



# DTX Studio™ Clinic

Version 4.5

## Release Notes

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# Version 4.5

This new release significantly improves collaboration between implant specialists and dental labs by offering seamless export of implant plans and effortless import of diagnostic objects and 3D prosthetic designs. Furthermore, the software now offers enhanced support for importing 3D face scans and introduces innovative implant planning features, such as the ability to place planned implants in parallel and add 3D reference planes.

In addition, it now supports the calculation and ordering of a NobelGuide surgical template in DTX Studio Clinic. Moreover, this new version includes a feature that automatically calculates the optimal position for planned implants based on a given tooth setup.

## Notes

All fixes and improvements are incremental to DTX Studio Clinic 4.3.21.

This version will be available to all customers in launched countries and to all Envista internal accounts.

## Compatibility

**DTX Studio Clinic 4.5 needs DTX Studio Core 4.0.4 or above (DTX Studio Clinic 4.5.5 will not connect with older DTX Studio Core versions).**

From DTX Studio Clinic 4.3, a CLINIVIEW side-by-side setup is no longer supported. CLINIVIEW users should use DTX Studio Core 3.15 or lower in a side-by-side setup with DTX Studio Clinic 3.4 or lower.

DEXIS™ IS ScanFlow 1.0.8 or higher is required if used for capturing with DEXIS IS intraoral scanners, installed in Integration mode.

For further details about compatibility, please refer to the latest computer guidelines and compatibility of DTX Studio ecosystem components on [go.dtxstudio.com](https://go.dtxstudio.com) under **Additional resources** or on [tech.dexis.com](https://tech.dexis.com).

DTX Studio database Migration v.3.13 and Plugins rev. 8 are required to perform migrations or update side-by-side migration setups.

## Note

Integration of DTX Studio Clinic with InVivo requires InVivo 6.0.5 or higher. Lower versions of InVivo may cause an additional undesired dialogue when a CBCT case is exported to InVivo, where the user is prompted to select the correct case. This issue is not present in InVivo 6.0.5 or higher.

## New Features

### NobelGuide

A new feature is now available for calculating a NobelGuide surgical template based on a selected implant plan. For each planned implant, users can choose the appropriate sleeve type from a list of supported options and adjust the template range (span). A preview of the surgical template is then generated. After the calculation, users can proceed to order the template, which involves uploading the template package file to DTX Studio Go. In the orders dialog, users can select the correct delivery address and review the NobelGuide production terms before finalizing the order. Once confirmed, the package file is automatically forwarded from DTX Studio Go to the Nobel Biocare production backend, where the template is produced and shipped.

## Implant Planning Warnings

The implant planning warning system has been improved with three additional warning types: (i) implant sleeves are colliding, (ii) anchor pin sleeves are colliding and (iii) implant sleeve and anchor pin sleeve are colliding. Additionally, users are now notified when the same tooth number is assigned to multiple planned implants.

## Orders

Orders created for a specific patient are now shown on the patient details page in the DTX Studio Home module when the patient is selected from the list. Additionally, a new search action was added to find a patient based on a selected Order or Service ID. Customers can directly launch the Nobel Biocare Online store (web page) from within DTX Studio Clinic, but only if they have a valid Nobel Biocare account ID. A textual overview of all planned implant items (article numbers) can also be copied easily to the clipboard.

## Auto Setup

This action enables users to define a target tooth setup (i.e. specifying which teeth should be restored and which may optionally be extracted) and to indicate on which teeth an implant should be planned. Based on this information along with the available IOS and CBCT data, the software calculates a proposal for the virtual tooth setup and the associated 3D implant planning. After calculation, the results are visualized in the 3D scene where the proposed implant plan can be adjusted and finalized by the user. A dedicated implant label was introduced to clearly indicate which implants were not altered since the automatic Auto Setup calculation. This information is additionally shown whenever an implant plan (or derived models) is exported.

## Export Implant Plan

This new software version enhances collaboration between implant specialists and dental labs by allowing the export of a complete implant plan. By selecting the appropriate Intraoral scan setup, the linked implant plan can be exported as an exocad dental project file, accurately detailing the position of each planned implant or abutment relative to the selected Intraoral scans. Users also have the option to export all associated diagnostic objects, such as virtual teeth, diagnostic scans, and reference planes. When this option is selected, these objects are automatically exported with the Intraoral scans in the correct 3D positions. All exported files are now conveniently grouped in a subfolder, which can be accessed immediately after export. Finally, the option to export an implant plan is also available when creating a new DTX Studio Go restoration order.

## Import From Lab

The Intraoral scan import wizard has been completely redesigned to support a more flexible workflow, allowing multiple Intraoral scan files to be imported at the same time. Additionally, at any stage of the process, Intraoral scan files can now be added to the planning scene as diagnostic models. The software also introduces a new action specifically for importing lab designs. Users can manually adjust the position of imported diagnostic scans and lab designs relative to the base Intraoral scans.

