



A patient guide

# Detour<sup>®</sup> Bypass

Preserving long-term  
kidney function  
and improving  
patients'  
quality-of-life

A patient guide to learn more about this effective  
therapeutic option and suitable alternative



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## A sterile and safe alternative treatment to standard urinary tract diversion

In healthy people, the urine produced by the kidneys flows into the bladder **via the ureters** (Figure 1).

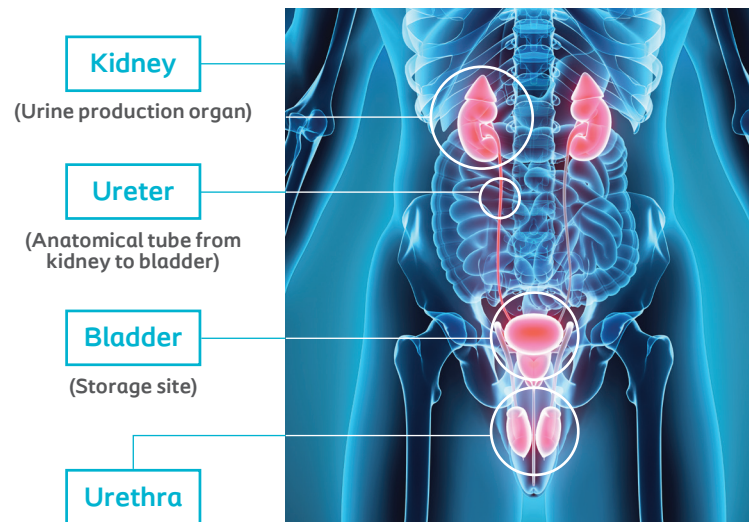
If this drainage is impaired, the urine is retained in the kidney, and this can be both dangerous and painful.

Conventionally, urologists **alleviate chronic urine retention** as **standard** with **renal catheters** (nephrostomy drains that are left in place through the skin, often permanently) which drain the urine into a bag, or with **ureteral stents** (small internal tubes). Both forms of treatment are frequently associated with patient's discomfort and complications<sup>1-5</sup> (Table 1), moreover in case of long-term treatment.

## Surgeons striving for patient's comfort have developed a suitable solution: **Detour**



Diagram of urinary system



(Figure 1)

## Highly effective and minimally invasive

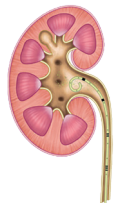
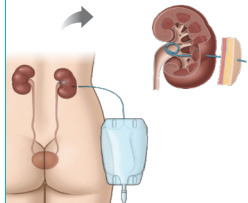
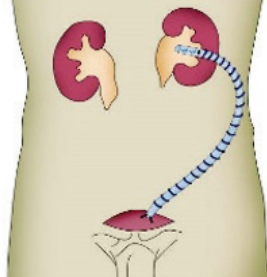
Detour is an **internal bypass** that re-establishes the connection for urine drainage between the kidney and the bladder.

It is implanted in the flank underneath the skin, and customised to the physique of the patient.<sup>1,6</sup>



The straightforward operation for Detour insertion can be performed on one or both kidneys.<sup>2,3,6</sup> This device has been successfully used in many patients, and even on transplanted kidneys.<sup>8</sup>

### Standard urinary diversion systems versus Detour:

STANDARD:		DETOUR BYPASS
<p><b>Ureteral stents</b></p> 	<p><b>Nephrostomy drains</b></p> 	
<p>☹️ <b>Regular rehospitalisation</b> for exchanging ureteral stents or renal catheters;</p> <p>☹️ Additional changes can be needed because the catheters can <b>fall out</b> or become <b>occluded</b>, and they foster developing <b>infections</b>.</p> <p>☹️ <b>Consequence on quality of life:</b> Nephrostomy means a urine <b>collecting bag</b> outside the body, which must be regularly emptied and may cause discomfort.</p>	<p>☺️ <b>Permanent closed system</b> "kidney-bladder":</p> <ul style="list-style-type: none"> <li>• Less exposed to infection than an externally opened nephrostomy<sup>4</sup></li> <li>• No external nephrostomy to be changed</li> <li>• No external bag to empty</li> </ul> <p>☺️ Significant <b>quality of life improvement</b> for the patient: less discomfort than standard urinary diversion, no catheter changes.<sup>9</sup></p>	

(Table 1)

The Detour bypass is a clinically safe and highly effective alternative for patients with still functioning bladder and kidney, who required permanent nephrostomy or palliative ureteral stenting.<sup>3-6,9-11</sup>

## Biocompatible material<sup>12</sup>

The Detour system consists of two biomaterial layers: a silicone tube reinforced with a polyester sheath:

- A smooth<sup>2</sup> inner **silicone tube** through which the urine drains safely; one end is inserted in the kidney and the other end goes into the bladder.<sup>6-8</sup> Only the silicone is in contact with urine, thus reducing the risk of encrustation. Indeed, silicone is biocompatible and quite resistant to encrustation.\*<sup>2,12</sup>
- Between the kidney and the bladder, this silicone tube is enclosed in a porous **polyester sheath** whose grooved surface readily becomes self-fixated in the surrounding tissues, and in this way holds the implant securely in the desired position.<sup>2,6,7</sup> This inert material allows limiting inflammatory reactions.<sup>2</sup>

\*Encrustation means a mineral deposit that may form inside drainage tubes after long-term contact with urine.

