

# Concordance between index lesion and side of lymph node invasion in patients subtended to extended lymphatic dissection



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## Introduction

We evaluated the concordance between laterality of index lesion and lymph node involvement (LI) in patients underwent extended pelvic lymphadenectomy (ePLND) during radical prostatectomy for prostate cancer.

## Material and methods

We evaluated 264 patients underwent retropubic and robot-assisted radical prostatectomy from January 2016 to February 2018. Patients were divided according D'Amico classification group risk. We calculated Briganti and MSKCC nomograms for LI risk. We considered the laterality of index lesion, detected with mpMRI and biopsy, the laterality of lymphadenectomy (unilateral or bilateral), the number of lymph nodes removed and the laterality of LI.

## Results

181 patients underwent ePLND, unilaterally in 56 cases (30,9%) and bilaterally in 125 cases (69,1%). 10,91 (DS 7,41) lymph nodes were removed in case of unilateral ePLND and 16,55 (DS 9,12) in case of bilateral ePLND. Lymph nodes resulted positive for cancer invasion in 22 cases: 20 in bilateral ePLND group (16%) and 2 in unilateral ePLND group (3,6%).

Lymph nodes resulted positive in the right side in 10 cases; in this group, the index lesion was in the right lobe in 6 cases, in the left lobe in 2, bilateral in 1 and anterior in 1. Lymph nodes resulted positive in the left side in 7 cases; in this group, the index lesion was in the right lobe in 3 cases, in the left in 2, bilateral in 2. Lymph nodes resulted positive bilaterally in 5 cases; in this group the index lesion was in the left lobe in 2 cases, bilateral in 3 (p=0,21). (Figure 1)

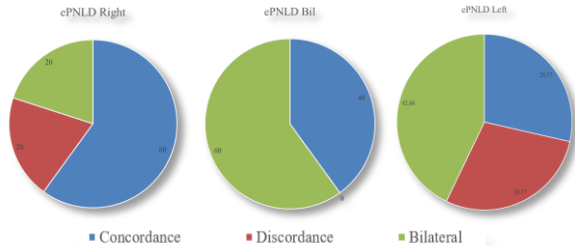


Figure 1: Concordance between the index lesion and the side of the ePLND expressed in percentage.

We observed discordance of the laterality between the index lesion and positive lymph nodes in 5 cases; 2 cases were of Prognostic Grade Group (PGG) 3 and 3 cases PGG5. According to D'Amico classification group risk, LI resulted in 2 low risk patients (2,4%), in 10 intermediate risk patients (7,4%), in 11 high risk patients (24,4%). In low-risk patients, LI resulted ipsilateral to index lesion. Among patients with intermediate risk and LI, in 2 cases (both PGG3) positive lymph nodes resulted contralateral to index lesion (Figure 2 - Figure 3).

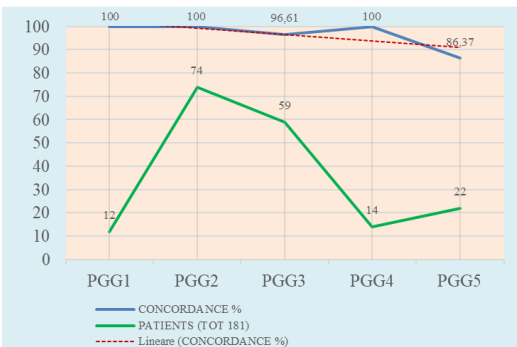


Figure 2: Relation between concordance of the laterality of index lesion and the lymph node involvement in patients divided in Prognostic Grade Group.



Figure 3: Discordance rate between the laterality of index lesion and the lymph node involvement in patients divided in D'Amico classification group risk.

## Conclusions

We observed discordance between the laterality of index lesion and the lymph node involvement in 5 of 181 patients (2,6%) underwent ePLND; all cases were of intermediate and high risk according to D'Amico classification group risk. Our data support bilateral ePLND in patients with intermediate and high risk tumor.