



Sidexis iX App

Version 5.0

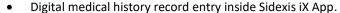
This software is not approved for diagnostic use. For this purpose, please use an approved system in your installation.

Intended use

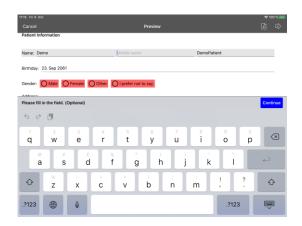
Sidexis iX can be used for both patient and image data retrieval and to trigger exposure readiness at a remote Sidexis PC installation. Sidexis iX is not a medical device and must not be used for diagnosis.



New in version 5.0



- Integrated medical history forms editor.
- Automatic storage of filled medical history records inside Sidexis 4 database.
- SSL secured data transport all the way from Sidexis iX App via Sidexis iX server to Sidexis 4 database server. Requires a preinstalled Sidexis 4 V4.3 or higher.
- Autodelete option covers 2D media, too.
- Patient-lock mode.
- Sidexis iX server V.5.x now automatically checks for new available software updates and installs them optionally.







Introduction

Sidexis iX allows both the management of patient and image data on the Apple iPad and to enable exposure readiness remotely.

Sodexos iX consists of two components:

- 1. Sidexis iX app running on the iPad and
- 2. Sidexis iX server

The Sidexis iX server is installed on a Sidexis workstation PC and communicates both with a local Sidexis installation and the Sidexis iX app on the wireless LAN attached iPad.

Sidexis iX is available in two versions:

Sidexis iX light

This version offers all features except the following ones:

No communication with the remote Sidexis iX server (just to the restore function of a previous backup).

No remote access to the Sidexis database.

Therefore, no option that enables exposure readiness right from the iPad device and

no automatic data transfer of the resulting image and patient data.

The Sidexis iX light version does not require an existing WLAN connection to a remote Sidexis iX server. It provides all patient and image functions based on the shipped database content.





Sidexis iX full version

Purchasing the full version license (see full version purchase) will disable all functional limitations.

This version offers several communication functions with a remote Sidexis iX server. This server has to be installed and configured first in order to establish a communication link to the iPad. Please refer to the Sidexis iX server manual for details, esp. the identical configuration of user accounts on both server and iPad side.

The enhanced features of the full version are marked with a $\mbox{\scriptsize *}$ in the text below.

System requirements

Regular and 2D operations	Any iPad with iOS 10.3 or higher. Sidexis iX Server V.5.0 or higher.
3D operations	iPads with >=2 GB RAM, e.g. iPad Air 2, iPad Pro. Sidexis iX server version 4.x or higher with connected Sidexis 4 V4.2 or higher. Optimal results are offered in combination with >= 4 GB RAM, e.g. iPad Pro 12,9.





Online- and offline modes

Sidexis iX can operate in one of these two modes:

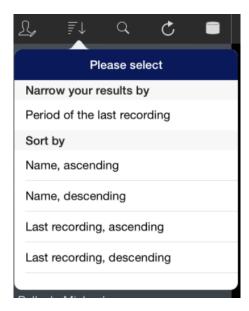
During offline mode only patient and image data stored on the iPad are available to the user.

When working in online mode a connection to the remote Sidexis database is established and allows active browsing inside the Sidexis patient list. A Sidexis iX server is required at the Sidexis PC side in order to offer online database access.

Working online*



This icon inside the patient caption signals an active online connection. Patient data is shown from the remote Sidexis database. Pressing this button switches to offline mode.



Patient list sort order can be set as follows:

Name (ascending or descending)

Date of last take (ascending or descending)





The last one allows presenting the patient with the newest images at the beginning of the list.

The patient list can be narrowed using the period of the last image recording. Following selection criteria are offered:

- 1. Start date and End Date, or
- 2. Quarter selection.

Via "Request patients" the narrowed patient list will be fetched and displayed.





In order to exit the narrowed patient list view just select one of the available sort options.



The search function allows searching inside the Sidexis patient list using the name property.







Right after selecting the patient button one or more patient list entries can be selected. The actual selection is visualized using checkmarks right to the patient names.



Now all selected entries can be downloaded into the offline database pressing the (now) visible download button.
Using the Cancel button cancels this operation



Above the shown image thumbnails the edit button allows to switch into the image edit mode. One or more thumbnails may be selected and marked with a blue arrow.



All selected items can now be downloaded to the offline database using the shown download button.

