



PD50-01

# Impact of Weekly Multidisciplinary Team Meeting in Implementing Pathways on Early Perioperative Outcomes after Robot-Assisted Radical Cystectomy: A Matched Analysis

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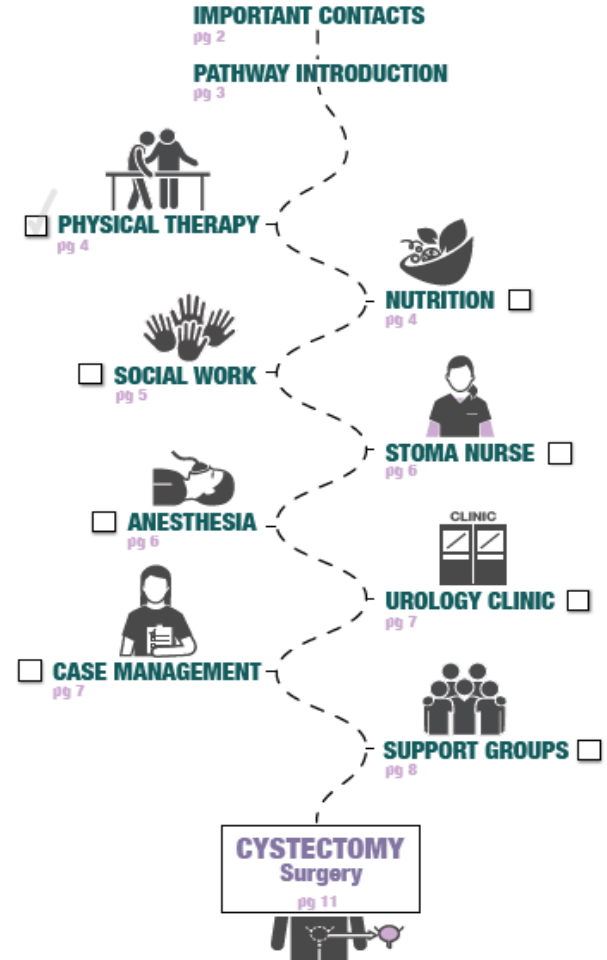
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# Introduction

- The value of other perioperative aspects e.g. physical rehabilitation, socioeconomic needs, and optimizing nutritional status is yet to be defined.
- ERAS principles—Improved perioperative outcomes

# NEEW Pathway

- NEEW” = Nutrition, Exercise, patient Education and Wellness pathway.
- Combines ERAS principles with perioperative physical rehabilitation, nutrition and social wellbeing.



# Nutritionist



- **4 weeks pre-operative:**
  - 1) Nutrition screening test to assess individual needs for calories, protein, & fluid
  - 2) Oral liquid nutrition supplement to drink 5 days pre-op
  - 3) Education materials booklet
- **During hospital stay:**
  - 1) Reassess nutrient needs on the 1<sup>st</sup> or 2<sup>nd</sup> day after surgery
  - 2) Oral liquid supplement once the patient can eat or drink
- **4 weeks post-operative:**
  - 1) Home IV hydration (1 L of saline on post-op day 2, 5, 7)
  - 2) Minimize nutrition-related symptoms



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# Physical Therapist



- **4 weeks pre-operative:**
  - 1) Give education materials, discuss expectations and motivation
  - 2) Functional assessment tests performed: 6-minute "Walk Test," 30-second "Sit to Stand Test," & a timed "Up & Go Test"
  - 3) Home exercise program: resistance band exercises (upper and lower body) to be done 3 days a week, & a walking program to be done 30 minutes every day
- **During hospital stay:**
  - 1) Patient walks 3-4 times daily with help from staff and devices as needed- at least 100 ft and/or 15 minutes.
  - 2) Respiratory & circulatory exercises daily.
  - 3) Before discharge, therapist will assess patient on stairs & potentially recommend home PT services
- **4 weeks post-operative:**
  - 1) Functional assessment test performed again
  - 2) Continue home exercise program and walking program

# Social Worker



- **4 weeks pre-operative:**
  - 1) Address all non-medical concerns before surgery
  - 2) Provide resources for any concerns such as anxiety, depression, substance use, financial concerns, and caregiver issues
- **During hospital stay:**
  - 1) Emotional support
  - 2) Organize nurse home care visits for home hydration protocol



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# Ostomy Nurse



- **4 weeks pre-operative**
  - 1) Familiarize patient with ostomy bag and base
  - 2) Provide educational resources for better understanding of stoma complications
- **During hospital stay:**

Ensure the patient/caregiver can change the stoma bag
- **4 weeks post-operative:**
  - 1) Teach patient proper pouch irrigation
  - 2) Early reporting of stoma related complications



