5) 510(k) Summary

This summary of 510(k) information is submitted in accordance with the requirements of the Safe Medical Devices Act of 1990 and 21CFR807.92.

510(k) Number K072776

Applicant Information
Date Prepared: September 27, 2007
Name and Address: FlowCardia, Inc.
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Sunnyvale, CA 94085
Ph: (408) 617-0352
Contact Person: Dustin Michaels, Sr. Director of RA/CR
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Device Information
Classification: DQY
Trade Name: The CROSSER System
Common Name: Percutaneous Catheter
Classification Name: Percutaneous Catheter, 74 DQY / 21 CFR 870.1250

Predicate Device
The CROSSER System manufactured by FlowCardia, Inc. (K062868)

Indications for Use:

The CROSSER System is indicated to facilitate the intra-luminal placement of conventional guidewires beyond peripheral artery chronic total occlusions. The device is contraindicated for use in carotid arteries.

The CROSSER Catheter is only intended for use with the CROSSER Electronics System. Refer to the CROSSER Electronics System Manual of Operations for proper use.
Device Description

The CROSSER System consists of a re-usable electronic Generator, Foot Switch, high-frequency Transducer, and single-use CROSSER Catheter. The CROSSER Catheter is available in three sizes:

- CROSSER 14P (014 guidewire compatible),
- CROSSER 14S (014 guidewire compatible supportive),
- CROSSER 18 (018 guidewire compatible).

Each Catheter is connected to the electronic Generator through the Transducer. The Foot Switch is used to activate the system. The Generator and Transducer convert AC power into high-frequency mechanical vibrations which are propagated through a Nitinol core wire to the Titanium tip of the CROSSER Catheter. The main body of the catheter is constructed from Pebax and a hydrophilic coating which covers the distal end of the catheter.

Technological Characteristics

The predicate and CROSSER System catheters are substantially equivalent with respect to materials, design construction and performance. The CROSSER System catheters differ only slightly with respect to tip diameter, tip material and guidewire lumen length. These differences are due to the intended use of the CROSSER Catheters over the predicate device; the predicate device is indicated for use in coronary chronic occlusions and the CROSSER System is indicated for use in peripheral artery occlusions.

Physical Test Data

Design analysis, bench, and biocompatibility testing were conducted according to the relevant guidance documents to demonstrate that the FlowCardia CROSSER System met the acceptance criteria and performed similarly to the predicate device. In addition to dimensional verification, the following functional tests were performed: Tensile Strength, Torque Strength, Torqueability, Tip Flexibility, Coating Adherence/Integrity, Biocompatibility, Bench top Simulated Efficiency, Catheter Fatigue Testing, Shelf Life and Package Integrity Testing.

Clinical Test Data

The clinical performance of the CROSSER System was verified through a human clinical study designed to demonstrate the intended use of the device.

Conclusion

Based upon device physical and clinical comparisons the CROSSER System is substantially equivalent to the predicate device.
FlowCardia, Inc.
Mr. Dustin Michaels
Senior Director of RA/CR
745 N. Pastoria Avenue
Sunnyvale, CA 94085

Re: K072776
Trade/Device Name: The CROSSER System
Regulation Number: 21 CFR 870.1250
Regulation Name: Percutaneous Catheter
Regulatory Class: Class II
Product Code: PDU
Dated: September 27, 2007
Received: September 28, 2007

Dear Mr. Michaels:

This letter corrects our substantially equivalent letter of December 7, 2007.

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
contact 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. 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/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

Sincerely yours,

[Signature]

Bram D. Zuckerman, M.D.
Director
Division of Cardiovascular Devices
Office of Device Evaluation
Center for Devices and Radiological Health

Enclosure
Statement of Indications for Use

510(k) Number (if known): K072776

Device Name: The CROSSTER System

Indications for Use:

The CROSSTER System is indicated to facilitate the intra-luminal placement of conventional guidewires beyond peripheral artery chronic total occlusions. The device is contraindicated for use in carotid arteries.

The CROSSTER Catheter is only intended for use with the CROSSTER Electronics System. Refer to the CROSSTER Electronics System Manual of Operations for proper use.

Prescription Use X AND/OR Over-The-Counter Use
(Part 21 CFR 801 Subpart D) (21 CFR 801 Subpart C)

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

Concurrence of CDRH, Office of Device Evaluation (ODE)

[Signature]
(Division Sr. Off)
Division of Cardiovascular Devices

510(k) Number K072776