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Introduction & Objectives: PNL is still the standard procedure for large renal stones. The high recurrence rate usually associates with an increased need for re-intervention. This study aims to compare the efficacy and the risks in previously operated patients who undergone PNL or open nephrolithotomy vs. first time procedure.

Materials & Methods: From 1 October 2017 until 30 November 2018, 99 cases who undergone PNL at Prof. Dr. Th. Burghel Clinical Hospital, Bucharest, were retrospectively analyzed. There were excluded staghorn lithiasis. Patients were categorized in 3 groups: Group 1 (first time PNL), Group 2 (previous PNL) and Group 3 (previous open nephrolithotomy). All patients were primarily assessed with standard blood and urine tests and were imagistic evaluated before the procedure with Intravenous Urography and US and after only with KUB.

Results: There were no significant differences between patients characteristics and stone length or location. The mean operative time was 79,15 min. in Group 1, 81,64 min. in Group 2, 84,36 min. in Group 3. Some differences were registered in the number of punctions needed to access the PCS: 1,5 in Group 1, 2,1 in Group 2, 2,6 in Group 3. No differences were detected in mean Hb loss. Blood transfusions were needed in all three groups as 3:3:4. As referring to adjoining organ damage in Group 3 was registered one colon perforation which was treated conservatively. The stone free rate was 84,84 in Group 1, 85,21 in Group 2 and 83,34 in Group 3. The mean hospital stay between Group 1, 2 and 3 was 5,12, days vs. 5,02 days vs. 5,61 days.

Conclusions: The only difference registered refers to the number of attempts to access the kidney which is less in previously nonoperated. The success and complication rate is the same between the analyzed groups.