

## **510 (k) Summary of Safety and Effectiveness**

**Product:** VectorVision Frameless Biopsy System

**510 (k) application:**

**Manufacturer:**

BrainLAB AG

Ammerthalstrasse 8

85551 Heimstetten

Germany

Phone: +49 89 99 15 68 0

Fax: +49 89 99 15 68 33

**What is new?**

The VectorVision Frameless Biopsy System contains features to improve the support and guidance of surgical instruments. A multiarticulated arm facilitates the use of miscellaneous instruments for serial approaches along a determined trajectory to a specific target as well as the guidance of a single instrument to multiple targets along the same trajectory. Combined with the IGS features of VectorVision's software, the determination and repeated locating of trajectories is considerably simplified. By mechanical support, the degrees of freedom of the instrument can be limited either to zero or to one, thus giving the surgeon's hand mechanical support for increased stability, alleviating the surgeon's task of holding or inserting instruments and enhancing the efficiency of the surgery.

**Indications for use:**

The BrainLAB VectorVision Frameless Biopsy System is intended to be an intraoperative image guided localization system to enable minimally invasive surgery. It links a freehand probe, tracked by a passive marker sensor system to virtual computer image space on a patient's preoperative image data being processed by a VectorVision workstation. The system is indicated for any medical condition in which the use of stereotactic surgery may be appropriate and where a reference to a rigid anatomical structure, such as the skull, a long bone or vertebra, can be identified relative to a CT, X-ray or MR based model of the anatomy.

Example procedures include but are not limited to:

**Cranial Procedures:**

Cranial biopsies.

Tumor resections.

Craniotomies/ Craniectomies.

Skull base procedures.

Thalamotomies/ Pallidotomies.

**Spinal Procedures:**

Spinal implant procedures such as pedicle screw placement.

**ENT Procedures:**

Transphenoidal procedures.

Intranasal procedures.

Sinus procedures, such as Maximillary antrostomies, Ethmoidectomies,

Sphenoidotomies/Sphenoid explorations, Turbinate resections and Frontal sinusotomies

**Substantial equivalence**

The information provided by BrainLAB in this 510 (k) application was found to be substantially equivalent with predicate devices such as the 510(k)-clearance of BrainLAB's VectorVision<sup>2</sup> System (K983831, K003589).



Food and Drug Administration  
9200 Corporate Boulevard  
Rockville MD 20850

SEP - 6 2001

Mr. Stefan Vilsmeier  
President and CEO  
BrainLAB AG  
Ammerthalstrasse 8  
85551 Heimstetten  
Germany

Re: K012564

Trade/Device Name: Modification to VectorVision Frameless Biopsy System  
Regulation Number: 882.4560  
Regulatory Class: II  
Product Code: HAW  
Dated: July 31, 2001  
Received: August 9, 2001

Dear Mr. Vilsmeier:

We have reviewed your Section 510(k) notification of intent to market the device referenced above and we 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). 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 (Premarket Approval), 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 895. A substantially equivalent determination assumes compliance with the Current Good Manufacturing Practice requirements, as set forth in the Quality System Regulation (QS) for Medical Devices: General regulation (21 CFR Part 820) and that, through periodic QS inspections, the Food and Drug Administration (FDA) will verify such assumptions. Failure to comply with the GMP regulation may result in regulatory action. In addition, FDA may publish further announcements concerning your device in the Federal Register. Please note: this response to your premarket notification submission does not affect any obligation you might have under sections 531 through 542 of the Act for devices under the Electronic Product Radiation Control provisions, or other Federal laws or regulations.

This letter will allow you to begin marketing your device as described in your 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 and additionally 809.10 for in vitro diagnostic devices), please contact the Office of Compliance at (301) 594-4659. Additionally, for questions on the promotion and advertising of your device, please contact the Office of Compliance at (301) 594-4639. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR 807.97). Other general information on your responsibilities under the Act may be obtained from the Division of Small Manufacturers International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 443-6597 or at its internet address "<http://www.fda.gov/cdrh/dsma/dsmamain.html>".

Sincerely yours,



*For* Celia M. Witten, Ph.D., M.D.  
Director  
Division of General, Restorative  
and Neurological Devices  
Office of Device Evaluation  
Center for Devices and  
Radiological Health

Enclosure

510(k) Number (if known): K012564

Device Name: VectorVision Frameless Biopsy System

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

Concurrence of CDRH, Office of Device Evaluation (ODE)

Prescription Use   *✓*    
(Per 21 CFR 801.109)

*Susan Welch*  
(Division Sign-Off)  
Division of General, Restorative  
and Neurological Devices

Over-The-Counter Use \_\_\_\_\_

(Optional Format I-2-96)

510(k) Number 1012564