

Metastases to inguinal lymph nodes in prostate cancer: a new perspective on an uncommon pattern of spread

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Prostate cancer is the second most common malignancy in men, second only to non-melanoma skin cancer⁽¹⁾. The metastatic spread of prostate cancer occurs through local invasion, lymphatic dissemination, and hematogenous dissemination, the most common sites being the pelvic lymph nodes and bones, where metastases are found in 99% and 84% of cases, respectively⁽²⁾. The question of inguinal lymph node involvement has emerged primarily due to the increased use of cross-sectional imaging methods such as CT and MRI, as well as metabolic evaluation by PET, especially with prostate-specific radiotracers such as PSMA. Metastases to inguinal lymph nodes are considered rare and present a diagnostic challenge because they are not typically included in conventional treatment fields such as radiotherapy or lymphadenectomy. The actual prevalence of and predictive factors for metastatic inguinal lymph nodes remain uncertain, and data in the literature are based on imaging findings without histopathological correlation^(3,4).

The study “Inguinal lymph node metastases from prostate cancer: clinical, pathology, and multimodality imaging considerations”⁽⁵⁾, recently published in **Radiologia Brasileira**, comprehensively investigates the clinical, pathological, and imaging findings associated with metastases in inguinal lymph nodes in patients with prostate cancer who underwent image-guided inguinal lymph node biopsy. Through a detailed retrospective analysis involving a substantial cohort of patients, the authors explored morphological and functional characteristics, such as inguinal lymph node short-axis diameter, PSMA uptake on PET, and extent of the primary tumor, as well as complete staging, with assessment of the pattern of lymphatic spread

and non-lymph node metastases. Clinical, laboratory, and previous treatment data (primary tumor or recurrence) were also crucial in the assessment of metastatic inguinal lymph nodes, including PSA levels and castration resistance.

This study contributes significantly to the understanding of risk factors for inguinal lymph node metastases in prostate cancer, being the largest cohort for this assessment. Knowledge of these risk factors can help radiologists and nuclear medicine physicians interpret findings, which are essential for accurate patient staging and individualized therapeutic planning. The authors emphasize that isolated inguinal lymph node metastasis is extremely rare in the absence of identified risk factors. Additionally, investigation with different diagnostic methods, including PSMA-PET and potentially PET with radiotracers other than PSMA, in the detection of inguinal lymph nodes metastases, is promising for a more accurate diagnosis. As a future perspective, the investigation of biomarkers and molecular pathways involved in the spread of prostate cancer to inguinal lymph nodes may pave the way for therapies that are more targeted and personalized⁽⁶⁾.

REFERENCES

1. Gandaglia G, Abdollah F, Schiffmann J, et al. Distribution of metastatic sites in patients with prostate cancer: a population-based analysis. *Prostate*. 2014;74:210–6.
2. Swanson GP, Hubbard JK. A better understanding of lymphatic drainage of the prostate with modern imaging and surgical techniques. *Clin Genitourin Cancer*. 2013;11:431–40.
3. Jackson ASN, Sohaib SA, Staffurth JN, et al. Distribution of lymph nodes in men with prostatic adenocarcinoma and lymphadenopathy at presentation: a retrospective radiological review and implications for prostate and pelvis radiotherapy. *Clin Oncol (R Coll Radiol)*. 2006;18:109–16.
4. Schiller K, Stöhler L, Düsberg M, et al. PSMA-PET/CT-based lymph node atlas for prostate cancer patients recurring after primary treatment: clinical implications for salvage radiation therapy. *Eur Urol Oncol*. 2021;4:73–83.
5. Woo S, Becker AS, Ghafoor S, et al. Inguinal lymph node metastases from prostate cancer: clinical, pathology, and multimodality imaging considerations. *Radiol Bras*. 2024;57:e20240013.
6. Barbosa FG, Queiroz MA, Nunes RF, et al. Revisiting prostate cancer recurrence with PSMA PET: atlas of typical and atypical patterns of spread. *Radiographics*. 2019;39:186–212.

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