April 21, 2023

Ewoosoft Co., Ltd
℅ Ms. Priscilla Chung
Regulatory Affairs Consultant
LK Consulting Group USA, Inc.
18881 Von Karman Ave. Ste 160
IRVINE CA 92612

Re: K230468
Trade/Device Name: EzDent Web
Regulation Number: 21 CFR 892.2050
Regulation Name: Medical image management and processing system
Regulatory Class: Class II
Product Code: LLZ
Dated: February 21, 2023
Received: February 21, 2023

Dear Ms. Chung:

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,

Lu Jiang

Lu Jiang, Ph.D.
Assistant Director
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DHT8B: Division of Radiological Imaging Devices and Electronic Products
OHT8: Office of Radiological Health
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)*

K230468

Device Name
EzDent Web

Indications for Use *(Describe)*

EzDent Web is a dental imaging software that is intended to provide viewer and image processing tools for maxillofacial radiographic images. These tools are available to view and interpret a series of DICOM compliant dental radiology images and are meant to be used by trained medical professionals such as radiologist and dentist.
EzDent Web is intended for use as software to acquire, view, and save 2D and 3D image files, to load DICOM project files from panorama, cephalometric, and intra-oral imaging equipment, and to provide 3D visualization and 2D 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

(K230468)

This summary of 510(k) information is being submitted in accordance with requirements of 21 CFR Part 807.92.

1. **Date:** 4/20/2023

2. **Applicant / Submitter**

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3. **U.S. Designated Agent**

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4. **Subject Device:**

- Trade/Device Name: EzDent Web
- Version #: v1.2
- Regulation Number: 21 CFR 892.2050
- Regulation Name: Medical Image Management and Processing System
- Regulatory Class: Class II
- Product Code: LLZ

5. **Predicate Device:**

- Manufacturer: Ewoosoft Co., Ltd.
- Trade/Device name: EzDent Web
- Version #: v1.0
- 510(k) number: K211700
- Regulation number 21 CFR 892.2050
- Regulation name: Picture Archiving and Communications System

- Regulatory Class: Class II
- Classification Product Code: LLZ

6. Device Description:

EzDent Web v1.2 is a dental imaging software that enables you to save, manage, view and process patients' images. EzDent Web is equipped with management and processing system for various 2D and 3D images. In addition, EzDent Web provides media contents for patient consultation and user friendly instruction to assist your use of the software.

EzDent Web provides you with the following functions using patient images in 2D and 3D.

- Manage patient information
- View patient images in 2D/3D using tools for image processing and view function.
- Use high resolution 3D volume rendering to view 3D images in the optimized view for user intent.
- Consult patients using media contents provided for patient consultation.

EzDent Web can be used in a networked environment. If EzDent Web is installed in several computers, the patient and image database can be shared among them and used on different workstations.

The software level of concern is Moderate.

7. Indication for use:

EzDent Web is a dental imaging software that is intended to provide viewer and image processing tools for maxillofacial radiographic images. These tools are available to view and interpret a series of DICOM compliant dental radiology images and are meant to be used by trained medical professionals such as radiologist and dentist.

EzDent Web is intended for use as software to acquire, view, and save 2D and 3D image files, to load DICOM project files from panorama, cephalometric, and intra-oral imaging equipment, and to provide 3D visualization and 2D analysis.

8. Substantial Equivalence:

	Modified Device	Unmodified Device
Device name	EzDent Web	EzDent Web
510K number	-	K211700
Manufacturer	Ewoosoft Co., Ltd	Ewoosoft Co., Ltd
Indications for use	EzDent Web is a dental imaging software that is intended to provide viewer and image processing tools for maxillofacial radiographic images. These tools are available to view and interpret a series of DICOM compliant dental radiology images and are meant to be used by trained medical professionals such as radiologist and dentist. EzDent Web is intended for use as software to acquire, view, and save 2D and 3D image files, to load DICOM project files from panorama, cephalometric, and intra-oral imaging equipment, and to provide 3D visualization and 2D analysis.	EzDent Web is a dental imaging software that is intended to provide viewer and image processing tools for maxillofacial radiographic images. These tools are available to view and interpret a series of DICOM compliant dental radiology images and are meant to be used by trained medical professionals such as radiologist and dentist. EzDent Web is intended for use as software to acquire, view, and save 2D and 3D image files, to load DICOM project files from panorama, cephalometric, and intra-oral imaging equipment, and to provide 3D visualization and 2D analysis.
Technology/Principle of Operation	EzDent Web is a device that provides various features to acquire, transfer, edit, display, store, and perform digital processing of medical images. EzDent Web is a patient & image management software specifically for digital dental radiography. It also provides server/client model so that the users upload and download clinical diagnostic images and patient information from any workstations in the network environment. EzDent Web supports general image formats such as JPG and BMP for 2D,3D image viewing as well as DICOM format.	EzDent Web is a device that provides various features to acquire, transfer, edit, display, store, and perform digital processing of medical images. EzDent Web is a patient & image management software specifically for digital dental radiography. It also provides server/client model so that the users upload and download clinical diagnostic images and patient information from any workstations in the network environment. EzDent Web supports general image formats such as JPG and BMP for 2D,3D image viewing as well as DICOM format.
Platform	IBM-compatible PC or PC network	IBM-compatible PC or PC network
Operating System	Microsoft Windows 10 or Higher	Microsoft Windows 10
User Interface	Mouse, Keyboard	Mouse, Keyboard
Image Input Sources	Images can be scanned, loaded from digital cameras or card readers, or imported from a radiographic imaging device	Images can be scanned, loaded from digital cameras or card readers, or imported from a radiographic imaging device
Image format	DICOM, JPG, BMP	DICOM, JPG, BMP
Patient Database Compatibility	SQL	SQL
Includes Image Measurement tools	Linear distance, Angle, Profile	Linear distance, Angle, Profile
Image viewing	Full, side by side, gallery, thumbnail	Full, side by side, gallery, thumbnail
Image manipulation	Brightness, contrast, sharpness, inverse, film view, rotate, zooming, draw canal, memo, implant simulations	Brightness, contrast, sharpness, inverse, film view, rotate, zooming, draw canal, memo, implant simulations

