

# Enhancing Bladder Cancer Surgery Recovery: Strategies for Better Patient Outcomes

**Guest Presenter:**  
**Dr. Saum Ghodoussipour**



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## **Stephanie Chisolm:**

Welcome to Enhancing Bladder Cancer Surgery Recovery, or ERAS, Strategies for Better Patient Outcomes.

I'd like to thank Merck and UroGen for making Patient Insight webinars possible. Today's topic is about enhancing bladder cancer surgery recovery strategies for better patient outcomes. Surgery options ranging from a TURBT, a Transurethral Resection of a Bladder Tumor, to a radical cystectomy, actual bladder removal, play a very important part in treating bladder cancer. Enhancing recovery after surgery, or ERAS, is a number of different strategies that can have a significant impact on postoperative recovery.

Our featured speaker tonight, our expert is Dr. Sam Ghodoussipour from Rutgers Cancer Institute, and he's going to share insights into the latest strategies and practices that are really aimed at improving recovery, including both the physical and mental health, preventing infections, just giving you overall better outcomes after any bladder cancer surgical procedure. Dr. Ghodoussipour is a urologic surgeon, and he focuses on the treatment of men and women with cancers of the genitourinary system. His clinical expertise includes complex open and robotic surgeries of the pelvis and retroperitoneum. This includes removal of the bladder, a radical cystectomy, with reconstruction of the urinary tract to maximize functional recovery, nerve sparing procedures to maintain sexual function and fertility, advanced vascular techniques for invasive tumors, and open extraperitoneal procedures to hasten or speed up your recovery process. He's done research on techniques to enhance recovery methods, and he's going to share his latest strategies and practices that are really aimed on improving recovery, including, as I said, the physical and mental health, and infection prevention that you might have risk for following bladder cancer surgeries. I'm now going to direct your attention to Dr. Ghodoussipour. Welcome, I'm really looking forward to your presentation and if you would like to share your screen, you can start your slides.

**Dr. Ghodoussipour:**

**Enhancing Bladder Cancer Surgery Recovery: Strategies for Better Patient Outcomes**

Guest Presenter:  
**Dr. Saum Ghodoussipour**

BCAN  
Bladder Cancer Advocacy Network

Great. Thank you so much Stephanie, and to BCAN, and really everyone for the opportunity to share our experience here with Enhanced Recovery After Surgery, also known as ERAS, a topic that is near and dear to my heart and what I do every day in taking care of patients.

**Dr. Ghodoussipour:**

**Objectives**

Challenges in recovery

History of enhanced recovery after surgery

Modern efforts to improve outcomes

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So I also appreciate everyone who was able to fill out the questionnaire prior to this talk, and based off of that, I was able to understand that the majority of responders had never really heard about Enhanced Recovery After Surgery, over 70% of you. And half of you reported not being sure if you had ever been treated with an Enhanced Recovery After Surgery protocol. So my main objectives are to explain what these

protocols really are, and in order to accomplish that, I'm going to highlight some of the challenges in recovery that patients with bladder cancer face. I'm going to go over some of the history of Enhanced Recovery After Surgery, how we got to where we are today, and then go over some modern efforts to improve outcomes.

**Dr. Ghodoussipour:**

**Indications for Radical Cystectomy**

- Muscle invasive bladder cancer
- Certain high risk non-muscle invasive diseases
- After failure of intravesical therapy for non-muscle invasive disease
- After failure of trimodal (radiation) therapy for muscle invasive disease

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So while ERAS may be a somewhat new concept for many of you, I think that the indications, or the reasons patients have surgery for bladder cancer might be a little bit more clear based off of your personal experience. Radical cystectomy is a vital treatment procedure in bladder cancer. The indications for radical cystectomy are patients with muscle invasive bladder cancer, patients with certain high risk non-muscle

invasive diseases that might not be good candidates for bladder sparing treatments, patients who failed bladder sparing treatments for non-muscle invasive disease, and then patients who have failed trimodal therapy, which is chemotherapy and radiation for bladder cancer. A lot of the focus in recovering

patients after surgery has focused on radical cystectomy, but transurethral resection of bladder tumor is an often overlooked procedure as well.

