



INTRODUCTION AND OBJECTIVE

Retroperitoneal lymph node dissection (RPLND) is a well-established treatment for post chemotherapy residual mass in non-seminoma germ cell tumor (NSGCT).

Open RPLND is gold standard, but due to high postoperative morbidity and poor cosmesis laparoscopic retroperitoneal lymph node dissection (L-RPLND) has been described by Rukstalis and Chodak¹.

The proposed advantages of L-RPLND are good cosmesis, shorter hospital stay, less post-operative pain and reduced complication rate.

Robot assisted laparoscopic retroperitoneal lymph node dissection(RA-RPLND) has been described to overcome difficulties associated with laparoscopic technique, like difficulty with dissection in retro-aortic and retro-caval area².

We describe our experience of robot assisted retroperitoneal lymph node dissection (RA-RPLND) for post chemotherapy residual mass in terms of surgical, pathological and oncological outcomes.

MATERIAL AND METHOD

A total of 18 patients underwent RA - RPLND between September 2011 to September 2017 at our institute.

Study was started on January 2015 so data were collected retrospectively and prospectively regarding demography of patients, tumor characteristics, surgical, pathological and oncological outcomes. Short term and medium term clinical outcomes were also recorded.

DISCUSSION

Davol et al. reported first RA-RPLND IN 2006,³ and subsequently many investigators published small case series for primary RPLND.

There are only few studies of RA-RPLND for post chemotherapy residual mass.

Our published case series of 13 patients is probably largest series till now.⁴

With our learning curve, our incidence of chylous ascites has decreased. In last 8 patients we did not observe chylous ascites in the post operative period.

There is a definite advantage of supine approach, like it provides exposure to both sides of retroperitoneum simultaneously, and decreases operative time.

Result

Parameters	Number (n)
Patients Number	18
Mean age	28 years
Mean B.M.I.	21.51 Kg/m2
Patients with Mixed Germ Cell	13
Patients with NSGCT	4
Patient with Para -testicular Tumor	1
Pre-Chemotherapy Stage I	1
Pre-Chemotherapy Stage IIB	4
Pre-Chemotherapy Stage IIIA	5
Pre-Chemotherapy Stage IIIB	6
Pre-Chemotherapy Stage IIIC	2
Post-Chemotherapy Stage I	1
Post-Chemotherapy Stage IIA	9
Post-Chemotherapy Stage IIB	7
Post-Chemotherapy Stage IIC	1
Mean Nodal size (cm)	5.4

Parameter	Number (n)
Mean Console Time	180.78 min
Mean Blood Loss	207.89 ml
Mean Hospital Stay	4.31 day
Blood Transfusion	0
Conversion to Open Surgery	0
RPLND in Supine Position	4
RPLND in Unilateral Position	13
RPLND in Bilateral Position	1
Mean Lymph Node Yield	20
Necrosis	14
Teratoma	4
Chylous Ascites	6
Conservative Management of Chylous Ascites	2
Lymphangiogram and Embolisation for Chylous Ascites	2
Exploratory Laparotomy and Ligation of lymphatics	2
Nerve Preserving RPLND	15
Antegrade Ejaculation	12

Characteristics	Our Study	Kamel (2016) ⁵	Stepanian (2016) ⁶	Cheney (2016) ⁷
Post-chemotherapy case/Total case	18/18	12/12	4/20	8/18
Age (yr)	28	39	36	38
BMI (kg/m ²)	21.51	Not mentioned	25.7	29.25
OT (min)	180.78	298.5	317.5	358
EBL (ml)	207.89	300	150	150
LOS (day)	4.31	3.6	1.5	2.5
Transfusion	0	2	0	1
Conversion	0	2	0	2
Lymph node yield	20	12	21	20.5
Positive node	4/18	6/12	2/4	4/8
Follow up (mths)	19.5	30	40	2.5
Recurrence	0	0	0	0
Complication (Clavien I-II)	4	2	0	3
Complication (Clavien III-IV)	2	1	1	0
Retrograde Ejaculation	6/18	2/10	2/20	1/11