## Face Scan

Face scans can now be imported into the software and viewed alongside Intraoral scans. The software assumes that imported face scans are pre-aligned with the available Intraoral scans. Once Intraoral scans are aligned with 3D CBCT data, the face scans become accessible in the 3D Patient workspace. For instances where face scans and Intraoral scans are not pre-aligned, users can manually align the imported face scan with the 3D CBCT data by selecting multiple corresponding points. After manual alignment, the relative position of the face scan in relation to the Intraoral scans is updated accordingly. When working with multiple face scans, users can also manually adjust the relative positions of those face scans with respect to each other. The software now supports the import of face scans without texture information. Additionally, imported face scans can be exported at any stage via the right-click context menu. Finally, simple 3D measurements and annotations can be added to imported face scans.

## Virtual Tooth Setup

The virtual tooth manipulation framework has been reworked to facilitate easier manipulation of teeth within the 3D space. Translations are now always relative to the patient reference frame, while rotations are done around the tooth axis. Manipulations can be done in the smart panel or directly within in the 3D space. In the visibility panel, virtual roots and crowns are now grouped together, allowing for easier toggling of the visibility of all objects.

## Reference Planes

Now add reference planes to the upper or lower jaw Intraoral scan to provide additional guidance during implant planning. Three types of planes can be easily added: upper horizontal, lower horizontal, and vertical planes. These planes can also be inserted via the right-click context menu. Users can adjust the position and orientation of each plane, as well as set their color and opacity, either through the context menu or in the smart panel. Once the Intraoral scans are aligned with 3D CBCT data, the linked reference planes will also be displayed in the 3D Patient workspace.

## Implant Planning Improvements

A new feature has been added that allows you to place a selected implant parallel to another already planned implant. If an abutment is also planned, the prosthetic screw axis is considered. For each planned implant, the deviation from the average implant axis is displayed. Additionally, measurements can now be linked to a planned implant, so when the implant position is adjusted, the measurement automatically updates. After aligning Intraoral scans with the 3D CBCT, all implant planning items are visible in the Intraoral scan workspace. A new planning warning has been introduced to detect when the sleeve of an implant or anchor pin collides with the Intraoral scan. When changing the implant family or brand, the software attempts to maintain the same diameter, length, and platform, if possible. The user experience for rotating an implant has also been improved. The implant planning report and surgical instructions report that can be generated by the user, have been updated with additional information.

## Drag and Drop

You can now import mixed data sets via drag and drop in both DTX Studio Home and DTX Studio Clinic. When you drop the files, an enhanced data selection dialog appears, listing all imported files along with their detected modalities. Subtypes are automatically suggested based on the filenames, but users can adjust the modality and type for each file before starting the import. Additionally, DEXIS IS ScanFlow DICOM files can now be imported into DTX Studio Clinic through drag and drop. After import, the filename is automatically set as the default display name in the smart panel.

## Minor Feature Enhancements

- The display name and color of imported IOS or face scans can now be changed in the smart panel or right-click context menu.
- Workspace tabs have been reordered and renamed, to improve the overall UX experience when working with these workspaces.
- Users can now select to only align upper or lower jaw in the SmartFusion™ wizard. After SmartFusion, the SmartFusion alignment can be removed at any stage through the right-click context panel of the selected Intraoral scan object.
- An additional notification message is shown when exporting a plan to DTX Studio Implant or X-Guide that contains implant items not available in the current implant catalog.
- An error message is shown when the user tries to load a 3D CBCT data set that has a non-orthonormal transformation.
- Intraoral scans can now be imported through the clipboard.
- The acquisition date of imported Intraoral scans can be changed.
- Added tray app notification in case the Polaris DEXIS driver is in use by another application.

## Most Important Bug fixes

### DTX Studio Home module

- Fixed issue where reassigning the CT scan corrupted the target patient in a setup without DTX Studio Core.
- Fixed issue where the image was incorrectly automatically rotated when imported (specific case).
- Fixed issue where the DTX Studio Clinic warning text was missing in the list view when importing 2D DICOM via drag and drop.
- Fixed issue where the software crashed when clicking OK in the settings dialog with PMS web and audit logging enabled.
- Fixed issue where there was no error handling on export to X-guide in a very specific scenario.
- Fixed issue where an error dialog was shown when resetting a patient.
- Fixed issue where the exit code was incorrect when performing silent setup with an invalid settings file.
- Fixed issue where no “failed to start software” notification was shown when the internal setting file is invalid.
- Fixed issue where warnings were logged when you click on the ‘subset of setting’ in the export settings tab.
- Fixed issue where, in the maximized viewer - Viewer smart panel, the scan object item visibility could not be changed.
- Fixed issue where the application was blocked when the network is disconnected during adding data to a partner case.
- Fixed issue where the software crashed while configuring settings.

