November 21, 2019

Medtronic, Inc.
Mr. Federico Epinot
Principal Regulatory Affairs Specialist
3576 Unocal Place
Santa Rosa, California 95403

Re: P190008
Trade/Device Name: IN.PACT™ AV Paclitaxel-coated Percutaneous Transluminal Angioplasty (PTA) Balloon Catheter
Product Code: PRC
Filed: April 3, 2019
Amended: June 28, 2019; August 22, 2019

Dear Mr. Epinot:

The Center for Devices and Radiological Health (CDRH) of the Food and Drug Administration (FDA) has completed its review of your premarket approval application (PMA) for the IN.PACT AV Paclitaxel-coated Percutaneous Transluminal Angioplasty (PTA) Balloon Catheter. This device is indicated for percutaneous transluminal angioplasty, after appropriate vessel preparation, for the treatment of obstructive lesions up to 100 mm in length in the native arteriovenous dialysis fistulae with reference vessel diameters of 4 to 12 mm. We are pleased to inform you that the PMA is approved. You may begin commercial distribution of the device upon receipt of this letter. Although this letter refers to your product as a device, please be aware that some approved products may instead be combination products. The Premarket Approval Database located at https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfPMA/pma.cfm identifies combination product submissions.

The sale and distribution of this device is restricted to prescription use in accordance with 21 CFR 801.109 and under section 515(d)(1)(B)(ii) of the Federal Food, Drug, and Cosmetic Act (the act). FDA has determined that these restrictions on sale and distribution are necessary to provide reasonable assurance of the safety and effectiveness of the device. Your device is therefore a restricted device subject to the requirements in sections 502(q) and (r) of the act, in addition to the many other FDA requirements governing the manufacture, distribution, and marketing of devices.

Expiration dating for this device has been established and approved at 36 months.

Continued approval of the PMA is contingent upon the submission of periodic reports, required under 21 CFR 814.84, at intervals of one year (unless otherwise specified) from the date of approval of the original PMA. This report, identified as "Annual Report" and bearing the applicable PMA reference number, should be submitted to the address below. The Annual Report should indicate the beginning and ending date of the period covered by the report and should include the information required by 21 CFR 814.84.

In addition to the above, and in order to provide continued reasonable assurance of the safety and effectiveness of the PMA device, the Annual Report must include, separately for each model number (if applicable), the number of devices sold and distributed during the reporting period, including those distributed to distributors. The distribution data will serve as a denominator and provide necessary context for FDA to ascertain the frequency and prevalence of adverse events, as FDA evaluates the continued safety and effectiveness of the device.

In addition to the Annual Report requirements, you must provide the following data in post-approval study (PAS) reports for each PAS listed below. Separate PAS Progress Reports must be submitted for each study every six (6) months during the first two (2) year of the study and annually thereafter, unless otherwise specified by FDA. Each report, identified as a "PMA Post-Approval Study Report" in accordance with how the study is identified below and bearing the applicable PMA reference number, should be submitted to the address below.

1. IN.PACT AV Access IDE Cohort Post Approval Study
   The PAS protocol was agreed upon via email on November 14, 2019.

   The IN.PACT AV Access IDE Cohort Post Approval Study is a study that was initiated prior to device approval. It was designed as a prospective, global, randomized (1:1), multi-center clinical study that is ongoing at sites in the United States, New Zealand, and Japan. This study will evaluate the long-term safety and effectiveness of the IN.PACT AV Paclitaxel-coated Percutaneous Transluminal Angioplasty (PTA) Balloon Catheter (IN.PACT AV DCB) for the treatment of obstructive lesions up to 100 mm in length in the native arteriovenous dialysis fistulae. The study has 330 subjects with follow-up assessments scheduled up to 60-months post-index procedure.

   The primary safety endpoint is defined as the serious adverse event (SAE) rate involving the AV access circuit through 30 days post-procedure. The primary effectiveness endpoint is defined as freedom from clinically-driven target lesion revascularization (CD-TLR) or access circuit thrombosis measured through 6 months post-index procedure.

   Secondary endpoints will be descriptively presented. Secondary endpoints that will be evaluated at 30 days, 3, 6, 9, 12, 18 and 24-months post-index procedure include: access circuit primary patency, target lesion primary patency, cumulative target lesion revascularizations, number of interventions required to maintain target lesion patency, number of interventions required to maintain access circuit patency, cumulative access circuit thromboses, device, procedure and clinical success and the rate of device and procedure and therapy related adverse events. Secondary endpoints that will be evaluated at 30-day, 3, 6, 9, 12, 18, 24, 36, 48, and 60-months post-index procedure include: target lesion

revascularizations, CD-TLR, re-interventions in the access circuit, abandonment of target arteriovenous fistula and SAEs.