## Long-term implantation

### Durability

Unlike renal catheters that have to be changed every 1 - 3 months or ureteral stents whose replacement is recommended about every 3 - 12 months to avoid complication,<sup>13</sup> depending on patient's risk profile, Detour is a long-term ureter replacement.<sup>6-8</sup>

Clinical data show an average implantation duration of about 2 years (23 months). In some patients, experience already dates back more than 10 years, which means for the patient that Detour has significantly increased his quality of life.<sup>8</sup>

The long-term reliability of Detour bypass has also been demonstrated even in difficult cases such as renal transplantation.<sup>8</sup>



### Quality of life improved

Well tolerated underneath the skin,<sup>3</sup> Detour improves patient quality of life:

- Subcutaneous urine drainage with Detour makes life easier: there is no constraining leg bag, there is no risk of displacement; regular changes of ureteral stents or renal catheters are also unnecessary, as are the associated visits to the doctor, while the risk of infection is reduced.<sup>3-6,9-11</sup>
- This creates more time and new opportunities for an active social life: quality of life and social reintegration are improved significantly in patients with Detour.<sup>9</sup>

### Barely visible

The Detour implant is barely visible after implantation. Only in thin people can a hint of the track be seen and may be palpable,<sup>1</sup> but doesn't cause discomfort.<sup>4</sup> Due to the minimally invasive surgery, only minor scars remain visible in the long-term: one in the flank and another in the lower abdomen, which correspond to the two small skin incisions that were necessary to position the implant correctly.<sup>1,3,4</sup>

### Fast recovery

Following the operation, it takes the body a few days to get used to the new situation.<sup>7,4</sup>

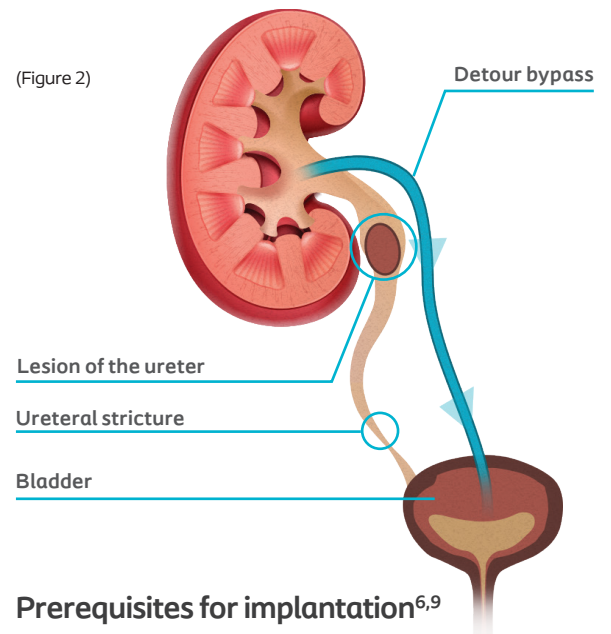
## Having the Detour bypass

### Which patients can be candidates for the placement of Detour?

Selected patients:<sup>1,2,5-8,10</sup> (Figure 2)

- With an impassable ureteral obstruction (caused by a benign or a tumoral disease) and with permanent nephrostomy,
- Or with complete disruption of the ureter, in whom repeat stenting or ureteral reconstruction is not possible or not indicated (e.g., transplanted kidneys with failed endoscopic and open procedures),
- Or with failure or intolerance of ureteral stents.

(Figure 2)



### Prerequisites for implantation<sup>6,9</sup>

- Freedom from urinary infection;
- Adequate renal function;
- Intact urinary bladder with adequate storage capacity;
- If adult, age does not matter

### Detour placement

Detour implantation represents a minimally invasive technique that is accessible to surgeons performing percutaneous surgery. The radiopaque ring of Detour enables an easy identification during its placement.

Under general anesthesia, Detour is placed in the kidney through a small incision of the flank. Detour bypass is cut to the correct length for the patient. Then it is tunnelled underneath the skin and sutured into the bladder after having accessed the bladder through another small incision in the lower abdomen.<sup>6,7</sup>

**A good operation also relies on conscientious aftercare.<sup>9</sup>**



## What is the optimal aftercare?

During the first half-year after implantation, follow-up monitoring should be given to patients one month after intervention, then 3 and 6 months after. After that, biannual controls shall be sufficient, depending on the case.<sup>6</sup>

The most important thing is to attend follow-up appointments. If a problem occurs, for example a urinary tract infection, then please go to the doctor immediately!

### General preventive diet measures are also advised:

#### Drinks:

- Patients must drink enough water so that the Detour bypass is flushed well. This also dilutes your urine and reduces the risk of stones that could form around the bypass.<sup>14</sup>

#### Food:

Tips for a urinary stone diet<sup>14,15</sup>:

- Limit your intake of animal proteins, salt and rapid-absorption sugars.
- Eat fruit and vegetables which contain alkaline minerals such as potassium.
- It is essential to have a well-balanced diet, avoiding too many calories.

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role in your health care by  
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