

[2006] [1395] Extended pelvic lymph node dissection allows better identification of lymph node metastasis in patients with clinically localised prostate cancer

Virgilijus Klevecka, Michael Musch, Ulla Roggenbuck, Essen, Germany; Stephan Störkel, Wuppertal, Germany; Darko Kroepfl*, Essen, Germany.

Introduction and Objective: Pelvic lymph node dissection is the most accurate tool for detecting lymph node metastasis in patients with prostate cancer. It has been suggested that limited pelvic node dissection as commonly performed in misses a substantial number of lymph node metastases. To assess the value of extended lymphadenectomy in detecting nodal metastasis we compared the results of limited versus extended pelvic lymphadenectomy in patients stratified according to their tumor characteristics. Methods: Based on the prospectively sampled data we stratified prostate cancer patients according to their tumor characteristics, i.e., PSA level, clinical stage, preoperative Gleason score, and the extent of lymph node dissection performed. The limited lymph node dissection included obturator and external iliac vein lymph nodes and the extended lymphadenectomy additionally the hypogastric and external iliac artery lymph nodes. Results: 668 patients underwent surgery between 06/1997 and 10/2004, limited lymph node dissection was performed in 477 patients and extended lymph node dissection in 191. Mean patient age was 64.9 years, clinical stage was T1 in 267 (40,0%), T2a in 161 (24,1%), T2b in 159 (23,8%) and T2c in 81 (12,1%). Mean preoperative PSA was 8,14 ng/ml. Positive nodes were found in 30 of 477 (6.3%) patients undergoing limited dissection and 28 of 191 (14.7%) patients undergoing extended dissection. The numbers of lymph node metastases detected in the different subgroups of patients formed on the basis of PSA level, preoperative Gleason score, clinical stage and extent of lymphadenectomy are shown in Table 1. Conclusions: The present study demonstrates that, in prostate cancer patients with similar tumor characteristics, extended pelvic lymphadenectomy substantially increases the number of lymph node metastases diagnosed. These findings suggest that extended pelvic lymphadenectomy should be performed in patients with localised prostate cancer who have a risk of lymph node metastasis.

Incidence of lymph node metastasis depending on extent of lymph node dissection						
PSA (ng/ml) and Gleason Score	cT1c-cT2a, pN+			cT2b-T2c, pN+		
	Total	LimitedpLa	ExtendedpLa	Total	LimitedpLa	ExtendedpLa
All patients	17/428(4.0%)	10/315(3.2%)	7/113(6.2%)	41/240(17.1%)	20/162(12.3%)	21/78(26.9%)
PSA<10, Gleason Score<7	7/249(2.8%)	5/207(2.4%)	2/42(4.8%)	5/96(5.2%)	3/78(3.9%)	2/18(11.8%)
PSA<10, Gleason Score≥7	4/38(10.3%)	1/22(4.5%)	3/16(18.7%)	7/28(25.0%)	5/18(27.8%)	2/10(20.0%)
PSA≥10, Gleason Score<7	4/118(3.4%)	4/77(5.2%)	0/41(0%)	13/80(16.3%)	7/53(13.2%)	6/27(22.2%)
PSA≥10, Gleason-	2/23(8.7%)	0/9(0%)	2/14(14.3%)	16/36(44.4%)	5/13(38.5%)	11/23(47.8%)