Choose OSNA to explore a new dimension of nodal staging in prostate cancer

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Metastatic cancer spread to lymph nodes (LN) is a pivotal prognostic factor in prostate cancer, thus correct assessment of the nodal status is paramount for adjuvant treatment planning. In clinically localised early stage prostate cancer, nodal staging is performed by pelvic lymph node dissection (PLND) in eligible intermediate- or high-risk patients. However, this surgical procedure is associated with a high risk for patients to suffer from post-surgical morbidities and a considerable reduction of quality of life. Furthermore, metastatic LN involvement in low volume disease might be limited. Current histopathological assessment of dissected nodes comprises H&E staining of a limited number of tissue sections often leaving small metastases undetected thus impairing staging accuracy.

Alternative approaches to PLND are under evaluation with the aim to increase staging accuracy and at the same time offering the potential to reduce surgical radicality. One option put to the test is targeted PLND, where a selected number of lymph nodes is removed from different areas of the pelvic lymph node pattern. A second option is intra-operative tracer-guided sentinel LND (sLND) to identify lymph nodes with the highest chance to harbour metastasis. Both methods aim to enhance staging accuracy by more intensive LN analysis of a smaller number of nodes. However, histopathologic serial sectioning and immunochemistry are known to be labour-intensive, time-consuming and costly and not suitable for intraoperative use.

OSNA (one step nucleic acid amplification) constitutes an optimal solution to overcome such limitations. OSNA is a rapid, highly sensitive and standardised molecular method which allows analysis of the entire LN, already intraoperatively if necessary. This enables clinicians to base treatment decisions on solid nodal staging information.

**At a glance**

- Sensitive, molecular whole node analysis avoids missing even the smallest metastasis and increases staging and prognosis accuracy
- Fast, fully informed intraoperative results allow to potentially reduce surgical radicality and related morbidities
- Reliable nodal staging supports adequate treatment choice and prevention of biomedical recurrence risk

**Accurate, molecular analysis of lymph nodes supporting treatment decisions in prostate cancer patients**