**Dr. Ghodoussipour:**

Indications for Transurethral Resection of Bladder Tumor (TURBT)



Initial diagnosis


Repeat resection of high-risk disease

Resection of recurrent disease

Complete resection prior to chemotherapy and radiation

This is a procedure that every patient with bladder cancer has to have as it is indicated for initial diagnosis of bladder cancer at the time of repeat resection, in patients with high risk disease, at any time a patient may have recurrent disease and to ensure a complete resection of bladder tumor to enhance the efficacy of chemotherapy and radiation.

**Dr. Ghodoussipour:**



THE JOURNAL OF UROLOGY  
Vol. 63, No. 2, February 1950  
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REGIONAL GLAND DISSECTION FOR CARCINOMA OF THE BLADDER: A TECHNIQUE FOR ONE-STAGE CYSTECTOMY, GLAND DISSECTION, AND BILATERAL URETERO-ENTEROSTOMY<sup>1</sup>

W. F. LEADBETTER AND (by invitation) JOHN F. COOPER  
*From the Department of Urology, Tufts Medical School, and The New England Center Hospital, Boston, Mass.*

Now we're talking about radical cystectomy now in 2024, but this has really been around for almost a century. In 1950, Professor Leadbetter and Cooper from Tufts Medical School in Boston explained the concept of regional gland dissection, which means lymph node removal, cystectomy and urinary diversion for bladder cancer. At the time of this publication, the urinary diversion that they did was plugging the ureters, which drained the kidneys into the rectum. It was not a separate urinary diversion at the time, and we'll talk about how we've evolved from there.

drained the kidneys into the rectum. It was not a separate urinary diversion at the time, and we'll talk about how we've evolved from there.

**Dr. Ghodoussipour:**

A standard since 1950

- Males: bladder, prostate, seminal vesicles
- Females: bladder, uterus, fallopian tubes, ovaries, anterior vaginal wall
- Both: regional lymph nodes
- SURGICAL MORTALITY 40%
  - 35% 5-year survival


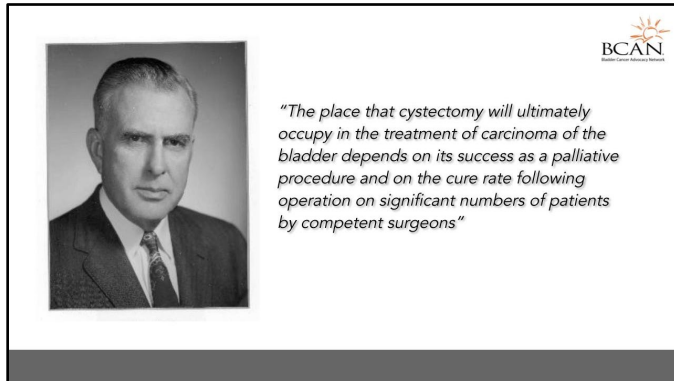


FIG. 8. Case 10. Entire specimen: bladder, prostate, glands

So really this surgery has been a standard since 1950. At that time, similar to now, the surgery in men involved removal of the bladder, prostate and seminal vesicles, and in female patients it involved removal of the bladder, uterus, fallopian tubes, ovaries, the anterior or top wall of the vagina, and in both sexes, removal of the regional lymph nodes. Now this was done to cure patients of bladder cancer, but at the time of this

publication in 1950, the mortality rate or risk of death after surgery was 40%, and the survival at that time was 35%. But these results were what we had at that time.

