Classification of Wound Dressings with Animal-derived Materials
FDA Questions

General and Plastic Surgery Devices Panel of the Medical Devices Advisory Committee

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1. FDA has identified the following risks to health for wound dressings with animal-derived materials:

Identified Risk	**Description/Examples**
Adverse Tissue Reaction	This can result from the use of device materials that are not biocompatible. For devices intended to degrade in the wound, delayed tissue response or toxicity can result from the degradants, such as crosslinking agents used to crosslink the animal-derived materials.
Infection	This can result from inadequate device sterilization, inadequate viral inactivation, or inadequate packaging integrity.
Immunological reaction	This can result from a device derived from a new animal source or protein denaturation/modification due to the manufacturing conditions.
Transmission of pathogens and parasites (e.g., bacteria, mycoplasma, fungi, viruses, and other transmissible spongiform encephalopathy agents)	This can result from contaminated animal sources, feed, inadequate processing and viral inactivation of the animal-derived materials.
Delays in wound healing	This can result from the use of device materials which may interfere with the wound healing process.

Please comment on whether you agree with inclusion of all the risks in the overall risk assessment of wound dressings with animal-derived materials. In addition, please comment on whether you believe that any additional risks should be included in the overall risk assessment of these wound dressings with animal-derived materials.

2. Section 513 of the Food, Drug, and Cosmetic Act states a device should be Class III if:

    - insufficient information exists to determine that general and special controls are sufficient to provide reasonable assurance of its safety and effectiveness, AND

- if the device is purported or represented to be for use in supporting or sustaining human life, or for a use which is of substantial importance in preventing impairment of human health, or if the device presents a potential unreasonable risk of illness or injury.

A device should be Class II if:

- general controls by themselves are insufficient to provide reasonable assurance of the safety and effectiveness, AND

- there is sufficient information to establish special controls to provide such assurance.

A device should be Class I if:

- general controls are sufficient to provide reasonable assurance of the safety and effectiveness, OR
- insufficient information exists to:
  - determine that general controls are sufficient to provide reasonable assurance of the safety and effectiveness, OR
  - establish special controls to provide such assurance, BUT
    I. is not purported or represented to be for a use in supporting or sustaining human life or for a use which is of substantial importance in preventing impairment of human health, and
    II. does not present a potential unreasonable risk of illness or injury.

FDA believes general controls by themselves are insufficient to provide reasonable assurance of the safety and effectiveness and sufficient information exists to establish special controls to adequately mitigate the risks to health and provide reasonable assurance of device safety and effectiveness for this device type. As such, FDA believes that Class II is the appropriate classification for wound dressings with animal-derived materials. Following are the risk/mitigation tables which outline the identified risks to health for these devices and the recommended controls to mitigate the identified risks.

Risk/mitigation recommendations for wound dressing with animal-derived materials

Identified Risk	**Recommended Mitigation Measure**
Adverse tissue reaction	Biocompatibility evaluation Pyrogenicity testing Performance testing and descriptive information Risk management assessment for animal-derived materials Labeling
Infection	Sterilization testing/validation information Shelf life validation Labeling

Identified Risk	Recommended Mitigation Measure
	Risk management assessment for animal-derived materials
Immunological reaction	Performance testing Material characterization Risk management assessment for animal-derived materials Labeling
Transmission of pathogens and parasites (including bacteria, mycoplasma, fungi, viruses, and other transmissible spongiform encephalopathy agents)	Risk management assessment for animal-derived materials Performance testing Labeling
Delays in wound healing	Performance testing and descriptive information Biocompatibility evaluation Labeling

Please discuss whether the identified special controls for wound dressing with animal-derived materials appropriately mitigate the identified risks to health and whether additional or different special controls are recommended:

1. Performance testing and descriptive information must demonstrate the functionality of the device to achieve the specified use, including establishing the physical and chemical characteristics of the device. The following must be provided:
   i) Identity, quantification, and purpose of each component in the finished product;
   ii) Specification and characterization of each component in the finished product; and
   iii) Final release specifications for the finished product.

2. Performance data must demonstrate the sterility of the device.

3. The device, including any degradants, must be demonstrated to be biocompatible, non-pyrogenic and contain endotoxin level within acceptable limits.

4. Performance data must support the shelf life of the device by demonstrating continued sterility, package integrity, and device functionality over the identified shelf life.

5. Performance data must demonstrate that the device performs as intended under anticipated conditions of use, including device degradation, if applicable, and evaluation of expected worst-case conditions.

6. If the device contains materials derived from a new animal species or from manufacturing processes which cause structural changes (i.e., denaturation, modification) to the animal protein, performance data (e.g., patch and prick testing, human repeat insult patch testing) must demonstrate that the device is not immunogenic.

7. The following information must be provided to support the safety of the animal-derived material(s):
   i) Documentation of the processing methods, including animal species, origin, husbandry, and tissue selection as well as methods for tissue storage, transport, and quarantine, that mitigate the risk of parasites and pathogens.
   ii) Performance data which demonstrates adequate removal (i.e., clearance or inactivation) of parasites and pathogens (including bacteria, mycoplasma, fungi, viruses, and other transmissible spongiform encephalopathy agents) from the final finished device.
   iii) A risk management assessment for the inclusion of animal-derived material(s) which considers any probable risk associated with the presence of the animal tissue in the final finished wound dressing (including pathogen and parasite infection and immunological reaction). The risk management assessment must describe how these risks are controlled and mitigated by:
      (a) The methods of animal husbandry, tissue selection, and tissue handling;
      (b) Manufacturing and process controls; and
      (c) Data documenting the ability of the manufacturing and sterilization procedures to ensure adequate removal (i.e., clearance or inactivation) of parasites and pathogens from the final finished device.

8. The labeling must include:
   i) A description of the intended user population.
   ii) Specific instructions regarding the proper placement, sizing, duration of use, frequency of dressing change, maximum use life per application of the dressing, maximum total use life of the dressing, and removal of the dressing, if applicable.
   iii) A list of each ingredient or component within the finished device, including the functional role of that ingredient or component within the device.
   iv) If the device is non-resorbable, a warning statement for the potential retention of material in the wound or the surrounding area.
   v) A contraindication for any known sensitivity to components within the device.
   vi) A contraindication if there are incompatibilities with other therapies.
   vii) A shelf life.

viii) A statement regarding when to discontinue use of the device after multiple reapplications based on biocompatibility and performance testing, if applicable.

ix) For devices indicated for over-the-counter use, the indications must specify conditions, uses, or purposes for which the product may be safely administered by a lay user without the supervision of a licensed practitioner.

x) Any statements in the labeling must be clear such that they may be understood by the end user, supported by appropriate evidence, and consistent with the intended use of covering and protecting a wound, absorbing exudate, and maintaining appropriate moisture balance within the wound.

xi) Disposal instructions.

3. **Please discuss whether you agree with FDA's proposed classification of Class II with special controls for wound dressing with animal-derived materials. If you do not agree with FDA's proposed classification, please provide your rationale for recommending a different classification.**