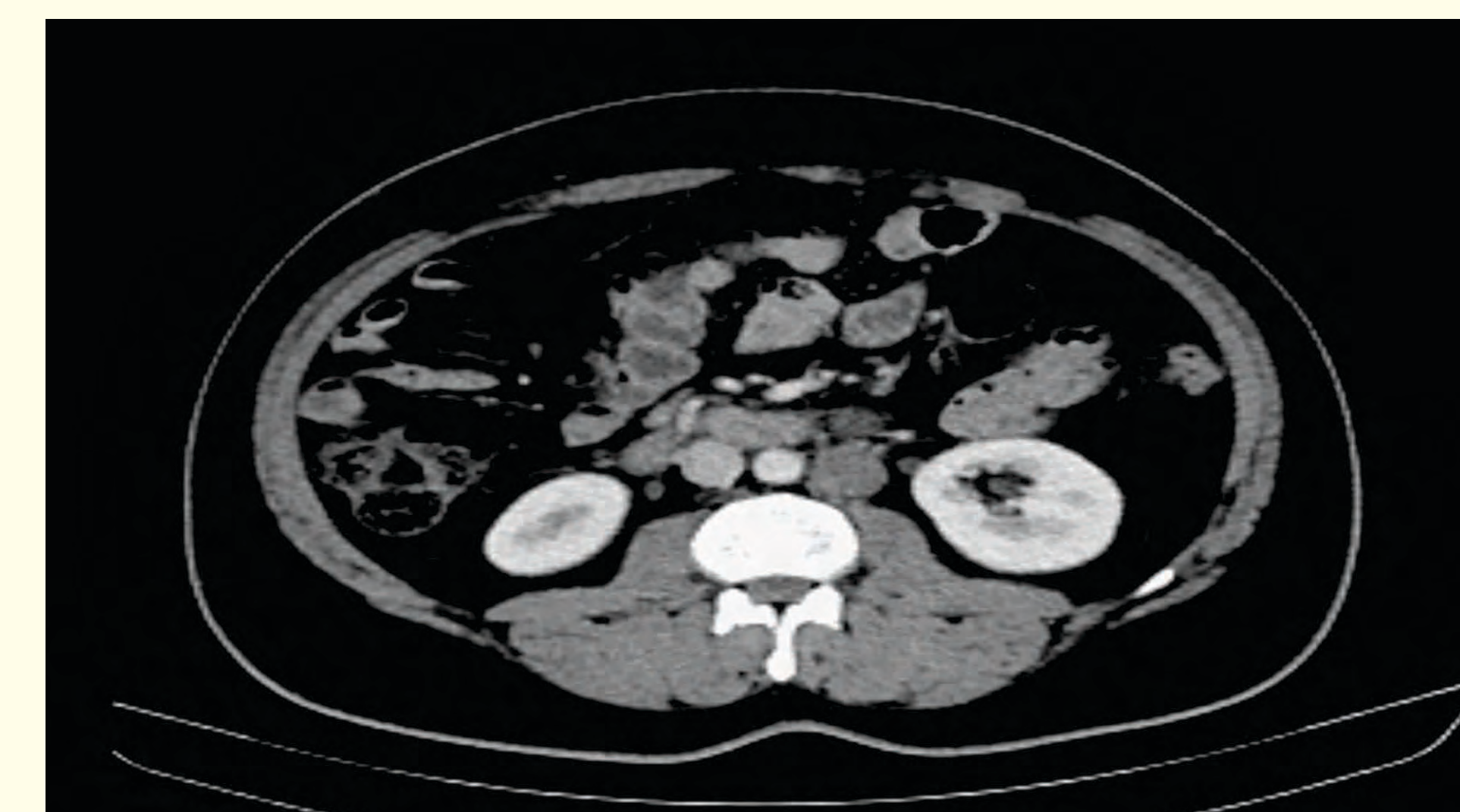


Fig. 1- CECT Abdomen showing paraaortic mass.