Using the Cancel button cancels this operation

Right after selecting a single image thumbnail this image will be opened inside the Sidexis iX image viewer. All corresponding patient and image data is transferred into the iPad offline database automatically. During later offline sessions this patient/image will be served from that offline database.

Inside the image viewer several edit options are available and identical to the ones available while working offline. Please refer to the following chapter for details.





Having selected an available patient this option opens the medical history entry form. This option is only available in "online" mode.





Working offline



The shown button signals working offline. Pressing this button switches to online mode.



Pressing this button enters the patient edit mode. Following options are offered:

Add patient

This function opens the patient data dialog to enter new patient data.

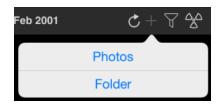
Delete patient

Deletes the selected patient from the iPad database.

(Important: delete and edit operations only manipulate offline data. Any remote data inside the Sidexis database is never touched using the Sidexis iX app!)



Check for new PC side data to import. This function has to be triggered after using the Sidexis send image function in order the iPad with new image and patient data. Patients will be added automatically to the iPad database.



Imports new image data from 2 possible sources:

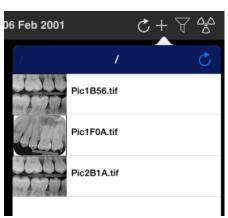
- 1. iPad Photos folder
- 2. Remote PC image folder (see SIDEXIS iX server)





According to the actual selection following popup menus will be shown with thumbnail representations of available images. The selected image will be stored inside the local patient database.







The filter function allows selecting images to be included in the thumbnail preview based on their image types.



Exposure readiness.*

After selecting the requested image type a corresponding exposure readiness request will be sent to the remote Sidexis iX server. The server orders a new exposure readiness from Sidexis.





After completion of the image recording process image data is transferred automatically to the iPad and corresponding results are shown in the image view of Sidexis iX.

Important notice: exposure readiness requires an available wireless network connection to the Sidexis iX server. This function is only available in the Sidexis iX full version.

In case of failure the exposure readiness can be established using the remote Sidexis PC installation directly.

Fdit

Right after pressing the edit button a Delete and an Export button

are presented. The edit button is renamed in Cancel. Now one or more image thumbnails can be selected in order to mark them for later deletion or export.

All check marked images will be deleted after pressing the Delete button.

Via export option selected images can be transferred to following targets:

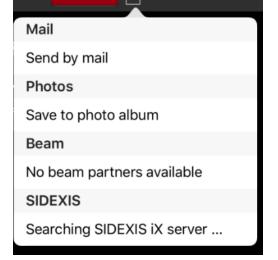
Send by mail allows to send all selected items as standard email with image file attachments.

Save to photo album exports to the iPad Photos folder.

The Beam options pushes selected images to connected iPads running the Sidexis iX application, too. The found Sidexis iX devices will be listed below, after selection of one of the given devices the user will be prompted in order to accept the data transfer on the target iPad. Right after giving permission to this operation the data transfer will start.

SIDEXIS – copies selected images to the connected Sidexis 4 database.

Using the Cancel button cancels this operation.



ancel

Delete (1)



Opens this help document.







Opens the settings dialog. Please refer to chapter Settings for details.





Image View

Selecting a thumbnail image opens the Sidexis iX image view offering following features.

Zoom

Spreading of two fingers on the shown image scales the image display.

Hitting the image using one finger 2 times switches between 1:1 and frame-filling display.

Navigation

The toolbar at the bottom of the display following image navigation functions are presented:



Moves to the previous image.



Moves to the next image.



The fast image selection bar shows a representation of all images of the selected patient. Moving a finger on this area to the left or to the right pops up a thumbnail of the currently selected image. After releasing the fast image selection bar the last selected image will be opened in the image view.





Image information



After selecting the information icon image metadata will be displayed on the left. The metadata view will be active until a second selection of the information icon.

Combined Brightness and Contrast control





After selecting this tool the shown cursor will be displayed. Moving the finger to the right increases image contrast, moving to the left decreases the shown contrast.

Moving the finger up increases image brightness, moving down decreases the shown brightness.

Pressing the Done button stores the last shown setting, pressing Cancel rejects all changes.



Pressing the Done button will display the patient selection and image preview again.

During contrast or brightness operations all other image controls are disabled. Right after pressing the Done button these options are available again.



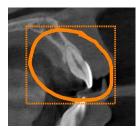
Reset to the original image brightness and contrast values.







Starts the image annotation mode. Activating this mode allows to draw annotations above the shown image. Drawing colors and line width can be configured using the settings form.



