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DOES THE LYMPHATIC DRAINAGE PATTERN OF THE LATERAL BLADDER WALL MAKE A BILATERAL PELVIC LYMPHADENECTOMY (PLND) UNNECESSARY IN STRICTLY LATERALLY LOCALIZED INVASIVE BLADDER CANCER? RESULTS OF A MULTIMODALITY MAPPING STUDY
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INTRODUCTION AND OBJECTIVES: To use single photon emission computed tomography (SPECT) combined with computed tomography (CT) plus intraoperative gamma probe verification to map the primary lymphatic landing sites of the lateral bladder wall.

METHODS: Clinical trial of 40 consecutive cystectomy patients with unilateral bladder cancer (>cT3, cN0, cM0) at a single center. One day prior to surgery flexible cystoscopy-guided injection of Tc-99m nanocolloid into the non-tumor-bearing lateral bladder wall (left: n=21; right: n=19) was performed. All patients underwent SPECT-CT 3 and 6 h after injection of the radiopharmaceutical with a bladder flushing catheter in place. The SPECT-CT detected radioactive lymph nodes (LNs) were confirmed intraoperatively with a gamma probe at the time of PLND. Radioactive LNs were removed separately. A backup extended PLND was performed to preclude missed primary lymphatic landing sites. The SPECT-CT and intraoperative findings were used to generate a three-dimensional projection of each LN site.

RESULTS: A total of 1655 LNs (median 39 LNs per patient; range 21–83) were resected. 228 of these were radioactive (median 6 radioactive LNs per patient; range: 1–17). 193 radioactive LNs (85%) were located on the ipsilateral side of the injection and 35 (15%) on the contralateral side (external iliac 6%, obturator fossa 5%, common iliac 4%), but none in the internal iliac region. Only 11% of radioactive LNs were located cephalad to the ureter-iliac crossing. All patients had at least 1 radioactive LN on the ipsilateral side. 40% of patients had at least 1 additional radioactive LN on the contralateral side.

CONCLUSIONS: A unilateral PLND would have missed radioactive LNs on the contralateral side in 40% of patients. Therefore, a bilateral extended PLND including the common iliac region up to the ureter-iliac crossing is mandatory even in strictly laterally localized bladder tumors. Still, we could not detect any radioactive LNs in the contralateral internal iliac region. Therefore, contralateral PLND may be limited to the obturator fossa, external iliac and common iliac region which has influence on nerve sparing in patients who are candidates for an ileal bladder substitute.

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PRACTICE PATTERNS OF PELVIC LYMPH NODE DISSECTION FOR RADICAL CYSTECTOMY FROM THE VETERANS AFFAIRS CENTRAL CANCER REGISTRY (VACCR)
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INTRODUCTION AND OBJECTIVES: Recent reports from Medicare-SEER suggest that pelvic lymph node dissection (PLND) is only performed approximately half of the time during cystectomy for bladder cancer. We examined patterns of PLND and lymph node (LN) yield in patients undergoing cystectomy from a multi-center database of 120 VA medical centers.

METHODS: The VACCR was queried for all patients diagnosed with bladder cancer from 1995–2008. Number of patients undergoing PLND and LN yield was calculated by stage for 1,940 patients that had cystectomy. Kaplan-Meier analysis was used to examine overall survival (OS) and disease-free survival (DFS) in patients with/without PLND and with LN yield ≥10 or ≥14 by T stage. Uni- and multivariate analyses for the effects of age, T stage, and year of surgery on PLND and LN yield were performed.

RESULTS: PLND was performed in 1,806 (83%) of patients undergoing cystectomy and median number of nodes obtained was 9. 739 (50%) patients had LN yield ≥ 10 nodes, and 475 (32%) had ≥ 14 nodes. Overall survival was not significantly different in all patients undergoing cystectomy based on whether PLND was performed; however, when stratified by stage, only T1 patients had significantly improved OS and DFS if PLND was performed (Fig. 1). In patients who had PLND, lymph node yield ≥10 or ≥14 did not result in significant differences in OS or DFS. Both univariate and multivariate analyses demonstrated that surgery after 2001 was significantly associated with performance of PLND (OR 1.38, 1.06–1.80) and that older patients were less likely to have LN yield ≥10 or ≥14 (OR 0.98, 0.97–0.99).

CONCLUSIONS: In contrast to other published series, the majority of patients in the VACCR underwent PLND, and patients undergoing cystectomy after 2001 were more likely to have PLND. PLND improved OS and DFS only for patients with T1 disease. Poor overall survival in this population may impede efforts to detect survival benefit from PLND. Further examination of the VACCR is required to understand comorbidities and other factors that may contribute to overall poor survival in this population.