October 6, 2022

b-ONE ORTHO, Corp.
Allison Gecik
Director, US QA & RA
3 Wing Drive Suite #259
Cedar Knolls, New Jersey 07927

Re: K222431
Trade/Device Name: MOBIO Total Knee System
Regulation Number: 21 CFR 888.3560
Regulation Name: Knee Joint Patellofemorotibial Polymer/Metal/Polymer Semi-Constrained Cemented Prosthesis
Regulatory Class: Class II
Product Code: JWH
Dated: August 11, 2022
Received: August 11, 2022

Dear Allison Gecik:

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,

Ting Song, Ph.D.
Assistant Director
DHT6A: Division of Joint Arthroplasty Devices
OHT6: Office of Orthopedic 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: 06/30/2023
See PRA Statement below.

510(k) Number *(if known)*
K222431

Device Name
MOBIO Total Knee System

Indications for Use *(Describe)*

The b-ONE™ MOBIO™ Total Knee System is intended for total knee arthroplasty due to the following conditions:
· Painful, disabling joint disease of the knee resulting from: noninflammatory degenerative joint disease (including osteoarthritis, traumatic arthritis, or avascular necrosis), rheumatoid arthritis or post -traumatic arthritis.
· Post-traumatic loss of knee joint configuration and function.
· Moderate varus, valgus, or flexion deformity in which the ligamentous structures can be returned to adequate function and stability.
· Revision of previous unsuccessful knee replacement or other procedure
· Fracture of the distal femur and/or proximal tibia that cannot be stabilized by standard fracture- management techniques.

Additional indications for Posterior Stabilized (PS) and Posterior Stabilized Plus (PS+) components:
· Ligamentous instability requiring implant bearing surface geometries with increased constraint.
· Absent or nonfunctioning posterior cruciate ligament.
· Severe anteroposterior instability of the knee joint

The b-ONE™ MOBIO™ Total Knee System is intended for implantation with bone cement only.
b-ONE™ MOBIO™ Total Knee System components are not intended for use with other knee systems.

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.

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TRADITIONAL
510(K) SUMMARY
As required by 21 CFR 807.92

Submitter Information:

Submitter's Name:	b-ONE ORTHO, Corp.
Address:	3 Wing Drive
	Suite 259
	Cedar Knolls, NJ 07927
Telephone:	866-276-4538
Contact Person:	Allison Gecik
Telephone:	973-965-8940

Date Prepared:	August 11, 2022
Proprietary Name:	MOBIO Total Knee System
Classification:	Class II
Classification Panel:	Orthopedic
Common Name:	Total Knee Joint Replacement
Product Code(s):	JWH

Classification Name(s):	Regulation Number
Prosthesis, Knee, Patellofemorotibial, Semi-Constrained, Cemented, Polymer/Metal Polymer knee joint patellofemorotibial polymer/metal/polymer semi-constrained cemented prosthesis	888.3560

Legally Marketed Predicate Devices to Which Substantial Equivalence is Claimed:	b-ONE MOBIO PS Tibial Baseplate; K180446
Legally Marketed Reference Devices Used to Support Substantial Equivalence:	Stryker Triathlon T/S Universal Baseplate and Cemented Stems; K070095 DePuy Attune Cemented Stems; K160700

Intended Use:

The MOBIO Total Knee System is intended for total knee arthroplasty due to the following conditions:

- Painful, disabling joint disease of the knee resulting from: noninflammatory degenerative joint disease (including osteoarthritis, traumatic arthritis, or avascular necrosis), rheumatoid arthritis or post -traumatic arthritis
- Post-traumatic loss of knee joint configuration and function
- Moderate varus, valgus, or flexion deformity in which the ligamentous structures can be returned to adequate function and stability.
- Revision of previous unsuccessful knee replacement or other procedure
- Fracture of the distal femur and/or proximal tibia that cannot be stabilized by standard fracture- management techniques

Additional Indications for the PS and PS+:

- Ligamentous instability requiring implant bearing surface geometries with increased constraint
- Absent or nonfunctioning posterior cruciate ligament
- Severe anteroposterior instability of the knee joint

The MOBIO Total Knee System is intended for implantation with bone cement only. MOBIO Total Knee System components are not intended for use with other knee systems.

Device Description/Technological Characteristics:

The MOBIO Total Knee System is a modular artificial knee replacement system comprised of symmetric cemented femoral components, symmetric cemented tibial tray, symmetric tibial inserts with locking wires, symmetric patellar resurfacing button, and reusable surgical instruments. The therapeutic effect is replacement of the diseased joint with artificial components to restore joint function. This submission is to add a Stemmed Baseplate with modular Stem Extension options. Compatibility of the system components is only claimed with the b-ONE Total Knee System components. There is no allowed interchangeability with systems manufactured by other companies.

The b-ONE MOBIO Total Knee System Stemmed Tibial Baseplates are manufactured from forged titanium alloy. The baseplates are offered in 9 sizes with medial lateral dimensional range from 58-85mm and anterior posterior dimensional range from 58-85mm and anterior posterior dimensional range from 38-59mm. The baseplate is intended for cemented fixation. The Stemmed Baseplates mate with stem extensions through a threaded junction. The Tibial Stems are manufactured from forged titanium alloy. The Tibial Stems are offered in 3 diameters (12, 14, and 16mm) with various lengths ranging from 20-120mm. The stems are intended for cemented fixation.

All system components are supplied sterile and are single use devices.

Comparison of Technological Characteristics

The design features and materials of the subject devices are substantially equivalent to those of the predicate devices. The MOBIO Total Knee System and the predicate devices share the following characteristics:

- Materials of construction
- Manufacturing processes

- Sizes offered
- Product design for shape and macrostructures
- Sterilization methods

Performance Data

The following performance data were provided in support of the substantial equivalence determination.

Non-Clinical Studies

- Tibial Baseplate Fatigue
- Torque Testing
- Locking Mechanism Strength
- Constraint
- Contact Area and Contact Stress
- Tibiofemoral Range of Motion
- Bacterial Endotoxin Testing
- Shelf Life Studies
- Biocompatibility

Conclusion

The information provided above supports that the MOBIO Total Knee System Stemmed Baseplate and Stem Extension components are as safe and effective as the predicate devices with the same intended use. Some minor differences in design and technology exist between the subject and predicate devices, however applicable reference devices have been cited to support the conclusion that these differences do not raise any new questions of safety and effectiveness. The MOBIO Total Knee System Stemmed Baseplate and Stem Extensions are substantially equivalent to the predicate devices.