



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

January 27, 2015

AliveCor, Inc.
Albert Boniske
Director of Regulatory Affairs
30 Maiden Lane, 6th Floor
San Francisco, California 94108

Re: K142743
Trade/Device Name: Alivecor Heart Monitor
Regulation Number: 21 CFR 870.2920
Regulation Name: Telephone Electrocardiograph Transmitter And Receiver
Regulatory Class: Class II
Product Code: DXH, DPS
Dated: December 15, 2014
Received: December 18, 2014

Dear Albert Boniske,

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 Industry and Consumer Education 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 Industry and Consumer Education 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>.

Sincerely yours,

Kenneth J. Cavanaugh -S

for

Bram D. Zuckerman, M.D.

Director

Division of Cardiovascular Devices

Office of Device Evaluation

Center for Devices and Radiological Health

Enclosure

INDICATIONS FOR USE STATEMENT

510(k) Number (if known): K142743

Device Name: AliveCor Heart Monitor

Indications For Use:

The AliveCor Heart Monitor is intended to record, store and transfer single-channel electrocardiogram (ECG) rhythms. The AliveCor Heart Monitor also displays ECG rhythms and detects the presence of atrial fibrillation and normal sinus rhythm (when prescribed or used under the care of a physician). The AliveCor Heart Monitor is intended for use by healthcare professionals, patients with known or suspected heart conditions and health conscious individuals. The device has not been tested and it is not intended for pediatric use.

Prescription Use X
(21 CFR Part 801 Subpart D)

And/Or

Over the Counter Use X
(21 CFR Part 801 Subpart C)

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

Concurrence of CDRH, Office of Device Evaluation (ODE)

510(k) SUMMARY

510(k) Premarket Notification: K142743

GENERAL INFORMATION

Applicant:

AliveCor, Inc.
30 Maiden Lane, 6th Floor
San Francisco, CA 94108

Contact Person:

Albert Boniske
Director of Regulatory Affairs
AliveCor, Inc.
Phone: 415-795-9811
Fax: 415-397-0440

Date Prepared:

September 22, 2014

DEVICE INFORMATION

Trade Name:

AliveCor Heart Monitor

Generic/Common Name:

Telephone electrocardiograph transmitter and receiver

Classification:

21 CFR§870.2920, Transmitters and Receivers, Electrocardiograph, Telephone, Class II

Product Code:

DXH, DPS

PREDICATE DEVICE(S)

- K140933 – AliveCor Heart Monitor

510(k) SUMMARY

INDICATIONS FOR USE

The AliveCor Heart Monitor is intended to record, store and transfer single-channel electrocardiogram (ECG) rhythms. The AliveCor Heart Monitor also displays ECG rhythms and detects the presence of atrial fibrillation and normal sinus rhythm (when prescribed or used under the care of a physician). The AliveCor Heart Monitor is intended for use by healthcare professionals, patients with known or suspected heart conditions and health conscious individuals. The device has not been tested for and it is not intended for pediatric use.

DEVICE DESCRIPTION

The AliveCor Heart Monitor (the device) is the next generation of trans-telephonic (transmission by telephone) ECG (electrocardiogram) event recorders. The device utilizes the processing power of a mobile computing platform (MCP) while reducing the complexity of the electronics hardware associated with data acquisition and transmission. The AliveCor Heart Monitor can also analyze ECG signals and indicate the presence of noise, normal sinus rhythm and atrial fibrillation for each ECG recording.

SUBSTANTIAL EQUIVALENCE

The proposed indications for use for the AliveCor Heart Monitor are substantially equivalent to the indications for use for the predicate device. The AliveCor Heart Monitor operates using the same technological characteristics for the same intended use as its predicate device. Each device records and stores ECGs and indicates the presence of abnormalities in the recording. The nonclinical testing results demonstrate that any differences in the technological characteristics between the subject and predicate device do not raise any new issues of safety or effectiveness. Thus, the AliveCor Heart Monitor is substantially equivalent to the predicate device.

NONCLINICAL TESTING IN SUPPORT OF SUBSTANTIAL EQUIVALENCE DETERMINATION

All necessary performance testing was conducted on the AliveCor Heart Monitor to support a determination of substantial equivalence to the predicate device and demonstrate conformity to recognized standards

- AAMI / ANSI / IEC 62304:2006 Medical device software - software life cycle processes,
- ISO 14971: 2007 Medical devices -- Application of risk management to medical devices, and
- AAMI/ANSI EC57: 2012 Testing and reporting performance results of cardiac rhythm and ST segment measurement algorithms.

510(k) SUMMARY

The non-clinical testing included software verification and algorithm validation to demonstrate the functionality of the software application and the performance of the algorithms. The databases recommended by EC57 and data captured from the AliveCor Heart Monitor were used to validate the algorithms' performance. The collective results of the non-clinical testing demonstrate that the AliveCor Heart Monitor meets the established specifications necessary for consistent performance for its intended use.

CONCLUSION

The results of the nonclinical testing demonstrate that the AliveCor Heart Monitor is substantially equivalent to the predicate device.