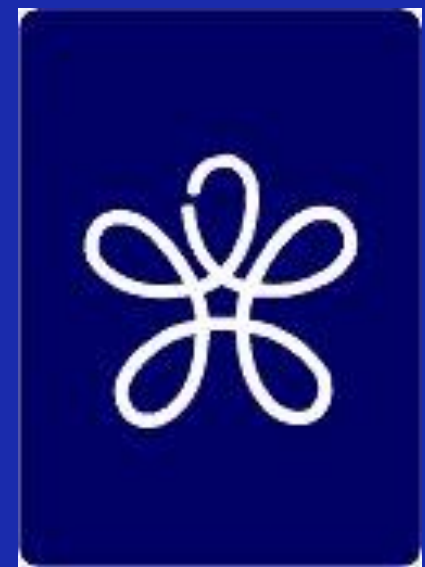




The initial experience of transanal mesorectal excision (TaTME) and short-term outcomes for rectal cancer

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ABSTRACT

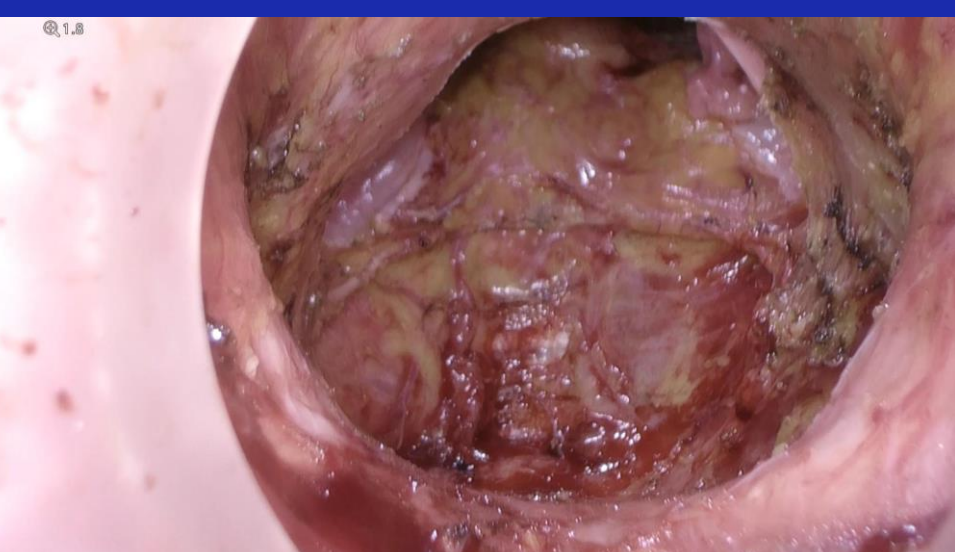