- Fixed issue where trying to start a camera stream when the camera is in use by another caused a crash (rare case).
- Fixed issue where the Patient panel More options menu was not completely visible with minimum monitor resolution.
- Fixed issue where the keyboard shortcuts window did not fit on a minimum resolution screen.
- Fixed issue where the patient and exposure information option was confusing in the export data dialog.
- Fixed issue where MediaType bitset usage was incorrect and consumes too much memory.

### **DTX Studio Clinic Module**

- Fixed issue where the software crashed when opening DTX Studio Clinic from DTX Studio Home in specific cases.
- Fixed issue where the software crashed when creating a surgical template in specific cases.
- Fixed issue where the Brightness/Contrast action was slow for high-resolution DSLR images on low-spec machines.
- Fixed issue where the software crashed when an ODL file was corrupted on the disk.
- Fixed issue where the area measurement rename styling was incorrect.
- Fixed issue where the cross-sectional reslice jumped to the end of the OPG curve when changing the reslice distance.
- Fixed issue where the visualization of the nerve was not updated in the 3D viewer after undoing the edit diameter action.
- Fixed issue where multiple bite scans were not numbered in the same way as the occlusions.
- Fixed issue where the reslice viewer in the check alignment of Fuse Intraoral scan did not follow the dental arch.
- Fixed issue where adding/removing images from the layout resulted in unexpected zooming.
- Fixed issue where opening the demo patient showed an unintended dialog due to a catalog update.
- Fixed issue where the instruction panel did not scale dynamically.
- Fixed issue where the radiant mode looked unappealing for colorless scans after hole filling.
- Fixed issue where the 3D viewer was not responsive on a Mac with an Intel CPU.
- Fixed issue where generating a report with many images was slow.
- Fixed issue where the software crashed when tooth 46 was virtually extracted (specific intraoral scan).
- Fixed issue where screenshots added to the implant report turned out having lower resolution than expected.

### **Capture Module**

- Fixed issue where the software crashed when a tooth was selected when in free capture mode.



## Treatment/Implant

- Fixed issue where the exported plane did not have the correct transformations.
- Fixed issue where no notification was shown when starting the virtual teeth wizard with an altered Intraoral scan (specific scenario).
- Fixed issue where adding or modifying implants was slow when the Panoramic viewer is in the Workspace.
- Fixed issue where the implant component order was not adjusted when the tooth number was updated.
- Fixed issue where the sequence number on the surgical template tile did not stand out.
- Fixed issue where the template label was placed in the wrong direction.
- Fixed issue where the ordering of abutment properties in CB was incorrect.
- Fixed issue where implant details became enabled after selecting an item in the visibility list.
- Fixed issue where the visibility icon of the abutment screw channel behaved inconsistently (specific scenario).
- Fixed issue where it was possible to finish the surgical template wizard during the placement of the label.
- Fixed issue where it was not possible to translate the virtual tooth with InVivo controls.
- Fixed issue where the template calculation: adjust template section did not maximize.
- Fixed issue where the Surgical Template Instructions were missing after exporting the diagnosis of a patient.
- Fixed issue where the translation direction flipped when zoomed in.
- Fixed issue where reports contained random implants when generic implants are planned.
- Fixed issue where the initial position of the perpendicular snapped reslice of an implant was not perpendicular to the OPG curve.
- Fixed issue where the order/generate action for the surgical template was not working after starting the action help menu.
- Fixed issue where DTX Studio Clinic crashed when no implants are available to plan.
- Fixed issue where the snapped reslice viewer zoomed out unexpectedly in a specific scenario.
- Fixed issue where the incorrect sleeve visualization occurred when changing the implant family.
- Fixed issue where it was unable to find warnings logged when another implant brand was selected.
- Fixed issue where the undo action was triggered after just selecting an implant.
- Fixed issue where the lower jaw was not visible in the 3D viewer when editing the lower alignment of a dental scan.
- Fixed issue where the order of implant lengths was not always increasing.
- Fixed issue where the abutment icon was not updated after undoing the Delete abutment action.

# Version 4.3

This software version aims to address the needs of dentists wanting to create prosthetically-driven treatment plans and create surgical templates chairside – for local production on their 3D printer or by their partnering lab. It also offers the feature set for partially edentulous cases.

## Notes

All fixes and improvements are incremental to DTX Studio Clinic 3.4.

This version will be available to all customers in launched countries and to all Envista internal accounts.