Data will be analyzed and reported to the Agency annually until completion.

2. New Enrollment Study IN.PACT AV Access Post-Approval Study
The major elements of this PAS protocol were agreed upon via email on November 14, 2019.

The New Enrollment IN.PACT AV Access Post-Approval Study is a prospective, single-arm, multi-center clinical study that will take place at up to 20 investigational sites in the United States and will evaluate the long-term safety of the IN.PACT AV DCB for the treatment of obstructive lesions up to 100 mm in length in the native arteriovenous dialysis fistulae. The study will have two cohorts: a primary cohort with a minimum of 125 patients evaluable at 1-year post-index procedure that meet the inclusion/exclusion criteria of the pre-market study and receive the IN.PACT AV DCB device, and an extended cohort of up to 80 subjects who do not meet the pre-market inclusion/exclusions criteria and receive the IN.PACT AV DCB device. The primary cohort will be followed for 5-years post-index procedure; the endpoints for this cohort are described below. The extended cohort will be followed for 5-years; the endpoints include infections and infestations, including pneumonia, reported through 1-year and mortality reported through 5-years post-index procedure.

The primary cohort has a primary safety endpoint of site reported incidence of infection and infestation SAEs through 12-months post-index procedure. There is a performance goal of 30%.

The primary cohort secondary safety endpoint is the mortality rate through 1, 2, 3, 4, and 5 years post-index procedure. Additional primary cohort endpoints include: SAEs, target lesion primary patency, access circuit primary patency, cumulative target lesion revascularizations, number of interventions required to maintain target lesion patency, number of interventions required to maintain access circuit patency, cumulative access circuit thromboses, device, procedure and clinical success and the rate of device, procedure and therapy related adverse events at 6-months and 1, 2, 3, 4, and 5 years post-index procedure.

Data will be analyzed and reported to the Agency at 6-months and annually thereafter until completion.

Within 30 days of your receipt of this letter, you must submit a PMA supplement that includes a complete protocol for the “New Enrollment IN.PACT AV Access Post-Approval Study” described above. Your PMA supplement should be clearly labeled as a PMA Post-Approval Study Protocol" as noted above and submitted to the address below. Please reference the PMA number above to facilitate processing. If there are multiple protocols being finalized after PMA approval, please submit each protocol as a separate PMA supplement.

Be advised that failure to comply with any post-approval requirement, including study design, study initiation, enrollment, completion, and reporting requirements, constitutes grounds for FDA withdrawal of approval of the PMA in accordance with 21 CFR 814.126(a).”

Be advised that the failure to conduct any such study in compliance with the good clinical laboratory practices in 21 CFR part 58 (if a non-clinical study subject to part 58) or the institutional review board

regulations in 21 CFR part 56 and the informed consent regulations in 21 CFR part 50 (if a clinical study involving human subjects) may be grounds for FDA withdrawal of approval of the PMA.

Be advised that protocol information, interim site and subject enrollment numbers, follow-up rates, 6-month and 1-year infection/infestation and pneumonia rates for the IDE and primary cohort, interim annual mortality and final results will be published on the Post Approval Study Webpage https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfPMA/pma_pas.cfm.

In addition, the results from any post approval study should be included in the labeling as these data become available. Any updated labeling must be submitted to FDA in the form of a PMA Supplement. For more information on post-approval studies, see the FDA guidance document entitled, "Procedures for Handling Post-Approval Studies Imposed by PMA Order" (https://www.fda.gov/media/71327/download).

This is a reminder that as of September 24, 2014, class III devices are subject to certain provisions of the final Unique Device Identification (UDI) rule. These provisions include the requirement to provide a UDI on the device label and packages (21 CFR 801.20), format dates on the device label in accordance with 21 CFR 801.18, and submit data to the Global Unique Device Identification Database (GUDID) (21 CFR 830 Subpart E). Additionally, 21 CFR 814.84 (b)(4) requires PMA annual reports submitted after September 24, 2014, to identify each device identifier currently in use for the subject device, and the device identifiers for devices that have been discontinued since the previous periodic report. It is not necessary to identify any device identifier discontinued prior to December 23, 2013. Combination Products may also be subject to UDI requirements (see 21 CFR 801.30). For more information on these requirements, please see the UDI website, https://www.fda.gov/medical-devices/device-advice-comprehensive-regulatory-assistance/unique-device-identification-udi-system.

