



MAY 17 2010

### 510(k) Summary

This summary of 510(k) safety and effectiveness information is being submitted in accordance with the requirements of 21 CFR § 807.92.

**Preparation Date:** January 25, 2010

**Applicant/Sponsor:** Biomet Spine  
100 Interpace Parkway  
Parsippany, NJ 07054

**Contact Person:** Shikha Gola  
Phone: 973-299-9300, Ext. 2070  
Fax: 973-257-0232

**Trade name:** Polaris Spinal System

**Common Name:** Non-cervical spinal fixation system

**Classification Name (Product Code):** Posterior, noncervical, nonpedicle use (KWP)  
Anterior/anterolateral noncervical use (KWQ)  
Noncervical pedicle applications (MNI, MNH and NKB)

**Device Panel - Regulation No.:** Orthopedic - 21 CFR 888.3050, 888.3060 and 888.3070

**Device Description:**

This submission is a line extension to the Polaris Spinal System to add new uniplanar screws fabricated from titanium.

**Indications for Use:**

The Polaris Spinal System is a non-cervical spinal fixation device intended for immobilization and stabilization as an adjunct to fusion as a pedicle screw fixation system, a posterior hook and sacral/iliac screw fixation system, or as an anterolateral fixation system. Pedicle screw fixation is limited to skeletally mature patients and for use with autograft. The device is indicated for all the following indications: degenerative disc disease (defined as discogenic back pain with degeneration of the disc confirmed by history and radiographic studies), spondylolisthesis, trauma, (i.e., fracture or dislocation), deformity or curvature (i.e., scoliosis, kyphosis, and lordosis), tumor, stenosis, pseudarthrosis, and failed previous fusion.

The Ballista instruments are intended to be used with the 5.5 Polaris implants. The Ballista instruments when used with the Ballista cannulated screws and percutaneous rods, are indicated to provide the surgeon with a percutaneous approach for posterior spinal surgery for the following indications: degenerative disc disease (defined as discogenic back pain with degeneration of the disc confirmed by history and radiographic studies), spondylolisthesis, trauma, (i.e., fracture or dislocation), deformity or curvature (i.e., scoliosis, kyphosis, and lordosis), tumor, stenosis, pseudarthrosis, and failed previous fusion that warrant the use of a non-cervical spinal fixation device intended for use as a pedicle screw fixation system or sacral/iliac screw fixation system. Pedicle screw fixation is limited to skeletally mature patients and for use with autograft.

**Biomet Spine**  
**Special 510(k) Premarket Notification**

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The AccuVision Instruments, when used with the Polaris Spinal System implants are indicated to provide the surgeon with a minimally invasive approach for posterior spinal surgery for the following indications: degenerative disc disease (defined as discogenic back pain with degeneration of the disc confirmed by history and radiographic studies), spondylolisthesis, trauma, (i.e., fracture or dislocation), deformity or curvature (i.e., scoliosis, kyphosis, and lordosis), tumor, stenosis, pseudarthrosis, and failed previous fusion that warrant the use of a non-cervical spinal fixation device intended for use as a pedicle screw fixation system or sacral/iliac screw fixation system. Pedicle screw fixation is limited to skeletally mature patients and for use with autograft.

**Summary of Technologies:**

The technological characteristics (material, design and sizing) of the Polaris 5.5 uniplanar screws are the same as, or similar to, the predicate devices.

**Substantial Equivalence:**

The uniplanar screws are substantially equivalent to the predicate screws with respect to intended use and indications, technological characteristics, and principles of operation and do not present any new issues of safety or effectiveness. Examples of predicate devices include the 4.0mm titanium screws cleared in K090203 and the stainless steel uniplanar screws cleared in K090523. Mechanical testing (conducted in accordance to *ASTM 1717-04 Standard Test Methods for Static and Fatigue for Spinal Implant Constructs in a Vertebrectomy Model*) included static compression bending, static torsion and dynamic compression bending fatigue. Based upon the mechanical testing, these screws are substantially equivalent for their intended use to other spinal systems currently on the market.

**Conclusion:**

The subject screws are substantially equivalent to the predicate screws when used as a spinal fixation device. The indications for use and fundamental technology of the device remain unchanged. Furthermore, engineering testing and other supporting information sufficiently demonstrate the substantial equivalence of the subject device to the other components in the Synergy/Polaris Spinal System. Based on this information, the subject components do not raise any new issues regarding the safety or efficacy.



DEPARTMENT OF HEALTH & HUMAN SERVICES

Food and Drug Administration  
10903 New Hampshire Avenue  
Document Mail Center - WO66-G609  
Silver Spring, MD 20993-0002

MAY 17 2010

Biomet Spine  
% Ms. Shikha Gola  
Regulatory Affairs Specialist  
100 Interpace Parkway  
Parsippany, New Jersey 07054

Re: K100220  
Trade/Device Name: Polaris Spinal System  
Regulation Number: 21 CFR 888.3070  
Regulation Name: Pedicle screw spinal system  
Regulatory Class: Class III  
Product Code: NKB, MNI, MNH, KWP, KWQ  
Dated: April 26, 2010  
Received: April 27, 2010

Dear Shikha Gola:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration. Please note: CDRH does not evaluate information related to contract liability warranties. We remind you; however, that device labeling must be truthful and not misleading.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act

or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); medical device reporting (reporting of medical device-related adverse events) (21 CFR 803); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please go to <http://www.fda.gov/AboutFDA/CentersOffices/CDRH/CDRHOffices/ucm115809.htm> for the Center for Devices and Radiological Health's (CDRH's) Office of Compliance. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to <http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm> for the CDRH's Office of Surveillance and Biometrics/Division of Postmarket Surveillance.

You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address <http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm>.

Sincerely yours,



Mark N. Melkerson  
Director  
Division of Surgical, Orthopedic  
And Restorative Devices  
Office of Device Evaluation  
Center for Devices and  
Radiological Health

Enclosure

Indications for Use

510(k) Number: K100220

Device Name: Polaris Spinal System

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Prescription Use  X  
(Part 21 CFR 801 Subpart D)

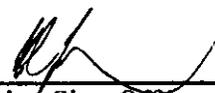
AND/OR

Over-The-Counter Use   
(21 CFR 801 Subpart C)

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Concurrence of CDRH, Office of Device Evaluation (ODE)

  
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(Division Sign-Off)  
Division of Surgical, Orthopedic,  
and Restorative Devices

510(k) Number K100220