## Compatibility

**DTX Studio Clinic 4.3 needs DTX Studio Core 4.0.4 or above (DTX Studio Clinic 4.3.12 will not connect with older DTX Studio Core versions).**

From DTX Studio Clinic 4.3, a CLINIVIEW side-by-side setup is no longer supported. CLINIVIEW users should use DTX Studio Core 3.15 or lower in a side-by-side setup with DTX Studio Clinic 3.4 or lower.

DEXIS™ IS ScanFlow 1.0.8 or higher is required if used for capturing with DEXIS IS intraoral scanners, installed in Integration mode.

For further details about compatibility, please refer to the latest computer guidelines and compatibility of DTX Studio ecosystem components on [go.dtxstudio.com](https://go.dtxstudio.com) under [Additional resources](#) or on [tech.dexis.com](https://tech.dexis.com).

DTX Studio database Migration v.3.13 and Plugins rev. 8 are required to perform migrations or update side-by-side migration setups.

## Note

Integration of DTX Studio Clinic with InVivo requires InVivo 6.0.5 or higher. Lower versions of InVivo may cause an additional undesired dialogue when a CBCT case is exported to InVivo, where the user is prompted to select the correct case. This issue is not present in InVivo 6.0.5 or higher.

## New Features

### Surgical Templates

A workflow to create - in just a few clicks - a chairside designed surgical template for local production is now available. A wizard allows the user to set the template range and the preferred template sleeve for each planned implant.

Pilot sleeves, fully guided sleeves and anchor pins are supported<sup>1</sup>.

Following additional options can be set:

- Implant orientation notch for optimal prosthetic orientation
- Option for template height, material thickness, punch size
- Option to add inspection windows
- Option to add custom labels (up to 8 characters)

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<sup>1</sup> Currently supported sleeves for surgical templates are:

- Nobel Biocare - pilot drill sleeves, fully guided sleeves and anchor pin sleeves  
(Nobel Biocare Pilot Sleeves 1.5 and 2.0mm can be planned for any third-party implant brand)
- Alpha Bio Tec sleeves – fully guided + anchor pin sleeves
- Implant Direct – fully guided, pilot, anchor pin sleeves

When the wizard is finished, the surgical template preview is added to the 3D scene and planned implants and anchor pins are automatically locked. Afterwards, a high-resolution surgical template can also be calculated directly in DTX Studio Clinic and exported for production (e.g. chairside 3D printing or sending it to the lab for production).

Each designed surgical template is stored together with a surgical instructions report and an assembly instructions report in the patient record, available at all workstations in the network.

The surgical template can be printed on a 3D printer (recommended 100 microns print or 50 microns) and assembled by clinical staff or sent to the lab for manufacturing.

## Surgical Template Order

Before generating the final high-resolution surgical template in DTX Studio Clinic, the system checks in the background if customers have a valid subscription and the customer is informed about the item price. A new order is created in DTX Studio Go when the customer proceeds. In specific software configurations, the price and ordering step can be skipped. Monthly invoicing is based on the generated templates.

Users can now regenerate an additional virtual surgical template with different production settings, such as a modified offset. This will be free of charge.

## Implant Planning

Abutments<sup>2</sup> can now be added allowing for prosthetically-driven crown-down implant planning. Planned abutments and their linked screw channel, are visualized in all 2D and 3D scenes. When changing the implant length or diameter, the software now tries to keep other parameters fixed.

### Note

Currently supported abutments are:

- Engaging and non-engaging abutments for all treatment phases: healing, temporary and final.
- Abutment rotation support (free angle for non-engaging, or in angle steps for engaging abutments).
- Abutment angulation support (for individualized abutments with Angulated Screw Channel) incl. screw channel axis visualization.

Users can also more easily indicate the position of anchor pins on the OPG/PAN view.

The surgical instruction report was significantly extended, offering a clear overview of the full implant plan and generated surgical template (if available). The report is automatically created whenever a high-resolution template is generated.

## Virtual Tooth Extraction

DTX Studio Clinic allows virtual extraction of teeth from the Intraoral scan to create surgical templates for immediate extraction and implant placement, powered by embedded MagicAssist AI.

The altered scan is saved as a separate one and can be used for treatment planning or exported/shared as STL or PLY file. Virtual tooth extraction aims to extract a single tooth or set of teeth where at least 3 teeth must remain in the jaw.

## Diagnostics

The intraoral X-ray crisp filter was improved (ClearVu 3.0). The new filter has enhanced performance in image regions with high intensity values (fillings, enamel, ...).

<sup>2</sup> Currently supported abutments are Nobel Biocare only, other brands are on the prioritized roadmap for library integrations.

## Installation Workflow

Thanks to a set of modifications, the installation and configuration process is currently running more smoothly:

- Software updates and shared settings files can now be uploaded to DTX Studio Core. When a DTX Studio Clinic client connects to DTX Studio Core, software updates are automatically downloaded and a notification is shown at the next startup. Similarly, shared settings files are downloaded and automatically applied in the background.
- Better guidance is provided on how to safely connect to DTX Studio Core and how the DTX Studio Core security certificate can be downloaded.
- A new user action was implemented to easily collect all relevant DTX Studio Clinic log files with a single click.

