becaplermin (be-kap-lur-min)

**Indications**
Treatment of lower extremity diabetic neuropathic ulcers extending to subcut tissue or beyond and having adequate blood supply.

**Action**
Promotes chemotaxis of cells involved in wound repair and enhances formation of granulation tissue.

**Pharmacokinetics**
- **Absorption:** Minimal absorption (<3%).
- **Distribution:** Action is primarily local.
- **Metabolism and Excretion:** Unknown.
- **Half-life:** Unknown.

**TIME/ACTION PROFILE (improvement in ulcer healing)**

<table>
<thead>
<tr>
<th>ROUTE</th>
<th>ONSET</th>
<th>PEAK</th>
<th>DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topical</td>
<td>within 10 wk</td>
<td>unknown</td>
<td>unknown</td>
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</tbody>
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**Contraindications/Precautions**
- **Contraindicated in:** Known hypersensitivity to becaplermin or parabens; Known neoplasm at site of application; Wounds that close by primary intention.
- **Use Cautiously in:** Known malignancy; OB, Lactation, Pedi: Safety not established.

**Adverse Reactions/Side Effects**
- **Derm:** Erythematous rash at application site.
- **Misc:** Malignancy (may lead to mortality, especially with use of 3 tubes).

**Interactions**
- **Drug-Drug:** None known.

**Route/Dosage**
**Topical (Adults):**
- Length of gel in inches from 15- or 7.5-g tube = length × width of ulcer area ÷ 0.6; from the 2-g tube = length × width of ulcer area ÷ 1.3. Length of gel in centimeters from 15- or 7.5-g tube = length × width of ulcer area ÷ 4; from the 2-g tube = length × width of ulcer area ÷ 2, for 12 hr each day.

**NURSING IMPLICATIONS**

**Assessment**
- Assess size, color, drainage, and skin surrounding wound at weekly or biweekly intervals. Amount of gel to be applied is recalculated based on wound size.

**Potential Nursing Diagnoses**
- Impaired tissue integrity (Indications)
- Deficient knowledge, related to medication regimen (Patient/Family Teaching)

**Implementation**
- **Topical:** Calculated amount is applied as a thin layer (1/16-in. thick) and covered with a moist saline dressing for 12 hr; dressing is removed, silver mixed and reinitiated with moist dressing without becaplermin for rest of day. Process is repeated daily.
- Store gel in refrigerator; do not freeze. Do not use beyond expiration date on crimped end of tube.

**Patient/Family Teaching**
- Instruct patient on proper technique for application. Wash hands before applying gel and use cotton swab or tongue depressor to aid in application. Tip of tube should not come in contact with ulcer or any other surface; recap tightly after each use. Squeeze calculated amount of gel onto a clean, firm, nonabsorbable surface (wax paper). Spread gel with swab or tongue depressor over the ulcer surface in an even layer to the thickness of a dime. Cover with a saline-moistened gauze dressing.
- Do not apply more than calculated amount; has not been shown to be beneficial. If a dose is missed, apply as soon as remembered. If not remembered until next day, skip dose and restart at regular dosing schedule. Do not double doses.
- After 12 hr, rinse ulcer gently with saline or water to remove residual gel and cover with saline-moistened gauze.
Emphasize the importance of strict wound care and non-weight-bearing program.

Evaluation/Desired Outcomes

- Improved healing of ulcers. If the ulcer does not decrease in size by 30% within 10 weeks or if complete healing has not occurred within 20 weeks, continuation of therapy should be reassessed.

Why was this drug prescribed for your patient?