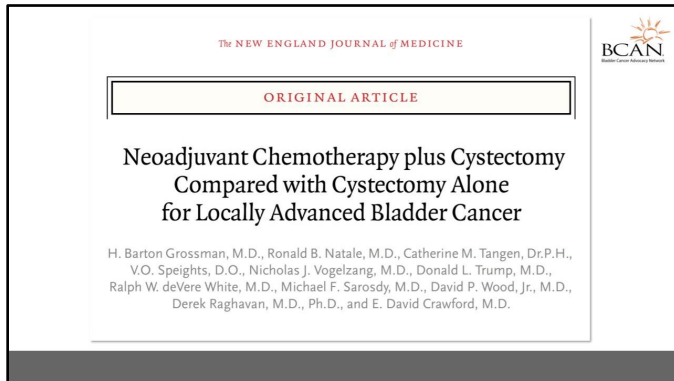
**Dr. Ghodoussipour:**



But Professor Leadbetter was sort of an innovative thinker, and in that publication he said, "The place that cystectomy will ultimately occupy in the treatment of carcinoma of the bladder, depends on its success as a palliative procedure, and on the cure rate following operation on significant numbers of patients by competent surgeons." So in the remainder of this talk I'm going to talk about how we've evolved from this

statement, and how he really was able to be a visionary in this statement here. The success of cystectomy as a palliative procedure refers to its ability to improve symptoms and potentially maintain quality of life. Cure I think is a little bit more clear, it's to rid patients of this so that they can live their life. And competent surgeons, I think he was putting the onus on us to continue to improve outcomes for patients.

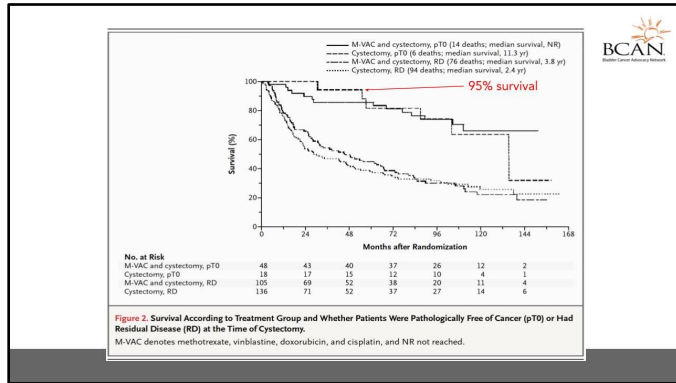
**Dr. Ghodoussipour:**



Well, I think that we've done Professor Leadbetter proud in many ways since the time of that publication. When it comes to cure, we have made significant progress in treating patients with bladder cancer, but it's not necessarily by improving our technique of surgery, it's more so with the perioperative management. This was a publication in the New England Journal of Medicine from 2009 from the SWOG 8710 trial, where patients

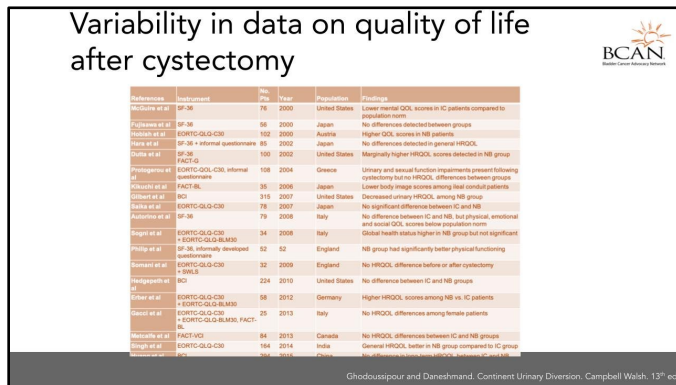
with muscle invasive bladder cancer were treated with chemotherapy before surgery, versus surgery alone, and we saw that we were able to really move that needle towards cure when patients had a great response to chemotherapy.

**Dr. Ghodoussipour:**



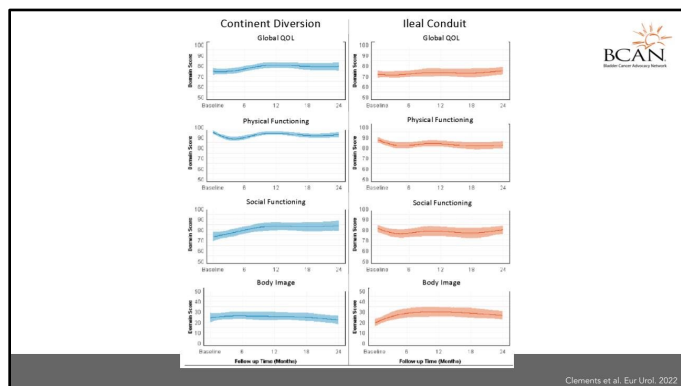
I promised Stephanie that I would stay away from Kaplan-Meier curves in this talk, and I really want this to be more of a practical conversation, less so about the science. But if you see this top curve here, and the 100 markup here, we're showing that patients who have a great response to chemotherapy are essentially cured of this disease, 95% chance of cure.

