August 21, 2020

Monteris Medical
David H. Mueller
Senior Principal Regulatory Affairs Specialist
14755 27th Avenue North, Suite C
Plymouth, Minnesota 55447

Re: K201056
Trade/Device Name: NeuroBlate System
Regulation Number: 21 CFR 878.4810
Regulation Name: Laser Surgical Instrument for Use in General and Plastic Surgery and in Dermatology
Regulatory Class: Class II
Product Code: GEX, HAW
Dated: July 20, 2020
Received: July 22, 2020

Dear Mr. David Mueller:

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. Although this letter refers to your product as a device, please be aware that some cleared products may instead be combination products. The 510(k) Premarket Notification Database located at https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfpmn/pmn.cfm identifies combination product submissions. 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) for devices or postmarketing safety reporting (21 CFR 4, Subpart B) for combination products (see https://www.fda.gov/combination-products/guidance-regulatory-information/postmarketing-safety-reporting-combination-products); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820) for devices or current good manufacturing practices (21 CFR 4, Subpart A) for combination products; and, if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

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 https://www.fda.gov/medical-devices/medical-device-safety/medical-device-reporting-mdr-how-report-medical-device-problems.

For comprehensive regulatory information about medical devices and radiation-emitting products, including information about labeling regulations, please see Device Advice (https://www.fda.gov/medical-devices/device-advice-comprehensive-regulatory-assistance) and CDRH Learn (https://www.fda.gov/training-and-continuing-education/cdrh-learn). Additionally, you may contact the Division of Industry and Consumer Education (DICE) to ask a question about a specific regulatory topic. See the DICE website (https://www.fda.gov/medical-devices/device-advice-comprehensive-regulatory-assistance/contact-us-division-industry-and-consumer-education-dice) for more information or contact DICE by email (DICE@fda.hhs.gov) or phone (1-800-638-2041 or 301-796-7100).

Sincerely,

Xiaolin Zheng, Ph.D.
Director
DHT5A: Division of Neurosurgical,
Neurointerventional
and Neurodiagnostic Devices
OHT5: Office of Neurological
and Physical Medicine Devices
Office of Product Evaluation and Quality
Center for Devices and Radiological Health

Enclosure

DEPARTMENT OF HEALTH AND HUMAN SERVICES
Food and Drug Administration

Indications for Use

Form Approved: OMB No. 0910-0120
Expiration Date: 06/30/2020
See PRA Statement below.

510(k) Number *(if known)*
K201056

Device Name
NeuroBlate System

Indications for Use *(Describe)*

The Monteris Medical NeuroBlate System is a neurosurgical tool and is indicated for use to ablate, necrotize, or coagulate intracranial soft tissue, including brain structures (e.g., brain tumor and epileptic foci as identified by non-invasive and invasive neurodiagnostic testing, including imaging), through interstitial irradiation or thermal therapy in medicine and surgery in the discipline of neurosurgery with 1064 nm lasers.

The Monteris Medical NeuroBlate System is intended for planning and monitoring thermal therapies under MRI visualization. It provides MRI based trajectory planning assistance for the stereotaxic placement of MRI compatible (conditional) NeuroBlate Laser Delivery Probes. It also provides near real-time thermographic analysis of selected MRI images.

When interpreted by a trained physician, this System provides information that may be useful in the determination or assessment of thermal therapy. Patient management decisions should not be made solely on the basis of the NeuroBlate System analysis.

Type of Use *(Select one or both, as applicable)*

☒ Prescription Use (Part 21 CFR 801 Subpart D) ☐ Over-The-Counter Use (21 CFR 801 Subpart C)

CONTINUE ON A SEPARATE PAGE IF NEEDED.

This section applies only to requirements of the Paperwork Reduction Act of 1995.

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510(k) Summary

a. Device Information:

Category	Comments
Sponsor:	Monteris Medical 14755 27th Avenue North Suite C Plymouth, MN 55447 763-253-4710 Fax: 763-746-0084 www.monteris.com
Correspondent Contact Information:	David H. Mueller Senior Principal Regulatory Affairs Specialist Monteris Medical TEL: 763-253-2732 FAX: 763-746-0084 Email: DMueller@Monteris.com
Device Common Name:	Magnetic Resonance Image Guided Laser Thermal Therapy System
Device Classification Number:	21 CFR 878.4810 Laser surgical instrument for use in general and plastic surgery and in dermatology 21 CFR 882.4560 Stereotaxic instrument
Device Classification & Product Code:	Class II, GEX Class II, HAW
Device Proprietary Name:	NeuroBlate® System
Predicate Devices	Monteris Medical NeuroBlate® System (K171255, K182036, K193375)
FDA Guidance Reference Predicate Devices([1])	K163244, truFreeze System K171626, truFreeze System

b. Date Summary Prepared

August 17, 2020

c. Description of Device

The Monteris NeuroBlate® System is a collection of MRI-compatible laser devices and accessories that create an MRI guided delivery of precision thermal therapy that is currently indicated for the practice of neurosurgery.

[1] Food and Drug Administration. The Least Burdensome Provisions: Concepts and Principles; Guidance for Industry and Food and Drug Administration Staff. Draft Guidance. February 5th ed. Washington, D.C., U.S. Department of Health and Human Services. Food and Drug Administration, Center for Devices and Radiological Health, US Printing Office, 2019

As previously described in K171255, K182036, K193375, the NeuroBlate System is typically used for the minimally invasive ablation of neurosurgeon identified target tissue (tumors, epileptic foci) in the brain.

