

NOV 12 2004

Section II

510(k) SUMMARY

This summary of 510(k) safety and effectiveness information is submitted in accordance with the requirements of SMDA 1990 and 21 CFR 807.92.

510(k) Number:

Date	October 12, 2004
Submitter	Intuitive Surgical, Inc. 950 Kifer Road Sunnyvale, CA 94086
ER Number	2955842
Contact	Mike Yramategui Director, Regulatory Affairs Telephone: (408) 523 - 2145 Fax: (408) 523 - 1390 e-mail: mike.yramategui@intusurg.com
New Device	<u>Name:</u> Harmonic Curved Shears Instrument <u>Classification Name:</u> System, Surgical, Computer Controlled Instrument <u>Common Name:</u> Endoscopic Instrument, Harmonic Curved Shears
Predicate Devices	<i>Intuitive Surgical</i> [®] Endoscopic Instrument Control System and <i>Intuitive Surgical</i> [®] Endoscopic Instruments and accessories (legally marketed under K990144 / K002489 / K011002 / K021036 / K022574 / K040237), <i>Intuitive Surgical</i> [®] Ultrasonic Shears (K011281) and Ethicon Endo-Surgery, Inc., UltraCision [®] Harmonic Scalpel [®] LCS & CS Curved Shears (K993054).
Device Description	This special 510(k) is being submitted for a modification of <i>Intuitive Surgical</i> [®] Ultrasonic Shears. The subject device is similar to the Ultrasonic Shears instrument cleared by FDA in 2001 (K011281) and UltraCision [®] Harmonic Scalpel [®] LCS & CS Curved Shears instrument cleared by FDA in 2001 for Ethicon Endo-Surgery, Inc. (K993054). The Harmonic Curved Shears Instruments are to be used with the <i>Intuitive Surgical</i> [®] Endoscopic Instrument Control System, known as the <i>da Vinci</i> [®] Surgical System.

**Device
Description
(continued)**

The *da Vinci*[®] Surgical System consists of two integrated sub-systems as follows:

Intuitive Surgical[®] Endoscopic Instrument Control System: This sub-system is comprised of the Surgeon Console and Patient Side Cart. While seated at the Surgeon Console, the surgeon controls critical aspects of the procedure, including movement of the endoscopic instruments and endoscope, within the operative field. Endoscopic instrument and camera movements are controlled by the surgeon through use of the Master Tool Manipulators (MTM), two hand operated mechanisms residing within the Surgeon Console. The endoscopic instruments are held in a fixed position (with respect to the patient) by either two (or optionally three) unique arms known as Patient Side Manipulators (PSM), which are located on the Patient Side Cart (PSC). The endoscope is also held in a fixed position (with respect to the patient) by another arm, similar to the PSM, known as the Endoscope Camera Manipulator (ECM) and also located on the PSC. Commands from the Surgeon Console are relayed to the PSC, which is located immediately adjacent to the patient, via cables. Instrument and endoscope changes are performed by another provider positioned adjacent to the PSC.

Intuitive Surgical[®] Stereo View Endoscopic System: The endoscopic vision system used with the *da Vinci*[®] Surgical System, also known as *Intuitive Surgical*[®] *Insite*[™] Vision System, consists of a stereo endoscope, endoscopic camera, and various accessories, including a light source and light guides. The *Insite*[™] Vision System provides two independent images that are relayed to the viewer located in the Surgeon Console, where they are fused to form a 3-D (or alternatively a 2-D image) image of the surgical field.

Intended Use

The *Intuitive Surgical*[®] Endoscopic Instrument Control System is intended to assist in the accurate control of *Intuitive Surgical*[®] Endoscopic Instruments including rigid endoscopes, blunt and sharp endoscopic dissectors, scissors, scalpels, ultrasonic shears, forceps/pick-ups, needle holders, endoscopic retractors, stabilizers, electrocautery and accessories for endoscopic manipulation of tissue, including grasping, cutting, blunt and sharp dissection, approximation, ligation, electrocautery and suturing during general laparoscopic surgical procedures, general non-cardiovascular thoracoscopic surgical procedures, and thoracoscopically assisted cardiotomy procedures. The system can also be employed, with adjunctive mediastinotomy to perform coronary anastomosis during cardiac revascularization. It is intended for use by trained physicians in an operating room environment in accordance with the representative specific procedures set forth in the Professional Instructions for Use.