**Dr. Ghodoussipour:**



When it comes to maintaining quality of life, there's been a lot of variability in the data on quality of life after cystectomy, and the quality of life as it pertains to research has really centered around the focus of urinary diversion. There's a lot of different types of urinary diversion including ileal conduit, which is the most common. That's the one where you have a bag on the abdomen, versus continent urinary diversions, the most common being a neobladder or an Indiana pouch. A lot of studies have shown that you can preserve quality of life.

**Dr. Ghodoussipour:**

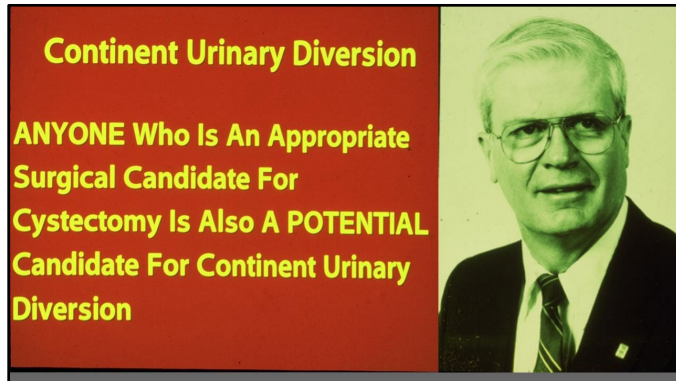


One of the most well done studies I think was this one, that included 411 patients with bladder cancer who were treated with cystectomy, and they looked at 14 different patient reported quality of life measures. And you can see in all of these figures that the quality of life from baseline, meaning before surgery here on the left, to after surgery up to two years, the numbers actually were pretty good. After two months of surgery,

most of these measures returned to where they were before surgery and some of them get even better. In these top three figures, higher numbers are better, and in this bottom one, body image, higher numbers tend to be a little bit worse, so that you can see that with ileal conduit compared to continent diversion, body image does get slightly worse, but it's not dramatically far off from baseline. So we now

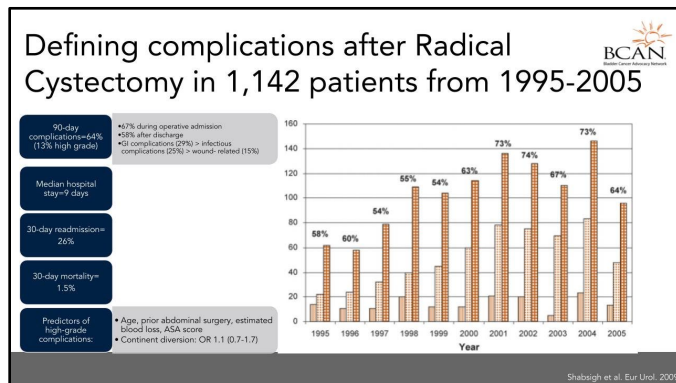
understand that patients are going through a major operation, but if we're able to preserve quality of life, then that's a significant effort that we want to make.

**Dr. Ghodoussipour:**



I have to throw this slide up here as another one of my main areas of interest is continent diversion after radical cystectomy. The man in this figure is Donald Skinner, who is one of the grandfathers of urologic oncology, and champions of continent diversions. At the time of this presentation, this slide of his, he said that any patient who's an appropriate surgical candidate for a cystectomy is also a potential candidate for continent urinary diversion. I think this is a talk unto itself.

