



January 30, 2024

Evolution Spine
Todd Wallenstein
VP R&D, Quality, Regulatory
2300 N. Haskell Ave
Dallas, Texas 75204

Re: K232432

Trade/Device Name: E3D™-A Interbody System
Regulation Number: 21 CFR 888.3080
Regulation Name: Intervertebral body fusion device
Regulatory Class: Class II
Product Code: OVD, MAX, PHM
Dated: January 2, 2024
Received: January 2, 2024

Dear Todd Wallenstein:

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 (the 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 available 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.

Additional information about changes that may require a new premarket notification are provided in the FDA guidance documents entitled "Deciding When to Submit a 510(k) for a Change to an Existing Device" (<https://www.fda.gov/media/99812/download>) and "Deciding When to Submit a 510(k) for a Software Change to an Existing Device" (<https://www.fda.gov/media/99785/download>).

Your device is also subject to, among other requirements, the Quality System (QS) regulation (21 CFR Part 820), which includes, but is not limited to, 21 CFR 820.30, Design controls; 21 CFR 820.90, Nonconforming product; and 21 CFR 820.100, Corrective and preventive action. Please note that regardless of whether a change requires premarket review, the QS regulation requires device manufacturers to review and approve changes to device design and production (21 CFR 820.30 and 21 CFR 820.70) and document changes and approvals in the device master record (21 CFR 820.181).

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 Part 803) for devices or postmarketing safety reporting (21 CFR Part 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 Part 4, Subpart A) for combination products; and, if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR Parts 1000-1050.

Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR 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,

Katherine D. Kavlock -S

for

Brent Showalter, Ph.D.

Assistant Director

DHT6B: Division of Spinal Devices

OHT6: Office of Orthopedic Devices

Office of Product Evaluation and Quality

Center for Devices and Radiological Health

Enclosure

Indications for Use

Submission Number (if known)

K232432

Device Name

E3D™-A Interbody System

Indications for Use (Describe)

E3D™-A Static Interbody Devices are thoraco-lumbar interbody fusion devices indicated at one or more levels of the thoracic spine (T1-T12), thoracolumbar junction (T12- L1), or lumbosacral spine (L1-S1) as an adjunct to fusion in patients with the following indications: degenerative disc disease (DDD), disc herniation (with myelopathy and/or radiculopathy), spondylolisthesis, deformity (degenerative scoliosis or kyphosis), spinal stenosis, and failed previous fusion (pseudarthrosis). DDD is defined as discogenic back pain with degeneration of the disc as confirmed by history and radiographic studies. These patients should be skeletally mature and have had at least six (6) months of non-operative treatment. Devices are to be filled with autograft bone and/or allogenic bone graft composed of cancellous and/or corticocancellous bone. These devices are intended to be used with supplemental fixation systems that have been cleared for use in the thoracolumbosacral spine (e.g., posterior pedicle screw and rod systems, anterior plate systems, and anterior screw and rod systems). Hyperlordotic interbody devices ($\geq 20^\circ$ lordosis) must be used with at least anterior supplemental fixation.

E3D™-A Integrated Interbody Devices are integrated lumbar interbody fusion devices intended for use in patients with degenerative disc disease (DDD) at one or two contiguous levels of the lumbosacral spine (L2-S1). DDD is defined as discogenic back pain with degeneration of the disc confirmed by history and radiographic studies. These patients should be skeletally mature and have had at least six (6) months of non-operative treatment. In addition, these patients may have up to Grade 1 spondylolisthesis or retrolisthesis at the involved level(s). Devices are to be filled with autograft bone and/or allogenic bone graft composed of cancellous and/or corticocancellous bone. These devices are intended to be used with three screws or anchors which accompany the implants. When used with screws, these devices are stand-alone interbody fusion devices. When used with anchors, these devices are intended for use with supplemental fixation (e.g., facet screws or posterior fixation). Hyperlordotic implants ($\geq 20^\circ$ lordosis) are intended for use with supplemental fixation (e.g., facet screws or posterior fixation). When used without screws or anchors, these devices are intended for use with supplemental fixation (e.g., facet screws or posterior fixation).

When used for multilevel degenerative scoliosis or sagittal deformity, supplemental fixation that have been cleared for use in the thoracolumbosacral spine (e.g., posterior pedicle screw and rod systems, anterior plate systems, and anterior screw and rod systems) must be used.

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.