## New DTX Studio Core Connection Flow

The connection framework has been revamped and enhanced. Setting up a connection between DTX Studio Clinic and DTX Studio Core no longer requires a password. Connections from DTX Studio Clinic clients to DTX Studio Core can now be managed (accepted or revoked) centrally in DTX Studio Core.

## New ICE Filter

A new 3D CBCT image filter, Implant Contrast Enhancement (ICE), has been added. This filter is exclusively available for 3D CBCT scans acquired with a DEXIS OP 3D device. Default values can be preconfigured.

## Load Demo Patients

Two demo patient cases are now installed with DTX Studio Clinic. An action within the software allows loading these demo cases to facilitate onboarding, sales, or training events. Depending on the selected case, 2D FMX data or more complete 3D data will be available.

## New Quick GoShare Action

A new feature was added, allowing the creation of shortcuts for quick data sharing to frequently used DTX Studio Go connections. For each connection it is possible to configure whether the DTX Studio Go website should be opened after data upload or not.

## Set up PMS Connection

The workflow for setting up and configuring a linked PMS system in DTX Studio Clinic has been improved. A small wizard guides users through the configuration process, and the set-up connection can be quickly tested during configuration.

## Area Measurement

By clicking 3 or more points on a 2D image or 3D reslice, segments of a polygon are created. After closing the shape, the enclosed area is measured.

### **Bookmark an intraoral template**

It is now possible to bookmark favorite, commonly-used intraoral templates (layouts) for efficient switching between these templates.

## **Minor Feature Enhancements**

### **AI Improvements**

- The automated initialization of CBCT scan by MagicAssist™ AI is now supported also for smaller FOVs.
- The AI Focus Area Detection engine has been improved to reduce false positive detected areas.
- Users can now configure whether certain focus area types should be hidden by default.
- The automatic AI orientation detection for clinical pictures was improved significantly.
- When users want to crop a clinical picture, a default smart crop box that centers around the patient's face is generated.

### **UX Improvements**

- The visibility tab in the smart panel now shows all scene objects (annotations, implants, findings, ...) grouped per type to make it easier to toggle the visibility. Groups can be easily expanded or collapsed.
- Users can now search patient records in DTX Studio Home by PMS ID.
- Bookmarks can now be created in a single click and are directly accessible in the Findings section of the smart panel.
- The screenshot action is made available in the upper ribbon, allowing immediate access to this action at any time.
- Bone threshold can now be adjusted with sliders.
- The IO X-ray crisp filter was improved. 2D X-Ray visualization is enhanced by reducing 'halo' artifacts on high-contrast (metal, fillings, enamel, ...) objects thanks to the new ClearVu 3.0 filter.

### **Generated cephs (3D cephs)**

- Generated cephs (or 3D Cephs) now have their own image settings (separate from ceph images).
- Added new 3D ceph mode switch to toggle on/off 'Enhance bony structures' (by default on). Switching this off provides the generated ceph as it was pre-DTX Studio Clinic 3.4.
- Optimized the generated ceph (with 'Enhance bony structures' on).

## Other

- Patient records with unsynced data are now shown at the top of the patient list.
- The visualization of patient records with a sync conflict is updated.
- A recovery solution is in place in case the connection with DTX Studio Core is lost while capturing with USB devices.
- The acquisition date and time is shown in the local time frame of the original acquisition PC.
- ‘Natural head position’ (if available) is now the default patient orientation for the 3D viewer.
- The option to keep up to only 5 patient records stored locally is added. Select it on the Storage tab of the DTX Studio settings.
- Updated silent installation flow in line with the new DTX Studio Core authentication workflow.
- Added functionality to automatically download and install implant libraries from DTX Studio Core.
- Added a new UI notification in the application menu to indicate when a new software version is available or when maintenance subscription is expired.
- Updated user-interface of the PMS integration settings panel (improved layout, instructions).
- Starting Dexis IS ScanFlow from DTX Studio Clinic no longer requires the PMS integration to be enabled.
- The DIN 2020 DICOM compliance setting is no longer enabled by default.
- The auto-save setting is now by default switched on.
- Screenshots are no longer linked to implants.
- Updated modality sorter to include the rotation of clinical pictures.
- Added functionality to load a custom template from the export report dialog.

