

## + Evidence in focus

Poster summary: Motley TA, et al. Wounds (2014)\*

Collagenase SANTYL<sup>o</sup> Ointment 250 units/g plus sharp debridement (SD) significantly decreased wound area and reduced time to closure compared with SD alone in patients with diabetic foot ulcers (DFUs)

## + Plus points

**Significant decrease** in DFU wound area from baseline with SANTYL Ointment plus SD at the end of treatment (EOT) and end of study (EOS) ( $p < 0.001$  for both)

Median time to DFU closure decreased with SANTYL Ointment plus SD versus SD alone (9 vs 11 weeks)

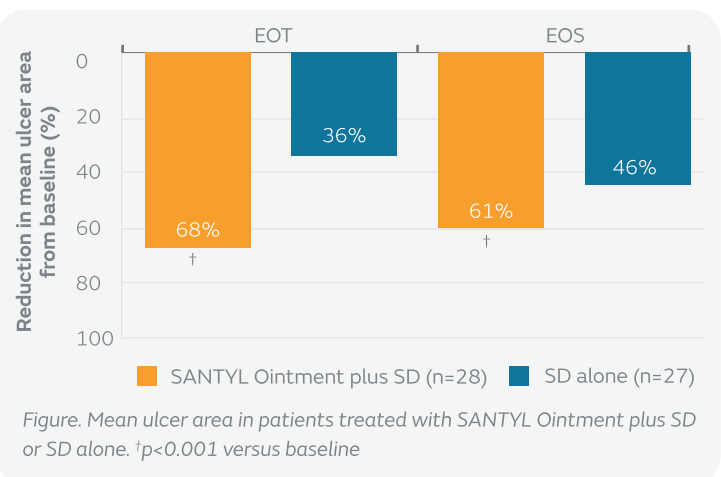
**Clinically relevant** and statistically significant decreases in total wound status score with SANTYL Ointment

## Overview

- Randomized, parallel-group, open label study conducted at seven foot and ankle, and woundcare specialist centers in the USA
- Patients with type 1 or 2 diabetes and a neuropathic DFU received once daily SANTYL Ointment (thickness ~2mm;  $n=28$ ) with SD or SD with daily wound care/dressings ( $n=27$ ) for 6 weeks; patients were followed for an additional 6 weeks without treatment
- Both groups underwent SD throughout the 6-week treatment period whenever the DFU was rated  $\geq 3$  on any one of several wound assessment subscales
  - Subscales assessed edges, undermining, necrotic tissue type, necrotic tissue amount, exudate type, exudate amount, skin color surrounding wound and granulation tissue

## Results

- Percent change from baseline in mean wound area at both EOT and EOS (primary endpoint) was significant with SANTYL Ointment plus SD ( $p < 0.001$ ; Figure), but not with SD alone
- Clinically relevant and statistically significant decreases from baseline in total wound status score (secondary endpoint) were observed with SANTYL Ointment plus SD and SD, respectively, at EOT ( $p < 0.0028$ ;  $p < 0.0444$ ) and EOS ( $p < 0.0001$ ;  $p < 0.0011$ )
- Median time to DFU closure (secondary endpoint) was decreased with SANTYL Ointment plus SD compared with SD alone (9 vs 11 weeks)



## Conclusions

Use of SANTYL Ointment plus SD significantly reduced wound area from baseline at both EOT and EOS, as well as reducing time to wound closure, compared with SD alone in patients with DFUs.

## Citation

\*Motley TA, Lange DL, Dickerson JE, Slade HB. Clinical outcomes associated with serial sharp debridement of diabetic foot ulcers with and without clostridial collagenase ointment. Wounds. 2014;26(3):57–64.  
Available at: [Wounds.com](http://Wounds.com)

### Important Safety Information

**Indications:** Collagenase SANTYL Ointment (“SANTYL”) is indicated for debriding chronic dermal ulcers and severely burned areas.

**Contraindications:** SANTYL is contraindicated in patients who have shown local or systemic hypersensitivity to collagenase. **Warnings**

**and Precautions:** The optimal pH range of collagenase is 6 to 8. Higher or lower pH conditions will decrease the enzyme’s activity and appropriate precautions should be taken. The enzymatic activity is also adversely affected by certain detergents, and heavy metal ions

such as mercury and silver which are used in some antiseptics. As such, the wound should be properly cleansed prior to application of SANTYL. Debilitated patients should be closely monitored for systemic bacterial infections because of the theoretical possibility that

debriding enzymes may increase the risk of bacteremia. A slight transient erythema has been noted occasionally in the surrounding tissue, particularly when SANTYL was not confined to the wound. SANTYL is not indicated for wound closure. Discontinue use of SANTYL after

granulation tissue is well-established. **Adverse Reactions:** No allergic sensitivity or toxic reactions have been noted in clinical use when used as directed. The risk information provided herein is not comprehensive. You are encouraged to report negative side effects of prescription

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# Collagenase SANTYL<sup>®</sup>

Ointment 250 units/g

Rx only

## DESCRIPTION

Collagenase Santyl<sup>®</sup> Ointment is a sterile enzymatic debriding ointment which contains 250 collagenase units per gram of white petrolatum USP. The enzyme collagenase is derived from the fermentation by *Clostridium histolyticum*. It possesses the unique ability to digest collagen in necrotic tissue.