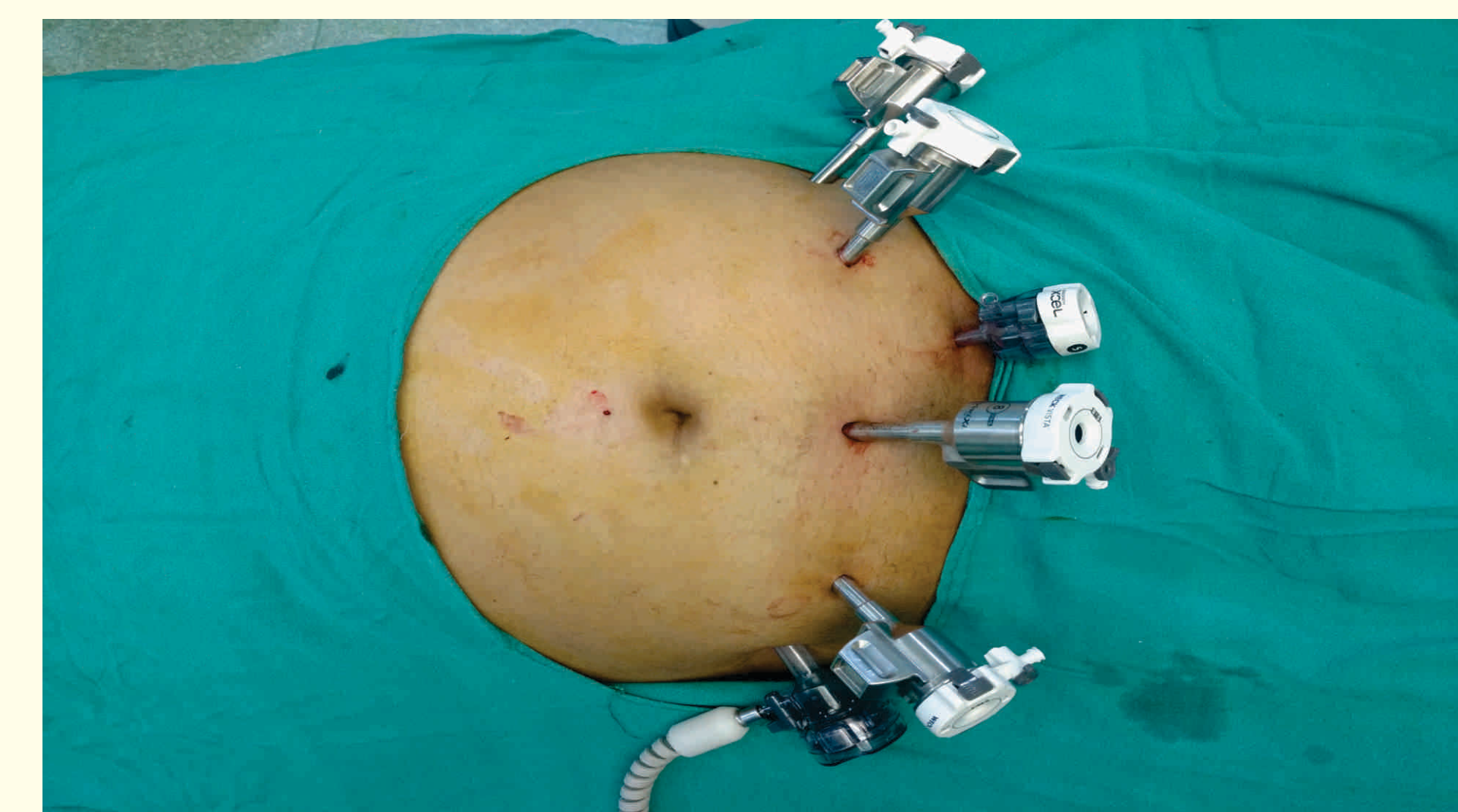


Fig.2 - Port placement for RA-RPLND.