## Most Important Bug Fixes

### DTX Studio Home Module

- Fixed issue where patient name was visible in DTX Studio log files.
- Fixed issue where a 3Shape IOS scan was incorrectly oriented when exporting from DTX Studio Clinic to DTX Studio Lab.
- Fixed issue where right-click on DTX Studio tray icon did not open tray context menu.
- Fixed issue where drag-and-drop of a folder containing sub folders showed an invalid DICOM error dialog.
- Fixed issue where a crash could occur when changing modality after doing it on another PC first.
- Fixed issue where drag-and-drop in FMX template flow was not working.
- Fixed issue where ‘Patient Orientation’ DICOM tag was not filled in for (generated) OPG and CEPH.
- Fixed issue where DTX Studio Clinic would hang when closed down shortly after startup.
- Fixed issue where no notification message was shown in tray when upload is paused due to a lost Internet connection.

- Fixed issue where data export would fail after DTX Studio Core reconnected (specific scenario).
- Fixed issue where a non-local patient record with clinical pictures were not downscaled according to the performance setting.
- Fixed issue where tooth center was not detected on Intraoral scan (specific case).
- Fixed issue where (CB)CT dataset of size 1024x1024x1024 (or larger) could not be loaded.
- Fixed issue in watch folder where DICOM file set with too large slice thickness or slice increment was marked as invalid.
- Fixed issue where low quality DICOM files could be added via drag-and-drop without a warning.
- Fixed issue where study date and acquisition date were not the same.
- Fixed consistency of the time indication throughout the application.
- Fixed issue where the patient record could not be opened when it failed to upload to DTX Studio Go.
- Fixed issue where there was an invalid 'pixel spacing' tag exported when value was missing.
- Fixed issue where 'Ignore practice number' becomes unchecked in the PMS integration settings.
- Fixed issue where .mod file cannot be imported into the patient record as media attachment.
- Fixed issue where a captured image cannot be saved when acquired while a DEXIS IS scan session is open.
- Fixed issue where the Edit/Resume actions are not available in ScanFlow when using VDDS PMS with a different practice PMS ID.
- Fixed issue where Quick launch of DTX Studio Implant was not working for a specific patient name with strange characters.
- Fixed issue where a file exported to X-Guide™ contains small rounding errors in transformation matrix.
- Fixed issue where a registration call for local USB device was executed twice.
- Fixed issue where the dates in stats files created on Thai(?) PCs are not readable for processing.
- Fixed issue where the behavior of Patient PMS ID creation with DTX Studio Clinic was confusing.
- Fixed issue where ArchType is sent with translated values for GoShare and Partner cases.
- Fixed issue where DTX Studio sends updates to local devices to DTX Studio Core twice.
- Fixed issue where the reset patient record action is not logged to the Stats.

### DTX Studio Clinic Module

- Fixed issue where crash would occur when adding or removing viewers from a layout in a specific scenario.
- Fixed issue where brightness/contrast of CBCT imported through OPP is not as expected.
- Fixed issue where the DTX Studio Clinic module would crash after changing tooth number of a finding.
- Fixed issue where slices were skipped when scrolling in parallel or horizontal viewer.
- Fixed issue where "Last Modified" date of diagnose would not update when creating a new diagnose and saving it.

- Fixed issue where unmatched focus areas showed up when dragging an image, processed with MagicAssist™, to the opposing tile and then undoing the action.
- Fixed issue where images captured on the day that the diagnosis was created, were not automatically added to respective diagnosis.
- Fixed issue where ‘Operator information’ was missing in acquired image details (with OP 3D LX).
- Fixed issue where orientation of bitewing IOR for specific legacy template was not as expected.
- Fixed issue where the patient model was not centered in viewer after switching between workspace and implant plans.
- Fixed issue where the menu did not open when clicking the ellipsis icon on a non-active implant plan item.
- Fixed issue where multiple calibration or distance measurements did not get incremental names (for 2D media).
- Fixed issue where application would assign tooth numbers with too low confidence.
- Fixed issue where a crash occurred when opening a patient record with single-frame DICOM file (Specific dataset).
- Fixed issue where a clinical picture would flip when DTX Studio Clinic module is reopened.
- Fixed issue where a large associated teeth list in Image details would be shown for OPG/PAN image.
- Fixed issue where the latest added screenshot was not marked as selected in specific scenario.
- Fixed issue where reassigned 3D X-ray data was not visible in patient module.
- Fixed issue where the looking glass in spotlight mode showed a black box when hovering over data.
- Fixed issue where in the airway indication a wrong image label is shown for upper point.
- Fixed issue where the 3D Panoramic default slice thickness was unexpected on single slice in a specific scenario.
- Fixed issue where wrong level/window was used for 8-bit images using “auto L/W” button.
- Fixed issue where the pregnancy of a patient was not stored in the direct scan request when capturing with Core device in DTX Studio Clinic.
- Fixed issue where migrated 2D images with an empty scanned region are not available in the workspace.