**Dr. Ghodoussipour:**



So we can move on understanding that we've been able to move the curative needle as well as the palliative needle in cystectomy for bladder cancer. Now this is a really important paper that was published in 2009, that looked at complications or challenges in recovery after a cystectomy, and over 1,000 patients treated over a 10-year period. These results I think were sobering to a lot of urologists and patients.

In this study, we found that in these patients who had cystectomy, though there was excellent cure rates and preserved quality of life, the 90-day complication rate approached 64%, meaning the majority of patients are having some complication. Now, the rate of high grade complications, meaning complications that really required treatment in the hospital, that was lower, that was around 13%. But a lot of these complications even happen after discharge from the hospital. The most common complications that occurred were GI related, or gastrointestinal related complications, things like having nausea or vomiting after surgery, or having a hard time moving your bowels after surgery, the bowels sort of get paralyzed. There's a concept called paralytic ileus where the intestines slow down, infectious complications like urinary tract infections, and wound infections happen in a quarter of patients, and other noninfectious wound related complications happen in 15% of patients.

On top of this, the average hospital length of stay was nine days. That's a long time to stay in the hospital for a lot of patients, but that varies by location. I'm going to get into that a little bit later. Re-admissions to the hospital were also a significant concern. A quarter of patients, 26%, would have to



come back to the hospital for treatment. Mortality rate was low, 1.5%, but you may say that we want it to be even lower. And there were several predictors of complications, but really had a hard time predicting who was going to have a complication, and these numbers were not really where we would want them to be, and as a field we sought ways to improve this.

### Dr. Ghodoussipour:

A need to learn from our colleagues



"Fast Track" colorectal surgery

Moliniche et al. Eur J Surg. 1995 – epidural, no nasogastric tube, oral feeding with protein enriched solution 24hrs postop, intensive mobilization -> median hospital stay of 5 days  
Basse et al. Ann Surg. 2000 – epidural, early mobilization, enteral nutrition -> median hospital stay of 2 days



Enhanced Recovery After Surgery (ERAS)

Multimodal pathway that optimizes all elements of perioperative care  
Creation of ERAS Society in 2001  
• Mission: to develop perioperative care and to improve recovery through research, education, audit and implementation of evidence-based practice.  
• Specialty specific guidelines

So what was the first thing that we did to try to improve outcomes when it comes to recovery after a radical cystectomy? Well, the first thing we did was we looked to our colleagues. In colorectal surgery, there had been this concept in place called fast track surgery, where there was these perioperative care pathways that included multiple different interventions or steps that would speed up recovery. In 1995, there was a publication that included the use of epidurals

to decrease pain after surgery, omission of a nasogastric tube, that's a tube going down the nose to drain the stomach, which up until that time had been sort of a dogmatic standard of care. Early oral feeding was used, and in the past we used to not give patients any food until they passed flatus, and they would sit there hungry in the hospital. And intensive mobilization was used, meaning patients were encouraged to walk right after surgery. Up until this time we were still in the era of bed rest. If you had a major operation, you were instructed to stay in bed all the time, but now we know that the more you move, the more your body starts to move, the faster you'll recover. But by implementing all these changes, they were able to have patients stay in the hospital for a median of five days.

Now these are not patients having cystectomy for bladder cancer, but there's a lot of similarities between colorectal surgeries and bladder cancer surgeries. There's still bowel resections and bowel anastomosis, but the urinary diversion does make cystectomy a little bit unique. In 2000, they were able to update some of the experience with fast track for colorectal surgery, and saw that patients were able to stay in the hospital two days, which is a significant improvement. This ultimately led to the development of Enhanced Recovery After Surgery protocols. So what are ERAS protocols? The sort of topic of the evening tonight? So ERAS protocols are multimodal pathways that optimize all elements of perioperative care. This includes interventions that happen before surgery, before you ever come to the operating room, interventions inside of the operating room that we perform to improve your recovery, and then interventions after surgery to speed things up.