Annotations are drawn using the finger above the shown image using the preselected color and line width. Multiple annotation objects can be layered. After finishing the annotation mode by clicking the Done button a rectangle will be drawn framing the annotation area.



In order to delete an existing and shown annotation just activate the annotation mode and single-tap into the framing rectangle. A popup menu occurs and allows to acknowledge the delete operation.



Hides all shown annotations.



Shows existing image annotations.



Opens settings form with following options:







Annotation color

Annotation line width

All following annotation operations will be shown using the selected values.



Starts implant annotation mode.

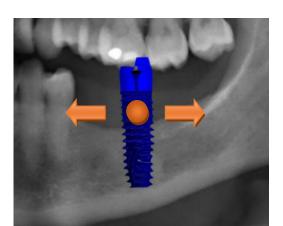
Already visible implants can be edited or deleted.



Selecting the implant tool opens an implant selection view. Right after selecting an implant option this annotation object will be placed using the preselected color.



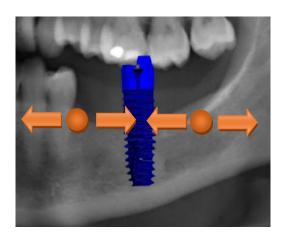




Following interaction options are available:

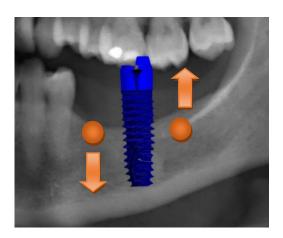
Translation

Select a shown implant using one finger and move in any direction.



Scale

Tap 2 fingers right beside a shown implant and move in or out.



Rotation

Tap 2 fingers right beside a shown implant and rotate.

Selection of *Done* ends the implant edit mode.

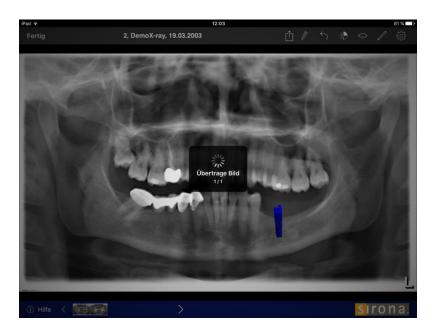




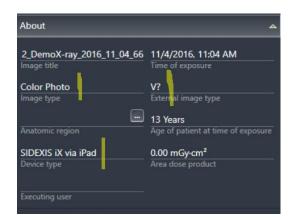


Initiates an image upload to Sidexis 4

The shown image including all annotations will be transferred to the (online) registered patient. During transfer a progress indicator will be displayed:



In Sidexis 4 images uploaded from an iPad show following metadata:



Note: the image upload function is not available for the preinstalled demo patients.





3D View

Upon selection of a 3D volume file a special 3D volume display is shown. In this view a volume file will be displayed both as 3D rendering and as orthogonal slices. This display is available during online and offline scenarios without connection to a remote Sidexis 4 database.



Volume files will be compresses at Sidexis iX server side.

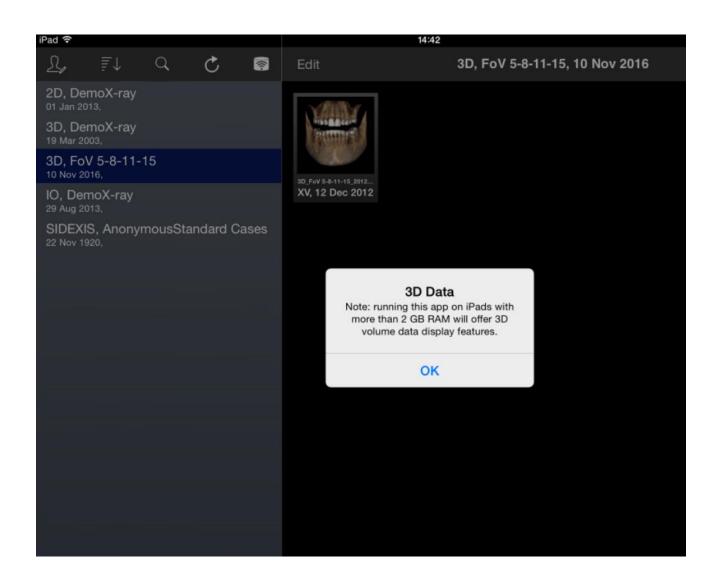


Using the upload function a shown 3D view can be transferred as 2D "snapshot" into the local database. Optionally a direct upload to a connected database can be triggered as well.