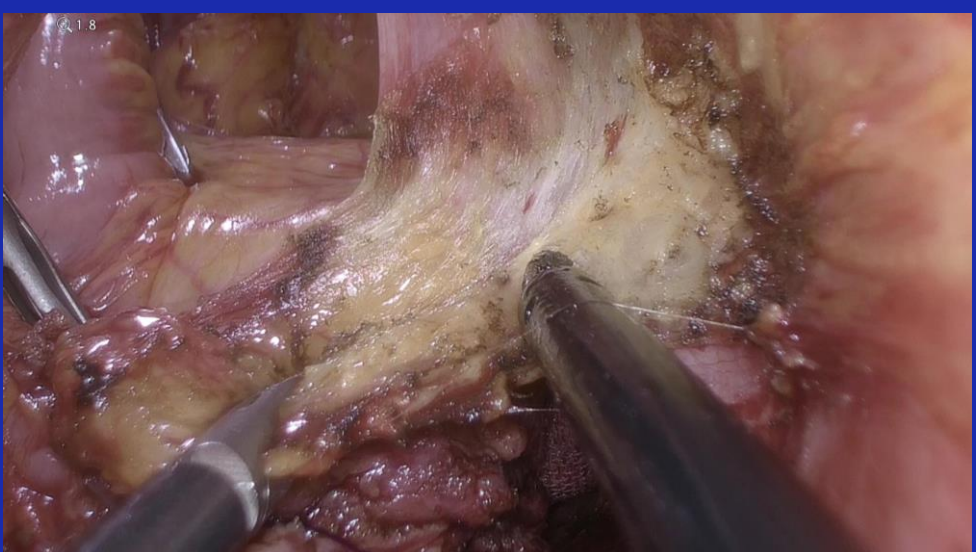
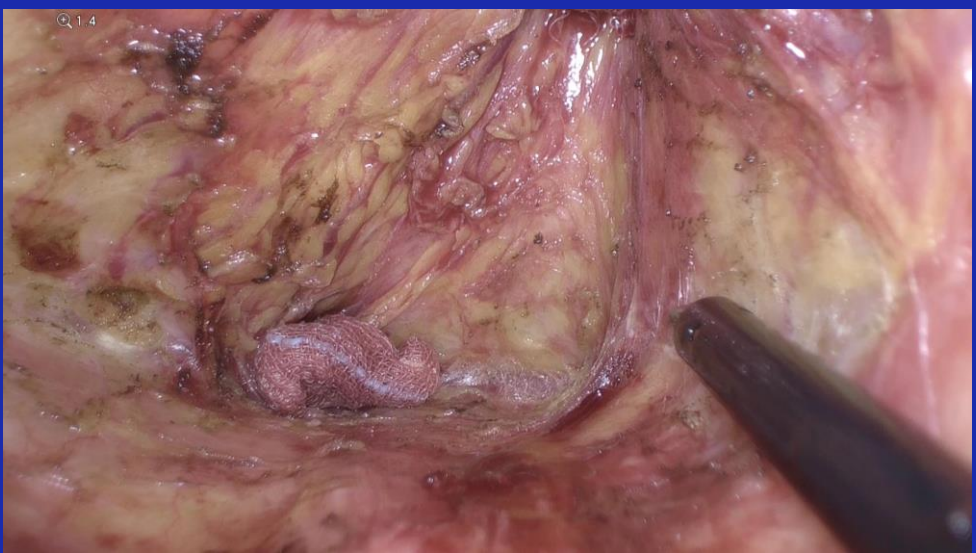
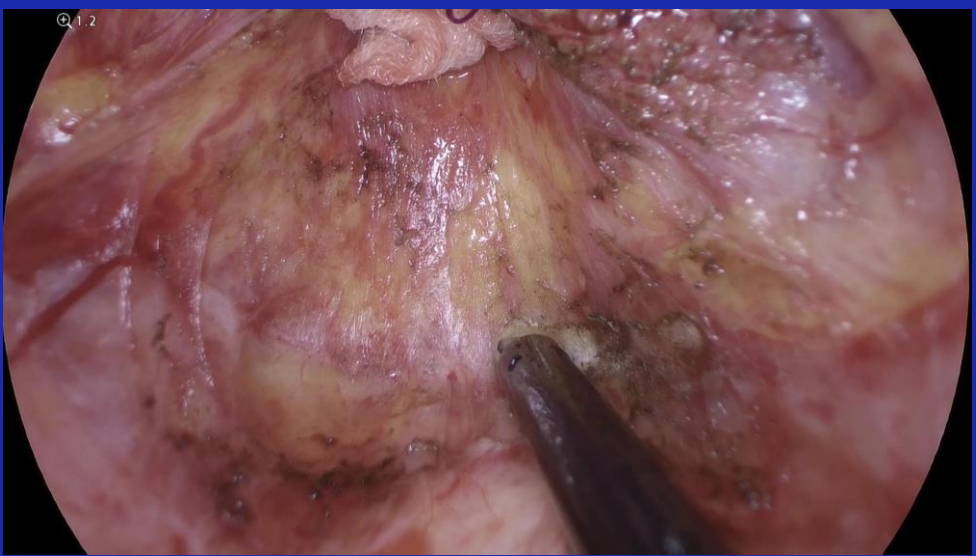
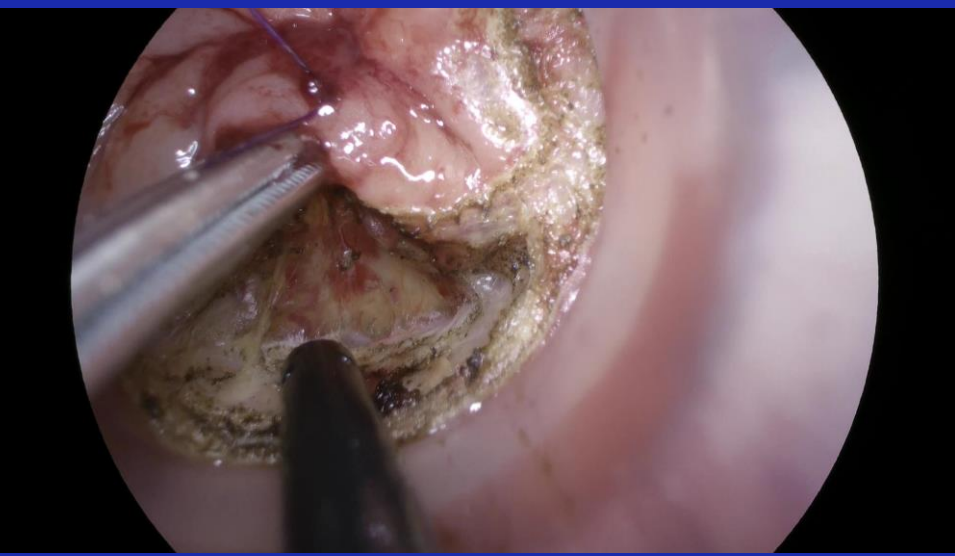
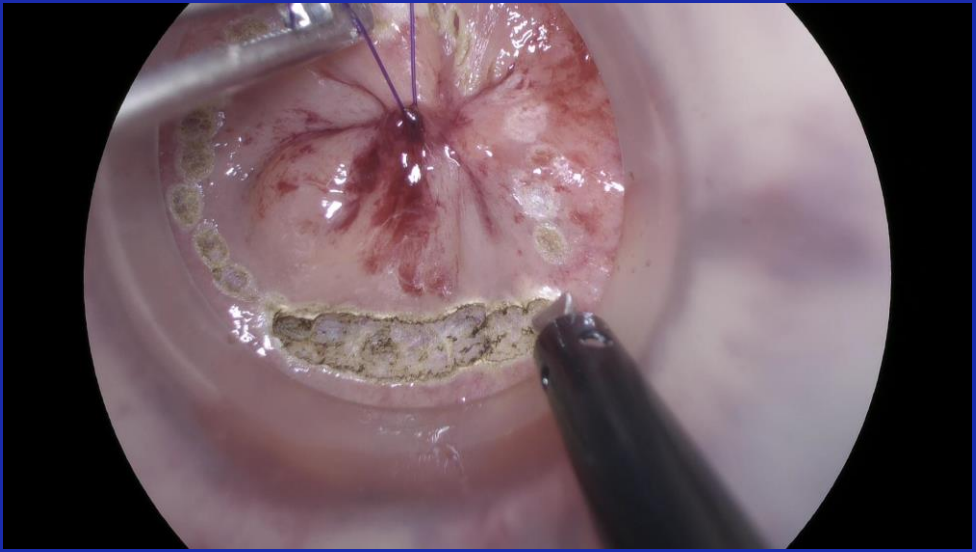
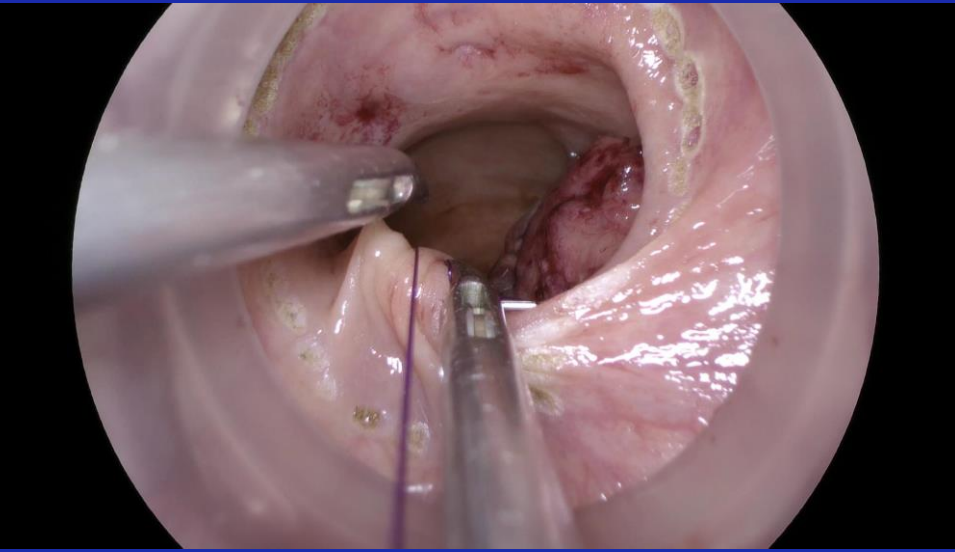
Background: The transanal(Ta), transperineal(Tp) total mesorectal excision (Ta(p)TME) is a new technique which seems to provide technical advantages for rectal cancer surgery. This study aims to report the short-term outcomes of initial Ta(p)TME cases in our institute.