These are really multidisciplinary efforts as well. It's not just us surgeons who are involved with ERAS, it involves nursing, it involves nutritionists, physical therapists before surgery, it involves our anesthesiology colleagues intraoperatively, and then postoperatively, it's still the whole team as well. The ERAS society is an international society that was created in 2001. I'm very fortunate to be a part of this group, and along with some other very distinguished colleagues who are focusing on bladder cancer

surgery. But the mission of the ERAS Society was to develop perioperative care to improve recovery through research, education, audit and implementation of evidence-based practice. The ERAS Society employed specialty specific guidelines to make specific recommendations. Because as I said, though colorectal surgery and bladder cancer surgery have some similarities, each is very unique, as is trauma surgery, gynecologic surgery.

### Dr. Ghodoussipour:

REDUCING TIME TO ORAL DIET AND HOSPITAL DISCHARGE IN PATIENTS UNDERGOING RADICAL CYSTECTOMY USING A PERIOPERATIVE CARE PLAN

RAJ S. PRUTHI, JUDY CHUN, AND MARC RICHMAN

- 40 consecutive patients underwent RC from 2001-2003 with a "care plan"
  - Limited bowel prep, preop education, smaller incisions, preperitoneal dissection, use of stapling devices, prokinetic agents, early NGT removal, non-narcotic analgesia, early oral diet
- Median stay 5 days
  - One patient developed ileus and had hospital stay 7 days

J Urol. 2003

So that is what the ERAS Society set out to do. One of the first reports of an ERAS pathway, or a perioperative care plan in bladder cancer came from this study published in 2003 by Dr. Pruthi, that looked at 40 consecutive patients who were treated with this modified care plan. Their care plan included a limited bowel preparation. Up until that time, all patients who went to cystectomy for bladder cancer had a bowel

preparation, which sort of cleaned out the intestines. Then the thought was that it could decrease infection rates. However, there were some studies to show that there's no benefit, and there's potentially harm if you do a bowel preparation, patients can get dehydrated. Preoperative education was standardized in their protocol. Incisions were made smaller. Preperitoneal dissection means that we stayed outside of the abdominal cavity for as long as we could, and stapling devices were used to make the surgery faster. Again, nasogastric tube, which is the tube going down the nose, was omitted from ERAS protocols for a cystectomy, and non-narcotic pain medications were used. We now know that there's a lot of side effects from narcotic pain medications, and if you use things like Tylenol or anti-inflammatories, you can avoid a lot of those undesired side effects, and early feeding has been and remains to be an important tenet of ERAS after a radical cystectomy.

So with all of these measures, they were able to have a median hospital stay of five days. Only one patient out of these 40 had an ileus, which is where the bowels don't really quite wake up right after surgery, and that patient had to stay in the hospital for seven days.

### Dr. Ghodoussipour:

This study and other small studies similar to it, led the ERAS Society to create specialty specific recommendations for a radical cystectomy. Now these guidelines were published in 2013, and they're the last version of guidelines for enhanced recovery after a cystectomy for bladder cancer, and they included these 22 different measures. Now, as part of our questionnaire, we got some feedback from you all on what measures you thought might be important in the preoperative area. All of you thought that counseling and education was extremely effective, and I would agree with you. However, I feel that all of these other interventions are similarly effective, and that includes medical optimization, making sure that you're healthy enough for surgery, that your heart, and your lungs, and your diabetes if you have it, are under control. Other things involved in medical optimization include smoking cessation and



**Guidelines for perioperative care after radical cystectomy for bladder cancer: Enhanced Recovery After Surgery (ERAS<sup>®</sup>) society recommendations**

Yannick Cerantola<sup>1</sup>, Massimo Valerio<sup>2</sup>, Beata Persson<sup>3</sup>, Patrice Jechinski<sup>4</sup>, Olof Ljungqvist<sup>5</sup>, Martin Haberer<sup>6</sup>, Wasiim Kassem<sup>7</sup>, Jörg Müller<sup>8</sup>, Gabriele Baldini<sup>9</sup>, Francesco Carlì<sup>10</sup>, Torvind Naesheim<sup>11</sup>, Lars Vreibe<sup>12</sup>, Arthur Revhaug<sup>13</sup>, Kristoffer Lassen<sup>14</sup>, Tore Knutsen<sup>15</sup>, Erling Aarseth<sup>16</sup>, Peter Wiklund<sup>17</sup>, Harendra R.H. Patel<sup>18</sup>