Before making any change affecting the safety or effectiveness of the PMA device, you must submit a PMA supplement or an alternate submission (30-day notice) in accordance with 21 CFR 814.39. All PMA supplements and alternate submissions (30-day notice) must comply with the applicable requirements in 21 CFR 814.39. For more information, please refer to the FDA guidance document entitled, "Modifications to Devices Subject to Premarket Approval (PMA) - The PMA Supplement Decision-Making Process" https://www.fda.gov/media/81431/download.

You are reminded that many FDA requirements govern the manufacture, distribution, and marketing of devices. For example, in accordance with the Medical Device Reporting (MDR) regulation, 21 CFR 803.50 and 21 CFR 803.52 for devices or postmarketing safety reporting (21 CFR 4, Subpart B) for combination products, you are required to report adverse events for this device. Manufacturers of medical devices, including in vitro diagnostic devices, are required to report to FDA no later than 30 calendar days after the day they receive or otherwise becomes aware of information, from any source, that reasonably suggests that one of their marketed devices:

1. May have caused or contributed to a death or serious injury; or

2. Has malfunctioned and such device or similar device marketed by the manufacturer would be likely to cause or contribute to a death or serious injury if the malfunction were to recur.

Additional information on MDR, including how, when, and where to report, is available at

https://www.fda.gov/medical-devices/medical-device-safety/medical-device-reporting-mdr-how-report-medical-device-problems and on combination product postmarketing safety reporting is available at (see https://www.fda.gov/combination-products/guidance-regulatory-information/postmarketing-safety-reporting-combination-products).

In accordance with the recall requirements specified in 21 CFR 806.10 for devices or the postmarketing safety reporting requirements (21 CFR 4, Subpart B) for combination products, you are required to submit a written report to FDA of any correction or removal of this device initiated by you to: (1) reduce a risk to health posed by the device; or (2) remedy a violation of the act caused by the device which may present a risk to health, with certain exceptions specified in 21 CFR 806.10(a)(2). Additional information on recalls is available at https://www.fda.gov/safety/recalls-market-withdrawals-safety-alerts/industry-guidance-recalls.

CDRH does not evaluate information related to contract liability warranties. We remind you; however, that device labeling must be truthful and not misleading. CDRH will notify the public of its decision to approve your PMA by making available, among other information, a summary of the safety and effectiveness data upon which the approval is based. The information can be found on the FDA CDRH Internet HomePage located at https://www.fda.gov/medical-devices/device-approvals-denials-and-clearances/pma-approvals. Written requests for this information can also be made to the Food and Drug Administration, Dockets Management Branch, (HFA-305), 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852. The written request should include the PMA number or docket number. Within 30 days from the date that this information is placed on the Internet, any interested person may seek review of this decision by submitting a petition for review under section 515(g) of the act and requesting either a hearing or review by an independent advisory committee. FDA may, for good cause, extend this 30-day filing period.

Failure to comply with any post-approval requirement constitutes a ground for withdrawal of approval of a PMA. The introduction or delivery for introduction into interstate commerce of a device that is not in compliance with its conditions of approval is a violation of law.

You are reminded that, as soon as possible and before commercial distribution of your device, you must submit an amendment to this PMA submission with a copy of all final labeling. Final labeling that is identical to the labeling approved in draft form will not routinely be reviewed by FDA staff when accompanied by a cover letter stating that the final labeling is identical to the labeling approved in draft form. If the final labeling is not identical, any changes from the final draft labeling should be highlighted and explained in the amendment.

All required documents should be submitted, unless otherwise specified, to the address below and should reference the above PMA number to facilitate processing.

U.S. Food and Drug Administration
Center for Devices and Radiological Health
Document Control Center - WO66-G609
10903 New Hampshire Avenue
Silver Spring, MD 20993-0002

If you have any questions concerning this approval order, please contact Sara Royce at 301-796-6536 or Sara.Royce@fda.hhs.gov.

Sincerely,

Nicole G. Ibrahim -S

for Bram Zuckerman, M.D.
Director
OHT2: Office of Cardiovascular Devices
Office of Product Evaluation and Quality
Center for Devices and Radiological Health