510(k) Summary

In accordance with Title 21 of the Code of Federal Regulations, Part 807, and in particular 21 CFR §807.92, the following summary of information is provided:

Company: Evolution Spine
2300 N Haskell Rd
Dallas, TX 75204

Contact: Todd Wallenstein
Evolution Spine
2300 N Haskell Ave
Dallas, TX 75204
Phone: (214) 682-8536
twallenstein@evolutionspine.com

Date Prepared: November 16, 2023

Device Trade Name: E3D™-A Interbody System
Common Name: Intervertebral Body Fusion Device
Classification: 21 CFR §888.3080
Class: II
Product Code: OVD, MAX, PHM

Primary Predicate: EVOLUTION SPINE Interbody System (K223146)
Additional Predicates: Align Anterior Cages from Acuity Surgical Devices (K222561)
Alphatec Spine - IdentiTi™ NanoTec™ ALIF Standalone Interbody System (K220782)
Innovasis® AxTiHA™ Stand-Alone ALIF System (K201614)

Device Description:

The E3D™-A Interbody System provides interbody fusion devices designed to provide structural stability during spinal fusion. The E3D™-A Interbody System consists of interbodies offered in various sizes to accommodate surgical needs and anatomic requirements. The E3D-A Interbodies were designed to be placed via an anterior approach. All interbodies in the system are additively manufactured from titanium alloy powder, per ASTM F3001. The System offers both Static and Integrated Interbodies. The Integrated version is to be used in conjunction with three (3) screws that are subtractively manufactured from titanium alloy, per ASTM F136.

The E3D-A Interbody System's implants are available with and without HA^{nano} Surface®, a 20-40 nanometer thin hydroxyapatite (HA) surface treatment. The surface treatment presents nano-scale topography on the entirety of the implant surface.

The purpose of this submission is to add HA^{nano} Surface® and a new AM supplier.

Indications For Use:

E3D™-A Static Interbody Devices are thoraco-lumbar interbody fusion devices indicated at one or more levels of the thoracic spine (T1-T12), thoracolumbar junction (T12- L1), or lumbosacral spine (L1-S1) as an adjunct to fusion in patients with the following indications: degenerative disc disease (DDD), disc herniation (with myelopathy and/or radiculopathy), spondylolisthesis, deformity (degenerative scoliosis or kyphosis), spinal stenosis, and failed previous fusion (pseudarthrosis). DDD is defined as discogenic back pain with degeneration of the disc as confirmed by history and radiographic studies. These patients should be skeletally mature and have had at least six (6) months of non-operative treatment. Devices are to be filled with autograft bone and/or allogenic bone graft composed of cancellous and/or corticocancellous bone. These devices are intended to be used with supplemental fixation systems that have been cleared for use in the thoracolumbosacral spine (e.g., posterior pedicle screw and rod systems, anterior plate systems, and anterior screw and rod systems). Hyperlordotic interbody devices ($\geq 20^\circ$ lordosis) must be used with at least anterior supplemental fixation.

E3D™-A Integrated Interbody Devices are integrated lumbar interbody fusion devices intended for use in patients with degenerative disc disease (DDD) at one or two contiguous levels of the lumbosacral spine (L2-S1). DDD is defined as discogenic back pain with degeneration of the disc confirmed by history and radiographic studies. These patients should be skeletally mature and have had at least six (6) months of non-operative treatment. In addition, these patients may have up to Grade 1 spondylolisthesis or retrolisthesis at the involved level(s). Devices are to be filled with autograft bone and/or allogenic bone graft composed of cancellous and/or corticocancellous bone. These devices are intended to be used with three screws or anchors which accompany the implants. When used with screws, these devices are stand-alone interbody fusion devices. When used with anchors, these devices are intended for use with supplemental fixation (e.g. facet screws or posterior fixation). Hyperlordotic implants ($\geq 20^\circ$ lordosis) are intended for use with supplemental fixation (e.g. facet screws or posterior fixation). When used without screws or anchors, these devices are intended for use with supplemental fixation (e.g. facet screws or posterior fixation).

When used for multilevel degenerative scoliosis or sagittal deformity, supplemental fixation that have been cleared for use in the thoracolumbosacral spine (e.g., posterior pedicle screw and rod systems, anterior plate systems, and anterior screw and rod systems) must be used.

Technological Comparison To Predicates:

The technological design features of the subject E3D™-A Interbody System are identical to the predicate K223146, EVOLUTION SPINE Interbody System in intended use, indications for use, design, function, and technology, and it was demonstrated that they are substantially equivalent.

The subject E3D™-A Interbody System incorporates a nano-scale hydroxyapatite surface treatment, identical to that provided on devices cleared in K201614 (TxTiHA IBF System, AxTiHA Stand-Alone ALIF System, Innovasis, Inc.), K222561 (Align Anterior Cages, Acuity Surgical Devices, and K220782 (IdentiTi™ NanoTec™ ALIF Standalone Interbody System, Alphatec Spine).

Performance Data:

Performance testing per ASTM F2077 for dynamic compression shear testing performed on the uncoated version of the subject device.

Performance testing of HAnano Surface was previously conducted per Promimic's protocols, as accepted by FDA for the clearance of the reference devices K201614 (TxTiHA IBF System, AxTiHA Stand-Alone ALIF System, Innovasis, Inc.), K222561 (Align Anterior Cages, Acuity Surgical Devices, and K220782 (IdentiTi™ NanoTec™ ALIF Standalone Interbody System, Alphatec Spine).

The results of these tests indicate that the E3D™-A Interbody System is substantially equivalent to the predicate and reference devices.

Conclusion:

Based on the indications for use, technological characteristics, performance testing, and comparison to predicate devices, the subject E3D™-A Interbody System has been shown to be substantially equivalent to legally marketed predicate devices.