Clinical Nutrition 32 (2013) 879–887

Preoperative	Intraoperative	Postoperative
1. Counseling and education	8. Epidural analgesia	16. Urinary drainage
2. Medical optimization	9. Minimally invasive approach	17. Prevention of ileus
3. Oral mechanical bowel preparation	10. Resection site drainage	18. Antiemetics
4. Carbohydrate loading	11. Antimicrobial prophylaxis and skin preparation	19. Postoperative analgesia
5. Fasting	12. Standard anesthetic protocol	20. Early mobilization
6. Preanesthesia medications	13. Fluid management	21. Early oral diet
7. Thromboprophylaxis	14. Preventing hypothermia	22. Audit
	15. Nasogastric intubation	

alcohol cessation, which can negatively impact your recovery after surgery. Avoiding bowel preparation, giving you carbohydrates and avoiding fasting before surgery.

We have to get your body ready for the stress of surgery, and fasting can really impair your ability to recover right away, we now know, so we avoid those things. Giving medications to prevent the nausea related to anesthesia,

and thromboprophylaxis, means giving medication to prevent blood clots, which is something that can happen in any patient who's having any operation, and especially so in patients who are having operations for cancer. Intraoperative interventions included in this guideline series epidurals to avoid narcotics after surgery. They recommended minimally invasive approaches using drains to avoid lymphatic collections and urine collections using antibiotics to prevent infections from ever happening, starting them before you have an infection rather than waiting for an infection, having a standardized anesthetic protocol, and one of the most important parts of that is fluid management. You don't want to be overloaded with fluid, which can make you feel boggy after surgery and patients can really feel that, but you also don't want to be dry. Your kidneys need fluid, and overall you need fluid to recover after surgery. Maintaining your body temperature, preventing hypothermia, and avoiding that NG tube. Postoperative, I think you all agreed that early mobilization and early diet are important. Those remain cornerstones of ERAS for a cystectomy, but avoiding postoperative narcotics, preventing ileus with medications that stimulate the gut are all important. And the last one on this measure is audit. That means tracking our outcomes, learning what we can do better and making modifications. And we've done a lot of that since 2013, and there's been a lot of evidence which we'll get into.

**Dr. Ghodoussipour:**

**Enhanced Recovery Protocol after Radical Cystectomy for Bladder Cancer**

Siamak Daneshmand,\*† Hamed Ahmadi, Anne K. Schuckman,‡ Anirban P. Mitra, Jie Cai, Gus Miranda and Hooman Djaladat

126 patients May 2012- July 2013

Median hospital stay: Decrease from 8 to 4 days

30-day complications = 68% minor/14% major

30-day readmissions = 21%

**Hospital Stay**

Length of Hospital Stay (days)	ERAS Patients	Historical cohort
3	15	10
4	45	15
5	20	15
6	10	15
7	5	15
8	2	22
9	1	15
10	1	15
11	1	10
12	1	10
13	1	5
14	1	5
15	1	5
16	1	5
17	1	5
18	1	5
19	1	5
20	1	5
21	1	5
22	1	5
23	1	5
24	1	5
25	1	5
26	1	5

J. Urol. 2014

One of the first reports of ERAS, one of the first large series reports of ERAS for a radical cystectomy came from the University of Southern California in 2014. In this series they included 126 patients who were treated with an ERAS pathway that included the interventions I had on the last slide. They were able to decrease hospital stay from eight days after surgery to four days. That eight days was before the use of ERAS

protocols. Complication rates remained unchanged, still 68% complication rates, 14% major. And again, the most common complications were anemia, which is a low blood count requiring transfusion in 20% of patients, infection in 13% of patients, and dehydration in 10%. Readmissions were 21%.

So you can look at all of these outcomes and say, "Yeah, we were able to knock down hospital stay, which can get patients home, not because we're getting them out of the hospital quicker, just because they're ready to go quicker without negatively impacting complications and readmissions."

