

**Summary of the Risk Management Plan (RMP) for NexoBrid, poudre et gel pour gel (concentrate of proteolytic enzymes enriched in bromelain)**

Marketing Authorisation Holder: Triskel Integrated Services SA

Version number 2.0 dated 25.07.2024

Based on the EU-Risk Management Plan (version number 8.2 dated 13.03.2023)

**Disclaimer**

The Risk Management Plan (RMP) is a comprehensive document submitted as part of the application dossier for market approval of a medicine. The RMP summary contains information on the medicine's safety profile and explains the measures that are taken in order to further investigate and follow the risks as well as to prevent or minimise them.

The RMP summary of NexoBrid is a concise document and does not claim to be exhaustive.

As the RMP is an international document, the summary might differ from the "Arzneimittelinformation / Information sur le médicament" approved and published in Switzerland, e.g. by mentioning risks occurring in populations or indications not included in the Swiss authorization.

Please note that the reference document which is valid and relevant for the effective and safe use of NexoBrid in Switzerland is the "Arzneimittelinformation / Information sur le médicament" (see [www.swissmedicinfo.ch](http://www.swissmedicinfo.ch)) approved and authorized by Swissmedic. Triskel Integrated Services SA is fully responsible for the accuracy and correctness of the content of the published summary RMP of NexoBrid.

## Summary of risk management plan for NexoBrid (concentrate of proteolytic enzymes enriched in bromelain)

This is a summary of the risk management plan (RMP) for NexoBrid. The RMP details important risks of NexoBrid, how these risks can be minimised, and how more information will be obtained about NexoBrid's risks and uncertainties (missing information).

NexoBrid's summary of product characteristics (SmPC) and its package leaflet give essential information to healthcare professionals and patients on how NexoBrid should be used.

This summary of the RMP for NexoBrid should be read in the context of all this information including the assessment report of the evaluation and its plain-language summary, all which is part of the European Public Assessment Report (EPAR).

Important new concerns or changes to the current ones will be included in updates of NexoBrid's RMP.

### **I. The medicine and what it is used for**

NexoBrid is authorised for removal of eschar in adults with deep partial- and full-thickness thermal burns (see SmPC for the full indication). It contains concentrate of proteolytic enzymes enriched in bromelain as the active substance and it is given by topical route of administration.

Further information about the evaluation of NexoBrid's benefits can be found in NexoBrid's EPAR, including in its plain-language summary, available on the EMA website, under the medicine's [webpage](#).

### **II. Risks associated with the medicine and activities to minimise or further characterise the risks**

Important risks of NexoBrid, together with measures to minimise such risks and the proposed studies for learning more about NexoBrid's risks, are outlined below.

Measures to minimise the risks identified for medicinal products can be:

- Specific information, such as warnings, precautions, and advice on correct use, in the package leaflet and SmPC addressed to patients and healthcare professionals;
- Important advice on the medicine's packaging;
- The authorised pack size — the amount of medicine in a pack is chosen so to ensure that the medicine is used correctly;
- The medicine's legal status — the way a medicine is supplied to the patient (e.g. with or without prescription) can help to minimise its risks.

Together, these measures constitute routine risk minimisation measures.

In the case of NexoBrid, these measures are supplemented with additional risk minimisation measures mentioned under relevant important risks, below.

In addition to these measures, information about adverse reactions is collected continuously and regularly analysed, including PSUR assessment so that immediate action can be taken as necessary. These measures constitute routine pharmacovigilance activities.

If important information that may affect the safe use of NexoBrid is not yet available, it is listed under 'missing information' below.

## **II.A List of important risks and missing information**

Important risks of NexoBrid are risks that need special risk management activities to further investigate or minimise the risk, so that the medicinal product can be safely administered. Important risks can be regarded as identified or potential. Identified risks are concerns for which there is sufficient proof of a link with the use of NexoBrid. Potential risks are concerns for which an association with the use of this medicine is possible based on available data, but this association has not been established yet and needs further evaluation. Missing information refers to information on the safety of the medicinal product that is currently missing and needs to be collected (e.g. on the long-term use of the medicine).