The 3D view is only displayed if the iPad covers minimum system requirements. In all other cases following information will be shown to the user and the volume will not be displayed:





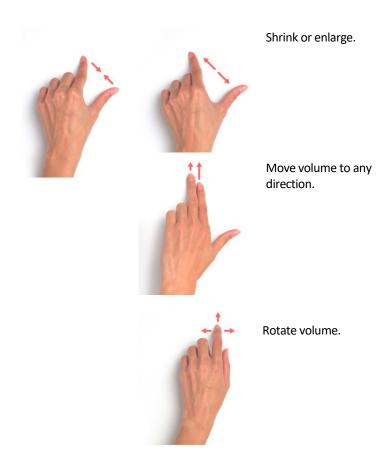




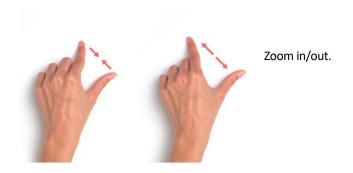


Inside an opened 3D view following multi-touch interactions are offered.

3D Volume display



Orthogonal slice views









Step through slices (up/down).



Move slice view.



Double tap: the shown slice view will be exchanged with the 3D rendering view (and viceversa).

The slice view will now be

The slice view will now be displayed inside the large center display.







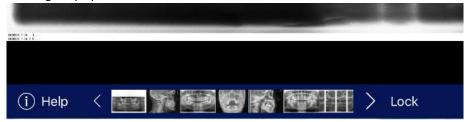


Patient-Lock

This feature allows to lock the Sidexis iX App inside an image view. In this state, the iPad can be safely handed over to the patient. The following functions are then no longer available:

- View of the patient list
- Patient selection
- Image manipulation or annotations

To activate the patient lock, select the "Lock" function at the bottom of the image display.



In this state, corresponding functions and tools are hidden:







In this state, the user can only view and change the media of the selected patient.

Unlocking takes place analogously from the status bar via "Unlocking" and entering the configured password:









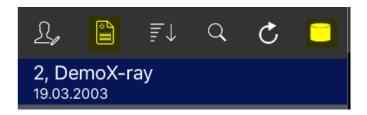


Medical history form workflow

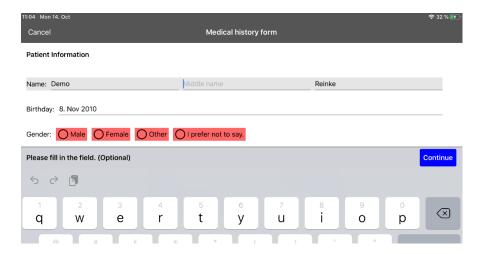
The completion of an anamnesis sheet until final storage within the Sidexis 4 database follows the procedure outlined below.

Medical staff selects desired patients in the Sidexis iX App

This must be done in the "online" state. Also, a patient lock must be configured initially. Via the "medical history record form" icon, the form to be filled out opens.



Completion of the anamnesis sheet by practice staff or patients



The input fields can be filled out one after the other.

The automatically opened iPad keyboard offers the following contextspecific help:

- Note if it is an optional or mandatory field.
- Next button to select the following input field.

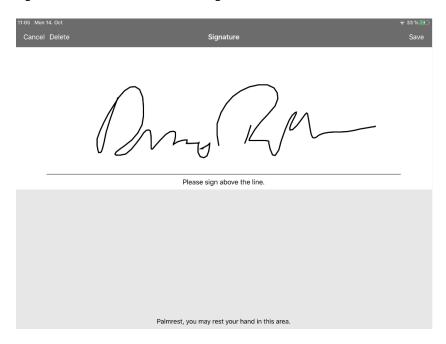
Mandatory fields are marked red in the form:



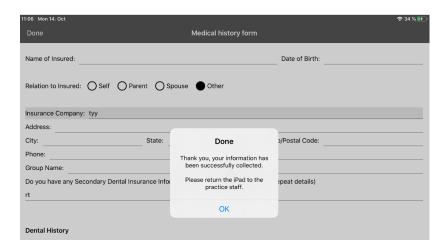




Signature fields are filled in with the finger:



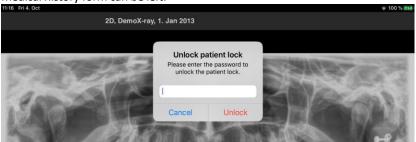
Only after completing (at least) all mandatory fields the form can be finalized via "Done".



