The pathologic stage of the primary bladder tumour and the presence of lymph node metastasis are the most important determinants of survival in patients with bladder cancer undergoing radical cystectomy. The optimal extent of the lymph node dissection for accurate staging, the curative potential of the method, and the prognosis of lymph node-positive disease after such treatment are matters of debate.

In a recent issue of *European Urology* it was shown that there is a relatively common discrepancy between clinical and pathologic stage after extirpative surgery for bladder cancer [1]. But even the histopathologic examination of lymph nodes has its limitations, as indicated by immunohistochemical and reverse transcription polymerase chain reaction (RT-PCR) analysis [2]. As cancer is a disease of cells having abnormal gene expression, different molecular tools are currently being investigated to improve diagnostics and optimize therapy decisions [3].

In the present study, qRT-PCR analysis is used focusing on the sensitivity of routine histologic examination of lymph nodes from bladder cancer patients undergoing radical cystectomy [4]. A whole set of genes was analysed in terms of applicability, ending up with five genes that were evaluated by qRT-PCR. A combination of two of the evaluated genes yielded a 100% sensitivity and specificity differentiating lymph nodes with bladder urothelial carcinoma dissemination from controls. Combined, the expression of both genes allowed the identification of urothelial cells in lymph nodes in 20.5% of patients with previous histopathologically negative classified lymph nodes.

However, the present study showed, as others before [3], no significantly worse survival of patients presenting qRT-PCR positive compared to negative lymph nodes after a median follow-up of 35 mo.

When using RT-PCR analysis, it is important to ask how patient management will be affected when the assay is positive and the histopathologic assessment is negative. If the prognostic value of this method could be determined in prospective series, RT-PCR results could serve as a tool to assess the need for and extent of lymph node dissection, especially if available in a time frame suitable for intraoperative evaluation.

**References**


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