



MEMORANDUM

SUMMARY OF:

P910073/S107  
PELIANCE 4-SITE Passive Fixation Lead Models

*Boston Scientific*

BACKGROUND

This PMA supplement was submitted to gain approval for a change to the active pharmaceutical ingredient (API) used to make the steroid-eluting component of the passive fixation models of the RELIANCE 4-SITE defibrillation lead; this change is required because the manufacturer currently providing the API will be discontinuing the ingredient soon. A change is also proposed for the method of delivery of the API. The current leads have a steroid plug containing dexamethasone sodium phosphate (DSP). The firm would like to replace the plug with a steroid eluting collar with dexamethasone sodium acetate (DXA). In order to accommodate the changes to the API and delivery method, changes are also proposed to the tined neck and electrode collar. All changes are identical to those approved under P910073/S091 for the RELIANCE S/G/SG (not quadripolar) passive fixation defibrillation leads.

The firm has provided information mostly identical to that provided in support of approval of the same changes for the RELIANCE S/G/SG leads with rationale for why the bench testing, drug testing, and animal study results for the RELIANCE S/G/SG devices are representative of the subject RELIANCE 4-SITE devices.

INDICATIONS FOR USE

The indications for use are not affected by the proposed change. However, an edit to reflect the new drug nominal dose was made to the contraindications statement. This edit is acceptable.

DEVICE DESCRIPTION

The RELIANCE 4-SITE lead was approved 10 Nov 2010 under P910073/S077 as Boston Scientific's first quadripolar defibrillation lead. The transvenous, endocardial lead is intended for chronic implantation as part of an ICD or CRT system. As compared to the RELIANCE S/G/SG leads, it has only one quadripolar connector containing both high and low voltage connections instead of separate connectors for the low voltage and high voltage connections. The RELIANCE 4-SITE lead is available with a single or dual coil, with active or passive fixation, and with (b) (4) covered shocking coils. However, the models subject in this submission are only those with (b) (4) adjacent to the tip electrode.

Specific to the drug component: The proposed collar contains a nominal dosage (0.87 +/- 0.08 mg) of the anti-inflammatory glucocorticosteroid dexamethasone acetate (DXA) within a (b) (4)

(b) (4)

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## CHANGE DESCRIPTION

The proposed changes (summarized below) are identical to those submitted and approved for the RELIANCE S/G/SG under P910073/S091.

Steroid: change API from DSP to DXA; change supplier based on change in API; and change excipient from plug of (b) (4) to collar of (b) (4)

Tined Neck: (b) (4) to accommodate collar; (b) (4)

(b) (4)

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## RISK ANALYSIS

The firm evaluated the proposed change within a Hazard Analysis and a Safety Risk Management Report. The firm clarified via email that no new risks or changes to the current risks were identified relative to the RELIANCE S/G/SG for which the proposed changes have already been approved. Since there is no new information in the report and no new risks would be expected as a result of the change, this information was found acceptable.

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## PRECLINICAL TESTING

A suite of Design Verification Testing was conducted on the RELIANCE S/G/SG leads in order to evaluate the impact of the changes to the (b) (4)

An engineering analysis is included in the subject submission to provide a rationale for extending the acceptable results from the RELIANCE S/G/SG (b) (4)

(b) (4) The (b) (4)

(b) (4) therefore, no additional bench testing was required for the subject submission.

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## ANIMAL STUDY

The firm provides reference to the 90 Day GLP animal study conducted to support approval of the same changes proposed in this submission for the RELIANCE S/G/SG; the study included (b) (4) and characterized the (b) (4) on electrical performance of leads with the proposed changes. The study compared pacing thresholds on passive fixation leads with a DXA collar to both the current design (DSP plug) and (b) (4). The firm indicates that they believe the results of this study with the RELIANCE S/G/SG lead should be extended to the subject lead since the region of interest in the distal end and the changes proposed are (b) (4). This rationale was deemed acceptable; therefore no additional animal study was required to for the subject submission.

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## DRUG COMPONENT

The firm has requested specific changes to the drug component of the subject leads. The firm submitted characterization testing of and specifications for their drug substance and finished product, analyses for (b) (4) manufacturing information and a (b) (4) method

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## **BIOCOMPATIBILITY**

As compared to the already market-approved RELIANCE S/G/SG leads, there are no new materials or manufacturing processes; therefore, there are no biocompatibility concerns with the subject device for which the same changes are requested. As a note- the firm conducted a biocompatibility assessment for the RELIANCE S/G/SG lead under P910073/S091 to determine what testing needed to be repeated due to the proposed changes.

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## **PACKAGING, SHELF LIFE, AND STERILIZATION**

The firm indicates that no changes are proposed to the packaging, sterilization methods, or shelf life of the market approved RELIANCE 4-SITE leads. From a device perspective, the proposed modifications would not be expected to impact the acceptability of the packaging, sterilization or shelf life of the lead. The impact of the proposed changes on the acceptability of the packaging, sterilization, and shelf life from a drug perspective is discussed above in the Drug Component section.

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## **MANUFACTURING**

The firm provided a detailed overview of the manufacturing and design control activities required to implement the changes proposed. Additional information clarifying the differences relative to the RELIANCE S/G/SG was provided via email: the only process changes are relative to the overall full lead manufacturing differences due to the differences in connector design. Since there are no new changes proposed in this submission, there is no concern with this section.

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## **LABELING**

The firm indicates that necessary descriptions of the drug and its quantity have been updated. In addition, the warnings section of the labeling includes two clarifications not related to the proposed changes. A change table is provided as Table 10-1 from pages 10-1 to 10-8 and is acceptable.

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## **OTHER REVIEW ELEMENTS**

The following areas are not relevant for the subject review:

- Clinical
- Software
- EMC/EMI
- Marketing
- Post Market

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**SUMMARY OF INTERACTIONS**

18 Dec 2012 Email sent to sponsor with interactive questions  
18 Dec 2012 Response from sponsor to additional information request

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**CONCLUSION/RECOMMENDATION**

Based on the information in the file and provided during interactive review, there does not appear to be an impact on safety or effectiveness when the proposed changes to the active pharmaceutical ingredient, drug delivery method, tined neck, and electrode collar are implemented in comparison to the current approved material.

I recommend that the sponsor receive an **APPROVAL** letter.