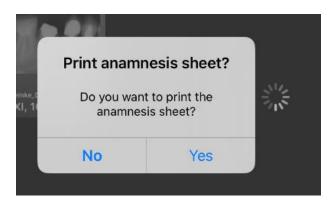


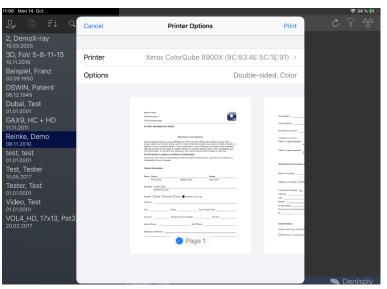


Only after entering the previously defined patient lock password the medical history form can be left:



The practice staff now has the option to print the completed sheet after successful unlocking:



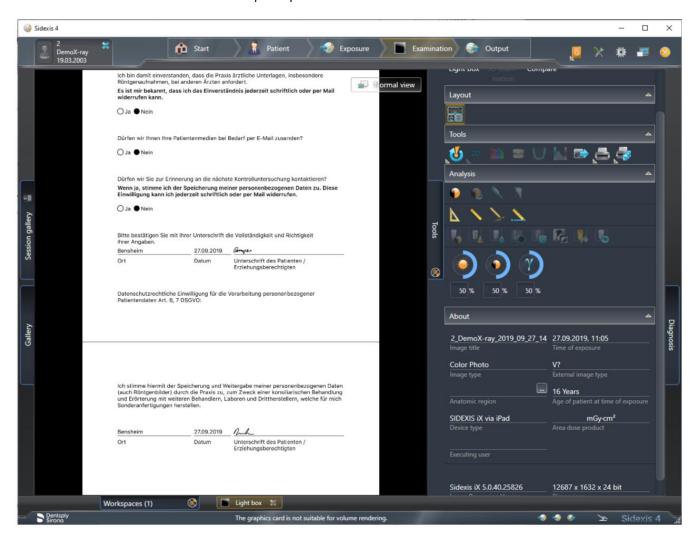


In any case, the anamnesis sheet is automatically sent to the connected Sidexis 4 server and stored there. The iPad local database does not keep a copy of the medical history sheet.





Via Sidexis 4 Client, the anamnesis sheet provided by Sidexis iX can be opened patient-related:









Medical history record from editor

This function can only be selected from the settings area.

MEDICAL HISTORY FORM
Template german
Template english
Current medical history form

Here you choose the history sheet to be edited out of 3 alternatives:

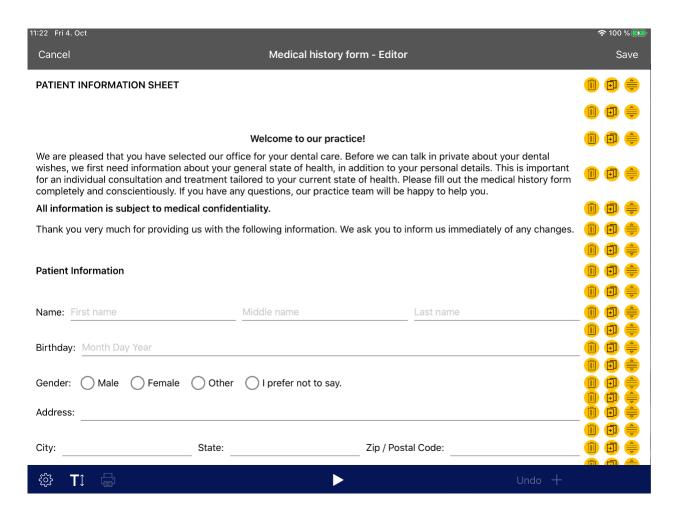
Description
The unaltered German version of the anamnesis sheet will be opened. After storing any changes, this history sheet will automatically become the practice-wide, current history sheet.
The unaltered English version of the anamnesis sheet will be opened. After storing any changes, this history sheet will automatically become the practice-wide, current history sheet.
The state of the last modified medical history sheet is opened. After storing any changes, this history sheet will automatically become the practice-wide, current history sheet.

Saved changes to the anamnesis sheet are automatically updated on all involved Sidexis iX iPads.

The editor itself allows a free design of a possibly practice-specific history sheet. Desired fields are simply clicked on, the respective field editor opens and allows the respective field configuration.







The following functions are available:

Function	Description
Done	Terminates editor operation.
Edit/ Save/ Cancel	Switches to edit mode. Change can be saved or discarded.







Switches to the interactive preview mode. Here, current changes can be checked directly in the "fill-in mode".

