Baylor St. Luke's Medical Center | Baylor College of Medicine

2026 BSLOutcomes.org

Urology

The exemplary team of physicians, caregivers and researchers at Baylor St. Luke's Medical Center continues to push the boundaries of what is possible in patient care through meaningful medical advancements and notable clinical achievements. This document highlights just a few of the stories that reflect our commitment to advanced services, innovative technology and forward-thinking care. Together, these accomplishments demonstrate how we remain at the forefront of medicine—bringing leading-edge solutions, improved outcomes and exceptional care to the patients and communities we serve.

Clinical trial at Baylor St. Luke's Medical Center raises standard of care for patients with muscle-invasive bladder cancer.

For patients with locally advanced bladder cancer who have a higher risk of lymph node metastases, extended lymphadenectomy has been a standard of care, and is increasingly used in radical cystectomies. The procedure involves the removal of the bladder and nearby lymph nodes.

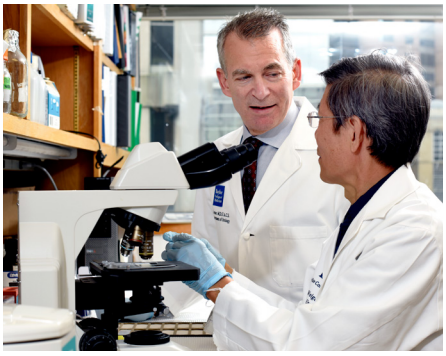
Now, recently published results of a six-year clinical trial led by researchers at Baylor St. Luke's Medical Center investigating whether extensive lymph node dissection improves patient survival has concluded that there is no advantage to the more extensive surgery.

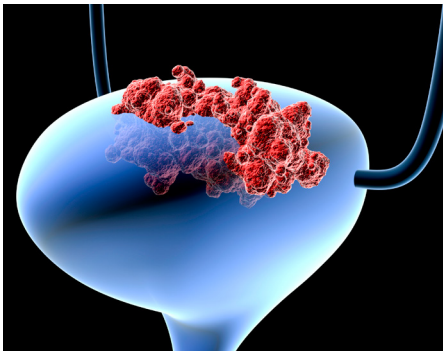
In fact, the trial found that an extended lymphadenectomy in patients with muscle-invasive bladder cancer undergoing radical cystectomy neither improved patients' remaining disease-free nor their survival rates.

In fact, the clinical trial showed that, compared with standard lymphadenectomy, extended lymphadenectomy was associated with higher perioperative morbidity and mortality.

The results of this trial will change the standard of care for these patients to include the removal of lymph nodes only in the pelvis.

Baylor St. Luke's researchers are also continuing to employ advanced gene-sequencing technology to determine the subtype of a patient's cancer and whether these molecular subtypes can predict outcomes for patients undergoing radical cystectomy.





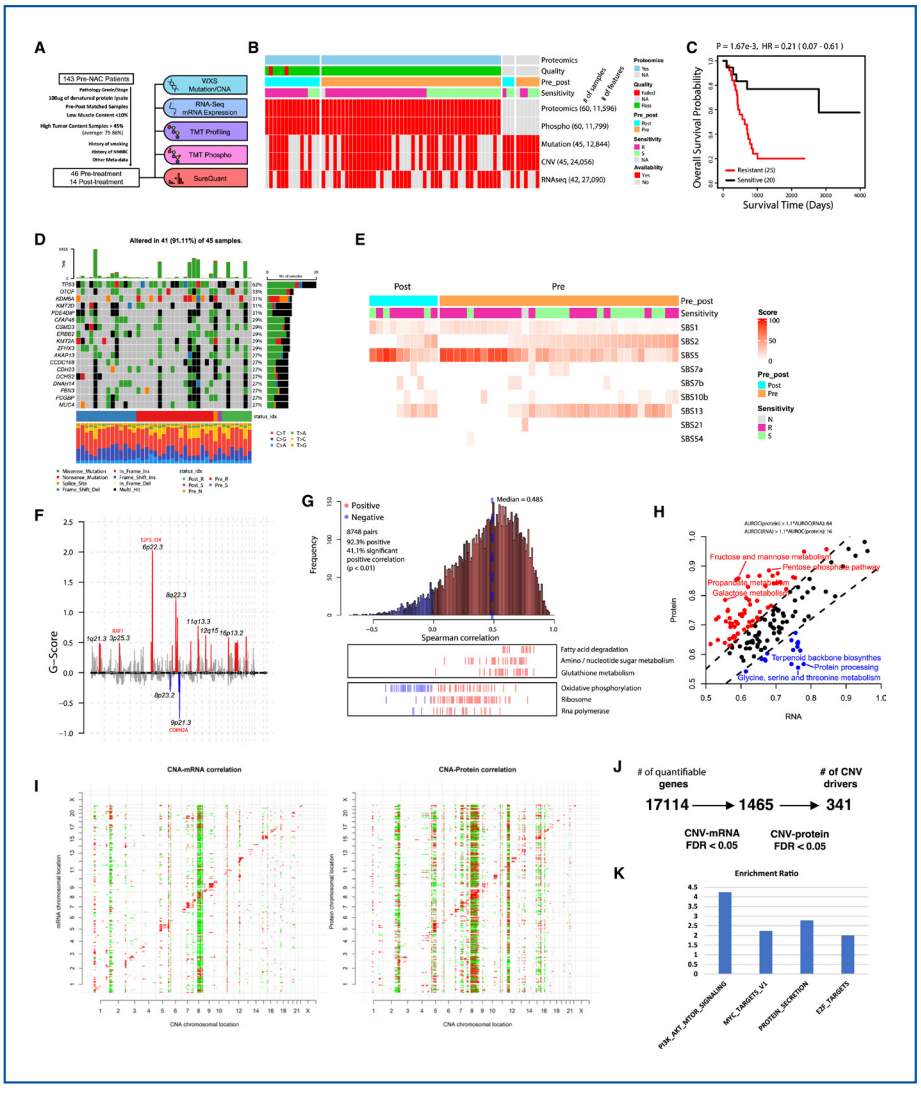
Researchers at Baylor St. Luke's Medical Center identify biomarkers in muscle-invasive bladder cancer, advancing potential new and more effective therapies for chemoresistant tumors.

