

K091122

SEP 18 2009

## 4. 510(k) Summary according to 807.92(c)

**Contact:** Thomas Hoghaug  
Signus Medical  
18888 Lake Drive East  
Chanhassen, MN 55317  
952-294-8700

**Trade Name:** DIANA™ Fusion Cage  
**Product Class:** Class II  
**Classification:** 21 CFR §888.3080 Orthosis, intervertebral fusion  
**Product Codes:** MAX  
**Panel Code:** 87

### Indications for Use:

The DIANA™ Fusion Cage is intended for interbody fusion procedures and is indicated for use in skeletally mature patients with Degenerative Disc Disease (DDD) at one or two contiguous levels from L2-S1. DDD is defined as discogenic back pain with degeneration of the disc confirmed by patient history and radiographic studies. Patients should have received 6 months of non-operative treatment prior to treatment with the devices. The device is intended to be used with supplemental fixation. These DDD patients may also have up to Grade I spondylolisthesis or retrolisthesis at the involved level(s). It is indicated to be used with autograft bone.

### Device Description:

The DIANA™ Fusion Cage is comprised of a variety of implant sizes to accommodate various patient anatomy and pathology, and associated instrumentation. All implantable components are manufactured from medical grade titanium alloy (Ti6Al4V-ELI).

### Predicate Device(s):

The DIANA™ Fusion Cage was shown to be substantially equivalent to previously cleared devices and has the same indications for use, design, function, and materials used. The four formerly Class III predicate devices include the BAK Interbody Fusion Device (Spine-Tech, P950002), Inter Fix Threaded Fusion Device (Sofamor Danek, P970015), the Ray Threaded Fusion Cage (Surgical Dynamics, P950019) and the Brantigan Cage (P960025).

### Performance Testing:

The pre-clinical testing performed indicated that the DIANA™ Fusion Cage is substantially equivalent to the predicate devices and is adequate for the intended use.

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DEPARTMENT OF HEALTH & HUMAN SERVICES

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

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Signus Medical  
% MCRAPPD Medical Device  
Rich Jansen, Pharm.D.  
1331 H Street Northwest, Suite 1200  
Washington, District of Columbia 20005

Re: K091122  
Trade/Device Name: The DIANA™ Fusion Cage  
Regulation Number: 21 CFR 888.3080  
Regulation Name: Intervertebral body fusion device  
Regulatory Class: Class II  
Product Code: MAX  
Dated: July 27, 2009  
Received: August 5, 2009

Dear Mr. Jansen:

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 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

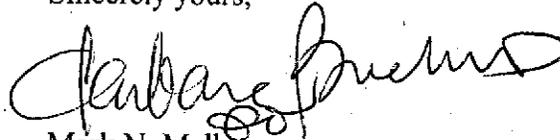
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forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

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" (21 CFR 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/cdrh/mdr/> 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 (240) 276-3150 or at its Internet address <http://www.fda.gov/cdrh/industry/support/index.html>.

Sincerely yours,



Mark N. Melkerson

Director

Division of Surgical, Orthopedic  
and Restorative Devices

Office of Device Evaluation

Center for Devices and  
Radiological Health

Enclosure

### 3. Statement of Indications for Use

510(k) Number (if known): K091122

Indications for Use:

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Prescription Use   
(Part 21 CFR 801 Subpart D)

AND/OR

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

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

Kareem S. Panney for M.X.M.  
(Division Sign-Off)  
Division of Surgical, Orthopedic,  
and Restorative Devices

510(k) Number K091122

Concurrence of CDRH, Office of Device Evaluation (ODE)