## CLINICAL PHARMACOLOGY

Since collagen accounts for 75% of the dry weight of skin tissue, the ability of collagenase to digest collagen in the physiological pH and temperature range makes it particularly effective in the removal of detritus.<sup>1</sup>

Collagenase thus contributes towards the formation of granulation tissue and subsequent epithelialization of dermal ulcers and severely burned areas.<sup>2,3,4,5,6</sup> Collagen in healthy tissue or in newly formed granulation tissue is not attacked.<sup>2,3,4,5,6,7,8</sup> There is no information available on collagenase absorption through skin or its concentration in body fluids associated with therapeutic and/or toxic effects, degree of binding to plasma proteins, degree of uptake by a particular organ or in the fetus, and passage across the blood brain barrier.

## INDICATIONS AND USAGE

Collagenase Santyl<sup>®</sup> Ointment is indicated for debriding chronic dermal ulcers<sup>2,3,4,5,6,8,9,10,11,12,13,14,15,16,17,18</sup> and severely burned areas.<sup>3,4,5,7,16,19,20,21</sup>

## CONTRAINDICATIONS

Collagenase Santyl<sup>®</sup> Ointment is contraindicated in patients who have shown local or systemic hypersensitivity to collagenase.

## PRECAUTIONS

The optimal pH range of collagenase is 6 to 8. Higher or lower pH conditions will decrease the enzyme's activity and appropriate precautions should be taken. The enzymatic activity is also adversely affected by certain detergents, and heavy metal ions such as mercury and silver which are used in some antiseptics. When it is suspected such materials have been used, the site should be carefully cleansed by repeated washings with normal saline before Collagenase Santyl<sup>®</sup> Ointment is applied. Soaks containing metal ions or acidic solutions should be avoided because of the metal ion and low pH. Cleansing materials such as Dakin's solution and normal saline are compatible with Collagenase Santyl<sup>®</sup> Ointment.

Debililitated patients should be closely monitored for systemic bacterial infections because of the theoretical possibility that debriding enzymes may increase the risk of bacteremia.

A slight transient erythema has been noted occasionally in the surrounding tissue, particularly when Collagenase Santyl<sup>®</sup> Ointment was not confined to the wound. Therefore, the ointment should be applied carefully within the area of the wound. Safety and effectiveness in pediatric patients have not been established.

## ADVERSE REACTIONS

No allergic sensitivity or toxic reactions have been noted in clinical use when used as directed. However, one case of systemic manifestations of hypersensitivity to collagenase in a patient treated for more than one year with a combination of collagenase and cortisone has been reported.

## OVERDOSAGE

No systemic or local reaction attributed to overdose has been observed in clinical investigations and clinical use. If deemed necessary the enzyme may be inactivated by washing the area with povidone iodine.

## DOSAGE AND ADMINISTRATION

Collagenase Santyl<sup>®</sup> Ointment should be applied once daily (or more frequently if the dressing becomes soiled, as from incontinence). When clinically indicated, crosshatching thick eschar with a #10 blade allows Collagenase Santyl<sup>®</sup> Ointment more surface contact with necrotic debris. It is also desirable to remove, with forceps and scissors, as much loosened detritus as can be done readily. Use Collagenase Santyl<sup>®</sup> Ointment in the following manner:

1 – Prior to application the wound should be cleansed of debris and digested material by gently rubbing with a gauze pad saturated with normal saline solution, or with the desired cleansing agent compatible with Collagenase Santyl<sup>®</sup> Ointment (See **PRECAUTIONS**), followed by a normal saline solution rinse.

2 – Whenever infection is present, it is desirable to use an appropriate topical antibiotic powder. The antibiotic should be applied to the wound prior to the application of Collagenase Santyl<sup>®</sup> Ointment. Should the infection not respond, therapy with Collagenase Santyl<sup>®</sup> Ointment should be discontinued until remission of the infection.

3 – Collagenase Santyl<sup>®</sup> Ointment may be applied directly to the wound or to a sterile gauze pad which is then applied to the wound and properly secured.

4 – Use of Collagenase Santyl<sup>®</sup> Ointment should be terminated when debridement of necrotic tissue is complete and granulation tissue is well established.

## HOW SUPPLIED

Collagenase Santyl<sup>®</sup> Ointment contains 250 units of collagenase enzyme per gram of white petrolatum USP.

Do not store above 25°C (77°F). Sterility guaranteed until tube is opened.

Collagenase Santyl<sup>®</sup> Ointment is available in the following sizes:

30 g tube NDC 50484-010-30

90 g tube NDC 50484-010-90

## REFERENCES

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