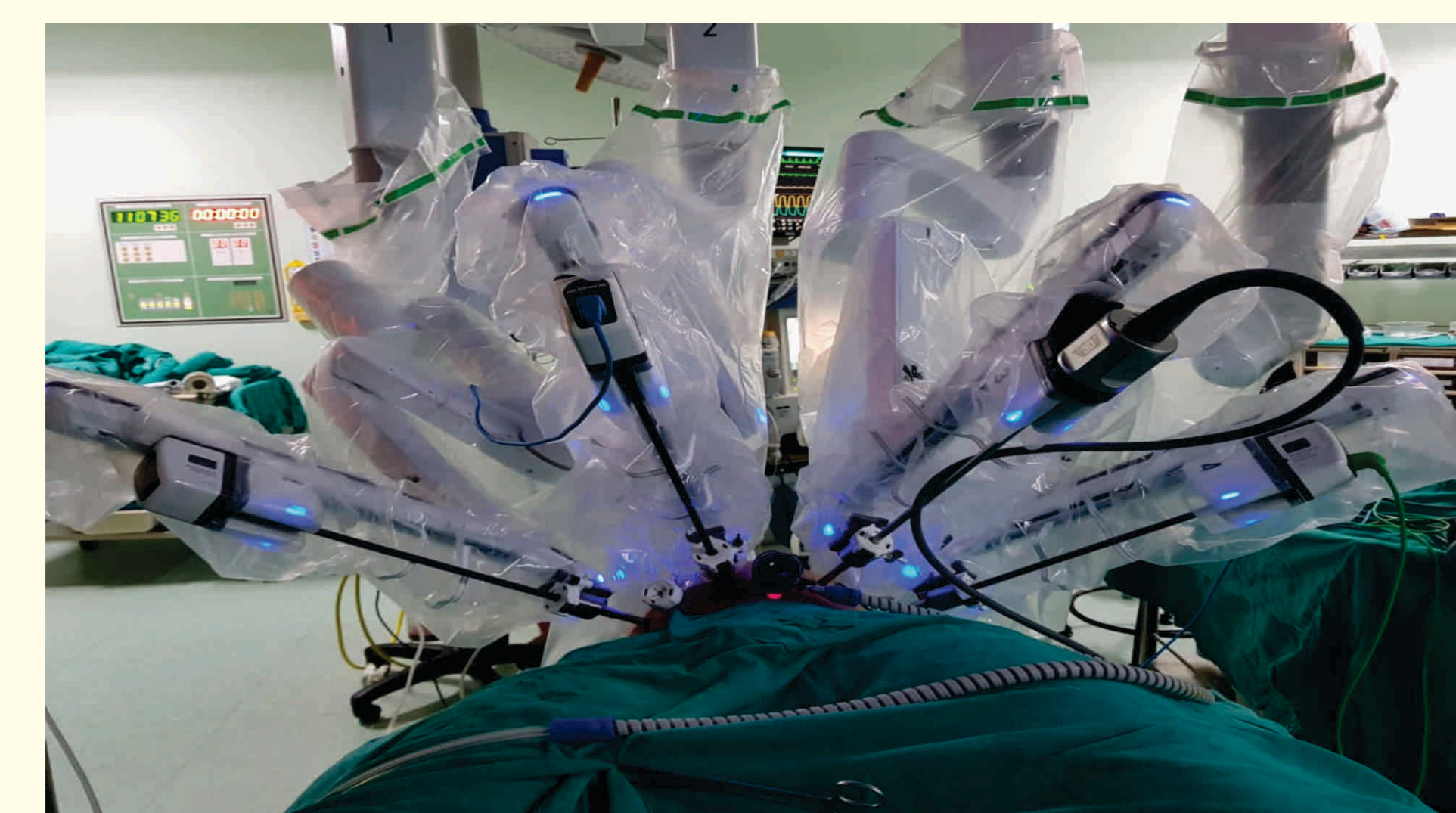


Fig. 3 - Position of patient after docking.

