo Andrea Bravi¹, Nicola Fossati¹, Giorgio Gandaglia¹, Nazareno Suardi², Francesco Montorsi¹, Alberto Briganti¹

¹ *Division of Oncology/Unit of Urology; URI; IRCCS Ospedale San Raffaele, Milan, Italy*

² *Department of Urology, Policlinico San Martino Hospital, University of Genova, Italy*

Word count: 331 [Word limit: 800]

References: 10 [Reference limit: 10]

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors. The authors declare no conflicts of interest in preparing this article.

We read with great interest the insightful article by Dr. Farolfi and colleagues¹ recently published in the *Journal of Nuclear Medicine* and describing patterns of prostate cancer recurrence after salvage lymph node dissection (sLND). Data provided by authors adds significantly to current literature, and improves our understanding of potential pitfalls that might determine suboptimal results after metastasis-directed therapies (MDTs).

In a series of 16 men who had PSA persistence after sLND, Dr. Farolfi and colleagues compared results of pre- vs. post-operative PSMA-PET scans, and found that 63% of patients had post-operative scan positive for cancer recurrence in locations already described at pre-operative imaging. Although the precise surgical template was not specified by authors, all positive regions at preoperative PSMA-PET scan were surgically explored, with a median number of 17 nodes removed. However, while preoperative PSMA-PET scans identified 24 positive spots, final pathology resulted in 88 positive nodes. This further underlines how imaging is prone to underestimation of tumor burden^{2,3}, and reiterates the importance of a thorough surgical dissection, including obturator and internal iliac nodes that were the sites most often involved by PSMA-PET persistence after sLND¹. In fact, an incomplete surgical resection might be among reasons explaining the worse-than-expected outcomes of sLND at long-term follow-up^{4,5}. Therefore, awaiting prospective evidence on this issue, an extended, bilateral surgical template should be recommended whenever pelvic sLND is contemplated, an exception being men with one single spot at preoperative PSMA-PET scan who might safely undergo an unilateral (yet, extended) surgical dissection⁶.

The adoption of an adequate template is key to maximize the potential benefit associated with metastasis-directed therapies, a rationale that pertains to sLND as well as to radiotherapy⁷⁻¹⁰. This was further confirmed by Dr. Farolfi and colleagues who should be commended for their important contribution that has relevant implications for clinical practice. Now more than ever, this data should be borne in mind whenever MDTs are contemplated, and physicians should be aware of the risk of unsuccessful MDT in case of suboptimal treatment template.

Abbreviations:

PSMA, prostate specific membrane antigen

PET, positron emission tomography

REFERENCES

1. Farolfi A, Ilhan H, Gafita A, Calais J. Mapping Prostate Cancer Lesions Before and After Unsuccessful Salvage Lymph Node Dissection Using Repeat PSMA PET. June 2020:1-6. doi:10.2967/jnumed.119.235374.
2. 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. *European Urology*. October 2018:1-8. doi:10.1016/j.eururo.2018.09.009.
3. Fossati N, Scarcella S, Gandaglia G, et al. *Underestimation of PET/CT Scan in Assessing Tumour Burden of Men with Nodal Recurrence From Prostate Cancer: Head-to-Head Comparison of ⁶⁸Ga-PSMA and ¹¹C-Choline in a Large, Multi-Institutional Series of Extended Salvage Lymph Node Dissections*. JURO; 2020. doi:doi.org/10.1097/JU.0000000000000800.
4. Bravi CA, Fossati N, Gandaglia G, et al. Long-term Outcomes of Salvage Lymph Node Dissection for Nodal Recurrence of Prostate Cancer After Radical Prostatectomy: Not as Good as Previously Thought. *European Urology*. July 2020:1-9. doi:10.1016/j.eururo.2020.06.043.
5. Eastham J. Salvage Pelvic Lymph Node Dissection for Nodal Recurrence After Radical Prostatectomy Results in Minimal Clinical Benefit. *European Urology*. July 2020:1-1. doi:10.1016/j.eururo.2020.06.043.
6. Bravi CA, Fossati N, Gandaglia G, et al. Assessing the Best Surgical Template at Salvage Pelvic Lymph Node Dissection for Nodal Recurrence of Prostate Cancer After Radical Prostatectomy: When Can Bilateral Dissection be Omitted? Results from a Multi-institutional Series. *European Urology*. July 2020:1-4. doi:10.1016/j.eururo.2020.06.047.
7. Palma DA, Olson R, Harrow S, et al. Stereotactic ablative radiotherapy versus standard of care palliative treatment in patients with oligometastatic cancers (SABR-COMET): a randomised, phase 2, open-label trial. *The Lancet*. 2019;393(10185):2051-2058. doi:10.1016/S0140-6736(18)32487-5.
8. Ost P, Reynders D, Decaestecker K. Surveillance or Metastasis-Directed Therapy for Oligometastatic Prostate Cancer Recurrence: A Prospective, Randomized, Multicenter Phase II Trial. *JCO*. January 2018:1-9. doi:10.1200/JCO.2017.75.4853.
9. Bravi CA, Montorsi F, Briganti A. Reply to V erane Achard, Alan Dal Pra, and Thomas Zilli's Letter to the Editor re: Carlo A. Bravi, Nicola Fossati, Giorgio Gandaglia, et al. Long-term Outcomes of Salvage Lymph Node Dissection for Nodal Recurrence of Prostate Cancer After Radical Prostatectomy: Not as Good as Previously Thought. *Eur Urol*. In press. <https://doi.org/10.1016/j.eururo.2020.06.043>. *European Urology*. October 2020:1-2. doi:10.1016/j.eururo.2020.09.036.
10. Connor MJ, Smith A, Miah S, et al. Targeting Oligometastasis with Stereotactic Ablative Radiation Therapy or Surgery in Metastatic Hormone-sensitive Prostate Cancer: A Systematic Review of Prospective Clinical Trials. *European Urology Oncology*. September 2020:1-12. doi:10.1016/j.euo.2020.07.004.