<b>List of important risks and missing information</b>	
Important identified risks	Pain Pyrexia/hyperthermia Wound complications (including wound infections) Allergic reactions (including anaphylactic reaction)
Important potential risks	Severe irritation Increased tendency to bleeding
Missing information	Use in pregnancy

## **II.B Summary of important risks**

<b>Identified risk: Pain</b>	
Evidence for linking the risk to the medicine	This risk is based on the findings from the non-clinical as well as clinical part of the development programme for NexoBrid, where local pain was identified as an accompanying symptom of enzymatic debridement.
Risk factors and risk groups	No risk groups or specific risk factors have been identified for the events of pain associated with NexoBrid enzymatic debridement.
Risk minimisation measures	<u>Routine risk minimisation measures:</u> SmPC sections 4.2, 4.8 and 5.3 PL sections 3 and 4 Recommendation for pain management in section 4.2 of the SmPC and section 3 of PL. Restricted medical prescription <u>Additional risk minimisation measures:</u> Healthcare Professional Information Pack

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<b>Identified risk: Pyrexia/hyperthermia</b>	
Evidence for linking the risk to the medicine	<p>Pyrexia/hyperthermia were the most commonly reported adverse reactions associated with the use of NexoBrid in clinical trials.</p> <p>The frequency of the pyrexia/hyperthermia decreased when NexoBrid was used in a regimen, which included recommended antibacterial soaking of the treatment area before and after NexoBrid application and administration of preventive analgesia.</p>
Risk factors and risk groups	There are several different possible risk factors for pyrexia/hyperthermia in burn patients, such as infection or contaminated wound.
Risk minimisation measures	<p><u>Routine risk minimisation measures:</u></p> <p>SmPC sections 4.4 and 4.8</p> <p>PL sections 2 and 4</p> <p>Section 4.4 of the SmPC recommends additional monitoring of burn patients for rise in body temperature and signs of local and systemic inflammatory and infectious processes.</p> <p>Restricted medical prescription</p> <p><u>Additional risk minimisation measures:</u></p> <p>Healthcare Professional Information Pack</p> <p>Training</p>

<b>Identified risk: Wound complications (including wound infections)</b>	
Evidence for linking the risk to the medicine	Various wound complications, including a delay in time to complete wound closure (in certain cases linked to a selected wound-care strategy) and wound infections, were reported in early clinical development programme for NexoBrid. The implementation of preventive measures later in the programme led to a decrease in the incidence of general wound infections. However, wound complications remain an important risk associated with NexoBrid treatment.
Risk factors and risk groups	Patients with burn area greater than 30% TBSA or old, contaminated burns are at increased risk of wound complications, same as burn patients with full-thickness wounds and deep burns that can spontaneously epithelise and are not autografted

	<p>immediately after debridement for time to complete wound closure.</p> <p>Immunosuppressed patients are in general at higher risk of wound infections and sepsis.</p>
Risk minimisation measures	<p><u>Routine risk minimisation measures:</u></p> <p>SmPC sections 4.2, 4.4 and 4.8</p> <p>PL sections 2, 3, and 4</p> <p>Detailed description of wound management and instructions for preventive measures against development of infection are included in sections 4.2 and 4.4 of the SmPC and section 3 of the PL.</p> <p>Restricted medical prescription</p> <p><u>Additional risk minimisation measures:</u></p> <p>Healthcare Professional Information Pack</p> <p>Training</p>