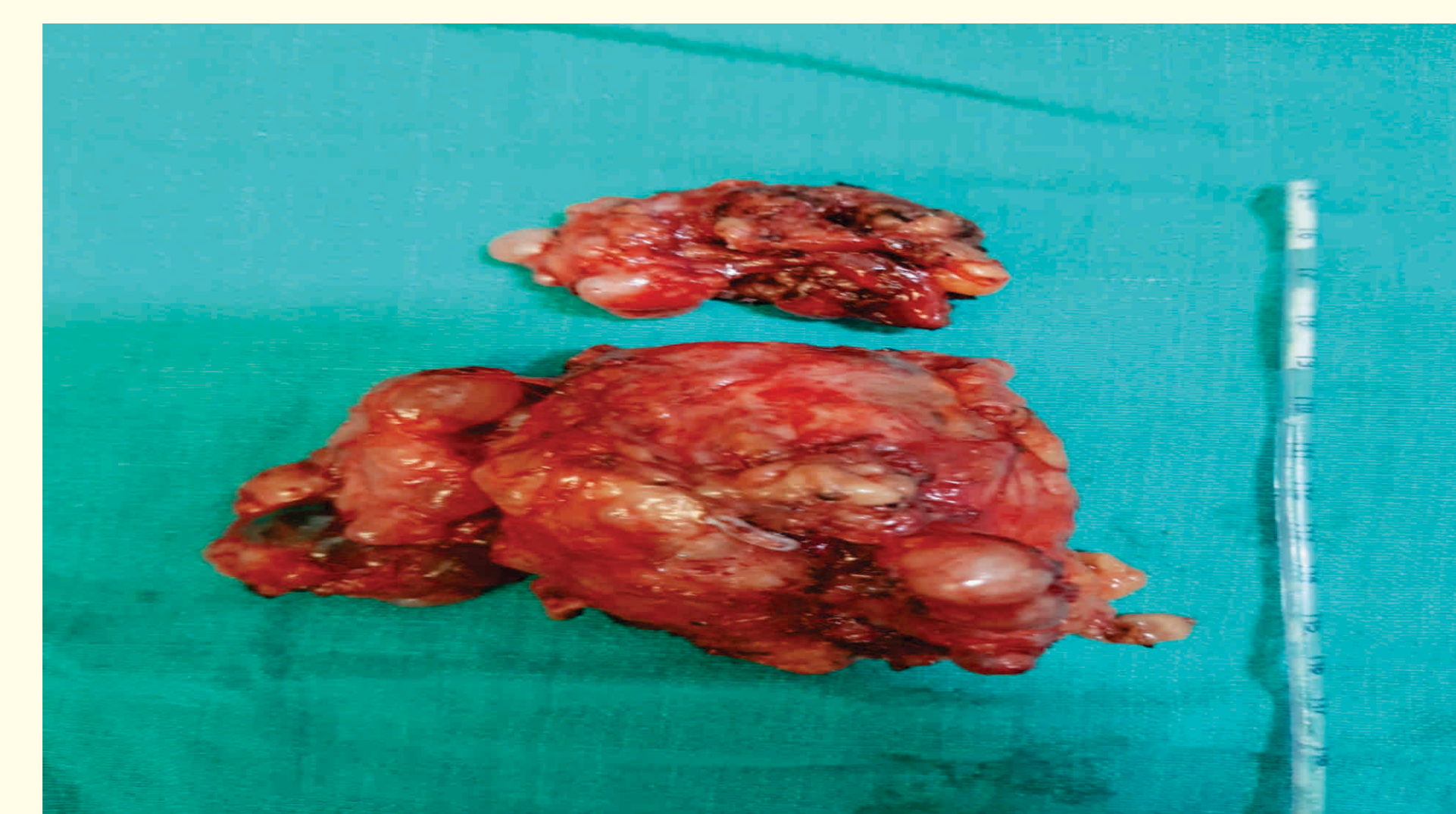


Fig. 4 - Image of post-operative specimen.

CONCLUSION

RA - RPLND is safe and feasible for post chemotherapy residual mass with acceptable complication rate. Though larger studies are required to establish its therapeutic utility.

REFERENCES

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