Methods: A retrospective chart review was conducted of 37 patients who underwent Ta(p)TME from August 2017 to September 2019. Among these patients, 33 patients for primary rectal cancer were evaluated, except 4 patients including 2 Ulcerative colitis, 1 Crohn’s disease, and 1 rectal cancer recurrent case.

Results: Twenty-one patients (63.6%) were male. The average age was 68-year-old. The mean BMI was 22.3kg/m² (15.7-31.5kg/m²). Preoperative chemotherapy or chemoradiotherapy was administrated in 16 patients (48.5%). The median tumor distance from the anal verge was 4cm (0-8cm). TaTME was performed in 18 cases (single stapling technique in 9 cases, hand-sewn anastomosis in 9 cases). On the other hand, TpTME (Miles procedure) was performed in 15 cases. All cases were performed by a two-team approach which means laparoscopic and endoscopic Ta or Tp approach. The median operative time was 329min (174-731min), including uni- or bilateral lateral pelvic lymph node dissection in 13 patients and simultaneous hepatectomy in 5 patients. Temporary or permanent ostomy was created in all cases. The median estimated blood loss was 80 ml (0-6520ml). Final pathology showed that the median tumor size was 43mm (6-95mm), the median harvested lymph node was 15 (1-79), the median distal resection margin was 24mm (5-57mm), and CRM was positive in 3 patients (9.1%). The postoperative complications (Clavien-Dindo classification grade III or more) were seen in 3 patients, including anastomotic leakage in 1 case and pelvic abscess/sepsis in 2 cases. Urinary retention was seen in 3 patients. However, all patients recovered with oral pharmacological treatment. The median postoperative length of hospital stay was 20 days (11-66 days). No mortality was recorded during hospitalization.

Conclusion: The initial implementation of Ta(p)TME was safe and feasible. However, more experience and further evidence will be needed to support this technique over conventional laparoscopic surgery.

Operative findings of transanal approach



Baseline characteristics of patients

	N=33
Age (median, range, [years])	74 (37-90)
Gender (male/female)	21/12
Body mass index (median, range, [kg/m2])	22.3 (15.7-31.5)
Tumor location from anal verge (median, range, [cm])	4 (0-8)
AJCC ^a stage, <i>N</i> (%)	
0	0
I	5 (15.2)
II	5 (15.2)
III	13 (39.4)
IV	8 (24.2)
Malignant melanoma	2 (6.1)
Neoadjuvant therapy, <i>N</i> (%)	16 (48.5)
Radiochemotherapy, <i>N</i> (%)	5 (15.2)
Chemotherapy, <i>N</i> (%)	11 (33.3)

^a the American Joint Committee on Cancer

Peri- and post-operative outcomes

	N=33
Procedures	
Ta TME ^a , <i>N</i> (%)	18 (54.5)
LAR/ISR ^b	11/7
Tp TME ^c , <i>N</i> (%)	15 (45.5)
Additional procedures <i>N</i>	
Liver resection	5
Lateral lymph node dissection (hemi-/bi-lateral)	13 (6/7)
Operative time (median, IQR ^d , [min.])	329 (214-508)
Estimated blood loss (median. IQR, [g])	80 (28.8-221.5)
Complications (CD classification ^e ≥grade III)	
Anastomotic leakage, <i>N</i> (%)	1 (3.0)
Pelvic abscess/sepsis, <i>N</i> (%)	2 (6.1)
Urinary retention (CD grade II), <i>N</i> (%)	3 (9.1)
Postoperative length of hospital stay (median, IQR, [days])	20 (17-27.5)
Mortality ^f , <i>N</i> (%)	1 (3.0)

^a Transanal total mesorectal excision, ^b Low anterior resection/Intersphincteric resection

^c Tansperineal total mesorectal excision, ^d Interquartile range

^e Clavien-Dindo classification,

^f Mortality was recorded in one case postoperative day 53 due to sepsis.

Tumor characteristics and pathological results

	N=33
Tumor size (median, range, [mm])	43 (6-95)
Harvested lymph nodes (median, IQR)	15 (7.5-23.5)
CRM ^a positivity (<1mm excl. T4), <i>N</i> (%)	3 (10.0)
Distal resection margin (median, range, [mm])	24 (5-57)
pCR ^b rate among neoadjuvant therapy, <i>N</i> (%)	2/16 (12.5)

^a Circum ferential resection margin, ^b Pathological complete response

Conclusions

Our initial experience of transanal approach for rectal malignancies was safe and feasible. However, more experience and further evidence will be needed to support this technique over conventional laparoscopic or robotic surgery.

Limitations

- ✓ This study was reported from single institution. Patient number was too small to validate the short-term outcomes of TaTME.
- ✓ We did not compare with conventional laparoscopic approach to evaluate this procedure.
- ✓ To evaluate this procedure, robotic procedure will be appropriate. However, we did not adopt the robotics at this study period.
- ✓ Long-term outcomes including local recurrence rate will be needed To evaluate this procedure.

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COI disclosure

Name of first author: **Kazuki Ueda MD**

The authors have no financial conflicts of interest to disclose concerning the presentation.