The following additional functions are available in preview mode:



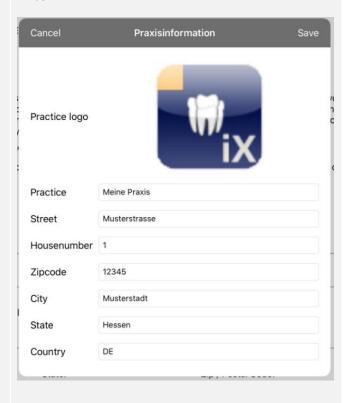
Creates a PDF copy of the active history sheet.



Validates degree of completion of the anamnesis sheet. Mandatory input fields are highlighted in red.



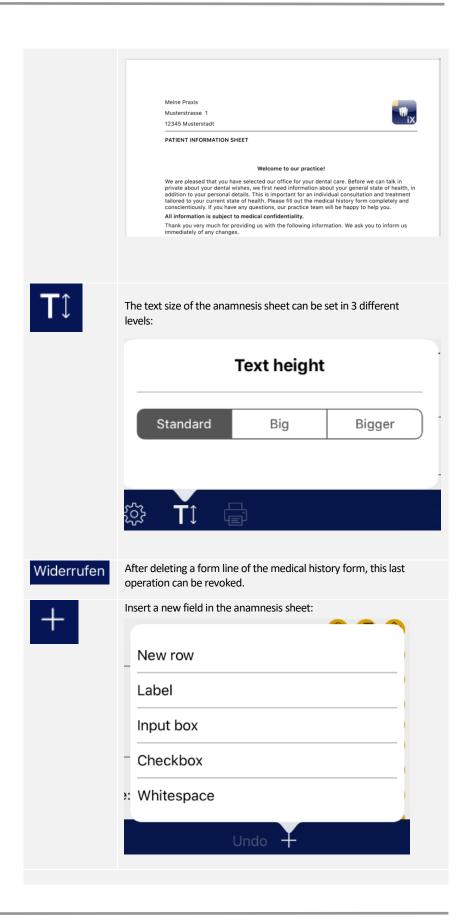
When saving, printing and creating a completed medical history sheet, an individualized header area is automatically added. The content of this area can be edited in the following settings window.



In print or in PDF copy:













Form field types

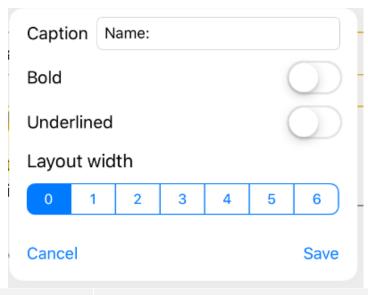
The following field types are available for the design of the anamnesis sheet:

New row

Represents a blank line. Here subsequent field types can be placed.

Label

With this field type, non-editable labels can be placed on the form.



Function	Description
Caption	Text to be displayed in the label.
Bold	Text attribute.
Underline	Text attribute.
Layout width	Relative width of field.

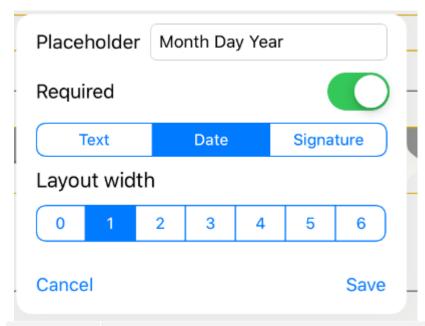
^{*} requires the SIDEXIS iX full version.





Input box

This field type allows manual input by the user.



Function	Description
Placeholder	Text that is displayed as a prompt in the input field. In the PDF, this text will be displayed as an explanation below the field.
Required	Switch with which the filling in of the field can be marked as compulsory entry.
Text	The input field is used for text input.
Date	The input field is used for date input.
Signature	The input field is used for signature input.
Layout width	Relative width of field.

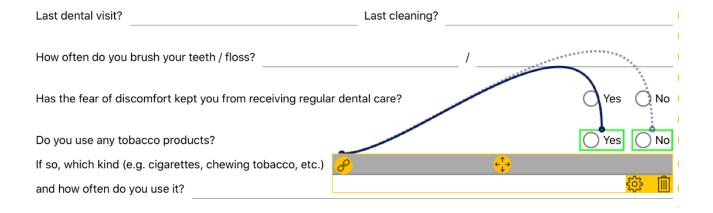




Input field - dependency



An input field can be activated depending on the status of a check box. To do this, press the link button in the upper left corner of the activated input field.



Subsequently, possible candidates are presented for selection (marked green in the picture). The dependency of an optional field should be as close as possible to the input field. Therefore, the following fields are offered for selection:

Either the checkbox fields to the left of the input field or if there are no checkbox fields, then the checkbox fields in the previous line.

