What makes a wound complex?
Wounds with exposed tendons, nerves and bones are often described as ‘complex’. A series of other factors including associated diseases, large size, crushing injury, infection, chronicity and history of previous radiation all add to the complexity of a wound.

Rigorous, focused surgical intervention is frequently required to repair these wounds.

So how are complex wounds treated?
Many surgical options are available for a complex wound. However, any decision should be holistic and take into account factors such as the occupational circumstances of the patient, comorbidity, likelihood of success, donor morbidity, functional outcome, the risks of surgery and anaesthesia.

The surgical management of problem wounds generally aims to obtain rapid wound closure with the simplest method and with minimal compromise of cosmesis and function.1

The mechanism of CuraVAC
CuraVAC is the wound dressing kit designed for Negative Pressure Wound Therapy which leads to faster granulation which accommodates current methods for healing.

Any Soft Tissue Defect with Vascular bed
CuraVAC Therapy

Suction of Exudate
- Reduced Edema
- Reduced chance of infection
- Reduced cytokines (Inflammation)
- Enhanced O2: Perfusion

Mechanical Stress
- Promote Angiogenesis
- Promote faster Granulation

End Point: Granulation till the level of skin/Coverage of all vital tissues/ Bleeding noted on granulation

Frequent use of NPWT is noted to be a significant change in practice, with a trend down the reconstructive ladder, using fewer free flaps and more delayed closures and skin grafts.2
CuraVAC is indicated in various applications alone or with other therapies which include...

- **Diabetic Wound**
- **Pressure Wounds**
- **Trauma Wounds (e.g. compartment syndrome)**
- **Sternal Wounds (After Heart Transplant)**
- **Skin & Split thickness Graft to promote perfusion and microcirculation**

**Other CuraVAC applications also includes...**
- Donor Site
- Degloving Injuries
- Various Soft tissue injuries prior to surgical closure, grafting or reconstructive surgery

**Contraindicated for NPWT System**
- Fistulas to organs or body cavity
- Necrotic Tissue
- Cancer
- Untreated Osteomyelitis
  * Fatal complications may occur.

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**Additional Clinical Evidences**

1) Comparison of NPWT with AMWT in the treatment of Diabetic Foot Ulcers (DFUs)\(^\text{11}\)

A multicenter randomized controlled trial; Peter A. Blume et al. DIABETES CARE, VOLUME 31, NUMBER 4, APRIL 2008.

<table>
<thead>
<tr>
<th>MedDRA System Organ Class</th>
<th>NPWT</th>
<th>AMWT</th>
<th>P value*</th>
</tr>
</thead>
<tbody>
<tr>
<td>e Secondary amputations</td>
<td>169</td>
<td>166</td>
<td>0.015</td>
</tr>
<tr>
<td>Edema</td>
<td>5.10</td>
<td>1.42</td>
<td>0.371</td>
</tr>
<tr>
<td>Wound infection</td>
<td>4.24</td>
<td>1.60</td>
<td>0.371</td>
</tr>
<tr>
<td>Cellulitis</td>
<td>4.24</td>
<td>1.60</td>
<td>0.371</td>
</tr>
<tr>
<td>Osteomyelitis</td>
<td>1.00</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Staphylococcal infection</td>
<td>1.00</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Infected skin ulcer</td>
<td>1.00</td>
<td>2.12</td>
<td>0.020</td>
</tr>
</tbody>
</table>

Data are n (%). * Fisher exact test: moderate, 1 sided, endpoint MedDRA, Medical Dictionary for Regulatory Activities.

NPWT significantly reduces the incidence of secondary amputation when compared with AMWT.

"NPWT is as safe as and more efficacious than AMWT in the treatment of DFUs."

2) Cost Effectiveness Study between NPWT and AWMT.\(^\text{10}\)

Ostomy wound manage.1999;45:32-33

300 250 200 150 100 50 0

<table>
<thead>
<tr>
<th>Healing time (day)</th>
<th>NPWT</th>
<th>Gauze</th>
</tr>
</thead>
<tbody>
<tr>
<td>97 days</td>
<td>Gauze</td>
<td></td>
</tr>
<tr>
<td>247 days</td>
<td>NPWT</td>
<td></td>
</tr>
</tbody>
</table>

Cost for treatment ($)

<table>
<thead>
<tr>
<th>Cost for treatment ($)</th>
<th>NPWT</th>
<th>Gauze</th>
</tr>
</thead>
<tbody>
<tr>
<td>$14,646</td>
<td>Gauze</td>
<td></td>
</tr>
<tr>
<td>$23,465</td>
<td>NPWT</td>
<td></td>
</tr>
</tbody>
</table>

* Average Closure : Gauze group 247 days VS NPWT group 97 days........247 days
  * Average Total Cost : Gauze group $23,465 VS NPWT group $14,646........38% cheaper in NPWT
CuraVAC: The Complete Set provided for Negative Pressure Wound Therapy (NPWT)

Reference
3. Fay MF. AORN J 1987;46:442
4. Ovington LG. In advances in wound care, the 1999 edition source book
7. Walbo et al. Unifllchirurg 2001;104:918
10. Ostomy wound manage. 1999;45:32-33