**Intended Use
(continued)**

Intuitive Surgical[®] Harmonic Curved Shears Instruments are designed to be used in conjunction with the *da Vinci*[®] Surgical System and with the Ethicon Endo-Surgery UltraCision[®] Harmonic Scalpel[®] Hand Piece (HP054) and UltraCision[®] Harmonic Scalpel[®] Generator Model 300 (GEN04), and is intended for soft tissue incisions when bleeding control and minimal thermal injury are desired. This instrument is not intended for use on cartilage, bone or hard objects, or for contraceptive tubal occlusion.

**Comparison to
Predicate
Device**

The *Intuitive Surgical*[®] Harmonic Curved Shears Instruments described herein is essentially identical in terms of shape, function, activation, and use to the predicate Class II endoscopic instrument cited. The primary difference is that the Ethicon Endo-Surgery predicate device is a hand-held instrument, and the subject device is to be used in conjunction with the *Intuitive Surgical*[®] da Vinci Surgical System.

**Technological
Characteristics**

The technological characteristics of the subject devices are the same as for the predicate devices.

**Performance
Data**

Design analysis and comparison, as well as bench testing confirm that basic functional characteristics are substantially equivalent to the predicate devices cited, and that design output meets the design input requirements.

Conclusion

Based upon the product technical information, intended use, and performance information provided in this pre-market notification, the *Intuitive Surgical*[®] Harmonic Curved Shears Instruments described herein has been shown to be substantially equivalent to current legally marketed predicate devices, and the results of the design control process confirm that the design output meets the design input requirements.



Food and Drug Administration
9200 Corporate Boulevard
Rockville MD 20850

NOV 12 2004

Mr. Michael H. Yramategui
Director, Regulatory Affairs
Intuitive Surgical, Inc.
950 Kifer Road
Sunnyvale, California 94086

Re: K042855

Trade/Device Name: Intuitive Surgical® Endoscopic Instrument Control System
Regulation Number: 21 CFR 876.1500
Regulation Name: Endoscope and accessories
Regulatory Class: II
Product Code: NAY
Dated: October 13, 2004
Received: October 15, 2004

Dear Mr. Yramategui:

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.

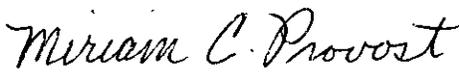
If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to such additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish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

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 Office of Compliance at (240) 276-0115. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). 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) 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

Indications for Use

510(k) Number (if known):

Device Name: *Intuitive Surgical*[®] Endoscopic Instrument Control System

Indications For Use:

The *Intuitive Surgical*[®] Endoscopic Instrument Control System is intended to assist in the accurate control of *Intuitive Surgical*[®] Endoscopic Instruments including rigid endoscopes, blunt and sharp endoscopic dissectors, scissors, scalpels, ultrasonic shears, forceps/pick-ups, needle holders, endoscopic retractors, stabilizers, electrocautery and accessories for endoscopic manipulation of tissue, including grasping, cutting, blunt and sharp dissection, approximation, ligation, electrocautery and suturing during general laparoscopic surgical procedures, general non-cardiovascular thoracoscopic surgical procedures, and thoracoscopically assisted cardiomy procedures. The system can also be employed, with adjunctive mediastinotomy to perform coronary anastomosis during cardiac revascularization. It is intended for use by trained physicians in an operating room environment in accordance with the representative specific procedures set forth in the Professional Instructions for Use.

Prescription Use X
(Part 21 CFR 801 Subpart D)

AND/OR

Over-The-Counter Use _____
(21 CFR 807 Subpart C)

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

Concurrence of CDRH, Office of Device Evaluation (ODE)

Miriam C. Provost
(Division Sign-Off)
Division of General, Restorative,
and Neurological Devices

510(k) Number K042855

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