



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, each with a tuft of blood vessels attached to it called a glomerulus. The glomerulus filters the blood and forms urine. In its 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. The early stages may last for 5 to 10 years before more severe complications arise. High blood pressure leads to chronic kidney failure and then to end-stage kidney disease. Diabetic nephropathy is the most common cause of chronic kidney failure and end-stage kidney disease in the United States. The American Diabetes Association believes that as many as 21 percent of people with diabetes have nephropathy.

	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. According to the National Ambulatory Medical Care Survey (NAMCS), in 1999, 22.3 men out of 1000 made office visits related to ED. This number may, however, be much higher as many men elect not to seek treatment due to stigma and embarrassment. In 1998, the 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 as improved treatments become available.

	COMPANY	PRODUCT	PHASE
Erectile Dysfunction	VIVUS, Inc.	Avanafil / TA-1790	II
	VIVUS, Inc.	Alibra	PA
	Senetek Plc	Invicorp	M
	VIVUS, Inc.	Muse (alprostadil)	M

Urinary Incontinence

There are two major muscle groups involved in urination: those in the walls of the bladder, which contract to force urine into the urethra, and the muscles that surround the urethra, which allow the urine to pass through. There are also the pelvic floor muscles, which support the bladder. 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 doctors, though treatments are readily available. Urinary incontinence is quite common, affecting over 12 million adults in the United States.

COMPANY	PRODUCT	PHASE	
Impax Laboratories, Inc.	Oxybutynin Chloride	PA	Urinary Incontinence
ALZA Corporation	Ditropan XL	M	Overactive Bladder

