

JUL 23 2008

Premarket Notification 510(k)  
Blackstone Medical, Inc.  
Blackstone PILLAR™ Spacer System  
Confidential

**510(k) SUMMARY****Blackstone Medical, Inc. PILLAR™ Spacer System**

Sponsor: Blackstone Medical, Inc.  
1211 Hamburg Turnpike  
Suite 300  
Wayne, NJ 07470

Registration Number: 3004606875

Contact Person: Whitney G. Törning, Senior Director of Regulatory Affairs  
& Quality Assurance  
Telephone Number: 973.406.2838  
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Email: wtorning@blackstonemedical.com

Submitter: Martin G. Sprunck  
Regulatory Affairs Manager

Manufacturer: Blackstone Medical, Inc.  
90 Brookdale Drive  
Springfield, MA 01104

Registration Number: 1225457

Contract Manufacturer: Marox Corporation  
373 Whitney Avenue  
Holyoke, MA 01040-2766

Trade Name(s): PILLAR AL, PILLAR PL, PILLAR TL Spacers

System Name: PILLAR™ Spacer System

Product Codes: MAX – Intervertebral Fusion Device with Bone Graft,  
Lumbar  
MQP – Spinal Intervertebral Body Fixation Orthosis

Common Name: Intervertebral body fusion device

Regulatory Classification: Class II - 888.3080 - Intervertebral body fusion device  
888.3060 - Spinal Intervertebral Body Fixation Orthosis

Review Panel: Orthopedic Device Panel

Predicate Devices: DePuy Acromed Saber™ Lumbar I/F Cage®, (P960025)  
Surgical Dynamics, Inc. Ray Threaded Fusion Cage (TFC)  
(P950019)  
Synthes Spine Opal Spacer System (K072791 SE 12-26-07)

### **Intended Use / Indications for Use**

When used as an intervertebral body fusion device, the PILLAR™ Spacer System is indicated for spinal fusion procedures in skeletally mature patients with degenerative disc disease (DDD) at one or two contiguous levels in the lumbar spine (L2-S1). DDD is defined as back pain of discogenic origin with degeneration of the disc confirmed by patient history and radiographic studies. DDD patients may also have up to Grade 1 spondylolisthesis at the involved levels. These patients may have had a previous non-fusion surgery at the involved level(s).

The PILLAR™ Spacer System is intended for use with autograft and supplemental internal fixation, e.g.: the Blackstone Medical ICON Modular Pedicle Screw System, or the Blackstone Medical Inc. SFS Spinal Fixation System.

Patients must have undergone a regimen of at least six (6) months of non-operative treatment prior to being treated with the PILLAR™ Spacer System.

The PILLAR™ PL spacer is used singly or in pairs, and is implanted using a posterior approach.

The PILLAR™ TL spacer is used singly or in pairs, and is implanted using a transforaminal approach.

The PILLAR™ AL spacer is used singly, and is implanted using an anterior approach.

When used as a Partial Vertebral Body Replacement (VBR) System, the PILLAR™ Spacer System is indicated for use in the thoracolumbar spine (T1-L5) for partial replacement (i.e., partial vertebrectomy) of a diseased vertebral body resected or excised for the treatment of tumors, to achieve anterior decompression of the spinal cord and neural tissues, and to restore the height of a collapsed vertebral body. The PILLAR™ Spacer System is also indicated for treating fractures of the thoracic and lumbar spine.

The PILLAR™ Spacer System is designed to restore the biomechanical integrity of the anterior, middle, and posterior spinal column even in the absence of fusion for a prolonged period of time. The Partial VBR device is intended to be used with autograft or allograft.

The PILLAR™ Spacer System is intended for use with internal fixation. The supplemental internal fixation system that may be used with the PILLAR™ Spacer System is the Blackstone Medical Spinal Fixation System.

### **Technological Characteristics**

The PILLAR Spacer System components consist of:

- 1) A PEEK Spacer
- 2) Tantalum Markers

### **Performance Data**

Mechanical testing of the Blackstone Medical, Inc. PILLAR™ Spacer System was conducted which demonstrates that the system is substantially equivalent to predicate devices that have the same intended use, similar indications, technological characteristics and principles of operation.

### **Substantial Equivalence**

The PILLAR Spacer System, the DePuy Acromed Saber™ Lumbar I/F Cage®, the Surgical Dynamics, Inc. Ray Threaded Fusion Cage and the Synthes Spine Opal Spacer System (K072791 SE 12-26-07) have the same intended use and similar indications, technological characteristics and principles of operation. The only technological differences between the PILLAR Spacer System and its predicates are minor dimensional characteristics and have been addressed mechanical verification testing. These differences do not present any new issues of safety or effectiveness, therefore, the PILLAR Spacer System is substantially equivalent to its predicate devices.



Food and Drug Administration  
9200 Corporate Boulevard  
Rockville MD 20850

Blackstone Medical, Inc.  
% Ms. Whitney G. Törning  
Senior Director of Regulatory Affairs  
and Quality Assurance  
1211 Hamburg Turnpike, Suite 300  
Wayne, NJ 07470

JUL 23 2008

Re: K081177  
Trade/Device Name: PILLAR™ Spacer System  
Regulation Number: 21 CFR 888.3060  
Regulation Name: Spinal intervertebral body fixation orthosis  
Regulatory Class: II  
Product Code: MAX, MQP  
Dated: April 23, 2008  
Received: April 28, 2008

Dear Ms. Törning:

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.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to such 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); 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.

Page 2 – Ms. Whitney G. Törning

This letter will allow you to begin marketing your device as described in your Section 510(k) premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus, permits your device to proceed to the market.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please contact the Center for Devices and Radiological Health's (CDRH's) Office of Compliance at (240) 276-0120. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). For questions regarding postmarket surveillance, please contact CDRH's Office of Surveillance and Biometric's (OSB's) Division of Postmarket Surveillance at (240) 276-3474. For questions regarding the reporting of device adverse events (Medical Device Reporting (MDR)), please contact the Division of Surveillance Systems at (240) 276-3464. You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at toll-free number (800) 638-2041 or (240) 276-3150 or the Internet address <http://www.fda.gov/cdrh/industry/support/index.html>.

Sincerely yours,



Mark N. Melkerson  
Director  
Division of General, Restorative  
and Neurological Devices  
Office of Device Evaluation  
Center for Devices and  
Radiological Health

Enclosure

Indications for Use Statement

510(k) Number (if known): K081177

Device Name: PILLAR™ Spacer System

Indications for Use:

When used as an intervertebral body fusion device, the PILLAR™ Spacer System is indicated for spinal fusion procedures in skeletally mature patients with degenerative disc disease (DDD) at one or two contiguous levels in the lumbar spine (L2-S1). DDD is defined as back pain of discogenic origin with degeneration of the disc confirmed by patient history and radiographic studies. DDD patients may also have up to Grade 1 spondylolisthesis at the involved levels. These patients may have had a previous non-fusion surgery at the involved level(s).

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Prescription Use  X   
(Part 21 C.F.R. 801 Subpart D)

AND/OR

Over-The-Counter Use    
(21 C.F.R. 807 Subpart C)

(PLEASE DO NOT WRITE BELOW THIS LINE -- CONTINUE ON ANOTHER PAGE IF NEEDED)

Concurrence of CDRH, Office of Device Evaluation (ODE)

  
\_\_\_\_\_  
(Division Sign-Off)  
Division of General, Restorative,  
and Neurological Devices  
510(k) Number K081177