Objectives: The role of Laparoscopic Radical Nephrectomy (LRN) regarding sizeable tumors is not clear. In this study we present our experience in LRN for tumors <10 cm.

Material & Method: We retrospectively studied the files of 56 patients treated with LRN between May 2006 and January 2010. Five of them were found to have malignant tumors <10 cm in maximum diameter. The mean age was 68 years (44-75), operating time was 175 min (120-240), blood loss was 150 ml (50-300) and the mean postoperative stay was 3 days (2-6). The mean tumor diameter was 12 cm (10-17). In all cases the transperitoneal technique was employed and the specimen was extracted either by expanding the incision at one of the port sites (2 patients), or by Pfannenstiel incision (3 patients). There were no intraoperative complications. Postoperatively, one patient experienced prolonged paralytic ileus (>48 hours), which subsided with no further treatment. The final pathologic stage was T2, T3a and T3b in 2, 2 and 1 patient respectively. All patients remain alive during a mean follow up period of 22 months (4-38 months).

Conclusion: LRN was successfully performed in malignant tumors up to 17 cm in maximum diameter. The technique is applicable even in these special cases, offering all the advantages of laparoscopic surgery. However, when considering LRN in large tumors, some other factors should also be taken into account such as surgeon's experience, location of the tumor and patient's general condition.