## Capture Module

- Fixed issue where captured clinical pictures (using TWAIN) did not apply resolution performance settings.
- Fixed issue where 3D DICOM file did not get imported via the watch folder.



## Treatment

- Fixed issue where, when exporting to X-Guide, the aligned reference jaw scan was not available when the other jaw scan was not aligned.
- Fixed issue where the angulation of virtual teeth would be shown at a wrong position after the rotation point is adjusted.
- Fixed issue where switching to a non-locked implant plan took some time.
- Fixed issue where Snapped-to-implant reslices would no longer be available after switching to a final implant plan and back.
- Fixed issue where Virtual Teeth Setup in DTX Studio Clinic would hang with incorrect input (rare scenario).
- Fixed issue where snapped-to-implant reslice viewers were not empty when adding a new implant plan.
- Full Nobel Biocare implant library is now included in the installer.

## PMS and Third-party Integration

- Fixed issue where images were not correctly returned via VDDS when patient record had attachments.
- Fixed issue where via DTX Studio Go Sync a duplicated patient record was created when the search for a patient record by PMS ID call fails.
- Fixed issue where clinical pictures imported through PMS were not downscaled according to the performance setting.
- Fixed issue where OPP XML - invalid data paths should be ignored.
- Fixed issue where OPP Web API did not return tooth numbers assigned afterwards.
- Fixed issue where TWAINDSM.dll's were not correctly signed in our installer (TWAIN dsm).

## DTX Studio Core Integration

- Fixed issue where background sync after reconnecting with DTX Studio Core was started while the DTX Studio Clinic module was open for that patient record.
- Fixed issue where patient record was not fully synced with media files after being partially synced.
- Fixed issue where sync of DICOM file failed when specific DICOM tag has very long value.

# Version 3.4

## Notes

All fixes and improvements are incremental to DTX Studio Clinic 3.3.7.

This version will be available to all customers in launched countries and to all Envista internal accounts.

## Compatibility

**DTX Studio Clinic 3.4.12 will not connect to DTX Studio Core versions lower than 3.13.22.**

**DTX Studio Core 3.13.22 or higher is required when updating to DTX Studio Clinic 3.4.12.**

CLINIVIEW™ 11.10 or higher is supported for side-by-side setups with DTX Studio Clinic 3.4.12.

DEXIS™ IS ScanFlow 1.0.8 or higher is required if used for capturing with DEXIS IS intraoral scanners, installed in Integration mode.

For further details about compatibility, please refer to the latest computer guidelines and compatibility of DTX Studio ecosystem components on [go.dtxstudio.com](https://go.dtxstudio.com) under [Additional resources](#) or on [tech.dexis.com](https://tech.dexis.com).

DTX Studio database Migration v.3.13 and Plugins rev. 8 are required to perform migrations or update side-by-side migration setups.

## Note

Integration of DTX Studio Clinic with InVivo requires InVivo 6.0.5 or higher. Lower versions of InVivo may cause an additional undesired dialogue when a CBCT case is exported to InVivo, where the user is prompted to select the correct case. This issue is not present in InVivo 6.0.5 or higher.

## New Features

### Touchscreen Support of Home Module

DTX Studio Clinic supports touchscreens in the DTX Studio Home module<sup>1</sup>. Suitable for DEXIS IS Voyager All-in-one touchscreen setups and setups requiring higher hygienic standards. This includes virtual keyboard support.

### Enhanced Photo Management – Crop & Straighten

To correctly visualize clinical photographs, it is now possible to crop and straighten images. Selected 2D images are exported with crop region and straighten angle applied if the export mode is set to filtered. Crop region and straighten angle are applied to the thumbnails in case of clinical pictures. The crop and straightened angle is applied when exporting as a clinical picture to a PMS or DTX Studio Implant. Modifications are reversible as the original image is always stored.

### Watch Folder for Attachments

Next to 2D and 3D images, the watch folder can now be configured for any other type of file (audio, video, documents, etc.).

<sup>1</sup> DTX Studio Clinic module is not fully optimized for touchscreen.

### Extended Scan Requests and QuickPrescribe

A user can now create a scan request for clinical pictures, third-party devices or attachments (using watch folder).

### Copy and Paste to/from Clipboard

It is now possible to copy the image inside the active viewer to the OS clipboard and import (via paste) an image from the clipboard.

### Auto-save

A new auto-save setting is added that saves the diagnosis upon closing the application or when switching to another diagnosis.