Implant module	Generic implant libraries	Generic implant libraries
Image annotation	Text, paint, ellipse, pointer, select, draw, magnify, line, rectangle, polygon, ruler, protractor, reduction, select region, copy / paste	Text, paint, ellipse, pointer, select, draw, magnify, line, rectangle, polygon, ruler, protractor, reduction, select region, copy / paste

The EzDent Web described in this 510(k) has the same indications for use and the same technical characteristics as the unmodified device.

The subject device and the unmodified device are substantially equivalent, having the same indications for use and functionalities like operation software, computer platform, picture archiving and communication format, image format, image processing features, windowing, image edit, measurements and manipulation.

The modifications are changes in hardware system requirements information and upgrades to Settings, PATIENT page, and VIEWER page. A brief description of the changes from the predicate are as below.

- PC System Requirement Information Updated
  - PC system requirement information has been updated. The PC system requirements have been revised to match the current PC component market for availability. We also added the tablet device specifications.

- EzDent Web Settings Upgrade
  - Server IP setting for mobile environment has been added. On a tablet device, the user can set its server only using the Server Setting for Mobile.
  - CT Data Compression feature has been added. This option has been added to improve loading speed.
  - Default Implant/Crown Insertion settings has been added. This feature is added for user convenience so that the user does not need to set the same settings manually every time they use the implant/crown simulation function.
  - Shortcut keys for overall EzDent Web functions have been added. Each function works the same as the unmodified device.

- PATIENT Page Upgrade
  - Exporting Acquisition History function has been upgraded. The exported data includes gender and age in additional to patient, modality, and period.
  - Checkboxes have been added to select multiple images. The user can open and view the selected images simultaneously.
  - Header/footer settings on Report module has been added. The user can decide whether to show or hide header and footer. Also, items to show on header/footer and their properties – font size, alignment, font color, and box properties – can be set.

- VIEWER Page Upgrade
  - Studio function upgrade
    - The Favorite has been added to the Studio function so that the user can easily access to preferred contents.

- Copying from the Clipboard feature has been added. The user can directly add a captured or copied image to the Studio without saving it on a local PC.

- Reset to DICOM Pixel Spacing function has been added to Image Edit dialog. The new version of the EzDent Web displays a message if the current calibration is different from the corresponding DICOM header information. The user can remove the current calibration and restore the DICOM header information.
- Layout upgrade
  - MPR view can be adjusted on the MPR layout. On a 2D view of MPR layout, a displayed image slice can be changed scrolling mouse wheel or clicking a direction (L / R) button. The user can also move and rotate the MPR axis using a mouse.
  - DSLR layout has been added. IO sensor, image plate, or IO camera images can be viewed in the DSLR layout by clicking the DSLR button from the title bar of the image.

These differences are not significant since they are additional features for user convenience and do not affect the device safety or effectiveness. Based on the test results submitted in this 510K, we conclude that the subject device is substantially equivalent to the predicate device.

9. Technological Characteristics:

EzDent Web v1.2 is a software device that does not contact the patient, nor does it control any life sustaining devices. Results produced by the software's diagnostic, treatment planning and simulation tools are dependent on the interpretation of trained and licensed radiologists, clinicians and referring physicians as an adjunctive to standard radiology practices for diagnosis.

10. Performance Data:

SW verification/validation and the measurement accuracy test were conducted to establish the performance, functionality and reliability characteristics of the modified devices. The device passed all of the tests based on pre-determined Pass/Fail criteria.

11. Conclusion:

The subject device is substantially equivalent in the areas of technical characteristics, general function, application, and indications for use. The new device does not introduce a fundamentally new scientific technology, and the device has been validated through system level test. Therefore, we conclude that the subject device described in this submission is substantially equivalent to the predicate device.