THE REVOLUTION IN SKIN REGENERATION
ReCell® is an innovative clinical solution used for the treatment of a wide range of wounds, burns, scars and skin defects. Working with a small site-matched sample of the patient’s healthy skin, ReCell produces a cell suspension that stimulates skin growth.

The cell suspension, which is sprayed onto an affected area to be treated, contains the appropriate mixture of healthy cells to promote healing (keratinocytes), skin structure (fibroblasts), vascularity (colour), pigmentation (melanocytes) and texture.
ReCell is used to facilitate quick epithelialisation of acute wounds, in isolation or in association with standard wound repair techniques. Rapid healing reduces the risk of long-term scarring, inflammation and redness.\textsuperscript{10}

ReCell can be used alone in wounds where the dermis of the skin has not been damaged. When the damage is deeper, ReCell can be used in combination with traditional skin grafting techniques to help improve wound healing.\textsuperscript{3,11}

The use of ReCell provides all the cells from the actively regenerating layer of skin.

The cell suspension also contains the cells needed to allow the skin to return to its original colour and texture.

WHY ReCell\textsuperscript{®} IS UNIQUE

1. It is a self-contained autologous-based process.

2. ReCell delivers a FULL complement of the patient’s own cells:
   - Keratinocytes
   - Basal cells
   - Fibroblasts
   - Melanocytes
   - Langerhans cells

3. Delivered in situ using the patient’s own skin:
   - No need for a laboratory
   - No waiting time
   - No extra costs

4. It is the best one-step intra-operative clinical solution available today to patients.
The ReCELL® Procedure

1. Take a thin, split thickness shave biopsy, 0.15 - 0.2 mm in depth, of site matched skin
2. Skin sample incubated in the ReCell Enzyme solution for approx 15 mins
3. Skin sample removed from incubator, mechanically agitated to separate cells
4. Cells rinsed and collected using ReCell Buffer Solution
5. Cells filtered and suspension drawn up
6. ReCell Suspension sprayed or dripped on wound - cover with recommended dressing

WHAT WILL HAPPEN?

Cells are applied to the treatment area.

Immediately the cells start to multiply and will form the first layer of skin within 7 days.

After 4 to 6 weeks, the cells form the proper thickness and the pigment cells (melanocytes) begin to release the melanin that gives skin colour. This process will continue over the next few months.

COMPOSITION OF SUSPENSION

Cells collected from dermal-epidermal junction include:

- Keratinocytes
- Melanocytes
- Fibroblasts
- Langerhans cells
- Un-differentiated Basal cells

These cells:

- Are not yet terminally differentiated
- Are highly proliferative
- Cultured in-situ
- Migrate evenly across the wound bed
- Provide rich signalling matrix
- Approx. 2.8 million viable cells derived from 2 cm² skin shave biopsy*

# The ReCell® Kit

## Technical specifications

<table>
<thead>
<tr>
<th>Maximum coverage per kit:</th>
<th>320 cm²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adults:</td>
<td>approximately 2%</td>
</tr>
<tr>
<td>Children:</td>
<td>approximately 4%</td>
</tr>
</tbody>
</table>

| Processing time:          | Approximately 30 minutes after skin sample is taken, the cell suspension is ready for application |

| Indication:               | ReCell is intended to be used to disaggregate cells from a patient’s split-thickness skin sample and to collect these cells into suspension for reintroduction to the patient. The cells can be used for autologous application to the prepared wound bed as determined by a physician |

| Clinical Applications:    | • Treatment of burns and skin-graft donor sites  
                          | • Remodeling of scar  
                          | • Reintroduction of pigmentation, e.g. stable vitiligo, leukoderma  
                          | • Restoration of damaged skin, e.g. acne scar, sun damage (wrinkles)  
                          | • Healing of chronic wounds |

| Contraindications:        | Infected or necrotic wounds, unstable vitiligo |

| Skin sample specifications: | Thin, split-thickness shave biopsy of 0.15 mm - 0.2 mm depth  
                          | Delivers a 1:80 expansion ratio |
**PRE-TREATMENT PREPARATION**

**Materials required**
- Sterile drapes, gowns, gloves
- Protective eyewear (if applicable)
- Skin biopsy instrument
  (e.g. dermatome or guarded knife)
- Appropriate anaesthesia
- Fine forceps

**Patient selection**
- Stable condition, no infection
- Expect improvement not perfection
- No history of keloids or scar going into dermal area

**Wound bed preparation**
- Sterile field
- Clean - no necrotic tissue
- Infection free
- Pinpoint bleeding

**Dressings**
- Primary dressing - small pore, low absorbent, non-adherent, non-toxic to cells
- Secondary dressing - moderately absorbent, minimal adherence, low shear, readily removable

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**STEP 1: ReCell Skin Processing**

1. **Take skin sample**
   - Take thin, split-thickness shave biopsy (0.15-0.2 mm in depth).

