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INTRODUCTION & OBJECTIVES: To evaluate the feasibility of narrow-band imaging (NBI) transurethral resection of the bladder (TURB) in the treatment of bladder cancer compared with traditional white light imaging (WLI) TURB.

MATERIAL & METHODS: 137 patients underwent to a TURB for a suspicious BC diagnosed by a WLI cystoscopy. We randomized these patients in two groups. 71 (52%) underwent to an NBI TURB and 66 (48%) to a WLI TURB. The TURBs was performed by the same surgeon by an Olympus resectoscope 26 Ch. using an Olympus Exera II endoscopical column. The characteristics of the groups are homogeneous in terms of age, lesions size, focality but not in terms of cancer history (primitive, recurrent): the recurrent tumours were significantly higher ($p = 0,04$) in NBI group (54%) respect WLI group (36%). The feasibility was studied evaluating the complication rate (CR) by Clavien-Dindo scale, mean surgery time (MST), mean time to catheter removal (MTCR), absence of muscular tissue in the specimen (AMT) and the false positive rate (FPR) in the two groups (NBI vs WLI). The statistical analysis was performed by Chi-square and T-test.

RESULTS: We observed only Clavien grade I-II complications. CR was 20% (14/71) in NBI group and 23% (15/66) in WLI group ($p = 0,6$). FPR was 30,5% (22/71) for NBI and 17% (11/66) for WLI ($p = 0,063$). The AMT was 17% (12/71) in NBI and 15% (10/66) in WLI ($p = 0,7$). MTP was 28 minutes (range 8 - 68) in NBI group and 38 minutes (range 9 - 135) in WLI group ($p = 0,07$); MTCR was 2,4 days (range 1 - 14) in NBI and 2,8 days (1 - 6) in WLI ($p = 0,15$).

CONCLUSIONS: TURB NBI is a safe, accurate and feasible procedure compared to traditional WLI approach. The CR scored by Clavien-Dindo scale, AMT and MTCR not demonstrate any statistical difference in two groups. Our study demonstrates a significant advantage of NBI TURB for MST perhaps NBI allows an immediate display of the lesions and suspicious areas and gives a better view of the neoplasms edges and bleeding areas.