To explore potential chemoresistance mechanisms and identify therapeutic opportunities in muscle-invasive bladder cancer (MIBC), researchers at Baylor St. Luke's Medical Center are conducting a comprehensive proteogenomic characterization of 46 pre- and 14 post-treatment MIBC tumors incorporating genomics, transcriptomics, proteomics, and phosphoproteomics.

Baylor St. Luke's researchers found that multi-omics clustering (an advanced computational method that groups biological samples by integrating data from multiple sources to find deeper patterns, subtypes, or disease mechanisms) not only recapitulated established molecular subtypes but also revealed subtypes associated with chemotherapy sensitivity.

Researchers analyzed protein isoform levels and identified a particular family of proteins as biomarkers of chemosensitivity, as well as potential targets to overcome chemoresistance, indicating an additive benefit of combination therapy targeting these proteins.

Overall, this study serves as a valuable resource for researchers and clinicians aiming to better understand and treat chemoresistant MIBC.



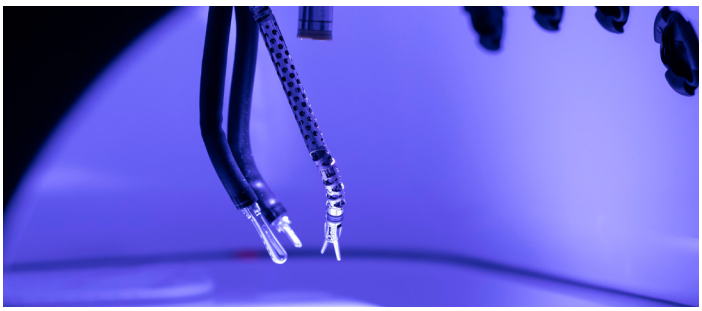
Click to read more about the study

Baylor St. Luke's Medical Center

Reconstructive surgeons at Baylor St. Luke's Medical Center experts in kidney-saving procedure.

For patients with severe kidney damage, the option of kidney removal might seem attractive in its simplicity. However, it could have long-term consequences on the patient's kidney function and ultimately affect their overall quality of life.

Surgeons at Baylor St. Luke's Medical Center are experts in options for patients whose kidneys have severe scarring from kidney stones, chronic antibiotic-resistant urinary tract infections or complications from previous surgeries. Often, these patients wind up having to wear a nephrostomy tube and a urine drainage bag while waiting for urologic reconstruction surgery.



For some patients, an autotransplant—a procedure in which the kidney is removed, repaired and reimplanted in a different location within the body—or total nephrectomy, in which the damaged kidney is completely removed, are viable options. But Baylor St. Luke's surgeons are experts in a third option: a ureterocalicostomy.

A ureterocalicostomy is a rare and technically demanding procedure, especially when done robotically. Surgeons reconstruct the urinary tract by carefully removing part of the kidney's lower pole and directly attaching the ureter to one of the internal drainage chambers called a calyx.

While the surgery and recovery process are challenging, requiring a multi-day hospitalization and temporary stents and drainage tubes, along with weeks of strict restrictions on activities and diet, Baylor St. Luke's surgeons have a high success rate performing a ureterocalicostomy to preserve patients' kidneys.

Read more about one patient's experience with this kidney-preserving procedure

Baylor St. Luke's Medical Center pioneers ultrasound-based solutions for male infertility.

Male Reproductive Medicine and Surgery at Baylor St. Luke's Medical Center focuses on innovative diagnostic approaches to male infertility.

One novel approach leverages high-frequency ultrasound technology to improve sperm detection in men presumed to be azoospermic, a condition characterized by the absence of sperm in the ejaculate.

By using quantitative analysis techniques, Baylor St. Luke's clinicians can identify sperm within the testes, allowing for more targeted sperm retrieval procedures and reducing the need for highly invasive procedures like microdissection TESE.

High-frequency ultrasound technology holds promise for enhancing fertility treatment options and improving outcomes for patients with non-obstructive azoospermia.