Patency under pressure

Resonance®
METALLIC URETERAL STENT

COOK® MEDICAL
The stent’s unique coil construction allows urine to flow even in instances of compression.4,5

1. The stent is made of a cobalt-chromium-nickel-molybdenum alloy (MP35N).
2. An internal wire (also made from MP35N) extends the full length of the stent and joins the stent at either extremity. This wire prevents the elastic elongation of the stent; prevention of stent elongation is particularly important during stent removal.
3. The tightly wound coil design helps maintain continuous drainage by allowing urine to flow in and out of the coils.
4. A stent positioner and clear sheath provide enhanced visualization and reference points for first and second pigtail deployment.

The stent may be placed using either an antegrade or retrograde technique—introduced coaxially through the sheath and removed using standard cystoscopic techniques.
Resist encrustation
The Resonance is more resistant to encrustation than traditional polymer stents, which may result in longer indwelling times and may reduce the number of exchange procedures needed.\(^3\)

The optimized compressive and radial strength of the Resonance stent, and its resistance to encrustation,\(^1\) allow the stent to remain indwelling for up to 12 months.

Resist compression
The Resonance provides radial strength without compromising longitudinal flexibility. In vitro testing found that the Resonance stent is more resistant to external compression than traditional polymer stents.\(^2\)
Unique stent performance characteristics

Compression testing

- **Stent type**
- **Best-performing plastic stent**
- **Resonance**

![Graph showing mean displacement (mm/kN) for stent compression testing](image)

**Compression testing shows the Resonance stent compresses less than the plastic stents tested.***

*Reference document number: VAL05-0058-REPORT (Rev 2) (2019). Testing was conducted on four different plastic stents manufactured by Cook Medical: Sof-Flex Double-Pigtail Stent, Cook Double-Pigtail Graduated Stent, Illack Silicone Filiform Double-Pigtail Ureteral Stent, and Cook Double-Pigtail Stent.

Comparative flow study

- **Flow rates under extrinsic loading**

![Graph showing flow rates at 0N and 40N for different stents](image)

**A comparative flow study shows the Resonance stent has superior flow rates to the plastic stents studied under comparable extrinsic compression testing conditions.***

**Reference document number: RWP1106 (2006). Testing was conducted on 6 Fr ureteral stents from different manufacturers: Cook Medical Resonance® Metallic Ureteral Stent, Boston Scientific Percuflex® Ureteral Stent, and Bard InLay® Ureteral Stent, respectively.

**Newton**

***Newton**
Cost savings

The Resonance stent has a maximum indwelling time of 12 months, which reduces the need for frequent stent changes. **As a result, the Resonance stent may be a cost-effective option for treating chronic patients.** Fewer stent exchanges may be required for the Resonance compared to standard plastic ureteral stents, which means it may be less costly to treat patients using the Resonance.¹,²

Example

**Assume your hospital performs 100 ureteral stenting procedures per year.** By placing the Resonance, you can potentially eliminate 198 exchanges, save $341,270.46 per year, and free up time to perform other procedures.

<table>
<thead>
<tr>
<th></th>
<th>Resonance metallic stents</th>
<th>Polymeric stents</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Estimated number of exchanges per patient per year¹</strong></td>
<td>1.91</td>
<td>3.89</td>
</tr>
<tr>
<td><strong>Total number of exchanges expected per year</strong></td>
<td>191</td>
<td>389</td>
</tr>
<tr>
<td><strong>Estimated average cost per year due to exchanges</strong> (includes procedure cost* and stent cost)**</td>
<td><strong>$666,928.07</strong></td>
<td><strong>$1,008,198.53</strong></td>
</tr>
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b. The estimated cost of each Resonance Metallic Ureteral Stent is $1,000, and the estimated cost of each polymeric stent is $100.
# Resonance Metallic Ureteral Stent Set

Used for temporary stenting of the ureter in adult patients with extrinsic ureteral obstruction. This stent is intended for one-time use.

<table>
<thead>
<tr>
<th>Order Number</th>
<th>Reference Part Number</th>
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### Positioning System Only

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Some products or part numbers may not be available in all markets. Contact your local Cook representative or Customer Service for details.

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Nonclinical testing has demonstrated that the Resonance stent is MR Conditional. Refer to the product’s IFU for more information.

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