



Urinary Tract System

The urinary tract is an organ system made up of the kidney, ureters, bladder and the urethra, as well as an array of various muscles and nerves. The kidney is a kidney-bean shaped organ whose main function is to filter waste products from the blood. It also produces certain hormones which help to regulate other organs and stimulates the production of red blood cells. The ureters are tubes attached to the kidneys that carry urine into a balloon shaped organ called the bladder, where it is stored until it leaves the body through the urethra. The system is known as the genito-urinary system because it includes the organs involved in processing and excreting urine from the body through the genitals. As we age, several of the organs of this system tend to function less than optimally, often resulting in kidney and urinary problems.

Diabetic Nephropathy

Each kidney is made up of more than a million nephrons and each has a tuft of blood vessels attached to it called a glomerulus. The glomerulus filters the blood and forms urine. In diabetic nephropathy's early stages, the glomerulus thickens and is rendered dysfunctional, allowing more albumin (protein) than normal to pass into the urine. As the disease progresses, more glomeruli are destroyed and protein continues to pass into the urine. Diabetic nephropathy is the most common cause of chronic kidney failure and end stage kidney disease in the United States.

Indication	Company	Product	Phase
Diabetic Nephropathy	Exelixis Inc	XL784	II

Erectile Dysfunction

Erectile Dysfunction (ED), also known as impotence, is the repeated inability to get or keep an erection for sexual intercourse. In 1998, breakthrough drug Viagra came on the market for the treatment of this condition. In older men, ED usually has a physical cause, such as disease, injury or side effects to other drugs. Any disorder that affects nerves or impairs blood flow has the potential to cause ED. ED is treatable at any age and more men have been seeking treatment and returning to normal sexual activity with improved treatments.

Indication	Company	Product	Phase
Erectile Dysfunction	VIVUS Inc	Avanafil	II
	Senetek Plc	Invicorp	III
	VIVUS Inc	Muse (alprostadil)	M

Urinary Incontinence

Urinary Incontinence (UI) is the accidental leaking of urine and is caused by muscles not functioning properly. Stress incontinence is a type of UI caused by sneezing, coughing, laughing, or other movements that put stress on the bladder, and is the result of a weakening of the pelvic floor muscles, those which hold the urethra closed. Overactive bladder is also a type of UI, and is caused by the involuntary contraction of bladder muscles. The female anatomy, along with the stresses of pregnancy and childbirth, make women much more likely to have UI than men. Many people are embarrassed about this problem and do not tell their doctor, though treatments are readily available. Urinary incontinence is quite common, affecting over 12 million adults.

Indication	Company	Product	Phase
Hypoactive bladder	Impax Laboratories Inc	Bethanechol chloride	A
Overactive Bladder	Johnson & Johnson	Ditropan XL (oxybutynin chloride)	M
Urinary Incontinence	Impax Laboratories Inc	Oxybutynin Chloride Extended-release Tablets	M