<b>Identified risk: Allergic reactions (including anaphylactic reaction)</b>	
Evidence for linking the risk to the medicine	<p>Allergic reactions associated with NexoBrid application, including infrequent events of anaphylactic reaction, were reported from the post-marketing experience with NexoBrid.</p> <p>Allergic reactions to bromelain have been reported in the literature, mostly related to cases of airway sensitisation resulting from occupational exposure or general pineapple allergy.</p>
Risk factors and risk groups	<p>Allergic reactions to bromelain may occur in individuals allergic to pineapple or other members of the Bromeliaceae family, or those frequently exposed to bromelain (occupational inhalation exposure).</p> <p>Cross-sensitivity between bromelain and papain as well as latex proteins (known as latex fruit syndrome), honeybee venom, and olive tree pollen has been reported in the literature.</p> <p>Since there are reports of occupational exposure to bromelain leading to sensitisation, the healthcare professionals preparing the final product may be at risk of hypersensitivity reactions.</p>

Risk minimisation measures	<p><u>Routine risk minimisation measures:</u></p> <p>SmPC section 4.3, 4.4, 4.8 and 6.6</p> <p>PL sections 2 and 4</p> <p>Restricted medical prescription</p> <p><u>Additional risk minimisation measures:</u></p> <p>Healthcare Professional Information Pack</p> <p>Training</p>
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<b>Potential risk: Severe irritation</b>	
Evidence for linking the risk to the medicine	<p>This risk is based on the findings from the non-clinical studies within the development programme for NexoBrid, where severe irritation and pain were noted, following the application of NexoBrid to abraded skin of minipigs in the local tolerance studies. These findings suggest that there is a potential for reversible local reactions when NexoBrid is applied on intact skin and that contact with abraded skin could be irritating and painful.</p> <p>No reports of any skin irritation following NexoBrid application were reported in the clinical development programme for NexoBrid.</p>
Risk factors and risk groups	Patients with abraded skin represent a risk group as these patients could be at increased risk of experiencing severe irritation.
Risk minimisation measures	<p><u>Routine risk minimisation measures:</u></p> <p>SmPC sections 4.2 and 5.3</p> <p>Restricted medical prescription</p> <p><u>Additional risk minimisation measures:</u></p> <p>Healthcare Professional Information Pack</p> <p>Training</p>

<b>Potential risk: Increased tendency to bleeding</b>	
Evidence for linking the risk to the medicine	<p>This risk is based on a theoretical possibility associated with topical NexoBrid and systemic effects of bromelain on blood coagulation, fibrinolysis, and platelet coagulation <i>in vivo</i> and <i>in vitro</i>.</p> <p>Topical administration of NexoBrid was shown to produce a systemic exposure with highly variable</p>

	<p>serum levels (depending on the dose, % TBSA treated, and interindividual factors).</p> <p>During the clinical development programme for NexoBrid and post-marketing experience, no indication of increased tendency to bleeding was noted.</p>
Risk factors and risk groups	<p>Clinical pharmacokinetic data indicate that systemic exposure to NexoBrid can increase with the dose administered (either larger TBSA treated or repeated NexoBrid applications), therefore potentially increasing the risk of bleeding.</p> <p>General risk factors for increased tendency to bleeding are coagulation abnormalities. NexoBrid should not be used in patients with uncontrolled coagulation disorders. NexoBrid should be used with caution in patients under anticoagulant therapy or other drugs affecting coagulation, and in patients with low platelet counts and increased risk of bleeding from other causes e.g. peptic ulcers and sepsis.</p>
Risk minimisation measures	<p><u>Routine risk minimisation measures:</u></p> <p>SmPC sections 4.2, 4.4 and 4.5</p> <p>PL section 2</p> <p>Section 4.4 of the SmPC recommendation for monitoring of signs of coagulation abnormalities in patients with coagulation disorders, low platelet counts, and increased risk of bleeding.</p> <p>Restricted medical prescription</p> <p><u>Additional risk minimisation measures:</u></p> <p>Healthcare Professional Information Pack</p> <p>Training</p>

<b>Missing information: Use in pregnancy</b>	
Risk minimisation measures	<p><u>Routine risk minimisation measures:</u></p> <p>SmPC section 4.6</p> <p>PL section 2</p> <p>Restricted medical prescription</p>