This procedure covers, for example, the following cases:

1-line: Do you smoke yes / no, if yes how many?

2-line: 1st line: Are you in treatment Yes No, 2nd line If yes, why?

To assign the blue displayed link to one of the checkboxes marked in green, click on the respective green field.

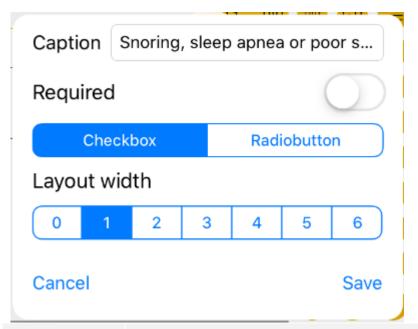
Checkbox/Radio button

This field type can be used to design interactive selection options. There are also the alternative radio buttons as well as multiple selections via checkboxes available.

^{*} requires the SIDEXIS iX full version.







Function	Description
Caption	Text displayed next to the checkbox.
Сарцоп	Text displayed flext to the checkbox.
Required	Switch with which the filling in of the field can be marked as compulsory entry.
Checkbox	The checkbox can be switched on / off independently.
Radio button	All checkbox objects that are in a row and have the radio button attribute work together as radio buttons. That only one of the options can be activated. An example of this would be the yes / no checkboxes.
	Note: Radio buttons are always considered required.
Layout width	Relative width of field.







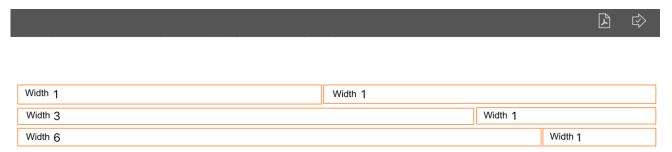
This field is suitable for creating both vertical and horizontal spaces within the form.

Function	Description
Height	Vertical height of the field.
Width	Width of the field, only in the state Relative width = 0.
Layout width	Relative width of the input field.





Concept of relative field width



Common to all objects is the concept of "relative filed width". If multiple objects are placed in a row, the display width of a field in the row is determined as follows:

A width of 0 means that the object occupies only as much space as is absolutely necessary for the display.

Objects with a width greater than 0 receive the remaining space of a line in relation to their "relative width".

Two objects of width 1 divide e.g. the free space at 50% each.

An object of width 2 becomes twice as wide as an object of width 1.

This allows automatic distribution of the objects in a row without complex manual size and position fixing.

Even a 2- or multi-column representation of objects is so easily possible.

^{*} requires the SIDEXIS iX full version.





Settings



MEDICAL HISTORY FORM
Template german
Template english
Current medical history form
PATIENT LOCK
Reset password
Change password
THUMBNAILS

Attribute	Description	Remarks		
MEDICAL HISTORY FO	MEDICAL HISTORY FORM			
Template German	Opens this template in the editor.	After saving a modified template, it automatically becomes the practice-wide		
Template English	Opens this template in the editor.	history sheet template on all involved Sidexis iX iPads.		
Current medical history form	Opens current template in editor.			
PATIENT LOCK				
Reset password	Resets the set password. Here you have to enter the 4-digit month and date (dd.mm) "backwards", eg: 29.09 -> 9092	Necessary password in order to reset any defined patient lock password. Before filling out an anamnesis sheet, a		
Change password	Changes the existing password.	password must be assigned!		
Thumbnails	Using the slider control the displayed thumbnail image size can be adjusted.			
Backup*	Backup and Restore options.	During backup all patient and image data will be saved at the remote Sidexis iX server side. The recover option allows the inverse operation.		
Restore	Backup and Restore options.	During backup all patient and image data will be saved at the remote Sidexis iX server side. Using this function the local iPad database can be restored from an available, Sidexis iX server side backup data set.		





Exposure readiness*	Displays a list of available device types. Only activated device types will be displayed in the exposure readiness selection window.	It is recommended to deactivate device types which are not installed on the remote Sidexis side.
Sidexis iX Server*	Sidexis iX server settings	Sidexis iX app full version requires this PC side server installation in order to establish a Sidexis communication.
	Bonjour	Automatic server configuration. Found Sidexis iX server will displayed in a list and can be selected in order to connect to this server. A checkmark shows the actual selected server.
	As an option all server address configuration can be done in manual mode:	
	IP Address	Address data of the remote
	IP Port	Sidexis iX Server
	Username Password	User authentication data.
	Comment	General description of this iPad device (free text).
TRASH COLLECTION		
2D Data	Enables automatic deletion of 2D data from the local database.	Only the local "offline content" of the Sidexis iX image database is affected. Relevant is the save date in
3D Data	Enables automatic deletion of 3D data from the local database.	this local database.
Simulation	Enables the exposure readiness simulation mode.	When enabled both exposure readiness and the resulting image data transfer will be simulated on the iPad without Sidexis iX server connections. Existing database image data will be returned as result of the exposure process. These images are marked with a SIMULATION stamp.