2. **Heat Enzyme**
   - Run test again by pressing ( )
   - When ( ) shows, press play ( ) button to heat the Enzyme

3. **Incubate skin sample**
   - When orange light ( ) changes to , insert skin sample into incubator well for 15 minutes

4. **Draw up Buffer Solution**
   - Using a 5 mL syringe and blunt needle draw up appropriate volume of Buffer Solution from well B

<table>
<thead>
<tr>
<th>Treatment Area</th>
<th>Buffer Solution Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 80 cm²</td>
<td>1.5 mL</td>
</tr>
<tr>
<td>80 cm² - 160 cm²</td>
<td>2.5 mL</td>
</tr>
<tr>
<td>160 cm² - 320 cm²</td>
<td>4.5 mL</td>
</tr>
</tbody>
</table>

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**DRESSINGS AND POST TREATMENT GUIDELINES**

- Prevent the treated area from getting wet while the wound is still open
- Refrain from strenuous activity
- Do not remove primary dressing before day 5

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**SET UP**

**SELF TEST**

Press ( ) button and wait 30 secs

( ) = successful

( ) = device failure - use another device

Device will turn OFF after 30 secs

**A - PREPARE ENZYME SOLUTION**

- Using a 10 mL syringe add 10 mL sterile water to enzyme
- Mix gently (DO NOT SHAKE)
- Place solution in incubator well marked A

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**Stage 2: ReCell Suspension Preparation**

**Test scrape**
- Remove skin sample from incubator and place on tray
- Gently scrape to test if the cells disaggregate, DO NOT complete scraping
- Cells do not come away - incubate for a further 5-10 minutes and repeat step

**Deactivate ReCell Enzyme**
- Rinse skin sample briefly in well B

**Scrape cells**
- Ace skin sample on tray dermal side down
- Using Buffer Solution in the 5 mL syringe, place a few drops to the skin sample
- Scrape thoroughly to disaggregate cells

**Rinse and Aspirate**
- Add remaining Buffer Solution from the 5 mL syringe onto the tray using the solution to rinse the scalpel and tray into one corner
- Using the 5 mL syringe and blunt needle, aspirate the cell suspension and again rinse the tray into one corner

**Status 3: ReCell Suspension Delivery**

**Filter cells**
- Filter cell suspension through well C
- Remove cell strainer
  - **Tip:** Tap cell strainer over well

**Draw up ReCell suspension**
- Use a new sterile 5 mL syringe with blunt needle draw up ReCell suspension from well C

**Dressings**
- Ensure the dressings are cut and prepared for immediate application once the cell suspension is applied

**Apply ReCell suspension to wound bed**
- If spraying, connect spray nozzle to the syringe
- If dripping, leave blunt needle in place
  - **N.B.** Spraying of less than 2 mL suspension is not recommended.

<table>
<thead>
<tr>
<th>Cell Volume</th>
<th>Recommended Application Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5 mL</td>
<td>Drip</td>
</tr>
<tr>
<td>2.5 mL</td>
<td>Spray or Drip</td>
</tr>
<tr>
<td>4.5 mL</td>
<td>Spray</td>
</tr>
</tbody>
</table>

**Position dressing below wound**

**Post-treatment guidelines**

- Ensure primary dressing removal is atraumatic
- Use the area has healed, massage using a gentle moisturiser at least twice daily

- Avoid direct sun exposure at least 4 weeks following treatment
Key Success Factors

Procedure
- Thin split-thickness skin shave biopsy
- Wound bed preparation
  - Keep demabration to pin point bleeding
  - Viable dermis, vascularised wound bed
- Good haemostasis
- Dressing (non adherent, small pore, no silver)

Patient selection
- Stable condition, no infection
- Expect improvement not perfection
- No history of keloids or scar going into dermal area

Post Operative Care
- Careful removal of dressings
- Protect the healed area
- Keep area moisturised
- Use sunscreen

ReCell® Benefits

ReCell is transforming today’s standard of care for the treatment of acute wounds (e.g. 2nd degree burns) by improving patient outcome and reducing the overall management costs.

ReCell® can:
- Improve aesthetic outcome\textsuperscript{1, 4-9}
- Be used with all skin types
- Site match (blend) with surrounding skin
- Limit skin sample size and depth required (1:80 ratio)\textsuperscript{1, 3, 5}
- Allow treatment of larger areas
- Increase the availability of healthy skin for successive treatments
- Speed up the healing\textsuperscript{1, 4, 5}
- Minimise hypertrophic scarring
- Reduce nursing care required
- Minimise the need for dressing changes
- Reduce the use of drugs (pain management)
- Reduce patient discomfort\textsuperscript{1, 2}
- Shorten hospital stay\textsuperscript{2}
- Reduce the number of outpatient/inpatient follow-up visits
- Reduce the need for secondary procedures
Clinical References


What Avita Medical offers to clinicians

- Clinical training on the use of ReCell
- OR Support during first ReCell procedure
- Access to recellnet.org web platform
  - Network of experienced users
  - Ongoing clinical updates
  - Research working groups
- Patient dedicated brochures on the benefits of ReCell
- Direct link to ReCell webpage
- Dedicated communication to patient through skinnet.info

Choose Avita Medical as your partner.
Together we can explore new innovative frontiers in the clinical management of your patients.
Avita Medical

Avita Medical (ASX: AVH) is a publicly listed medical technology company that develops and distributes regenerative and tissue-engineered products for the treatment of a broad range of wounds, scars and skin defects.

Avita Medical’s mission is to create a leading global healthcare company in the field of regenerative medicine and tissue engineering by providing highly differentiated and cost-effective clinical solutions which addresses the needs of patients, clinicians and healthcare systems.

Using patented and proprietary tissue harvesting, collection and application technologies, the company is able to provide innovative treatment solutions derived from the patient’s own skin. The company’s lead product, ReCell has been designed for use in a wide variety of burns, plastic, reconstructive and cosmetic procedures.

Training & Marketing

Brochure

Leaflet

Website
www.avitamedical.com
www.recell.info