**Dr. Ghodoussipour:**

<p><b>Gastrointestinal Complications Following Radical Cystectomy Using Enhanced Recovery Protocol</b>          Soroush T. Bazargani<sup>1</sup>, Hooman Djaladat<sup>1</sup>, Hamed Ahmadi<sup>1</sup>, Gus Mir...          Anne K. Schuckman<sup>1</sup>, Siamak Daneshmand<sup>1,2</sup></p>	<p><b>90-Day complication rate in patients undergoing radical cystectomy with enhanced recovery protocol: a prospective cohort study</b>          Hooman Djaladat<sup>1</sup>, Behrooz Katebian<sup>2</sup>, Soroush T. Bazargani<sup>1</sup>, Gus Miranda<sup>1</sup>,          Jamal Nabhani<sup>1</sup>, Hamed Ahmadi<sup>1</sup>, Anne K. Schuckman<sup>1</sup>, Siamak Daneshmand<sup>1,2</sup></p>
<p><b>Cost Analysis of the Enhanced Recovery After Surgery Protocol in Patients Undergoing Radical Cystectomy for Bladder Cancer</b>          Jamal Nabhani, Hamed Ahmadi, Anne K. Schuckman, Jie Cai, Gus Miranda, Hooman Djaladat, Siamak Daneshmand<sup>1</sup></p>	<p><b>The impact of patient-related nonmodifiable factors on perioperative outcomes following radical cystectomy with enhanced recovery protocol</b>          Zainfeld, Jian Chen<sup>1</sup>, Jie Cai, Gus Miranda, Anne Schuckman, Siamak Daneshmand, Hooman Djaladat</p>
<p><b>The association between intraoperative fluid intake and postoperative complications in patients undergoing radical cystectomy with an enhanced recovery protocol</b>          Soroush T. Bazargani<sup>1</sup>, Saum Ghodoussipour<sup>1</sup>, Beverly Tse<sup>2</sup>, Gus Miranda<sup>1</sup>, Jie Cai<sup>1</sup>, Anne Siamak Daneshmand<sup>1</sup>, Hooman Djaladat<sup>1</sup></p>	<p><b>Extended hospital stay after radical cystectomy with enhanced recovery protocol</b>          Hatim Thaker, MD, Saum Ghodoussipour, MD, Maheen Saffarian, Ji, MD, Gus Miranda, BS, Jie Cai, MS, Anne K. Schuckman, MD, J. MD, Mihir Desai, MD, Inderbir S. Gill, MD, Shmard, MD, Hooman Djaladat, MD  <small>Keenan Comprehensive Cancer Center, University of Southern California, Los Angeles, California, USA</small></p>
<p><b>Internal audit of an enhanced recovery after surgery protocol for radical cystectomy</b>          Saum Ghodoussipour<sup>1</sup>, Aurash Nazer-Tavakolian<sup>1</sup>, Brian Cameron<sup>1</sup>, Anirban P. Mitra<sup>1</sup>, Sunmeet Bhavada<sup>1</sup>, Monish Aron<sup>1</sup>, Mihir Desai<sup>1</sup>, Inderbir Gill<sup>1</sup>, Anne Schuckman<sup>1</sup>, Siamak Daneshmand<sup>1</sup>, Hooman Djaladat<sup>1</sup></p>	<p><b>An Update in Enhanced Recovery Following Radical Cystectomy</b>          Saum Ghodoussipour<sup>1</sup>, Hooman Djaladat<sup>1</sup></p>

Since that publication, there have been many, many, many studies done on ERAS for cystectomy. We've shown that we can decrease the rate of gastrointestinal complications, things like ileus, ability to eat, rates have been knocked down to 7% with the use of ERAS. Pain has been significantly decreased by having standardized pathways to give pain medication, specifically non-narcotics, after a radical cystectomy. Costs

have actually come down. There might be an initial increase in cost because of all these different interventions that are done, but in the long run, if patients do better costs come down. And there's been a lot of studies to suggest that patient reported quality of life, how you feel about your recovery is improved after an Enhanced Recovery After Surgery for a cystectomy.

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