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# Baseline Characteristics

Preoperative parameters	Pre-pathway group	Pathway group	P value
<b>N of patients (%)</b>	128 (67)	64 (33)	
<b>Age at cystectomy, mean (SD) (years)</b>	69±10	68±12	0.88
<b>Gender, Males n (%)</b>	99 (77)	46 (72)	0.41
<b>Body Mass Index, mean (SD) (kg/m2)</b>	30±8	29±7	0.76
<b>ASA score ≥3, n (%)</b>	55 (50)	29 (51)	0.96
<b>Charlson comorbidity index, mean (SD)</b>	4±2	5±2	0.08
<b>Prior abdominal/pelvic surgery, n (%)</b>	67 (52)	38 (59)	0.36
<b>Prior irradiation, n (%)</b>	12 (9)	9 (14)	0.33
<b>Neo-adjuvant chemotherapy, n (%)</b>	59 (46)	24 (41)	0.56



# Operative Outcomes

Operative parameters	Pre-pathway group	Pathway group	P value
Type of diversion, neobladder, n (%)	18 (14)	4 (7)	0.23
Operative time, median (IQR) (min)	305 (252,389)	370 (317,441)	<0.01
Estimated blood loss, median (IQR) (ml)	150 (70,250)	200 (100,400)	0.01
Intra-operative complications, n (%)	4 (3)	1 (2)	1.0
Blood Transfusion, n (%)	4 (3)	3 (5)	0.69



# Postoperative Outcomes

Postoperative parameters	Pre-pathway group	Pathway group	P value
ICU stay, mean (SD) (days)	1±2	1±1	0.02
Hospital stay, median (IQR) (days)	6 (5,8)	5 (4,6)	<0.01
Return of bowel motion, mean (SD)(days)	4±1	3±1	<0.01
Pain score, mean (SD)			
Day 1	4±2	3±2	<0.01
Day 2	3±2	2±1	<0.01
Day 3	3±2	1±1	<0.01
Functional mobility time, mean (SD)(min)	19±6	23±9	0.01
Maximum walked distance, mean (SD) (Feet)	347±240	407±256	0.12
30-days complication			
Overall	64(50)	38(59)	0.22
High grade	21(16)	3(5)	0.02
30-day readmission	23(18)	18(28)	0.11



# 30-day High Grade Complications

Complications subtypes	Pre-pathway group	Pathway group	P value
<b>Pulmonary, n (%)</b>	0 (0)	1 (2)	0.33
<b>Cardiovascular, n (%)</b>	3 (2)	0 (0)	0.55
<b>Gastrointestinal, n (%)</b>	4 (3)	2 (3)	1
<b>Genitourinary, n (%)</b>	<b>15 (12)</b>	<b>1 (2)</b>	<b>0.02</b>
<b>Acute kidney injury, n (%)</b>	2 (2)	2 (3)	0.60
<b>Wound infections, n (%)</b>	5 (4)	2 (3)	1

# 30-day Readmissions

Reason of readmission	Pre- pathway group	Pathway group	P value
<b>Total number of readmission, n</b>	23	18	
<b>Angina, n (%)</b>	3 (13)	1 (5)	0.62
<b>Cerebrovascular accident, n (%)</b>	0	1 (5)	0.44
<b>Dehydration, n (%)</b>	9 (39)	2 (11)	0.07
<b>Ileus, n (%)</b>	0	1 (5)	0.44
<b>Pulmonary embolism, n (%)</b>	2 (9)	1 (5)	1
<b>Pelvic collection, n (%)</b>	1 (4)	0	1
<b>Pneumonia, n (%)</b>	1 (4)	2 (11)	0.57
<b>Small bowel obstruction, n (%)</b>	2 (9)	1 (5)	1
<b>Urine leak, n (%)</b>	1 (4)	0	1
<b>Urinary tract infection, n (%)</b>	4 (17)	9 (50)	0.07



# Multivariate Analyses

	Estimate	P-value
Hospital stay (days)		
NEEW pathway	-2	0.01
Return of bowel function (days)		
NEEW pathway	-1	< 0.01
Maximum functional mobility time (minutes)		
NEEW pathway	4	< 0.01
Day 1, 2 & 3 pain score		
NEEW pathway	-1	< 0.01
Age (each 10 years)	-0.25	0.02

# Multivariate Analyses

	Odds Ratio	95% Confidence Interval	P value
30-day High Grade Complications			
Neobladder urinary diversion	4.33	1.55-12.08	< 0.01
30-day Readmission			
Prolonged operative time	1.46	1.16-1.85	< 0.01

# Limitations

- Non-randomized and retrospective study design.
- Complications and Readmissions at outside facilities.
- Unable to quantify the benefit conferred by each component of NEEW.

# Conclusion

Employment of standardized perioperative multidisciplinary rehabilitation pathway with scheduled weekly meeting lead to improved early postoperative outcomes after robot-assisted radical cystectomy.