## Minor Feature Enhancements

### General Enhancements

- A new auto-save setting that saves the diagnosis when closing the DTX Studio Clinic module or when switching to another diagnosis.
- When hovering over specific actions, a short, animated tooltip will appear.
- Copy/paste: It is now possible to copy the image inside the active viewer to the OS clipboard and import (via paste) an image from the OS clipboard.
- Allowing export of images when a patient record is open on another workstation.
- A clearer message is now shown when a patient record created in a newer version is imported.
- Exporting of patient data is now possible even if the patient record is locked by another workstation.
- Admin mode warning when launching applications via Quick Launch.
- US-specific default settings – short/long date format, time format, universal tooth numbering, Intraoral X-ray crisp value 54%, language set to 'US English'.
- Support of QuickLaunch to VistaDent cephalometric software.
- Added the capability to also add watch folder devices through the shared settings file.

### Extended Drag-and-Drop Import

- Support for drag-and-drop import of 2D images into the Clinic Module.
- Support for drag-and-drop import of 3D DICOM images into the Home module.

### Diagnostic and Workflow Enhancements

- Enhanced calculated cephalogram: Reworked how a cephalometric image is generated from a CBCT dataset. Additionally, a ruler has been added when exporting the image.
- Perpendicular and parallel reslices can now be rotated individually in the Implant workspace as well.

- Endo and Tooth workspaces are now always visible when a 3D dataset is available, even for volumes which were not auto-setup by AI MagicAssist.
- Patient orientation for a 3D patient record can be set to original (Scanned position, next to Dental head and Natural head position).
- A new action was added to perform Focus Area detection on template level.
- Updated labels and re-ordered actions to [Show Bookmark](#) and [Update Bookmark](#) in the three dot menu of a created finding.
- Optimized automatic nerve segmentation.
- The default image selection for 2D images when opening a patient is now set to 50.

### Capturing

- Added Intraoral camera images support to the watch folder.
- The QuickPrescribe tab is selected by default if QuickPrescribes are available.
- Added an extra image retrieval option to support TWAIN capturing for ScanX Swift devices.
- Added out-of-the box support for DEXIS IS ScanFlow 1.0.10

### Image Quality Enhancements

- 3D volume rendering visualizations have been optimized for DEXIS OP 3D LX.

## Most Important Bug Fixes

### DTX Studio Home Module

- Fixed issue where a failed sync would lead to no longer being able to open a patient record in a specific scenario.
- Fixed issue where certain dialogs could be resized on Mac computers.
- Fixed issue where it was not possible to share patient data (GoShare) when the date of birth was unrealistic.
- Fixed issue where editing the acquisition date for imported media to today was not possible.
- Fixed issue where opening a PMS patient record that had been deleted created a phantom locked patient record.
- Fixed issue where software hangs when using spotlight action and when the user switched between apps.
- Fixed issue when an offline available patient record is partially synced it could miss local media files.
- Fixed issue where the Clinic module would crash when importing an intraoral surface scan with special characters in OS username.
- Fixed issue where locally captured data would not be available in a specific 'offline available' scenario.
- Fixed issue where a sync was necessary after media was deleted on DTX Studio Core.

- Clinic tray app icon now has correct color when using Dark Mode on macOS.
- Fixed an issue where a 'delete series notification' was triggered even when deleting a single image PAN.
- Fixed issue where the brightness changed unexpectedly in the preview window when flipping the image.
- Fixed issue where the DAP value could be incorrectly shown in UI and/or incorrectly written to the DAP DICOM tag (in wrong units).

### **DTX Studio Clinic Module**

- Fixed issue where the Intraoral workspace was zoomed out after creating a Findings report.
- Fixed issue where intraoral images were incorrectly placed in the same placeholder in a specific scenario.
- Fixed issue where SmartFocus did not update the cursor when scrolling.
- Fixed issue where the Clinic module became unresponsive after importing many 2D images.
- Fixed issue where deselecting finding screenshots in Patient menu did not work correctly.
- Fixed issue where a point in root morphology wizard could not be dragged.
- Fixed issue where PLY from iTero could not be imported.
- Fixed issue where virtual teeth angulation was shown at wrong position in Implant workspace.
- Fixed issue where user was asked to save when closing the Clinic module when opening on a different screen.

### **Capture Module**

- Fixed a crash of the Clinic module (in specific scenario) when capture is closed while PSP device is going in sleep mode.
- Fixed issue where arming overlay was not shown when multiple sensors were plugged in (specific case).
- Fixed issue where it was not possible to capture from the Clinic module with a local device when the connection with DTX Studio Core was lost.
- Fixed issue where DTX Console (OP 3D GUI) did not start when using https connection to DTX Studio Core (in a specific case).

### **PMS and Third-Party**

- Fixed issue where the image returned by OPPWeb did not have filters applied (e.g. with Dentrix Ascend).
- Fixed issue where OPPWeb returned an invalid URL when a patient was locked after image acquisition.
- Fixed issue where generated ceph images were not returned correctly (via OPPWeb).

### **Important Notes**

This version will be available to all customers in launched countries and to all Envista internal accounts.



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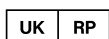
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