

Orthotopic Urinary Diversion for Women



Dimitar V. Zlatev, MD, Eila C. Skinner, MD*

KEYWORDS

- Neobladder • Orthotopic urinary diversion • Urinary bladder • Urinary incontinence
- Urinary obstruction • Vesicovaginal fistula

KEY POINTS

- Female patients with an intact functioning urethra are potential candidates for orthotopic diversion because the urethra is rarely involved with cancer in women with bladder cancer.
- The primary risk factors for urethral tumor involvement at cystectomy are tumor at the bladder neck and invasion into the cervix or vagina.
- The orthotopic neobladder relies on the rhabdosphincter for continence; in women, this structure is primarily around the portion of the urethra that is below the endopelvic fascia.
- The benefits of uterine preservation include decreased risk of vaginal fistula formation, improved sexual function, and possible decreased risk of late urinary retention.
- A vesicovaginal fistula is a unique complication for women that may be difficult to diagnose and treat. An omental flap between the vagina and neobladder can decrease the risk.

INTRODUCTION

After nearly 30 years of widespread experience with orthotopic urinary diversion for patients with bladder cancer, this form of diversion can no longer be considered experimental. Nonetheless, the adoption of orthotopic neobladder diversion for women has lagged behind that for men, in part because the urethra was routinely removed in women as part of the cystectomy, because it was commonly believed that the bladder neck itself was required for continence in women. Neobladders were occasionally performed for women with nonurothelial malignancies with promising results. Then in 1995, Stein and colleagues and Stenzl and associations each published pathologic studies suggesting the urethra was involved with cancer in only a relatively small percentage of women with urothelial bladder cancer, and thus could safely be retained in the majority.^{1,2} These findings were subsequently confirmed in

prospective series of women undergoing orthotopic diversion,^{3,4} which led to additional centers starting to offer neobladder reconstruction to women. Today, in many institutions this option is discussed with every patient who is a potential candidate. Patient selection, technical factors that impact functional outcomes, and reported results after orthotopic urinary diversion for women are discussed in this article.

PATIENT SELECTION

There are patient-specific and cancer-specific factors that must be considered in deciding who might be a candidate for an orthotopic diversion. Many of these factors are the same in men and women. The only absolute contraindications to orthotopic diversion are poor renal function (an estimated glomerular filtration rate of <40 mL/min), lack of available bowel, or poorly functioning urethral sphincter. Other patient

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Department of Urology, Stanford University School of Medicine, Stanford University Hospital and Clinics, 300 Pasteur Drive, Room S287, Stanford, CA 94304, USA

* Corresponding author.

E-mail address: skinnere@stanford.edu

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