Version	Displays app version.	Please include in any service center support requests.

Full version purchase

Sidexis iX light displays a purchase option in the settings d dialog at the Sidexis iX server position.

Right after selecting this function starts the purchase procedure of the Sidexis iX full version.

A connection to the Apple AppStore will be established and requires an existing iTunes user account.

After completion of the purchase procedure advanced features of the full version will be enabled automatically.

The necessary PC side Sidexis iX server software can be downloaded from following link:

https://www.dentsplysirona.com/en/explore/imaging-systems/software/sidexis-ix.html

For installation and configuration details please refer to the Sidexis iX server documentation.

Sidexis iX server connection*

In order to communicate with a remote Sidexis iX server following tasks have to be passed:

- Download an installation of the Sidexis iX server from the Dentsply Sirona homepage (https://www.dentsplysirona.com/en/explore/imaging-systems/software/sidexis-ix.html).
- 2. Setup of user and password information.
- 3. Select found Sidexis iX server inside Sidexis iX app using the settings-> Sidexis iX server (Bonjour) option.
- 4. Edit user name and password to match the server setting.





Backup*

Right after successful installation and configuration of the Sidexis iX server an initial data backup is strongly recommended. During an ongoing backup operation the iPad should left idle until the end of this operation.

This option requires an installed Sidexis iX server.

Restore

Using the Settings->Restore option available backup data sets can be written back to the iPad in order to restore the local database. The data sets are iPad specific and can only be restored on exactly the same device which has created the server side backup data.

This option requires an installed Sidexis iX server.





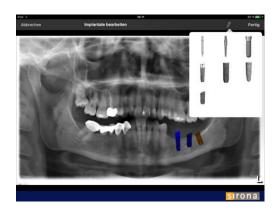
Appendix

New in version 4.0



- Real volume display of Sidexis 4 3D volume data. A new 3D view offers intuitive interactions in both 3D rendering and orthogonal slice displays.
- Sidexis 4 volume data sets can be stored locally inside the Sidexis iX app database. They can be used even in not connected "offline" scenarios at the iPad.
- "Snapshots" of shown 3D views can be annotated and stored locally. These annotated images can be uploaded to a connected Sidexis 4 database, too.
- Compatible to Sidexis iX server V.4.x

New in version 3.5



• Implant visualization. A new annotation type offers the addition of implant representations. These annotations can be moved, scaled and rotated.



- Image upload to a connected Sidexis 4 database*.
 Annotated iPad images can be copied to Sidexis 4.
 This function requires an installed Sidexis 4 V4.1.3 and a Sidexis iX server 3.5.x.
- Compatible with Sidexis iX server 3.5.x.





New in version 3.3



- Online access to remote Sidexis 4 database. Requires an installed Sidexis iX 3.3 server. Starting with this version both Sidexis XG and Sidexis 4 will be supported.
- IOS UI adaptions.
- New online patient selection criteria:
 - 1. Start date/end date..
 - 2. Quarter...
 - ...of last taken exposure.
- Bugfixes.

New in version 3.0



- Remote access to the Sidexis database.
- Automatic data download into the iPad (=offline) database.
- Download of patient data (one or more selected Sidexis patients).
- Download of selected patient images.
- Sorting of patient list.
- Patient search option.
- Enhanced user interface.
- Light version free of charge.
- Bug fixes.

^{*} requires the SIDEXIS iX full version.





01.12.2010	Version 1.0.x (M. Reinke, RSWE)
20.04.2011	Version 2.0.x (M. Reinke, RSWE)
28.01.2013	Version 2.6.x (M. Reinke, RSWE)
17.06.2013	Version 3.0x (M. Reinke, RSWE)
28.01.2015	Version 3.3x (M. Reinke, RSWE)
04.11.2016	Version 3.5.x (M. Reinke, RSWE)
30.03.2017	Version 4.0x (M. Reinke, RSWE)
04.10.2019	Version 5.0x (M. Reinke, RSWE)