The NeuroBlate System components consist of:

- Families of gas-cooled Laser Delivery Probe (Probe) (SideFire & FullFire) to deliver controlled energy to a target zone.
- Probe Drivers (Advanced Probe Driver, Robotic Probe Driver) which allow the surgeon to precisely position, stabilize and manipulate a probe, endoscope or other device within the target zone.
- An Interface Platform, which attaches to the MRI system patient table and provides supporting electronics for the Advanced and Robotic Probe Drivers and interconnections for the Laser Delivery Probes;
- A System Electronics Rack and Components, which includes necessary umbilicals, cables, penetration panels, and small hardware for system mechanical, electrical, and electronic operation,
- A Control Workstation including the *M-Vision, M-Vision Pro, M-Vision Fusion, and Fusion-S* software, which includes a user interface for procedure planning, interactive monitoring of NeuroBlate procedures, and interfaces to the MRI and hardware subsystems.

The NeuroBlate System is utilized with stereotaxic frames and patient stabilization systems, such as:

- The AXiiiS stereotaxic mini-frame and the Monteris Cranial Bolt and Mini-Bolt fixation components, and
- The AtamA Stabilization System and MRI receive-only head coil, as well as, other optional accessories, including: drill bits, bolts, thumbscrews, instrument adaptors, accessory host adaptors, MRI trajectory wands, cranial screws, bone screws, fiducial markers, stereotactic manual driver with mandrel and T-handle, and other manual accessory instruments and tools.

Change Description

Considering the Laser Interstitial Thermal Therapy (LITT) related Real World Evidence([2]) from Monteris' on-going post-market registry, the available scientific clinical literature peer reviewed published data, and the corresponding FDA publications, Monteris' minor (non-significant) modifications to the Indications For Use([3]) statement duplicate existing information in order to improve clarity and ease of understanding for the NeuroBlate System's (a) "tool" indication and (b) existing intended patient populations. These updates are in alignment with the current intended use. The modified text (underlined) will read:

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[2] United States Food and Drug Administration. *Use of Real-World Evidence to Support Regulatory Decision-Making for Medical Devices*; Guidance for Clinical Investigators, Industry, and FDA Staff. August 31st ed. Washington, D.C.: FDA, 2017.

[3] United States Food and Drug Administration, the 510(k) Program: Evaluating Substantial Equivalence in Premarket Notifications [510(k)], Guidance for Industry and Food and Drug Administration Staff. Washington, D.C.: FDA, 2014. http://www.fda.gov/downloads/MedicalDevices/.../UCM284443.pdf

The Monteris Medical NeuroBlate® System is a neurosurgical tool and is indicated for use to ablate, necrotize, or coagulate intracranial soft tissue, including brain structures (e.g., brain tumor and epileptic foci as identified by non-invasive and invasive neurodiagnostic testing, including imaging), through interstitial irradiation or thermal therapy in medicine and surgery in the discipline of neurosurgery with 1064 nm lasers.

The Monteris Medical NeuroBlate® System is intended for planning and monitoring thermal therapies under MRI visualization. It provides MRI based trajectory planning assistance for the stereotaxic placement of MRI compatible (conditional) NeuroBlate® Laser Delivery Probes. It also provides near real-time thermographic analysis of selected MRI images.

When interpreted by a trained physician, this System provides information that may be useful in the determination or assessment of thermal therapy. Patient management decisions should not be made solely on the basis of the NeuroBlate™ System analysis.

The clarified and duplicated indications were determined to not create a new intended use or raise different questions of safety and effectiveness, and were also determined to not introduce any new or different technical characteristics which could raise different questions of safety and effectiveness, i.e., the clarified indications are consistent with the existing intended use as well as the existing Indications For Use.

d. Indications For Use

The Monteris Medical NeuroBlate® System is a neurosurgical tool and is indicated for use to ablate, necrotize, or coagulate intracranial soft tissue, including brain structures (e.g., brain tumor and epileptic foci as identified by non-invasive and invasive neurodiagnostic testing, including imaging), through interstitial irradiation or thermal therapy in medicine and surgery in the discipline of neurosurgery with 1064 nm lasers.

The Monteris Medical NeuroBlate® System is intended for planning and monitoring thermal therapies under MRI visualization. It provides MRI based trajectory planning assistance for the stereotaxic placement of MRI compatible (conditional) NeuroBlate® Laser Delivery Probes. It also provides near real-time thermographic analysis of selected MRI images.

When interpreted by a trained physician, this System provides information that may be useful in the determination or assessment of thermal therapy. Patient management decisions should not be made solely on the basis of the NeuroBlate® System analysis.

e. Comparison to Predicate Devices

The application for the Monteris Medical NeuroBlate System with the modified labeling is substantially equivalent (and/ or identical) to the predicate Monteris NeuroBlate System (K171255, K182036, K193375) in intended use, Indications For Use, technology, design and physician use.

f. Summary of Supporting Data

Considering the intended labeling clarifications include no physical, material, or software related device design changes, the NeuroBlate System predicates' previously provided in-vitro (bench) and in-vivo (animal) data remains applicable and are incorporated by reference.

As these modifications to the Indications For Use do not create a new intended use or raise new or different questions of safety or efficacy and incorporates previously provided clinical data([4]), additional clinical data are not necessary to demonstrate substantial equivalence.

[4] K171255